



CALAVERAS COUNTY WATER DISTRICT

120 Toma Court • San Andreas, CA 95249 • (209) 754-3543

REQUEST FOR PROPOSALS (RFP)

Vertical Turbine Pumps for Hunters Reservoir Raw Water Intake Project (CIP No. 11103)

1. Request for Proposals. Calaveras County Water District (CCWD) is requesting proposals to purchase three vertical turbine pumps to replace the existing pumps at the Hunters Reservoir pump station. The District intends to pre-purchase the long lead equipment, including the vertical turbine pumps for the construction project. This Request for Proposals (RFP) is for the material purchase of three vertical turbine pumps and motors and is not a bid for construction.

A. Scope and Nature: The District is accepting proposals for supplying three vertical turbine pumps and motors as provided in the RFP documents and the 60% Project Plan Set (included as Attachment A).

B. Site and Delivery Address: Hunters Water Treatment Plant, 335 Hunters Dam Road, Avery, CA 95224.

C. Schedule: The tentative schedule is as follows:

- **Tuesday, July 5, 2022** – Solicit Proposals for Vertical Turbine Pumps.
- **Friday, July 22, 2022** – Last day for Request for Information.
- **Monday, August 1, 2022** – Proposal submittals due at 2:00pm.
- **Anticipated Pump Delivery** – June 2023.

Before submitting a response to this RFP, each proposer shall carefully read and examine all documents associated with this RFP.

Submitted pricing shall be good for 30 calendar days from the proposal due date. Pricing for the three pumps shall be secured once District signs and returns the Purchase Order agreement to confirm order.

D. Federal Requirements: This Project is funded in part by the United States Federal Emergency Management Agency (FEMA)/Cal-OES. The Project is subject to numerous permits, provisions and environmental constraints that must be adhered to during the course of the work.

This Project includes Federal Domestic Preferences for Procurements, 2 C.F.R. § 200.322. The pump manufacturer shall use products and materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products such as polyvinyl chloride pipe, aggregates such as concrete, glass, optical fiber, and lumber).

Supplier/Contractor is to comply with the Byrd Anti-Lobbying Amendment, 31 § U.S.C. 1352

Supplier/Contractors who apply or bid for an award of \$100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

These certifications are to be made (signed and submitted) in the form of 44 C.F.R. Part 18, Attachment B as shown below.

- E. Proposal Submission:** Three (3) copies of the proposal shall be addressed and delivered in a sealed envelope to Calaveras County Water District, Attention: Kevin Williams, 120 Toma Court, San Andreas, CA 95249. Proposals can be hand delivered on the day of submission or sent via FEDEX inside a separately sealed envelope inside the FEDEX packaging. The District will not accept responsibility for lost, misplaced, or delayed FEDEX packages. **Electronic submission via email will not be accepted.**

Proposals shall include the following:

- **Pump Product Catalog:** General Pump Description, Type and Model, Design Rotative Speed, Number of Stages, Type of Bowl Bearings, Type of Line Shaft Bearings, Size of Shafting, Size of Pump Column, Size of Discharge Outlet, OD of Pump Bowls, Pump Weight, Data on Shop Painting, Max Overall Dimensions, and Total Weight.
- **Performance Curves:** Including capacity versus head, NPSH required, efficiency, and BHP plotted scales consistent with performance requirements.
- **Total Cost for Pump Package:** Includes cost of fabrication and delivery of vertical turbine pumps to the Project Site. Terms of payment including initial deposit amount should be included.

- **References:** include names of at least three (3) clients who may be contacted, who purchased the same model of vertical turbine pumps.
- **Experience:** Provide brief history of the proposing firm and range of services offered and brief history of pump manufacturer.
- **Proposed Production Schedule:** Including timeframe for pump fabrication and delivery.
- **Business Information:** Name of Business and Location of all its offices, specifically indicating the principal place of business.
- **Purchase Order Contract:** form to be signed by District to secure proposal pricing once approved.

F. Detailed Project Description: At a minimum, the following pump specifications should apply:

- All pump components manufactured in the United States
- Pump manufacturer certified to the ISO 9001 standard for design and manufacture of vertical turbine pumps
- Warranty – one year after product is put into operation or eighteen months after date of shipment
- Design Flow – 2,100 gpm per pump
- Design TDH – 210 feet
- Bowl Efficiency – 80% minimum at design flow/TDH
- Pump Quantity – 3 pumps
- Pump Operation – Variable speed
- Suction – 16-inch flange
- Discharge – 10-inch flange
- Barrel length – 7.6 feet
- Removable cans
- Impeller Type – Semi-open
- Water Service – Raw water intake from Hunters Reservoir
- NSF Certification – complete pump assembly certified to ANSI/NSF 61 standard by an ANSI accredited certification body
- Representative Services – pump installation and operations training provided by manufacturer representative

The following motor specifications should apply:

- Warranty – one year after product is put into operation or eighteen months after date of shipment
- 150 HP or less
- 1,800 RPM maximum speed
- Motor operation - Variable speed
- Service Factor - 1.15
- NEMA premium efficient motor

- 460 volt, 3 phase, 60 Hz
- Totally Enclosed Fan Cooled

G. Evaluation Criteria and Selection: The District will review all Proposals for cost as well as technical comparisons. The District reserves the right to reject any and all proposals at its discretion, to waive any informality in a proposal, to reject the proposal of any bidder who has been delinquent or unfaithful in any former contract, and to make awards in the interest of the District. The District reserves the right not to purchase the vertical turbine pumps. The District reserves rights to waive formalities and minor irregularities in the proposals received.

H. Contract: The District will enter a contract with the selected Proposer.

I. Attachments:

- Attachment A – 60% Project Plan Set
- Attachment B – Bryd Anti-Lobbying Amendment, 31 § U.S.C. 1352

J. Request for Information: Request for information can be sent to kevinw@ccwd.org. Request for information must be received no later than Friday, July 22, 2022. Responses to request for information will be posted on the District Website.

RECEIPT OF PROPOSALS

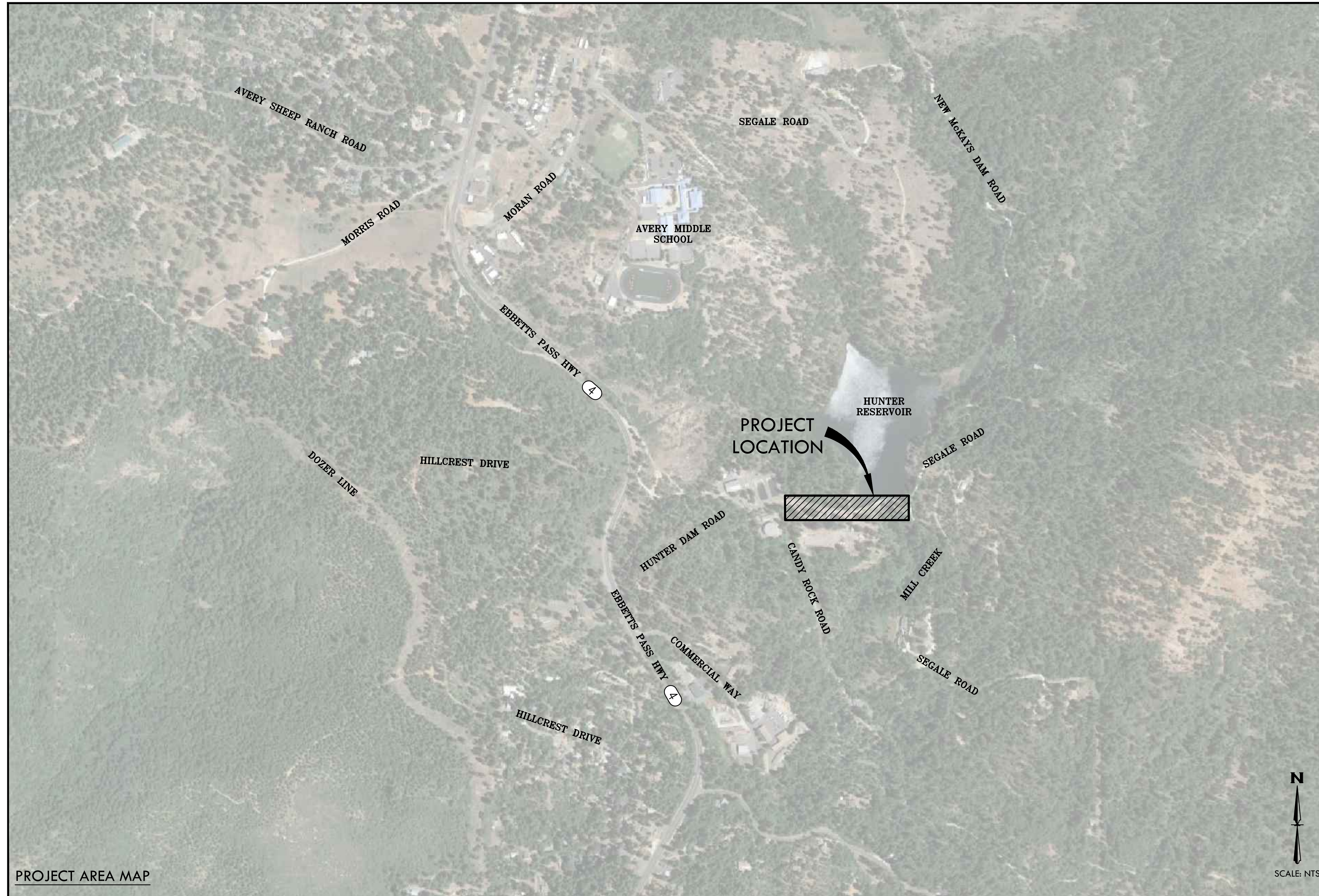
Three (3) copies of your proposal shall be delivered to the District on or before August 1, 2022 at 2:00 p.m. local time to the address below:

Calaveras County Water District
120 Toma Court
San Andreas, California 95249
Attn: Kevin Williams

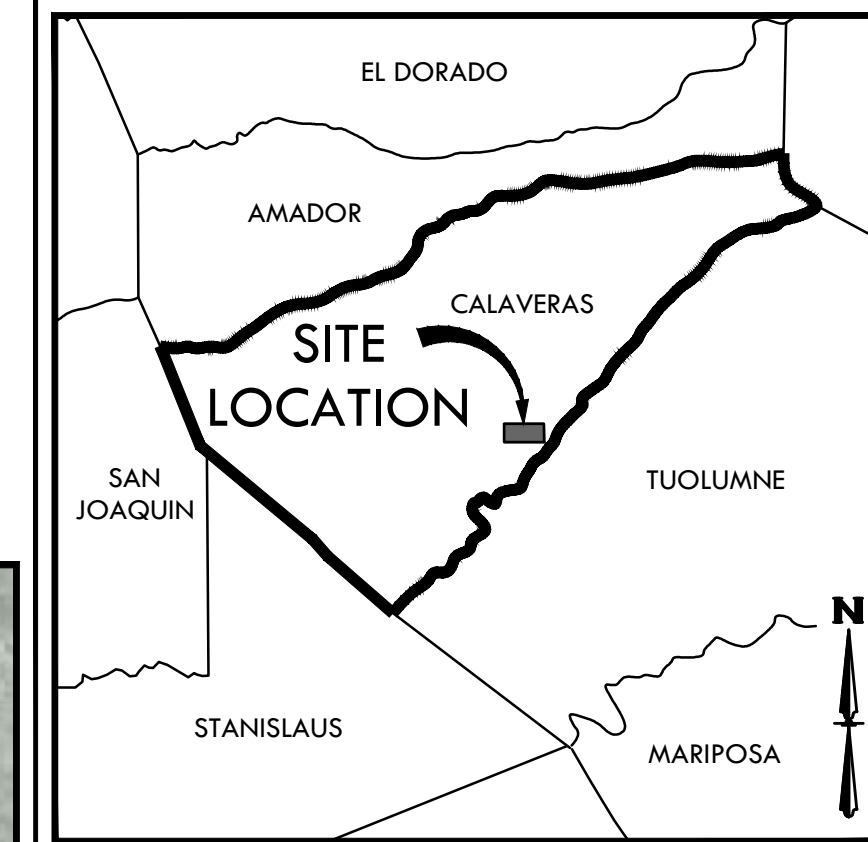
ATTACHMENT A

HUNTERS RESERVOIR RAW WATER INTAKE PROJECT

60% PROGRESS SET



PROJECT AREA MAP



VICINITY MAP

SHEET INDEX

| SHEET | DWG. | NAME |
|-------|-------|--|
| 1 | G.01 | COVER SHEET |
| 2 | G.02 | GENERAL NOTES |
| 3 | G.03 | ABBREVIATIONS AND SYMBOLS |
| 4 | G.04 | STAGING AREAS |
| 5 | C.01 | TOPOGRAPHY AND DEMOLITION PLAN |
| 6 | C.02 | TOPOGRAPHY AND DEMOLITION PLAN |
| 7 | C.03 | UTILITY PLAN |
| 8 | C.04 | UTILITY PLAN |
| 9 | C.05 | PUMP STATION DEMOLITION PLAN |
| 10 | C.06 | PUMP STATION SITE PLAN |
| 11 | C.07 | UWPA MECHANICAL BUILDING DEMOLITION PLAN |
| 12 | C.08 | UWPA MECHANICAL BUILDING FLOOR PLAN |
| 13 | C.09 | UWPA MECHANICAL BUILDING EXTERIOR ELEVATIONS |
| 14 | PP.01 | PLAN AND PROFILE -- STA 9+50 TO STA 18+00 |
| 15 | D.01 | DETAILS |
| 16 | E.01 | ELECTRICAL INFORMATION |
| 17 | E1.1 | OVERALL ELECTRICAL SITE PLAN |
| 18 | E1.2 | DAM ELECTRICAL SITE PLAN |
| 19 | E2 | POWER HOUSE PLANS |
| 20 | E3 | PUMP HOUSE |
| 21 | E4 | ELECTRICAL DETAILS |
| 22 | E5 | PLC NOTES |

HORIZONTAL DATUM

NORTH AMERICAN DATUM OF 1983 (NAD83).

COORDINATE SYSTEM

COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATES SYSTEM OF 1983 (CCS83), ZONE III.

VERTICAL DATUM

NORTH AMERICAN DATUM OF 1988 (NAVD88).

BENCHMARK (PT#15002)

SET REBAR WITH CAP ON A HILLSIDE ALONG THE WEST OF THE ACCESS ROAD LEADING TO SUBJECT FACILITY, APPROXIMATELY 600' SOUTH-SOUTHWESTERLY OF THE FIRE HYDRANT LOCATED IN FRONT OF THE FACILITY, AND APPROXIMATELY 50' WESTERLY OF THE CENTERLINE OF THE ACCESS ROAD.

ELEVATION = 906.85 FEET (NAVD88)

APPROVALS

| | |
|---|------------|
| APPROVED BY THE CALAVERAS COUNTY WATER DISTRICT | |
| BY _____ | DATE _____ |

PRELIMINARY



Know what's below.
Call before you dig.

BLACK WATER
CONSULTING ENGINEERS
602 LEVEL DRIVE, MODESTO, CA 95356 • PH: 209.322.1820



HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

COVER SHEET

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

| | |
|-------------|------------|
| DESIGNED BY | CRG |
| DRAWN BY | KCW |
| CHECKED BY | JMB |
| JOB NO. | J22370 |
| DATE | APRIL 2022 |
| DRAWING | G.01 |
| SHEET NO. | 01 OF XX |

60% IMPROVEMENT PLANS

11/22/2020 HUNTERS RESERVOIR RAW WATER INTAKE PROJECT (1) (S) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KK) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)

CONTACTS

OWNER:
 CALAVERAS COUNTY WATER DISTRICT
 120 TOMA COURT
 SAN ANDREAS, CA 95249
 GENERAL MANAGER: MICHAEL MINKLER
 T:209.754.3543

ENGINEER:
 BLACK WATER CONSULTING ENGINEERING INC.
 602 LVELL DRIVE
 MODESTO, CA 95356
 ENGINEER: JEFF BLACK P.E.
 T:209.322.1820

GENERAL NOTES

- CONTRACTOR SHALL CONSIDER THE INFORMATION PRESENTED AS "GENERAL NOTES" AS PART OF THE CONSTRUCTION DOCUMENTS.
- PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES, CCWD SHALL BE CONTACTED FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE OWNER AND CALL USA SEVENTY-TWO (72) HOURS PRIOR TO EXCAVATION AT 800-642-2444 AND ENGINEER SEVENTY-TWO (72) HOURS PRIOR TO MEETING DATE.
- ENGINEER OF RECORD MUST APPROVE ANY SUBSTITUTIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN THE DRAWINGS AND OTHER DETAILS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF WORK. MATERIALS PROCURED PRIOR TO RESOLUTION OF CONFLICTS SHALL BE AT THE CONTRACTOR'S RISK.
- ALL WORK IS NEW UNLESS INDICATED AS EXISTING.
- WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, ENGINEER AND THE RESPECTIVE REGULATORY AUTHORITY.
- THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSE FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE GOVERNING BUILDING JURISDICTION AND/OR THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
- CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND CALAVERAS COUNTY WATER DISTRICT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- THE CONTRACTOR AGREES TO BE RESPONSIBLE FOR:
 - CLEANING THE JOB SITE AT THE END OF EACH PHASE OF WORK.
 - CLEARING THE ROADWAY, INCLUDING SWEEPING, AT THE END OF EVERY WORK DAY.
 - REMOVING AND DISPOSING OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR EXPENSE IN A TIMELY MANNER.
 - MAINTAINING THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.
 - KEEPING MATERIALS, EQUIPMENT AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS TO NOT DELAY THE JOB.
 - PROVIDING ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
 - SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT.
 - FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
 - THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT ISSUE OF "MANUAL OF TRAFFIC CONTROLS, WARNING SIGNS, LIGHTS, AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAY" PUBLISHED BY THE STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY.

- PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
- ALL FERROUS METALS THAT ARE NOT GALVANIZED SHALL BE PREPARED, PRIMED, AND EPOXY COATED. THE PRIMER AND COATING SHALL BE OF THE SAME MANUFACTURER AND APPLIED AS A SYSTEM. THE COATING SYSTEM AND COLOR SHALL BE APPROVED BY THE ENGINEER AND THE OWNER PRIOR TO APPLICATION.
- THE INFORMATION SHOWN ON THE PLANS WITH REGARD TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATIONS AND/OR RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THESE LOCATIONS TO BE EITHER TRUE OR EXACT. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE UNDERGROUND UTILITIES RELATED TO THE PROJECT; INCLUDING BUT NOT LIMITED TO SEWER, STORM DRAIN, WATER, IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER AND OWNER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO THAT THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION/ELEVATION MUST BE MADE PRIOR TO CONSTRUCTION.
- WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONS SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES: (1) PRIOR TO OPENING AN EXCAVATION EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRICAL LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.
- THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 5' OR MORE. SAID PROTECTION TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT AND APPLICABLE REGULATIONS.
- ALL DIMENSIONS SHOWN ON DRAWINGS SHALL BE VERIFIED. DO NOT SCALE DRAWINGS. ENGINEER OF RECORD MUST APPROVE ANY SUBSTITUTIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN THE DRAWINGS AND OTHER DETAILS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF WORK. MATERIALS PROCURED PRIOR TO RESOLUTION OF CONFLICTS SHALL BE AT THE CONTRACTOR'S RISK.
- CONTRACTOR SHALL COMPLY WITH THE MITIGATION MONITORING AND REPORTING PLAN INCLUDED IN THE ENVIRONMENTAL DOCUMENTS.

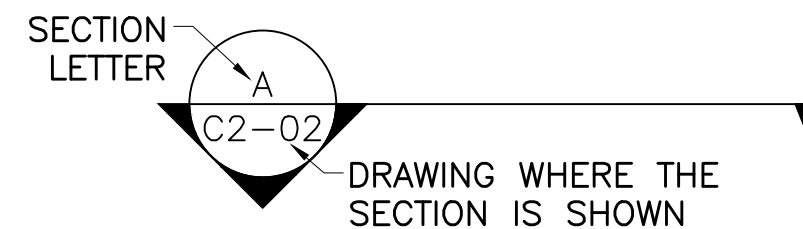
CALAVERAS COUNTY WATER DISTRICT GENERAL NOTES

- ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PLANS, NOTES, DETAILS, AND PROVISIONS AS SPECIFIED HERON AND IN ACCORDANCE WITH THE LATEST VERSION OF THE CALAVERAS COUNTY WATER DISTRICT STANDARD SPECIFICATIONS. ALL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS OF ALL AGENCIES HAVING JURISDICTION OVER THE WORK SHALL BE DONE TO THE SATISFACTION OF ALL OF THE INVOLVED AGENCIES.
- ALL SEWER AND WATER WORK WILL BE DONE UNDER THE INSPECTION OF CALAVERAS COUNTY WATER DISTRICT (CCWD). SEE SECTION 01000, SUB-SECTION 3.10.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND PROTECTING ALL UNDERGROUND FACILITIES AFFECTED BY THE WORK AND SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) 48 HOURS PRIOR TO ANY EXCAVATION WORK FOR IDENTIFICATION AND LOCATION OF UNDERGROUND UTILITIES. (PHONE: 1-800-227-2600)
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL FACILITIES PRIOR TO ANY EXCAVATION.
- WHERE DEPTH OF EXCAVATIONS INTO WHICH WORKERS DESCEND IS 5 FEET OR DEEPER, CONTRACTOR REQUIRED TO OBTAIN EXCAVATION PERMIT FROM NEAREST CAL/OSHA OFFICE & PROVIDE COPY TO CCWD PRIOR TO CONSTRUCTION.

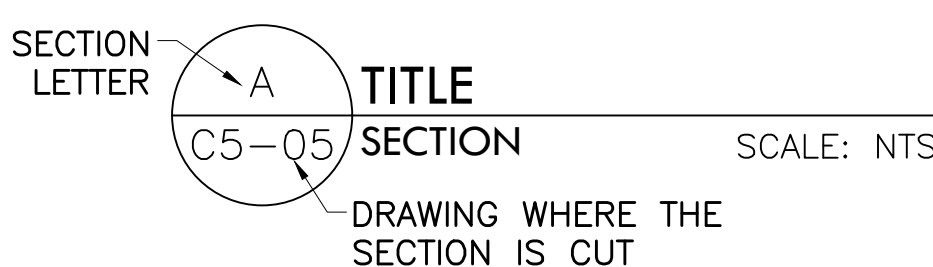
- AT AREAS ABOVE 2,500 FEET ELEVATION, ALL CASTING AND CONCRETE COLLARS IN THE ROADWAY SHALL BE DEPRESSED ¼ INCH FOR SNOWPLOWING.
- CONNECTIONS TO EXISTING WATER OR SEWER FACILITIES SHALL HAVE PRIOR APPROVAL AND BE DONE IN ACCORDANCE WITH CCWD TIE-IN PROCEDURES, PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL HAVE A COPY OF CCWD APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS ON SITE. SPECIFICATIONS, SPECIFIC NOTES, AND DETAIL DRAWINGS THEREON AND IN THE GEOTECHNICAL REPORT TAKE PRECEDENCE OVER GENERAL DRAWINGS AND PLANS UNLESS OTHERWISE DIRECTED BY DISTRICT ENGINEER. ANY DEVIATION FROM APPROVED PLANS DURING CONSTRUCTION WILL REQUIRE PRIOR WRITTEN NOTICE TO CCWD, OTHER APPROPRIATE PUBLIC AGENCIES, AND SHALL RECEIVE APPROVAL BY CCWD.
- ONLY CCWD PERSONNEL SHALL OPERATE EXISTING FACILITIES.
- THE HIGHEST REQUIRED FIRE FLOW IS _____ GPM AT 20 PSIG RESIDUAL.
- BASED UPON STATIC CONDITIONS AND A HYDRAULIC GRADE LINE OF _____ FEET., THE MAXIMUM AND MINIMUM PRESSURES ARE CALCULATED TO BE _____ PSI (LOT# _____) AND _____ PSI (LOT# _____), RESPECTIVELY.
- PIPELINES SHALL BE DISINFECTED, TESTED, AND INSTALLED IN ACCORDANCE WITH CCWD'S STANDARDS.
- SERVICE INSTALLATIONS IN ROADWAYS WITH CUTS OR FILLS GREATER THAN 6 FEET IN HEIGHT AND SLOPES STEEPER THAN 3:1 ARE REFERENCED UNDER CCWD STANDARD DETAIL W07D.
- LIDS FOR WATER FACILITIES SHALL BE MARKED "WATER" AND LIDS FOR SEWER FACILITIES SHALL BE MARKED "SEWER".
- CURBS SHALL BE MARKED WITH A "W" BRAND WHERE WATER SERVICES INTERCEPT AND "S" BRAND WHERE SEWER SERVICES INTERCEPT.
- CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
- NO SERVICES SHALL BE INSTALLED IN DRIVEWAYS.

SECTION AND DETAIL NUMBERING SYSTEM

SECTION CUT ON PLAN



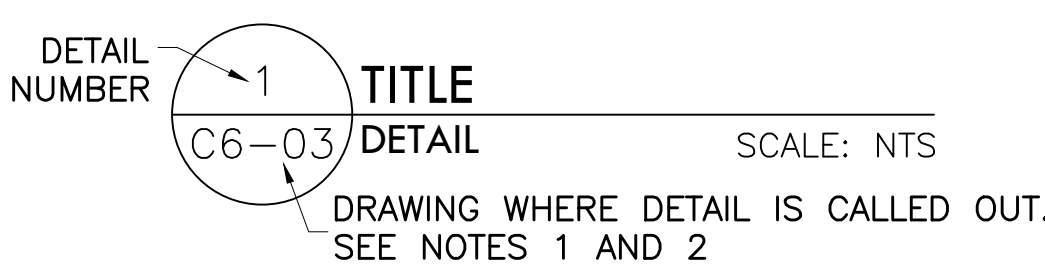
SECTION TITLE WITH REFERENCE



DETAIL CALL-OUT



DETAIL TITLE WITH REFERENCE



NOTES

- "VAR" IN THE DRAWING DESIGNATION AREA INDICATES DETAIL APPLIES TO MORE THAN ONE DRAWING.
- " - " IN THE DRAWING AREA INDICATES THAT SECTION OR DETAIL IS SHOWN ON THE SAME DRAWING THAT IT IS CUT FROM OR REFERRED TO.
- WHEN REFERRED TO IN A NOTE: "SEE DET 1/C7-02" "1" IS THE DETAIL NUMBER "C7-02" IS THE DRAWING WHERE DETAIL IS SHOWN.

PRELIMINARY



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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

GENERAL NOTES

60% IMPROVEMENT PLANS

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING



IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

| |
|------------------------------|
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| DATE APRIL 2022 |
| DRAWING G.02 |
| SHEET NO. 02 OF XX |

ABBREVIATIONS

| | |
|------|---|
| AB | AGGREGATE BASE CLASS II, 3/4" MAX. |
| AC | ASPHALT CONCRETE TYPE 'B', 1/2" MAX, MED. GRADING |
| ARV | AIR RELEASE VALVE |
| AVV | AIR VAC VALVE |
| AWWA | AMERICAN WATER WORKS ASSOCIATION |
| BO | BLOW OFF |
| BV | BALL VALVE |
| BFD | BACK FLOW DEVICE |
| CO | CLEANOUT |
| COR | CORNER |
| DE | DRAINAGE EASEMENT |
| DI | DRAIN INLET |
| DIP | DUCTILE IORN PIPE |
| DW | DRIVEWAY |
| EL | ELEVATION |
| EOP | EDGE OF PAVEMENT |
| FH | FIRE HYDRANT |
| FL | FLANGE |
| FM | FORCE MAIN |
| GV | GATE VALVE |
| LS | LIFT STATION |
| MH | MANHOLE |
| MJ | MECHANICAL JOINT |
| PE | POLYETHYLENE |
| PRV | PRESSURE REDUCING VALVE |
| PS | PUMP STATION |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYL CHLORIDE PIPE |
| SL | SEWER LATERAL |
| SRV | SURGE RELIEF VALVE |
| SS | SANITARY SEWER/STAINLESS STEEL |
| WM | WATER METER |

LEGEND

| | EXISTING | PROPOSED |
|--------------------------------|----------|----------|
| CENTER LINE | | |
| EASEMENT | | |
| LOT LINE | | |
| PROPERTY LINE | | |
| RIGHT-OFF-WAY | | |
| CHAINLINK FENCE | | N/A |
| GRADE CONTOURS | | |
| BUILDING | | N/A |
| BUILDING OVERHANG | | N/A |
| OVERHEAD LINE | | N/A |
| WATER | | |
| EXISTING PIPE REMOVAL | | N/A |
| EXISTING WATER TO BE ABANDONED | | N/A |
| ELECTRICAL BOX | | N/A |
| GUY WIRE | | N/A |
| JUNCTION POLE | | N/A |
| POWER POLE | | N/A |
| BOLLARD | | N/A |
| MAILBOX | | N/A |
| TREE | | N/A |
| BACK-FLOW PREVENTER | N/A | |
| AIR RELEASE VALVE | N/A | |
| BELL VALVE | N/A | |
| CHECK VALVE | N/A | |
| GATE VALVE | N/A | |
| FIRE HYDRANT | | N/A |
| HOSE BIB | | N/A |
| REDUCER | N/A | |
| TEE | | N/A |
| WATER STUB | | |
| WATER METER | | N/A |
| WATER VALVE | | |
| WATER WELL | | N/A |
| WATER WELL BOX | | |
| TEMPORARY BLOW-OFF VALVE | N/A | |
| TEMPORARY WATER SAMPLING POINT | | N/A |
| THRUST BLOCK | N/A | |
| SINGLE / DOUBLE GATE | | N/A |

I:\22270 HUNTER RESERVOIR RAW WATER INTAKE CAD\Task 04 Raw Water Intake WMP Plans\Legend & Abbreviations & Legend DWG.rvt 4/29/2022 1:26:40 PM BY KEVIN WILLIAMS

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**HUNTER RESERVOIR
RAW WATER INTAKE PROJECT**

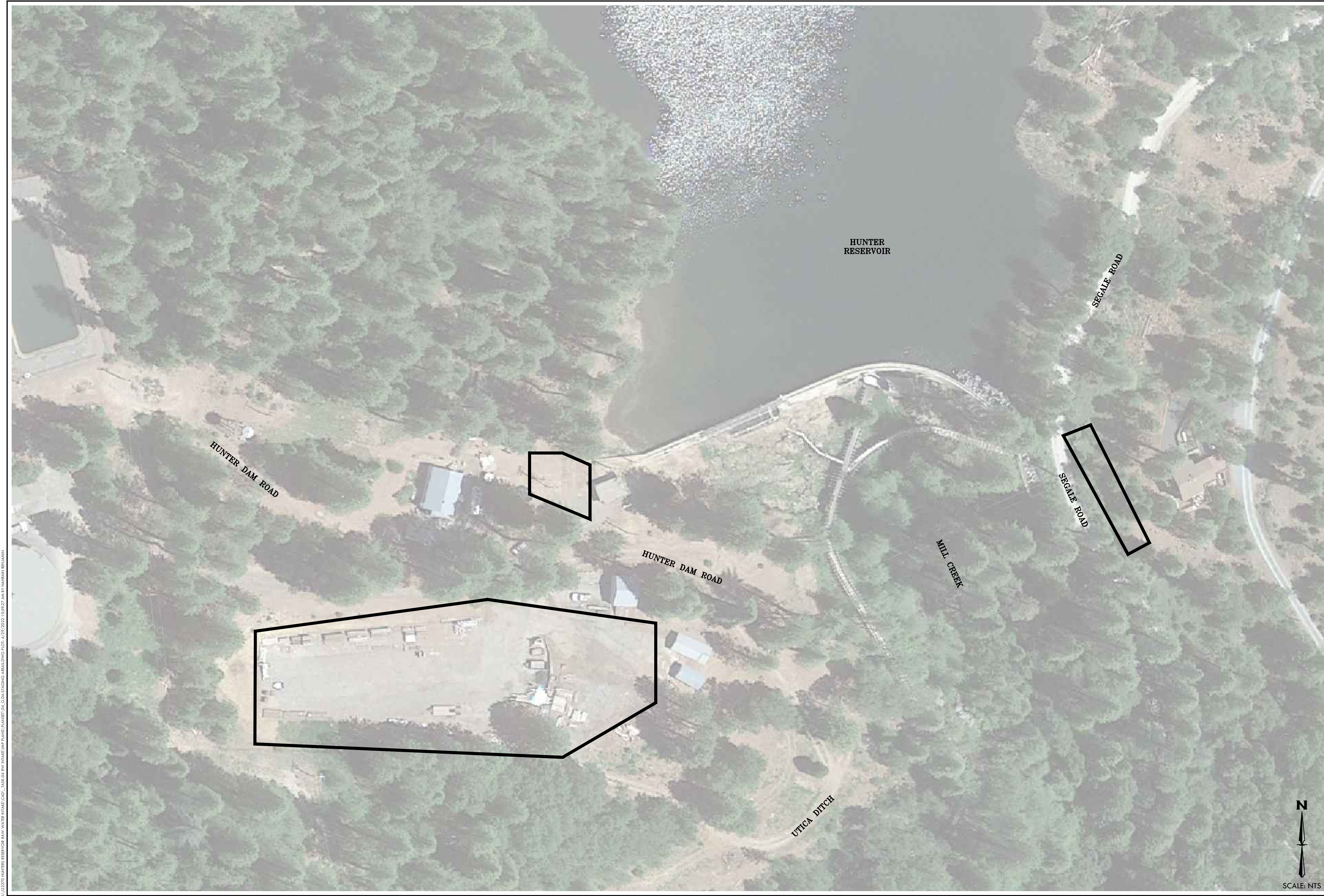
ABBREVIATIONS AND LEGEND

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| DRAWN BY | KCW |
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| DATE | APRIL 2022 |
| DRAWING | G.03 |
| SHEET NO. | 03 OF XX |

60% IMPROVEMENT PLANS



I:\22270 HUNTER RESERVOIR RAW WATER INTAKE CAD\1. 60% IMPROVEMENT PLANS\PALETTE (G.04) STAGING AREAS.DWG PLOT: 4/29/2022 10:39:57 AM BY TANNER.BRENNAN

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RAW WATER INTAKE PROJECT**

STAGING AREAS

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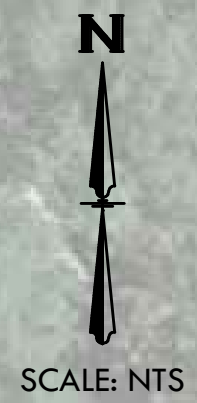
JOB NO.
J22370

DATE
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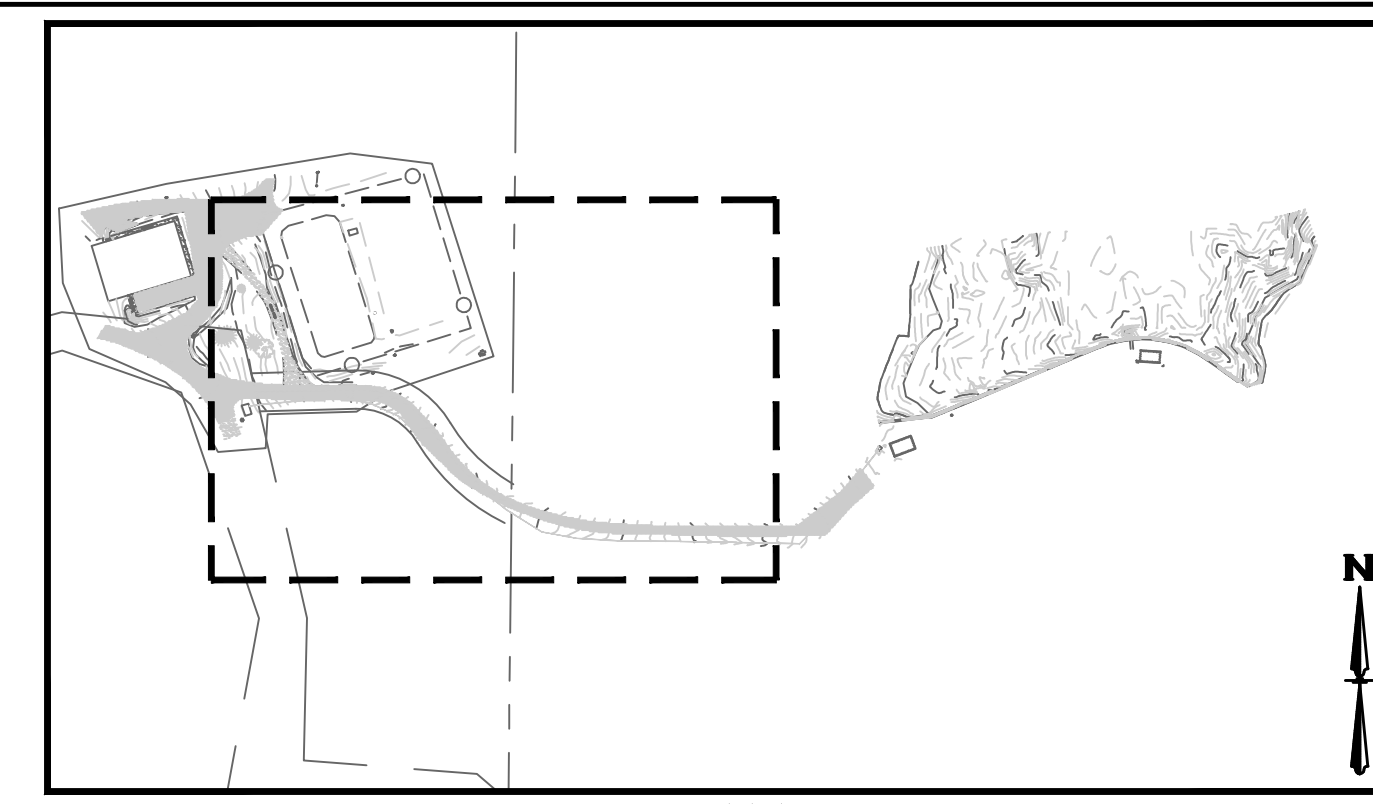
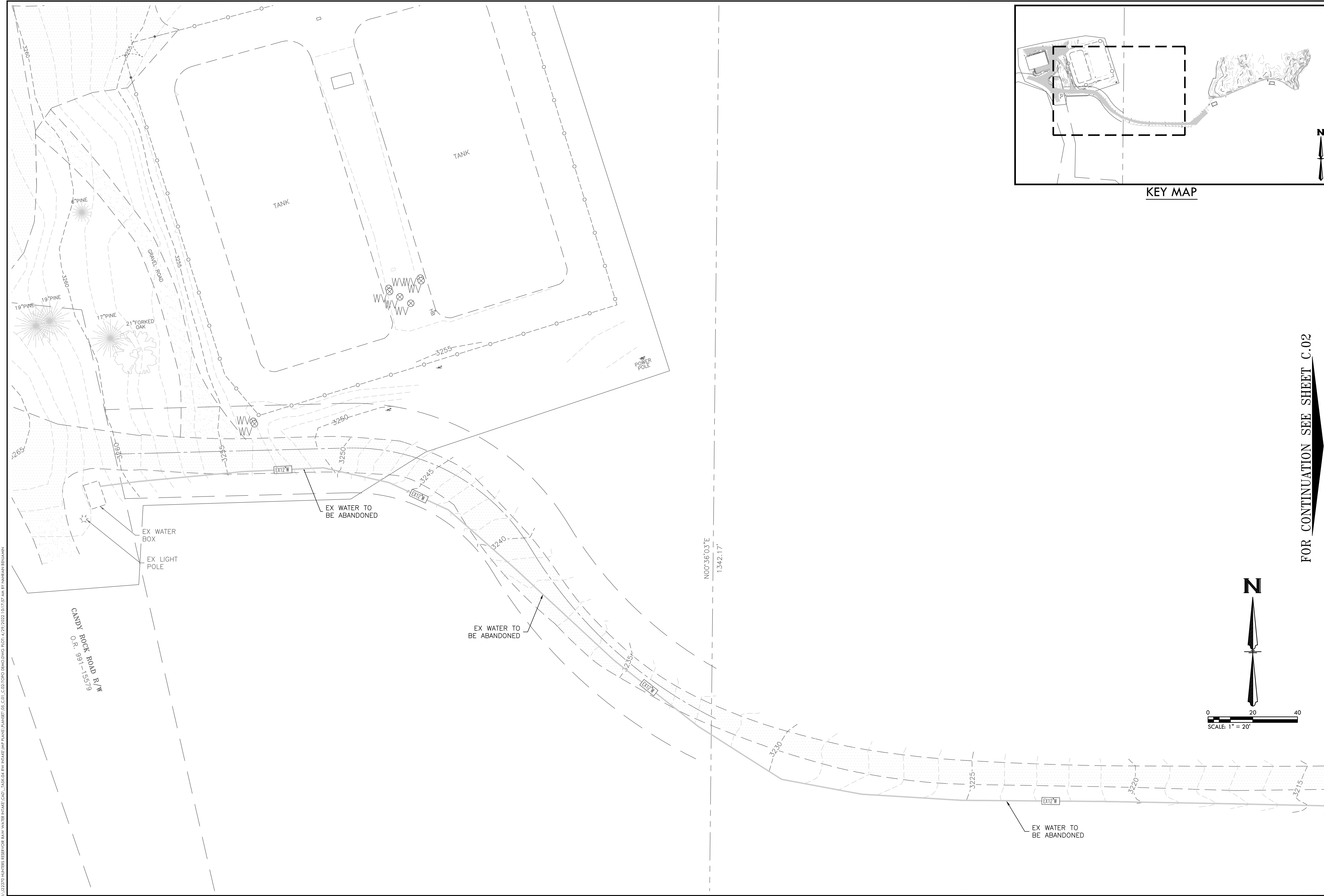
DRAWING
G.04

SHEET NO.
04 OF XX

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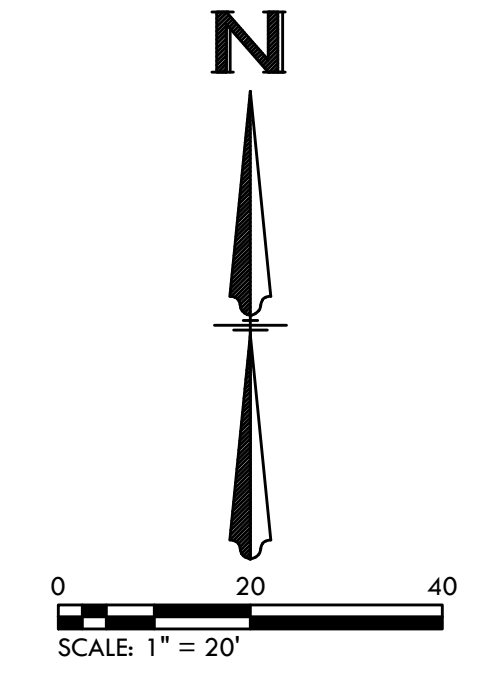


SCALE: NTS



KEY MAP

FOR CONTINUATION SEE SHEET C.02



1:22370 HUNTER RESERVOIR RAW WATER INTAKE CAD, TASK 04 RAW INTAKE IMP PLANS (PART 05) C.D. CAD FILED 04/05/2022 10:17:25 AM BY MARSHAN BENJAMIN

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**HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
TOPOGRAPHY AND
DEMOLITION PLAN**

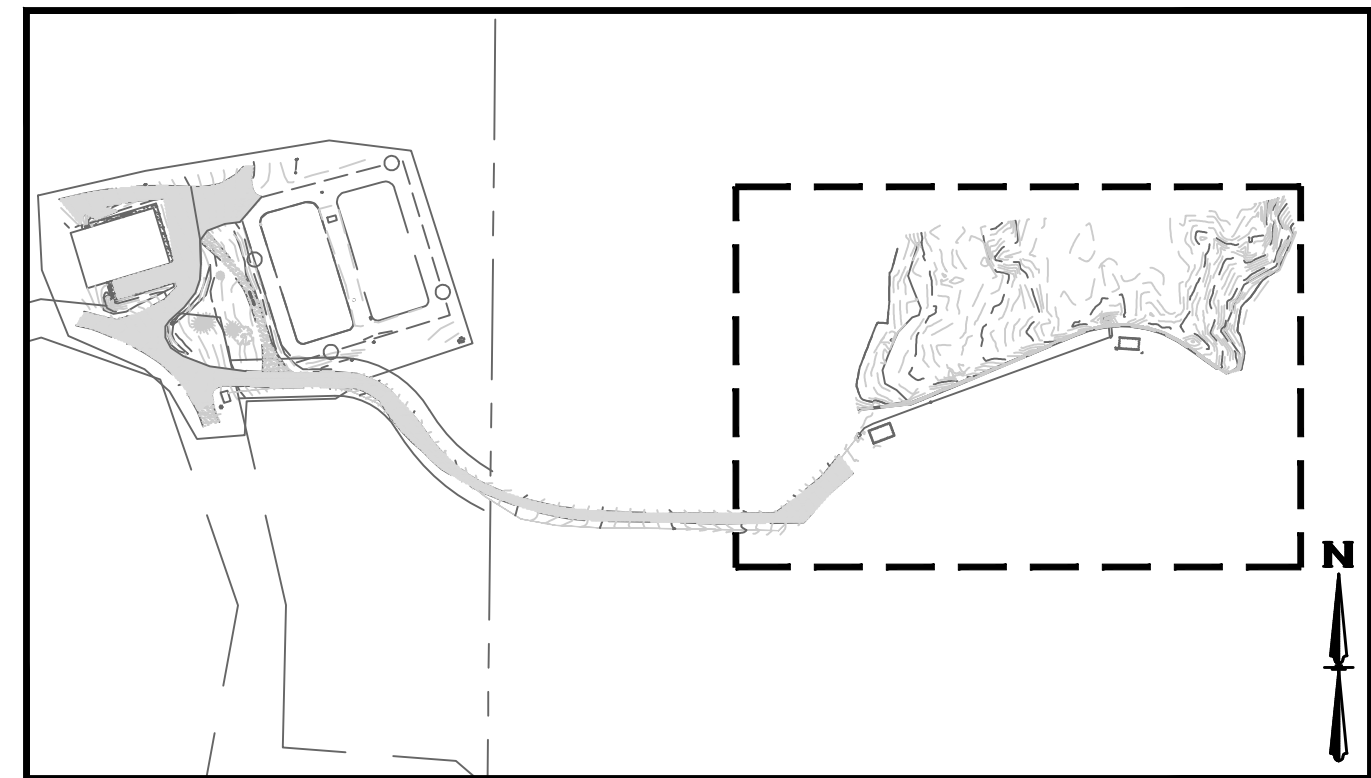
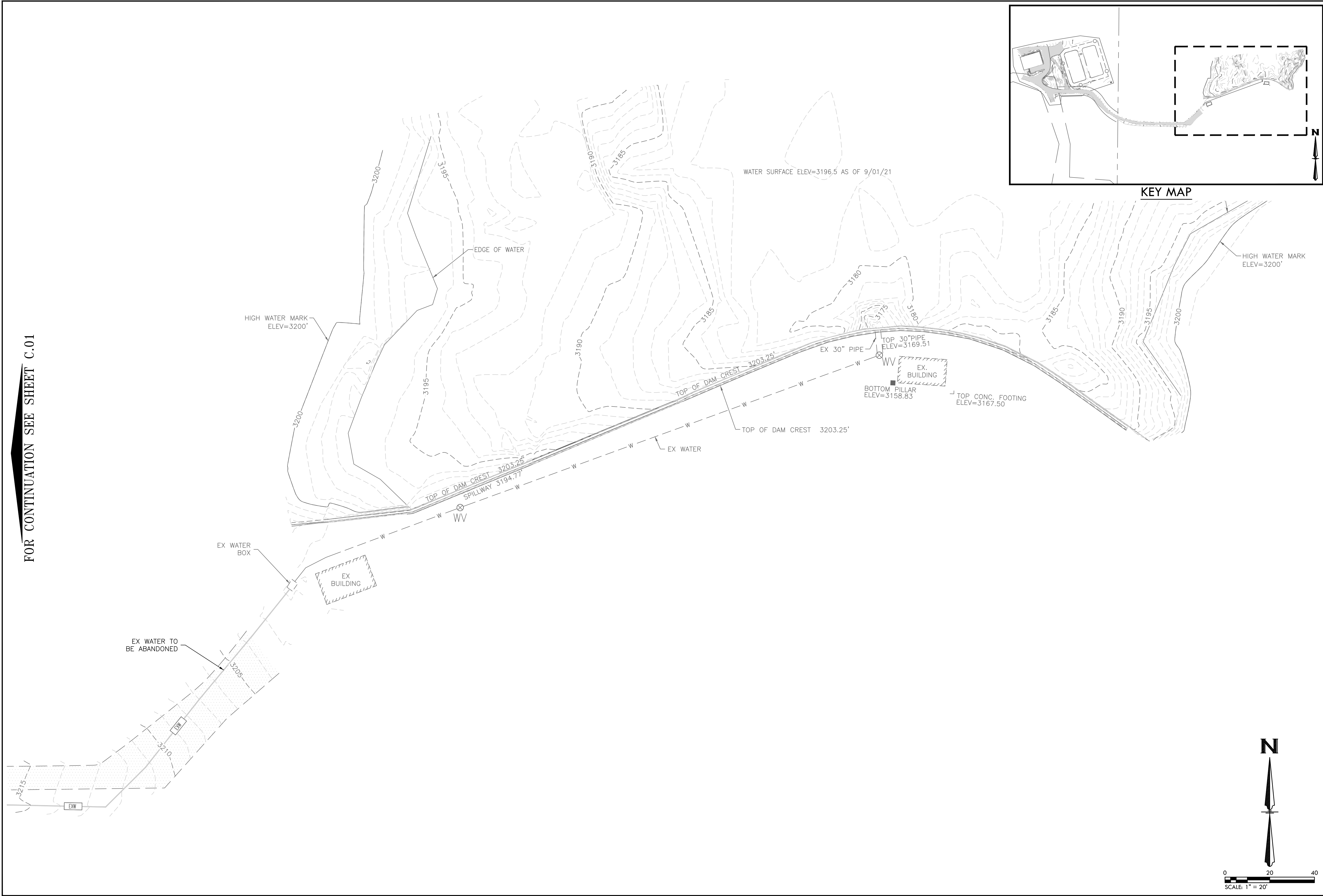
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| DATE APRIL 2022 |
| DRAWING C.01 |
| SHEET NO. 05 OF XX |

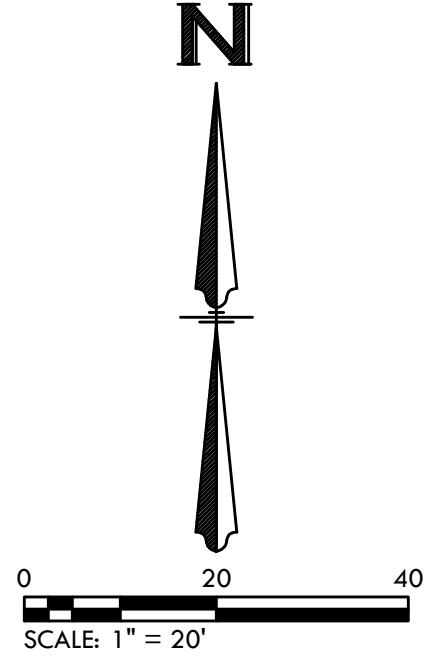
60% IMPROVEMENT PLANS

I:\22270 HUNTER RESERVOIR RAW WATER INTAKE CAD\Task 04 Raw Intake\WP Plans\PARSET (S.C.D.)_CADD\TOPO DEMO.DWG PROJ: 4/28/2022 11:18:17 PM BY: T.MARSHALL (BUDWANT)

FOR CONTINUATION SEE SHEET C.01



KEY MAP



PRELIMINARY



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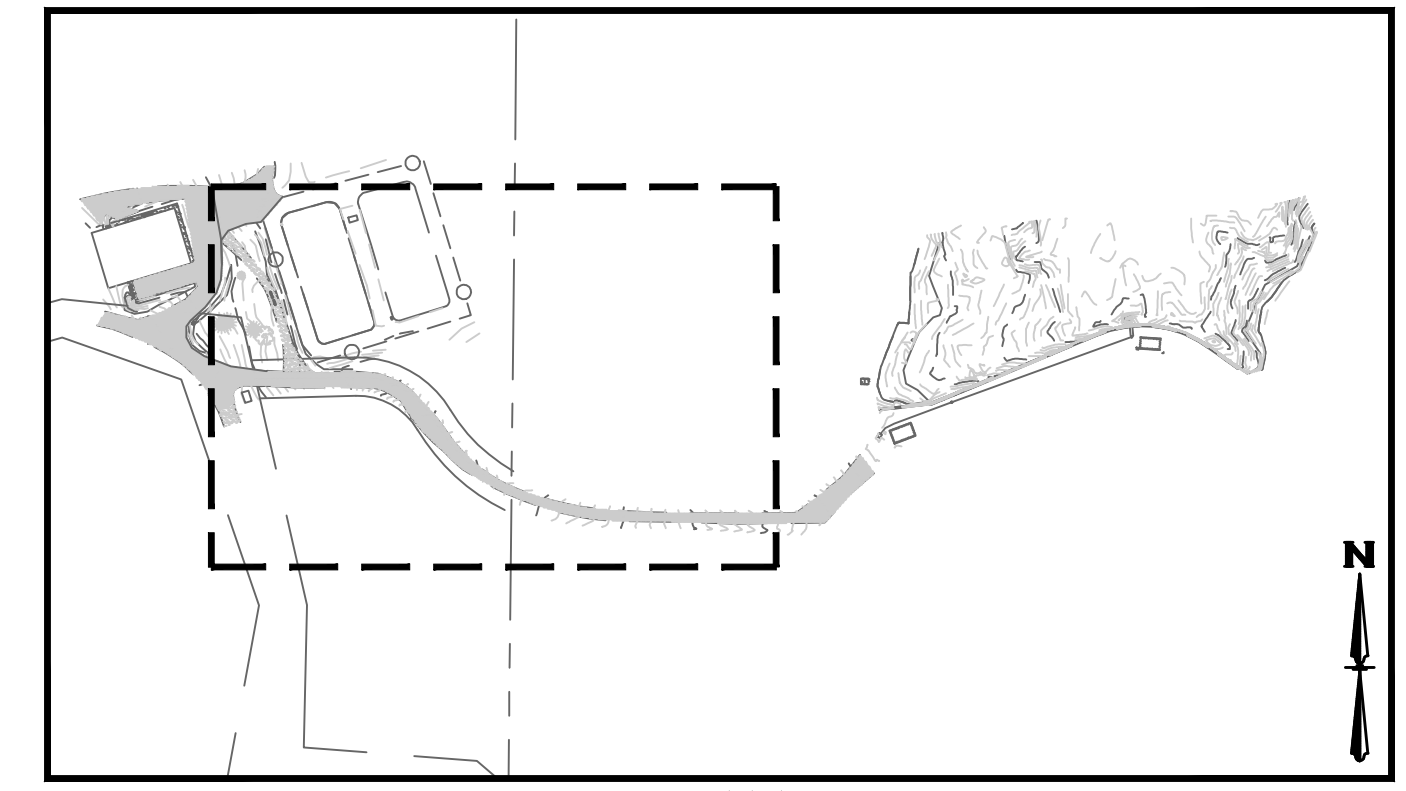
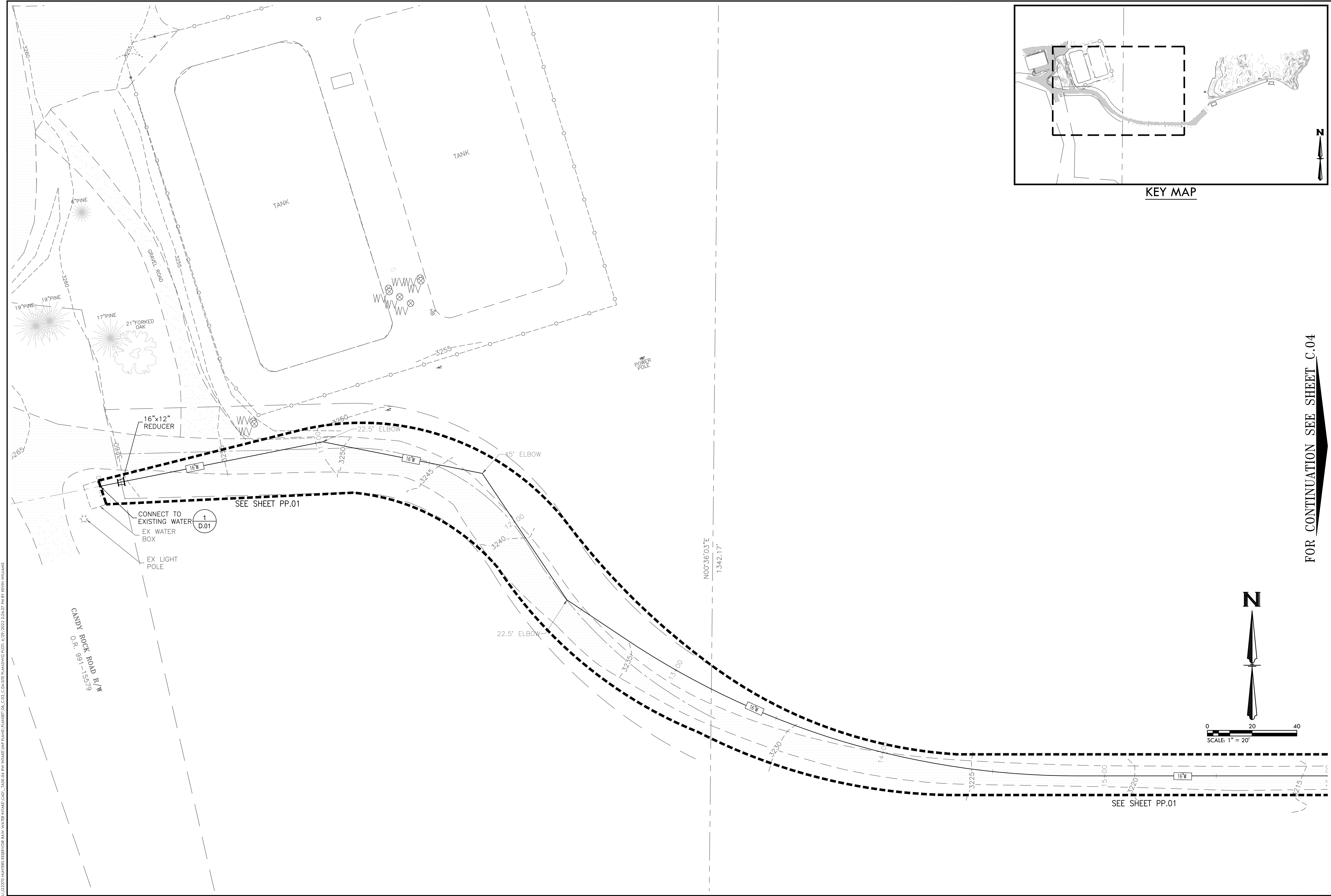
**HUNTER RESERVOIR
 RAW WATER INTAKE PROJECT
 TOPOGRAPHY AND
 DEMOLITION PLAN**

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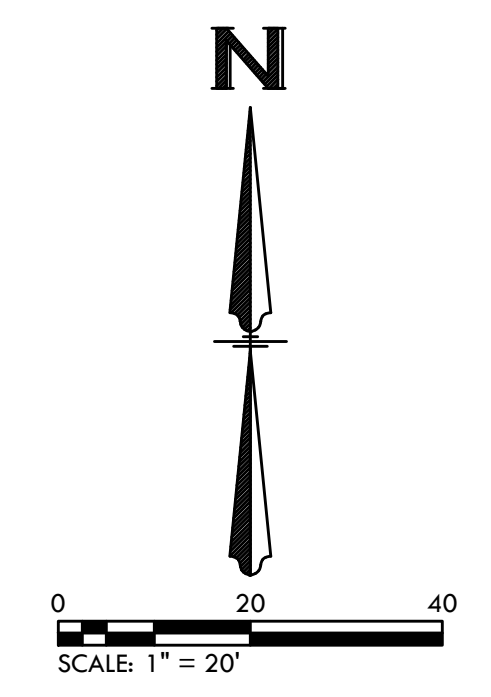
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JMB
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60% IMPROVEMENT PLANS



KEY MAP

FOR CONTINUATION SEE SHEET C.04



SEE SHEET PP.01

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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

UTILITY PLAN

60% IMPROVEMENT PLANS

VERIFY SCALES

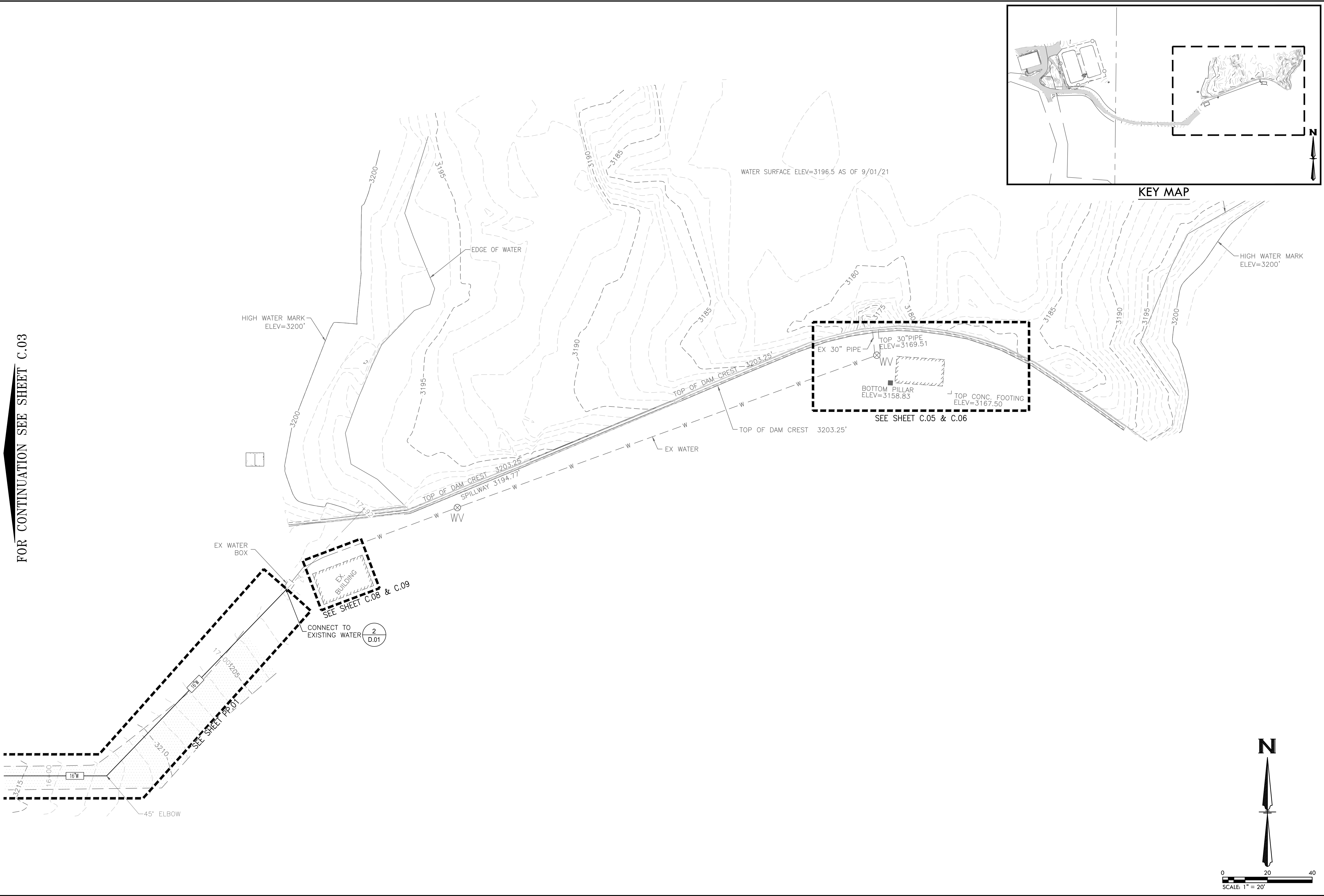
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| DRAWING | C.03 |
| SHEET NO. | 07 OF XX |

1:22370 HUNTER RESERVOIR RAW WATER INTAKE PROJECT (SHEET C.03) CAD-DWG PLANNING TIGS 4/29/2022 2:56:27 PM BY KEVIN WILLIAMS

I:\22370 HUNTER RESERVOIR RAW WATER INTAKE CAD\Task 04 Raw Water Intake Plans\Task 04 C.04 CAD FILE PLANNING TIGR 4/7/2022 2:54:45 PM BY JOHN WILLIAMS

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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

UTILITY PLAN

60% IMPROVEMENT PLANS

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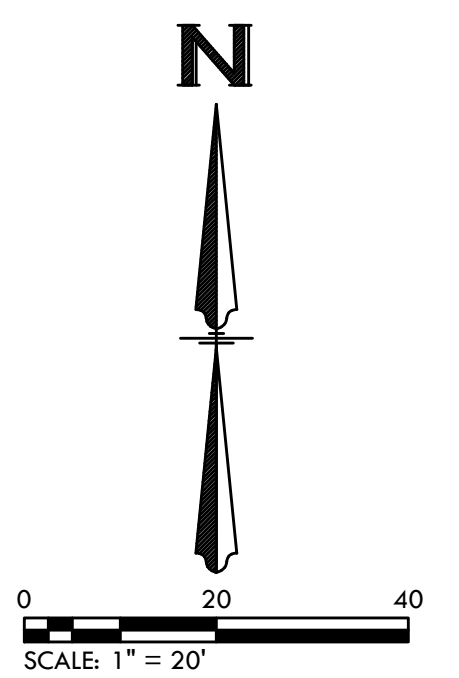
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C.04

SHEET NO.
08 OF XX



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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

PUMP STATION
DEMOLITION PLAN

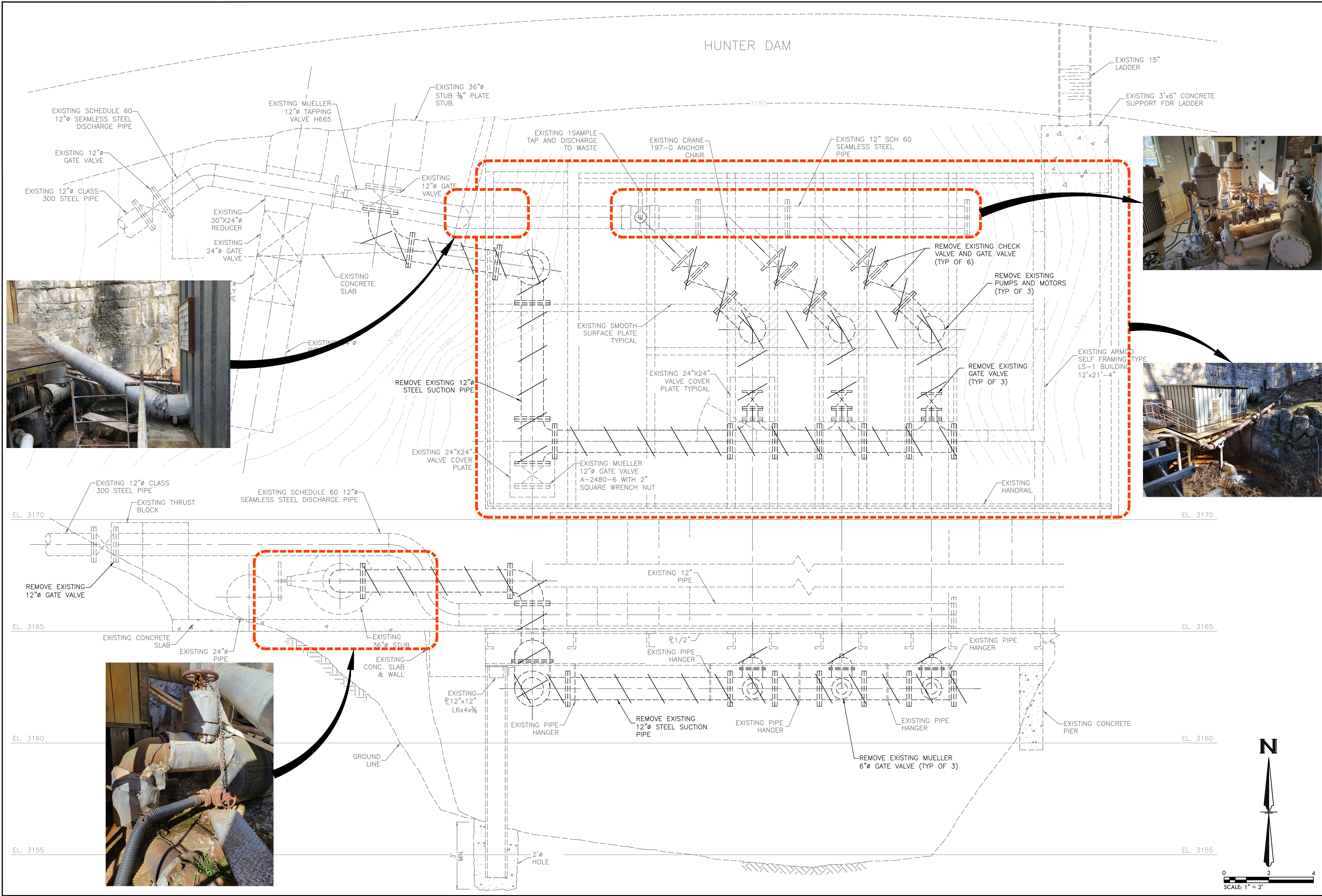
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C.05
SHEET NO.
09 OF XX



1:22220 HUNTER RESERVOIR RAW WATER INTAKE PROJECT (PART 1) OF C.A.S. CUBA-PUMP STATION DEMOLITION PLAN BY EDWIN WILLIAMS

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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT

PUMP STATION
SITE PLAN

60% IMPROVEMENT PLANS

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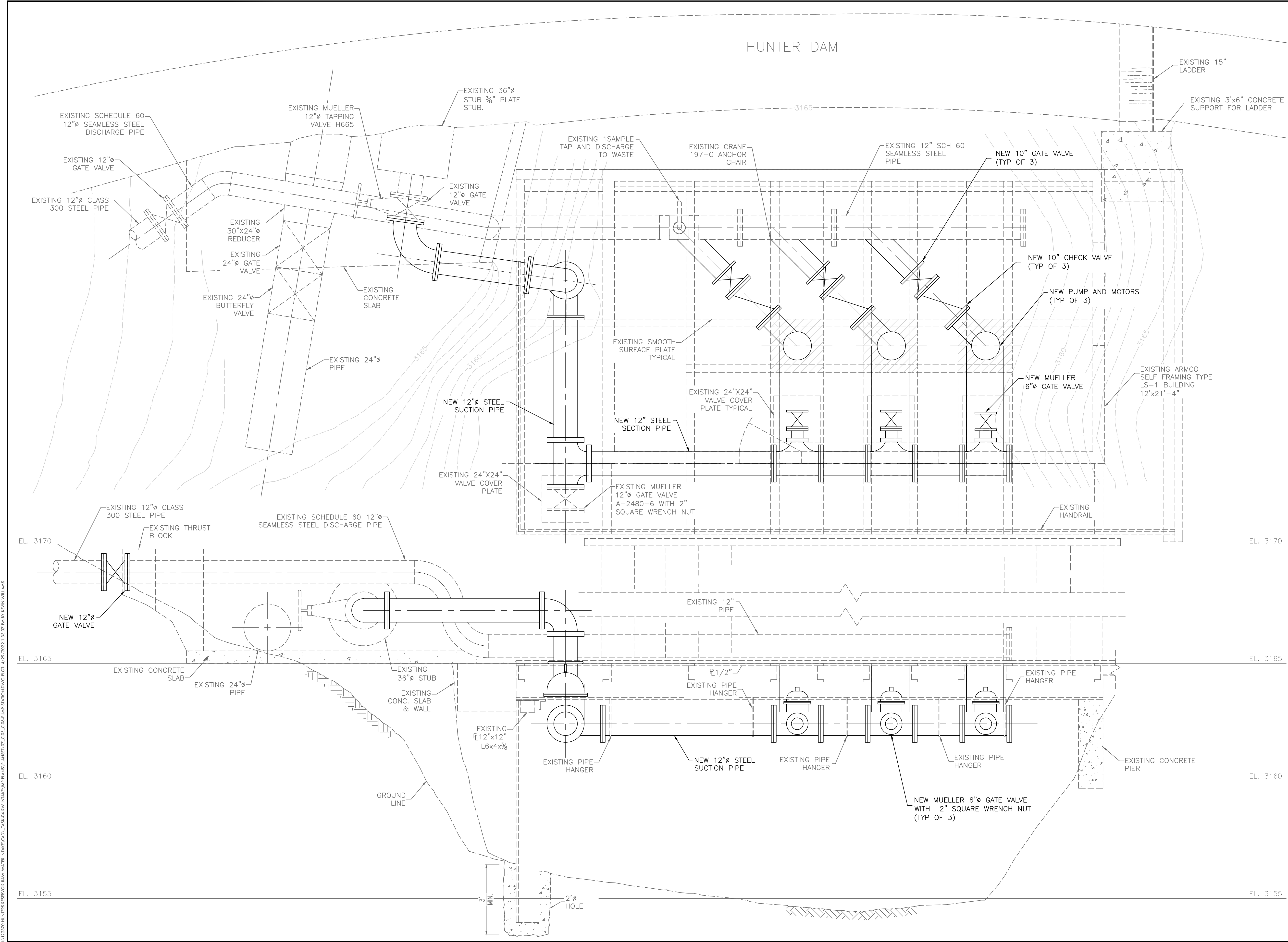
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DATE
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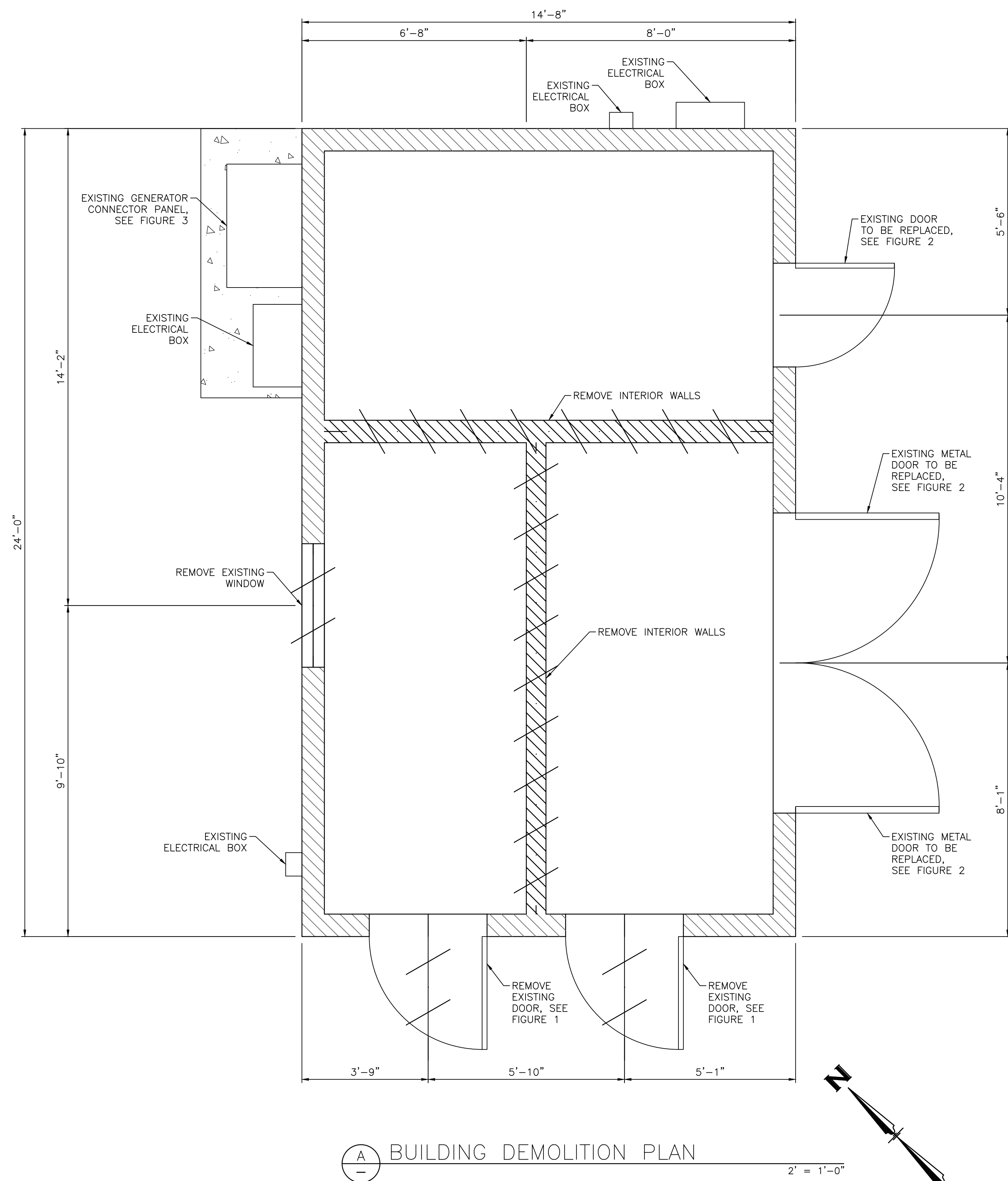
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SHEET NO.
10 OF XX



1:22370 HUNTER RESERVOIR RAW WATER INTAKE PROJECT (PUMP STATION) 4/29/2022 10:30 AM BY ERIN WILLIAMS

1:22220 HUNTER RESERVOIR RAW WATER INTAKE CAD, 1:06K 04 RAW INTAKE UWP PLANS PART 01 (01) 2/21/2022 1:56:17 PM BY KEVIN WILLIAMS



(A) BUILDING DEMOLITION PLAN

2" = 1'-0"



FIGURE 1



FIGURE 2



FIGURE 3

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| REV | DATE | DESCRIPTION |

**HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
UWPA MECHANICAL BUILDING
DEMOLITION PLAN**

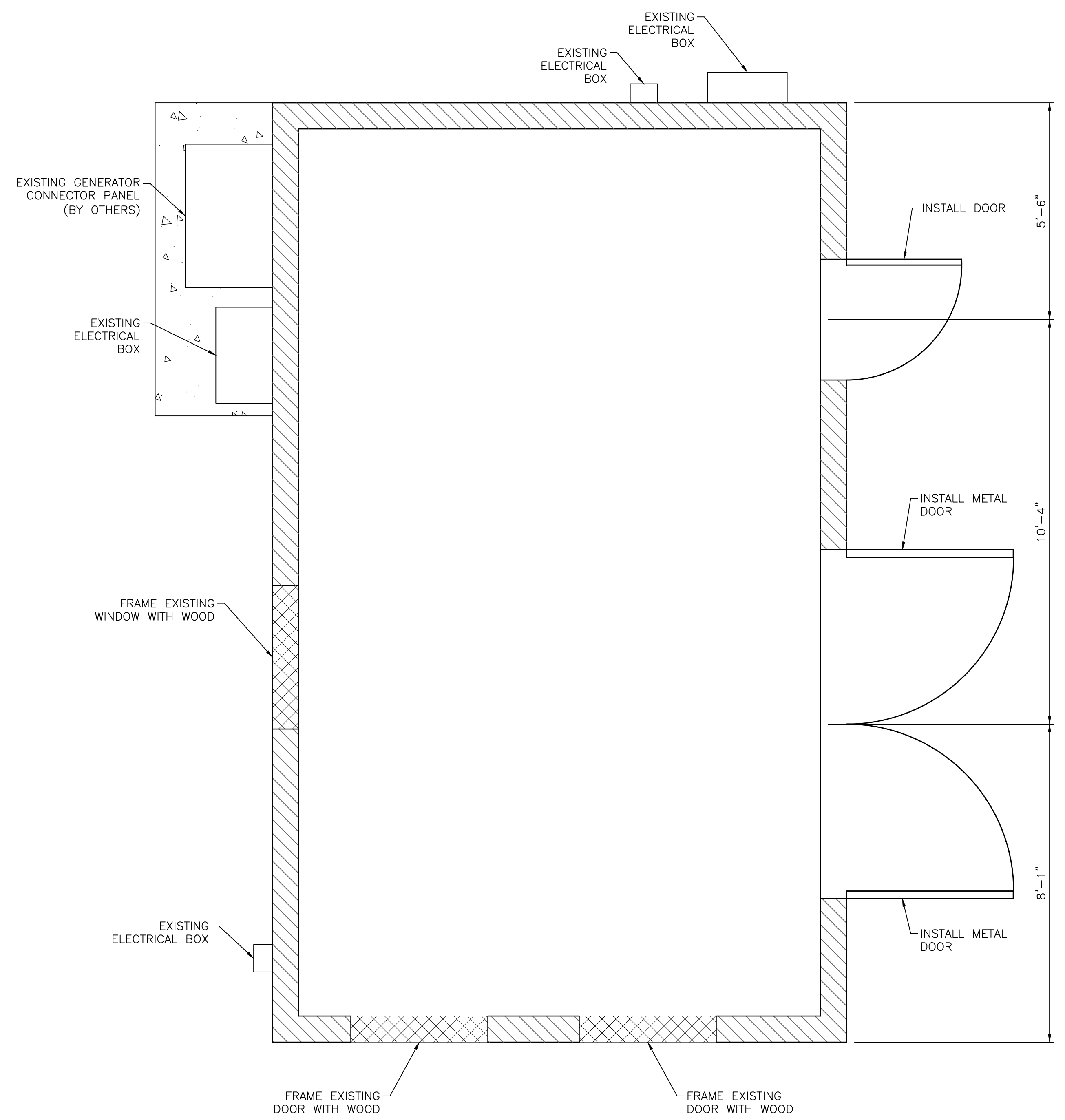
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0 1"
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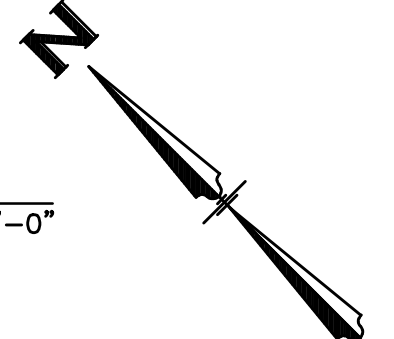
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| CHECKED BY | JMB |
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| DATE | APRIL 2022 |
| DRAWING | C.07 |
| SHEET NO. | 11 OF XX |

60% IMPROVEMENT PLANS

I:\22205 HUNTER RESERVOIR RAW WATER INTAKE CAD\Task 04 RAW INTAKE\WPA Plans\PLANSET 06_CAD\WPA EBD\DWG PLOT_4/28/2022 4:24:17 PM BY: MARSHALL BENJAMIN



(B) BUILDING FLOOR PLAN
2" = 1'-0"



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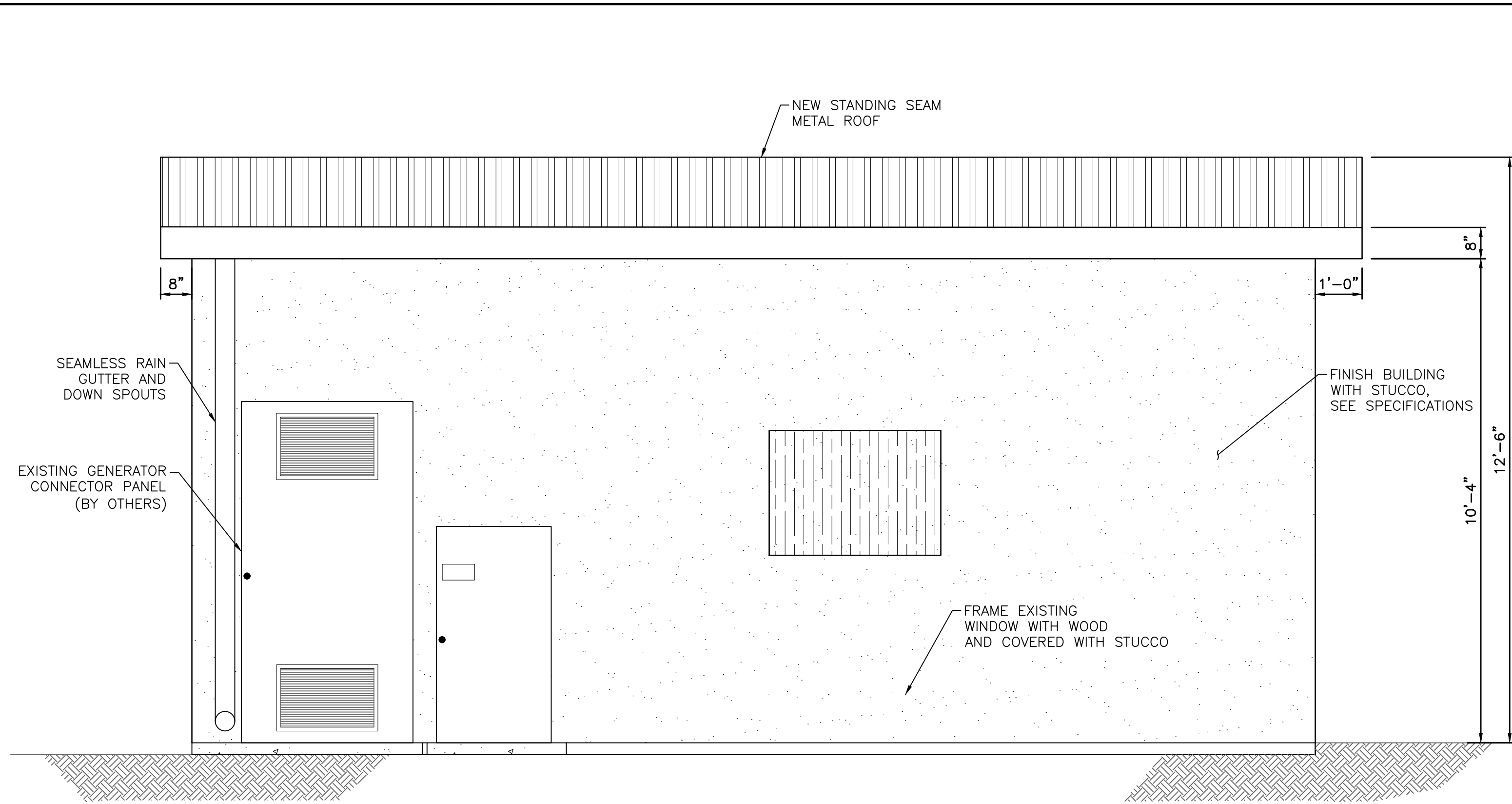
HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
UWPA MECHANICAL BUILDING
FLOOR PLAN

VERIFY SCALES
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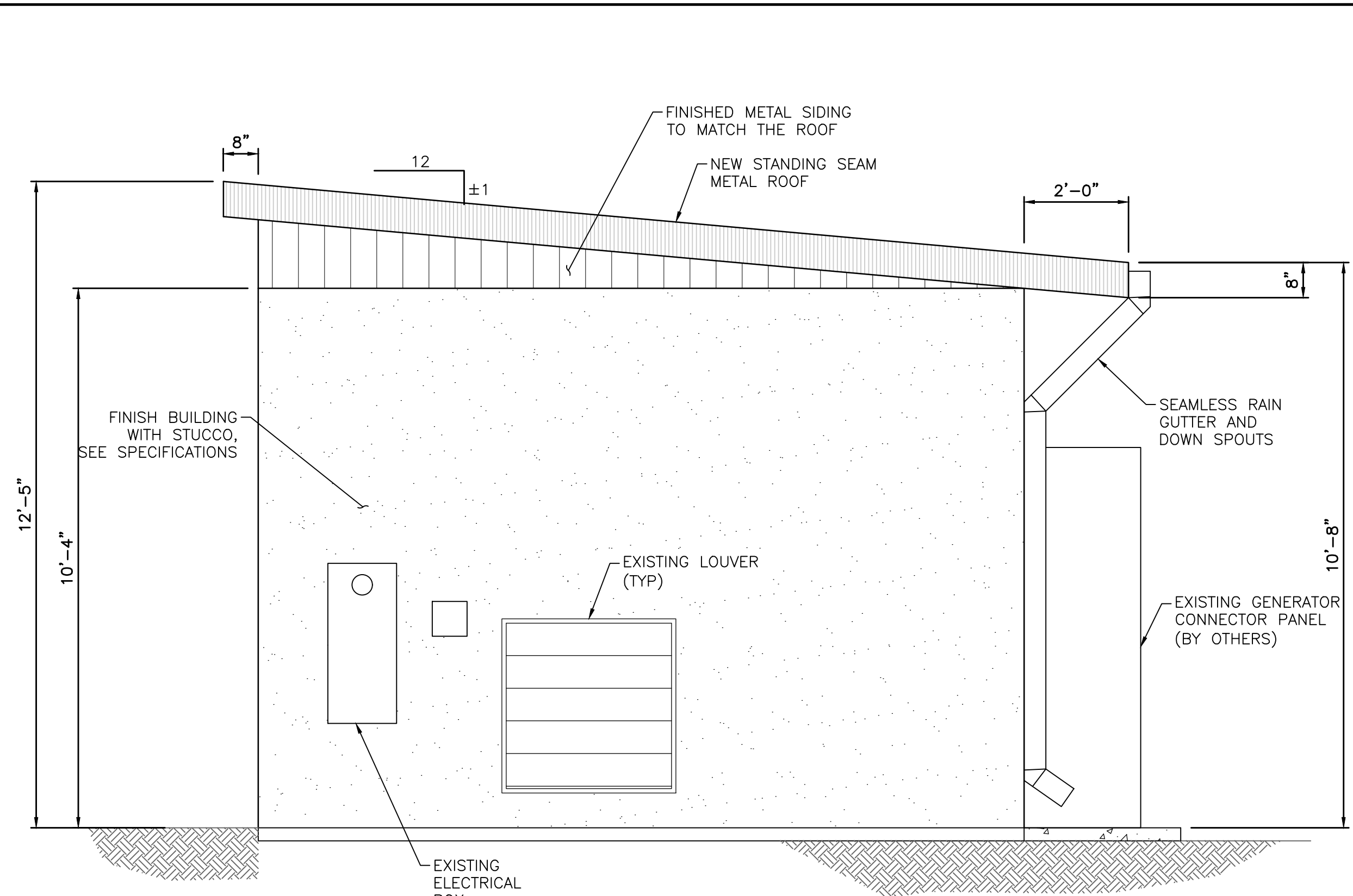
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| DRAWING C.08 |
| SHEET NO. 12 OF XX |

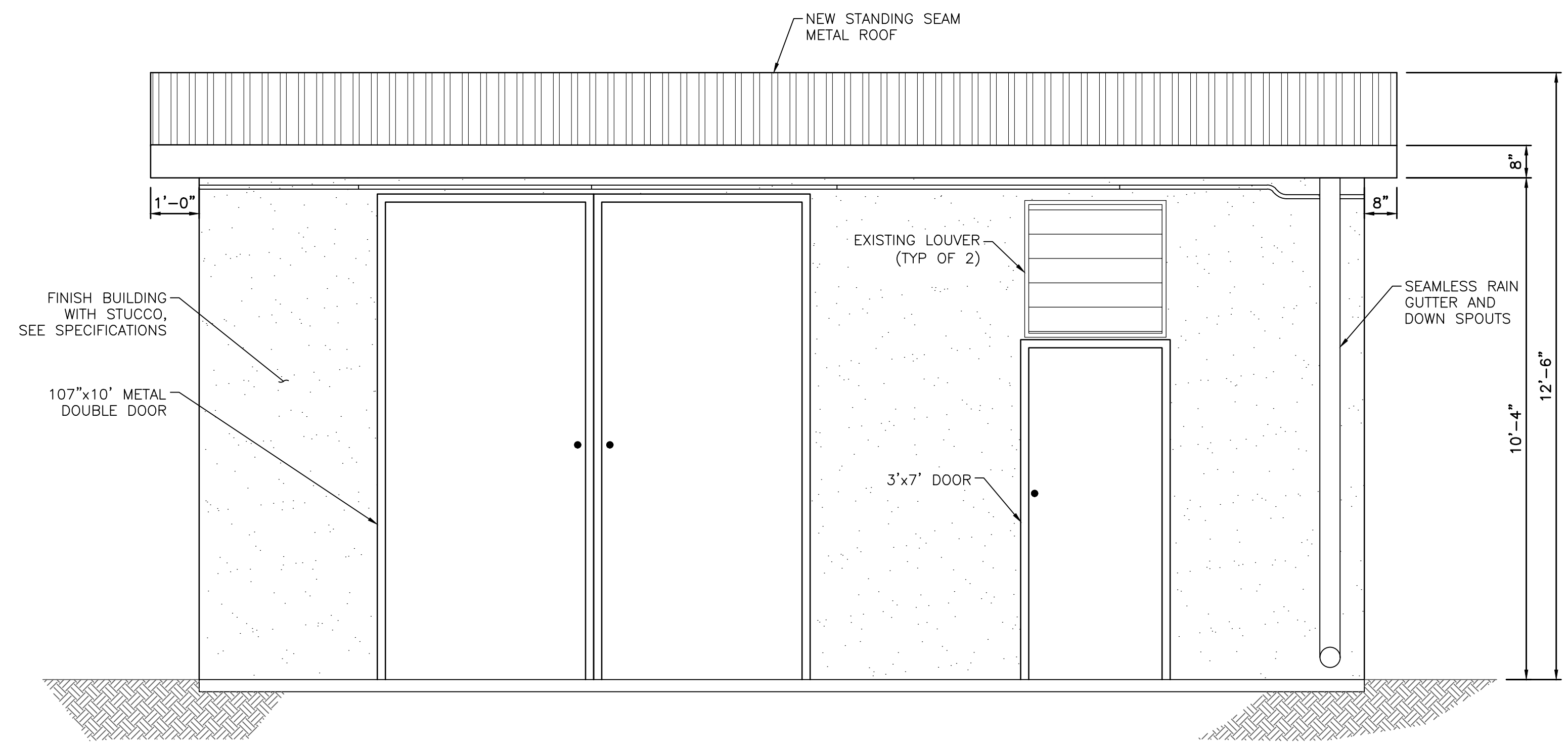
60% IMPROVEMENT PLANS



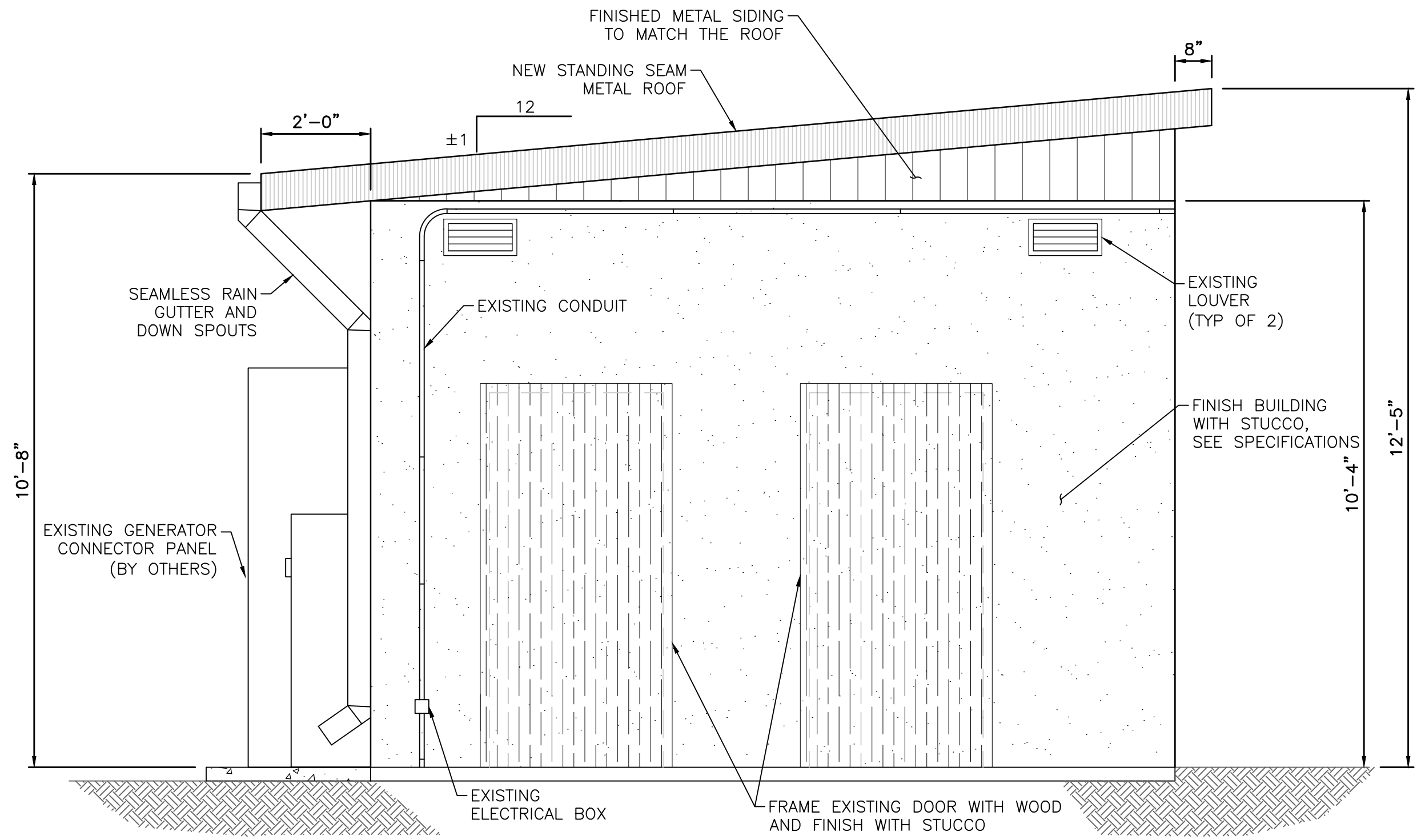
(S) NORTH ELEVATION
2" = 1'-0"



(E) EAST ELEVATION
3" = 1'-0"



(N) SOUTH ELEVATION
2" = 1'-0"



(W) WEST ELEVATION
3" = 1'-0"

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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
UWPA MECHANICAL BUILDING
EXTERIOR ELEVATIONS

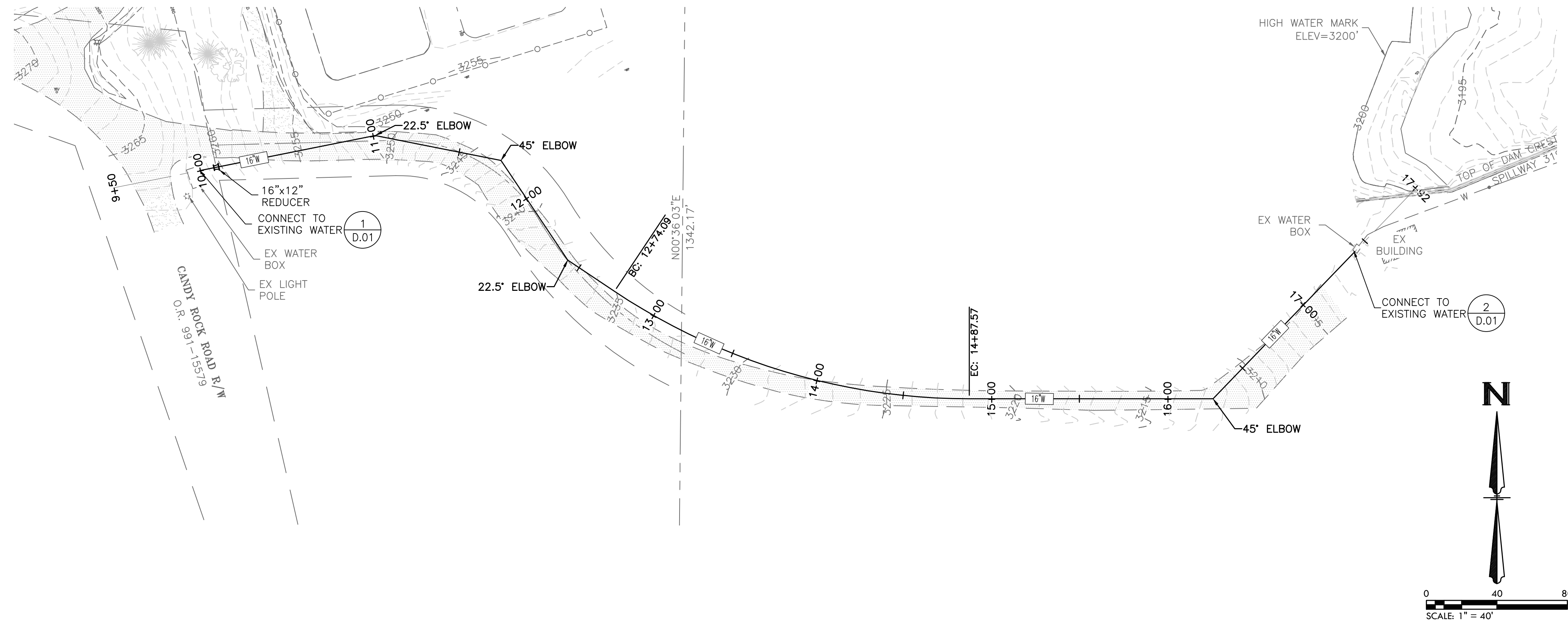
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60% IMPROVEMENT PLANS

1:22220 HUNTER RESERVOIR RAW WATER INTAKE CAD, 1:08:00 PM, 11/11/2021, 10:24:42 AM BY: HANNAH B. EDWARDS



NOTES:
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**HUNTER RESERVOIR
 RAW WATER INTAKE PROJECT**
 PLAN AND PROFILE
 STA 9+50 TO STA 18+00

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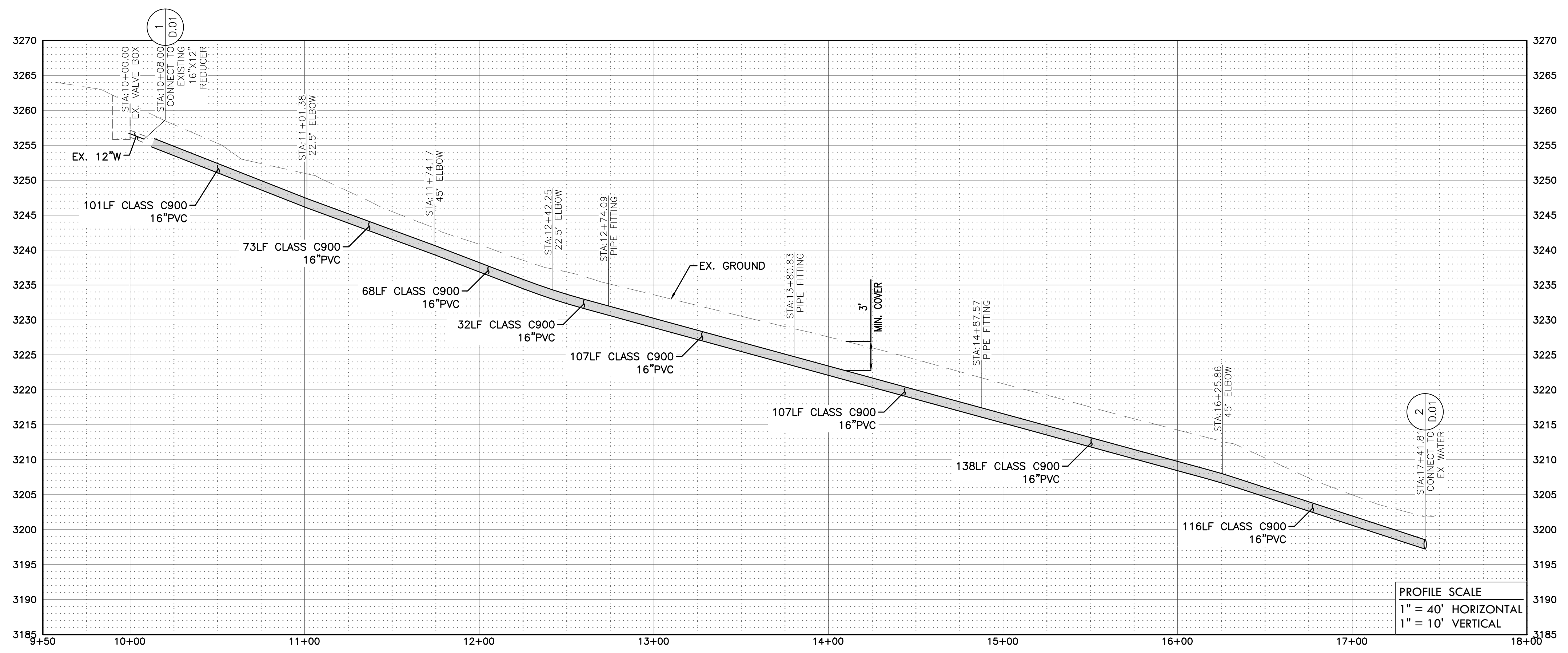
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 JMB

JOB NO.
 J22370

DATE
 APRIL 2022

DRAWING
 PP.01

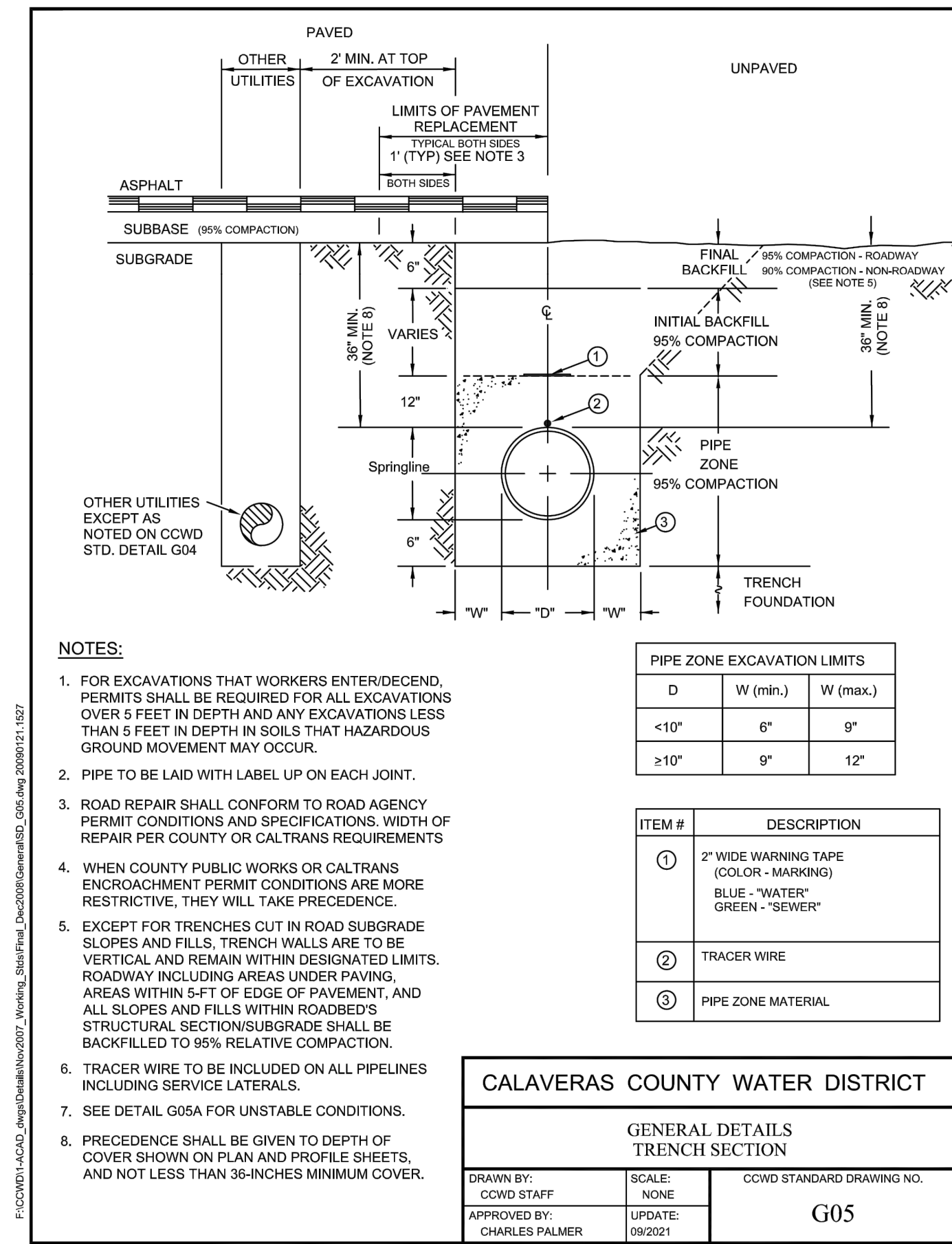
SHEET NO.
 14 OF XX



11/22/2019 HUNTER RESERVOIR RAW WATER INTAKE PROJECT - PP.01 - PLAN & PROFILE (DWG) - 11/22/2019 2:24:48 PM BY REVIN WILLIAMS

60% IMPROVEMENT PLANS

I:\22205 HUNTER RESERVOIR RAW WATER INTAKE CAD\Task 04 Raw Intake (WP Plans) PARALLEL (S.D.) DETAILS.DWG PLOT# 4/29/2022 2:50:36 PM BY KEVIN WILLIAMS



- NOTES:**
- FOR EXCAVATIONS THAT WORKERS ENTER/DESCEND, PERMITS SHALL BE REQUIRED FOR ALL EXCAVATIONS OVER 5 FEET IN DEPTH AND ANY EXCAVATIONS LESS THAN 5 FEET IN DEPTH IN SOILS THAT HAZARDOUS GROUND MOVEMENT MAY OCCUR.
 - PIPE TO BE LAID WITH LABEL UP ON EACH JOINT.
 - ROAD REPAIR SHALL CONFORM TO ROAD AGENCY PERMIT CONDITIONS AND SPECIFICATIONS. WIDTH OF REPAIR PER COUNTY OR CALTRANS REQUIREMENTS.
 - WHEN COUNTY PUBLIC WORKS OR CALTRANS ENCROACHMENT PERMIT CONDITIONS ARE MORE RESTRICTIVE, THEY WILL TAKE PRECEDENCE.
 - EXCEPT FOR TRENCHES CUT IN ROAD SUBGRADE SLOPES AND FILLS, TRENCH WALLS ARE TO BE VERTICAL AND REMAIN WITHIN DESIGNATED LIMITS. ROADWAY INCLUDING AREAS UNDER PAVING, AREAS WITHIN 5-FT OF EDGE OF PAVEMENT, AND ALL SLOPES AND FILLS WITHIN ROADBED'S STRUCTURAL SECTION/SUBGRADE SHALL BE BACKFILLED TO 95% RELATIVE COMPACTION.
 - TRACER WIRE TO BE INCLUDED ON ALL PIPELINES INCLUDING SERVICE LATERALS.
 - SEE DETAIL G05A FOR UNSTABLE CONDITIONS.
 - PRECEDENCE SHALL BE GIVEN TO DEPTH OF COVER SHOWN ON PLAN AND PROFILE SHEETS, AND NOT LESS THAN 36-INCHES MINIMUM COVER.

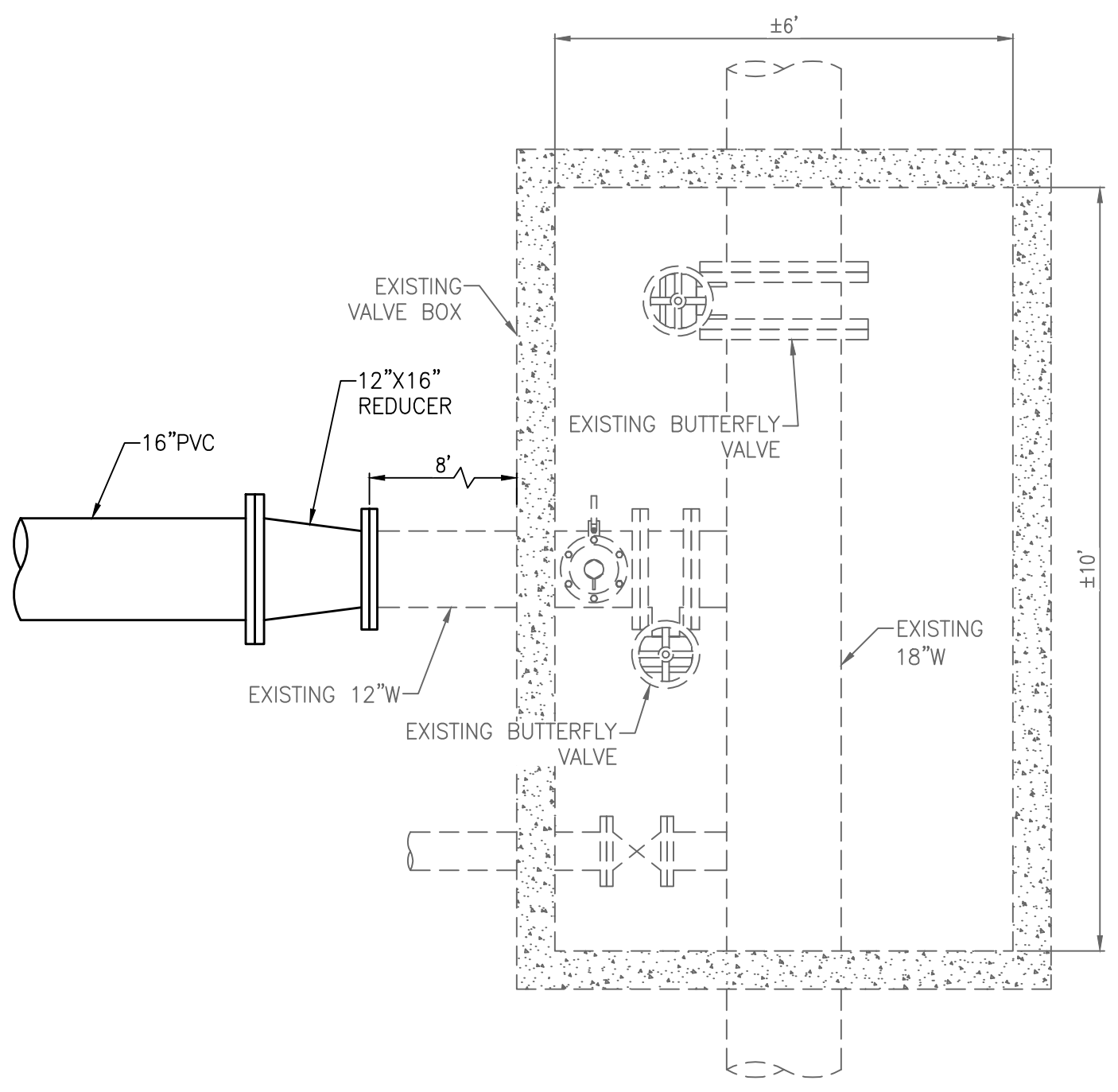
| PIPE ZONE EXCAVATION LIMITS | | |
|-----------------------------|----------|----------|
| D | W (min.) | W (max.) |
| <10" | 6" | 9" |
| ≥10" | 9" | 12" |

| ITEM # | DESCRIPTION |
|--------|--|
| ① | 2" WIDE WARNING TAPE (COLOR - MARKINGS) BLUE - "WATER" GREEN - "SEWER" |
| ② | TRACER WIRE |
| ③ | PIPE ZONE MATERIAL |

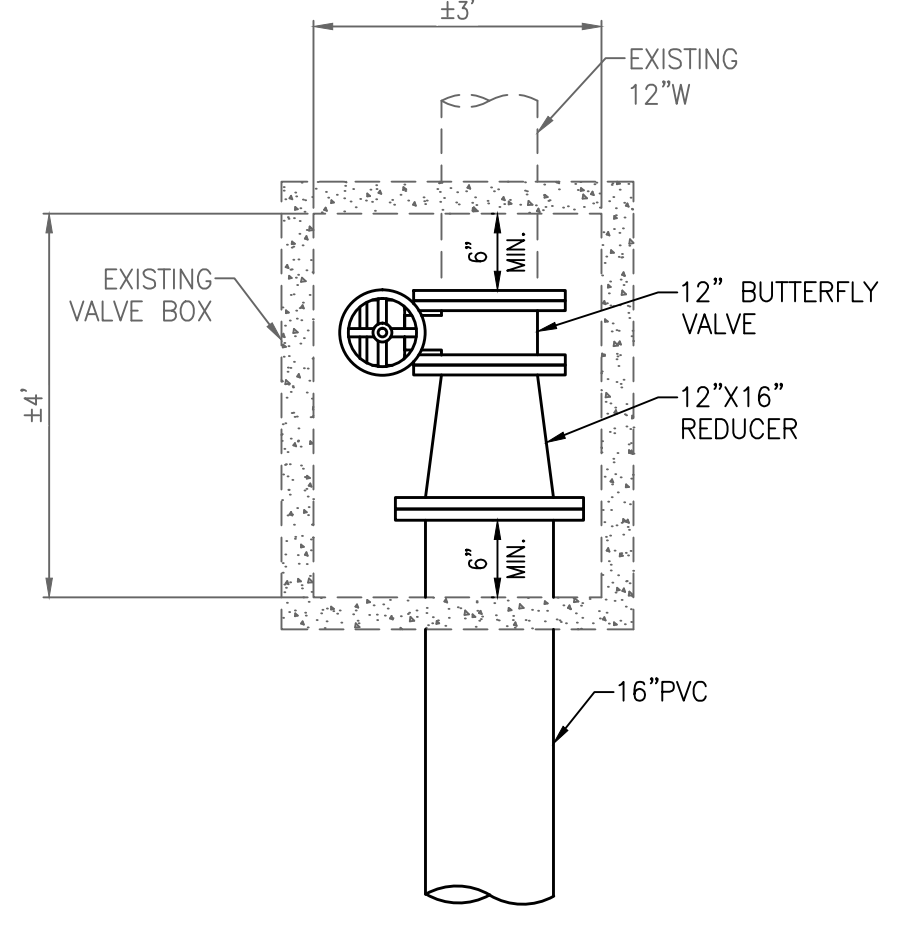
CALAVERAS COUNTY WATER DISTRICT

GENERAL DETAILS
TRENCH SECTION

| | | |
|--------------------------------|--------------------|----------------------------------|
| DRAWN BY: COWD STAFF | SCALE: NONE | COWD STANDARD DRAWING NO. G05 |
| APPROVED BY: CHARLES PALMER | UPDATE: 09/2021 | |



① CONNECT TO EXISTING WATER
SCALE: NTS



② CONNECT TO EXISTING WATER
SCALE: NTS

PRELIMINARY



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**HUNTER RESERVOIR
RAW WATER INTAKE PROJECT**

DETAILS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

| |
|------------------------------|
| DESIGNED BY CRG |
| DRAWN BY KCW |
| CHECKED BY JMB |
| JOB NO. J22370 |
| DATE APRIL 2022 |
| DRAWING D.01 |
| SHEET NO. 15 OF XX |

60% IMPROVEMENT PLANS

260500 ELECTRICAL WORK FOR COMMON RESULTS:

1. ELECTRICAL INSTALLATION SHALL COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, INCLUDING THE FOLLOWING:
TITLE 24, CCR, PART 2, 2019 CBC
TITLE 24, CCR, PART 3, 2019 CEC
TITLE 24, CCR, PART 4, 2019 CMIC
TITLE 24, CCR, PART 9, 2019 CFC
TITLE 24, CCR, PART 6, 2019 CALIFORNIA ENERGY CODE
TITLE 24, CCR, PART 11, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
ALL APPLICABLE LOCAL CODES

2. ELECTRICAL CONTRACTOR SHALL VERIFY POWER, TELEPHONE AND CABLE TV SERVICES AT SITE PRIOR TO BIDDING. SERVICES TO CONFORM TO UTILITY COMPANY REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL ARRANGE FOR SERVICE INSTALLATIONS PER UTILITY COMPANY REQUIREMENTS AND PAY ALL CUSTOMER CHARGED SERVICE COSTS. COORDINATE WITH OWNER AND UTILITY COMPANY FOR SERVICE INSTALLATION.

3. CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, LICENSES, ETC. REQUIRED TO CARRY ON AND COMPLETE THE WORK.

4. PROVIDE ALL LABOR, MATERIALS, TOOLS, PLANT EQUIPMENT, TRANSPORTATION AND PERFORM ALL OPERATIONS NECESSARY FOR ANY REASONABLE INCIDENTAL TO PROPER EXECUTION AND COMPLETION OF ALL "ELECTRICAL WORK" WHETHER SPECIFICALLY MENTIONED OR NOT; ALL AS INDICATED, SPECIFIED HEREIN, AND/OR IMPLIED THEREBY TO CARRY OUT THE APPARENT INTENT THEREOF.

5. ALL MATERIALS SHALL BE NEW AND LISTED WITH THE UNDERWRITERS' LABORATORIES, INC., SHALL MEET THEIR REQUIREMENTS AND SHALL BEAR THEIR LABEL WHEREVER STANDARDS HAVE BEEN ESTABLISHED AND LABEL SERVICE IS REGULARLY FURNISHED BY THAT AGENCY.

6. ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH THE SIZE AND LOCATIONS OF EQUIPMENT ARE SHOWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION AT THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT AND INSTALLING HIS WORK TO AVOID INTERFERENCE WITH OTHER TRADES.

7. WORK SHOWN ON THE DRAWINGS TO BE INSTALLED UNDERGROUND SHALL BE INSTALLED AT LEAST 24" BELOW GRADE UNLESS OTHERWISE NOTED. BACKFILL IN 6" THICK, PROPERLY MOISTENED LAYERS, SOLIDLY PACKED AND IRON TAMPED TO A DENSITY NOT LESS THAN THAT OF ADJACENT, UNDISTURBED EARTH. RESTORE SURFACES, ROADWAYS, WALKS, CURBS, WALLS AND EXISTING UNDERGROUND INSTALLATIONS TO ORIGINAL CONDITION IN AN ACCEPTABLE MANNER.

8. ALL ELECTRICAL EQUIPMENT EXPOSED TO THE WEATHER SHALL BE LISTED FOR EXTERIOR USE.

9. ALL U.L. LISTED EQUIPMENT SHALL BE INSTALLED AS PER THEIR LISTING OR LABELING.

10. IN LOCATIONS WHERE ELECTRICAL EQUIPMENT WOULD BE EXPOSED TO PHYSICAL DAMAGE, ENCLOSURES OR GUARDS SHALL BE SO ARRANGED AND OF SUCH STRENGTH AS TO PREVENT SUCH DAMAGE.

11. CONFLICTS BETWEEN SPECIFICATIONS AND PLANS:

a. ANY CONFLICT BETWEEN ELECTRICAL SPECIFICATIONS AND ELECTRICAL PLANS; OR BETWEEN ELECTRICAL PLANS AND PLANS OF ANOTHER DISCIPLINE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND A RESOLUTION RECEIVED PRIOR TO PROCUREMENT OR INSTALLATION OF THE ITEM IN QUESTION.

b. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT RECEIVING ANY RESOLUTION TO THE CONFLICT HE/SHE DOES SO AT HIS/HER OWN RISK AND SHALL RECTIFY THE WORK TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER OR ENGINEER.

260500.02 SUBMITTALS:

1. PROVIDE THE FOLLOWING SUBMITTALS FOR REVIEW AND APPROVAL. EACH SHALL BE SUBMITTED SEPARATELY TO AVOID DELAYS IN THE REVIEW OF ONE SUBMITTAL IN HOLDING UP REVIEW OF THE REMAINDER.

- a. SERVICE SWITCHBOARD
- b. BASIC ELECTRICAL MATERIALS

260500.03 WORKING CLEARANCES FOR ELECTRICAL SWITCHGEAR:

1. PROVIDE WORKING SPACES FOR ELECTRICAL PANELS AND SWITCHGEAR TO COMPLY WITH CEC 110.26.

2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES INVOLVED TO ENSURE THE CLEARANCES REQUIRED BY ITEM 1 ABOVE ARE PROVIDED.

260526 GROUNDING:

1. GROUND AND BOND ALL EQUIPMENT AS REQUIRED BY GOVERNING CODES AND SPECIFICALLY INCLUDING SWITCHBOARD, PANELBOARDS, MOTOR CASES, METAL PIPING SYSTEMS, STRUCTURAL STEEL, ETC.

2. PROVIDE GROUND WIRES IN ALL FEEDERS AND BRANCH CIRCUITS, SIZE PER CEC TABLE 250.122

3. ALL GROUND WIRES SHALL BE INSULATED GROUND WIRES.

260529 INSTALLATION OF SUPPORT SYSTEMS

1. RACEWAYS, CABLE ASSEMBLIES, BOXES, CABINETS, AND FITTINGS SHALL BE SECURELY FASTENED IN PLACE PER CEC ARTICLE 300.11. SUPPORT WIRES THAT DO NOT PROVIDE SECURE SUPPORT SHALL NOT BE PERMITTED AS THE SOLE SUPPORT. SUPPORT WIRES AND ASSOCIATED FITTINGS THAT PROVIDE SECURE SUPPORT AND THAT ARE INSTALLED IN ADDITION TO THE CEILING GRID SUPPORT WIRES SHALL BE PERMITTED AS THE SOLE SUPPORT, WHERE INDEPENDENT SUPPORT WIRE ARE USED, THEY SHALL BE SECURED AT BOTH ENDS. CABLES AND RACEWAYS SHALL NOT BE SUPPORTED BY CEILING GRIDS.

2. FURNISH ALL NECESSARY FOUNDATIONS, SUPPORTS, BACKING, ETC., FOR ALL ELECTRICAL ENCLOSURES, CONDUITS AND EQUIPMENT.

3. ATTACH ALL BOXES, CABINETS, ETC. TO WOOD WITH WOOD OR LAG SCREWS, TO METAL WITH MACHINE SCREWS OR BOLTS AND TO CONCRETE WITH EXPANSION ANCHORS AND MACHINE SCREWS OR BOLTS.

260533 PULL OR JUNCTION BOXES:

1. INSTALL WHERE INDICATED, OR AS REQUIRED BY CODE, PULL BOXES AND JUNCTION BOXES OF SUFFICIENT SIZE AND CAPACITY TO FACILITATE ALL WIRING. BOXES SHALL BE SIZED TO PROPERLY ACCOMMODATE ALL CONDUCTORS ENTERING SAME.

2. BOXES SHALL BE OF THE SHAPE AND SIZE BEST SUITED FOR THE PARTICULAR APPLICATION AND SHALL BE SUPPORTED DIRECTLY TO STRUCTURAL MEMBERS, FRAMING OR BLOCKING BY MEANS OF SCREWS, ANCHORS, BOLTS OR EMBEDDED IN MASONRY.

a. WEATHERPROOF BOXES SHALL BE APPLETON FD SERIES AND FITTED WITH GASKETED CAST COVERS.

260550 WIRING METHODS: LINE VOLTAGE SYSTEMS (120V AND ABOVE):

1. ALL WIRING SHALL BE INSTALLED IN CONDUITS. CONDUITS SHALL BE RUN CONCEALED IN WALLS AND CEILINGS WHERE FEASIBLE. ALL CONDUITS INSTALLED SURFACE ON WALL SHALL BE PAINTED TO MATCH WALL FINISH. MOUNT EXTERIOR CONDUITS ON WALL ON GALVANIZED UNISTRUTS. ALL SURFACE CONDUIT INSTALLATION/ RUNS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

2. ALL CONDUITS RUN WITHIN INTERIOR FINISHED SPACES SUCH AS OFFICES, BREAKROOM, RESTROOM ETC. SHALL BE RUN CONCEALED.

3. ALL CONDUITS RUN IN DEDICATED ELECTRICAL AND MECHANICAL ROOMS SHALL BE RUN EXPOSED.

4. MINIMUM CONDUIT SIZE SHALL BE 1/2" ABOVE GRADE AND 3/4" UNDERGROUND.

5. MINIMUM ACCEPTABLE CONDUITS ARE:

A. GALVANIZED RIGID STEEL - FOR USE ON:
(1) EXTERIOR WALL SURFACES.

B. GALVANIZED STEEL EMT NOT ALLOWED

C. LIQUID TIGHT STEEL FLEX:

(1) FOR FINAL CONNECTION TO OUTDOOR EQUIPMENT. LENGTH SHALL NOT EXCEED 36".

E. "PVC" SCHEDULE 40:

(1) FOR CONDUITS RUN UNDERGROUND AND FOR UNDER BUILDING SLAB.
(2) CONDUIT STUBUPS THROUGH THE FLOOR OR GRADE SHALL BE IN PVC WRAPPED RIGID STEEL CONDUIT. PVC WRAPPING SHALL EXTEND 6" ABOVE FINISHED FLOOR OR GRADE.
(3) NOT PERMITTED FOR WIRING ABOVE FINISHED FLOOR INSIDE BUILDINGS

F. ALUMINUM CONDUITS, IMC CONDUITS OR ALUMINUM FITTINGS ARE NOT APPROVED FOR USE ON THIS PROJECT.

G. ALL CONDUIT FITTINGS SHALL BE MALLEABLE IRON/STEEL.

6. CONDUCTORS SHALL BE COPPER CONDUCTORS TYPE THHN/THWN UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.

7. ALL DEVICES, CONDUITS, RACEWAYS AND CABLES SHOWN ARE NEW TO BE PROVIDED UNLESS OTHERWISE NOTED.

260553 NAMEPLATES & IDENTIFICATION:

1. INSTALL ENGRAVED NAMEPLATES FOR EACH PANELBOARD, CABINET, DISCONNECT, ETC. NAMEPLATES SHALL BE SECURELY FASTENED TO THE EQUIPMENT WITH #4 PHILLIPS ROUND HEAD CADMIUM PLATED SELF-TAPPING SCREWS, BRASS BOLT.

2. PROVIDE CIRCUIT LABEL INDICATING PANEL AND CIRCUIT NUMBER ON EACH COVERPLATE FOR EACH RECEPTACLE AND LIGHT SWITCH, MOTION SENSOR SWITCH. SUCH LABEL SHALL BE SELF ADHESIVE WHITE TAPE WITH BLACK LETTERS MADE ON A LABEL MAKER.

3. ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES PER CALIFORNIA ENERGY CODE SECTION 130.5(i)(3).

260573 ARC FLASH HAZARDS:

1. PROVIDE WARNING LABEL ON ELECTRICAL EQUIPMENT OF POSSIBLE ARC FLASH HAZARDS PER C.E.C. 110.16.

260800 TESTING:

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE FREE FROM SHORT CIRCUITS AND IMPROPER GROUNDS. TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDS BEFORE ANY FIXTURES OR EQUIPMENT ARE CONNECTED AND WHERE SUCH TESTS INDICATE FAULTY INSULATION OR OTHER DEFECTS, THEY SHALL BE LOCATED, REPAIRED AND RETESTED AT THE CONTRACTOR'S EXPENSE. PROVIDE ALL INSTRUMENTS TO MAKE SUCH TESTS.

2. DEMONSTRATE TO THE OWNER AND THE ENGINEER THAT THE ENTIRE INSTALLATION IS COMPLETE, IN PROPER OPERATING CONDITION AND THAT THE CONTRACT HAS BEEN PROPERLY AND FULLY EXECUTED.

260800.01 CERTIFICATE OF COMPLETION:

1. ACCEPTANCE OF THE CONTRACT FOR THIS WORK INCLUDES THIS GUARANTEE: THE CONTRACTOR GUARANTEES THAT HE HAS PERFORMED THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR AGREES TO REPLACE OR REPAIR, AS NEW ANY DEFECTIVE WORK, MATERIALS, OR PART WHICH MAY APPEAR WITHIN ONE YEAR (1) OF FINAL ACCEPTANCE, IF, IN THE OPINION OF THE ARCHITECT OR THE OWNER, THE DEFECT IS DUE TO WORKMANSHIP OR MATERIAL.

260800.02 WARRANTIES, GUARANTEES, CERTIFICATES, ETC.:

1. WARRANTIES, GUARANTEES, CERTIFICATES, ETC. THAT ARE FURNISHED AND AVAILABLE FOR EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED UNDER THIS SECTION SHALL BE PROPERLY FILLED OUT AS OF DATE OF ACCEPTANCE OF THE WORK BY THE OWNER AND SHALL BE DELIVERED TO THE ARCHITECTS.

260811 OPERATIONS AND MAINTENANCE (O&M) MANUALS:

1. PROVIDE AS-BUILT DRAWINGS.

A. UPON COMPLETION OF WORK COVERED BY THIS CONTRACT, PROVIDE AS-BUILT PLANS UPON WHICH SHALL BE SHOWN ALL CHANGES OF FEEDERS, PANELS, CIRCUITS, LIGHT FIXTURES, ETC., FOR THIS PROJECT AND INSTALLED UNDER THIS CONTRACT, WHICH ARE NOT IN ACCORD WITH THESE DRAWINGS FOR THE WORK.

B. ALL SYMBOLS AND DESIGNATIONS USED IN PREPARING "AS-BUILT" DRAWINGS SHALL MATCH THOSE USED IN CONTRACT DRAWINGS.

2. PROVIDE OF OPERATION AND MAINTENANCE MANUAL FOR POWER, AND LIGHTING SYSTEMS.

3. SCAN BOTH "AS-BUILT" PLANS AND O&M MANUAL ON TO A CD AND PROVIDE (3) COPIES OF THE CD TO OWNER PRIOR TO RELEASE OF FINAL PAYMENT.

262200 TRANSFORMERS:

1. TRANSFORMERS SHALL BE DRY TYPE LOW LOSS TRANSFORMERS TYPE AS MANUFACTURED BY SQUARE D OR APPROVED EQUAL THE SAME MANUFACTURER AS THE MAIN SERVICE SWITCHBOARD.

2. TRANSFORMERS SHALL BE THREE PHASE, FOUR WIRE OR SINGLE PHASE, THREE WIRE, WITH KVA RATING AND VOLTAGES AS INDICATED ON THE PLANS. PROVIDE FULL CAPACITY, OFF LOAD PRIMARY TAPS.

3. TRANSFORMERS SHALL BE 150 DEGREES C TEMPERATURE RISE ABOVE 40 DEGREE C AMBIENT. INSULATION SHALL BE IN ACCORDANCE WITH THE LATEST NEMA STANDARDS FOR A 220 DEGREE C UL COMPONENT RECOGNIZED INSULATION SYSTEM.

4. TRANSFORMER COILS SHALL BE COPPER OR ALUMINUM AND OF THE CONTINUOUS WIRE WOUND CONSTRUCTION AND SHALL BE IMPREGNATED WITH NON-HYGROSCOPIC THERMO SETTING VARNISH. TRANSFORMER CORES SHALL BE CONSTRUCTED FROM HIGH GRADE, NON-AGING SILICON STEEL WITH MAGNETIC PERMEABILITY AND LOW LOSSES. THE COMPLETE CORE AND COIL ASSEMBLY SHALL BE SUITABLY CLAMPED AND BRACED MECHANICALLY. ADDITIONALLY, PROVIDE AN ELECTROSTATIC SHIELD ENVELOPING THE FULL HEIGHT OF THE WINDING IN CASE OF SHIELDED TRANSFORMERS.

5. TRANSFORMERS SHALL BE IN HEAVY GAUGE, SHEET STEEL, VENTILATED ENCLOSURE PER UL, NEMA AND CEC STANDARDS EXCEPT ONES CALLED OUT ON THE PLANS TO HAVE NON-VENTILATED ENCLOSURES.

6. TRANSFORMER SOUND LEVELS SHALL NOT EXCEED 45dB FOR UNITS UP TO 50KVA AND 50dB FOR UNITS 51 TO 150KVA.

7. TRANSFORMERS SHALL BE SUITABLE FOR FLOOR OR WALL MOUNTING AS INDICATED ON THE DRAWINGS.

8. TRANSFORMERS FOR OUTDOORS INSTALLATION SHALL BE WEATHERPROOF. PROVIDE WEATHER SHIELDS WHERE SO REQUIRED.

9. PROVIDE CONCRETE PAD (FOR GRADE MOUNTING)

10. CONDUITS FOR TRANSFORMER CONNECTIONS SHALL BE LOCATED WITHIN THE FOOTPRINT OF THE UNITS AS FAR AS PRACTICAL.

11. CLEAN ALL DEBRIS FROM WITHIN THE TRANSFORMER.

262400 MAIN SERVICE SWITCHBOARD / PEDESTALS

1. TESCO, OR APPROVED EQUAL, METAL ENCLOSED UNIT WITH UGFS, METERING SECTION, MAIN DISCONNECT AND GROUP MOUNTED, MOULDED CASE BRANCH CIRCUIT BREAKERS COMPLETE WITH INTERCONNECTING BUS IN A FACTORY ASSEMBLED, INTEGRATED UNIT, ARRANGEMENT AND RATINGS OF EQUIPMENT ARE SHOWN ON DRAWINGS. UNIT SHALL MEET ALL UTILITY COMPANY REQUIREMENTS.

2. SWITCHBOARD SHALL BE ENCLOSED STRUCTURE OF CODE GAUGE STEEL PLATES WITH REMOVABLE FRONT. FULL FRONT ACCESS SHALL BE PROVIDED FOR CONNECTIONS AND OPERATIONS. FRONT SECTIONS SHALL BE ATTACHED WITH MACHINE SCREWS, EVENLY SPACED, HINGED DOOR SHALL HAVE VAULT TYPE HANDLES AND LOCKS. UNITS SHALL BE NEMA 3R FOR OUTDOOR INSTALLATION

3. PROVIDE INCOMING SERVICE TERMINALS, METERING SECTIONS, CTs, ETC. IN ACCORDANCE WITH THE UTILITY COMPANY AND PLANS.

4. PROVIDE A COPPER GROUND BUS.

262417 PANELBOARDS:

1. UNITS SHALL BE FLUSH OR SURFACE MOUNTED AS INDICATED ON THE PANEL SCHEDULE, WITH THE NUMBER AND SIZE OF BREAKERS AS INDICATED ON THE PANEL SCHEDULE. SINGLE POLE, TWO POLE, AND THREE POLE BREAKERS SHALL BE BOLT-ON TYPE. MULTIPLE POLE BREAKERS SHALL HAVE COMMON INTERNAL TRIP CONNECTION. SINGLE POLE BREAKERS SHALL NOT BE TIED AT HANDLES TO FORM MULTIPLE POLE BREAKERS. THE PANEL DOORS SHALL BE DOOR-IN-DOOR CONSTRUCTION AND SHALL HAVE FLUSH TYPE LOCKS. ALL LOCKS SHALL BE KEVED ALIKE AND HAVE TYPEWRITTEN DIRECTORIES INDICATING FIXTURES, EQUIPMENT, OR OUTLETS SERVICE BY EACH BREAKER. PANELS SHALL HAVE COPPER BUSSING.

262726 WIRING DEVICES:

1. UNITS SHALL BE EQUAL TO THE DEVICES SET FORTH HEREIN, IN STANDARD COLORS (BROWN, WHITE, GREY, BEIGE OR IVORY) AS SELECTED BY THE ARCHITECT.

| A. WIRING DEVICES | LEVITON # | HUBBELL # | P & S # |
|------------------------------|-----------|-----------|---------|
| DUPLEX CONV. OUTLET, 15A | 5262 | HBL5262 | 5262 |
| DUPLEX CONV. OUTLET, 20A | 5362 | HBL5362 | 5362 |
| DUPLEX CONV. GFI OUTLET, 15A | 6599 | GF15 | 1595L |
| DUPLEX CONV. GFI OUTLET, 20A | 6899 | GF15 | 2095L |

2. ALL RECEPTACLES INSTALLED OUTDOORS SHALL BE WEATHERPROOF AND HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION.

262726.02 DEVICE PLATES:

1. ALL DEVICE PLATES FOR INDOOR USE SHALL BE STAINLESS STEEL.

2. ALL DEVICE BOXES WHICH ARE INSTALLED IN FIRE RATED WALL ASSEMBLY AND IS PROVIDED WITH A FIRE-STOPPING PUTTY PAD SHALL HAVE A BRUSHED STAINLESS STEEL COVERPLATE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PUTTY PAD.

3. DEVICE COVERS FOR SURFACE MOUNTED BOXES SHALL BE 1/2" RAISED STEEL PLATES.

4. DEVICE COVERS FOR DEVICES LOCATED IN DAMP LOCATIONS SHALL COMPLY WITH CEC 406.9(A).

5. DEVICE COVERS FOR DEVICES LOCATED IN WET LOCATIONS SHALL COMPLY WITH CEC 406.9(B).

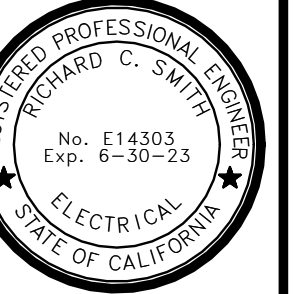
265100 LIGHTING:

1. ALL LUMINARIES SHALL BE CERTIFIED BY THE MANUFACTURER TO THE CALIFORNIA ENERGY COMMISSION:

A. ALL LUMINARIES SPECIFIED ON THIS PROJECT SHALL BE AS NOTED IN THE "LIGHT FIXTURE SCHEDULE" ON THESE PLANS. NO SUBSTITUTES ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

B. ALL INTERIOR LUMINARIES SHALL BE PROVIDES WITH 0-10V DIMMING LED DRIVERS.

C. ALL EXTERIOR LUMINARIES SHALL BE PROVIDED WITH 0-10V DIMMING LED DRIVERS WITH INTEGRAL MOTION SENSORS WHERE SO NOTED.



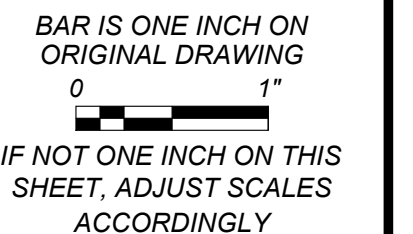
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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
ELECTRICAL INFORMATION

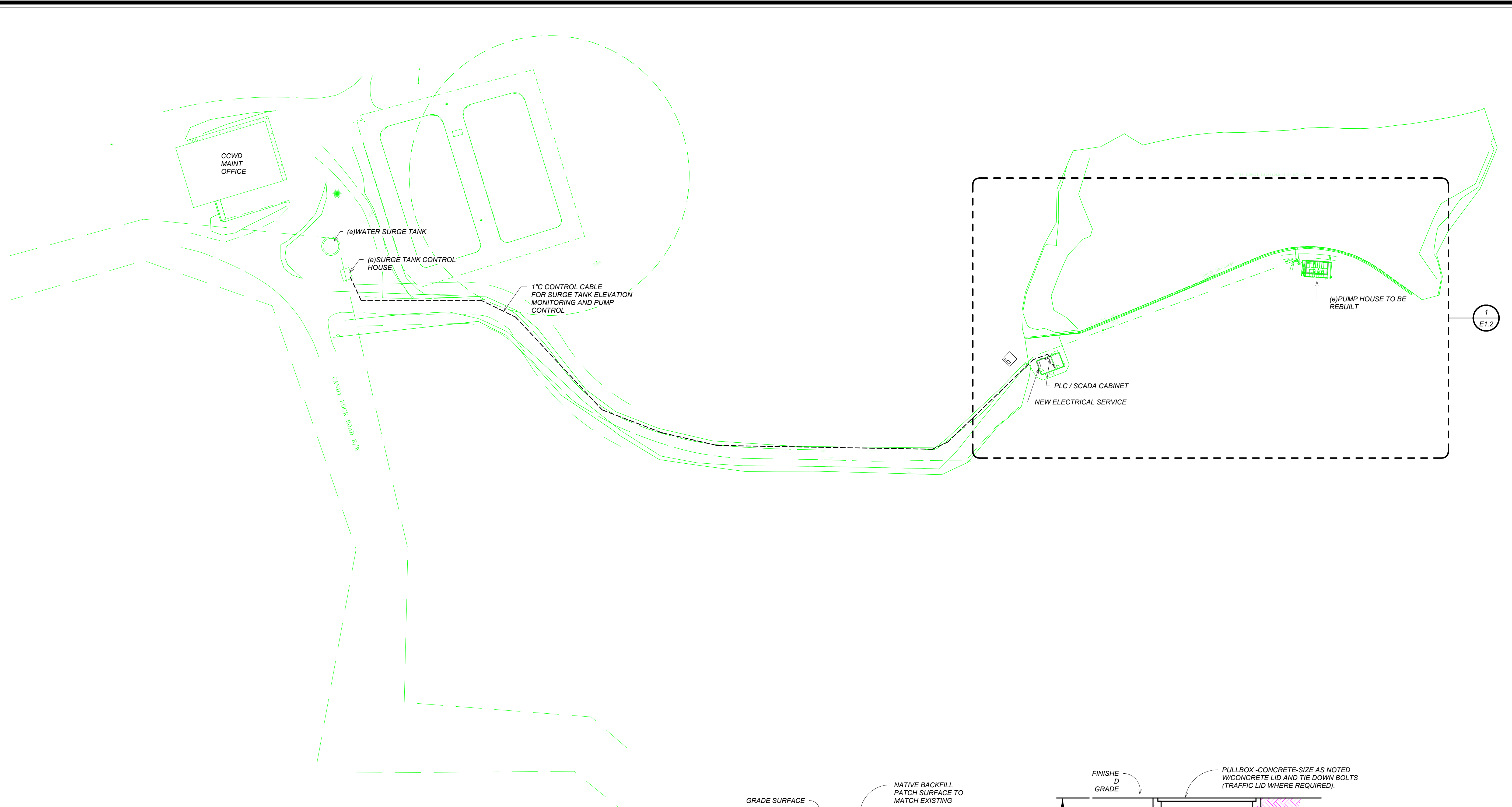
VERIFY SCALES



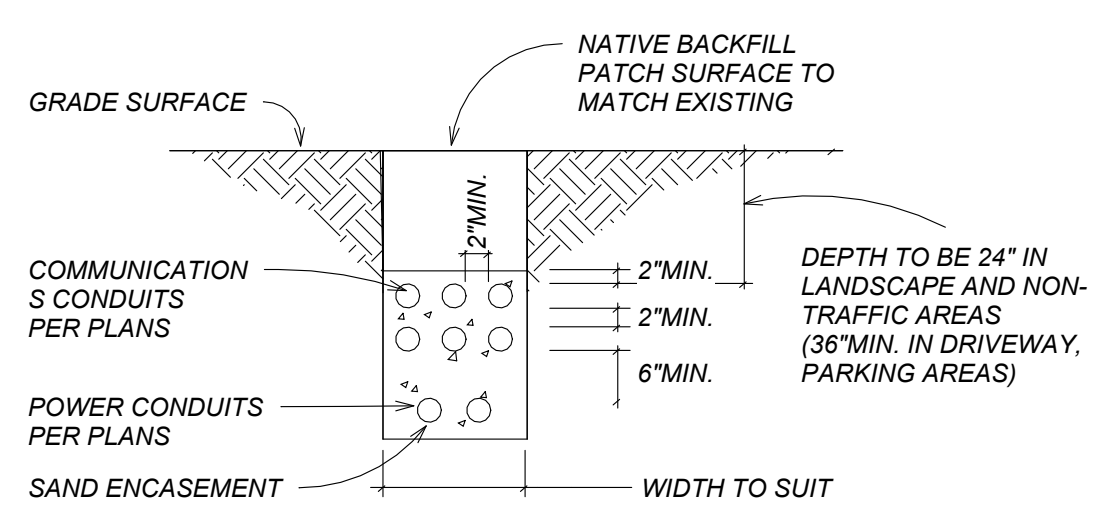
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| DRAWN BY RCS |
| CHECKED BY RCS |
| JOB NO. J22370 |
| DATE 4/27/2022 4:52:35 PM |
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| SHEET NO. OF XX |



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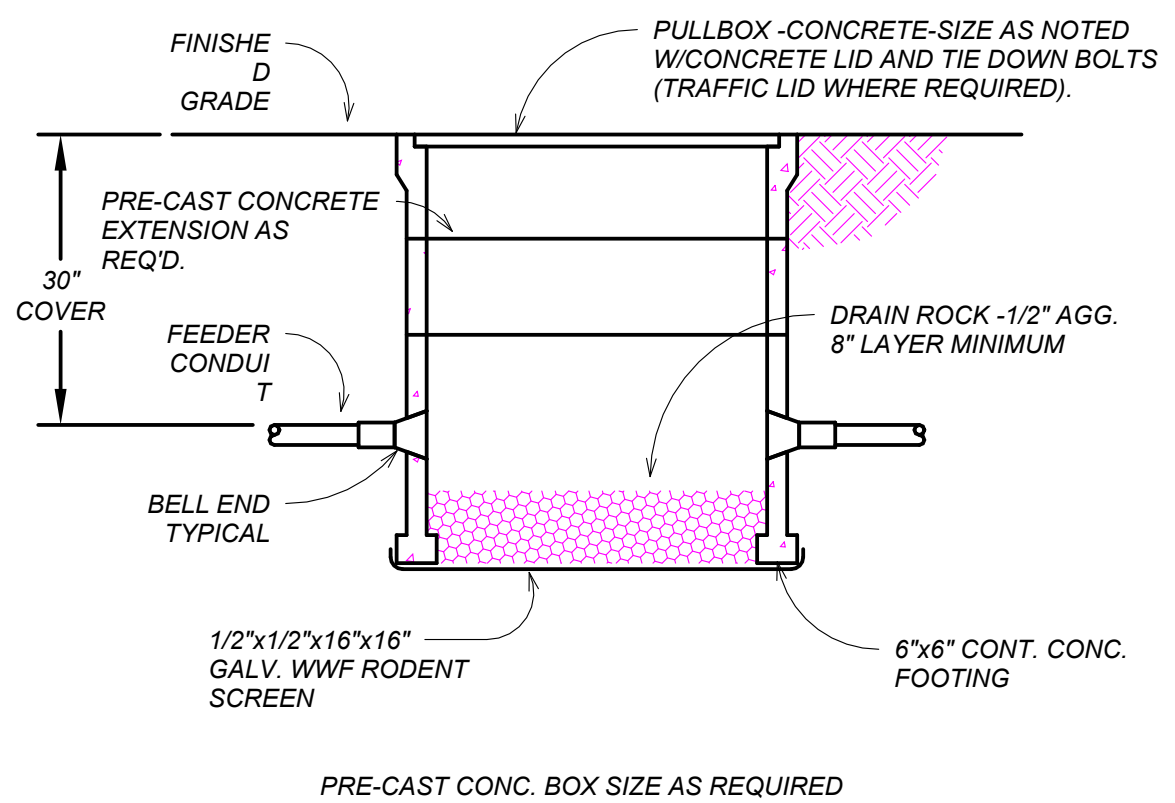


1 OVERALL ELECTRICAL SITE PLAN
SCALE: 1" = 50'-0"



NOTE: PROVIDE MIN 12" CLEARANCE BETWEEN ELECTRICAL AND OTHER UTILITIES (GAS, WATER, ETC.).

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



3 CONCRETE PULLBOX
SCALE: 12" = 1'-0"

HCS Engineering inc.
50 years

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HUNTER RESERVOIR RAW WATER INTAKE PROJECT
OVERALL ELECTRICAL SITE PLAN

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY

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RCS

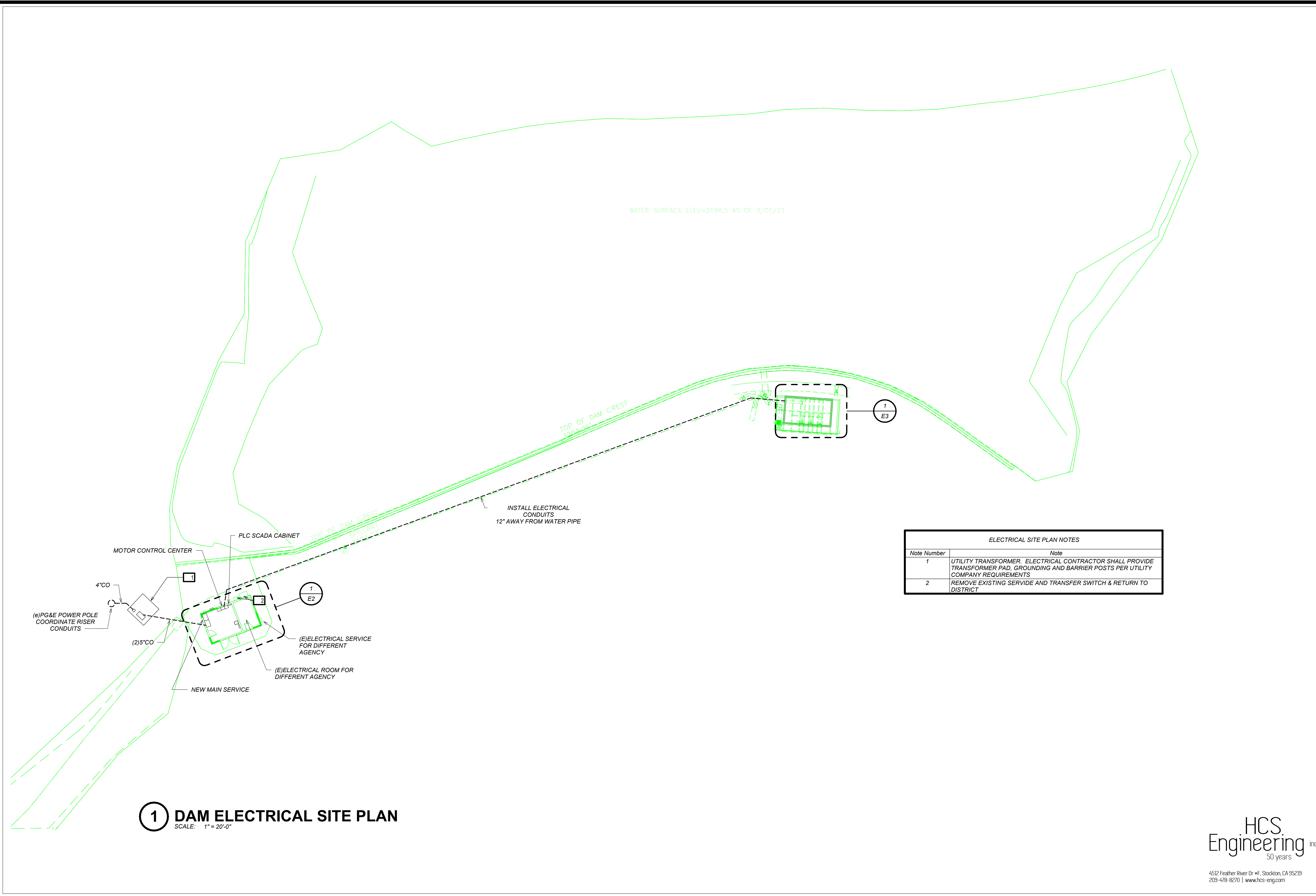
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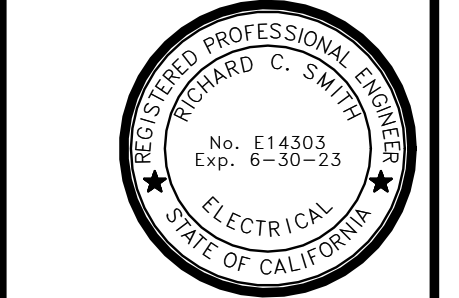
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E1.1

SHEET NO.
OF XX



| ELECTRICAL SITE PLAN NOTES | |
|----------------------------|--|
| Note Number | Note |
| 1 | UTILITY TRANSFORMER. ELECTRICAL CONTRACTOR SHALL PROVIDE TRANSFORMER PAD, GROUNDING AND BARRIER POSTS PER UTILITY COMPANY REQUIREMENTS |
| 2 | REMOVE EXISTING SERVICE AND TRANSFER SWITCH & RETURN TO DISTRICT |

1 DAM ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



Know what's below.
Call before you dig.

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| REV | DATE | DESCRIPTION | APP |
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**HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
DAM ELECTRICAL SITE PLAN**

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY

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RCS

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JOB NO.
J22370

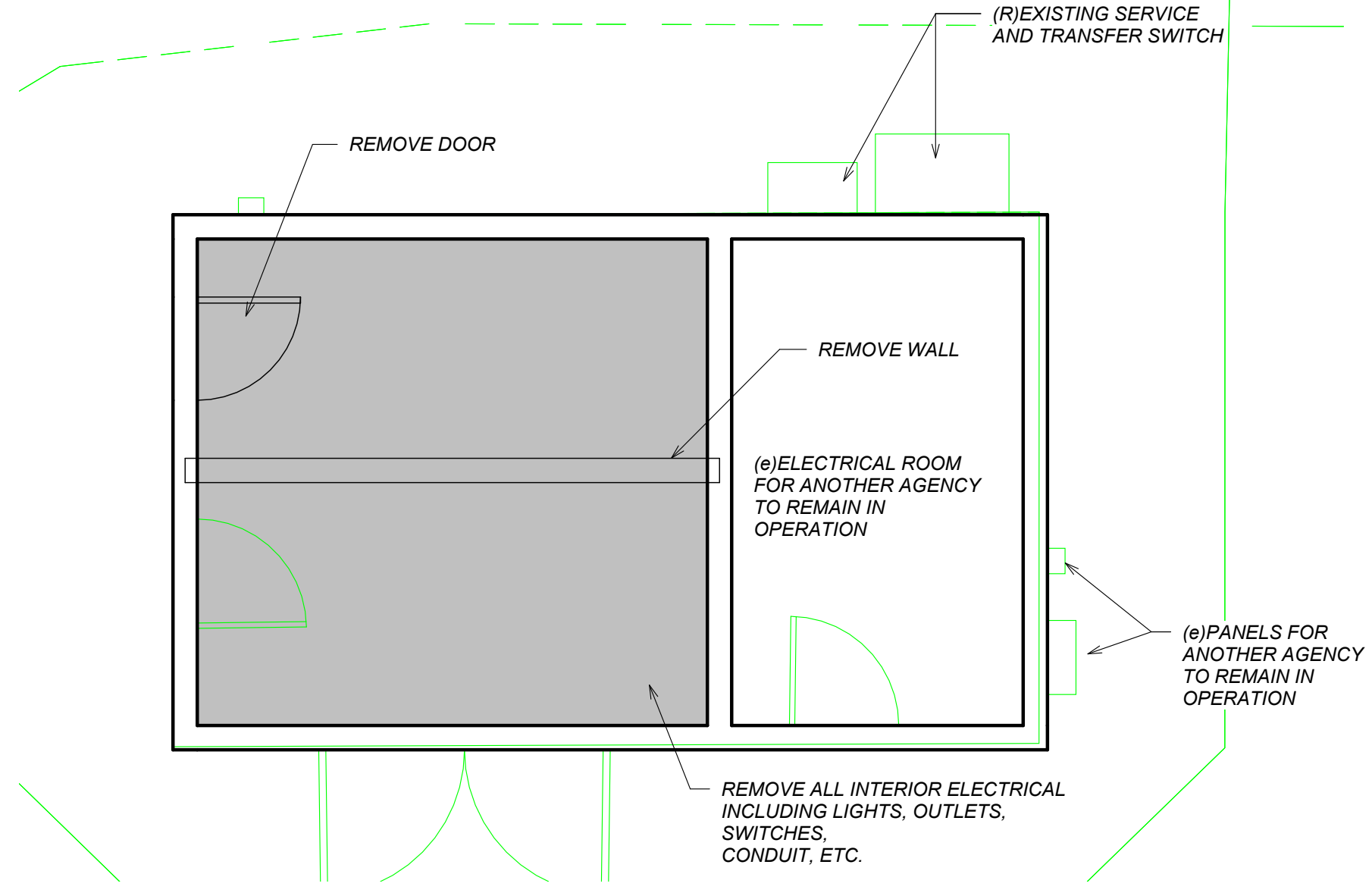
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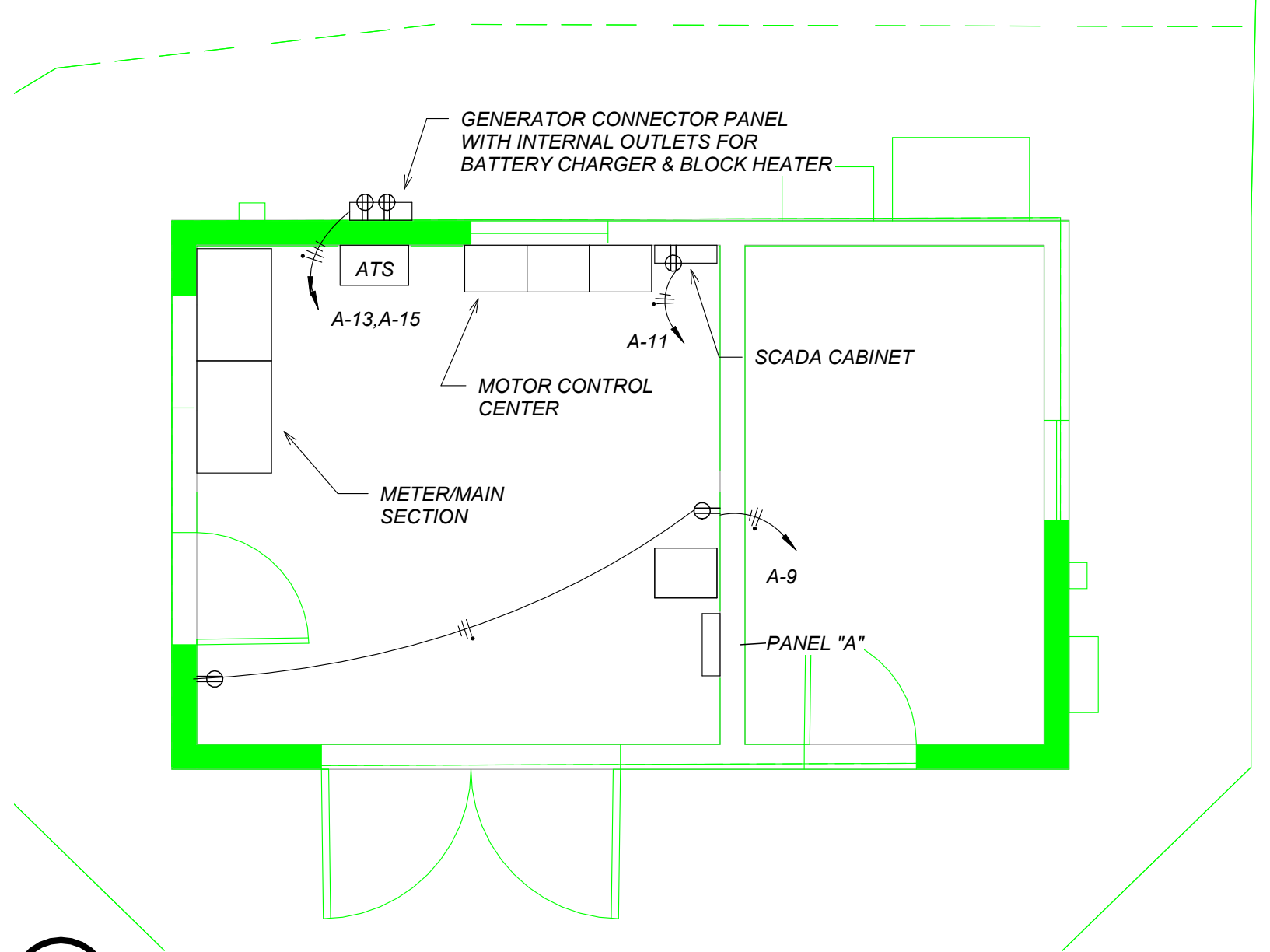
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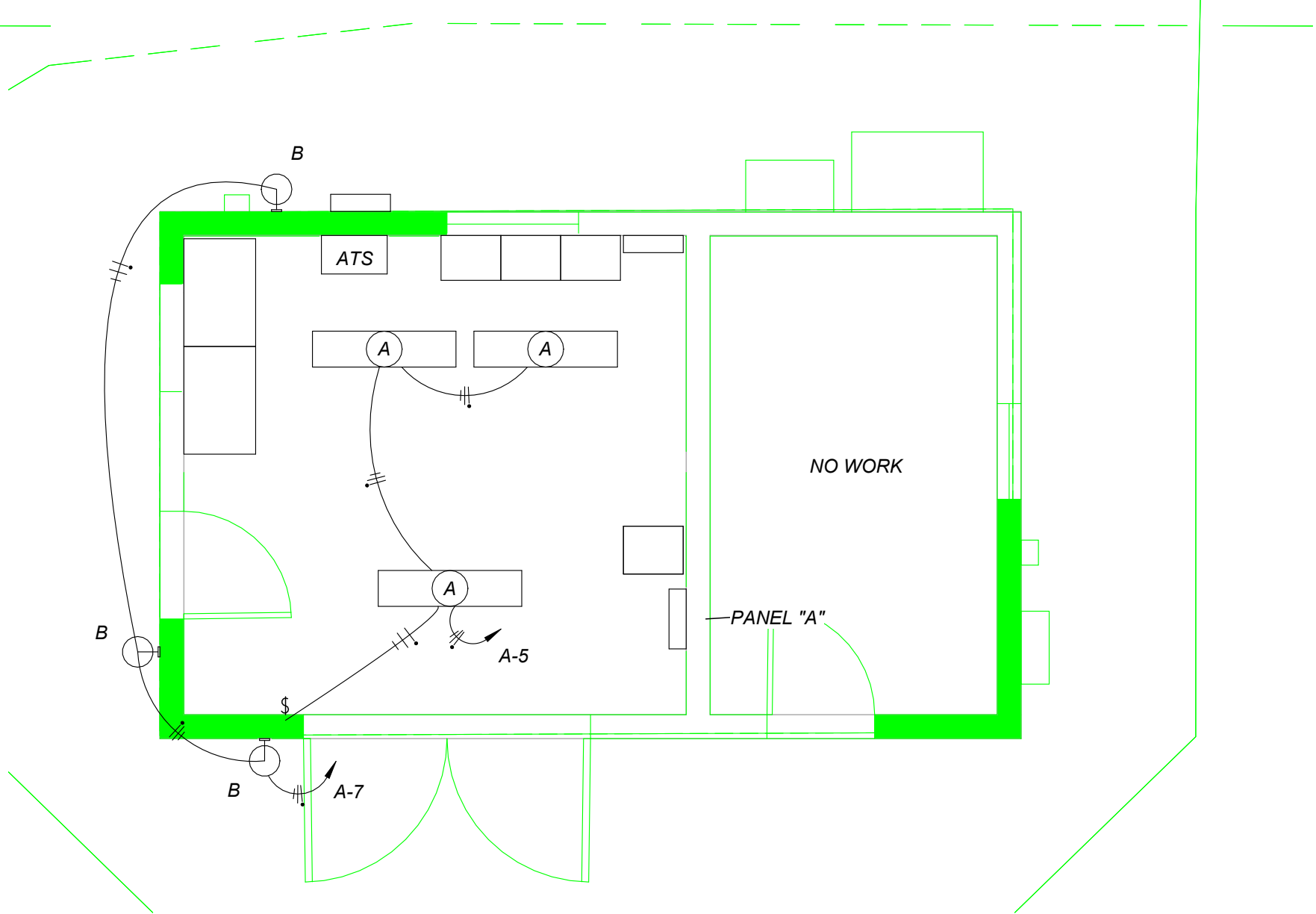
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0 POWER HOUSE DEMO PLAN
SCALE: 1/4" = 1'-0"



1 POWER HOUSE PLAN
SCALE: 1/4" = 1'-0"



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

PANEL "A"

Location: _____ Volts: 120/240 Single
 Supply From: _____ Phases: 1
 Mounting: IN MCC Wires: 3
 Enclosure: NEMA 3R A.I.C. Rating: 10,000
 Mains Type: MCB
 Mains Rating: 100 A
 MCB Rating: 100 A

Notes:

| CKT | Circuit Description | Trip | Poles | A | B | Poles | Trip | Circuit Description | CKT |
|-------------|---------------------|------|-------|--------|--------|-------|------|---------------------|-------|
| A-1 | PANEL B | 60 A | 2 | 285 VA | | | | | A-2 |
| A-3 | -- | -- | -- | | 40 VA | | | | A-4 |
| A-5 | INTERIOR LIGHTING | 20 A | 1 | 105 VA | | | | | A-6 |
| A-7 | Lighting | 20 A | 1 | | 60 VA | | | | A-8 |
| A-9 | Receptacle | 20 A | 1 | 360 VA | | | | | A-10 |
| A-11 | Receptacle | 20 A | 1 | | 180 VA | | | | A-12 |
| A-13 | BATTERY CHARGER | 20 A | 1 | 180 VA | 0 VA | 1 | 20 A | Spare | A-14 |
| A-15 | BLOCK HEATER | 20 A | 1 | | 180 VA | 0 VA | 1 | 20 A | Spare |
| A-17 | | | | 0 VA | | 1 | 20 A | Spare | A-18 |
| A-19 | | | | | 0 VA | 1 | 20 A | Spare | A-20 |
| Total Load: | | | | 930 VA | 456 VA | | | | |
| Total Amps: | | | | 8 A | 4 A | | | | |

Legend:

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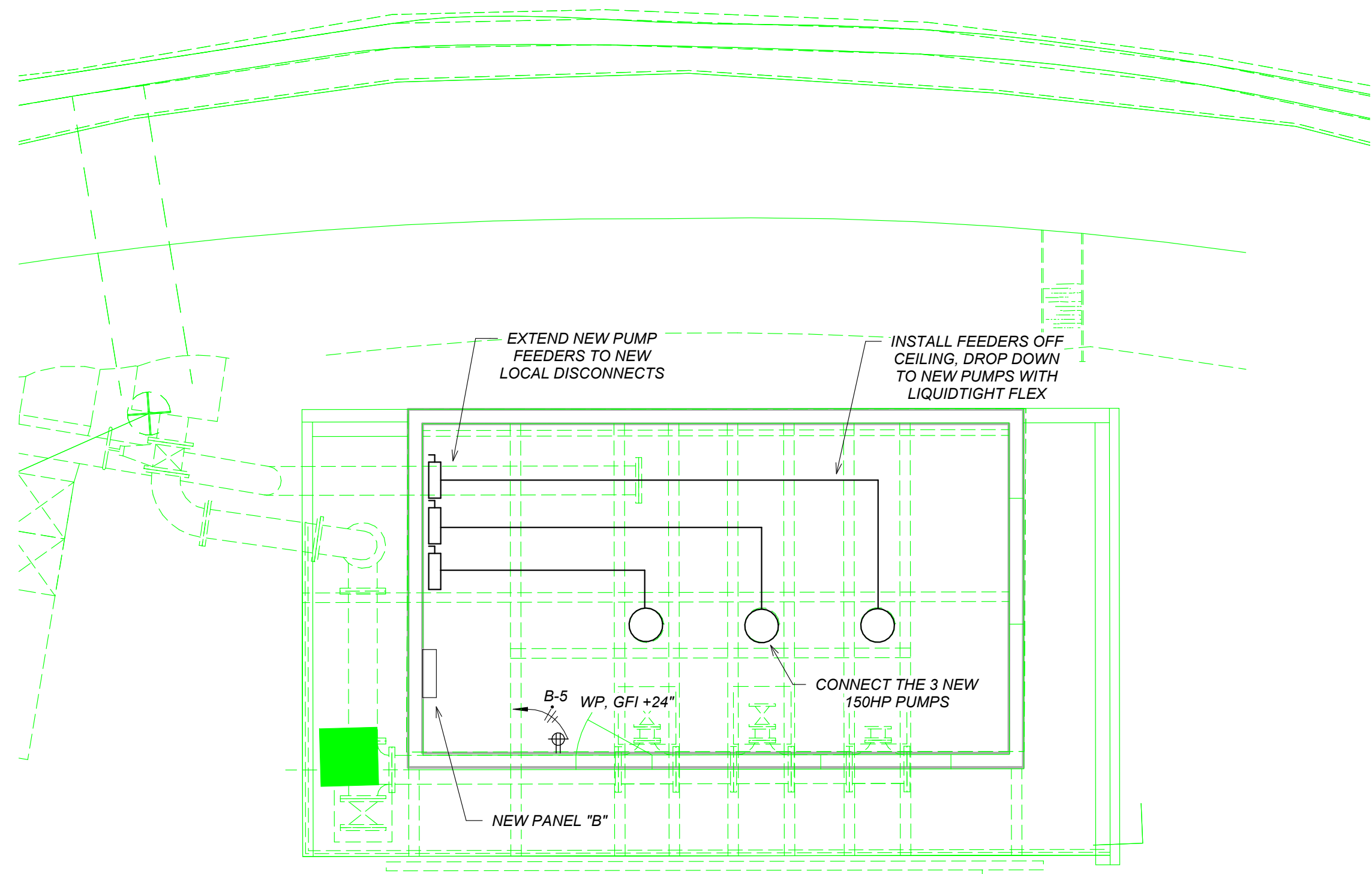
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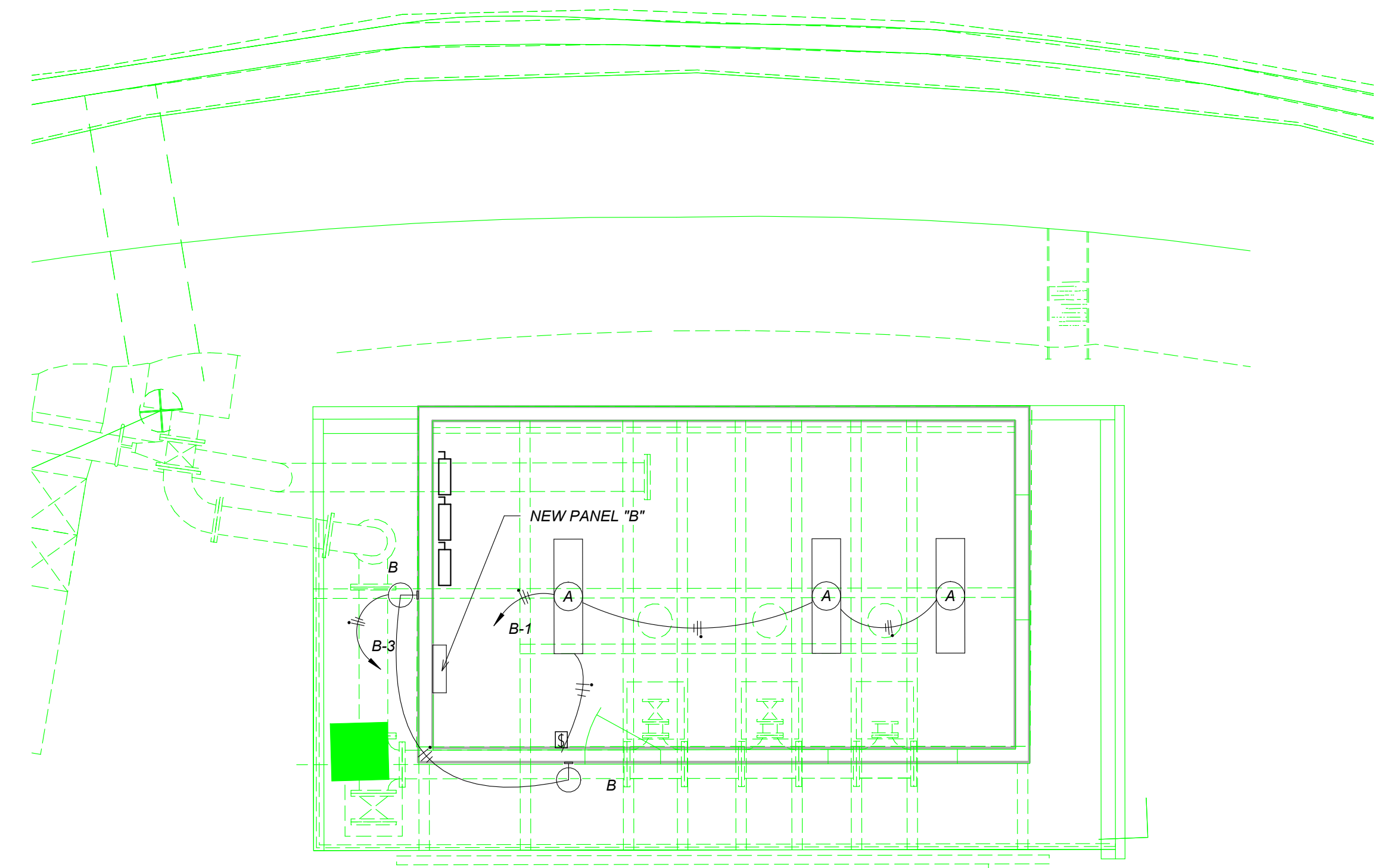
HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
POWER HOUSE PLANS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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- ELECTRICAL DEMOLITION:**
- REMOVE ALL ELECTRICAL FROM EXISTING BUILDING INCLUDING CONDUIT, WIRE, CONNECTIONS TO PUMPS, LIGHTS, CONTROLS, ETC.
 - SEAL ALL PENETRATIONS MADE BY THE REMOVAL OF ELECTRICAL



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

2 PUMP HOUSE LIGHTING
SCALE: 1/4" = 1'-0"

| PANEL B | | | | | | | | | |
|------------------------|---------------------|-----------------------|-------|-----------------------|-------|-------|------|---------------------|------|
| Location: | | Volts: 120/240 Single | | A.I.C. Rating: 10,000 | | | | | |
| Supply From: PANEL "A" | | Phases: 1 | | Mains Type: MCB | | | | | |
| Mounting: Surface | | Wires: 3 | | Mains Rating: 60 A | | | | | |
| Enclosure: NEMA 3R | | | | MCB Rating: 60 A | | | | | |
| Notes: | | | | | | | | | |
| CKT | Circuit Description | Trip | Poles | A | B | Poles | Trip | Circuit Description | CKT |
| B-1 | LIGHTING | 20 A | 1 | 105 VA | | | | | B-2 |
| B-3 | Lighting | 20 A | 1 | | 40 VA | | | | B-4 |
| B-5 | Receptacle | 20 A | 1 | 180 VA | 0 VA | | 20 A | Spare | B-6 |
| B-7 | | | | | 0 VA | | 20 A | Spare | B-8 |
| B-9 | | | | | 0 VA | | 20 A | Spare | B-10 |
| B-11 | | | | | 0 VA | | 20 A | Spare | B-12 |
| Total Load: | | | | 285 VA | 40 VA | | | | |
| Total Amps: | | | | 2 A | 0 A | | | | |
| Legend: | | | | | | | | | |

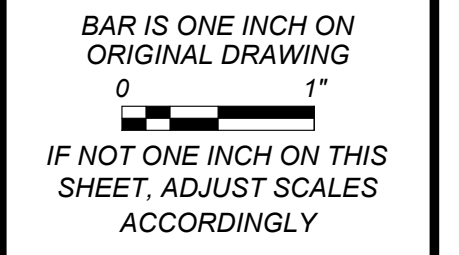
| FIXTURE SCHEDULE | | | | | |
|------------------|------|--|--------------|-----------------------------|---------------|
| Type Mark | Lamp | Description | Manufacturer | Model | Apparent Load |
| A | LED | 4" LED 4000 LUMEN LED WRAP SURFACE MOUNT FIXTURE, 0-10 V DIMMING DRIVER, UNIVERSAL VOLTAGE | LITHONIA | VAP LED L48 4000L LP840 EZ1 | 35 VA |
| B | LED | SMALL AREA LIGHTING +76" TO BOTTOM, PHOTOCCELL CONTROL | EATON | XTORA 2 PC | 20 VA |



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HUNTER RESERVOIR
RAW WATER INTAKE PROJECT
PUMP HOUSE

VERIFY SCALES



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ELECTRICAL LEGEND

LIGHTING FIXTURES

FIXTURE NOTATIONS:
A,(b),C-12 FIXTURE TYPE "A", SWITCH "b", CIRCUIT C-12

LINEAR FIXTURE
• SQUARE = RECESSED
• CIRCLE = SURFACE

DOWNLIGHT, SQUARE = RECESSED

WALL MOUNT

CEILING EXHAUST FAN

POLE MOUNT AREA LIGHT

EMERGENCY LIGHTING

EXIT SIGN WITH 90 MIN BATTERY BACKUP

WALL MOUNT EMERGENCY LIGHT WITH 90 MIN BATTERY BACK

EXTERIOR LANDING EMERGENCY LIGHT. CONNECT TO INTERIOR EXIT SIGN FOR POWER.

FIXTURES WITH INTEGRAL EMERGENCY BALLAST

BASIC LIGHTING CONTROLS

LIGHT SWITCH, +48" TO TOP OF BOX

- D = DIMMER
- 3 = SWAY
- P = PILOT SWITCH
- os = LINE VOLTAGE OCCUPANCY SENSOR
- T = TIMMER
- VS = VACANCY SENSOR

WALL MOUNT OCCUPANCY SENSOR (LINE VOLTAGE)

TITLE 24 LIGHTING CONTROLS

LIGHT SWITCH

COMPONENTS OF DIMMING ROOM CONTROLLER

- US = LOW VOLTAGE OCCUPANCY SENSOR (CAT 5 OR AS REQUIRED)
- DRC = DIMMING ROOM CONTROLLER
- PE = LOW VOLTAGE DIMMING PHOTOCELL (CAT 5 OR AS REQUIRED)
- D = LOW VOLTAGE DIMMER (CAT 5 OR AS REQUIRED)
- R = PLUG LOAD CONTROLLER
- ADR = AUTOMATIC DEMAND RESPOSNE (FOR BUILDINGS OVER 10,000 SF)

NOTES:

- FOR SUBMITTAL INCLUDE FACTORY CONTROL DRAWINGS.
- CONDUCT A CONTROLS PRE-CONSTRUCTION MEETING WITH CONTROLS STARTUP TEAM. PROVIDE AGENDA AND ATTENDEES AS A SUBMITTAL. INCLUDE DEVICE I.D. TAGS, PROGRAMMING, CABLE ROUTING, PROGRAM AND TIME SCHEDULES AND DATE OF PROGRAMMING AND TESTING.
- CONTRACTOR TO HAVE SYSTEM FACTORY SUPPORT FOR START UP, PROGRAMMING AND COMMISSIONING. VERIFY OPERATIONAL HOURS WITH OWNER PRIOR TO COMMISSIONING.

ELECTRICAL POWER

ALL LINE VOLTAGE WIRING IN CONDUIT, SEE GENERAL NOTES

TICKS = # OF #12 WIRE, SHORT = HOT, LONG = NEUTRAL, DOT = GROUND, UNLESS NOTED OTHERWISE

120V OUTLET, +18" TO BOTTOM OF BOX

- S = SIGN
- F = FLOOR
- GFI = GROUND FAULT INTERUPTER

COUNTER OUTLET

QUADRUPLEX OUTLET

HALF SWITCHED OUTLETS

OUTLETS ON EMERGENCY SYSTEMS

DUCT SMOKE DETECTOR

JUNCTION BOX

MOTOR / DISCONNECT

PANELBOARD

TRANSFORMER / SWITCHBOARD AS NOTED

MOUNTING HEIGHTS

FINISHED CEILING

AUDIBLE FIRE ALARM APPLIANCE
NOT LESS THEN 90" AFF OR AT LEAST 6" BELOW CEILING

VISUAL APPLIANCE TO BE NOT LESS THAN 80" AFF MIN. AND NOT MORE THAN 96" AFF TO BOTTOM

12" TYPICAL

SYSTEMS FURNITURE CONNECTIONS +15" TO BOTTOM OF BOXES

CONVNIENCE OUTLETS, PHONE & DATA OUTLETS, +15" TO BOTTOM OF BOX

FIRE ALARM MANUAL PULL STATION SHALL NOT REQUIRE "TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST"

THERMOSTAT OR WALL PHONE

LIGHT SWITCHES

48" TO TOP OF BOX

FINISHED FLOOR

ELECTRICAL LEGEND

DRAFTING NOTATIONS

KEY NOTE, SEE SCHEDULE

EQUIPMENT TAG, SEE SCHEDULE

REFERENCE TO A DETAIL VIEW "A" ON SHEET E-2

NEW ELECTRICAL

EXISTING ELECTRICAL OR DEMOLISHED WHERE NOTED

EXISTING DEVICE, TO REMAIN IN OPERATION

REMOVE DEVICE, KEEP REMAINDER OF CIRCUIT IN OPERATION

REMOVE, RELOCATE AND RECONNECT DEVICE ON EXISTING CIRCUIT, EXTEND CIRCUIT

ONE LINE DIAGRAM

BUS / SWITCHBOARD

PANEL

GROUND

METER

CURRENT TRANSFORMER

POTENTIAL TRANSFORMER

DRY TYPE TRANSFORMER

MOTOR

RELAY

CONTACT (OPEN)

CONTACT (CLOSED)

VARIABLE FREQ. DRIVE

MOTOR OVERLOAD HEATER

INDICATOR LIGHT (R) RED, (W) WHITE

ANTENNA

CIRCUIT BREAKER 50 AMP RATED, 3 POLE

GFI = GROUND FAULT INTERRUPTER
AFCI = ARC FAULT CIRCUIT INTERRUPTER

DISCONNECT, RATED TO POWER SOURCE VOLTAGE AND AMPERAGE RATING FOR FUSE OR AS NOTED

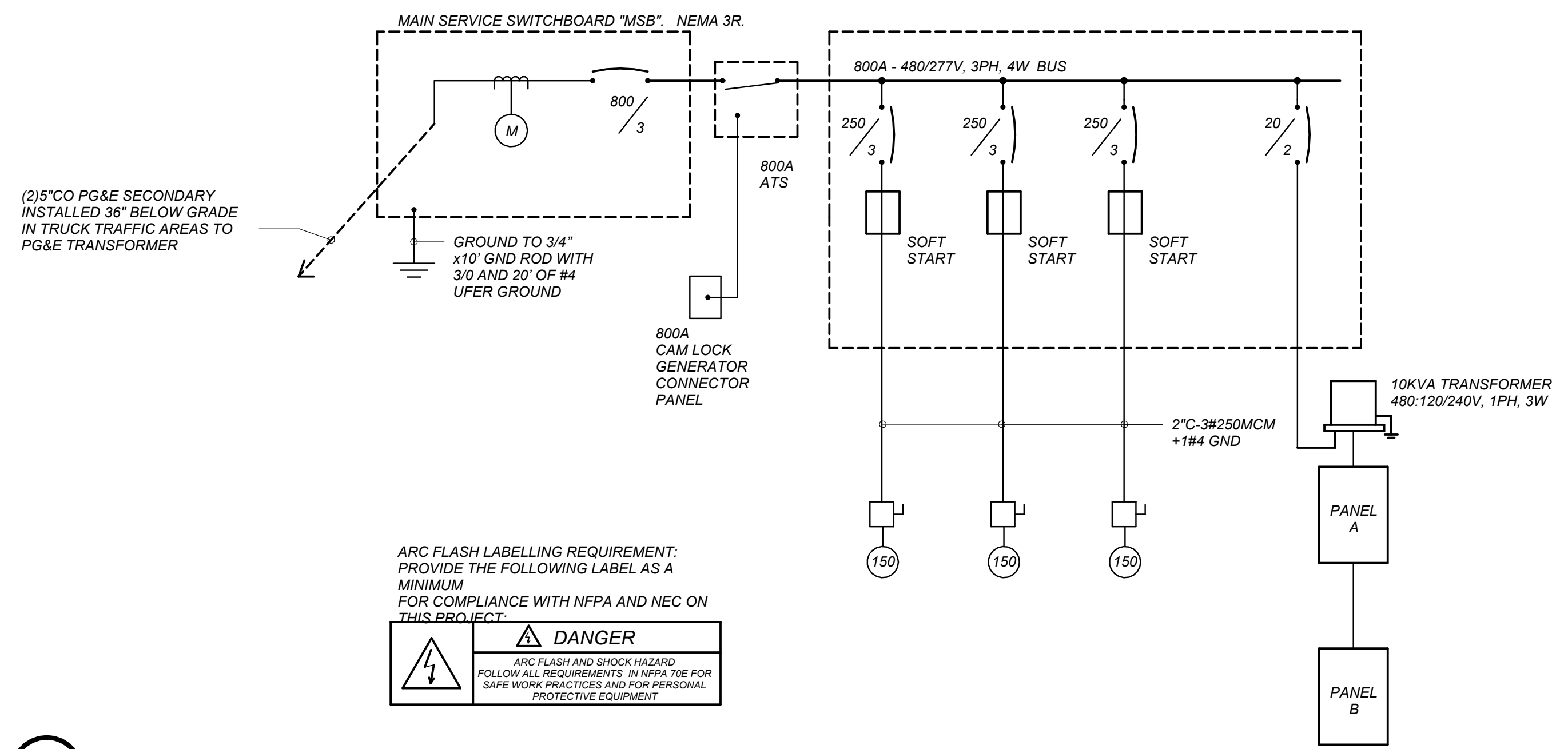
FUSE, SIZE = 60 AMPS

AUTOMATIC TRANSFER SWITCH

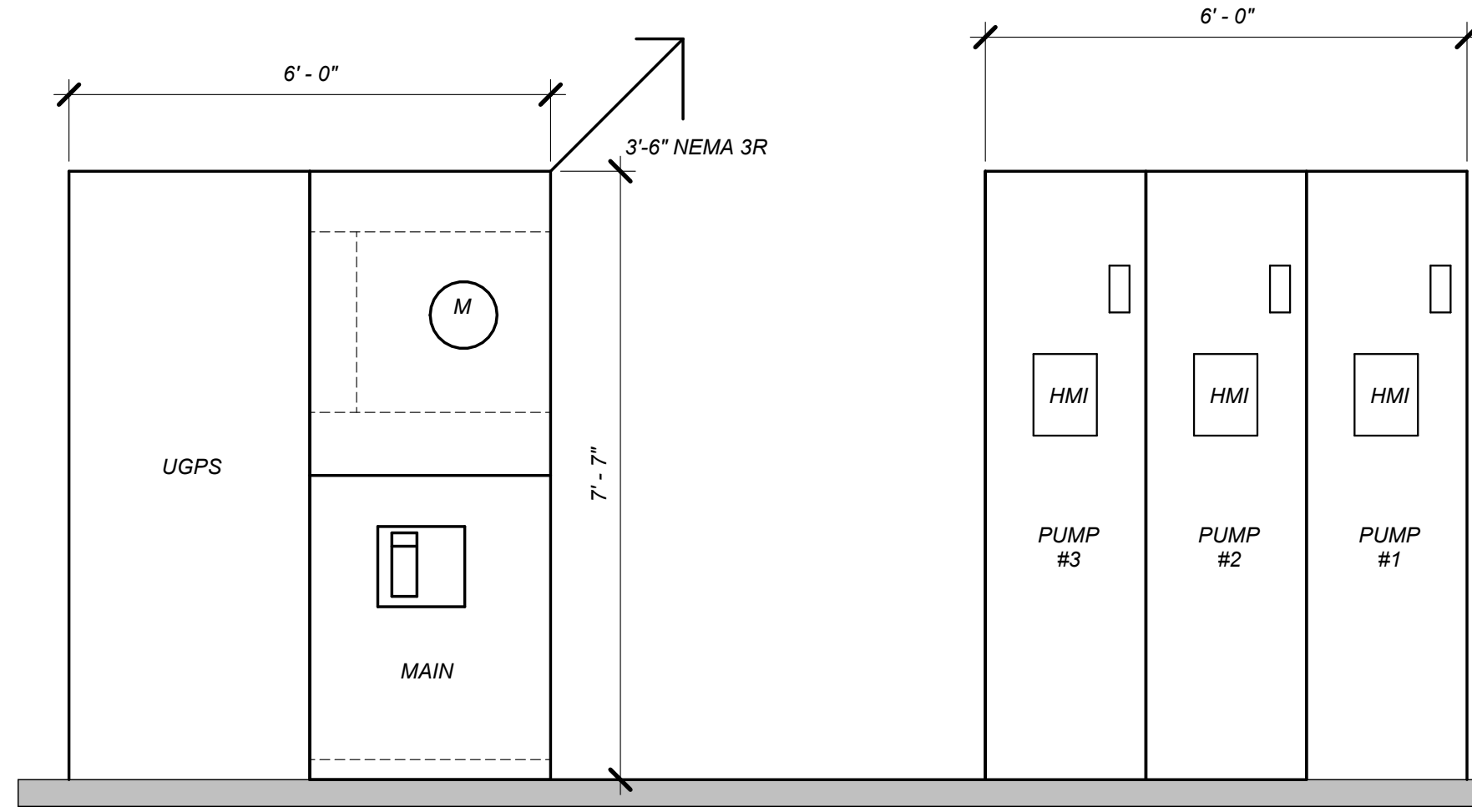
ENGINE DRIVEN GENERATOR RATING AS NOTED AGAINST THE UNIT.

DRAW OUT DEVICE

ANSI RELAY



1 ONE LINE DIAGRAM
SCALE: NTS



- NOTES: MAIN SERVICE SWITCHBOARD/MCC**
- ALL DIMENSIONS ARE NOMINAL.
 - THE COMPLETE SWITCHBOARD SHALL HAVE A SYMMETRICAL SHORT CIRCUIT RATING EQUAL TO OR GREATER THAN THAT AVAILABLE FROM THE UTILITY COMPANY.
 - MINIMUM INTEGRAL A.I.C. RATING OF SWITCHBOARD AND FEEDER CIRCUIT BREAKERS TO BE 42,000 AMPS.
 - BOLT SECTIONS OF THE SWITCHBOARD TOGETHER WITH 1/2" BOLT AND NUTS AT 4 PLACES PER SECTION.
 - BOLT EACH SECTION OF SWITCHBOARD TO FLOOR WITH (4) 1/2"x3" ANCHOR BOLTS.

2 SERVICE ELEVATION
SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER
RICHARD C. SWIFT
No. E14380
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

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| | | |
| | | |
| | | |

HUNTER RESERVOIR RAW WATER INTAKE PROJECT

ELECTRICAL DETAILS

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY

DRAWN BY
RCS

CHECKED BY
RCS

JOB NO.
J22370

DATE
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PROGRAMMABLE LOGIC CONTROLLER AND TELEMETRY REQUIREMENTS

PART 1 - PRODUCTS

1.01 PROGRAMMABLE LOGIC CONTROLLER AND PROGRAMMING SOFTWARE - WATER SYSTEM

A. GENERAL: FURNISH, INSTALL, TEST, AND PLACE THE PLCs INTO SATISFACTORY OPERATION. PROGRAM SCADA SERVER, SCADA WORKSTATIONS. ALL PROGRAMMING SHALL FOLLOW THE PORT'S SCADA DESIGN GUIDELINES AND THE LATEST NAMING STANDARDS AND ASSET HIERARCHY DOCUMENT AND STATION TEST SCRIPT.

B. HARDWARE: PROVIDE EACH PLC WITH THE FOLLOWING HARDWARE:

1. CENTRAL PROCESSING UNIT: THE CENTRAL PROCESSING UNIT (CPU) SHALL BE POWERED BY 115 VAC, 60 HERTZ, AND SHALL HAVE THE STANDARD INSTRUCTION SET WHICH SHALL INCLUDE ANALOG SIGNAL PROCESSING AND PID FUNCTIONS:

a. BATTERY BACKUP SHALL BE PROVIDED TOGETHER WITH A DISCRETE OUTPUT CORRESPONDING TO A LOW VOLTAGE ALARM CONDITION AT SCADA.

b. PROVIDE SPARE MEMORY OVER AND ABOVE THAT REQUIRED FOR REALIZING THE CONTROL PROGRAM. MINIMUM SPARE MEMORY IS 25% OF TOTAL USED OR 1 K WORDS, WHICHEVER IS GREATER.

c. PROVIDE A WATCHDOG TIMER WHICH MONITORS CPU ACTIVITY, AND A RELAY OUTPUT FOR WATCHDOG TIMER ALARM.

2. COMMUNICATIONS PROTOCOL FOR COMMUNICATING AMONG REMOTE UNITS SHALL BE MODBUS.

3. INPUTS AND OUTPUTS:

a. ANALOG INPUTS SHALL MEET THE FOLLOWING REQUIREMENTS:

1. 4 TO 20 mA DC INPUTS, 250 OHM IMPEDANCE MAXIMUM.
2. ACCURACY OF +/-0.1% OF SPAN.
3. RESOLUTION OF +/-0.05% OF SPAN.
4. COMMON MODE REJECTION OF 90 DB AT 60 HZ, MINIMUM.
5. NORMAL MODE REJECTION OF 45 DB AT 60 HZ, MINIMUM.
6. ISOLATION SHALL MEET OR EXCEED SURGE-WITHSTAND TEST, IEEE-472.
7. DRIFT SHALL NOT EXCEED 0.25% WITHIN A 30-DAY PERIOD.

b. DISCRETE INPUTS SHALL MEET THE FOLLOWING REQUIREMENTS:

1. UNPOWERED CONTACT INPUTS.
2. INPUT ISOLATION SHALL MEET, OR EXCEED IEEE-472. RELAY ISOLATION IS UNACCEPTABLE.
3. PROVIDE FILTERING ON A PER UNIT POINT BASIS TO PROVIDE CONTACT BOUNCE PROTECTION.
4. DISCRETE INPUTS SHALL BE POWERED BY THE PLC AT A MINIMUM OF 24 VOLTS, BUT LESS THAN 125 VOLTS. POWER SUPPLY SHALL BE CURRENT LIMITED TO CONFORM WITH NEC CLASS 2 REMOTE CONTROL AND SIGNAL WIRING CIRCUITS.
5. DISCRETE OUTPUT MOTOR MODULES SHALL BE CAPABLE OF INTERFACING SIZE 5 MAGNETIC STARTERS. RELAY ISOLATION IS ACCEPTABLE.
6. ANALOG OUTPUTS SHALL MEET THE FOLLOWING REQUIREMENTS.
 - i. OUTPUT: 4-20 mA DC.
 - ii. ISOLATION: FROM THE MULTIPLEXER GROUND.
 - iii. RESOLUTION: +/-0.1% OF ELECTRIC SPAN, 10 BITS.
 - iv. ACCURACY: +/-0.25% OF SPAN.
 - v. DRIFT: SHALL NOT EXCEED 0.25% IN A 30-DAY PERIOD.

7. FOR EACH PLC, PROVIDE THE FOLLOWING MINIMUM SPARE, INSTALLED, INPUTS AND OUTPUTS: 2 DISCRETE INPUTS, 2 DISCRETE OUTPUTS, AND 1 ANALOG INPUT. PROVIDE SPARE SPACE IN ALL PLCs FOR A 50% INCREASE IN THE NUMBER OF INPUT/OUTPUT MODULES.

4. POWER LINE VOLTAGE REGULATION TRANSFORMER: PROVIDE A UL RECOGNIZED POWER LINE VOLTAGE REGULATION TRANSFORMER TO PROVIDE 115 VAC POWER FOR THE PLC, IN ADDITION TO ANY ISOLATION TRANSFORMER(S) REQUIRED FOR UL LABELING OF THE PLC ENCLOSURE.

5. HUMAN MACHINE INTERFACE: PROVIDE A HUMAN MACHINE INTERFACE (HMI) PANEL CONSISTING OF 5.7 INCH MINIMUM TOUCHSCREEN TO ALLOW OPERATOR INTERFACE WITH PLC. HMI SHALL ALLOW MONITORING OF PROCESS VARIABLES AND REGISTERS IN ENGINEERING UNITS. DISPLAY MESSAGES IN ENGLISH LANGUAGE FORMAT. HMI TO BE PROGRAMMED WITH PASSWORD PROTECTION USER ACCOUNTS. THE DIFFERENT LEVELS OF USER ACCOUNTS PERMISSIONS ARE READ ONLY OR EDIT VARIABLES VALUES. HMI, 5.7 INCHES TOUCHSCREEN BY SCHNEIDER ELECTRONIC MODEL HMISTU855, MODBUS PROTOCOL, NO EQUAL.

C. PLC PROGRAMMING SOFTWARE:

1. PROVIDE SOFTWARE WHICH COMPILES PROGRAMS GENERATED FROM LADDER-LOGIC CRT DISPLAYS DIRECTLY TO PLC OBJECT MODE. PROVIDE SOFTWARE WHICH PERMITS ON-SCREEN TEXT EDITING FOR PURPOSES OF DOCUMENTING THE LADDER-LOGIC DIAGRAMS ON STANDARD 8-1/2 INCH WIDE PRINTER PAPER WITH:

- a. CONTACT AND COIL NUMBERS.
- b. CONTACT AND COIL FUNCTIONAL DESCRIPTIONS.
- c. RUNG NUMBER CROSS REFERENCES.
- d. FUNCTIONAL DESCRIPTIONS TO THE RIGHT OF THE COILS.

2. SOFTWARE SHALL PERMIT ENTERING THE CONTROL PROGRAM FROM HMI WITH FUNCTIONALITY CORRESPONDING TO THE COMMONLY USED RELAY LADDER DIAGRAM SYMBOLS:

3. PROVIDE THE FOLLOWING REAL-TIME FUNCTIONS:

- a. MONITOR AND DISPLAY POWER FLOW THROUGH THE LOGIC
- b. MONITOR AND DISPLAY REGISTER CONTENTS.
- c. THE ABILITY TO FORCE OUTPUTS HIGH OR LOW REGARDLESS OF THE STATE CORRESPONDING TO THE SOLVED RELAY-LADDER-DIAGRAM EXPRESSION.

D. SPARE PARTS: PROVIDE THE FOLLOWING SPARE PARTS:

1. ONE INPUT/OUTPUT MODULE FOR EACH TYPE PROVIDED.
2. PLC PROCESSOR CARD INCLUDING MEMORY.
3. POWER SUPPLY.
4. ONE LICENSE, LATEST UNITY PRO SOFTWARE BY SCHNEIDER ELECTRIC.

E. PLC MANUFACTURER: MODICON 340 BMX P34 2020 WITH MODBUS AND ETHERNET. THE PORT WILL NOT ACCEPT ANY SUBSTITUTIONS.

1. THE PLC COMMUNICATION SHOULD BE CONFIGURED AT 9600 7E1 BAUD.

1.03 INSTRUMENTS

A. LEVEL TRANSMITTER, GENERAL PURPOSE:

1. GENERAL: ELECTRONIC INDICATING-TYPE PRESSURE TRANSMITTERS SHALL CONVERT A GAUGE OR ABSOLUTE PRESSURE MEASUREMENT TO A 4-20 mA DC LINEAR ELECTRICAL OUTPUT SIGNAL CAPABLE OF TRANSMISSION INTO AT LEAST A 600 OHM MAXIMUM LOAD AT AT 24 VDC OR LESS. SIGNAL AND POWER TRANSMISSION SHALL BE PROVIDED ON A SINGLE PAIR OF WIRES. OPERATING AMBIENT TEMPERATURE LIMITS SHALL BE AT LEAST -40°C TO +82°C.
2. RANGE SHALL BE AS INDICATED IN THE INPUT/OUTPUT LIST. OVER-RANGE PROTECTION SHALL BE AT LEAST 1-1/2 TIMES SPAN WITHOUT DEGRADATION OF ACCURACY. REFERENCE ACCURACY SHALL BE ± 1/2% OR BETTER.
3. CONSTRUCTION: THE TRANSMITTER ENCLOSURE SHALL BE NEMA 4X RATED. THE PROCESS CONNECTION FOR CLEAN LIQUID SERVICE SHALL BE 1/4-INCH NPT. ENCLOSURE AND WETTED SURFACE MATERIAL SHALL BE CORROSION RESISTANT AND SUITABLE FOR WATER.
4. MANUFACTURERS: KPSI 700 WITH SCALING AT 0-FT TO 20-FT = 4-20mA, NO EQUAL.

B. FLOAT SWITCHES - NON-MERCURY TYPE

1.04 SCADA

A. NEW REMOTE STATION PROGRAMMING WILL COVER SCADA SERVER, SCADA WORKSTATIONS, ALARM AUTO DIALER, PROGRAMS AT PORT OFFICE. ALL PROGRAMMING SHALL FOLLOW THE CCWD SCADA DESIGN GUIDELINES AND THE LATEST NAMING STANDARDS AND ASSET HIERARCHY DOCUMENTATION.

B. THE NEW PROGRAM WILL INTEGRATE WITH THE PORT EXISTING SOFTWARE

C. ALL NEW SCADA PAGES WILL BE CUSTOMIZED FOR THE CONTROL AND SUPERVISION OF THE NEW REMOTE STATION. NEW SCADA PAGES SHALL BE PROGRAMMED AND CUSTOMIZED THAT ANY SCADA PAGE FEATURE CAN BE DELETED, MODIFIED OR ADDED WITHOUT AFFECTING OTHER EXISTING PAGES. NEW SCADA PAGES WILL NOT BE DEPENDENT ON A MASTER SCRIPTED SCADA TEMPLATE. EACH NEW SCADA PAGE WILL STAND ALONE.

D. NEW SCADA PAGES MOCK-UP SCREENS SHALL BE SUBMITTED TO CCWD AND ENGINEER FOR APPROVAL, AT LEAST TWO WEEKS IN ADVANCE BEFORE ANY PROGRAMMING BEGINS.

1.05 BATTERY BACKUP

A. BATTERY BACKUP: PROVIDE MODEL APC 750 OR EQUIVALENT FOR PLC, HMI, RADIO, AND LEVEL TRANSMITTERS.

B. BATTERIES SHALL BE MOUNTED ON A SLIDE TRAY.

1.06 FLOW METER

A. ROSEMOUNT MODEL 8750W, NO EQUAL.

B. FLOW METER MUST BE CALIBRATED AND VOLUMETRIC TESTED FOR ACCURACY.

C. FLOW METER DISPLAY LOCATED INSIDE INSTRUMENTATION CABINET.

1.07 CABINET

A. CABINET WILL ENCLOSE POWER METER, MAIN BREAKERS, DISCONNECT SWITCHES, RESET CONTROL, MCC, RTU, HOA SWITCHES, AND HMI.

B. THE PANEL ENCLOSURE SHALL BE N.E.M.A. TYPE 3R WITH APPROXIMATE MINIMUM DIMENSIONS 32-INCH X 20-INCH X 60-INCH BY TESCO OR EQUIVALENT.

C. CABINET SHALL CONTAIN A SHADE HOOD, 100 AMP APPLON RECEPTACLE FOR BACKUP GENERATOR CONNECTIONS AND A SLIDE TRAY FOR BACKUP BATTERIES.

PART 2 - EXECUTION

2.01 EQUIPMENT

A. INSTRUMENTS:

1. INDICATED UNITS: PROVIDE INDICATORS SCALED IN ACTUAL ENGINEERING UNITS, I.E., GALLONS PER MINUTE (GPM), FEET, POUNDS PER SQUARE INCH (PSI), ETC., RATHER THAN 0 TO 100%.
2. CALIBRATION:
 - a. EACH FIELD INSTRUMENT SHALL BE CALIBRATED AT 0%, 25%, 50%, 75% AND 100% OF SPAN USING TEST INSTRUMENTS TO SIMULATE INPUTS AND READ OUTPUTS THAT ARE RATED TO AN ACCURACY OF AT LEAST 5 TIMES GREATER THAN THE SPECIFIED ACCURACY OF THE INSTRUMENT BEING CALIBRATED. SUCH TEST INSTRUMENTS HAVE ACCURACIES TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST).
 - b. SUBMIT A WRITTEN REPORT (HARD COPY AND ELECTRONIC FILE) TO THE PUBLIC WORKS ENGINEER ON EACH INSTRUMENT. THIS REPORT SHALL INCLUDE A LABORATORY CALIBRATION SHEET OR THE MANUFACTURER'S STANDARDS CALIBRATION SHEET ON EACH INSTRUMENT AND CALIBRATION READING AS FINALLY ADJUSTED WITHIN TOLERANCES.

2.02 APPLICATIONS PROGRAMMING

A. PLC AND RTU PROGRAMS:

1. PROVIDE 3 COPIES USB / CD MEDIA CONTAINING A COPY OF THE PROGRAM SOFTWARE, INCLUDING MODIFICATIONS MADE THROUGH FINAL ACCEPTANCE TESTING, SHOP DRAWINGS, PROCESS AND INSTRUMENT DIAGRAMS (P&ID), LOOP DIAGRAMS, AND DATA MAPS. A "READ ME" FILE SHALL CONTAIN THE COMPANY NAME, DATE, VERSION, PURPOSE OF DRAWING, DIAGRAM OR PROGRAM AND DESCRIBE ALL MODIFICATIONS.
2. ALL PROGRAMMING SHALL FOLLOW THE PORT OF MANTECA'S LATEST NAMING STANDARDS AND ASSET HIERARCHY DOCUMENT AND STATION TEST SCRIPTS.
3. BEFORE ANY PROGRAMMING IS STARTED A BACKUP MUST BE MADE OF THE POLL MASTER PROGRAM, ANY EXISTING PLC PROGRAMS THAT ARE PART OF THE CONTROL STRATEGY AND THE IFX PROCESS DATABASE. THE BACKUPS SHALL BE SUBMITTED TO CCWD, IN A USB / CD MEDIA.

PART 3 - I/O LISTS

3.01 INPUT/OUTPUT LIST

A. GENERAL: THE TABLES BELOW SUMMARIZE THE INPUTS AND OUTPUTS FOR THE WASTEWATER AND STORMWATER SYSTEMS.

B. TYPICAL PUMP STATION INPUT/OUTPUT LIST

1. FLOW METER (AI) ** NOT USED **
2. PUMP 1 RUN (DI)
3. PUMP 2 RUN (DI)
4. PUMP 3 RUN (DI)
5. PUMP 1 OVERLOAD (DI)
6. PUMP 2 OVERLOAD (DI)
7. PUMP 3 OVERLOAD (DI)
8. PUMP 1 SWITCH STATUS: HAND (DI)
9. PUMP 1 SWITCH STATUS: AUTO (DI)
10. PUMP 2 SWITCH STATUS: HAND (DI)
11. PUMP 2 SWITCH STATUS: AUTO (DI)
12. PUMP 3 SWITCH STATUS: HAND (DI)
13. PUMP 3 SWITCH STATUS: AUTO (DI)
14. POWER FAILURE ALARM (DI)
15. DOWNSSTREAM MONITOR LEVEL (DI) **NOT USED **
16. WET WELL LEVEL (AI)
17. REMOTE COMMAND: PUMP 1 START (DO)
18. REMOTE COMMAND: PUMP 1 STOP (DO)
19. REMOTE COMMAND: PUMP 2 START (DO)
20. REMOTE COMMAND: PUMP 2 STOP (DO)
21. REMOTE COMMAND: PUMP 3 START (DO)
22. REMOTE COMMAND: PUMP 3 STOP (DO)
23. BATTERY BACKUP (DI) ** NOT USED **
24. STORMWATER SEPARATOR LEVEL (AI) ** NOT USED **
25. INTRUSION ALARM (DI)
26. LOW OFF FLOAT (DI)
27. LEAD START FLOAT (DI)
28. LAG STAR FLOAT (DI)
29. HIGH ALARM FLOOD (DI)

D. FLOAT SYSTEM TO START AND STOP BOTH PUMPS IF THE PLC SYSTEM SHOULD FAIL.

3.02 CONTROL STRATEGIES

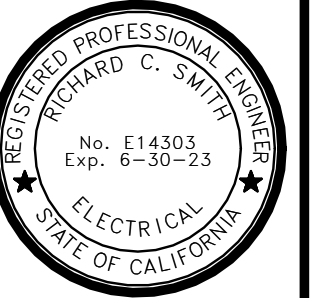
A. GENERAL: PROVIDE AND PROCESS AND INSTRUMENTATION DIAGRAM AND SOFTWARE FOR A COMPLETE AND FULLY FUNCTIONING TELEMETRY SYSTEM FOR OPERATING AND MONITORING THE PUMP STATION SYSTEM. THE TABLE BELOW SUMMARIZES THE MAJOR CONTROL STRATEGIES REQUIRED.

REQUIRED RTU/PLC OPERATOR INTERFACE AND HMI DIGITAL DISPLAYS

- WET WELL LEVEL INDICATOR
- PUMP RUN TIME INDICATOR
- PUMP HOA SWITCH STATUS
- MOTOR OVERLOAD ALARM
- HIGH LEVEL ALARM
- LOW LEVEL ALARM
- INTRUSION ALARM
- POWER FAILURE ALARM
- BATTERY BACKUP LOW VOLTAGE
- FLOW METER TOTAL INDICATOR
- RESETTABLE FLOW METER TOTALIZER INDICATOR

REQUIRED CONTROLS

- PUMP START/STOP LOCALLY OR REMOTELY
- LEVEL SET POINT ADJUSTMENT FOR TURNING PUMP ON AND OFF
- PUMP AUTOMATIC ALTERNATION
- LEVEL SET POINT ADJUSTMENT FOR ALARMS
- DOWNSSTREAM HIGH LEVEL LOCKOUT
- PASSWORD PROTECTED HMI
- HMI USER ACCOUNT PERMISSION, TYPES, READ ONLY SET POINTS, AND EDIT SET POINTS
- STATION IN LOCAL MODE, SET POINTS ARE EDITABLE
- STATION IN AUTOMATIC MODE, SET POINTS ARE READ ONLY



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HUNTER RESERVOIR RAW WATER INTAKE PROJECT
PLC NOTES

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

| | |
|-------------|----------------------|
| DESIGNED BY | |
| DRAWN BY | RCS |
| CHECKED BY | RCS |
| JOB NO. | J22370 |
| DATE | 4/27/2022 4:52:47 PM |
| DRAWING | E6 |
| SHEET NO. | OF XX |



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ATTACHMENT B

Contractor is to comply with the Byrd Anti-Lobbying Amendment, 31 § U.S.C. 1352

Contractors who apply or bid for an award of \$100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

These certifications are to be made (signed and submitted) in the form of 44 C.F.R. Part 18, Appendix A as shown below.

Bryd Anti-Lobbying Amendment, 31 § U.S.C. 1352

Certification for Contracts, Grants, Loans and Cooperative Agreements

The undersign certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

A. Procurement of Recovered Materials, 2 C.F.R. § 200.323

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

- (1) In the performance of this contract, the Contractor will make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired either: a) competitively within a timeframe providing for compliance with the contract performance schedule; b) meeting contract performance requirements; or c) at a reasonable price.*
- (2) Information about this requirement, along with a list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program>.*
- (3) Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.*

B. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment, 2 C.F.R. § 200.216

Contractor shall comply with Prohibitions on Certain Telecommunications and Video Surveillance Services or Equipment in conformance with 2 C.F.R. §200.216.

C. Domestic Preferences for Procurements, 2 C.F.R. § 200.322.

- (a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.
- (b) For purposes of this section:
 - (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
 - (2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

D. Access to Records and Retention,

As stipulated in 44 C.F.R. § 13.36(i) (10) – (11), the following access to records and retention requirements apply to this contract and its subcontracts:

- a. The contractor agrees to provide the Calaveras County Water District, Cal-OES, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.*
- b. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.*
- c. The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.*
- d. The Contractor will retain these records for three years after final payments and all other pending matters are closed.*

E. Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871)

- a. In accordance with 44 C.F.R. §13.36(i)(13), the Contractor agrees to comply with all mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871)*
- b. The Contractor agrees to including paragraph a. above in each third-party subcontract financed in whole or in part with Federal assistance provided by FEMA.*