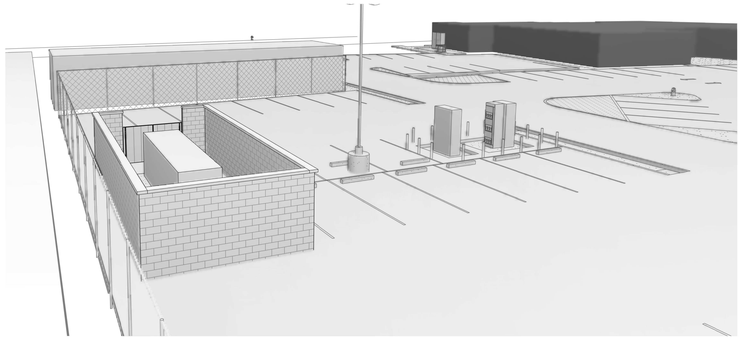
HUMBOLDT COUNTY OFFICE OF EDUCATION

FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501
HUMBOLDT COUNTY OFFICE OF EDUCATION

DSA File No. 12-50
App. No. 01-122322
PTN. 10124-N/A



DSA REQUIREMENTS

1. ALL WORK SHALL CONFORM TO THE 2022 EDITION OF THE TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. AS A FACILITY WHICH COMES UNDER THE APPROVAL AND AUTHORITY OF THE DIVISION OF THE STATE ARCHITECT (DSA), THIS PROJECT IS SUBJECT TO DRAWING AND JOB SITE REVIEW BY A REPRESENTATIVE OF DSA.
3. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS AFFECTING FLS, SSS, AND/OR ACS SHALL BE MADE BY ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR AND DSA IR A-6.
4. A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
5. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
6. A COPY OF PART 1 TO PART 5 & 9 OF TITLE 24 SHALL BE KEPT AND BE AVAILABLE IN THE FIELD DURING CONSTRUCTION.
7. DSA SHALL BE NOTIFIED OF THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24, CCR
8. THE DIVISION OF THE STATE ARCHITECT IS EXEMPT FROM ARBITRATION OR MEDIATION PROCEDURES.
9. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT IS PER SECTION 4-334, PART 1, TITLE 24, CCR
10. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, CCR:
    - VERIFIED REPORTS PER SECT 4-336; PART 1, TITLE 24 CCR
    - DUTIES OF ARCHITECT PER SECT 4-331, 4-341; PART 1, TITLE 24 CCR
    - DUTIES OF CONTRACTOR PER SECT. 4-343; PART 1, TITLE 24
11. TESTING AND INSPECTION:
    - INSPECTOR APPROVED BY DSA AS PER SECT. 4-333(D); PART 1, TITLE 24, CCR
    - TESTS AND TESTING LABORATORIES PER SECT 4-335
    - SPECIAL INSPECTION PER SECT. 4-333(C)
12. CHANGES IN LEVEL FOR FLOOR FINISHES SHALL CONFORM WITH CBC SECTIONS 11B-303.2 AND303.3.
13. ALL TESTS TO CONFORM TO REQUIREMENTS OF SECTION 4-335; PART 1, TITLE 24, CCR
14. TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335; PART 1, TITLE 24, CCR AND THE DISTRICT SHALL EMPLOY AND PAY THE DSA ACCEPTED LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.
15. INSPECTOR SHALL BE APPROVED BY DSA. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333(B).
16. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)
17. INSPECTOR OF RECORD REQUIREMENTS:
    A. ONE OR MORE INSPECTORS EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS WILL BE ASSIGNED TO THE WORK. THE INSPECTOR'S DUTIES ARE SPECIFICALLY DEFINED IN SECTION 4-342 OF SAID TITLE 24; PART 1 AND IN ADDITION, SHALL BE STIPULATED IN INTERPRETATION OF REGULATION DOCUMENT IR A-8.
    B. INSPECTOR SHALL BE CERTIFIED AS A CLASS 3 INSPECTOR THROUGH THE DIVISION OF THE STATE ARCHITECT INSPECTOR EXAMINATION PROGRAM. INSPECTOR SHALL ALSO BE SPECIFICALLY APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR THIS PROJECT AT LEAST 10 DAYS PRIOR TO THE START OF ANY WORK FOR THIS PROJECT.
18. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDUM, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION PER DSA IR A-6 AND SECTION 338(C) PART 1, TITLE 24 CCR.

DEFERRED APPROVALS

1. NONE

ADD ALTERNATES

1. NONE

CODES AND REGULATIONS

APPLICABLE STATE CODES AND REGULATIONS WITH LATEST AMENDMENTS AND SUPPLEMENTS:

1. 2025 BUILDING STANDARDS ADMINISTRATIVE CODE. PART 1, TITLE 24 CCR
2. 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2021 IBC & CALIFORNIA AMENDMENTS)
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2020 NATIONAL ELECTRICAL CODE & CALIFORNIA AMENDMENTS)
4. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2021 UNIFORM MECHANICAL CODE & CALIFORNIA AMENDMENTS)
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2021 UNIFORM PLUMBING CODE & CALIFORNIA AMENDMENTS)
6. 2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CBSC
7. 2022 CALIFORNIA HISTORICAL BUILDING CODE, PART 8, TITLE 24 CCR
8. 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 CCR (2021 INTERNATIONAL FIRE CODE & CALIFORNIA AMENDMENTS)
9. 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2021 INTERNATIONAL EXISTING BUILDING CODE & CALIFORNIA AMENDMENTS)
10. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE PART 11, TITLE 24
11. 2022 CALIFORNIA REFERENCED STANDARDS. PART 12. TITLE 24 CCR
12. TITLE 8 CCR, CH. 4, SUB-CH. 6 - ELEVATOR SAFETY ORDERS
13. TITLE 19 CCR, PUBLIC SAFETY, SFM REGULATIONS

APPLICABLE FEDERAL CODES AND STANDARDS:

14. AMERICANS WITH DISABILITIES ACT (ADA), TITLE 11
15. UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS) or ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)

APPLICABLE REFERENCED STANDARDS:

16. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED), 2022 EDITION
17. NFPA 24, PRIVATE FIRE MAINS (CA AMENDED), 2019 EDITION
18. NFPA 58, LIQUIFIED PETEROLEUM GAS CODE
19. NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED). 2022 EDITION
20. NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVES, 2019 EDITION
21. NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, 2018 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2022 CBC CHAPTER 35 AND 2022 CFC CHAPTER 80. SEE CHAPTER 80 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

PROJECT DESCRIPTION

APN: 002-171-009, 006-093-001

THE PROJECT INCLUDES NEW NATURAL GAS GENERATOR AND ASSOCIATED ENCLOSURE. THIS GENERATOR IS TO PROVIDE 100% BACKUP EMERGENCY POWER TO THE EXISTING ADMINISTRATION, RESOURCE, AND CONFERENCE BUILDINGS.

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

Application No.01-122322

File No. 12-50

[X] The drawings or sheets listed on the cover or index sheet (all S, P, and E drawings)
[ ] This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1. design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
2. coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. (Title 24, Part 1, Section 4-317 [b])

I find that:
[X] All drawings or sheets listed on the cover or index sheet
[ ] This drawing or page

[X] is/are in general conformance with the project design and
[X] has/have been coordinated with the project plans and specifications

Signature — **Date** 04/08/2025

Architect or Engineer designated to be in general responsible charge.

Brian P. Whitmore
Print Name

C 30345 — **License Number**
09-30-2025 — **Expiration Date**

STATEMENT OF GENERAL CONFORMANCE AND SIGNATURE BLOCK PER IR A-18

DRAWING INDEX

SHT. NO.	DESCRIPTION
ARCHITECTURAL	
A0.1	COVER SHEET
A0.2	GENERAL NOTES
A0.3	ARCHITECTURAL SYMBOLS AND ABBREVIATIONS
A0.4	CODE ANALYSIS SITE PLAN
A10.2.1	SITE DETAILS
STRUCTURAL	
S0.1	GENERAL NOTES
S0.11	SPECIFICATIONS
S5.0	FOUNDATION DETAILS
PLUMBING	
P0.1	PLUMBING NOTES, LEGEND AND DETAILS
P1.1	PLUMBING SITE PLAN
P1.2	PLUMBING ENLARGED SITE PLAN
ELECTRICAL	
E0.1	ELECTRICAL ABBREVIATIONS AND NOTES
E0.2	ELECTRICAL LEGENDS
E1.1	ELECTRICAL OVERALL SITE PLAN
E1.2	ELECTRICAL ENLARGED SITE PLAN
E2.1	ELECTRICAL ONE LINE DIAGRAM AND DETAILS
E3.1	ELECTRICAL SPECIFICATIONS
E3.2	ELECTRICAL SPECIFICATIONS
E3.3	ELECTRICAL SPECIFICATIONS
TOTAL SHEET COUNT: 19	

SHT. NO.	DESCRIPTION

PROJECT DIRECTORY

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DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

STUDIO W ARCHITECTS

Studio W Architects
1930 H Street
Sacramento, California 95811
[T] 916.254.5600
www.StudioW-Architects.com

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/25 STATE OF CALIFORNIA — DATE SIGNED: 11/10/2025	

GENERAL NOTES

1. This sheet is part of a set and is not to be used alone.
2. This sheet is not to be used for construction unless the architect's stamp and signature appear on the drawings and the status box indicated drawings have been released for construction.
3. These plans and prints thereof, as instruments of service, are owned by the architect and are for use on this project only. Reproduction and/or distribution without the prior written consent of the architect is forbidden.
4. Copyright Studio W Associates, Inc. 2024.

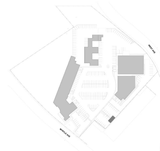
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	
● DSA BACK CHECK	11/10/2025
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



HUMBOLDT COUNTY OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

DSA SUBMITTAL

HUMBOLDT COUNTY OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

COVER SHEET

Date	Project Number
11/10/2025	23051
Application Number	Drawing Number
01-122322	A0.1
Drawn: HF	Checked: BG

PRINT DATE: 11/10/2025 3:30:23 PM
FILE PATH: Autodesk Docs://23051 HCOE Franklin Site Generator Inn & Report/23051-HCOE Franklin Site Generator Inn & Report-A23.rvt

GENERAL STEEL NOTES

1. REQUIRED MATERIAL PROPERTIES, INCLUDING COMPLIANCE WITH AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) SPECIFICATIONS WHEN APPLICABLE.
2. PROPRIETARY PRODUCTS NAME, MANUFACTURER, AND EVALUATION REPORT NUMBER. REFER TO SECTION 1.12 BELOW.
3. QUALITY CONTROL PERFORMED BY THE SUPPLIER.
4. STANDARDS FOR THE EXECUTION OF THE WORK, INCLUDING ASSOCIATED TOLERANCES. REFERENCES TO RECOGNIZED STANDARDS ARE ACCCEPTABLE.
5. REQUIRED QUALIFICATIONS OF PERSONNEL PERFORMING THE WORK FOR EACH APPLICABLE TRADE.
6. PRODUCT AND MATERIAL FINISHES WHERE REQUIRED FOR WEATHER PROTECTION OR SAFETY.
7. QUALITY ASSURANCE TESTS AND FREQUENCY REQUIREMENTS (INCLUDING CITATION OF ASTM STANDARDS WHEN APPLICABLE) NOT COVERED BY SECTION 1.3 BELOW.

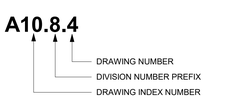
DRAWING DISCIPLINE PREFIX

A.	ARCHITECTURAL
C.	CIVIL
D.	INTERIOR DESIGN / FURNITURE
E.	ELECTRICAL
FA.	FIRE ALARM
FP.	FIRE PROTECTION / SPRINKLER SYSTEM
FS.	FOOD SERVICE
L.	LANDSCAPING
M.	MECHANICAL
P.	PLUMBING
S.	STRUCTURAL
T.	TECHNOLOGY

DRAWING INDEX CODE

A0.	GENERAL INFORMATION
A1.	SITE PLANS
A2.	FLOOR PLANS
A3.	REFLECTED CEILING PLANS
A4.	ROOF PLANS
A5.	EXTERIOR ELEVATIONS
A6.	BUILDING SECTIONS
A7.	ENLARGED PLANS
A8.	INTERIOR ELEVATIONS
A9.	SCHEDULES
A10.	CONSTRUCTION DETAILS

DETAIL DRAWING CODE



THE DIVISION PREFIX NUMBERS ARE THOSE IDENTIFIED BY THE 48 DIVISION GROUPING SYSTEM OF MASTERFORMAT AS PUBLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI) AND SHALL NOT BE SOLELY REPRESENTATIVE OF REQUIREMENTS FOR ANY ONE DIVISION. THOSE DIVISIONS NOTED AS BEING OMITTED ARE NOT APPLICABLE OR ARE INCLUDED UNDER DISCIPLINE DRAWINGS.

IN CASE OF DISCREPANCY BETWEEN THE INDEX AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

DIVISION NUMBER CODE

MASTERFORMAT NUMBERS AND TITLES AS PUBLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI).

DIVISION 00	PROCUREMENT AND CONTRACTING REQUIREMENTS
DIVISION 01	GENERAL REQUIREMENTS
DIVISION 02	EXISTING CONDITIONS
DIVISION 03	CONCRETE
DIVISION 04	MASONRY
DIVISION 05	METALS
DIVISION 06	WOODS, PLASTICS, AND COMPOSITES
DIVISION 07	THERMAL AND MOISTURE PROTECTION
DIVISION 08	OPENINGS
DIVISION 09	FINISHES
DIVISION 10	SPECIALTIES
DIVISION 11	EQUIPMENT
DIVISION 12	FURNISHINGS
DIVISION 13	SPECIAL CONSTRUCTION
DIVISION 14	CONVEYING EQUIPMENT
DIVISION 21	FIRE SUPPRESSION
DIVISION 22	PLUMBING
DIVISION 23	HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)
DIVISION 25	INTEGRATED AUTOMATION
DIVISION 26	ELECTRICAL
DIVISION 27	COMMUNICATIONS
DIVISION 28	ELECTRONIC SAFETY AND SECURITY
DIVISION 31	EARTHWORK
DIVISION 32	EXTERIOR IMPROVEMENTS
DIVISION 33	UTILITIES
DIVISION 34	TRANSPORTATION
DIVISION 35	WATERWAY AND MARINE CONSTRUCTION
DIVISION 40	PROCESS INTERCONNECTIONS
DIVISION 41	MATERIAL PROCESSING AND HANDLING EQUIPMENT
DIVISION 42	PROCESS HEATING, COOLING, AND DRYING EQUIPMENT
DIVISION 43	PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND STORAGE EQUIPMENT
DIVISION 44	POLLUTION AND WASTE CONTROL EQUIPMENT
DIVISION 45	INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT
DIVISION 46	WATER AND WASTEWATER EQUIPMENT
DIVISION 48	ELECTRICAL POWER GENERATION

GENERAL NOTES

1. PRIOR TO SUBMITTING PROPOSAL, BIDDER SHALL EXAMINE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL HAVE VISITED THE CONSTRUCTION SITE. HE SHALL BE FAMILIAR WITH THE CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. THE GENERAL CONTRACTOR SHALL NOT DISPUTE, COMPLAIN OR ASSERT THAT THERE IS ANY MISUNDERSTANDING IN REGARDS TO LOCATION, EXTENT, NATURE OR AMOUNT OF WORK TO BE PERFORMED UNDER THIS CONTRACT DUE TO THE CONTRACTOR'S FAILURE TO INSPECT THE SITE. BIDDERS SHALL NOTIFY THE ARCHITECT OF ANY CONDITIONS, REQUIRING WORK, WHICH ARE NOT COVERED IN THE CONTRACT DOCUMENTS.
2. THERE WILL BE NO SUBSTITUTION FOR SPECIFIED ITEMS WITHOUT PRIOR APPROVAL UNLESS OTHERWISE NOTED.
3. THE GENERAL BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS REQUIRED BY GOVERNING AGENCIES IN ORDER TO PERFORM THE WORK.
4. THE FINAL LOCATION OF ALL ELECTRICAL AND SIGNAL EQUIPMENT, PANEL BOARDS, FIXTURES, ETC., SHALL BE APPROVED BY OWNER PRIOR TO INSTALLATION.
5. DEFINITIONS
   - A. "TYPICAL" MEANS IDENTICAL FOR ALL CONDITIONS, UNLESS OTHERWISE NOTED.
   - B. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITION NOTED. VERIFY DIMENSIONS AND ORIENTATIONS.
   - C. "PROVIDE" MEANS TO FURNISH AND INSTALL.
   - D. "FURNISH" MEANS TO FURNISH AND OTHERS WILL INSTALL.
6. DIMENSIONING RULES:
   - A. ALL HORIZONTAL DIMENSIONS SHALL BE TO FACE OF STUD OR TO CENTERLINE OF COLUMN GRID LINE, U.O.N
   - B. DIMENSIONS NOTED "CLEAR", "CLR", OR "MINIMUM" MUST BE PRECISELY MAINTAINED.
   - C. DIMENSIONS CAN NOT BE MODIFIED WITHOUT APPROVAL OF THE ARCHITECT UNLESS OTHERWISE NOTED.
   - D. VERTICAL DIMENSIONS ARE FROM TOP OF FLOOR SLAB UNLESS OTHERWISE NOTED.
   - E. DO NOT SCALE DRAWINGS. IF ANY ITEM OF WORK CANNOT BE LOCATED, DO NOT PROCEED WITH THE WORK WITHOUT THE ARCHITECT'S APPROVAL.
   - F. DIMENSIONS MARKED "V.I.F." OR "VERIFY" SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
   - G. VERIFY ALL ROUGH OPENING DIMENSIONS FOR FABRICATED ITEMS WITH THE MANUFACTURER PRIOR TO PROCEEDING WITH CONSTRUCTION.
7. PROVIDE REQUIRED BACKING, BLOCKING, AND BRACING FOR ALL WALL - MOUNTED FIXTURES, ACCESSORIES AND EQUIPMENT.
8. VERIFY AND COORDINATE WALLS THAT MAY REQUIRE NON-TYPICAL THICKNESS OR FRAMING DUE TO ELECTRICAL, MECHANICAL, PLUMBING, STRUCTURAL AND/OR EQUIPMENT REQUIREMENTS.
9. ALL GLAZING SHALL CONFORM TO FEDERAL GLAZING REGULATIONS AND CHAPTER 24, CBC.
10. ALL CONTRACTORS SHALL REMOVE TRASH AND DEBRIS STEMMING FROM THEIR WORK ON A DAILY BASIS. PROJECT SITE SHALL BE MAINTAINED IN A CLEAN AND ORDERLY CONDITION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL LEFT-OVER MATERIALS, DEBRIS, TOOLS AND EQUIPMENT INVOLVED IN HIS OPERATIONS AT THE CONCLUSION OF THE INSTALLATION. HE SHALL LEAVE ALL AREAS CLEAN AND FREE FROM DUST.
12. HAZARDOUS MATERIALS: THE ARCHITECT AND THE ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL, DISPOSAL OF OR EXPOSURE OF PERSONS TO ASBESTOS OR HAZARDOUS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE. PROFESSIONAL SERVICES RELATED OR IN ANY WAY CONNECTED WITH THE INVESTIGATION, DETECTION, ABATEMENT, REPLACEMENT, USE, SPECIFICATION, OR REMOVAL OF PRODUCTS, MATERIALS, OR PROCESSES CONTAINING ASBESTOS OR HAZARDOUS OR TOXIC MATERIALS ARE BEYOND THE SCOPE OF THIS AGREEMENT. THE GENERAL CONTRACTOR & SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES IN ALL AREAS OF NEW WORK PRIOR TO COMMENCEMENT OF EXCAVATION. EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ROUTING LOCATION AS BEST DETERMINED FROM EXISTING DRAWINGS AND THE SCHOOL DISTRICT, BUT SHOULD NOT BE CONSTRUED TO REPRESENT ALL THE EXISTING UNDERGROUND UTILITIES.
14. ALL TEMPORARY WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
15. ALL WALL PENETRATIONS TO EXTERIOR WALLS SHALL BE SEALED AIR/WATER TIGHT. ALL INTERIOR PENETRATIONS SHALL BE SEALED TO PROVIDE A PROFESSIONAL AND FINISHED APPEARANCE.
16. THE DRAWINGS AND SPECIFICATIONS DO NOT UNDERTAKE TO SHOW OR LIST EVERY ITEM TO BE PROVIDED, BUT RATHER TO DEFINE THE REQUIREMENTS FOR A FULL AND WORKING SYSTEM FROM THE STANDPOINT OF THE END USER. FOR THIS REASON, WHEN AN ITEM NOT SHOWN OR LISTED IS CLEARLY NECESSARY FOR PROPER USE CONTROL/ OPERATION OF EQUIPMENT WHICH IS SHOWN OR LISTED, PROVIDE ALL ITEMS WHICH WILL ALLOW THE SYSTEM TO FUNCTION PROPERLY AT NO INCREASE IN CONTRACT PRICE OR TIME.
17. THE DETAILS REFLECT THE DESIGN INTENT FOR TYPICAL CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND SHALL INCLUDE, IN HIS SCOPE. THE COST FOR COMPLETE FINISHED INSTALLATIONS, INCLUDING ANOMALIES, OF ALL TRADES.
18. ALL WORK SHALL CONFORM TO CALIFORNIA CODES, TRADE STANDARDS WHICH GOVERN EACH PHASE OF THE PROJECT, AND ALL APPLICABLE LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
19. NO WORK SHALL COMMENCE WITH UNAPPROVED MATERIALS. ANY WORK DONE WITH UNAPPROVED MATERIALS AND EQUIPMENT IS AT THE CONTRACTOR'S RISK. SEE SPECIFICATIONS FOR SUBMITTAL AND SUBSTITUTION REQUIREMENTS.
20. CONSTRUCTION MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE OR DETERIORATION. FAILURE IN THIS REGARD MAY BE CAUSE FOR REJECTION OF MATERIAL AND/OR WORK. SECURITY OF MATERIALS ARE THE SOLE RESPONSIBILITY OF CONTRACTOR.
21. ALL EQUIPMENT/CABINETS SHALL BE FABRICATED FROM FIELD VERIFIED DIMENSIONS AND APPROVED SHOP DRAWINGS. COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT WITH THIS WORK.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE AND COSTS ATTRIBUTED TO RAIN WATER DAMAGE DURING THE DURATION OF THIS PROJECT.
23. PROTECT AREAS FROM DAMAGE WHICH MAY OCCUR DUE TO TEMPERATURES, WIND, DUST, WATER, ETC. PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED DURING CONSTRUCTION.
24. MAINTAIN EXISTING PEDESTRIAN ACCESS ALONG EXISTING ADJACENT STREETS.
25. ALL PUBLIC IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST ADOPTED CITY/COUNTY STANDARDS.
26. ALL TYPICAL DETAILS SHALL APPLY UNLESS NOTED OTHERWISE.
27. NOTIFY THE ARCHITECT IN WRITING AND SEEK CLARIFICATION IF ANY DISCREPANCIES OR OMISSIONS ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIAL WORK IF RELATED WORK IS CONTINUED AFTER A DISCREPANCY IS IDENTIFIED.
28. NEW FINISHES AND CONSTRUCTION SHALL BE PROTECTED BY THE CONTRACTOR FROM POTENTIAL DAMAGE CAUSED BY CONSTRUCTION ACTIVITY. DAMAGE TO FINISHES OR CONSTRUCTION SHALL BE REPAIRED OR REPLACED (OWNER'S DECISION) BY THE CONTRACTOR WITH IDENTICAL MATERIAL AND/OR FINISHES. CONTRACTOR SHALL MAKE AND MAINTAIN A PHOTOGRAPHIC RECORD NOTEBOOK WITH DATED/INDEXED PHOTOGRAPHS.
29. SEE ELECTRICAL DRAWINGS FOR INFORMATION RELATED TO TELECOMMUNICATION EQUIPMENT, POWER, AND LIGHTING FIXTURES AND EQUIPMENT. SEE ARCHITECTURAL PLANS, REFLECTED CEILING PLAN AND INTERIOR ELEVATIONS FOR COORDINATED EQUIPMENT LOCATIONS. IF NOT SHOWN, CONTACT ARCHITECT FOR REVIEW AND DECISION.
30. PROVIDE ACCESS DOORS REQUIRED FOR ACCESS TO CONCEALED MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT.
31. ALL NOTED WORK IS UNDERSTOOD TO BE NEW, UNLESS LABELED AS "(E)" OR "EXISTING".
32. ALL CONSTRUCTION AND DEMOLITION SHALL BE IN ACCORDANCE WITH CHAPTER 33 OF THE CBC AND CFC, AND THE WRITTEN FIRE LIFE SAFETY PLAN.

SUPPLEMENTAL GENERAL NOTES

1. THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
2. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREIN OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
3. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF STUDIO W ARCHITECTS, AND ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF STUDIO W ARCHITECTS.
4. EACH BIDDER SHALL POSSESS AT THE TIME OF BID, A CLASS B OR THE APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF THIS CONTRACT.
5. FIRE SAFETY DURING CONSTRUCTION & DEMOLITION:
   - A. GENERAL: FIRE SAFETY DURING CONSTRUCTION & DEMOLITION SHALL COMPLY WITH 2022 CALIFORNIA FIRE CODE (CFC) CH. 33 (PART 9, TITLE 24 CCR)
   - B. CONSTRUCTION SAFEGUARDS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF CBC 3302.
   - C. DEMOLITION: SHALL COMPLY WITH APPLICABLE PROVISIONS OF CBC 3303.
   - D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES PER CBC 3308.1.
   - E. MEANS OF EGRESS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF CBC 3310.
   - F. WATER SUPPLY: APPROVED WATER SUPPLY SHALL BE MADE AVAILABLE IN ACCORDANCE WITH CBC 3313.
   - G. FIRE WATCH: MAINTAIN FIRE WATCH WHEN REQUIRED BY THE BUILDING OFFICIAL AND WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE OR AS ALLOWED BY THE BUILDING OFFICIAL PER CBC 3314.
6. PENETRATIONS IN FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO EQUAL RATING. FIRE STOP SYSTEMS AS LISTED BY UNDERWRITERS LABORATORIES SHALL BE INSTALLED PER FIRE RESISTANCE DIRECTORY. FIRE STOP SYSTEMS SHALL BE AS SPECIFIED.
7. NONRESIDENTIAL ENERGY STANDARDS COMPLIANCE STATEMENT (TITLE 24, PART 6):
   - A. THE DESIGN INDICATED HEREIN COMPLIES WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION STANDARDS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THE PROPOSED BUILDINGS WILL BE IN COMPLIANCE WITH THE ENERGY CONSERVATION STANDARDS PROVIDED THEY ARE BUILT ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS AND PROVIDED ANY FUTURE IMPROVEMENTS ARE COMPLETED ACCORDING TO THE REQUIREMENTS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO INCLUDE ALL SIGNIFICANT ENERGY CONSERVATION FEATURES REQUIRED FOR COMPLIANCE WITH THE STANDARDS. BUILDING AREAS THAT ARE UNCONDITIONED AND/OR NOT SUBJECT TO THE STANDARDS ARE INDICATED ON THE DRAWINGS.
   - B. ENVELOPE MANDATORY MEASURES:
     - A. INSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.
     - B. ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS, SECTIONS 719
     - C. ALL EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL AND OBSERVABLE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED.
     - D. SITE CONSTRUCTED DOORS, WINDOWS, AND SKYLIGHTS SHALL BE CAULKED BETWEEN THE UNIT AND THE BUILDING, AND SHALL BE WEATHERSTRIPPED (EXCEPT FOR UNFRAMED GLASS DOORS AND FIRE DOORS).
     - E. MANUFACTURED DOORS AND WINDOWS INSTALLED SHALL HAVE AIR INFILTRATION RATES CERTIFIED BY THE MANUFACTURER IN ACCORDANCE WITH TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS, SECTION 116(a)1.
     - F. MANUFACTURED FENESTRATION PRODUCTS IN THE ENVELOPE OF THE BUILDING, INCLUDING, BUT NOT LIMITED TO, WINDOWS, SLIDING GLASS DOORS, FRENCH DOORS, SKYLIGHTS, CURTAIN WALLS, AND GARDEN WINDOWS MUST BE LABELED FOR U-VALUE IN ACCORDANCE WITH THE (NFRC) NATIONAL FENESTRATION RATING COUNCIL'S INTERIM U-VALUE RATING PROCEDURE.
     - G. DEMISING WALL INSULATION SHALL BE INSTALLED IN ALL OPAQUE PORTIONS OF FRAMED WALLS (EXCEPT DOORS).
8. PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:
   - A. ANCHOR DIAMETER REFERS TO THE THREAD SIZE FOR THE WEDGE CATEGORY AND TO THE ANCHOR OUTSIDE DIAMETER FOR THE SLEEVE CATEGORY.
   - B. APPLY PROOF TEST LOADS TO WEDGE & SLEEVE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.
   - C. FOR SLEEVE INTERNALLY THREADED CATEGORIES, VERIFY THAT THE ANCHOR IS NOT PREVENTED FROM WITHDRAWING BY A BASEPLATE OR OTHER FIXTURES. IF RESTRAINT IS FOUND, LOOSEN AND SHIM OR REMOVE FIXTURE(S) PRIOR TO TESTING.
   - D. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
   - E. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
   - F. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
     1. HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP-IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD.
     2. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE OR SLEEVE TYPE: ONE-HALF (1/2) TURN OF THE NUT. ONE-QUARTER (1/4) TURN OF THE NUT FOR THE 3/8 IN. SLEEVE ANCHOR ONLY.
   - G. TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.
   - H. ALL ANCHOR BOLTS OF THE EXPANSION TYPE (LOADED IN EITHER PULLOUT OR SHEAR) SHALL HAVE 50 PERCENT OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT ALLOWED BY THE TYPE OF SUBSTRATE AND DIAMETER OF BOLT LISTED BELOW UNDER TEST VALUES TABLE) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 1910A.5, "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE."
   - I. ALL BOLTS MUST HAVE ICC APPROVAL.
   - J. ALL ANCHOR BOLTS OF THE EXPANSION TYPE SHALL BE ONE OF THE FOLLOWING:
     1. HILTI KB-TZ2 ANCHOR ICC NO. ESR 4266

MINIMUM TEST VALUES
NORMAL WEIGHT OR LIGHTWEIGHT CONCRETE

ANCHOR	WEDGE		
DIA. (IN)	TENSION LOAD (LBS)	TORQUE (FT-LBS)	EFFECTIVE MIN. EMBEDMENT
3/8	6,490	30	1 1/2" - 2 1/2"
1/2	11,240	50	1 1/2" - 3 1/4"
5/8	17,535	40	2 3/4" - 4"
3/4	25,335	110	3 1/4" - 4 3/4"

9. POWDER-DRIVEN CONCRETE FASTENERS:
   - A. GENERAL: USE OF POWDER DRIVEN CONCRETE FASTENERS FOR TENSION LOADS IS LIMITED TO SUPPORT OF MINOR LOADS LIKE ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT.
   - B. ALLOWABLE LOADS: IN GENERAL, LOADS SHOULD BE LIMITED TO LESS THAN 100 POUNDS. HOWEVER GREATER LOADS MAY BE PERMITTED FOR SPECIAL CASES WHEN APPROVED BY THE CHECKING SUPERVISOR OR FIELD ENGINEER.
   - C. TESTING: THE OPERATOR, TOOL, AND FASTENER SHALL BE PREQUALIFIED BY THE PROJECT INSPECTOR. HE SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL-OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD, OR 200 POUNDS, WHICHEVER IS GREATER, SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PIN. THEREAFTER, RANDOM TESTS UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS, EXCEPT THAT WHEN THE DESIGN LOAD EXCEEDS 100 POUNDS, ONE HALF OF THE PINS SHALL BE TESTED. SHOULD FAILURE OCCUR ON ANY PIN TESTED, ALL INSTALLATIONS MUST BE TESTED AND UNFAIR PINS REPLACED.
   - D. ALL POWDER DRIVEN CONCRETE FASTENERS SHALL BE ONE OF THE FOLLOWING: HILTI, INC.
     1. 0.145 DIA. PAF X-CR INTO STEEL BASE MATERIAL - ICC NO. ESR 1663
     2. 0.138 DIA. PAF X-CR INTO CONCRETE BASE MATERIAL - ICC NO. ESR 1663

ACCEPTANCE TESTING

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT: HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.

THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

STUDIO W ARCHITECTS

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 8/30/25 STATE OF CALIFORNIA	

DATE SIGNED: 11/10/2025

GENERAL NOTES
1. This sheet is part of a set and is not to be used alone.
2. This sheet is not to be used for construction unless the architect's stamp and signature in the drawings and the status box indicated drawings have been released for construction.
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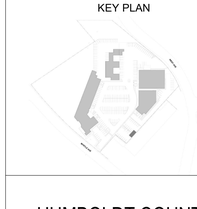
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	
● DSA BACK CHECK	11/10/2025
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



HUMBOLDT COUNTY
OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

DSA SUBMITTAL

HUMBOLDT COUNTY
OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

GENERAL NOTES

Date	Project Number
11/10/2025	23051
Application Number	Drawing Number
01-122322	A0.2
Drawn HF	Checked BG

PRINT DATE: 11/10/2025 3:30:24 PM
FILE PATH: Autodesk Docs://23051 HCOE Franklin Site Generator Inv & Report/23051-HCOE Franklin Site Generator Inv & Report-A23.rvt

ARCHITECTURAL DRAWING ABBREVIATIONS

	#	POUND OR NUMBER
	&	AND
	*	ITEMS IDENTIFIED AS "NIC" ARE NOT PART OF THIS DSA APPROVAL
	2X	NOMINAL LUMBER SIZE (4X, 6X, 8X, ETC.)
	@	AT
	⊥	PERPENDICULAR
A		
A	A/C	AIR CONDITIONING
A	A/E	ARCHITECT/ENGINEER
A	AB	ANCHOR BOLT
A	ABAN	ABANDON
A	ABC	AGGREGATE BASE COURSE
A	ABV	ABOVE
A	AC	ASPHALTIC CONCRETE
A	ACC	ACCESS(IBLE)
A	ACP	ALUMINUM COMPOSITE PANEL
A	ACST	ACOUSTICAL
A	ACT	ACOUSTICAL CEILING TILE
A	AD	AREA DRAIN
A	ADDM	ADDENDUM
A	ADH	ADHESIVE
A	ADJ	ADJUSTABLE
A	ADJC	ADJACENT
A	AFF	ABOVE FINISH FLOOR
A	AFG	ABOVE FINISHED GRADE
A	AGGR	AGGREGATE
A	AHU	AIR HANDLING UNIT
A	ALS	ASSISTED LISTENING SYSTEM
A	ALT	ALTERNATE
A	ALUM./AL.	ALUMINUM
A	ANC	ANCHOR, ANCHORAGE
A	APLD	APPLIED
A	APPRX	APPROXIMATELY
A	ARCH	ARCHITECT(URAL)
A	ASC	ABOVE SUSPENDED CEILING
A	ASF	ABOVE STAGE FINISH
A	ASPH	ASPHALT
A	ASSY.	ASSEMBLY
A	ASYM	ASYMMETRICAL
A	AUTO	AUTOMATIC
A	AV	AUDIO VISUAL
A	AWG	AMERICAN WIRE GAUGE
B		
B	B	BOLT
B	BC	BACK OF CURB
B	BD	BOARD
B	BITUM	BITUMINOUS
B	BLDG	BUILDING
B	BLK	BLOCK
B	BLKG	BLOCKING
B	BLW	BELOW
B	BLW CLG	BELOW CEILING
B	BLW FFLR	BELOW FINISH FLOOR
B	BM	BENCH MARK
B	BN	BOUNDARY NAILING
B	BO	BOTTOM OF
B	BOT	BOTTOM
B	BRCG	BRACING
B	BRDG	BRIDGING
B	BRG	BEARING
B	BRK	BRICK
B	BRKT	BRACKET
B	BRS	BRASS
B	BRZ	BRONZE
B	BS	BOTH SIDES
B	BSMT	BASEMENT
B	BTWN	BETWEEN
B	BUR	BUILT UP ROOFING
B	BW	BOTH WAYS
C		
C	C&G	CURB AND GUTTER
C	CAB	CABINET
C	CAD	CADMIUM
C	CB	CATCH BASIN
C	CBB	CEMENTITIOUS BACKER BOARD
C	CBC	CALIFORNIA BUILDING CODE
C	CEM	CEMENT
C	CER	CERAMIC
C	CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
C	CFLG	COUNTERFLASHING
C	CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
C	CG	CORNER GUARD
C	CHBD	CHALKBOARD
C	CHFR	CHAMFER
C	CI	CAST IRON
C	CIP	CAST IN PLACE
C	CIR	CIRCLE
C	CIRC	CIRCULAR, CIRCUMFERENCE
C	CJ	CONSTRUCTION JOINT
C	CL	CHAIN LINK OR CENTER LINE
C	CLG	CEILING
C	CLJ	CONTROL JOINT
C	CLKG	CAULKING
C	CLL	CONTRACT LIMIT LINE
C	CLOS	CLOSURE
C	CLR	CLEAR(ANCE)
C	CLRM	CLASSROOM
C	CMP	CORRUGATED METAL PANEL
C	CMPST	COMPOSITION
C	CMU	CONCRETE MASONARY UNIT
C	CNCL	CONCEALED
C	CNR	CORNER
C	CNTR	COUNTER
C	COL	COLUMN
C	COM	COMMON
C	COMB	COMBINATION
C	COMP	COMPOSITE
C	COMPT	COMPARTMENT
C	CONC	CONCRETE
C	CONF	CONFERENCE
C	CONN	CONNECTION
C	CONSTR	CONSTRUCTION
C	CONT	CONTINUOUS, CONTINUATION
C	CONTR	CONTRACT(OR)
C	COORD	COORDINATE
C	CORR	CORRIDOR
C	CPR	COPPER
C	CPRS	COMPRESS(ED), (ION), (IBLE)
C	CPT	CARPET
C	CRS	COLD ROLLED STEEL
C	CS	CAST STONE
C	CSG	CASING
C	CSK	COUNTERSUNK
C	CSMT	CASEMENT
C	CSWK	CASEWORK
C	CT	CERAMIC TILE
C	CTB	CERAMIC TILE BASE
C	CTF	CERAMIC TILE FLOOR
C	CTG	COATING
C	CTR	CENTER
C	CUFT	CUBIC FOOT
C	CUIN	CUBIC INCH
C	CUST	CUSTODIAN
C	CUYD	CUBIC YARD
C	CW	CURTAIN WALL
D		
D	D	DRAIN
D	d.	PENNYWEIGHT (NAILS)
D	DA	DOUBLE ACTING
D	DBL	DOUBLE
D	DEG	DEGREES
D	DEMO	DEMOLISH, DEMOLITION
D	DEP	DEPRESSED
D	DEPT	DEPARTMENT
D	DET	DETAIL
D	DF	DRINKING FOUNTAIN
D	DG	DECOMPOSED GRANITE
D	DH	DOUBLE HUNG
D	DIA	DIAMETER
D	DIAG	DIAGONAL
D	DIFF	DIFFUSER
D	DIM	DIMENSION
D	DISP	DISPENSER
D	DIV	DIVISION
D	DMPF	DAMPPROOFING
D	DMT	DEMOUNTABLE
D	DN	DOWN
D	DR	DOOR
D	DRB	DRAINBOARD
D	DRLV	DOOR LOUVER
D	DS	DOWNSPOUT
D	DSP	DRY STANDPIPE
D	DT	DRAIN TILE
D	DVTL	DOVETAIL
D	DW	DISHWASHER
D	DWG	DRAWING
D	DWL	DOWEL
D	DWR	DRAWER
E		
E	(E)	EXISTING
E	E	EAST
E	EA	EACH
E	EAR	EXHAUST AIR REGISTER
E	EB	EXPANSION BOLT
E	EE	EACH END
E	EF	EACH FACE
E	EFS	EXTERIOR FINISH SYSTEM
E	EHD	ELECTRIC HAND DRYER
E	EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
E	EJ	EXPANSION JOINT
E	EL	ELEVATION
E	ELAST	ELASTOMERIC
E	ELEC	ELECTRIC(AL)
E	ELEV	ELEVATOR
E	EM	EXPANDED METAL
E	EMER	EMERGENCY
E	EN	EDGE NAILING
E	ENCL	ENCLOSE(URE)
E	ENGR	ENGINEER
E	ENTR	ENTRANCE
E	EP	ELECTRICAL PANELBOARD
E	EQ	EQUAL
E	EQUIP	EQUIPMENT
E	ESC	ESCUTCHEON
E	ESCL	ESCALATOR
E	ESMT	EASEMENT
E	EW	EACH WAY
E	EWC	ELECTRIC WATER COOLER
E	EWH	ELECTRIC WATER HEATER
E	EWS	EYE WASH STATION
E	EXC	EXCAVATE
E	EXH	EXHAUST
E	EXP	EXPOSED
E	EXPN	EXPANSION
E	EXS	EXTRA STRONG
E	EXT	EXTERIOR
F		
F	(F)	FUTURE
F	F/F	FACE TO FACE
F	FA	FIRE ALARM
F	FAB	FABRIC
F	FBD	FIBERBOARD
F	FBRK	FIRE BRICK
F	FCBRK	FACE BRICK
F	FD	FLOOR DRAIN
F	FDTN	FOUNDATION
F	FE	FIRE EXTINGUISHER
F	FEC	FIRE EXTINGUISHER CABINET
F	FF	FINISH FLOOR
F	FFA	FROM FLOOR ABOVE
F	FFB	FROM FLOOR BELOW
F	FFEL	FINISHED FLOOR ELEVATION
F	FFL	FINISHED FLOOR LINE
F	FGL	FIBERGLASS
F	FHC	FIRE HOUSE CABINET
F	FHMB	FLAT HEAD MACHINE BOLT
F	FHMS	FLAT HEAD MACHINE SCREW
F	FHWS	FLATHEAD WOOD SCREW
F	FIN	FINISH(ED)
F	FJT	FLUSH JOINT
F	FLASH	FLASHING
F	FLDG	FOLDING
F	FLG	FLOORING
F	FLR	FLOOR
F	FLUOR	FLUORESCENT
F	FN	FIELD NAILING
F	FOB	FACE OF BLOCK
F	FOC	FACE OF CONCRETE/CURB
F	FOF	FACE OF FINISH
F	FOG	FACE OF GRID
F	FOM	FACE OF MASONRY
F	FOS	FACE OF STUD
F	FPL	FIREPLACE
F	FPRF	FIREPROOF(ING)
F	FR	FRAME(D), (ING)
F	FRG	FIBERGLASS REINFORCED GYPSUM
F	FRP	FIBERGLASS REINFORCED PLASTIC
F	FRTW	FIRE RETARDANT TREATED WOOD
F	FRZ	FREEZER
F	FS	FIRE SPRINKLER
F	FS	FAR SIDE
F	FSTN	FASTEN, FASTENER
F	FT	FOOT/FEET
F	FTG	FOOTING
F	FURG	FURRED, (ING)
F	FWC	FABRIC WALL COVERING
G		
G	GA	GAUGE
G	GAL	GALLON
G	GALV	GALVANIZED
G	GB	GRAB BAR
G	GFRC	GLASS FIBER REINFORCED CONCRETE
G	GI	GALVANIZED IRON
G	GL	GLASS
G	GLULAM	GLUE LAMINATED
G	GLZ	GLAZING
G	GLZCMU	GLAZED CONRETE MASONRY UNIT
G	GND	GROUND
G	GPC	GYPSUM PLASTER CEILING
G	GR	GRADE
G	GRBM	GRADE BEAM
G	GRLN	GRADE LINE
G	GSB	GYPSUM SHEATHING BOARD
G	GSM	GALVANIZED SHEET METAL
G	GSS	GALVANIZED STEEL SHEET
G	GST	GLAZED STRUCTURAL TILE
G	GT	GROUT
G	GVL	GRAVEL
G	GYP	GYPSUM
G	GYP BD	GYPSUM BOARD
H		
H	HB	HOSE BIB
H	HC	HOLLOW CORE
H	HD	HEAVY DUTY
H	HDAS	HEADED ANCHOR STUD
H	HDJT	HEAD JOINT
H	HDR	HEADER
H	HDW	HARDWARE
H	HDWD	HARDWOOD
H	HEX	HEXAGONAL
H	HGR	HANGER
H	HLDN	HOLD DOWN
H	HM	HOLLOW METAL
H	HMD	HOLOW METAL DOOR
H	HMDF	HOLLOW METAL DOOR AND FRAME
H	HMF	HOLLOW METAL FRAME
H	HNDRL	HANDRAIL
H	HORIZ	HORIZONTAL
H	HPT	HIGH POINT
H	HR	HOUR
H	HT	HEIGHT
H	HTG	HEATING
H	HVAC	HEATING, VENTILATING, AIR CONDITIONING
H	HWH	HOT WATER HEATER
I		
I	ID	INSIDE DIAMETER
I	IN	INCH
I	INCL	INCLUDE(D), (ING)
I	INFO	INFORMATION
I	INSTL	INSTALL
I	INSUL	INSULATE(D), (ION)
I	INT	INTERIOR
I	INV	INVERT
I	IPS	IRON PIPE SIZE
I	ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY
J		
J	JAN	JANITOR
J	JST	JOIST
J	JT	JOINT
K		
K	KIT	KITCHEN
K	KO	KNOCKOUT
K	KPL	KICKPLATE
L		
L	LAB	LABORATORY
L	LAD	LADDER
L	LAM	LAMINATE
L	LAV	LAVATORY
L	LB(S)	POUND(S)
L	LBL	LABEL
L	LBR	LUMBER
L	LDR	LEADER
L	LF	LINEAL FOOT
L	LG	LENGTH, LONG
L	LH	LEFT HAND
L	LHR	LEFT HAND REVERSE
L	LKNT	LOCKNUT
L	LKR	LOCKER
L	LKWASH	LOCKWASHER
L	LLH	LONG LEG HORIZONTAL
L	LLV	LONG LEG VERTICAL
L	LMST	LIMSTONE
L	LNSCP	LANDSCAPE(D)
L	LNTL	LINTEL
L	LP	LIGHTPROOF
L	LPT	LOW POINT
L	LT	LIGHT
L	LTWT	LIGHTWEIGHT
L	LV	LOUVER VENT
L	LVL	LEVEL(ER)
L	LWC	LIGHTWEIGHT CONCRETE
L	LWIC	LIGHTWEIGHT INSULATING CONCRETE
M		
M	MAINT	MAINTAIN(ANCE)
M	MAS	MASONRY
M	MATL	MATERIAL
M	MAX	MAXIMUM
M	MB	MACHINE BOLT
M	MBR	MEMBER
M	MC	MEDICINE CABINET
M	MCB	METAL CORNER BEAD
M	MDO	MEDIUM DENSITY OVERLAID
M	MECH	MECHANICAL
M	MED	MEDIUM
M	MEMB	MEMBRANE
M	MEZZ	MEZZANINE
M	MFD	METAL FLOOR DECKING
M	MFR	MANUFACTUR(ER)
M	MH	MANHOLE
M	MIN	MINIMUM
M	MIRR	MIRROR
M	MISC	MISCELLANEOUS
M	ML	METAL LATH
M	MLDG	MOLDING
M	MLWK	MILLWORK
M	MO	MASONRY OPENING
M	MOD	MODULE(AR)
M	MR	MOISTURE RESISTANT
M	MRB	MARBLE
M	MRD	METAL ROOF DECKING
M	MS	MACHINE SCREW
M	MTD	MOUNTED
M	MTL	METAL
M	MTR	MOVERAR
M	MULL	MULLION
N		
N	(N)	NEW
N	N	NORTH
N	NAT	NATURAL
N	NCOMBL	NONCOMBUSTIBLE
N	NE	NOT EXCEEDING
N	NF	NEAR FACE
N	NIC	NOT IN CONTRACT
N	NLB	NON-LOAD BEARING
N	NM	NONMETALLIC
N	NO	NUMBER
N	NOM	NOMINAL
N	NR	NOISE REDUCTION
N	NRC	NOISE REDUCTION COEFFICIENT
N	NRCA	NATIONAL ROOFING CONTRACTOR'S ASSOCIATION
N	NS	NEAR SIDE
N	NTS	NOT TO SCALE
O		
O	O/	OVER
O	O/O	OUT TO OUT
O	OA	OVERALL
O	OBS	OBSCURE
O	OC	ON CENTER
O	OCC	OCCUPANTS OR OCCUPANCY
O	OD	OUTSIDE DIAMETER
O	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
O	OFF	OFFICE
O	OFOI	OWNER FURNISHED OWNER INSTALLED
O	OFS	OUTSIDE FACE OF STUD
O	OHMS	OVAL HEAD MACHINE SCREW
O	OHWS	OVALHEAD WOOD SCREW
O	OI	OWNER INSTALLED
O	OPH	OPPOSITE HAND
O	OPNG	OPENING
O	OPP	OPPOSITE
O	OPQ	OPAQUE
O	OPR	OPERABLE
O	ORD	OVERFLOW ROOF DRAIN
O	OSB	ORIENTED STRAND BOARD
O	OVFL	OVERFLOW
O	OVHD	OVERHEAD
P		
P	P	PAINT
P	PA	PUBLIC ADDRESS
P	PAR	PARALLEL
P	PAT	PATTERN
P	PB	PANIC BAR
P	PBD	PARTICLE BOARD
P	PC	PORTLAND CEMENT
P	PCC	PRECAST CONCRETE
P	PCP	PORTLAND CEMENT PLASTER
P	PED	PEDESTAL
P	PERF	PERFORATED
P	PERIM	PERIMETER
P	PERP	PERPENDICULAR
P	PGBD	PEGBOARD
P	PH	PHASE
P	PHS	PHILLIPS HEAD SCREW
P	PI	POINT OF INTERSECTION
P	PIV	POST INDICATOR VALVE
P	PL	PLATE, PROPERTY LINE
P	PLAM	PLASTIC LAMINATE
P	PLAS	PLASTER
P	PLYWD	PLYWOOD
P	PM	PRESSED METAL
P	PMF	PRESSED METAL FRAME
P	PNEU	PNEUMATIC
P	PNL	PANEL
P	PNT	PAINT(ED)
P	POL	POLISHED
P	POLY	POLYETHYLENE
P	PORC	PORCELAIN
P	PORT	PORTABLE
P	PR	PAIR
P	PRCST	PRECAST
P	PREFAB	PREFABRICATED
P	PREFIN	PREFINISHED
P	PREFMD	PREFORMED
P	PRKG	PARKING
P	PRML	PREMOLDED
P	PROJ	PROJECT
P	PROP	PROPERTY
P	PSCONC	PRESTRESSED CONCRETE
P	PT	POINT
P	PTD	PAPER TOWEL DISPENSER
P	PTDF	PRESSURE TREATED DOUGLAS FIR
P	PTN	PARTITION
P	PTR	PAPER TOWEL RECEPTACLE
P	PVC	POLYVINYL CHLORIDE
P	PVG	PAVE(D), (ING)
P	PVMT	PAVEMENT
Q		
Q	QT	QUARRY TILE
Q	QTB	QUARRY TILE BASE
Q	QTF	QUARRY TILE FLOOR
Q	QTR	QUARTER
Q	QTY	QUANTITY
R		
R	R	RISER
R	RA	RETURN AIR
R	RAB	RABBET
R	RAD	RADIUS
R	RB	RESILIENT BASE
R	RBR	RUBBER
R	RCP	REINFORCED CONCRETE PIPE
R	RCVR	RECEIVER
R	RD	ROOF DRAIN
R	RDWY	ROADWAY
R	REBAR	REINFORCING STEEL BARS
R	REC	RECESSED
R	RECT	RECTANGULAR
R	RECYL	RECYCLING
R	REF	REFERENCE
R	REFL	REFLECT(ED), (IVE), (OR)
R	REFR	REFRIGERATOR
R	REG	REGISTER
R	REINF	REINFORCED
R	REM	REMOVE(ABLE)
R	REP	REPAIR
R	REPL	REPLACE
R	REQD	REQUIRED
R	RESIL	RESILIENT
R	RET	RETURN
R	REV	REVISION(S), REVISED
R	RF	RESILIENT FLOORING
R	RFG	ROOFING
R	RFH	ROOF HATCH
R	RGDINS	RIGID INSULATION
R	RH	RIGHT HAND
R	RHMS	ROUND HEAD MACHINE SCREW
R	RHR	RIGHT HAND REVERSE
R	RHWS	ROUND HEAD WOOD SCREW
R	RL	ROOF LEADER
R	RLG	RAILING
R	RM	ROOM
R	RND	ROUND
R	RO	ROUGH OPENING
R	ROW	RIGHT OF WAY
R	RR	RESTROOM
R	RS	ROUGH SAWN
R	RTF	RUBBER TILE FLOORING
R	RTU	ROOF TOP UNIT
R	RV	ROOF VENT
R	RVL	REVEAL
R	RVS	REVERSE (SIDE)
R	RVT	RIVET(ED)
R	RWD	REDWOOD
R	RWL	RAIN WATER LEADER
S		
S	S	SOUTH
S	S2S	SURFACED TWO SIDES
S	S4S	SURFACED FOUR SIDES
S	SA	SUPPLY AIR
S	SALV	SALVAGE
S	SAM	SELF-ADHERED MEMBRANE
S	SAT	SUSPENDED ACOUSTICAL TILE
S	SB	SPLASH BLOCK
S	SBSTR	SUBSTRATE
S	SC	SOLID CORE
S	SCD	SEAT COVER DISPENSER
S	SCHED	SCHEDULE
S	SCP	SCUPPER
S	SCRN	SCREEN
S	SD	STORM DRAIN
S	SDBL	SANDBLAST
S	SEC	SECONDS
S	SECT	SECTION
S	SEP	SEPERATE OR SEPERATION
S	SF	SQUARE FEET, STOREFRONT
S	SGL	SINGLE
S	SHR	SHOWER
S	SHT	SHEET(ING)
S	SHTG	SHEATHING
S	SHV	SHELVES(ING)
S	SIM	SIMILAR
S	SK	SINK
S	SKLT	SKYLIGHT
S	SLD	SEALED
S	SLDG	SLIDE(ING)
S	SLDR	SOLDER
S	SLNT	SEALANT
S	SLV	SLEEVE
S	SM	SHEET METAL
S	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
S	SMLS	SEAMLESS
S	SMS	SHEET METAL SCREW
S	SND	SANITARY NAPKIN DISPENSER
S	SNDINS	SOUND INSULATION
S	SNDU	SANITARY NAPKIN DISPOSAL UNIT
S	SNT	SEALANT
S	SP	SPACES
S	SPC	SUSPENDED PLASTER CEILING
S	SPD	SOAP DISPENSER
S	SPEC	SPECIFICATION(S)
S	SPRT	SUPPORT
S	SQ	SQUARE
S	SS	STAINLESS STEEL
S	SSD	SEE STRUCTURAL DRAWINGS
S	SSK	SERVICE SINK
S	ST	STREET
S	STA	STATION
S	STAG	STAGGERED
S	STC	SOUND TRANSMISSION CLASS
S	STD	STANDARD
S	STG	SEATING
S	STIF	STIFFENER
S	STIR	STIRRUP
S	STL	STEEL
S	STOR	STORAGE
S	STR	STRAIGHT
S	STRUC	STRUCTURAL
S	STU	STRUCT
S	SUSP	SUSPENDED
S	SV	SHEET VINYL
S	SYMM	SYMMETRICAL
S	SYNTH	SYNTHETIC
S	SYS	SYSTEM
T		
T	T	TEMPERED, TOILET, TREAD
T	T24	TITLE 24
T	T&B	TOP AND BOTTOM
T	T&G	TONGUE & GROOVE
T	TB	THRU BOLT
T	TBE	THREADED BOTH ENDS
T	TD	TOWEL DISPENSER
T	TDR	TOWEL DISPENSER/RECEPTACLE
T	TEL	TELEPHONE
T	TEMP	TEMPORARY
T	TER	TERRAZZO
T	TFA	TO FLOOR ABOVE
T	TFB	TO FLOOR BELOW
T	THD	THREAD(ED)
T	THERM	THERMAL
T	THK	THICK
T	THRES	THRESHOLD
T	THRU	THROUGH
T	TKBD	TACKBOARD
T	TMPD	TEMPERED
T	TO	TOP OF
T	TOB	TOP OF BEAM
T	TOC	TOP OF CURB OR TOP OF CONCRETE
T	TOF	TOP OF FOOTING
T	TOFF	TOP OF FINISH FLOOR
T	TOJ	TOP OF JOIST
T	TOL	TOLERANCE
T	TOM	TOP OF MASONRY
T	TOP	TOP OF PARAPET
T	TOPV	TOP OF PAVEMENT
T	TOS	TOP OF SHEATHING
T	TOSL	TOP OF SLAB
T	TOST	TOP OF STEEL
T	TOW	TOP OF WALL OR TOP OF WALK
T	TPD	TOILET PAPER DISPENSER
T	TPTN	TOILET PARTITION
T	TRANS	TRANSITION
T	TS	TUBE STEEL
T	TV	TELEVISION
T	TWLB	TOWEL BAR
T	TYP	TYPICAL
U		
U	UC	UNDERCUT
U	UGND	UNDERGROUND
U	UL	UNDERWRITER'S LABORATORY
U	UNFIN	UNFINISHED
U	UON	UNLESS OTHERWISE NOTED
U	UR	URINAL
U	URM	UNREINFORCED MASONRY
U	UTIL	UTILITY
V		
V	VAR	VARIES
V	VB	VINYL BASE
V	VCT	VINYL COMPOSITION TITLE
V	VER	VERIFY
V	VERT	VERTICAL
V	VEST	VESTIBULE
V	VF	VINYL FABRIC
V	VFAT	VINYL FACED ACOUSTIC TILE
V	VIF	VERIFY IN FIELD
V	VJ	V-JOINT(ED)
V	VNR	VENEER
V	VR	VAPOR RETARDER
V	VTR	VENT THROUGH ROOF
V	VWC	VINYL WALL COVERING
W		
W	W	WEST
W	W.O.	WHERE OCCURS
W	W/	WITH
W	W/O	WITHOUT
W	WW	WALL TO WALL
W	WBL	WOOD BLOCKING
W	WC	WATER CLOSET
W	WD	WOOD
W	WDP	WOOD PANELING
W	WDW	WINDOW
W	WF	WIDE FLANGE
W	WFS	WOOD FURRING STRIP
W	WGL	WIRED GLASS
W	WH	WATER HEATER
W	WH	WALL HUNG
W	WI	WROUGHT IRON
W	WID	WIDTH, WIDE
W	WLD	WELD(ED)
W	WM	WIRE MESH
W	WP	WATERPROOF(ING)
W	WPT	WORKING POINT
W	WR	WIRE ROPE
W	WS	WOOD SCREW
W	WSCT	WAINSCOT
W	WT	WEIGHT
W	WWF	WELDED WIRE FABRIC
X		
X	XBRACE	CROSS BRACE
X	XFMR	TRANSFORMER
X	XSECT	CROSS SECTION
Y		
Y	YCO	YARD CLEANOUT
Y	YD	YARD

SYMBOLS LEGEND

N = PLAN NORTH ARROW
ADDITIONAL ARROW INDICATES TRUE NORTH

X = BUILDING SECTION NUMBER
AX.X = SHEET NUMBER

X = WALL SECTION NUMBER
AX.X = SHEET NUMBER

X = EXTERIOR ELEVATION NUMBER
AX.X = SHEET NUMBER

X = INTERIOR ELEVATION NUMBER
AX.X = SHEET NUMBER
N,S,E,W = INDICATES CARDINAL DIRECTION

GRID LINE, FACE OF STRUCTURE

GRID LINE, CENTER OF STRUCTURE

ELEVATION OR DATUM POINT

WP — WORK POINT

REFERENCE DETAIL
X = DETAIL DRAWING NUMBER
AX.X = SHEET NUMBER

20 / AX.X — MATCH LINE AND AREA DESIGNATOR
SHADED PORTION IS THE SIDE CONSIDERED

ROOM NAME A119 — ROOM NAME
AREA IDENTIFICATION:
A = BUILDING OR AREA DESIGNATION
1 = FLOOR NUMBER
19 = ROOM NUMBER

A — WINDOW, STOREFRONT, OR CURTAINWALL
SEE WINDOW SCHEDULE

A101A — DOOR NUMBER, SEE DOOR SCHEDULE

08 211 — KEYNOTE
08 = SPECIFICATION DIVISIONAL PREFIX
2 = SPECIFICATION SUBSECTION PREFIX
11 = NOTE NUMBER

1 — REVISION

102 (30" x 24" x 24" LOCKABLE) — CASEWORK TAG
102 = ARCHITECTURAL WOODWORK STANDARD (AWVS) NUMBER
36" x 24" x 24" = WIDTH x HEIGHT x DEPTH
LOCKABLE = MODIFYING NOTE

NOTE: FOR BASE CABINETS, HEIGHT DOES NOT INCLUDE COUNTERTOP THICKNESS - REFER TO PLANS FOR COUNTERTOP TYPE

41 — PATH OF EGRESS
41 = OCCUPANT LOAD
STARTING POINT OF PATH OF TRAVEL TO EXIT
MARKED BY DOT AT THE BEGINNING OF EGRESS LINE

P — PANIC HARDWARE DEVICE - REFERENCE DOOR SCHEDULE AND HARDWARE GROUP

S1 — SIGNAGE TAG

MATERIALS LEGEND

- EARTH
- POROUS FILL (STONE, GRAVEL, ETC.)
- CONCRETE
- GROUT
- STEEL
- FINISHED WOOD
- TERRAZZO
- WOOD BLOCKING
- WOOD FRAMING
- BATT INSULATION
- RIGID INSULATION
- GYPSUM BOARD
- PLYWOOD
- METAL LATH AND PLASTER

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

STUDIO W ARCHITECTS

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www.StudioW-Architects.com

ARCHITECT	ENGINEER

LICENSED ARCHITECT — BRIAN P. WHITMORE — No. C 30345 Ren. 8/30/25 — STATE OF CALIFORNIA
DATE SIGNED: 11/10/2025

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS — DATE
- DSA PLAN CHECK
- DSA BACK CHECK 11/10/2025
- BIDDING
- CONSTRUCTION

KEY PLAN



HUMBOLDT COUNTY
OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

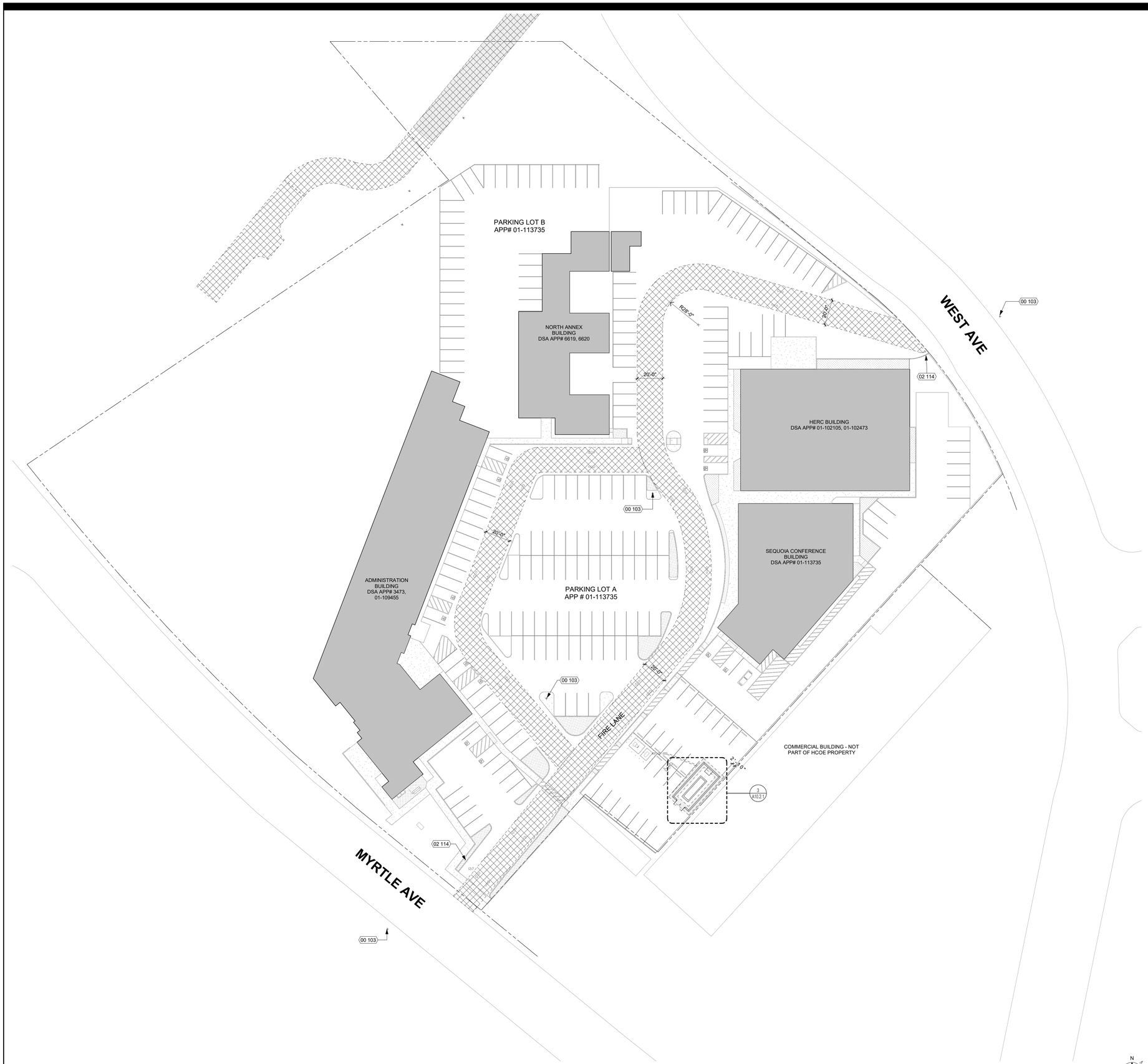
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FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

ARCHITECTURAL SYMBOLS AND ABBREVIATIONS

Date	Project Number
11/10/2025	23051
Application Number	Drawing Number
01-122322	A0.3
Drawn HF / Checked BG	

PRINT DATE: 11/10/2025 3:30:25 PM
FILE PATH: Autodesk Docs://23051 HCOE Franklin Site Generator Inv & Report/23051-HCOE Franklin Site Generator Inv & Report-A20.rvt



REF: 4 / A10.2.1

CODE ANALYSIS SITE PLAN 1" = 30'-0" 15

KEYNOTES

NUMBER	NOTE
00 103	(E) FIRE HYDRANT.
02 114	(E) TOW-AWAY SIGN, DSA APPLICATION 01-113735

GENERAL NOTES

EXISTING CONDITIONS
1. ALL (E) STRUCTURES AND ITEMS ON SITE ARE APPROXIMATE BASED ON DRAWINGS FROM OWNER.

GATES
1. GATES SHALL COMPLY WITH EXIT DOOR REQUIREMENTS.

CONSTRUCTION
1. CONTRACTOR IS RESPONSIBLE FOR 6'-0" HIGH TEMPORARY CONSTRUCTION BARRIER WITH VISION SCREEN AT STAGING, STORAGE AND CONSTRUCTION AREA WITH SIGNAGE EVERY 20'-0" TO WARN STUDENTS OF CONSTRUCTION AREA.
2. CONTRACTOR TO BRING IN OFFICE TRAILER TO CONSTRUCTION AREA.
3. CONTRACTOR SHALL ACCESS THE SITE FROM MYRTLE AVENUE. ANY DAMAGE TO FIRE LANE WILL BE AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR TO REPAIR BACK TO EXISTING CONDITIONS ALL LAYDOWN AREAS AT THE END OF CONSTRUCTION. THIS INCLUDES LANDSCAPE AREAS AND ANY BROKEN SPRINKLERS, VALVE BOXES, CONCRETE, ASPHALT, ETC.
5. CONTRACTOR SHALL REPLACE, RECONSTRUCT AND REPAIR ALL EXISTING WORK THAT IS IMPACTED, DAMAGED, OR DESTROYED AS A RESULT OF ANY CONTRACTOR WORK INCLUDING, BUT NOT LIMITED TO, HARDSCAPING, SIDEWALKS, IRRIGATION SYSTEMS, LANDSCAPING, LAWNS, STRUCTURES AND UTILITIES - ALL TO THE SATISFACTION OF THE DISTRICT.
6. WHERE ASPHALT OR CONCRETE IS BEING REPATCHED, CONTRACTOR SHALL PROVIDE EVEN AND STRAIGHT LINE CUTS WITH 2-FOOT STRAIGHT SLURRY SEAL SURFACE PATCH ON BOTH SIDES OF CUT.
7. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.

LEGEND

- (E) BUILDING, NOT UNDER SCOPE OF WORK
- (E) LANDSCAPE
- ASPHALT FIRE LANE (BELIEVED TO BE PART OF DSA APP #01-100409)
- PROPERTY LINE
- ASPHALT PATCH AND REPAIR, SED AND SSD

PARKING CALCULATION

PARKING	LOT A PROVIDED	LOT A REQUIRED
STANDARD	164	N/A
ACCESSIBLE	13	7
VAN	6	2
COMPACT SPACES	46	N/A
TOTAL COUNT	214	

PARKING TABULATION, SEE DSA APPROVED APP # 01-113735 , APP#01-102473

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APP: 01-122322 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 8/30/25 STATE OF CALIFORNIA DATE SIGNED: 11/10/2025	

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NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	
● DSA BACK CHECK	11/10/2025
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



HUMBOLDT COUNTY
OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

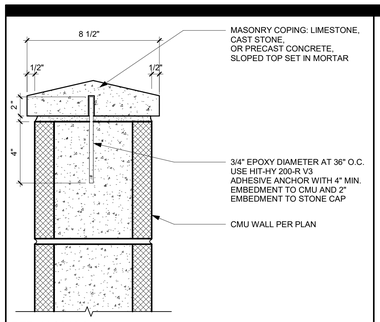
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CODE ANALYSIS SITE PLAN

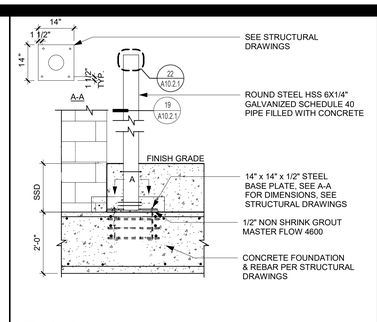
Date	Project Number
11/10/2025	23051
Application Number	Drawing Number
01-122322	A0.4
Drawn HF / Checked BG	

PRINT DATE: 11/10/2025 3:30:36 PM
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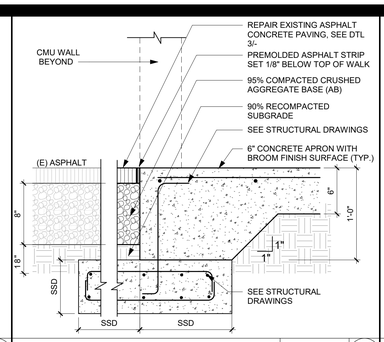
REF: 11 / A10.2.1

CMU WALL CAP 3" = 1'-0" 26

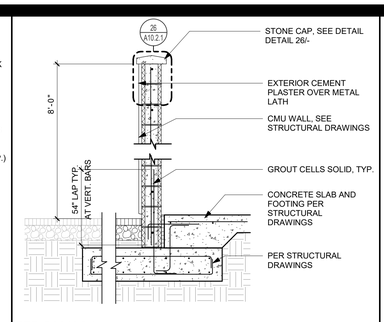


REF: 3 / A10.2.1

GATE COLUMN AND FOOTING 1/2" = 1'-0" 21

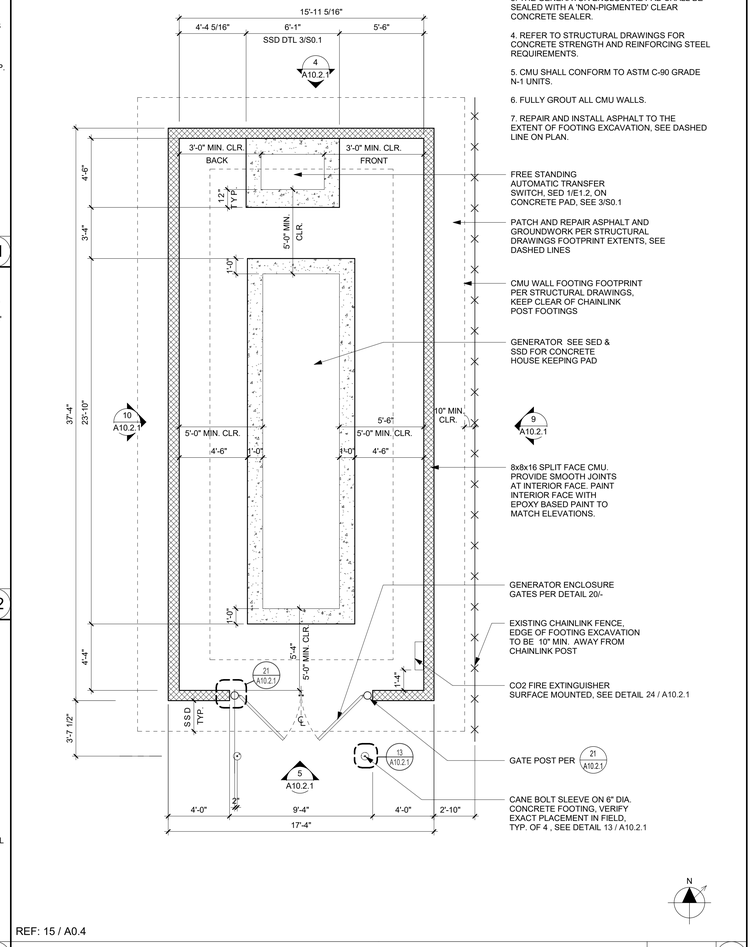


CONCRETE TRANSITION 1 1/2" = 1'-0" 16



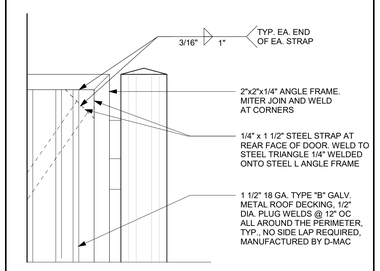
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CMU WALL SECTION 1/2" = 1'-0" 11

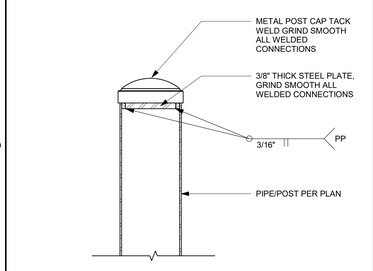


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GENERATOR ENCLOSURE 1/4" = 1'-0" 3

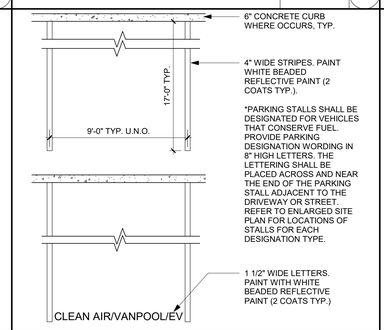


GATE STRAP DETAIL 1 1/2" = 1'-0" 27

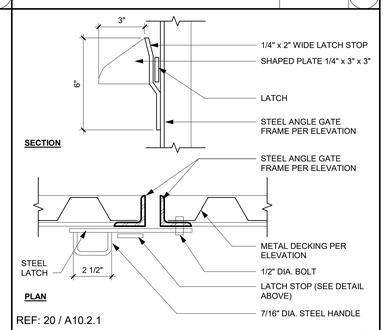


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METAL COLUMN CAP 3" = 1'-0" 22

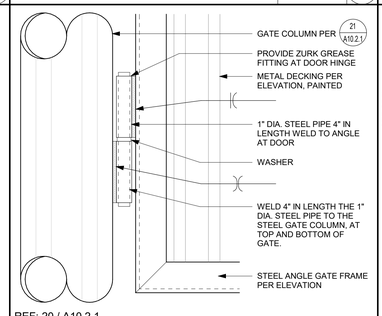


TYPICAL STALL MARKING 1/4" = 1'-0" 17



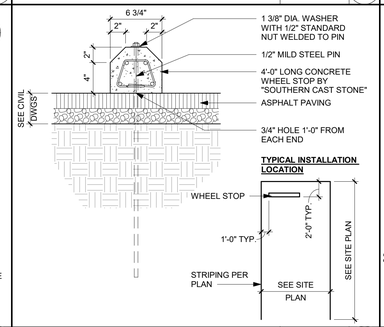
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ENCLOSURE LATCH 3" = 1'-0" 12

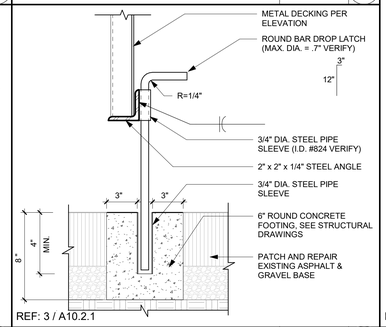


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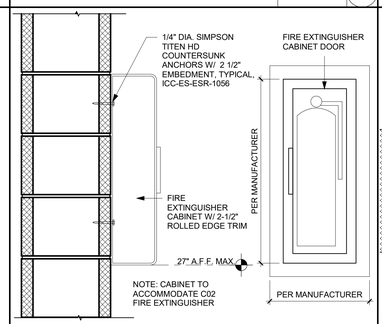


WHEEL STOP 1 1/2" = 1'-0" 18

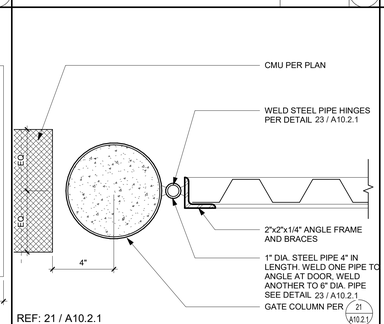


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CANE BOLT 3" = 1'-0" 13

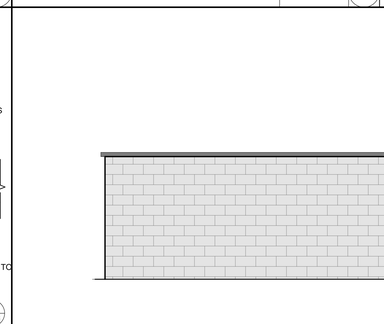


FIRE EXTINGUISHER ON MASONRY 1 1/2" = 1'-0" 24

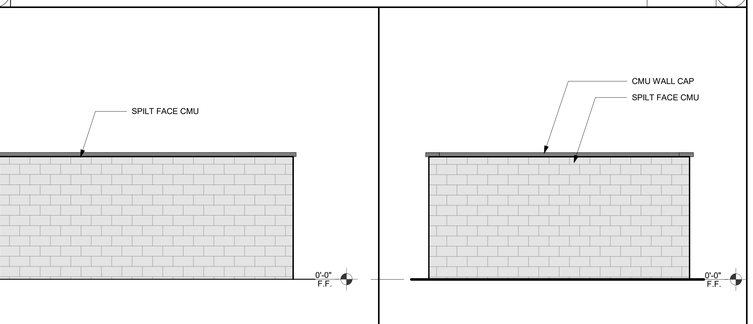


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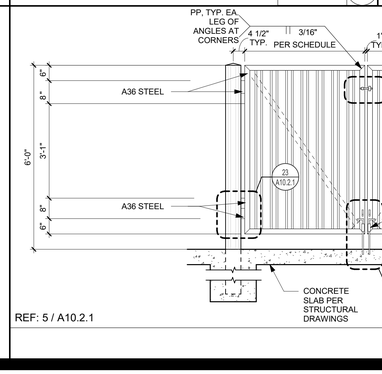
METAL GATE HINGE SECTION 3" = 1'-0" 19



EAST ELEVATION 1/4" = 1'-0" 9

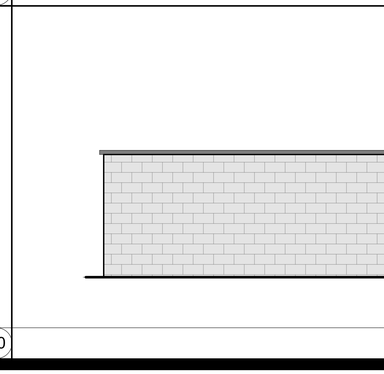


NORTH ELEVATION 1/4" = 1'-0" 4

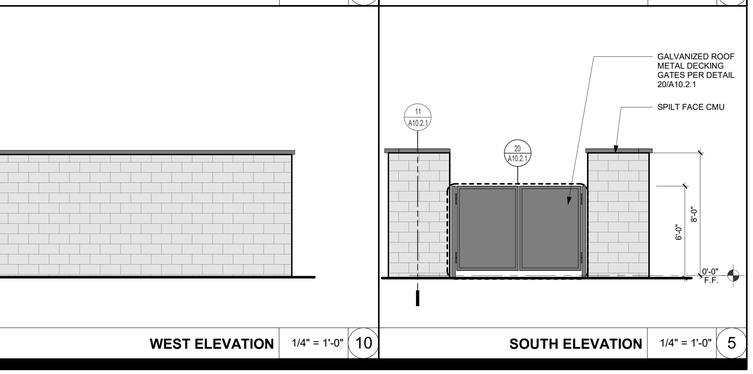


REF: 5 / A10.2.1

GATE SECTION 1/2" = 1'-0" 20



WEST ELEVATION 1/4" = 1'-0" 10



SOUTH ELEVATION 1/4" = 1'-0" 5

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

STUDIO W ARCHITECTS

Studio W Architects
1930 H Street
Sacramento, California 95811
[T] 916.254.5600
www.StudioW-Architects.com

ARCHITECT	ENGINEER

LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/25 STATE OF CALIFORNIA
DATE SIGNED: 11/10/2025

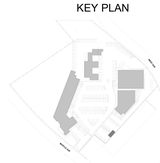
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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS — DATE
- DSA PLAN CHECK
- DSA BACK CHECK 11/10/2025
- BIDDING
- CONSTRUCTION

KEY PLAN



HUMBOLDT COUNTY OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

DSA SUBMITTAL

HUMBOLDT COUNTY OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

SITE DETAILS

Date	Project Number
11/10/2025	23051
Application Number	Drawing Number
01-122322	A10.2.1
Drawn HF	Checked BG

PRINT DATE: 11/10/2025 3:30:37 PM
FILE PATH: Autodesk Docs:/23051 HCOE Franklin Site Generator Inv & Report/23051-HCOE Franklin Site Generator Inv & Report-A23.rvt

GENERAL NOTES

1. GENERAL

1.1. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.

1.2. ALL CODE OR STANDARDS REFERENCES SHALL BE CONSIDERED TO BE THE MOST RECENT EDITION OF THE CODE OR STANDARD.

1.3. THE DESIGN WAS PERFORMED IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE AND LOCAL JURISDICTION BUILDING CODES. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL LOCAL JURISDICTION AND STATE BUILDING CODES IN EFFECT AT THE SITE OF THE BUILDING.

1.4. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION MEANS, TECHNIQUES, PROCEDURES, METHODS, SEQUENCES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK. NOR SHALL THE ENGINEER BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE TO COMPLETE THE WORK AS SPECIFIED BY THE CONTRACT DOCUMENTS.

1.5. BELOW ARE THE DESIGN LOADS AND PARAMETERS THAT WERE USED IN THE DESIGN OF THE STRUCTURE:

1.5.1. MECHANICAL BUILDING

SEISMIC DESIGN PARAMETERS						
DESIGN CATEGORY	I	Q_0	SOIL CLASS	SDs	S1	
D	1.5	2.5	D–DEFAULT	2.261	1.084	

WIND DESIGN PARAMETERS					
EXPOSURE	I	V(MPH)	Kd	Kzt	Kz
B	1.5	92	0.85	1.0	1.0

1.5.1.1. GEOTECHNICAL: THE CBC SECTION 1806.A.1 MINIMUM DESIGN BEARING PRESSURES ARE GIVEN BELOW:

BEARING: 1000 PSF (DEAD AND LIVE)

1500 PSF (WIND AND SEISMIC)

1.6. ALL MEMBERS AND CONNECTIONS FOR THE PROJECT, WHICH MAY NOT BE SHOWN OR SHOWN FULLY, SHALL BE CONSTRUCTED IN A MANNER SIMILAR TO THAT USED FOR SIMILAR MEMBERS AND CONNECTIONS.

1.7. THE EXISTING MEMBERS, CONNECTIONS AND CONDITIONS SHOWN ON THESE DRAWINGS HAS BEEN DETERMINED BY SOME MINOR FIELD VERIFICATION AND ANY AVAILABLE "RECORD" DRAWINGS MADE AVAILABLE TO THE ENGINEER. THE ENGINEER HAS MADE A GOOD FAITH EFFORT TO DETERMINE THE EXISTING CONSTRUCTION INFORMATION AND TECHNIQUES BUT SHALL NOT BE HELD ACCOUNTABLE FOR THE COMPLETE ACCURACY OF THE EXISTING CONDITIONS SHOWN ON THE PLANS AND DETAILS. THE CONTRACTOR AND SUBCONTRACTORS SHALL MAKE ALLOWANCES AND PROVISIONS IN PRICING AND TIME FRAME FOR ANY FIELD ADJUSTMENTS THAT MAY BE REQUIRED. PRIOR TO THE START OF WORK, THE CONTRACTOR AND SUBCONTRACTORS SHALL VISIT THE SITE AND DETERMINE THE EXISTING CONSTRUCTION AND TECHNICS FOR THEMSELVES AND BRING TO THE ATTENTION OF THE ENGINEERS ANY DISCREPANCIES.

1.8. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR AND SUBCONTRACTOR PRIOR TO THE START OF WORK. ALL DIMENSIONS SHALL BE COORDINATED WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS AS WELL AS ALL OTHER DRAWINGS AND SPECIFICATIONS. REPORT ANY AND ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK. FABRICATION OF MEMBERS AND CONNECTIONS SHALL NOT START UNTIL ALL DISCREPANCIES ARE RESOLVED.

1.9. CONDUCT ALL WORK IN A MANNER WHICH MINIMIZES THE DAMAGE TO THE EXISTING STRUCTURE AND FINISHES.

1.10. (E) INDICATES EXISTING CONSTRUCTION.

1.11. THE STRUCTURAL SYSTEMS HAVE BEEN DESIGNED TO RESIST THE SUPERIMPOSED LIVE LOADS REQUIRED BY THE BUILDING CODE AND FOR ADDITIONAL LOADING DETERMINED BY STANDARD ENGINEERING PRACTICES. NO SPECIAL LOADING CONDITIONS HAVE BEEN CONSIDERED FOR RESISTING CONCENTRATED LOADS FROM STORAGE AND HANDLING OF CONSTRUCTION MATERIALS OR FROM OPERATION OF CONSTRUCTION EQUIPMENT. ALL SCAFFOLDING, BRACING AND SHORING SYSTEMS REQUIRED FOR INSTALLATION, STABILITY, AND SAFETY OF NEW WORK AND PROTECTION REQUIRED FOR THE SAFETY OF PEDESTRIANS AND JOBSITE PERSONNEL SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR IS, AT ALL TIMES, SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE REPRESENTING THE SAFETY OF PERSONS AND PROPERTY. ALL NEW AND EXISTING CONSTRUCTION AND MATERIALS SHALL BE PROTECTED BY THE CONTRACTOR FROM ADVERSE CONDITIONS AND DAMAGE.

1.12. UNLESS SPECIFICALLY STATED IN THE APPROVAL, THE APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTORS FROM COMPLIANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. DIMENSIONS AND QUANTITIES MAY NOT BE CHECKED BY THE ENGINEER, AND APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER ONLY REPRESENTS THE APPROVAL OF GENERAL FABRICATION.

1.13. IN ANY CONDITION WHERE THE INTENT OF THE DRAWINGS IS IN DOUBT, WHERE THERE APPEARS TO BE AN ERROR ON THE DRAWINGS, DISCREPANCY BETWEEN THE DRAWINGS AND FIELD CONDITION, OR THERE APPEARS TO BE TYPOGRAPHICAL ERRORS IN THE SPECIFICATIONS, NOTIFY THE ENGINEER FOR INSTRUCTIONS ON HOW TO PROCEED. IN THE CASE WHERE THE CONTRACTOR PROCEEDS WITH THE WORK IN QUESTION WITHOUT DIRECTION FROM THE ENGINEER, THE CONTRACTOR OR SUBCONTRACTORS SHALL BE RESPONSIBLE FOR ANY INCORRECT CONSTRUCTION.

1.14. IF TWO OR MORE DETAILS APPLYING TO THE SAME PART OF THE WORK ARE IN CONFLICT, THE MOST RESTRICTIVE CONDITION SHALL APPLY UNLESS CLARIFIED OR OTHERWISE APPROVED BY THE ENGINEER.

1.15. THE CONDITIONS AFFECTING THE WORK SHALL BE CAREFULLY EXAMINED BY THE CONTRACTOR AND EACH SUBCONTRACTOR BEFORE PROCEEDING AND SHALL REPORT TO THE ENGINEER ANY CONDITION WHICH PREVENTS THE PROPER COMPLETION OF THE WORK. FAILURE TO REPORT ANY SUCH UNSUITABLE CONDITION WILL CONSTITUTE ACCEPTANCE OF ALL CONDITIONS BY THE CONTRACTOR OR SUBCONTRACTORS.

1.16. SPECIAL INSPECTION SHALL BE PROVIDED BY THE OWNER OF THE STRUCTURE AS REQUIRED BY SECTIONS OF THE 2022 CALIFORNIA BUILDING CODE FOR EACH OF THE ITEMS LISTED BELOW:

1.16.1. EPOXY OR EXPANSION BOLTS/REBAR/THREADED RODS IN CONCRETE OR MASONRY BY SECTIONS 1701A.

1.17.4. DURING PREPARATION OF MASONRY WALL PRISMS, SAMPLING AND PLACING OF ALL MASONRY UNITS, PLACEMENT OF REINFORCING, INSPECTION OF GROUT SPACE IMMEDIATELY PRIOR TO CLOSING OF CLEAN–OUTS, AND DURING ALL GROUTING.

1.17.5. CONCRETE CONSTRUCTION. SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TABLE 1705A.3.

1.17.6. A QUALITY ASSURANCE PROGRAM SHALL BE USED TO ENSURE THAT THE CONSTRUCTED MASONRY IS IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. THE QUALITY ASSURANCE PROGRAM SHALL COMPLY WITH THE INSPECTION AND TESTING REQUIREMENTS OF CHAPTER 17A AND TMS 602 AND SECTIONS 2105A.2 THROUGH 2105A.4.

1.17.7. GROUT POUR HEIGHT MUST FOLLOW SECTIONS 2104A.1.3 REINFORCED GROUTED MASONRY, 2104A.1.3.5 AND TMS 602, ARTICLE 3.5 C FOR GROUT POUR HEIGHT AND THE PROCEDURES LISTED IN SECTION 2104A.1.3.6 TMS 602, ARTICLE 3.5 D FOR GROUT LIFT HEIGHT.

1.18. SPECIAL INSPECTION AGENCY AND ALL SPECIAL INSPECTORS SHALL BE RECOGNIZED AND APPROVED BY THE BUILDING OFFICIAL HAVING JURISDICTION OVER THIS PROJECT.

1.19. SPECIAL INSPECTION FORMS SHALL BE OBTAINED FROM THE BUILDING OFFICIAL HAVING JURISDICTION, COMPLETED, AND SIGNED BY THE GENERAL CONTRACTOR, ENGINEER, OWNER AND SPECIAL INSPECTION AGENCY AND SUBMITTED PRIOR TO PERMIT ISSUE.

2. CONCRETE

2.1. CONCRETE MATERIALS:

2.1.1. CEMENT: ASTM C 150 TYPE II. THROUGHOUT THE PROJECT CEMENT OF THE SAME BRAND, TYPE AND SOURCE SHALL BE USED. USE LOW ALKALI CEMENT IN ANY CASE WHERE THE AGGREGATES ARE POTENTIALLY REACTIVE.

2.1.2. AGGREGATES: ASTM C 33 AND C 88. THE AGGREGATES USED SHALL BE CONSTANT AND FROM A SOURCE WITH A PROVEN HISTORY OF SUCCESSFUL USE. IF THE SOURCE IS NOT CONSTANT, 10 DAYS PRIOR NOTICE IS REQUIRED FOR APPROVAL OF NEW SOURCE AFTER RECHECK OF MIX DESIGN.

2.1.2.1. FINE AGGREGATE SHALL BE SAND FROM SOURCES APPROVED BY THE STRUCTURAL ENGINEER.

2.1.2.2. COARSE AGGREGATE SHALL BE COARSE LIMESTONE OR GRANITE AGGREGATE, FROM SOURCES APPROVED BY STRUCTURAL ENGINEER.

2.1.3. CONCRETE MIXES SHALL CONFORM TO ALL APPLICABLE CALIFORNIA BUILDING CODE AND ACI 318 REQUIREMENTS REGARDLESS OF OTHER MINIMUM REQUIREMENTS SPECIFIC HEREIN OR ON THE DRAWINGS. THE CONCRETE DESIGN MIX MUST BE COMPLETED BY A TESTING LABORATORY THAT IS APPROVED BY THE ENGINEER AND THE GOVERNING AGENCY BEFORE USE. ALL MIX DESIGNS MUST SUBMITTED TO AND APPROVED BY THE ENGINEER. THE PROPORTION OF CEMENT, AGGREGATES (FINE AND COARSE), WATER, AND GRADATION OF COMBINED AGGREGATES SHALL BE SHOWN IN THE DESIGN.

2.1.4. 1704A.6 STRUCTURAL OBSERVATIONS. THE OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS. THE STRUCTURAL OBSERVER SHALL VISUALLY OBSERVE REPRESENTATIVE LOCATIONS OF STRUCTURAL SYSTEMS, DETAILS AND LOAD PATHS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS IN SECTION 110 OR THE SPECIAL INSPECTIONS IN SECTION 1705A OR OTHER SECTIONS OF THIS CODE. PRIOR TO THE COMMENCEMENT OF OBSERVATIONS, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED. [DSA–SS, DSA–SS/CC] REFERENCE TO SECTION 110 SHALL BE TO THE CALIFORNIA ADMINISTRATIVE CODE INSTEAD.

2.1.5. THE CONCRETE MIX DESIGN SHALL AT MINIMUM MEET THE REQUIREMENTS AS INDICATED BELOW. THE CEMENT CONTENT MAY BE INCREASED BEYOND THE SPECIFIED AMOUNT IF REQUIRED TO ACHIEVE THE NECESSARY COMPRESSIVE STRENGTH IN A GIVEN TIME FRAME.

SCHEDULE OF CONCRETE MIXES:

MIX NO.	LOCATION	28 DAY COMPRESSIVE STRENGTH	MIN. CEMENT CONTENT (SACKS)	SLUMP RANGE	MAX. AGGREGATE SIZE
1	SLAB ON GRADE	3000 psi	5¼	3"–4"	1"
2	CAST IN PLACE & MISC.	3000 psi	5¾	3"–4½"	1"

2.1. PROVIDE CONCRETE COVER PROTECTION FOR REINFORCEMENT PER THE FOLLOWING:

SURFACE	CONCRETE COVER
2.1.1. SURFACES POURED AGAINST EARTH	3"
2.1.2. FORMED SURFACES EXPOSED TO EARTH OR WEATHER:	
2.1.2.1. NO. 6 TO NO. 18 BARS	2"
2.1.2.2. NO. 5 BARS, W31 OR D31 WIRE AND SMALLER	1½"
2.1.3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:	
2.1.3.1. SURFACES OF SLABS, WALLS, AND JOISTS	
2.1.3.1.1. NO. 14 AND NO. 18 BARS	1½"
2.1.3.1.2. NO. 11 BAR AND SMALLER	¾"
2.1.3.2. BEAMS, COLUMNS:	
2.1.3.2.1. PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1½"

2.2. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A ¾" CHAMFER, UNLESS OTHERWISE SHOWN.

2.3. PRIOR TO POURING CONCRETE, RIGIDLY SECURE ALL REINFORCING, ANCHOR BOLTS, INSERTS, ETC.

2.4. EDGE OF SLAB FORM WORK MAY BE REMOVED AFTER A MINIMUM OF 24 HOURS. FORM WORK FOR WALLS 4'–0" TALL OR LESS MAY BE AFTER 36 HOURS. ALL OTHER REMOVAL OF FORM WORK, SHORING AND RESHORING SCHEDULES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

2.5. WHERE MASONRY WALLS/COLUMNS ARE TO BE SUPPORTED BY, OR ADJACENT TO, CONCRETE, ACCURATELY LOCATE DOWELS EXTENDING FROM THE CONCRETE INTO MASONRY BLOCKS TO COINCIDE WITH THE LAYOUT OF BLOCK OPENINGS, JOINTS AND REINFORCEMENT. SECURE DOWELS TO PREVENT MOVEMENT PRIOR TO POURING OF CONCRETE AND GROUT. DOWELS SHALL NOT BE OFFSET TO CLEAR WEBS OF MASONRY UNITS.

2.6. HOOKS SHALL BE STANDARD HOOKS PER ACI 318 UNLESS OTHERWISE NOTED.

2.7. LAP CONTACT SPLICES, HOOK EMBEDMENT, AND DEVELOPMENT LENGTHS SHALL BE PER ACI 318 UNLESS OTHERWISE NOTED. LAP SPLICES SHALL BE STAGGERED WHERE POSSIBLE.

2.8. ALL REINFORCEMENT IS TO BE COLD BENT. HEATING OF REINFORCEMENT IS NOT ALLOWED.

2.9. IN ADDITION TO REINFORCEMENT IN SUSPENDED SLABS 1½ POUNDS OF FIBER MESH PER CUBIC YARD MAY BE USED FOR CRACK CONTROL AT THE OWNERS OPTION.

2.10. FORM AND SHORING REMOVAL SHALL NOT INJURE OR OVERSTRESS COMPLETE OR PARTIALLY COMPLETE STRUCTURAL ELEMENTS. TIME OF FORM OR SHORE REMOVAL SHALL BE IN ACCORDANCE WITH ACI 347.

3. ADHESIVE ANCHORS

3.1. USE HIT–RE 200 V3 EPOXY PER ESR–4878 BY HILTI, INC. OR APPROVED EQUAL.

3.2. ALL SUBSTITUTIONS AS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO USE TO BE CONSIDERED FOR APPROVAL AS AN EQUAL PRODUCT.

3.3. NOTIFY THE CONTRACTOR PRIOR TO STARTING WORK TO ARRANGE FOR SPECIAL INSPECTION. FOR STRUCTURAL APPLICATIONS, DURING THE INSTALLATION, THE SPECIAL INSPECTOR SHALL BE AT THE JOBSITE CONTINUOUSLY VERIFYING THE INSTALLATION IS IN COMPLIANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND THE ESR REPORT WHICH INCLUDES BUT IS NOT LIMITED TO DRILL BIT COMPLIANCE WITH ANSI B212.15–1994, HOLE DIAMETER, HOLE DEPTH, HOLE CLEANLINESS, HOLE LOCATION IN CONCRETE MASONRY CONSTRUCTION, HOLE EDGE DISTANCE AND SPACING, INSTALLATION TEMPERATURE, ADHESIVE PRODUCT DESCRIPTION INCLUDING PRODUCT NAME, ADHESIVE EXPIRATION DATE, ADHESIVE MIXING PROCEDURE, USE OF PROPER NOZZLES, VERIFICATION OF PROPERLY MIXED ADHESIVE PRIOR TO INJECTION OF ADHESIVE IN ANCHOR HOLE, ANCHORS UNDISTURBED DURING GEL TIME, ROD TYPE, ROD GRADE, ROD DIAMETER, ROD LENGTH AND ROD CLEANLINESS.

3.3.1. (OSHCAI/OSHPD) ONE HUNDRED PERCENT (100%) OF ALL BOLTS, REBAR AND DOWELS SHALL BE TESTED. FOR SILL PLATE BOLTING APPLICATIONS TEN PERCENT (10%) OF ALL BOLTS SHALL BE TESTED. FOR NONSTRUCTURAL COMPONENTS, INCLUDING EQUIPMENT ANCHORS, FIFTY PERCENT (50%) OR ALTERNATE BOLTS IN A GROUP, INCLUDING ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED. ANCHORS WITH TENSION LESS THAN 100# AND CLEARLY NOTED ON APPROVED CONSTRUCTION DOCUMENTS, TEN (10%) OF ALL BOLTS SHALL BE TESTED. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE INSTALLED BY THE SAME TRADE AND NOT PREVIOUSLY TESTED SHALL BE TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL FREQUENCY.

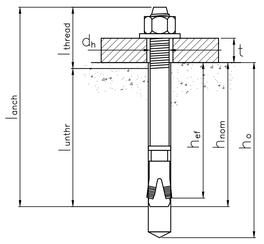
4. EXPANSION ANCHORS

4.1. EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI KWIK BOLT TZ2 PER ESR–4266 BY HILTI, INC. OR APPROVED EQUAL.

4.2. ALL SUBSTITUTIONS AS SHALL BE SUBMITTED TO THE ENGINEER AND TO DSA PRIOR TO USE TO BE CONSIDERED FOR APPROVAL AS AN EQUAL PRODUCT.

4.3. NOTIFY ENGINEER PRIOR TO STARTING WORK TO ARRANGE FOR SPECIAL INSPECTION. DURING THE INSTALLATION, THE SPECIAL INSPECTOR SHALL BE AT THE JOBSITE PERIODICALLY VERIFYING THE INSTALLATION IS IN COMPLIANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND THE ESR REPORT WHICH INCLUDES BUT IS NOT LIMITED TO HOLE CLEANING PROCEDURE, HOLE DIMENSIONS, ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR SPACING, ANCHOR EMBEDMENT, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, CONCRETE THICKNESS, EDGE DISTANCES, AND TIGHTENING TORQUE.

4.4. DIMENSIONS FOR EXPANSION ANCHOR ARE AS FOLLOWS:



5. INSTALLATION OF ADHESIVE ANCHORS, EXPANSION ANCHORS AND POWER DRIVEN PINS

5.1. EXERCISE CARE AND CAUTION TO AVOID DAMAGING OR CUTTING EXISTING REINFORCING BARS WHEN INSTALLING DRILLED IN ANCHORS OR POWER DRIVEN PINS INTO EXISTING NON–PRESTRESSED REINFORCED CONCRETE. WHEN INSTALLING SUCH ANCHORS OR PINS INTO EXISTING PRESTRESSED CONCRETE OR PRE/POST TENSIONED CONCRETE LOCATE THE PRESTRESSED TENDONS WITH A NON–DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXTREME CARE AND CAUTION SHALL BE TAKEN TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. A MINIMUM CLEARANCE OF ONE INCH SHALL BE MAINTAINED BETWEEN THE EXISTING REINFORCING TENDONS AND THE NEW DRILLED IN ANCHOR AND/OR PIN.

6. MASONRY

6.1. STRENGTH SCHEDULE:

SPECIFIED COMPRESSIVE STRENGTH OF MASONRY f'm (psi)	COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS (psi)	COMPRESSIVE STRENGTH OF GROUT (psi)	MORTAR TYPE
2000	2000	2000	M OR S

6.1.1. MORTAR PROPORTIONS SHALL CONFORM TO ASTM C–270.

6.1.2. MASONRY UNITS SHALL BE PER ASTM–C90.

6.1.3. GROUT SHALL CONFORM TO ASTM C476, U.O.N.

6.1.3.1. WHEN f'_m EXCEEDS 2000 PSI, GROUT COMPRESSIVE STRENGTH IN ACCORDANCE WITH ASTM C1019 AND NOT LESS THAN f'_m.

6.1.4. ALL CELLS TO BE GROUTED SOLID.

6.2. REINFORCING BARS TO BE INTERMEDIATE GRADE ASTM A615, GRADE 60. ALL LAP SPLICES TO BE 72 BAR DIAMETERS MINIMUM. STAGGER LAP SPLICES WHERE POSSIBLE.

6.3. MASONRY BLOCKS SHALL BE LAID IN COMMON BOND PATTERN AND SHALL BE STANDARD SIZE 12"X8"X16" OR 8"X8"X16" (PER PLAN) U.O.N. (SEE ARCHITECTURAL DRAWINGS)

6.4. SEE DRAWINGS FOR TYPICAL MASONRY WALL REINFORCING.

6.5. SPECIAL INSPECTION OF MASONRY CONSTRUCTION IS REQUIRED.

6.6. WHERE MASONRY UNITS ARE USED IN EARTH RETAINING CONSTRUCTION AND WALLS EXPOSED TO WEATHER PROVIDE MORTAR TYPE S .

6.7. PRIOR TO PLACING GROUT, ALL REINFORCEMENT MUST BE SECURED BY WIRE OR OTHER SUITABLE DEVICES TO PROTECT AGAINST DISPLACEMENT.

6.8. REINFORCEMENT EMBEDDED IN GROUT SHALL HAVE A THICKNESS OF GROUT BETWEEN THE REINFORCEMENT AND MASONRY UNITS NOT LESS THAN ¼" FOR FINE GROUT OR ½" FOR COARSE GROUT.

6.9. REINFORCING BARS SHALL HAVE A MASONRY COVER NOT LESS THAN THE FOLLOWING:

SURFACE	COVER
6.9.1. MASONRY FACE EXPOSED TO EARTH OR WEATHER	
6.9.1.1. FOR BARS LARGER THAN NO. 5	2"
6.9.1.2. FOR NO.5 BARS OR SMALLER	1½"
MASONRY NOT EXPOSED TO EARTH OR WEATHER	1½"

16

FOUNDATION NOTES:

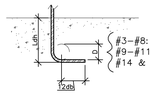
1. SEE GENERAL NOTES ON SHEET S0.1.
2. SEE 4/S5.0 FOR FOOTING AND WALL REINFORCING DETAIL AT CORNERS. DETAIL IS SIMILAR AT OTHER FOOTING INTERSECTIONS.
3. CONTRACTOR SHALL COORDINATE TOP OF FOOTING ELEVATIONS WITH CIVIL DRAWINGS TO ENSURE ADEQUATE COVERAGE OVER TOP OF FOOTINGS.
4. FOR TYPICAL BAR BENDS, SEE 8/S5.0.
5. FOR TYPICAL BAR LAP AND EMBEDMENTS SEE 23/S0.1, 24/S0.1, AND 25/S0.1.
6. SEE 6/S5.0 FOR REINFORCING WHERE ADJACENT FOOTING THICKNESS DIFFERS.
7. FOR UTILITY PIPING AND/OR CONDUITS NEAR FOUNDATIONS SEE DETAIL 10/S5.0.
8. FOR MASONRY SHEAR WALL CONSTRUCTIONS, SEE S4.1.
9. "C.J." DENOTES CONSTRUCTION JOINT, "W.P.J." DENOTES WEAKENED PLATE JOINT. W.P.J's MAY NOT BE SUBSTITUTED FOR C.J.'s (EVEN WHEN LASER SCREED IS USED).
10. FOR CONSTRUCTION JOINT IN CONTINUOUS FOOTINGS, SEE DETAIL 7/S5.0.
11. SEE 2/S4.0 FOR SHEAR WALL SCHEDULE.
12. SEE 22/S5.0 FOR CMU WALL INTERSECTIONS.
13. SEE 5/S4.0 FOR SHEAR WALL CONSTRUCTION
14. SEE DETAIL 17/S4.0 FOR HEADER SCHEDULE.
15. SEE 24/S4.0 AND 25/S4.0 FOR NOTCHES AND BORES THROUGH THE 2x6 STUDS AND DOUBLE TOP PLATE. SEE 18/S4.0 FOR NOTCHES AND BORES THROUGH JOISTS.
16. SEE DETAIL 23/S4.0 AND 20/S4.0 FOR TYPICAL TOP PLATE SPLICE.

11

REINFORCEMENT BAR DEVELOPMENT (Ldh) FOR STANDARD HOOKS IN NORMAL WEIGHT CONCRETE GENERAL USE (NOT FOR FRAME JOINTS)

CONC. F'c (psi)	STEEL Fy (ksi)	BAR SIZE										
		3	4	5	6	7	8	9	10	11	14	18
		"Ldh" = DEVELOPMENT LENGTH (in)										
3000	60	6	8	10	12	14	16	18	20	22	37	50

NOTES:
1. SIDE COVER MUST BE GREATER THAN OR EQUAL TO 2½"
2. END COVER MUST BE GREATER THAN OR EQUAL TO 2".
3. HOOK DEVELOPMENT LENGTH SHALL BE INCREASED BY 33% FOR LIGHT WEIGHT CONCRETE.
4. TABLE APPLIES TO ASTM 615, GRADE 60 REBAR.



#3–#8: D = 6db
#9–#11: D = 8db
#14 & #18: D = 10db

STANDARD 90° END HOOK

NOTE: 180° AND 135° HOOKS SIMILAR

6

REINFORCEMENT BAR SPLICE (Ls) FOR NORMAL WEIGHT CONCRETE (CLASS "B" SPLICE)

LOCATION	CONC. F'c (psi)	STEEL Fy (ksi)	BAR SIZE							
			3	4	5	6	7	8	9	10
			"Ls" = LAP SPLICE (in)							
TOP	3000	60	28	37	47	56	81	93	105	118
OTHER	3000	60	22	29	36	43	63	72	81	91
TOP	4000	60	24	32	40	48	70	80	91	102
OTHER	4000	60	19	25	31	37	54	62	70	79

NOTES:
1. LAP LENGTHS SHOWN IN THE SCHEDULE ARE CLASS B LAP SPLICES PER THE ACI 318–14, TABLE 25.5.2.1 FOR ASTM 615, GRADE 60 REBAR.
2. LAP LENGTH, Ls, IS BASED ON CASE 1 REINFORCEMENT BAR DEVELOPMENT LENGTH ld, PER ACI 318–14, TABLE 25.4.2.2 FOR OTHER CASES, REFER TO NOTES ON THE DEVELOPMENT LENGTH TABLE.
3. Ls SHALL BE INCREASED BY 33% FOR LIGHT WEIGHT CONCRETE.

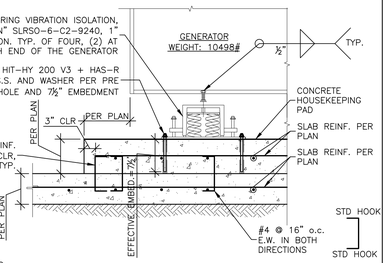
REINFORCEMENT BAR DEVELOPMENT LENGTH (ld) FOR MASONRY

BAR SIZE									
3	4	5	6	7	8	9	10	11	
"ld" = DEVELOPMENT LENGTH (in)									
27	36	45	54	63	72	81	90	99	

NOTES:
1. DEVELOPMENT LENGTHS SHOWN IN THE APPLY THE MAXIMUM DEVELOPMENT LENGTH OF 72 BAR DIAMETERS.

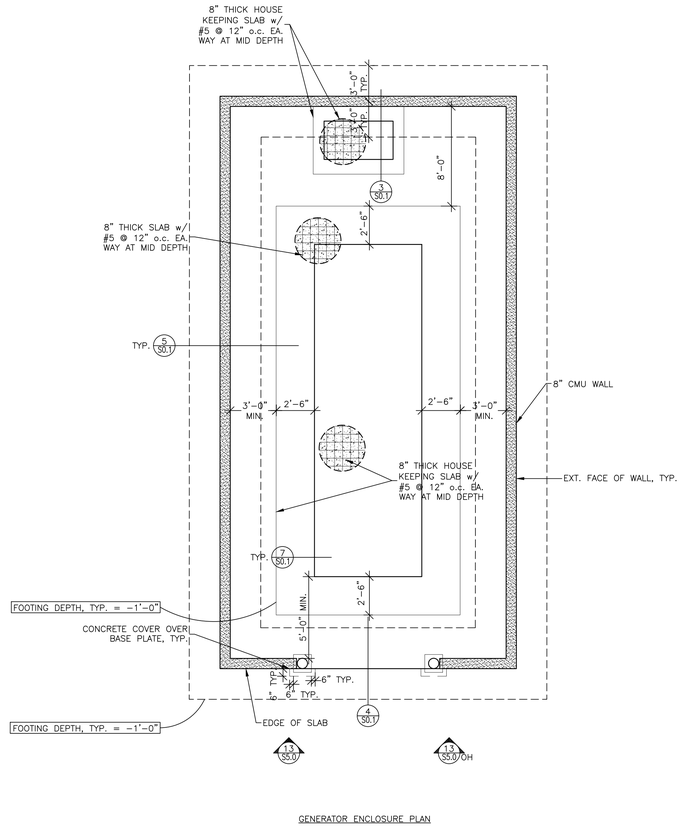
12

NOTE: PREAPPROVED, SEE OPA-194



SCALE: N.T.S.
NOTE: CONCRETE SURFACE AT INTERFACE SHALL BE CLEAN, FREE OF LAITANCE, AND INTENTIONALLY ROUGHENED PRIOR TO MORTAR PLACEMENT

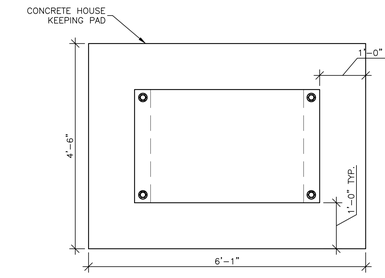
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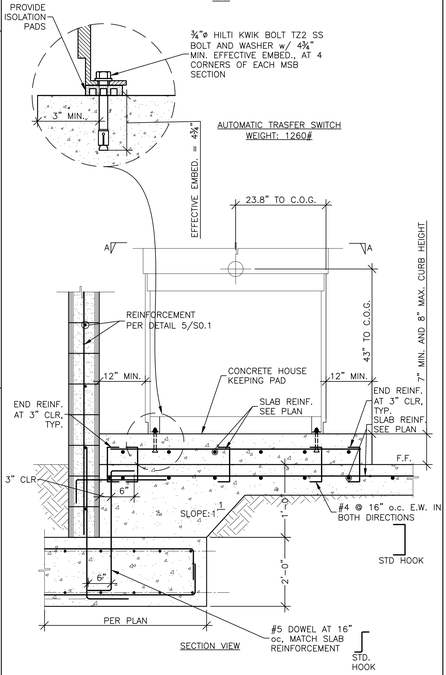
GENERATOR ENCLOSURE PLAN

NOTE: SEE DETAIL 1&2/S0.1 FOR CMU WALL INTERSECTIONS AND REINFORCEMENT AT FOOTING AND WALL INTERSECTIONS

10



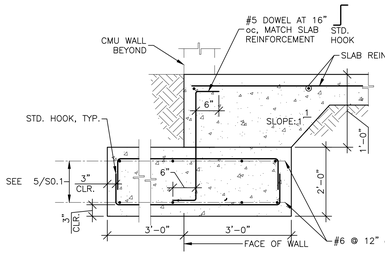
A–A



NOTE: FOR INFORMATION NOT SHOWN SEE DETAIL 5/S0.1

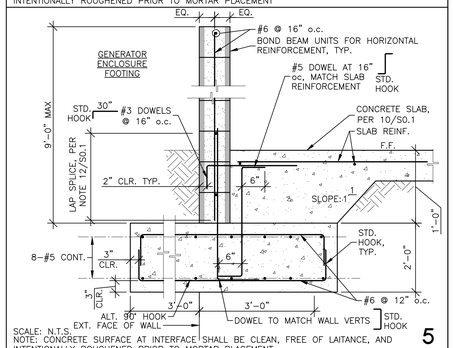
SCALE: N.T.S.
NOTE: CONCRETE SURFACE AT INTERFACE SHALL BE CLEAN, FREE OF LAITANCE, AND INTENTIONALLY ROUGHENED PRIOR TO MORTAR PLACEMENT

3



SCALE: N.T.S.
NOTE: CONCRETE SURFACE AT INTERFACE SHALL BE CLEAN, FREE OF LAITANCE, AND INTENTIONALLY ROUGHENED PRIOR TO MORTAR PLACEMENT

4

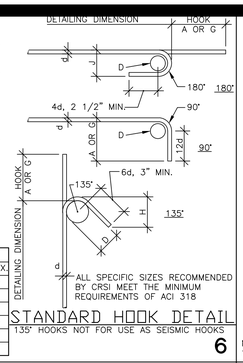

EQ.
EQ.
#6 @ 16" o.c.
BOND BEAM UNITS FOR HORIZONTAL REINFORCEMENT, TYP.
GENERATOR ENCLOSURE FOOTING
#5 DOWEL A

RECOMMENDED END HOOKS (ALL GRADES)
D=FINISHED BEND DIAMETER

BAR SIZES	180° HOOKS			90° HOOKS	
	D (in.)	A OR G	J	A OR G	
#3	2 1/4	5	3	6	
#4	3	6	4	8	
#5	3 3/4	7	5	10	
#6	4 1/2	8	6	12	
#7	5 1/4	10	7	14	
#8	6	11	8	16	
#9	9 1/2	15	11 3/4	19	
#10	10 3/4	17	13 1/4	22	
#11	12	19	14 3/4	24	
#14	18 1/4	27	21 3/4	31	
#18	24	36	28 1/2	41	

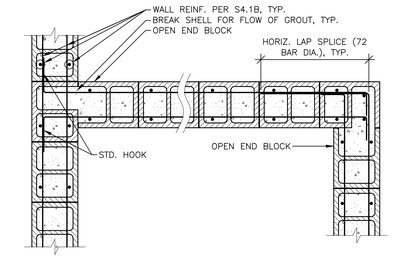
STANDARD STIRRUP/TIE HOOK DIMENSIONS (ALL GRADES)

BAR SIZES		90° HOOKS	135° HOOKS	
	D (in.)	A OR G	A OR G	H APPROX.
#3	1 1/2	4	4	3 1/2
#4	2	4 1/2	4 1/2	3
#5	2 1/2	6	5 1/2	3 3/4
#6	4 1/2	12	8	4 1/2
#7	5 1/4	14	9	5 1/4
#8	6	16	10 1/2	6



STANDARD HOOK DETAIL

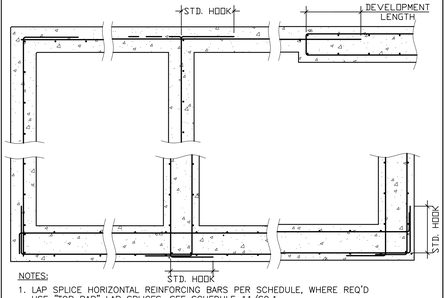
6



CMU WALL INTERSECTIONS

NOTES:
1. GROUT ALL CELLS

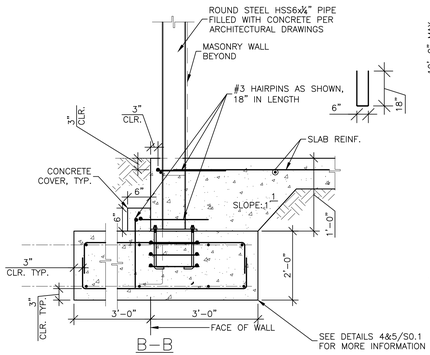
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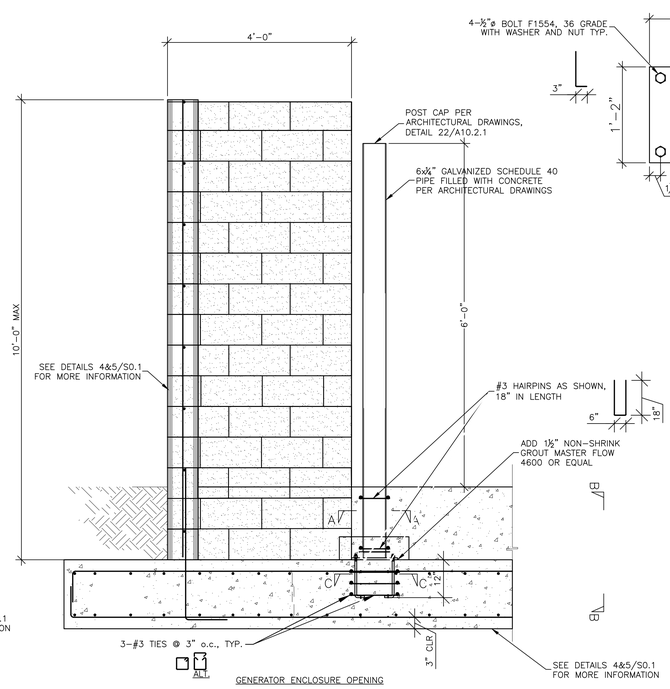
NOTES:
1. LAP SPLICE HORIZONTAL REINFORCING BARS PER SCHEDULE, WHERE REQ'D USE "TOP BAR" LAP SPLICES, SEE SCHEDULE 11/S0.1
2. STANDARD HOOK PER "STANDARD HOOK DETAIL", 6/S0.1, TURN HOOK DOWNWARD OR UPWARD IF REQUIRED TO FIT

REINFORCMENT @ FOOTING & WALL INTERSECTION

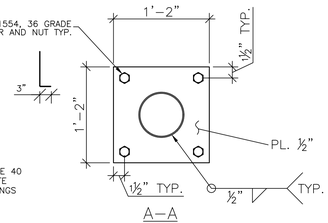
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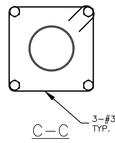
B—B



GENERATOR ENCLOSURE OPENING



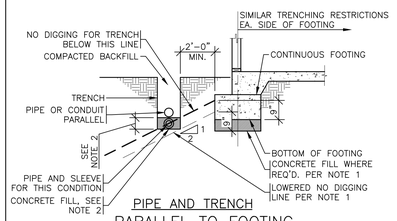
A—A



C—C

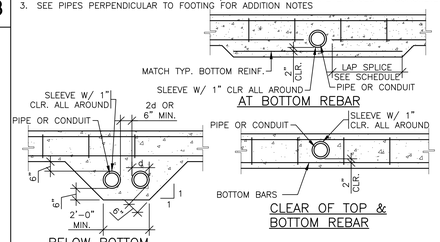
SCALE: N.T.S.

13



PIPE AND TRENCH PARALLEL TO FOOTING

NOTES:
1. WHERE TRENCH OCCURS BELOW "NO DIGGING LINE" (SHOWN AS HEAVY DASHED LINE), LOWER BOTTOM OF FOOTING WITH CONCRETE FILL TO LOWER NO DIGGING LINE AS REQ'D. (SHOWN AS LIGHT DASHED LINE)
2. IN LIEU OF LOWERING BOTTOM OF FOOTING WHERE TRENCH OCCURS BELOW "NO DIGGING LINE", FILL PORTION OF TRENCH BELOW NO DIGGING LINE W/ CONCRETE FILL PRIOR TO EXCAVATING FOOTING. PROVIDE SLEEVE W/ 1" CLR. AROUND PIPE ENCASED IN CONCRETE.
3. SEE PIPES PERPENDICULAR TO FOOTING FOR ADDITION NOTES



CLEAR OF TOP & BOTTOM REBAR

PIPES PERPENDICULAR TO FOOTING

NOTES:
1. SCALE: NTS
2. SLEEVE I.D. 2" LARGER THAN PIPE O.D. OR BELL O.D.
3. SEAL VOID BETWEEN PIPE AND SLEEVE W/ ELASTIC WATERPROOF MATERIAL, TYPICAL
4. CONCRETE FILL SHALL HAVE F'c @ 28 DAYS > 1500 PSI.
5. CONCRETE FILL TO BE SAME WIDTH AS FOOTING AND FULL WIDTH OF PIPE TRENCH. STEP FOOTING IF PIPE IS MORE THAN 2'-6" BELOW BOTTOM OF FOOTING.
6. NO PIPE SHALL BE PLACED BELOW SPREAD FOOTINGS, TYP.
7. NO PIPES UNDER PRESSURE ALLOWED WITHIN FOOTING IN LONGITUDINAL DIRECTION.
8. CONDUITS WITHIN FOOTING SHALL BE LOCATED SUCH THAT VERTICAL RISERS DO NOT CROSS ADJACENT HORIZONTAL CONDUIT. MINIMUM COVER SHALL BE 1½" AND 2d MINIMUM SEPARATION.

9

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/25 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER KEVIN T. O'REEP No. S 4192 Ce. 12/31/26 STRUCTURAL STATE OF CALIFORNIA
DATE SIGNED: 07/18/2024	

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REVISION HISTORY

NO.	REMARKS	DATE
1	PLAN CHECK 1	

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	
○ DSA BACK CHECK	
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

HUMBOLDT COUNTY OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

SCHEMATIC DESIGN

HUMBOLDT COUNTY OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

FOUNDATION DETAILS

Date	Project Number
06/25/2025	2024146
Application Number	Drawing Number
01-122322	S5.0
Drawn / Checked	
M.M. / KTO	

PRINT DATE: 11/22/2024 12:01:35 PM
FILE PATH: Z:\2024\2024146-HCOE Generator-Franklin\Drawing\Arch\Project Files_2024-11-06_07-51-52am\Project Files\Architectural\23361-HCOE Franklin Site Generator Inv & Report-A23.rvt

CONCRETE FORMING AND ACCESSORIES SPECIFICATIONS:

SECTION 031000: PART 1 – GENERAL

1.1 DESCRIPTION

A. WORK INCLUDED:
1. FORM WORK FOR ALL CAST–IN–PLACE AND SITE–PRECAST CONCRETE, INCLUDING ACCESSORIES SUCH AS ANCHORS, CLAMPS AND SNAP TIES.
2. ARCHITECTURAL FORM LINER WHERE SHOWN ON DRAWINGS.
3. ALL REQUIRED FORMING MATERIALS NECESSARY TO COMPLETE THE FORMWORK, INCLUDING ANCHORS, CLAMPS, SNAP TIES, ETC.
4. SHORES, SCAFFOLDS AND BRACES REQUIRED TO SUPPORT FORMWORK.
5. INSTALLATION ONLY OF ALL HARDWARE EMBEDDED IN CONCRETE, INCLUDING ANCHOR BOLTS, INSERTS, BEAM AND COLUMN CONNECTIONS EXCEPT AS EXCLUDED BELOW.
6. INSTALLATION ONLY OF ALL REGLETS, WOOD NAILING BLOCKS AND STRIPS, MASONRY ANCHORS AND CHAMFER STRIPS EMBEDDED IN CONCRETE.
7. INSTALLATION ONLY OF SLEEVES, ANCHORS, INSERTS, ETC., REQUIRED FOR THE MECHANICAL, ELECTRICAL, FIRE SPRINKLER AND PLUMBING SYSTEMS, IN ACCORD WITH LAYOUTS FURNISHED UNDER APPROPRIATE SECTIONS, WHEN THESE INSERTS PENETRATE OR ARE ANCHORED TO FORMS.
8. REMOVAL OF FORMS.

B. RELATED WORK SPECIFIED ELSEWHERE:
1. INSTALLING SUCH ITEMS AS INSERTS, SLEEVES, AND ANCHORS WHEN NOT PENETRATING OR FASTENED TO FORMS.
2. FURNISHING, ONLY, OF ANCHORS, BOLTS (OTHER THAN LEDGER ANCHOR BOLTS), FRAMES, HARDWARE, INSERTS, REGLETS, SLEEVES AND OTHER MATERIALS OR ITEMS REQUIRED FOR ELECTRICAL, PLUMBING AND OTHER SYSTEMS, OR AS PERMANENT PART OF STRUCTURE.
3. FURNISHING AND INSTALLATION OF ARCHITECTURAL CONCRETE FORM LINERS.
4. FURNISHING, ONLY OF PICK–UP INSERTS FOR ERECTION OF PRECAST CONCRETE.
5. SAND FORMING AND/OR CASTING BEDS AT EXPOSED AGGREGATE FINISHES AT PRECAST ELEMENTS.
6. PATCHING AND FILLING OF FORM TIE HOLES.

1.2 REFERENCES, CODES AND STANDARDS

A. THE FOLLOWING REFERENCES, CODES AND STANDARDS ARE HEREBY MADE A PART OF THIS SECTION AND FORMWORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS THEREIN EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS. NOTHING CONTAINED HEREIN SHALL BE CONSTRUED AS PERMITTING WORK THAT IS CONTRARY TO CODE REQUIREMENTS.
1. STANDARD SPECIFICATIONS: THE AMERICAN CONCRETE INSTITUTE (ACI) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" ACI 301 LATEST EDITION SHALL BE USED AS A STANDARD SPECIFICATION. ALL FORMWORK SHALL CONFORM WITH THE STANDARD SPECIFICATION EXCEPT AS MODIFIED BY THE REQUIREMENTS SPECIFIED HEREIN AND /OR THE DETAILS ON THE DRAWINGS.
2. CODES: THE CURRENT EDITION OF THE CALIFORNIA BUILDING CODE (CBC), CHAPTER 19A, "CONCRETE". ALL FORMWORK SHALL MEET THE REQUIREMENTS OF THIS CODE. THIS CODE SUPPLEMENTS THE STANDARD SPECIFICATION AND SHALL SUPERSEDE THE STANDARD SPECIFICATION IN CASES WHERE PROVISIONS ARE IN CONFLICT.
3. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AMERICAN CONCRETE INSTITUTE (ACI) DOCUMENT 318, LATEST EDITION.
4. "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK", AMERICAN CONCRETE INSTITUTE (ACI) DOCUMENT 347, LATEST EDITION.
5. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORD WITH ACI 318, ACI 347 AND APPLICABLE CONSTRUCTION SAFETY REGULATIONS FOR PLACE OF WORK.
6. "PRODUCT GUIDE TO GRADES AND SPECIFICATIONS", AMERICAN PLYWOOD ASSOCIATION (APA), LATEST EDITION.
7. "WESTERN LUMBER GRADING RULES", WESTERN WOOD PRODUCTS ASSOCIATION (WWPA), LATEST EDITION.

1.3 ALLOWABLE TOLERANCES

A. DESIGN, CONSTRUCT, SET, AND MAINTAIN THE FORMWORK SO AS TO INSURE COMPLETED WORK WITHIN THE SUGGESTED TOLERANCE LIMITS SPECIFIED IN ACI 347, SECTION 3.3.1. SEE CONCRETE FINISHES SECTION FOR TRAFFIC SURFACE TOLERANCES OF SLABS

PART 2 – PRODUCTS

2.1 MATERIALS

A. ALL FORMED SURFACES SHALL BE DOUGLAS FIR PLYWOOD "PLYFORM" OR S4S DOUGLAS FIR BOARDS OR PLANKS OF STANDARD GRADE OR BETTER.

B. LUMBER, PLYWOOD AND SONOTUBE USED FOR FORMING:
1. PLYWOOD: B–B(CONC FORM) CLASS 1: PLYFORM(APA) OR EQUAL.
2. BOARDS: DOUGLAS FIR, 3 COMMON OR BETTER, S4S(WWPA).
3. STUDS, BRACES, WALES, OTHER SHORING: MATERIAL CAPABLE OF SUPPORTING REQUIRED LOADS WITHOUT DISPLACEMENT.
4. DESIGNATED "ARCHITECTURAL CONCRETE" SURFACES: USE OVERLAID PLYWOOD COMPLYING WITH U.S. PRODUCT STANDARD PS–1, "A–C OR B–B HIGH DENSITY OVERLAID CONCRETE FORM", CLASS, I.
5. PROVIDE SONOTUBE "SMOOTH FORM ROUND COLUMN" AT CIRCULAR COLUMNS.

C. METAL PAN FORMS: OF OPTIONAL MANUFACTURE, SUFFICIENTLY STRONG AND OF SHAPES TO MEET DRAWING AND SPECIFICATION REQUIREMENTS.

D. RE–USE: ALLOWED, OF LUMBER, PLYWOOD AND METAL, IF MATERIALS ARE STRAIGHT, CLEAN, FREE OF DIRT AND HARDENED CONCRETE AND IF ALL SURFACES AND EDGES ARE IN GOOD CONDITION.

E. FORM HARDWARE: SUBJECT TO APPROVAL OF ENGINEER, IF PASSING THROUGH CONCRETE SECTIONS, TO BE REMOVED AFTER POURS. FURNISH HARDWARE OF NATURE SO NOT TO IMPAIR THE STRENGTH OR APPEARANCE OF THE FINISHED WORK, AND THAT WILL LEAVE NO METAL PORTIONS IN CONCRETE CLOSER TO THE SURFACE THAN 1 INCH.

F. FORM OIL: APPROVED NON–STAINING MINERAL OIL.

G. FORM LINING FOR ARCHITECTURAL CONCRETE SHALL BE SMOOTH SURFACED TEMPERED HARD BOARD OR PLASTIC OVERLAID PLYWOOD.

H. FORM LINER SHALL BE INTERFORM PATTERN NO. 1505, 1–1/2 INCH X 1–1/2 INCH.

I. WOOD SILL ANCHOR BOLTS: ASTM A307 WITH MALLEABLE IRON OR STEEL PLATE WASHERS. ALL SUCH INSERTS SHALL BE OF THE SAME BOLT SIZE AS THE SPECIFIED ANCHOR BOLT AND SHALL HAVE CBC APPROVED SHEAR AND TENSILE STRENGTH RATINGS AT LEAST EQUAL TO THOSE LISTED IN THE CBC FOR THE ANCHOR BOLT SPECIFIED.

PART 3 – EXECUTION

3.1 INSTALATION

A. DESIGN, CONSTRUCT AND ERECT FORMS IN ACCORD WITH ACI–347.

B. MAKE FORMS OF PLYWOOD, BOARDS OR METAL; MORTAR–TIGHT, SOUND, SUFFICIENTLY STRONG AND RIGID TO PREVENT DISTORTION DURING POURING AND CURING OF CONCRETE. BUILD FORMS TRUE TO REQUIRED LINES AND MAINTAIN THEM UNTIL CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT REMOVAL. DO NOT USE WIRE TIES OR WOOD FORM SPREADERS.

C. ANCHOR EDGE FORMS AT SLABS (AND TILT–UP PANELS) SECURELY. BUILD FORMS STRONG ENOUGH TO SUPPORT SCREEDS. ESTABLISH SCREED LEVELS TO OBTAIN REQUIRED SLAB THICKNESSES AND SLOPES SHOWN.

D. USE PLYWOOD SHEETS OF LARGEST PRACTICAL SIZE TO FORM EXPOSED SURFACES, EXCEPT WHEN ONE BOARD IS SUFFICIENT TO COVER ENTIRE SURFACE. CHAMFER CORNERS 3/4 INCH UNLESS OTHERWISE SHOWN.

E. LOCATE HARDWARE ACCURATELY AND ANCHOR SECURELY TO FORMS OR OTHER FALSEWORK. USE METAL OR WOOD DOOR AND WINDOW FRAMES WHEN THEY ARE SO ADAPTABLE.

F. LOCATE HARDWARE ACCURATELY AND ANCHOR SECURELY TO FORMS OR OTHER FALSEWORK.

G. BE RESPONSIBLE FOR INSURING THAT HARDWARE SHOWN EMBEDDED IN CONCRETE IS IN PLACE PRIOR TO POUR.

H. APPLY FORM OIL TO BOARDS OR PLYWOOD SURFACES, NOT MILL–OILED, BEFORE REINFORCING IS PLACED.

I. USE EARTH TRENCHES OR EXCAVATIONS FOR FOOTINGS IF SOIL CONDITION PERMITS, HOWEVER, USE OTHER MATERIALS TO FORM SECTIONS OF FOOTING WHICH ARE EXPOSED. INCREASE HORIZONTAL FOOTING DIMENSIONS BY 1 INCH, MINIMUM, FROM DIMENSIONS SHOWN, WHEN EARTH FORMS ARE USED.

J. VERIFY LINES, LEVELS AND CENTERS BEFORE PROCEEDING WITH FORMWORK. ENSURE THAT DIMENSIONS AGREE WITH DRAWINGS.

K. CONSTRUCT FORMWORK, SHORING AND BRACING TO MEET DESIGN AND CODE REQUIREMENTS, SO THAT RESULTANT FINISHED CONCRETE CONFORMS TO REQUIRED SHAPES, LINES AND DIMENSIONS.

L. OBTAIN ARCHITECT/ENGINEER'S REVIEW BEFORE FRAMING OPENINGS IN STRUCTURAL MEMBERS WHICH ARE NOT INDICATED ON DRAWINGS.

M. DO NOT APPLY FORM RELEASE AGENT WHERE CONCRETE SURFACES WILL RECEIVE FINISHES OR APPLIED COVERINGS WHICH ARE AFFECTED BY AGENT. SOAK INSIDE SURFACES OF UNTREATED FORMS WITH CLEAN WATER. KEEP SURFACES WET PRIOR TO PLACING CONCRETE.

N. PLACE ANCHOR BOLTS ACCURATELY AT THE LOCATION AND ELEVATIONS SHOWN ON THE DRAWING.

3.2 REMOVAL OF FORMS

A. REMOVE FORMS AT TIMES SPECIFIED IN 3.2D AND 3.2E. REMOVE FORMS WITHOUT DAMAGE TO CONCRETE. REMOVE FORMS BELOW GROUND SURFACE, ALONG WITH SHORES AND BRACES, BEFORE BACKFILLING.

B. DO NOT REMOVE FORMS AND BRACES UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT. AND CONSTRUCTION DESIGN LOAD WHICH ARE LIABLE TO BE IMPOSED UPON IT.

C. EDGE FORMS 8 INCHES OR LESS IN HEIGHT AT SLABS AND PANELS AND FORMS AT FOUNDATIONS AND ` CURBS SHALL REMAIN IN PLACE TWENTY FOUR 24 HOURS AFTER POURING.

D. FORMS FOR CAST–IN–PLACE COLUMNS AND BOND BEAMS SHALL REMAIN IN PLACE FORTY EIGHT 48 HOURS AFTER POURING. AT CAST IN PLACE WALLS, BEAMS AND COLUMNS (OTHER THAN COLUMNS AT TILT UP WALL CLOSURES) FORMS SHALL REMAIN IN PLACE FIVE (5) DAYS MINIMUM AFTER POURING AND SHALL NOTE BE REMOVED UNTIL CONCRETE HAS SET ADEQUATELY TO PREVENT DAMAGE DURING AND AFTER REMOVAL.

E. REMOVE FORMWORK PROGRESSIVELY AND IN ACCORD WITH CODE REQUIREMENTS SO THAT NO SHOCK LOADS OR UNBALANCED LOADS ARE IMPOSED ON STRUCTURE.

F. LOOSEN FORMS CAREFULLY. DO NOT WEDGE PRY BARS, HAMMERS OR TOOLS AGAINST CONCRETE SURFACES.

G. STORE REMOVED FORMS FOR EXPOSED ARCHITECTURAL CONCRETE IN MANNER THAT SURFACES TO BE IN CONTACT WITH FRESH CONCRETE WILL NOT BE DAMAGED. MARKED OR SCORED FORMS WILL BE REJECTED.

END OF SECTION 031000

CONCRETE REINFORCING SPECIFICATIONS

SECTION 032000: PART 1 – GENERAL

1.1 DESCRIPTION

A. WORK INCLUDED:
1. ALL CONCRETE REINFORCING SHOWN ON THE DRAWINGS.
2. ALL WELDED WIRE MESH CONCRETE REINFORCING SHOWN ON THE DRAWINGS.
3. SUPPORTS AND TIES FOR REINFORCEMENT.

B. RELATED WORK SPECIFIED ELSEWHERE:
1. FURNISHING AND PLACING OF ANCHOR BOLTS, ANCHORS, INSERTS FOR ATTACHMENT TO CONCRETE WORK.
2. PROVIDING ANCHOR BOLTS, ANCHORS, AND INSERTS FOR ATTACHING TO CONCRETE WORK.

1.2 REFERENCES, CODES AND STANDARDS

A. THE FOLLOWING REFERENCES, CODES AND STANDARDS ARE HEREBY MADE A PART OF THIS SECTION AND REINFORCEMENT SHALL CONFORM TO THE APPLICABLE REQUIREMENTS THEREIN EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS. NOTHING CONTAINED HEREIN SHALL BE CONSTRUED AS PERMITTING WORK THAT IS CONTRARY TO CODE REQUIREMENTS.
1. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315, LATEST EDITION.
2. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318, LATEST EDITION.
3. "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CRSI, LATEST EDITION.
4. CALIFORNIA BUILDING CODE (CBC), LATEST EDITION, CHAPTER 19A.

1.3 SOURCE QUALITY CONTROL

A. BE AWARE THAT TESTING AND INSPECTING RELATED TO WORK OF THIS SECTION IS NOT INCLUDED IN THE CONTRACT. NOTE THAT SUCH WORK, IF REQUIRED FOR PROSECUTION OF THE PROJECT, WILL BE CONTRACTED AND PAID FOR SEPARATELY BY THE OWNER; IF NOT REQUIRED, THE WORK MAY NOT BE DONE BY THE OWNER OR OTHERS UNDER SEPARATE CONTRACT TO HIM DURING COURSE OF CONSTRUCTION, AT HIS OPTION. BE RESPONSIBLE FOR NOTIFYING THE OWNER SUFFICIENTLY IN ADVANCE, IN CASE OF ACTION NECESSARY FOR COMPLETION OF THE WORK, TO PERMIT SUCH ACTION TO BE TAKEN IN ACCORD WITH PROJECT SCHEDULE.

B. WHERE CERTIFIED MILL TEST REPORTS (REQUIRED HEREINAFTER UNDER "SUBMITTALS") ARE NOT FURNISHED, CONFORM TO THE FOLLOWING:
1. REINFORCING BARS SHALL BE TESTED IN TENSION AND BENDING AS PER ASTM A 615. TESTING SHALL BE DONE BY THE OWNER'S TESTING AGENCY. FURNISH ONE COPY OF TEST REPORTS TO ARCHITECT, STRUCTURAL ENGINEER, OWNER AND CONTRACTOR.
2. SAMPLES WILL BE TAKEN BY THE TESTING AGENCY FROM BUNDLES AS DELIVERED FROM THE MILL. WHERE BUNDLES ARE IDENTIFIED BY HEAT NUMBER AND A MILL ANALYSIS ACCOMPANIES THE REPORTS, ONE TENSILE AND ONE BENDING TEST SPECIMEN WILL BE TAKEN FROM EACH 10 TONS OR FRACTION THEREOF, OF EACH SIZE AND KIND OF BAR. WHERE POSITIVE IDENTIFICATION OF HEAT NUMBERS CANNOT BE MADE OR WHERE RANDOM SAMPLES ARE TAKEN, ONE SERIES OF TESTS SHALL BE MADE FROM EACH 2–1/2 TONS OR FRACTION THEREOF, OF EACH SIZE AND KIND OF BAR.
3. THE COST OF TEST, SAMPLING AND HANDLING OF REINFORCING STEEL SHALL BE PAID BY THE OWNER BUT DEDUCTED FROM MONEYS DUE THE CONTRACTOR.
4. INCLUDE MATERIAL REQUIRED TO PROVIDE SAMPLES FOR TESTING.

C. THE FOLLOWING IS SUBJECT TO SPECIAL INSPECTION AS PER CBC, CHAPTER 17A. THE SCHOOL BOARD SHALL PAY FOR ALL TESTS/INSPECTIONS, BUT IF SO SPECIFIED THE AMOUNT OR A PORTION THEREOF MAY BE COLLECTED FROM THE CONTRACTOR BY THE SCHOOL BOARD. WHEN IN THE OPINION OF THE ARCHITECT OR REGISTERED ENGINEER, ADDITIONAL TESTS/INSPECTIONS ARE REQUIRED BECAUSE OF THE MANNER IN WHICH THE CONTRACTOR EXECUTES HIS OR HER WORK, SUCH TESTS/INSPECTIONS SHALL BE PAID FOR BY THE SCHOOLBOARD, BUT IF SO SPECIFIED THE AMOUNT PAID MAY BE COLLECTED FROM THE CONTRACTOR BY THE SCHOOL BOARD. EXAMPLES OF SUCH TESTS/INSPECTION ARE: TESTS OF MATERIAL SUBSTITUTED FOR PREVIOUSLY ACCEPTED MATERIALS, RETESTS OR RE–INSPECTIONS MADE NECESSARY BY THE FAILURE OF MATERIAL TO COMPLY WITH THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, AND LOAD TESTS NECESSARY BECAUSE CERTAIN PORTIONS OF THE STRUCTURE HAVE NOT FULLY MET SPECIFICATION OR PLAN REQUIREMENTS.
1. PLACEMENT OF REINFORCING STEEL AS REQUIRED BY SEC. 1705A.3

1.4 SUBMITTALS

A. SHOP DRAWINGS:
1. FULLY DETAILED SHOP DRAWINGS, INCLUDING BENDING SCHEDULES AND BENDING DIAGRAMS, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. SHOP DRAWINGS SHALL SHOW PLACING DETAILS AND SIZE AND LOCATION OF REINFORCING STEEL AND ANY WELDING PROPOSED. SHOP DRAWINGS SHALL SHOW METHOD OF CHAIRING REINFORCEMENT IN PANELS INCLUDING CHAIR SIZES AND SPACING.
2. SHOP DRAWINGS SHALL BE OF SUCH DETAIL AND COMPLETENESS THAT FABRICATION AND PLACEMENT AT THE SITE CAN BE ACCOMPLISHED WITHOUT THE USE OF PROJECT OR CONTRACT DRAWINGS FOR REFERENCE.
3. CONTRACTOR SHALL CHECK ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PROJECT OR CONTRACT DRAWINGS FOR ANCHOR BOLT SCHEDULES AND LOCATIONS, ANCHORS, INSERTS, CONDUITS, SLEEVES, AND ANY OTHER ITEMS WHICH ARE REQUIRED TO BE CAST IN CONCRETE, AND SHALL MAKE NECESSARY PROVISIONS AS REQUIRED SO THAT REINFORCING STEEL WILL NOT INTERFERE WITH THE PLACEMENT OF SUCH EMBEDDED ITEMS.
4. REINFORCING STEEL SHALL NOT BE FABRICATED OR PLACED BEFORE THE SHOP DRAWINGS HAVE BEEN REVIEWED BY THE STRUCTURAL ENGINEER AND RETURNED TO THE CONTRACTOR. REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR FOR FAILURE IN ACCURACY AND COMPLETE PLACING OF THE WORK.

B. MILL TEST REPORTS: CERTIFIED MILL TEST REPORTS (TENSILE AND BENDING) FOR EACH HEAT OR MELT OF STEEL SHALL BE SUBMITTED TO THE ARCHITECT BEFORE DELIVERY OF ANY MATERIAL TO THE JOB SITE. (SEE REQUIREMENTS ABOVE UNDER "SOURCE QUALITY CONTROL.") WHERE REINFORCING IS REQUIRED OR REQUESTED TO BE WELDED, MILL TEST REPORTS SHALL VERIFY THE WELDABILITY OF THE STEEL.

1.5 DELIVERY AND STORAGE

A. DELIVER REINFORCING TO SITE PROPERLY BUNDLED AND TAGGED, AND STORE SO AS TO PREVENT EXCESSIVE RUSTING OR FOULING WITH GREASE OR ANY COATING THAT WILL INTERFERE WITH BOND. SEGREGATE SO AS TO MAINTAIN IDENTIFICATION AFTER BUNDLES ARE BROKEN. DO NOT USE DAMAGED, REWORKED, OR DETERIORATED MATERIAL.

PART 2 – PRODUCTS

2.1 MATERIALS

A. WELDED WIRE FABRIC: ASTM A185, FURNISHED IN FLAT SHEETS, NOT ROLLS. SEE DRAWINGS FOR SIZE AND WEIGHT.

B. WELDED REINFORCING BARS: CONFORM TO ASTM A706, GRADE 60, 60,000 PSI YIELD STRENGTH.

C. REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, 60,000 PSI YIELD.

D. ALL BARS SHOWN ON THE DRAWINGS TO BE WELDED SHALL ALSO CONFORM TO AWS D1.4.

E. WIRE SPIRALS FOR COLUMN REINFORCING – ASTM A–82.

F. TIE WIRE: 18 GA. OR HEAVIER, BLACK ANNEALED.

G. METAL REINFORCING SUPPORTS: GALVANIZED, EXCEPT THAT ALL SUPPORTS USED AT WALL OR SLAB SURFACES EXPOSED TO EXTERIOR IN THE COMPLETED BUILDING SHALL BE ALUMINUM OR PLASTIC COATED, OF AN APPROVED MANUFACTURER. PAINT DOES NOT CONSTITUTE PROTECTION FOR SUCH SURFACES.

H. SMOOTH DOWELS AT CONSTRUCTION JOINTS: A615, GRADE 40, PLAIN BILLET–STEEL BARS, OR ANY MILD–STEEL ROD STOCK OF 30000 PSI OR GREATER YIELD STRENGTH. ENDS OF DOWELS SHALL BE SMOOTH, WITHOUT "RIVET" HEADS OR DEFORMATIONS OF ANY KIND.

2.2 FABRICATION

A. COMPLY WITH DETAILS ON DRAWINGS.

B. WHERE SPECIFIC DETAILS ARE NOT SHOWN OR NOTED, DO DETAILING AND FABRICATION IN CONFORMANCE WITH OR SUPERIOR TO REQUIREMENTS CONTAINED IN THE REFERENCES, CODES AND STANDARD ARTICLE.

C. CLEAN BARS OF LOOSE RUST, LOOSE MILL SCALE AND ANY SUBSTANCE WHICH MAY DECREASE BOND. BEND BARS ACCURATELY TO DETAILS ON REVIEWED SHOP DRAWINGS. UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER, BARS SHALL BE BENT COLD.

D. SHOP FABRICATE REINFORCEMENT.

PART 3 – EXECUTION

3.1 PLACING

A. CONFORM TO LATEST CODE OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE.

B. USE BARS FREE OF SCALE, RUST, MUD AND OIL. BEND MATERIAL COLD, TO THE SHAPES SHOWN. LAP SPLICES PER THE DRAWINGS, UNLESS OTHERWISE SHOWN. LOCATE SPLICES SUBJECT TO THE APPROVAL OF ENGINEER. MAKE SPLICES IN STRUCTURAL BEAMS, SLABS AND COLUMNS ONLY WHERE SHOWN.

C. PLACE REINFORCING STEEL ACCURATELY AND FASTEN SECURELY INTO POSITION. USE SUFFICIENT SUPPORTS AND TIES TO PERMIT WALKING ON REINFORCING WITHOUT UNDUE DISPLACEMENT.

D. PLACE REINFORCING BARS TO GIVE FOLLOWING MINIMUM CONCRETE COVER:
1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH------3 INCHES
2. CONCRETE EXPOSED TO EARTH OR WEATHER:
   a. NO. 6 THROUGH NO. 18 BARS----------2 INCHES
   b. NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER----------1 1/2 INCHES
3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTRACT WITH THE GROUND
   SLABS, WALLS, JOISTS:
   a. NO.14 AND NO. 18 BARS----------1 1/2 INCH
   b. NO.11 BAR AND SMALLER----------3/4 INCH
4. BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS–1–1/2 INCH
5. SHELLS, FOLDED PLATE MEMBERS:
   a. NO. 6 BAR AND LARGER----------3/4 INCH
   b. NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER----------1/2 INCH

E. MAKE MINIMUM SPACING BETWEEN PARALLEL BARS ONE BAR DIAMETER, BUT NOT LESS THAN ONE INCH, WHICHEVER IS GREATER. WHERE PARALLEL REINFORCEMENT IS PLACED IN TWO OR MORE LAYERS, BARS IN THE UPPER LAYER SHALL BE PLACED DIRECTLY ABOVE BARS IN THE BOTTOM LAYER WITH CLEAR DISTANCE BETWEEN LAYER NOT LESS THAN 1 INCH.

F. LAP WELDED WIRE FABRIC 2 CROSS WIRES MINIMUM AND TIE. PROVIDE SUPPORTS OR OTHER APPROVED MEANS TO INSURE THAT THE FABRIC IS MAINTAINED AT APPROXIMATELY MID–DEPTH OF THE SLAB.

G. ALL REINFORCING WELDING SHALL BE IN ACCORD WITH AWS D12.1. WELDERS SHALL BE QUALIFIED BY TESTS, AS PRESCRIBED IN THE "STANDARD QUALIFICATION PROCEDURE" OF THE AWS.

H. TIE REINFORCEMENT SECURELY IN PLACE PRIOR TO POURING CONCRETE. DO NOT PLACE DOWELS OR OTHER REINFORCING IN WET CONCRETE.

I. NOTIFY ENGINEER AT LEAST ONE WEEK PRIOR TO BEGINNING OF REINFORCEMENT WELDING WORK, TO PERMIT ARRANGEMENTS FOR TESTING LAB TO INSPECT THE WORK AND QUALIFY WELDERS. HAVE WELDERS, ONCE QUALIFIED BY TESTING LAB, PERFORM ALL WELDING WORK.

J. ALL 90, 135, AND 180 DEGREE HOOKS ARE ACI STANDARD BENDS AND EXTENSION LENGTHS UNLESS NOTED OTHERWISE ON THE DRAWINGS. HOOKS MAY BE RACKED AT AN ANGLE WHEN THE CONCRETE DIMENSIONS INTERFERE WITH PLACEMENT.

K. ELEMENTS SHALL BE CORRECTLY AND ACCURATELY POSITIONED AND PLUMBED IN THEIR ASSIGNED POSITIONS. ELEMENTS SHALL BE SECURELY AND ADEQUATELY BRACED BY APPROVED METHODS UNTIL THE PERMANENT CLOSURES, ANCHORS, AND BRACING ARE COMPLETED.

L. DO ALL CUTTING AND DRILLING OF PRECAST ITEMS AS REQUIRED TO ACCOMMODATE OTHER WORK. ALL CUTTING SHALL HAVE THE PRIOR APPROVAL OF THE ARCHITECT AND ENGINEER.

M. WHERE SHIMS, WEDGES, OR "BUTTONS" ARE TO BE USED FOR SETTING ITEMS, THEY SHALL BE OF NON–STAINING METAL OR OTHER APPROVED MATERIAL.

N. WHEN METAL CONNECTIONS HAVE BEEN COMPLETED, APPLY A COAT OF PRIMER TO ALL DAMAGED SHOP–COATED SURFACES.

3.2 CLEANING

A. CLEAN ALL EXPOSED SURFACES FREE OF MORTAR, LAITANCE, AND CONSTRUCTION SOIL. DO NOT USE WIRE BRUSHES OR ANY ACID SOLUTIONS. TAKE SPECIAL PRECAUTIONS TO REMOVE ALL ALKALIS AND OTHER COMPOUNDS FROM SURFACE OF UNITS WHICH MIGHT CAUSE ETCHING OF GLASS OR METAL SURFACES DUE TO RUN–OFF FROM RAIN OR WINDOW CLEANING OPERATIONS.

3.3 PROTECTION

A. PROTECT ALL UNITS EXPOSED IN THE FINISHED WORK FROM STAINS OR DAMAGE DURING REMAINDER OF CONSTRUCTION PERIOD. UNITS WHICH MAY BECOME STAINED OR DAMAGED SHALL BE CLEANED OR REPAIRED, PROVIDED THAT SUCH ACTIONS CAN RESTORE THE UNITS TO THEIR ORIGINAL APPEARANCE AND CONDITION. WHERE STRUCTURAL DAMAGE RESULTS OR WHERE REMEDIAL WORK IS NOT SATISFACTORY TO THE ARCHITECT, UNITS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

B. PROTECTION SHALL BE CONSIDERED THE RESPONSIBILITY OF THE ERECTOR UNTIL THE INSTALLATION IS APPROVED BY THE ARCHITECT.

END OF SECTION 032000

CONCRETE MASONRY UNITS SPECIFICATIONS:

SECTION 042000: PART 1 – GENERAL

1.1 DESCRIPTION

A. WORK INCLUDED:

1. ALL MASONRY WORK AND ALL PREPARATIONS NECESSARY TO RECEIVE AND ADJOIN OTHER WORK. OTHERS SHALL FURNISH ALL INSERTS AND ATTACHMENTS AS NOTED IN THE PLANS AND SPECIFICATIONS, BUT THESE SHALL BE INSTALLED UNDER THIS SECTION.

2. COOPERATION WITH ALL OTHER TRADES IN LAYING OUT THE WORK.

3. ARRANGING FOR ADEQUATE BRACING, FORMING, AND SHORING REQUIRED IN CONJUNCTION WITH AND IN THE COURSE OF CONSTRUCTING THE CONCRETE MASONRY AND NOT PROVIDED FOR UNDER OTHER SECTIONS.

4. ADVISING THE GENERAL CONTRACTOR AS TO THE POSITION OF ALL DOWELS TO MASONRY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF DOWELS IN ADJOINING CONSTRUCTION.

5. PLACING AND FURNISHING OF ALL MASONRY REINFORCING STEEL EXCEPT DOWELS TO FOOTINGS AND ADJOINING CONCRETE CONSTRUCTION.

6. ARRANGING FOR THE NECESSARY STORAGE SPACE AND PROTECTION FOR MATERIALS AT THE JOB SITE.

7. CALLING FOR ALL INSPECTIONS AS REQUIRED IN THE COURSE OF HIS WORK BY THE ENGINEER, AND/OR BUILDING DEPARTMENT.

8. ARRANGE FOR FURNISHING TEST SPECIMENS AND SAMPLES OF MATERIALS AS MAY BE REQUIRED.

9. WATERPROOFING OF EXTERIOR MASONRY WALLS.

10. INSTALLATION OF MISCELLANEOUS IRON EMBEDDED IN MASONRY.

11. CONSTRUCTION OF PRISM SAMPLES AS REQUIRED FOR TESTING.

B. RELATED WORK SPECIFIED ELSEWHERE:

1. FOOTING DOWELS AND DOWELS AT ADJOINING CONCRETE CONSTRUCTION.

1.2 UNIT PRICES

A. COST PER SQUARE FOOT FOR EACH TYPE OF MASONRY SPECIFIED.

1.3 STANDARDS AND REGULATIONS

A. "CODE OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE (CRSI), LATEST EDITION.

B. "STANDARD SPECIFICATIONS", AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), LATEST EDITION.

C. "STRUCTURAL WELDING CODE – REINFORCING STEEL, D1.4", AMERICAN WELDING SOCIETY (AWS), LATEST EDITION.

D. "QUALITY CONTROL STANDARDS", CONCRETE MASONRY ASSOCIATION.

1.4 SHOP DRAWINGS

A. EACH TYPE AND COLOR OF MASONRY UNIT SPECIFIED.

B. A CURED SAMPLE OF THE COLORED GROUT PROPOSED FOR USE.

1.5 DELIVERY – STORAGE AND HANDLING

A. ALL MASONRY UNITS SHALL BE STORED ON THE JOB SO THAT THEY ARE KEPT OFF THE GROUND AND PROTECTED FROM RAIN. WETTING THE UNITS SHALL NOT BE PERMITTED EXCEPT WHEN HOT DRY WEATHER EXISTS CAUSING THE UNITS TO BE WARM TO THE TOUCH, AND THEN THE SURFACE ONLY MAY BE WETTED WITH A LIGHT FOG SPRAY.

PART 2 – PRODUCTS

2.1 MATERIALS

A. MASONRY UNITS SHALL BE HOLLOW LOAD BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C–90. IN ADDITION ALL UNITS SHALL MEET THE REQUIREMENTS OF THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.

B. ALL UNITS SHALL BE STANDARD COMMON UNITS, 8 INCHES IN HEIGHT, 16 INCHES IN LENGTH, WIDTH AS SHOWN IN THE DRAWINGS, WITH APPROPRIATE SIZES AND SHAPES AS REQUIRED AT PILASTERS, CORNERS, LINTELS, OTHER SPECIAL CONDITIONS.

C. CEMENT – ASTM C–150, TYPE I, OR TYPE II.

D. LIME – HYDRATED LIME SHALL CONFORM TO ASTM DESIGNATION C207. QUICKLIME SHALL CONFORM TO ASTM DESIGNATION C5. QUICKLIME SHALL BE SLAKED AND THEN SCREENED THROUGH A 16–MESH SIEVE. AFTER SLAKING, SCREENING, AND BEFORE USING, IT SHALL BE STORED AND PROTECTED FOR NOT LESS THAN 10 DAYS. THE RESULTING PRODUCT SHALL WEIGH NOT LESS THAN EIGHTY–THREE POUNDS PER CUBIC FOOT.

E. AGGREGATE:

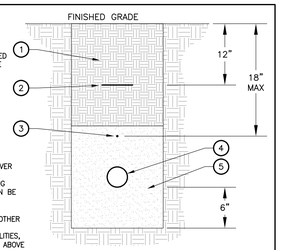
1. AGGREGATE SHALL BE CLEAN, SHARP, AND WELL GRADED, AND FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKALI, SURFACE COATINGS AND ORGANIC MATTER. AGGREGATE FOR MORTAR SHALL CONFORM TO ASTM DESIGNATION C144.

2. AGGREGATE FOR GROUT SHALL CONFORM TO ASTM DESIGNATION C404.

F. WATER – WATER SHALL BE FREE FROM DELETERIOUS QUANTITIES OF ACIDS, ALKALIS, AND ORGANIC MATERIALS.

G. REINFORCING STEEL SHALL BE AS SPECIFIED UNDER THE SECTION OF TH

1. COMPACTED BASE FILL & FINISH AS NEEDED, 95% COMPACTION OR GREATER PER ASTM D-1557
2. 6" WIDE X 4 MIL. THICK CAUTION TAPE MANUFACTURED FOR DIRECT BURIAL SERVICE
3. AWG #10 REINFORCED TRACER WIRE ABOVE GAS MAIN
4. GAS MAIN
5. SAND BEDDING AND COVER

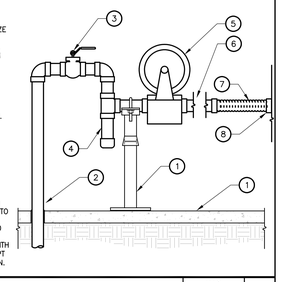


NOTES:
A. PROVIDE MIN. 24" COVER OVER GAS MAIN EXCEPTION: WHERE CROSSING OTHER UTILITIES, COVER CAN BE 18" MIN.
B. INSTALL GAS MAIN MIN. 18" HORIZONTALLY AWAY FROM OTHER UTILITIES.
C. WHEN CROSSING OTHER UTILITIES, INSTALL GAS MAIN MIN. 12" ABOVE UTILITY.
D. BACKFILL IN MAX. 6" LIFTS.

PFUP002A

SITE GAS TRENCHING | NTS | 1

1. FINISHED GRADE.
2. 2" MEDIUM PRESSURE GAS PIPING.
3. GAS SHUT-OFF VALVE.
4. 6" LONG DIRT LEG FULL SIZE OF SUPPLY PIPE.
5. GAS PRESSURE REGULATOR.
6. 10' OF PIPING DOWNSTREAM OF REGULATOR TO GENERATOR.
7. 3" FLEX CONNECTION TO GENERATOR INLET.
8. GENERATOR FUEL CONNECTION.
9. PIPE SUPPORT, SEE 3/P0.1.



NOTES:
A. REDUCE PIPE SIZE ONLY AT THE FLEXIBLE CONNECTION TO UNIT.
B. FLEXIBLE CONNECTION IS TO MATCH UNIT INLET SIZE.
C. VERIFY UNIT IS ORDERED WITH LOW FUEL PRESSURE 3" NPT COUPLING GAS INLET OPTION.

GAS SUPPLY TO GENERATOR | NTS | 2

1. PIPE, SEE PLAN FOR SIZE.
2. ADJUSTABLE PIPE SADDLE WITH YOKE "B-LINE" B3092.
3. "B-LINE" B3088ST THREADED SEISMIC BASE STAND.
4. 8"x8"x1/4" PLATE
5. 1/2"ø STAINLESS STEEL HILTI KB-TZ2 ANCHORS W/ 3"-1/2 MIN. EMBEDMENT (4) PER POST.
6. CONCRETE PAD.

PPISA01F

PIPE SUPPORT DETAIL | NTS | 3

PIPE MATERIAL SCHEDULE

SYSTEM	LOCATION	MATERIAL		JOINING METHOD	
		MATERIAL	TEST METHOD	MATERIAL	TEST METHOD
NAT. GAS	ABOVE SLAB	SCHEDULE 40 BLACK STEEL PIPE	ASTM A53	MALLEABLE IRON THREADED FOR <=2"; STEEL BUTT WELD FOR >2"	ASTM B16.3, ASTM A234
NAT. GAS	BELOW SLAB	MEDIUM DENSITY POLYETHYLENE PIPE	ASTM D2513	FUSION WELDED, SOCKET TYPE	ASTM D2513 ASTM D2683

NOTES:
1. PRIME AND PAINT ALL GAS PIPING OUTDOORS.
2. PROVIDE ANODELESS TRANSITION RISERS BETWEEN MDPE GAS PIPING BELOW GRADE AND STEEL PIPING ABOVE GRADE.

GAS PRESSURE REGULATOR SCHEDULE

GPR	V	DESCRIPTION
1	–	PIETRO FIORENTINI MODEL 31157, 3" GAS PRESSURE REGULATOR, INLET PRESSURE OF 2 PSIG, OUTLET PRESSURE 11" W.C., WITH A MAXIMUM CAPACITY OF 18,542 SCFH. ANSI Z21.80A2005
2	–	PIETRO FIORENTINI MODEL 31157, 3" GAS PRESSURE REGULATOR, INLET PRESSURE OF 2 PSIG, OUTLET PRESSURE 11" W.C., WITH A MAXIMUM CAPACITY OF 18,542 SCFH. ANSI Z21.80A2005

PLUMBING SPECIFICATIONS

A. THIS CONTRACTOR SHALL COMPLY WITH ALL CODES AND REGULATIONS IN EFFECT AT THE JOB SITE, INCLUDING, BUT NOT LIMITED TO:
A.1. 2022 CALIFORNIA BUILDING CODE
A.2. 2022 CALIFORNIA MECHANICAL CODE
A.3. 2022 CALIFORNIA PLUMBING CODE
A.4. 2022 CALIFORNIA ELECTRICAL CODE
A.5. 2022 CALIFORNIA GREEN BUILDING STANDARDS
A.6. 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS – TITLE 24
A.7. NATIONAL FIRE PROTECTION ASSOCIATION
A.8. CALIFORNIA STATE FIRE MARSHAL
B. DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT, PIPING, AND OTHER PLUMBING WORK. USE JUDGEMENT AND CARE TO INSTALL PLUMBING WORK TO FIT THE JOB CONDITIONS WITHIN THE BUILDING CONSTRUCTION AND FINISHES, AND TO FUNCTION PROPERLY.
C. CONTRACTOR SHALL EXAMINE THE SITE, VERIFY DIMENSIONS AND LOCATIONS WITH DRAWINGS, CHECK UTILITY CONNECTION LOCATIONS, AND FAMILARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITION WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
D. THIS CONTRACTOR SHALL ORGANIZE HIS WORK SO THAT THE PROGRESS OF THE PLUMBING WORK WILL CONFORM TO THE PROGRESS OF THE OTHER TRADES, AND SHALL COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE CONDITIONS OF THE BUILDING WILL PERMIT. ANY COST RESULTING FROM DEFECTIVE OR ILL TIMED WORK PERFORMED UNDER THIS SECTION SHALL BE BORNE BY THIS CONTRACTOR.
E. THE WORK SHALL ALSO INCLUDE THE COMPLETION OF DETAILS OF PLUMBING WORK NOT MENTIONED OR SHOWN WHICH ARE NECESSARY FOR THE SUCCESSFUL OPERATION OF PLUMBING SYSTEMS DESCRIBED ON THE DRAWINGS OR REQUIRED BY THESE SPECIFICATIONS. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH IS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
F. ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE GUARANTEED FREE FROM ALL MECHANICAL, ELECTRICAL AND WORKMANSHIP DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ALL DAMAGED ITEMS INSTALLED UNDER THIS CONTRACT WITHOUT ADDITIONAL COST TO OWNER.
G. THE PLUMBING CONTRACTOR SHALL PROVIDE THE OWNER COPIES OF OPERATION, MAINTENANCE AND PREVENTATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF PLUMBING EQUIPMENT.
H. SUBMIT MANUFACTURER'S PRODUCT DATA INCLUDING NAME OF MANUFACTURER, TRADE NAME, MODEL, CAPACITY, OPTIONS, DIMENSIONS, WEIGHTS, INSTALLATION AND STARTUP DATA. EQUIPMENT PERFORMANCES SCHEDULED ARE MINIMUM CAPACITY, FLOW, EFFICIENCY, ETC. REQUIRED. WEIGHTS AND ELECTRICAL DATA SCHEDULED IS MAXIMUM AVAILABLE OR ALLOWABLE.
I. ALL EQUIPMENT IS TO BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. USING ALL ACCESSORY EQUIPMENT AVAILABLE FROM THE MANUFACTURER FOR SUPPORTS, CONTROLS, ETC., TO MAKE A COMPLETE SYSTEM. ALL EQUIPMENT OR ACCESSORIES NEEDED AND NOT SHOWN OR SPECIFIED SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. ADJUST THE EQUIPMENT FOR PROPER OPERATION, CHECK ALL CONTROLS AND VERIFY THAT ALL SAFETY DEVICES ARE FUNCTIONING PROPERLY.
J. CHECK ALL SYSTEMS FOR LEAKS AND EXCESSIVE NOISE. CORRECT ANY DEFICIENCIES AS SOON AS DISCOVERED. OPERATE THE SYSTEMS AS A TEST AND DEMONSTRATE TO THE OWNER THAT THE SYSTEM IS FUNCTIONING PROPERLY.
K. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.
L. PLUMBING EQUIPMENT AND PIPING SHALL NOT BE WITHIN ELECTRICAL OR LOW VOLTAGE EQUIPMENT DEDICATED SPACE. NO PIPING WILL BE ALLOWED ABOVE EQUIPMENT'S DEDICATED SPACE.
M. ALL EXPOSED MATERIAL SHALL BE PREPARED WITH A PRIME COAT AND THEN PAINTED, COLOR BY ARCHITECT.
N. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS LISTED IN CALGREEN SECTION 5.504.4.1.
O. COORDINATE ALL NEW OR CHANGING UTILITY SERVICES WITH UTILITY PROVIDER AS SOON AS POSSIBLE. ALL WORK PERFORMED NOT IN ACCORDANCE WITH THE UTILITY COMPANIES REQUIREMENTS PRIOR TO COORDINATING WITH THE UTILITY COMPANY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
P. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, FIXTURE MOUNTING HEIGHTS AND CBC ACCESSIBILITY REQUIREMENTS.
Q. PROVIDE PIPE SLEEVES WHERE PIPES AND TUBING PASS THROUGH WALLS, FLOORS, ROOFS, AND PARTITIONS. FINISH FLUSH AT BOTH ENDS. EXTEND 2 INCHES (50 MM) ABOVE FINISHED FLOORS. PACK SPACE BETWEEN PIPE OR TUBING AND SLEEVE, AND CALK.
R. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINING DISSIMILAR METALS.
S. PLUMBING IDENTIFICATION:
S.1. IDENTIFY PLUMBING EQUIPMENT WITH LAMINATED PLASTIC NAMEPLATES CONFORMING TO ASTM D2709.
S.2. IDENTIFY PIPING WITH PLASTIC ADHESIVE TAPE MARKERS, CONFORMING TO ASME A13.1. INSTALL LABELING ON PIPE AT INTERVALS OF NOT MORE THAN 20 FEET (6 METERS) AND AT LEAST ONCE IN EACH ROOM AND EACH STORY TRAVERSED BY PIPELINE.
T. GENERAL TESTING REQUIREMENTS:
T.1. GAS PIPING: PRESSURE= 60 PSIG / MEDIUM= AIR AND SOAP / DURATION= 8 HOURS.

PLUMBING LEGEND

SYMBOL	ITEM	ABBR.
WC-1	FIXTURE DESIGNATION - UNIT ABBREVIATION - NUMBER	
1 P-1	DETAIL DESIGNATION - DETAIL NUMBER - SHEET NO. WHERE SHOWN	
-CW-	DOMESTIC COLD WATER	CW
-HW-	DOMESTIC HOT WATER	HW
	DOMESTIC HOT WATER SUPPLY	HWS
	DOMESTIC HOT WATER RETURN	HWR
-V-	VENT	V
G	GAS	G
MG	MEDIUM PRESSURE GAS	MG
LPG	LIQUID PROPANE GAS	LPG
S	SEWER	S
GW	GREASE WASTE	GW
OS	OIL/SAND WASTE	OS
AW	ACID WASTE	AW
SD	STORM DRAIN	SD
RD	ROOF DRAIN	RD
OD	OVERFLOW DRAIN	OD
C	CONDENSATE DRAIN	C
SCD	SECONDARY DRAIN	SCD
D	DRAIN	D
T&P	TEMPERATURE & PRESSURE RELIEF	T&P
FS	FIRE SPRINKLER	FS
	PIPE CAP	
	PIPE RISER/DROP	(R)/(D)
	SHUT-OFF VALVE IN BOX	SOV
FCO	FLOOR CLEANOUT	FCO
COTG	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	CLEANOUT	CO
	HOSE BIBB	HB
	OVERFLOW DRAIN OUTLET	
	BALL VALVE	BV
	GATE VALVE	GV
	CHECK VALVE	CHK.V
	MIXING VALVE	TMV
	SHUT-OFF COCK	SOC
	CIRCULATION PUMP	CP
	BALANCING VALVE	BLV
	TRAP PRIMER	TP
	TYPICAL	(TYP)
	VENT THRU ROOF	VTR
	UNDERGROUND	UG
	UNDER FLOOR	UF
	ABOVE CEILING	AB.C.
	TO ABOVE/BELOW	TA/TB
	FROM ABOVE/BELOW	FA/FB
	CONTINUATION	CONT.
	NEW	(N)
	EXISTING	(E)
	POINT OF DIS/CONNECTION	POD/POC

GAS CALCULATIONS

EXISTING BUILDINGS

NATURAL GAS SIZING TABLE

BASED ON 2022 CPC EQUATION 1215.3(2) HIGH PRESSURE (SCHEDULE 40 METALLIC)
INLET PRESS (PSIA)= 2
PRESSURE DROP (PSIA)= 1
PIPE LENGTH (FT)= 30
MAXIMUM LOAD (MBH)= 4,186

PIPE SIZE	PIPE ID	MAX. MBH
1/2	0.622	881
3/4	0.824	1,843
1	1.049	3,474
1-1/4	1.38	7,136
1-1/2	1.61	10,694
2	2.067	20,606
2-1/2	2.469	32,852
3	3.068	58,099
4	4.026	118,558

GAS EQUIPMENT CAPACITIES	
EQUIPMENT	GAS LOAD (MBH)
EXIST BUILDINGS	4,186
TOTAL	4,186

NATURAL GAS SIZING TABLE

BASED ON 2022 CPC EQUATION 1215.3(1) LOW PRESSURE (SCHEDULE 40 METALLIC)
PIPE LENGTH (FT)= 600
MAXIMUM LOAD (MBH)= 4186

PIPE SIZE	PIPE ID	MAX. MBH
1/2	0.622	18
3/4	0.824	39
1	1.049	74
1-1/4	1.38	153
1-1/2	1.61	229
2	2.067	442
2-1/2	2.469	704
3	3.068	1246
4	4.026	2544
6	5.643	6171
8	7.981	15330

GAS EQUIPMENT CAPACITIES	
EQUIPMENT	GAS LOAD (MBH)
EXIST BUILDINGS	4186
TOTAL	4186

NEW GENERATOR

NATURAL GAS SIZING TABLE

BASED ON 2022 CPC EQUATION 1215.3(2) HIGH PRESSURE (SCHEDULE 40 METALLIC)
INLET PRESS (PSIA)= 2
PRESSURE DROP (PSIA)= 1
PIPE LENGTH (FT)= 300
MAXIMUM LOAD (MBH)= 4,820

PIPE SIZE	PIPE ID	MAX. MBH
1/2	0.622	253
3/4	0.824	530
1	1.049	1,000
1-1/4	1.38	2,054
1-1/2	1.61	3,079
2	2.067	5,933
2-1/2	2.469	9,459
3	3.068	16,729
4	4.026	34,138

GAS EQUIPMENT CAPACITIES	
EQUIPMENT	GAS LOAD (MBH)
NEW GENERATOR	4,620
TOTAL	4,820

NATURAL GAS SIZING TABLE

BASED ON 2022 CPC EQUATION 1215.3(1) LOW PRESSURE (SCHEDULE 40 METALLIC)
PIPE LENGTH (FT)= 30
MAXIMUM LOAD (MBH)= 4620

PIPE SIZE	PIPE ID	MAX. MBH
1/2	0.622	95
3/4	0.824	199
1	1.049	376
1-1/4	1.38	773
1-1/2	1.61	1159
2	2.067	2233
2-1/2	2.469	3561
3	3.068	6298
4	4.026	12852
6	5.643	31178
8	7.981	77446

GAS EQUIPMENT CAPACITIES	
EQUIPMENT	GAS LOAD (MBH)
NEW GENERATOR	4620
TOTAL	4620

PLUMBING SHEET INDEX

SHEET NUMBER	SHEET NAME
P0.1	PLUMBING NOTES, LEGEND & DETAILS
P1.1	PLUMBING SITE PLAN
P1.2	PLUMBING ENLARGED SITE PLAN

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

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NO.	REMARKS	DATE

DRAWING STATUS — DATE
- ○ DSA PLAN CHECK
- ○ DSA BACK CHECK
- ○ BIDDING
- ○ CONSTRUCTION

KEY PLAN

HUMBOLDT COUNTY OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

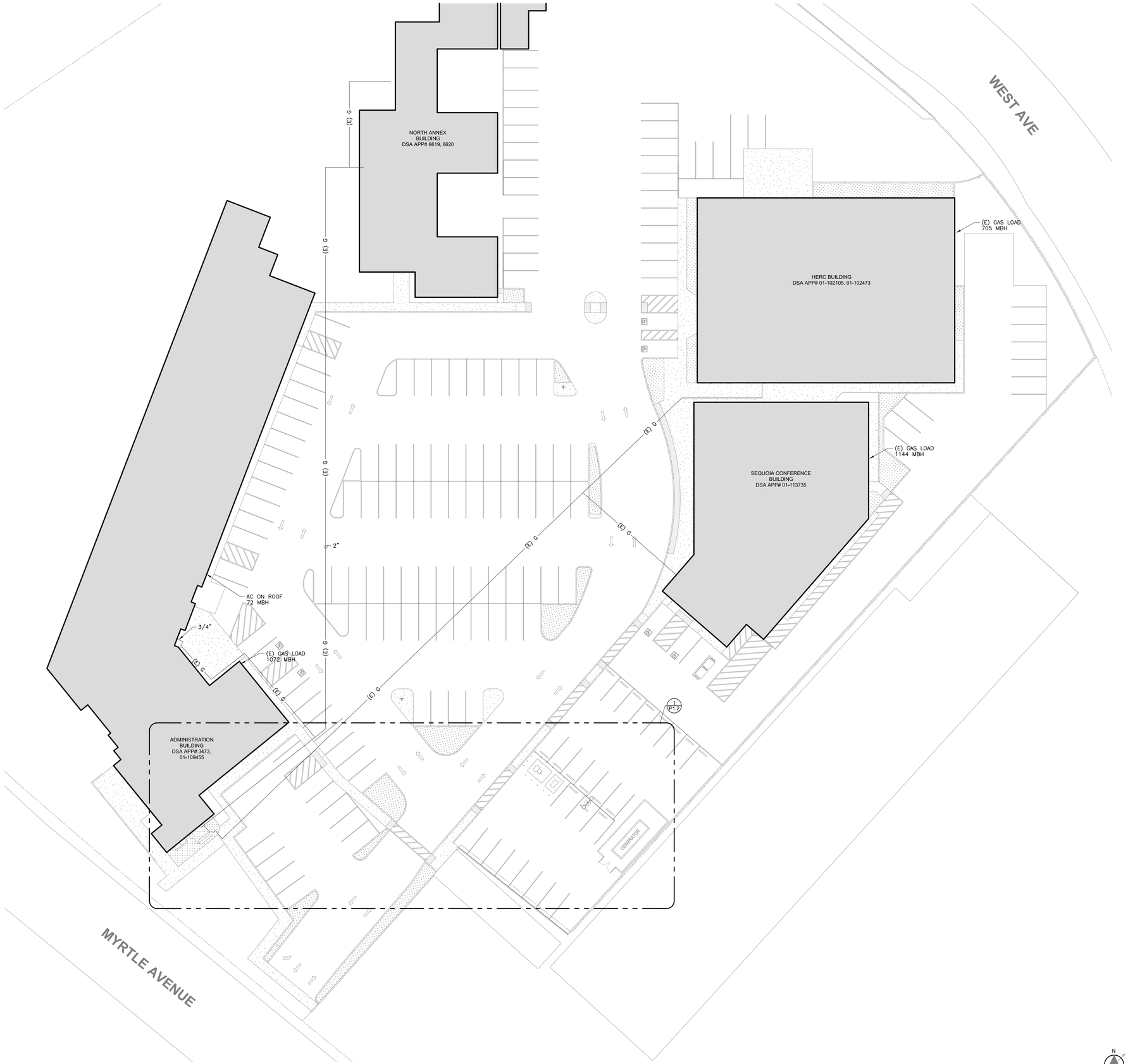
CONSTRUCTION DESIGN

HUMBOLDT COUNTY OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

PLUMBING NOTES, LEGEND AND DETAILS

Date 01/09/2025
Project Number 23051
Application Number XX-XXXXXX
Drawing Number P0.1
Drawn LPCE
Checked LPCE

PRINT DATE:
FILE PATH:



KEYNOTES

NUMBER	NOTE

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KEY PLAN

HUMBOLDT COUNTY
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CONSTRUCTION DESIGN

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PLUMBING
SITE PLAN

Date 01/09/2025	Project Number 23051
Application Number XX-XXXXXX	Drawing Number P1.1
Drawn LPCE	Checked LPCE

PLUMBING - OVERALL SITE PLAN 1" = 20'-0" 1

PRINT DATE:
FILE PATH:



KEYNOTES

NUMBER	NOTE
1	CONTRACTOR TO COORDINATE WITH PG&E FOR GAS METER REPLACEMENT FOR ADDED LOAD. SYSTEM TO BE REVISED TO 2 PSI ELEVATED PRESSURE.
2	PROVIDE (N) GAS PRESSURE REGULATOR AND CONNECT (E) GAS PIPING TO (N) REGULATOR.
3	(N) 2" MG (D) TO UNDERGROUND WITH SOC IN DROP.

GENERAL NOTES

A. DRAWINGS REPRESENT DIAGRAMMATIC REPRESENTATION OF SCOPE OF WORK ANTICIPATED. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT OR DISCREPANCIES.

B. CONTRACTOR SHALL COORDINATE GAS METER REPLACEMENT WITH PG&E.

N

PLUMBING - ENLARGED SITE PLAN | 1" = 10'-0" | 1

PRINT DATE:
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NO.	REMARKS	DATE

DRAWING STATUS

	DATE
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○ CONSTRUCTION	

KEY PLAN

HUMBOLDT COUNTY
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EUREKA, CA 95501

CONSTRUCTION DESIGN

HUMBOLDT COUNTY
OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

PLUMBING
ENLARGED SITE PLAN

Date	Project Number
01/09/2025	23051
Application Number	Drawing Number
XX-XXXXXX	P1.2
Drawn: LPCE	Checked: LPCE

GENERAL NOTES

ALL GENERAL NOTES SHOWN BELOW ARE NOT NECESSARILY USED ON PLANS IF NOT REQUIRED.

1. THESE GENERAL NOTES ARE INTENDED TO ASSIST THE CONTRACTOR IN THE EXECUTION OF THE ELECTRICAL WORK AND TO BE INCLUDED IN CONJUNCTION WITH THE CONTRACT DOCUMENT DRAWINGS AND SPECIFICATION REQUIREMENTS. SOME OF THE GENERAL NOTES ARE EXCERPTS FROM THE SPECIFICATION.
2. PROCURE PERMITS AND LICENSES REQUIRED. PAY ALL NECESSARY FEES AND ARRANGE FOR INSPECTIONS REQUIRED BY LOCAL CODES AND ORDINANCES AND UTILITY COMPANIES.
3. COORDINATE ALL ELECTRICAL SERVICES WITH THE RESPECTIVE UTILITY COMPANIES AND PROVIDE ALL TRENCHING, CONDUITS, WIRING, METER FACILITIES AND OUTLETS REQUIRED BY THEM.
4. WORKMANSHIP SHALL BE OF THE HIGHEST GRADE. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING WITH THE ACCEPTANCE OF THE ARCHITECT.
5. INSTALL ALL EQUIPMENT, CONDUITS, OUTLETS, AND FIXTURES IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF ALL APPLICABLE CODES (CEC, STATE, COUNTY AND CITY).
6. DO NOT SCALE PLANS FOR FIXTURES, DEVICES, OR APPLIANCE LOCATIONS. USE FIGURED DIMENSIONS IF GIVEN OR CHECK MECHANICAL AND ARCHITECTURAL PLANS. ALSO REFER TO ACTUAL ON-SITE CONDITIONS.
7. ALL MATERIAL AND EQUIPMENT IS TO BE LISTED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND CEC 110.3.
8. ALL ELECTRICAL DEVICES AND EQUIPMENT, FIXTURES, CONDUITS AND WIRING SHOWN ON THESE PLANS ARE NEW, UNLESS OTHERWISE NOTED.
9. OUTLET BOXES INSTALLED IN FIRE WALLS SHALL BE ONE-PIECE STEEL AND INSTALLED IN SEPARATE (STAGGERED) STUD PENETRATIONS, MINIMUM 24 INCHES HORIZONTAL SEPARATION. FIRE WALLS SHALL BE MADE IN ACCORDANCE WITH CBC AND ELECTRICAL CODES.
10. THE FINAL LOCATION OF ALL OUTLETS SHALL BE VERIFIED WITH THE ARCHITECT AND/OR OWNER AT TIME OF CONSTRUCTION.
11. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE WEATHER-PROTECTED.
12. CONTRACTOR SHALL VERIFY THAT ALL LIGHTING FIXTURES, CEILING TRIMS, AND FRAMES ARE COMPATIBLE WITH CEILING SYSTEM INSTALLED.
13. CONTRACTOR SHALL COORDINATE LIGHT FIXTURE LOCATIONS AND INSTALLATIONS WITH THE MECHANICAL CONTRACTOR. MAINTAIN REQUIRED CLEARANCES (MINIMUM 3 INCHES) BETWEEN THE LIGHT FIXTURES AND MECHANICAL DUCTS OR EQUIPMENT FOR PROPER OPERATION, INSTALLATION AND/OR REMOVAL OF FIXTURES.
14. BEFORE SUBMITTING FOR ARCHITECT'S REVIEW AND PLACING ORDER FOR THE LIGHT FIXTURES, THE CONTRACTOR SHALL VERIFY THE VOLTAGE OF ALL THE LIGHTING FIXTURES TO MATCH THE VOLTAGE OF THE SERVICE PANEL, WHETHER THE VOLTAGE FOR THE LIGHT FIXTURES ARE SHOWN ON THE PLAN OR NOT.
15. PLACEMENT AND CIRCUITING OF EXIT SIGNS AND EGRESS LIGHTING SHALL COMPLY WITH CBC REQUIREMENTS.
16. ALL CONDUIT SHALL BE ROUTED CONCEALED UNLESS NOTED ON PLAN OR ACCEPTED BY THE ARCHITECT.
17. PROVIDE ALL NECESSARY SLEEVES AND INSERTS FOR ALL WORK PASSING THROUGH OR ATTACHING TO WALLS, FLOORS, OR CEILINGS.
18. ALL WIRING SHALL BE INSTALLED IN RIGID METALLIC CONDUIT, UNLESS OTHERWISE NOTED. CONDUITS INSTALLED CONCEALED IN WALL AND CEILING MAY BE EMT WITH STEEL COMPRESSION TYPE FITTINGS. PVC WHERE INSTALLED UNDERGROUND AND/OR UNDER SLAB. ALL EXPOSED CONDUITS SHALL BE RIGID STEEL CONDUITS WITH THREADED TYPE FITTINGS. INSTALL ALL CONDUITS IN ACCORDANCE WITH CECA STANDARDS OF INSTALLATION.
19. ELECTRICAL NON-METALLIC TUBING (ENT) AND MC CABLE ARE NOT PERMITTED TO BE USED FOR THIS PROJECT, NO EXCEPTIONS.
20. WHERE EXISTING CONDUITS, CONCEALED OR EXPOSED, AND (WIREMOLD) SURFACE RACEWAY IS NOT IN PLACE AS SHOWN ON PLANS, PROVIDE NEW CONDUITS AND (WIREMOLD) SURFACE RACEWAY FOR THE NEW WORK. VERIFY EXISTING CONDITION ON SITE AND PROVIDE ALL NECESSARY NEW MATERIAL, APPARATUS, AND WORK THAT ARE REQUIRED TO BE INCLUDED IN THE BID PACKAGE.
21. CONDUCTORS, #8 AND LARGER, SHALL BE STRANDED COPPER WITH THHN/THWN INSULATION, UNLESS OTHERWISE NOTED.
22. PROVIDE WORKING CLEARANCE PER CEC 110.26 FOR SERVICE PANEL, SUBPANELS, MOTOR DISCONNECT SWITCHES, CONTROL SECTIONS. HVAC EQUIPMENT, APPLIANCES, ETC.
23. PROVIDE A WARNING LABEL (SIGN) CLEARLY VISIBLE TO QUALIFIED PERSONS TO COMPLY WITH NEC AND CEC 116.16 OF POTENTIAL ELECTRIC ARC FLASH HAZARDS AT SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS AND MOTOR CONTROL CENTERS THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC SECTION 110.24(A).
24. BUILDING SERVICE AND SUBPANELS TO COMPLY WITH CEC 110.9 AND 110.10 INTERRUPTING RATING AND BRACING. PROVIDE A.I.C. CALCULATIONS FOR SUBPANELS IF INTERRUPTING RATING TO BE USED IS LOWER THAN MAIN SERVICE RATING.
25. ALL APPLIANCES SHALL COMPLY WITH CEC ARTICLE 422. APPLIANCE CONTROL AND PROTECTION PER CEC 422-III; BRANCH CIRCUITS PER 422-II.
26. BUILDING EXPANSION JOINTS MAY OR MAY NOT BE INDICATED ON THE ELECTRICAL DRAWINGS. VERIFY THE LOCATIONS OF ALL APPLICABLE BUILDING EXPANSION JOINTS WITH THE ARCHITECTURAL DRAWINGS. WIRING METHODS ACROSS EXPANSIONS JOINTS SHALL INCLUDE USE OF FLEXIBLE FITTINGS OR OTHER DEVICES AS APPROPRIATE TO EACH APPLICATION. IN NO CASE SHALL CONDUIT CROSS SUCH A JOINT IN BUILDING CONSTRUCTION WITHOUT USE OF THE APPROPRIATE WIRING METHODS.
27. CONTRACTOR SHALL SIZE ALL THE INTERIOR AND EXTERIOR BUILDING PULL BOXES AND UNDERGROUND PULL BOXES PER CEC 314.16 AND COMPLY WITH CEC 314.28 FOR INSTALLATION OF RACEWAYS AND WIRING AS REQUIRED BY CODE, UNLESS OTHERWISE NOTED.
28. WHERE ACCESSIBILITY IS NOT AVAILABLE TO ELECTRICAL OUTLETS, DEVICES AND/OR EQUIPMENT, COORDINATE WITH THE ARCHITECT FOR PROVISIONS TO PROVIDE ACCESSIBILITY TO THEM.
29. CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL DRAWINGS AND PROVIDES ALL CONDUITS AND CONTROL WIRING AND POWER WIRING SHOWN ON THE MECHANICAL DRAWINGS THAT IS NOT SHOWN ON THE ELECTRICAL PLANS.
30. CONTRACTOR SHALL REFER TO THE MECHANICAL DRAWINGS AND COORDINATE FOR THE EQUIPMENT LOCATIONS. COORDINATE ROOF PENETRATION WITH THE MECHANICAL CONTRACTOR FOR MECHANICAL CONNECTIONS. ENTER ROOF MOUNTED UNITS THROUGH EQUIPMENT MOUNTING CURBS WHERE POSSIBLE. VERIFY ON-SITE.
31. PROVIDE CONVENIENCE OUTLET WITHIN 25 FEET OF MECHANICAL EQUIPMENT PER U.M.C. WHERE LOCATED OUTSIDE, PROVIDE WEATHER PROOF AND GFCI CONVENIENCE OUTLET. SECURE ROOF MOUNTED OUTLET TO THE MECHANICAL EQUIPMENT. VERIFY LOCATION IN FIELD WITH THE MECHANICAL CONTRACTOR.
32. VERIFY SINGLE-POINT CONNECTIONS TO ROOF MOUNTED HVAC UNITS WITH MECHANICAL CONTRACTOR ON-SITE PRIOR TO ELECTRICAL ROUGH-IN. PROVIDE DUAL DISCONNECTS IF TWO-POINT CONNECTIONS ARE REQUIRED, WHETHER SHOWN ON PLANS OR NOT.
33. SWITCH DEVICES CONTROLLING MECHANICAL EQUIPMENT SHALL BE SIZE AND TYPE REQUIRED AND SHALL BE SERVED WITH QUANTITY OF WIRES AS REQUIRED. REFER TO DIVISION 23 MECHANICAL PLANS AND SPECIFICATIONS.
34. COORDINATE THE HVAC EQUIPMENT FOR FUSES REQUIRE. WHERE FUSES ARE REQUIRED, VERIFY FUSE SIZE ON-SITE AND PROVIDE FOR HVAC EQUIPMENT PER UNIT NAMEPLATE SPECIFICATIONS.
35. MOTOR DISCONNECT SWITCHES SHALL COMPLY WITH CEC 430-IX AND 440.II.
36. MOTOR STARTERS FOR HVAC EQUIPMENT ARE PROVIDED BY MECHANICAL CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.
37. ALL CONNECTIONS FROM THE DISCONNECT SWITCHES TO HVAC UNITS SHALL BE COPPER CONDUCTORS. MOTOR DISCONNECT SWITCHES SHALL COMPLY WITH CEC 430-VII, 430-VIII, AND 440-II.
38. VERIFY LOCATION AND HEIGHT OF ALL MECHANICAL OR FIXTURE EQUIPMENT OUTLETS WITH SUPPLIER PRIOR TO ANY ROUGH-IN WORK. PROVIDE ALL RUNS AND CONNECTIONS TO EQUIPMENT.
39. ALL TERMINATION PROVISIONS OF EQUIPMENT, INCLUDING CIRCUITS RATED 100 AMPERES OR LESS, SHALL BE RATED AT 60 DEGREE, CENTIGRADE PER CEC 110.14(c).
40. ALL LIGHT FIXTURES INSTALLED OVER FOOD HANDLING OR FOOD PREPARATION AREAS, OPEN FOOD STORAGE AND UTENSIL WASHING AREAS SHALL BE OF SHATTERPROOF CONSTRUCTION OR SHALL BE PROTECTED WITH SHATTERPROOF SHIELDS AND SHALL BE READILY CLEANABLE.
41. ALL CONDUITS SHALL BE CONCEALED BELOW SLAB, IN WALLS AND/OR ABOVE CEILINGS EXCEPT IN ELECTRICAL ROOMS, MECHANICAL ROOMS, AND OTHER SIMILAR UTILITY ROOMS AS APPROVED BY THE ARCHITECT. NO CONDUIT SHALL BE EXPOSED ON EXTERIOR BUILDING SURFACES WITHOUT PRIOR APPROVAL FROM THE ARCHITECT.
42. PROVIDE A CODE SIZED GROUND CONDUCTOR IN ALL CONDUITS WHETHER INDICATED ON PLAN OR NOT.

GENERAL NOTES (CONTINUE)

ALL GENERAL NOTES SHOWN BELOW ARE NOT NECESSARILY USED ON PLANS IF NOT REQUIRED.

43. ALL EQUIPMENT AND SYSTEMS CALLED FOR SHALL BE INSTALLED BY EXPERIENCED CRAFTSMEN AND ALL INCLUDE ALL NECESSARY DEVICES, APPURTENANCE AND EQUIPMENT FOR A COMPLETE WORKABLE YSTEM. ALL SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED AND FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR TIME PERIODS OF GUARANTEE AND SPECIFICALLY CALLED FOR OR FOR A MINIMUM TIME OF ONE YEAR WHERE NO LIMIT IS SET FORTH.
44. CONTRACTOR TO MAKE ALL FINAL CONNECTIONS AND TO PROVIDE A COMPLETE AND WORKING ELECTRICAL SYSTEM.
45. FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN SPECIFIC INSTALLATION OR CONNECTION DETAILS ARE NOT INDICATE OR SPECIFIED ON TEH CONTRACT DOCUMENTS.
46. FURNISH AND INSTALL ALL NECESSARY SLEEVES AND INSERTS FOR ALL WORK PASSING THROUGH OR ATTACHING TO WALLS, FLOORS, OR CEILINGS.
47. ALL WIRING SHALL BE COPPER AND INSTALL IN CONDUITS.
48. CONTRACTOR TO FURNISH FOUR SETS OF ELECTRICAL EQUIPMENT SUBMITTALS TO THE ARCHITECT FOR ACCEPTANCE.
49. AT COMPLETION OF THE JOB, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT AND SHALL INSTRUCT OWNER'S MAINTENANCE PERSONNEL ON ALL OPERATING PROCEDURES. THE CONTRACTOR SHALL ALSO PROVIDE CLEARLY MARKED REFERENCE DRAWINGS NOTING LOCATIONS OF FUTURE STUB OUTS AND CONCRETE PAVING SLEEVES.
50. ALL EQUIPMENT AND SYSTEMS CALLED FOR SHALL BE INSTALLED BY EXPERIENCED CRAFTSMEN AND SHALL INCLUDE ALL NECESSARY DEVICES, APPURTENANCE AND EQUIPMENT FOR A COMPLETE WORKABLE SYSTEM. ALL SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED AND FEE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR TIME PERIODS OF GUARANTEE AND SPECIFICALLY CALLED FOR OR FOR A MINIMUM TIME OF ONE YEAR WHERE NO LIMIT IS SET FORTH.
51. CONTRACTOR TO MAKE ALL FINAL CONNECTIONS AND TO PROVIDE A COMPLETE AND WORKING ELECTRICAL SYSTEM.

UNDERGROUND TRENCHING NOTES

1. UNDERGROUND TRENCHING:

A. USE EXTREME CAUTION WHEN DIGGING TO AVOID BURIED ELECTRICAL CABLES. CALL UNDERGROUND SERVICE ALERT (U.S.A.) 800-227-2600, 48 HOURS BEFORE DIGGING.

B. BEFORE START OF ANY UNDERGROUND TRENCHING FOR CONDUIT RUNS, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL PLANS OF OTHER TRADES (ARCHITECTURAL, CIVIL, LANDSCAPE), AND SITE CONDITIONS TO AVOID CONFLICT.

C. TRENCHING AND BACKFILLING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. COORDINATE WITH CIVIL, LANDSCAPE, AND ARCHITECTURAL SITE PLAN PRIOR TO THE TRENCHING, ETC. AND THE INSTALLATION OF THE ELECTRICAL SYSTEM.

D. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC, UL LISTED FOR DIRECT BURIAL, AND TERMINATED WITH FACTORY END BELL FITTINGS. ALL ELBOWS, BENDS AND TURNS SHALL TRANSITIONING TO GRADE SHALL BE INSTALLED USING PER MANUFACTURED 40-MIL PVC COATED GALVANIZED STEEL ELBOWS AND OFFSETS.

E. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED TO COMPLY WITH CEC 230.8.

F. PROVIDE 24" MINIMUM COVERAGE FOR UNDERGROUND CONDUITS, UNLESS OTHERWISE NOTED. THE EXCEPTION IS FOR UTILITY POWER COMPANY SERVICE CONDUITS WHICH SHALL HAVE A 36" MINIMUM BURIAL DEPTH AND BE INSTALLED WITH A RED OXIDE CONCRETE CAP. MAINTAIN 12" MINIMUM SEPARATION BETWEEN THE POWER AND LOW VOLTAGE SYSTEM UNDERGROUND CONDUITS. TRENCHES SHALL ALL BE INSTALLED WITH A RED POLYETHYLENE WARNING RIBBON LABELED "ELECTRICAL", LOCATED 8" BELOW GRADE IN THE TRENCH.

G. PROVIDE UNDERGROUND TRACER WHERE NON-METAL CONDUITS ARE INSTALLED.

H. PROVIDE "PARTEX" IDENTIFICATION TAGS TO IDENTIFY UNDERGROUND CIRCUITS.

I. ALL UNDERGROUND SPLICES SHALL BE MADE WATERPROOF BY PROVIDING WITH "SPLICE-KOTE" SPLICE KITS OR OTHER ACCEPTED METHODS. ALL FUSE HOLDERS SHALL BE WATERTIGHT.

J. ALL UNDERGROUND RACEWAYS SHALL BE PROVIDED WITH A #8 AWG MINIMUM SIZE COPPER EQUIPMENT GROUNDING CONDUCTOR, WHETHER SHOWN ON PLAN OR NOT, UNLESS OTHERWISE NOTED.

K. THE CONTRACTOR SHALL BE RESPONSIBLE UNDER THIS CONTRACT TO REPAIR AND REPLACE ANY AND ALL DAMAGES TO EXISTING PCC (PORTLAND CEMENT CONCRETE) WALKS, AC PAVING, UTILITIES, TREES, TURF, PLANTED AREAS, AND OTHER FACILITIES RESULTING FROM THIS PROJECT. WHEN CUTTING OR TRENCHING THROUGH EXISTING CONCRETE SIDEWALKS, DRIVEWAYS, AND WALKWAYS, THE CONTRACTOR SHALL BE REQUIRED TO COMPLETELY REPLACE ENTIRE SECTIONS OF CONCRETE PANELS FROM SCORE MARK TO SCORE MARK AFFECTED BY THE CONSTRUCTION WORK. ALL SIDEWALKS, DRIVEWAYS, AND WALKWAYS SHALL BE REPLACED TO MATCH ADJACENT CONDITION AND AS DIRECTED BY THE ARCHITECT.

ELECTRICAL ABBREVIATIONS

ABBREV	DESCRIPTIONS	ABBREV	DESCRIPTIONS
A, AMP	AMPERES	MAX	MAXIMUM
AC	ABOVE COUNTER	MC	METAL-CLAD CABLE
AF/AT	AMPERE FRAME / AMPERE TRIP	MCA	MINIMUM CIRCUIT AMPACITY
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
AFG	ABOVE FINISHED GRADE	MGB	MAIN GROUND BAR
AHJ	AUTHORITY HAVING JURISDICTION	MG SET	MOTOR-GENERATOR SET
AIC	AMPERE INTERRUPTING CAPACITY	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MOCP	MAXIMUM OVERCURRENT PROTECTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MPOE	MINIMUM POINT OF ENTRY
AS/AF	AMPERE SWITCH / AMPERE FUSE	MS	MOTION SENSOR
AT	AMPERE TRIP RATING OF BREAKER	MSB	MAIN SWITCHBOARD
AUTO	AUTOMATIC	MTD	MOUNTED
ATS	AUTOMATIC TRANSFER SWITCH	MTS	MANUAL TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE	MV	MEDIUM VOLTAGE CABLE
BMS	BUILDING MANAGEMENT SYSTEM	MW	MEGAWATTS
C, CDT	CONDUIT	(N)	NEW
CATV	COMMUNITY ANTENNA TELEVISION	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
CEC	CALIFORNIA ELECTRICAL CODE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CFL	COMPACT FLUORESCENT	NIC	NOT IN CONTRACT
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	NL	NIGHT LIGHT
CKT	CIRCUIT	NRTL	NATIONALLY RECOGNIZED TESTING LABORATORIES
cmil	CIRCULAR MIL	NTS	NOT TO SCALE
CO	CONDUIT ONLY w/PULL STRING	OC	ON CENTER
CSFM	CALIFORNIA STATE FIRE MARSHALL	OCPD	OVERCURRENT PROTECTIVE DEVICE
CT	CURRENT TRANSFORMER	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CU	COPPER	OFOI	OWNER FURNISHED, OWNER INSTALLED
DET	DETAIL	PH, P	PHASE OR POLE
DISC	DISCONNECT	PB	PULL BOX
DIST	DISTRIBUTION	PF	POWER FACTOR
DSA	DIVISION OF THE STATE ARCHITECT	PFB	PROVIDE FOR FUTURE BREAKER
DWG	DRAWING	PIV	POST INDICATOR VALVE
EC	ELECTRICAL CONTRACTOR	PLC	PROGRAMMABLE LOGIC CONTROLLERS
EGC	EQUIPMENT GROUNDING CONDUCTOR	PNL	PANEL
ELEV, EL	ELEVATION	PoE	POWER OVER INTERNET
EM, EMERG	EMERGENCY	PV	PHOTOVOLTAICS
EMT	ELECTRICAL METALLIC TUBING	PVC	POLYVINYL CHLORIDE
ENT	ELECTRICAL NONMETALLIC TUBING	PWR	POWER
EOL	END OF LINE RESISTOR	(R)	RELOCATED
EOR	ENGINEER OF RECORD	RCP	REFLECTED CEILING PLAN
EPO	EMERGENCY POWER OFF	REC, RECPT	RECEPTACLE
EQPT	EQUIPMENT	REQD	REQUIRED
EV	ELECTRIC VEHICLE	RGSC	RIGID GALVANIZED STEEL CONDUIT
EVSE	ELECTRIC VEHICLE SUPPLY EQUIPMENT	RMC	RIGID METAL CONDUIT
EXH	EXHAUST	RMS	ROOT-MEAN-SQUARE
(E)	EXISTING	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
(F)	FUTURE	SCR	SILICON CONTROLLED RECTIFIER
FACP	FIRE ALARM CONTROL PANEL	SHLD	SHIELDED
FBO	FURNISHED BY OTHERS	SPD	SURGE-PROTECTIVE DEVICE
FF	FINISHED FLOOR	SPECS	SPECIFICATIONS
FG	FINISHED GRADE	SW	SWITCH
FLA	FULL LOAD AMPS	T, XFMR	TRANSFORMER
FLEX	FLEXIBLE	TEMP	TEMPORARY
FLUOR	FLUORESCENT	THHN	THERMOPLASTIC, HEAT RESISTANT CABLE, NYLON JACKET OUTER SHEATH
FMC	FLEXIBLE METAL CONDUIT		
FMT	FLEXIBLE METAL TUBING	THWN	THERMOPLASTIC, HEAT AND MOISTURE RESISTANT CABLE, NYLON JACKET OUTER SHEATH
GEC	GROUNDING ELECTRODE CONDUCTOR		
GFCI	GROUND-FAULT CURRENT INTERRUPTER	TR	TAMPER-RESISTANT
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT	TS	TAMPER SWITCH
GND	GROUND	TSTAT	THERMOSTAT
HID	HIGH INTENSITY DISCHARGE	TYP	TYPICAL
HP	HORSEPOWER	UG	UNDERGROUND
HVAC	HEATING, VENTILATION & AIR CONDITIONING	UGPS	UNDERGROUND PULL SECTION
Hz	HERTZ (cycle per second)	UL	UNDERWRITERS LABORATORIES
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS	UNO	UNLESS NOTED OTHERWISE
		UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	USB	UNIVERSAL SERIAL BUS
IMC	INTERMEDIATE METAL CONDUIT	VFD	VARIABLE FREQUENCY DRIVE
ISC, SC	SHORT CIRCUIT	V	VOLTS
ISOL	ISOLATED	VA	VOLT-AMPERE
JBOX	JUNCTION BOX	Vac	VOLTS ALTERNATING CURRENT
kcmil	ONE THOUSAND CIRCULAR MILS	Vdc	VOLTS DIRECT CURRENT
kV	KILOVOLTS	VNEM	VIRTUAL NET ENERGY METERING
kW	KILOWATTS	W	WATTS
kVA	KILOVOLT-AMPERES	W-hr	WATT-HOUR
LED	LIGHT-EMITTING DIODE	w/	WITH
LCP	LIGHTING CONTROL PANEL	WP	WEATHERPROOF
LPG	LIQUEFIED PETROLEUM GAS	WPL	WEATHERPROOF LOCKING
LRC	LOCKED-ROTOR CURRENT	WPU	WEATHERPROOF WHILE IN USE
LSIG	LONG-TIME, SHORT-TIME, INSTANTANEOUS & EQUIPMENT GROUND-FAULT PROTECTION	WR	WEATHER RESISTANT
		(X)	REMOVE OR DEMO
LTG	LIGHTING		

ELECTRICAL SCOPE DRAWINGS

THESE ELECTRICAL DRAWINGS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ELECTRICAL DESIGN CONCEPT, MAJOR ELECTRICAL ELEMENTS, AND THE TYPE OF ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS, THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS. ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED, THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

THE PROJECT CONSISTS OF ADDING A NEW OUTDOOR NATURAL GAS GENERATOR TO PROVIDE 100% STANDBY EMERGENCY POWER TO THE EXISTING OUTDOOR MAIN SWITCHBOARD IN THE EVENT THE UTILITY COMPANY NORMAL POWER SHUT DOWN.

APPLICABLE CODES AND STANDARDS

- "2022 CALIFORNIA BUILDING CODE" (CBC).
- "2022 CALIFORNIA ELECTRICAL CODE" (CEC).
- CITY OR COUNTY ELECTRICAL CODE AS APPLICABLE.
- "2022 CALIFORNIA ENERGY CODE" (TITLE 24 – PART 6).
- "2022 CALIFORNIA GREEN BUILDING STANDARDS CODE" – CALGreen (TITLE 24 – PART 11).
- ANY ADDITIONAL CODES EFFECTIVE AT THE JOB SITE.

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET TITLE
E0.1	ELECTRICAL ABBREVIATIONS, SHEET INDEX AND NOTES
E0.2	ELECTRICAL SYMBOL LEGEND
E1.1	ELECTRICAL OVERALL SITE PLAN
E1.2	ELECTRICAL ENLARGED SITE PLAN
E2.1	ELECTRICAL ONE LINE DIAGRAM AND DETAILS

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

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GENERAL NOTES

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

DATE
- ○ DSA PLAN CHECK
- ○ DSA BACK CHECK
- ○ BIDDING
- ○ CONSTRUCTION

KEY PLAN

HUMBOLDT COUNTY
OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

CONSTRUCTION DESIGN

HUMBOLDT COUNTY
OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

ELECTRICAL ABBREVIATIONS AND NOTES

Date	Project Number
01/09/2025	23051
Application Number	Drawing Number
XX-XXXXXX	E0.1
Drawn / Checked	
LPCE / LPCE	

PRINT DATE:
FILE PATH:

ELECTRICAL SYMBOL LEGEND

ALL SYMBOLS SHOWN IN THIS LEGEND ARE NOT NECESSARILY USED ON PLANS IF NOT REQUIRED.

SYMBOL	DESCRIPTION
	POWER
	MAIN SWITCHBOARD OR DISTRIBUTION BOARD, PAD OR FLOOR MOUNTED AS NOTED.
	RECESSED MOUNTED LIGHTING OR DISTRIBUTION PANEL
	SURFACE MOUNTED LIGHTING OR DISTRIBUTION PANEL
	RECESSED TERMINAL CABINET WITH 3/4"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UNO.
	SURFACE MOUNTED TERMINAL CABINET WITH 3/4"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UNO.
T	DISTRIBUTION TRANSFORMER, MOUNTING AND SIZE AS NOTED
	NON-FUSED DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH; SIZE DISCONNECT AND FUSES PER UNIT LABEL
	MOTOR STARTER/CONTROLLER
	COMBINATION CIRCUIT BREAKER DISCONNECT/MOTOR STARTER
	COMBINATION FUSIBLE DISCONNECT/MOTOR CONTROLLER; PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS. N.F. INDICATES NON-FUSED
	POWER POINT OF CONNECTION
	DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO. SPLIT-WIRED CIRCUIT, TOP RECEPTACLE SWITCHED CONTROLLED.
A	DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO. SUBSCRIPT TEXT WHERE OCCURS, SEE RECEPTACLE SUBSCRIPT LEGEND BELOW.
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]
	ISOLATED GROUND DUPLEX RECEPTACLE, 20A, 125V @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI DUPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]
	ISOLATED GROUND GFCI DUPLEX RECEPTACLE 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED GFCI DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	DOUBLE DUPLEX MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]
	ISOLATED GROUNDED DOUBLE DUPLEX RECEPTACLE 20A, 125V @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO
	GFCI DOUBLE DUPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]
	ISOLATED GROUND GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.
	SPECIAL RECEPTACLE OUTLET, SIZE AND NEMA CONFIGURATION AS NOTED, MOUNTED @ +16" TO BOTTOM OF BOX, UNO.
	FLOOR MOUNTED DUPLEX RECEPTACLE, 20A, 125V FLUSH IN FINISHED FLOOR
	FLOOR MOUNTED DOUBLE DUPLEX RECEPTACLE, 20A, 125V FLUSH IN FINISHED FLOOR
	CEILING MOUNTED DUPLEX RECEPTACLE, 20A, 125V
	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE, 20A, 125V
	FLOOR MOUNTED COMBINATION DUPLEX RECEPTACLE AND TELECOM
	FLOOR MOUNTED COMBINATION DOUBLE DUPLEX RECEPTACLE AND TELECOM
	FLOOR MOUNTED COMBINATION POWER AND TELCOM WITH WHIP FOR PARTITION FURNITURE
	POWER AND TELECOM WITH WHIP FOR PARTITION FURNITURE
	WALL MOUNTED JUNCTION BOX – SIZE AS REQUIRED BY CODE
	CEILING JUNCTION BOX – SIZE AS REQUIRED BY CODE
	FLOOR MOUNTED JUNCTION BOX – SIZE AS REQUIRED BY CODE
	PLUGMOLD
	POWER POLE
EV EV	ELECTRIC VEHICLE CHARGING STATION, DUAL PORT & SINGLE PORT
$T	THERMAL OVERLOAD SWITCH
$M	MOTOR RATED SWITCH

RECEPTACLE SUBSCRIPTS (APPLIES TO ALL RECEPTACLES)

C	CONTROLLED/UNCONTROLLED [2]
LC	LOCKING COVER
TR	TAMPER-RESISTANT
U	USB (UNIVERSAL SERIAL BUS)
WP	WEATHERPROOF
WPU	WEATHERPROOF WHILE IN USE

FOOTNOTES:

[1] PROVIDE 44" MAX. TO TOP OF BOX AT AREAS WITH FORWARD ACCESSIBLE APPROACH KNEE CLEARANCE, OR PROVIDE 46" MAX. TO TOP OF BOX AT AREAS WITH PARALLEL ACCESSIBLE APPROACH (PER CBC 11B-308).

[2] FOR DUPLEX RECEPTACLES: ONE HALF IS CONTROLLED, AND ONE HALF IS UNCONTROLLED. PLACE CONTROLLED HALF AT BOTTOM. FOR DOUBLE DUPLEX RECEPTACLES: ONE DUPLEX IS CONTROLLED, AND ONE DUPLEX IS UNCONTROLLED. PLACE CONTROLLED DUPLEX AT RIGHT.

SYMBOL	DESCRIPTION
	LIGHTING
	LED LUMINAIRE – T-BAR LAY-IN
	LED LUMINAIRE – RECESSED IN GYPBOARD
	LED LUMINAIRE – SURFACE
	LED LUMINAIRE – SUSPENDED
	LED STRIP LIGHT – SURFACE OR SUSPENDED
	DOWNLIGHT LUMINAIRE – RECESSED
	WALLWASH LUMINAIRE – RECESSED
	LUMINAIRE – SURFACE
	LUMINAIRE – WALL
	LUMINAIRE – PENDANT
	TRACK LIGHT – SUSPENDED OR SURFACE MOUNTED
	CONTINUOUS LINEAR LED TAPE OR LED COVE LIGHT
	HATCHED LUMINAIRE INDICATES AN EMERGENCY LUMINAIRE CONNECTED TO A EMERGENCY POWER DISTRIBUTION SYSTEM, OR INTEGRAL EMERGENCY BATTERY BACKUP.
	SINGLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION.
	DOUBLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED ON PLANS. (CEILING OR WALL)
	COMBINATION EMERGENCY EXIT SIGN WITH DUAL HEAD LIGHTS WITH EMERGENCY BATTERY BACK-UP.
	BATTERY POWERED EMERGENCY EGRESS LUMINAIRE – SURFACE MOUNTED
	SPOT/FLOOD LUMINAIRE – GROUND MOUNTED. FOR BLDG WALL MOUNTED AS WELL.
	EXTERIOR POLE FIXTURE – SINGLE HEAD
	EXTERIOR POLE FIXTURE – TWIN HEAD
	EXTERIOR PATHWAY POST TOP POLE FIXTURE
	BOLLARD FIXTURE
	STEP LUMINAIRE
	LIGHTING CONTROLS
$	SINGLE POLE TOGGLE SWITCH, 20A, 120-277V @ +46" TO TOP OF BOX, UNO [1].
$3	THREE WAY TOGGLE SWITCH 20A,120-277V @ +46" TO TOP OF BOX, UNO. [1].
$a,b,c	SUBSCRIPTS "a,b,c" DESIGNATE THE QUANTITY OF SWITCHES AT EACH LOCATION (TYPICAL FOR ALL SWITCH TYPES) MOUNTED @ +46" TO TOP OF BOX, UNO. [1].
$K	SINGLE POLE KEYED BARREL SWITCH 20A, 120-277 @ +46" TO TOP OF BOX, UNO. [1].
	WALL MOUNTED PUSH BUTTON @ +46" TO TOP OF BOX, UNO. [1].
	WALL MOUNTED DIMMER SWITCH @ +46" TO TOP OF BOX, UNO. [1].
DIM	DIGITAL WALL CONTROL OVERRIDE SWITCH. RUN CABLING BACK TO LIGHTING CONTROL PANEL. MOUNTED @ +46" TO TOP OF BOX, UNO. [1].
OS	WALL MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC, MOUNTED @ +46" TO TOP OF BOX, UNO. [1].
OS	CEILING, OR PENDANT, MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC.
OS	CORNER MOUNT OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC.
PC	PHOTOCONTROL DAYLIGHT SENSOR.
	TAGS & LEADERS
X	KEYNOTE SHOWN ON SAME SHEET
'XX' XX-Xx	LIGHT FIXTURE TAG: FIXTURE TAG 'XX' XX-Xx; CIRCUIT NUMBER; PANEL; SWITCH LEG
X	FEEDER DESIGNATION TAG
X	FOOD SERVICE EQUIPMENT DESIGNATION TAG
X Ex.1	DETAIL DESIGNATION: TOP LETTER INDICATES DETAIL NUMBER, BOTTOM LETTER/NUMBER INDICATES SHEET NUMBER
REF x	MECHANICAL OR PLUMBING EQUIPMENT TAG
	BRACKET
	LEADERS

SYMBOL	DESCRIPTION
	ONE LINE DIAGRAM
(N) PANEL "A"	PANEL IDENTIFICATION
100A 3P	CIRCUIT BREAKER
100A 3P	FUSED SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	GROUND
	UNDERGROUND TERMINATION SERVICE LUG
M	UTILITY METER WITH CURRENT TRANSFORMER COMPARTMENT METER SOCKET
M	CUSTOMER-OWNED MULTIFUNCTION METER WITH CURRENT TRANSFORMERS
	MOTOR
	TRANSFORMER WITH GROUND
	UFER GROUND
	BOND TO COLD WATER PIPE, GAS PIPE, BUILDING STEEL
	AUTOMATIC TRANSFER SWITCH
	NEUTRAL LINK
SPD	SURGE PROTECTIVE DEVICE
	CIRCUITS
	STUB
	CONTINUATION
	CONDUIT RISER – UP
	CONDUIT DROP – DOWN
	CONDUIT CONCEALED IN CEILING OR WALL.
	CONDUIT CONCEALED IN UNDERFLOOR OR UNDERGROUND
	EXISTING CONDUIT TO REMAIN.
	CONDUIT & CONDUCTORS FOR LOW VOLTAGE MOTION SENSORS
	EXISTING CONDUIT & CONDUCTORS TO REMAIN FOR LOW VOLTAGE MOTION SENSORS
	EXISTING CONDUIT AND/OR CONDUCTORS TO BE REMOVED. UNDERGROUND CONDUIT MAY BE ABANDONED IN PLACE.
	HOMERUN TO PANELBOARD OR TERMINAL CABINET WITH CONDUCTORS AS NOTED
#	CIRCUIT CONDUCTORS: LONG TICK INDICATES NEUTRAL CONDUCTOR; SHORT TICKS INDICATES PHASE CONDUCTORS; CURVED TICK INDICATES EQUIPMENT GROUNDING CONDUCTOR; ADDITIONAL CURVED TICK INDICATES ISOLATED GROUNDING CONDUCTOR. NUMBER BY TICKS INDICATES WIRE GAUGE OTHER THAN 12 AWG CU, NO TICKS INDICATE 2 #12 CU, 1 #12 CU GND, IN 1/2" CONDUIT. OTHERS AS NOTED ON PLAN.
	NOTE: PROVIDE A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS FOR THIS PROJECT, WHETHER SHOWN ON PLAN OR NOT.
	FLEXIBLE CONDUIT, 6'-0" LONG MAX. WITH #12 CU GROUND, UNO.

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KEY PLAN

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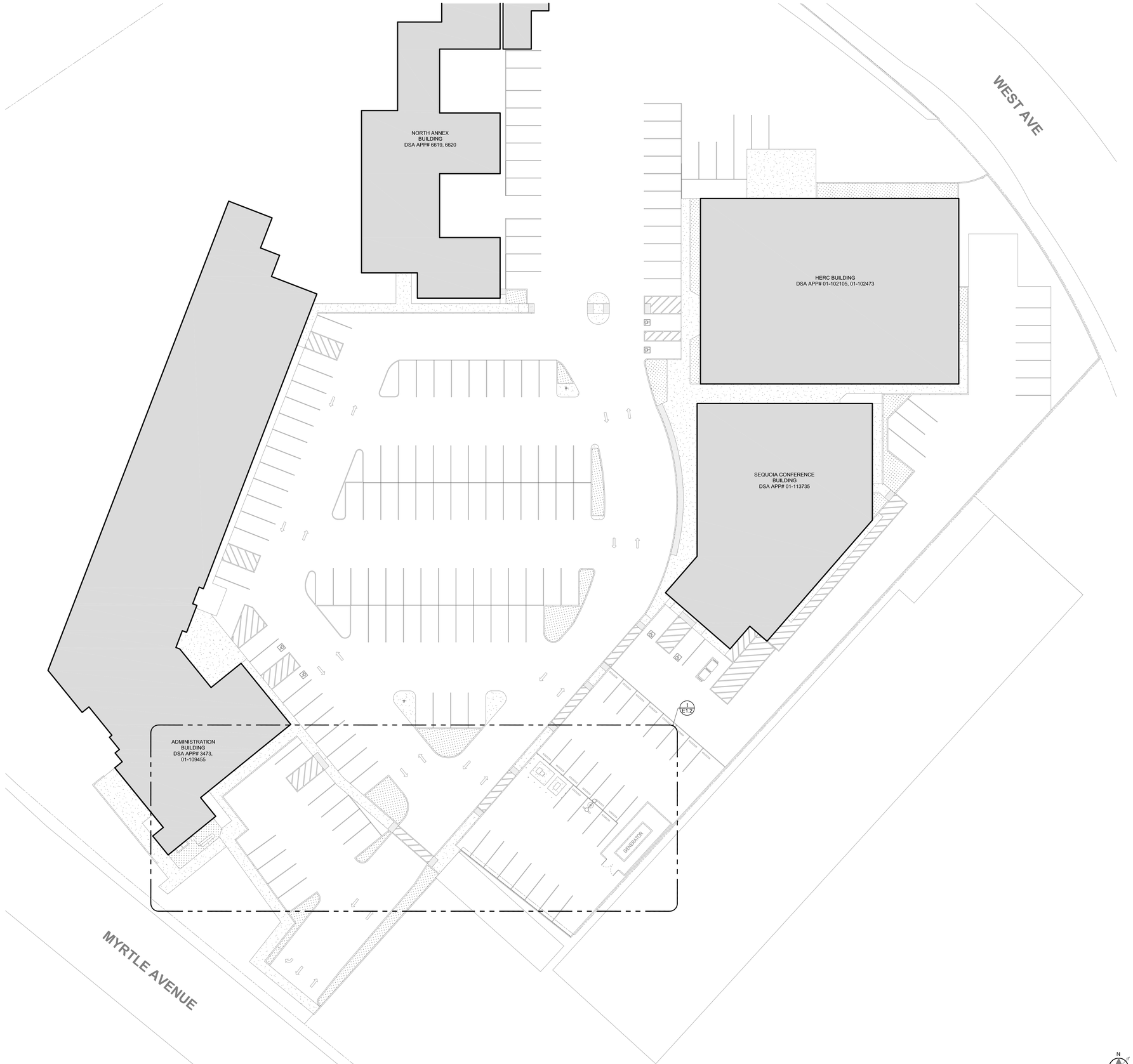
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ELECTRICAL
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01/09/2025	23051
Application Number	Drawing Number
XX-XXXXXX	E0.2
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ELECTRICAL - OVERALL SITE PLAN 1" = 20'-0" 1

PRINT DATE:
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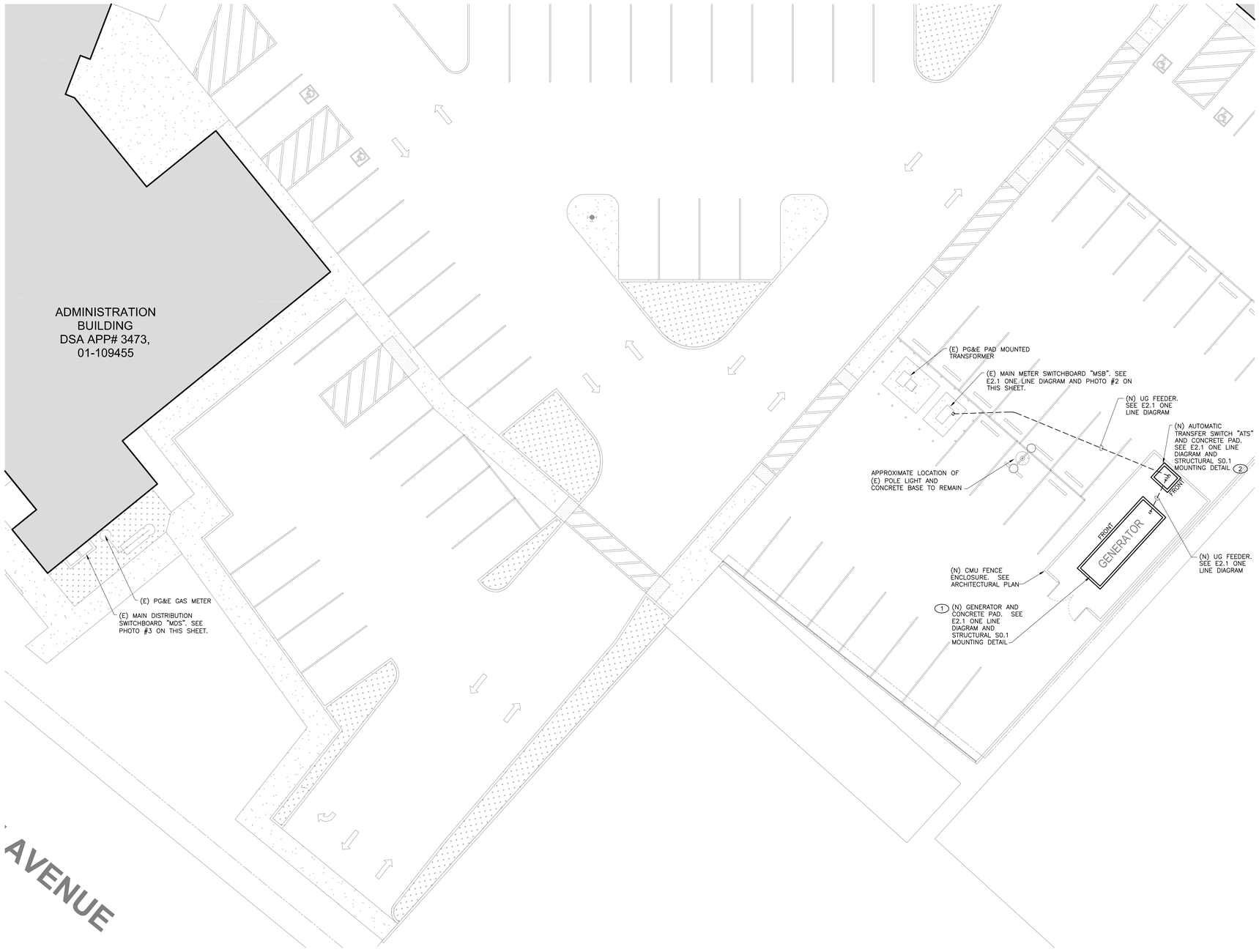
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ELECTRICAL OVERALL SITE PLAN

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ELECTRICAL - ENLARGED SITE PLAN 1" = 10'-0" 1

KEYNOTES

NUMBER	NOTE
1	PROVIDE NEW 400KW RATING, 277/480V, 3 PHASE, NATURAL GAS, WEATHERPROOF STEEL ENCLOSURE WITH LEVEL 1 SOUND ATTENUATION. GENERATOR SHALL BE PROVIDED WITH BATTERY CHARGER AND JACKET HEATER, SECOND FULLY RATED OUTPUT BREAKER, INTELLIGENT CONTROLLER WITH MODBUS CAPABILITY, POWEWR METER OR INTELLIGENT TRANSFER SWITCH AND 3" NATURAL GAS CONNECTIN LOW FUEL PRESSURE OPTION. PROVIDE AND MAINTAIN 5'-0" MINIMUM CLEARANCE AROUND THE GENERATOR. GENERAC IS THE PRODUCT OF CHOICE.
2	PROVIDE FREE STANDING 600A, 3P, 277/480V, 3 PHASE AUTOMATIC TRANSFER SWITCH WITH MAINTENANCE BYPASS IN NEMA 3R ENCLOSURE. PROVIDE AND MAINTAIN 3'-0" MINIMUM CLEARANE AT THE FRONT AND BACK OF THE TRANSFER SWITCH. GENERAC IS THE PRODUCT OF CHOICE.

GENERAL NOTES

A. DRAWINGS REPRESENT DIAGRAMMATIC REPRESENTATION OF SCOPE OF WORK ANTICIPATED. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT OR DISCREPANCIES.

B. CONTRACTOR SHALL PROVIDE ALL CABLING FOR GENERATOR ACCESSORIES, REMOTE ANNUNCIATOR PANEL AND ALL POWER BREAKERS.



(E) MAIN METER SWITCHBOARD "MSB" | NTS | 2



(E) MAIN DISTRIBUTION SWITCHBOARD "MDS" | NTS | 3

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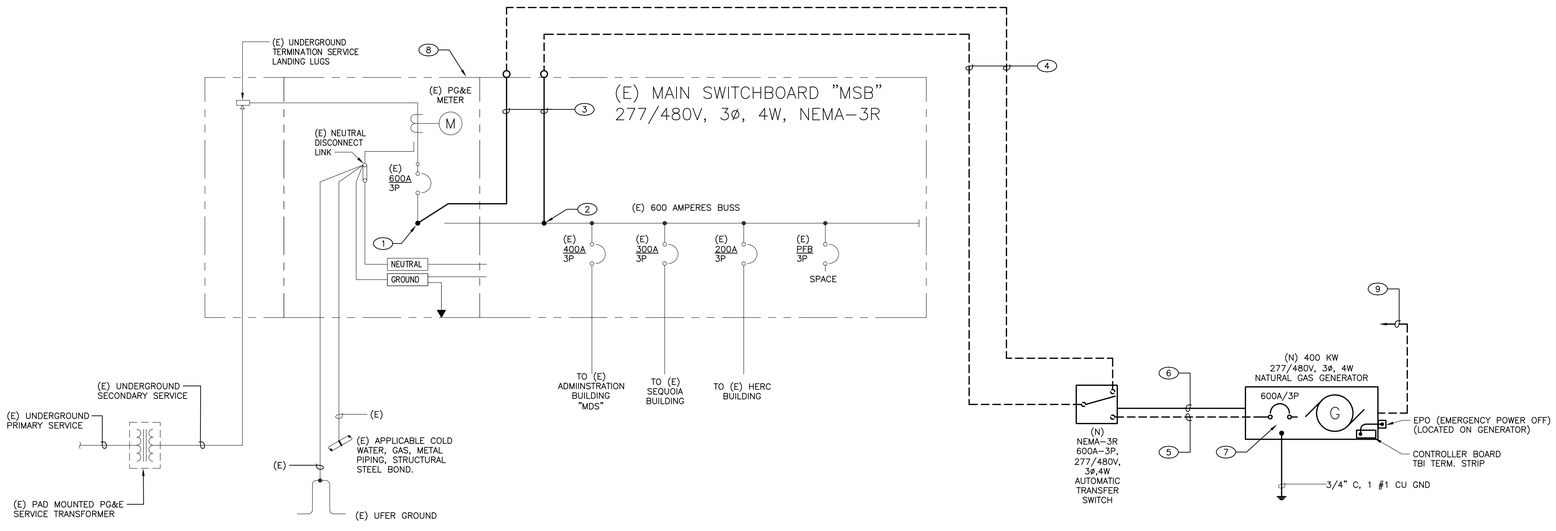
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ELECTRICAL
ENLARGED SITE PLAN

Date	Project Number
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ONE LINE DIAGARM | NTS | 1

KEY NOTES

1. DISCONNECT EXISTING 600A MAIN BREAKER EXISTING BUS BAR. RECONNECT TO NEW AUTOMATIC TRANSFER SWITCH AS SHOWN. PROVIDE BUS MODIFICATION AS REQUIRED TO MAINTAIN MINIMUM SEPARATION DISTANCE FROM NEW CABLING AND EXISTING BUS BAR.
2. PROVIDE BUS TAP FOR CONNECTION TO NEW AUTOMATIC TRANSFER SWITCH AS SHOWN.
3. NEW #350 KCMIL + #1 CU GND.
4. NEW (2) 3"C, EACH WITH (4) #350 KCMIL + #1 CU GND. UNDERGROUND CONDUIT/WIRING TO THE NEW GENERATOR.
5. NEW (2) 3"C, EACH WITH (4) #350 KCMIL + #6 CU GND.
6. NEW 1"CO, CONTROL WIRING PER MANUFACTURER'S RECOMMENDATION.
7. (N) 600A-3P, 480V, CIRCUIT BREAKER LOCATED IN READILY ACCESSIBLE LOCATION AND LOCKABLE IN THE OPEN POSITION FOR COMPLIANCE WITH CEC 450.18(A).
8. PROVIDE SIGNAGE WHERE APPLICABLE STATING: WARNING ELECTRICAL SERVICE IS BACKED BY EMERGENCY GENERATOR.
9. PROVIDE 120V POWER CONNECTION FROM NEAREST PANEL FOR CONNECTION TO HEATER AND BATTERY CHARGER. CONNECT WITH (2) #12 + #12 CU GND - 3/4"C. PROVIDE 20A-1P CIRCUIT BREAKER AS REQUIRED.

GENERAL NOTES

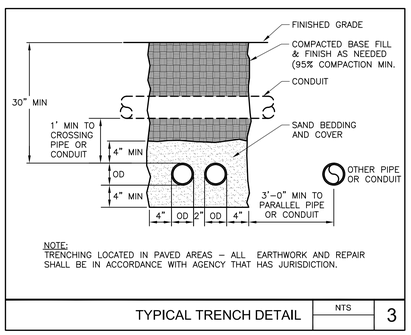
A. ALL CONDUCTORS SHALL BE DUAL RATED THNN/THWN, 90/75 DEGREE, 600V, COPPER WIRE INSTALLED UNDERGROUND OR IN WET LOCATIONS.

B. CONDUCTOR SIZES ARE BASED ON 2022 CEC TABLE 310.16, COPPER.

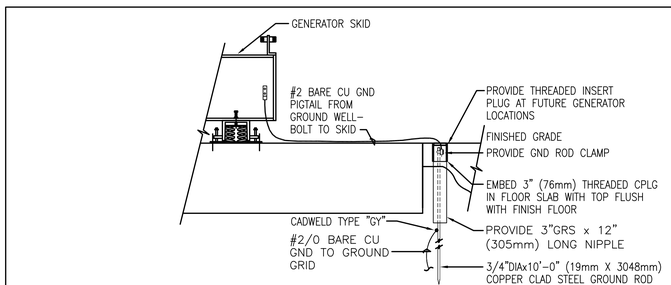
C. ALL CIRCUITS 100A AND LOWER ARE SIZED FROM THE 60 DEGREE COLUMN (CEC 110.14(C). ALL OTHER CIRCUITS ARE SIZED FROM THE 75 DEGREE COLUMN.

D. PVC CONDUIT HAS BEEN SIZED BASED ON TABLE C.1 - SCHEDULE 80.

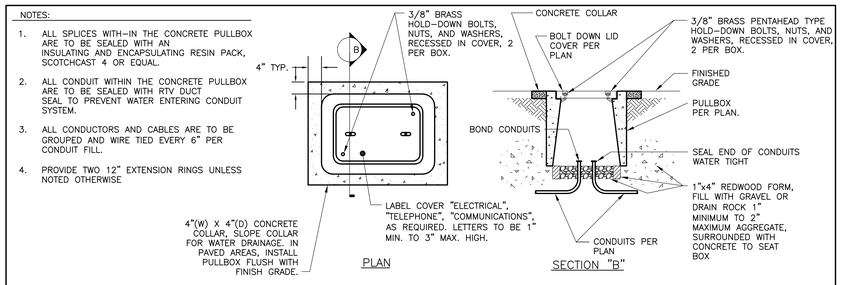
E. WHERE UNDERGROUNDED CONDUCTORS ARE INCREASED FROM THE MINIMUM SIZE DUE TO VOLTAGE DROP, THE EGC SHALL BE UPSIZE PROPORTIONATELY ACCORDING TO CIRCULAR MIL (CEC 250.122(B).



TYPICAL TRENCH DETAIL | NTS | 3



GENERATOR SKID GROUND WELL DETAIL | NTS | 2



ELGEQ02B

TYPICAL UNDERGROUND CONCRETE PULLBOX DETAIL | NTS | 4

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ELECTRICAL ONE LINE DIAGRAM AND DETAILS

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ELECTRICAL SPECIFICATIONS

THE SPECIFICATION SECTIONS LISTED BELOW DO NOT ALL NECESSARILY APPLY TO THE SCOPE OF THIS PROJECT.

PART 1 – GENERAL

1.01 SCOPE OF WORK

A. FURNISH ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM ACCORDING TO THE INTENT OF THIS SPECIFICATION WHETHER ITEMIZED OR NOT.

B. EXAMINE THE MECHANICAL PLANS AND SPECIFICATIONS FOR MECHANICAL EQUIPMENT AND PROVIDE ALL STARTERS, CIRCUIT BREAKERS, SWITCHES, PUSHBUTTONS, AND APPURTENANCES, WHICH ARE NOT SPECIFIED TO BE WITH THE MECHANICAL EQUIPMENT. ERECT ALL ELECTRICAL EQUIPMENT NOT DEFINITELY STATED TO BE ERECTED BY OTHERS, FURNISH AND INSTALL CONDUIT, WIRE, AND CABLE AND MAKE CONNECTIONS REQUIRED TO PLACE ALL EQUIPMENT IN COMPLETE OPERATION.

C. THE GENERAL EXTENT OF THE ELECTRICAL WORK INCLUDES, AMONG OTHERS, THE FURNISHING AND INSTALLING OF THE FOLLOWING ITEMS:

1. PRIMARY AND SECONDARY SERVICE FACILITIES INCLUDING TRANSFORMER PADS, PRIMARY CONDUIT AND TRENCHING, SECONDARY CONDUIT, TRENCHING AND CONDUCTORS, AND MAIN SWITCHBOARD INCLUDING FACILITIES FOR METERING, DISTRIBUTION PANELS, AND PANELBOARDS.
2. LIGHTING AND POWER INSTALLATION, INCLUDING FIXTURES, RECEPTACLE OUTLETS, SWITCHING, AND CIRCUITS AS INDICATED ON THE DRAWINGS.
3. ALL SUPPORTS, BASES, ANCHORS, SLEEVES, HANGERS AND THE LIKE, ALL ELECTRICAL WORK SHOWN AND/OR SPECIFIED, NOT PARTICULARLY MENTIONED ABOVE.
4. COMPLETE GROUNDING AND BONDING SYSTEMS.
5. TELEPHONE (MPOE) SERVICE ENTRANCE CONDUIT, BACKBOARDS, AND INTERCONNECTING CONDUIT. SEE TECHNOLOGY DRAWINGS AND COORDINATE REQUIREMENTS.
6. CABLE TELEVISION SERVICE ENTRANCE CONDUIT, BACKBOARD OR CABINET, AND INTERCONNECTING CONDUIT. SEE TECHNOLOGY DRAWINGS AND COORDINATE REQUIREMENTS.
7. THE CONTRACTOR WILL COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR VERIFICATION OF THEIR REQUIREMENTS PRIOR TO BID CLOSURE AND PRIOR TO INSTALLATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY VOLTAGE, PHASE, CONDUIT SIZE; TYPE AND QUANTITY, WIRE SIZE; TYPE AND QUANTITY, AND THE LOCATION OF ALL EQUIPMENT REQUIRED FOR THIS PROJECT.
8. STANDBY EMERGENCY POWER GENERATOR, CONCRETE PAD, AND AUTO–TRANSFER SWITCH.
9. POWER CONNECTION TO HVAC AND PLUMBING EQUIPMENT.

1.02 RELATED WORK INCLUDED IN OTHER DIVISIONS

A. FINISH PAINTING EXCEPT FACTORY APPLIED FINISHES AND REPAIR OF FACTORY FINISHES SHALL BE PROVIDED IN ACCORDANCE WITH APPROPRIATE SECTIONS OF THIS SPECIFICATION. COORDINATE "PAINTING" REQUIREMENTS OF THIS DIVISION WITH OTHER TRADES AS REQUIRED TO ASSURE TIMELY AND SATISFACTORY COMPLETION OF REQUIRED WORK. IN FINISHED AREAS, ALL EXPOSED RACEWAY, BOXES, GALVANIZED STEEL BOX COVERS (WHERE ALLOWED), AND OTHER ELECTRICAL "STRUCTURE" SHALL BE FINISHED TO MATCH ADJACENT STRUCTURES. VERIFY THAT ALL RACEWAY OPENINGS ARE CLOSED AND BOX COVERS ARE IN PLACE PRIOR TO FINISHING WORK DONE BY OTHERS.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS FOR MECHANICAL EQUIPMENT AND PROVIDE ELECTRICAL INSTALLATION FOR HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, MOTORS, PUMPS AND ASSOCIATED MOTOR STARTERS AND CONTROLS AS DESCRIBED IN 1.15 EQUIPMENT IDENTIFICATION.

C. EXAMINE THE DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR ELECTRICAL EQUIPMENT WHICH MAY NOT BE SHOWN ON THE PLANS TO INCLUDE AND PROVIDE ELECTRICAL INSTALLATIONS AS DESCRIBED IN OTHER TRADES WORK, I.E. MODULAR OFFICE SYSTEM FURNITURE, INFORMATION TECHNOLOGY (I.T.) SYSTEM EQUIPMENT, AUDIO/VIDEO SYSTEMS EQUIPMENT, ETC.

D. EXAMINE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ELECTRICAL APPLIANCES AND EQUIPMENT WHICH MAY NOT BE SHOWN ON THE PLANS TO INCLUDE AND PROVIDE ELECTRICAL INSTALLATIONS AS DESCRIBED IN THE ARCHITECTURAL DIVISION OF WORK.

E. EXAMINE THE ARCHITECTURAL DRAWINGS AND PROVIDE ALL CONSTRUCTION NECESSARY TO MAINTAIN THE INTEGRITY OF THE FIRE RATED BARRIERS.

F. EXAMINE THE ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE ARCHITECT TO PROVIDE ACCESS DOORS, WHETHER SHOWN ON DRAWINGS OR NOT, WHERE FLOORS, WALLS, OR CEILING MUST BE PENETRATED FOR ACCESS TO ELECTRICAL EQUIPMENT, OUTLET BOXES, DEVICES, ETC., AND AS SPECIFIED IN THIS SPECIFICATION.

G. EXAMINE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ELECTRICAL EQUIPMENT MOUNTING AND INSTALLATION.

H. PROVIDE AND INSTALL, AS PART OF THE WORK DESCRIBED IN THIS DIVISION, ALL POWER AND CONTROL WIRING FED FROM A SOURCE OF 30 VOLTS OR MORE (I.E. ALL WIRING EXCEPT TEMPERATURE CONTROL WIRING) FOR MECHANICAL EQUIPMENT DESCRIBED IN 1.15 EQUIPMENT IDENTIFICATION.

1.03 APPLICATION OF OTHER DIVISIONS

A. WHERE CARPENTRY, MASONRY, CONCRETE WORK, PAINTING, ETC., IS REQUIRED IN THE INSTALLATION OF EQUIPMENT SPECIFIED UNDER THIS DIVISION, THE WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE DIVISION OF THESE SPECIFICATIONS. THIS WORK COULD INCLUDE FOR EXAMPLE: WORK ASSOCIATED WITH PANELBOARD INSTALLATION, EQUIPMENT PADS OR BASES, SUPPORT STRUCTURES, ETC.

1.04 DRAWINGS AND SPECIFICATIONS

A. THE INFORMATION PRESENTED IN THESE SPECIFICATIONS AND ON THE DRAWINGS IS INTENDED TO DESCRIBE THE UTILITARIAN AND PHYSICAL ASPECTS OF THE SYSTEMS SHOWN AS WELL AS THE QUALITY OF THE ENTIRE INSTALLATION. ALL INFORMATION IS AS COMPLETE AND THOROUGH AS POSSIBLE, BUT EVERY CONDITION OR SITUATION CANNOT BE ANTICIPATED. EXACT LOCATIONS, DIMENSIONS, ELEVATIONS, ETC. MUST BE DETERMINED "ON THE JOB" WITH CAREFUL ATTENTION TO THE "INTENT" OF THE DRAWINGS AND SPECIFICATIONS.

B. THE ABOVE PARAGRAPH SHALL NOT BE CONSTRUED AS TO ALLOW SIGNIFICANT DEVIATION FROM EITHER THE DRAWINGS OR SPECIFICATIONS WITHOUT PRIOR APPROVAL OF THE ARCHITECT, BUT MINOR CHANGES IN CONDUIT ROUTING OR EQUIPMENT LOCATIONS MAY BE REQUIRED OR DESIRED DUE TO SPECIFIC CONDITIONS ENCOUNTERED. THIS WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE SPECIFICATIONS AND NO "EXTRA CHARGES" ARE TO BE CREATED FOR ANY UNANTICIPATED LABOR OR MATERIAL.

C. ANY ERROR OR OMISSIONS OF DETAIL IN EITHER THE DRAWINGS OR THE SPECIFICATIONS SHALL NOT RELIEVE THE CONTRACTOR FROM CORRECTLY INSTALLING ALL MATERIALS NECESSARY FOR COMPLETE AND OPERATING ELECTRICAL SYSTEMS.

D. CONTRACTOR SHALL INSPECT THE SITE AND VERIFY ALL MEASUREMENTS AND CONDITIONS. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF DIFFERENCES BETWEEN WORK SHOWN ON THE DRAWINGS AND MEASUREMENTS AT THE SITE.

E. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, BUT THE LOCATIONS OF DEVICES, EQUIPMENT, OUTLETS, AND LIGHTING FIXTURES ARE SHOWN APPROXIMATELY WHERE INSTALLATIONS ARE INTENDED. ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND OTHER DRAWINGS SHALL BE EXAMINED, NOTING ALL CONDITIONS THAT MAY AFFECT THIS WORK. REPORT CONFLICTING CONDITIONS TO THE ARCHITECT/ENGINEER FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PROCEED WITH WORK WITHOUT REPORTING THE MATTER, HE DOES SO ON HIS OWN RESPONSIBILITY AND SHALL ALTER WORK IF DIRECTED BY THE ARCHITECT/ENGINEER AT HIS OWN EXPENSE.

F. EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND MANUFACTURER'S DRAWINGS FOR VARIOUS EQUIPMENT IN ORDER TO DETERMINE EXACT ROUTING AND FINAL TERMINATIONS FOR ALL CONDUITS AND CABLES. CONDUITS SHALL BE STUBBED UP AS NEAR AS POSSIBLE TO EQUIPMENT ENCLOSURE.

G. ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED SO THAT IT WILL BE READILY ACCESSIBLE FOR OPERATION AND MAINTENANCE. THE OWNER RESERVES THE RIGHT TO REQUIRE MINOR CHANGES IN LOCATION OF OUTLETS OR EQUIPMENT, PRIOR TO ROUGH IN WITHOUT INCURRING ANY ADDITIONAL COST OR CHANGES.

H. IF SIGNIFICANT DEPARTURES FROM THE DRAWINGS OR SPECIFICATIONS ARE CONSIDERED NECESSARY BY THE CONTRACTOR, DETAILS OF THE CHANGES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER WITHIN THIRTY DAYS AFTER AWARD OF CONTRACT. PRIOR WRITTEN ACCEPTANCE OF THE ARCHITECT IS REQUIRED FOR THESE DEPARTURES.

I. CLARIFICATION OF PLANS AND SPECIFICATIONS FOR THE PURPOSE OF FACILITATING CONSTRUCTION, BUT NOT INVOLVING ADDITIONAL LABOR AND MATERIALS, MAY BE PREPARED DURING CONSTRUCTION BY THE ARCHITECT/ENGINEER. SAID REVISED PLANS AND SPECIFICATIONS SHALL BECOME A PART OF THE CONTRACT. THE CONTRACTOR SHALL CONFORM TO THE REVISED PLANS AND SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER.

J. WHERE EXISTING UNDERGROUND OR OTHERWISE CONCEALED FACILITIES ARE INDICATED ON THE DRAWINGS, THESE ARE LOCATED AS WELL AS CAN BE DETERMINED FROM AVAILABLE INFORMATION. THE CONTRACTOR IS REQUIRED TO VERIFY ACTUAL LOCATIONS AS NECESSARY FOR THIS CONSTRUCTION.

1.05 CODES AND STANDARDS

A. ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:

1. NFPA 70 – NATIONAL ELECTRICAL CODE 2020 EDITION WITH 2022 CALIFORNIA ELECTRICAL CODE (CEC) AMENDMENTS.
2. TITLE 24 2022 – STATE OF CALIFORNIA ADMINISTRATIVE CODE
3. 2022 CALIFORNIA BUILDING CODE
4. CITY OR COUNTY ELECTRICAL CODE AS APPLICABLE
5. APPLICABLE REGULATIONS OF LOCAL UTILITY COMPANIES
6. ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) STANDARDS
7. ANY ADDITIONAL CODES EFFECTIVE AT THE JOB SITE

B. FURNISH WITHOUT EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHICH MAY BE REQUIRED FOR COMPLIANCE WITH THESE LAWS, RULES, AND REGULATIONS, EVEN THOUGH THE WORK IS NOT MENTIONED IN THESE PARTICULAR SPECIFICATIONS.

C. APPLY AND PAY FOR ALL PERMITS REQUIRED BY ANY OF THE LEGALLY CONSTITUTED PUBLIC AUTHORITIES FOR THE INSTALLATION OR CONSTRUCTION OF THE WORK INCLUDED UNDER THIS SPECIFICATION.

D. ARRANGE AND PAY FOR ANY INSPECTIONS OR EXAMINATIONS SO REQUIRED AND DELIVER CERTIFICATES OF ALL SUCH INSPECTIONS TO THE OWNER. WHEN THESE SPECIFICATIONS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED RULES AND REGULATIONS, THE PROVISIONS OF THE SPECIFICATIONS SHALL TAKE PRECEDENCE.

1.06 EXAMINATION OF THE SITE

A. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE OF CONSTRUCTION PRIOR TO BID TO DETERMINE EXISTING CONDITIONS AND THEIR EFFECT UPON THE WORK HE WILL BE REQUIRED TO PERFORM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY EXTRA EXPENSES INCURRED BY FAILURE TO DETECT AND EVALUATE ALL EXISTING CONDITIONS THAT WILL AFFECT HIS WORK TO BE INCLUDED IN THE BID TO ACCOMPLISH THIS CONTRACT DOCUMENT'S GOAL.

1.07 COORDINATION WITH OTHER TRADES

A. EXAMINE THE ELECTRICAL DRAWINGS AND REFER TO THE DRAWINGS AND SPECIFICATIONS DESCRIBING OTHER WORK TO BE ACCOMPLISHED. VERIFY AND COORDINATE PRIOR TO BID. CONTINUE TO COORDINATE WORK PLANNING AND ALL WORK IN THE FIELD TO AVOID CONFLICTS, ERRORS, AND/OR DELAYS. NO COMPENSATION WILL BE ALLOWED FOR EXTRA WORK NECESSITATED BY LACK OF COORDINATION.

1.08 STRUCTURAL REQUIREMENTS

A. SECURE ALL ANCHORS FOR ELECTRICAL EQUIPMENT IN A MANNER, WHICH WILL NOT DECREASE THE STRUCTURAL VALUE OF ANY STRUCTURE TO AN UNSAFE LEVEL. INSTALL ALL EQUIPMENT, FIXTURES, ETC. TO RESIST SEISMIC MOVEMENTS. INFORM THE ARCHITECT IN ADVANCE AND PROVIDE DRAWINGS OF ANY PROPOSED MODIFICATIONS TO THE STRUCTURE THAT INVOLVES CUTTING OR PATCHING OF CONCRETE, MASONRY, STEEL, OR WOOD IN THIS PROJECT. SEE STRUCTURAL DRAWINGS FOR MOUNTING DETAILS.

1.09 MANUFACTURER'S INSTRUCTIONS

A. FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN SPECIFIC INSTALLATION OR CONNECTION DETAILS ARE NOT INDICATED OR SPECIFIED ON THE CONTRACT DOCUMENTS.

B. NOTIFY THE ARCHITECT/ENGINEER OF CONFLICTS BETWEEN THE MANUFACTURER'S INSTRUCTIONS AND INSTALLATION OR CONNECTION DETAILS PRIOR TO THE INSTALLATION OF MATERIALS.

1.10 SERVICE AND METERING

A. NEW UNDERGROUND FACILITIES SHALL BE PROVIDED FOR THE POWER COMPANY'S PRIMARY LINES. VERIFY AND COORDINATE WITH THE UTILITY COMPANY FOR EXACT REQUIREMENT FOR CONDUITS AND CONDUCTORS.

B. NEW UNDERGROUND FACILITIES SHALL BE PROVIDED FOR THE POWER COMPANY'S SECONDARY LINES. VERIFY AND COORDINATE WITH THE UTILITY COMPANY FOR EXACT REQUIREMENT FOR CONDUITS AND CONDUCTORS.

C. PROVIDE TRANSFORMER PADS AND SERVICE AS SHOWN ON PLANS.

D. PAY ALL COSTS AND POWER COMPANY CHARGES.

E. POWER IS PROVIDED BY THE LOCAL UTILITY COMPANY.

F. COORDINATE ALL REQUIREMENTS WITH THE UTILITY COMPANY PRIOR TO BID.

1.11 INSPECTION

A. COOPERATE WITH THE OWNER AND PROVIDE ASSISTANCE AT ALL TIMES FOR THE INSPECTION OF THE ELECTRICAL WORK. REMOVE COVERS, OPERATE MACHINERY, OR PERFORM ANY REASONABLE WORK, WHICH IN THE OPINION OF THE OWNER, WILL BE NECESSARY TO DETERMINE THE QUALITY OR ADEQUACY OF THE WORK.

B. IF ANY MATERIAL DOES NOT CONFORM TO THESE SPECIFICATIONS, REMOVE THE MATERIALS FROM THE PREMISES, WITHIN THREE DAYS AFTER BEING NOTIFIED BY THE OWNER.

C. WORK SHALL NOT BE CLOSED IN OR COVERED BEFORE INSPECTION AND APPROVAL BY THE OWNER.

1.12 QUALITY OF MATERIALS

A. ALL ELECTRICAL MATERIALS USED ON THIS PROJECT SHALL BE NEW AND FREE FROM DEFECTS.

B. ALL ELECTRICAL MATERIALS USED ON THIS PROJECT SHALL CONFORM WHERE APPLICABLE, TO THE FOLLOWING STANDARDS, UNLESS OTHERWISE NOTED:

1. NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
2. ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
3. UL – UNDERWRITERS LABORATORIES, INC.

C. EACH TYPE OF MATERIAL SHALL BE OF THE SAME MANUFACTURER AND QUALITY THROUGHOUT THE WORK.

1.13 SUBMITTAL & SHOP DRAWINGS

A. SHOP DRAWINGS AND SUPPLEMENTAL DATA WHERE CALLED FOR, SHALL BE PREPARED AND SUBMITTED AS PER GENERAL CONDITIONS. FINAL CORRECTED COPIES OF SCHEDULES AND SHOP DRAWINGS OR SUPPLEMENTAL DATA TO ARCHITECT FOR REVIEW SHALL BE SUCH AS TO PROVIDE ONE (1) FOR ARCHITECT'S FILES, ONE (1) FOR ELECTRICAL ENGINEER'S FILES, TWO (2) FOR THE OWNER, ONE (1) TO CONTRACTOR'S JOB FILES, AND SUCH ADDITIONAL COPIES AS CONTRACTOR MAY DESIRE FOR HIS OWN OFFICE FILES AND/OR FOR DISTRIBUTION BY HIM TO SUBCONTRACTORS OR VENDORS. EXCEPTIONS SHALL BE AS NOTED IN THE DIVISION 1 SPECIFICATION SECTIONS.

B. SHOP DRAWINGS AND SUPPLEMENTAL DATA ARE REQUIRED UNLESS SPECIFICALLY NOT REQUESTED BY THE ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL ELECTRICAL EQUIPMENT PERTAINING TO JOB. (NOT LIMITED TO ELECTRICAL EQUIPMENT, LIGHTS, RECEPTACLES, BOXES AND ENCLOSURES, CONDUIT, WIRE, ETC.)

C. THE SHOP DRAWINGS AND SUPPLEMENTAL DATA SHOWN CALLED FOR SHALL BE SUBMITTED AS THE INSTRUMENTS OF THE CONTRACTOR, EVEN THOUGH THEY MAY HAVE BEEN PREPARED BY A SUBCONTRACTOR, SUPPLIER, DEALER, MANUFACTURER, OR BY ANY OTHER PERSON, FIRM OR ORGANIZATION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL UNDERTAKE HIS OWN REVIEW AND STAMP WITH HIS ACCEPTANCE, THEN SUBMIT TO THE ENGINEER FOR HIS REVIEW. BY ACCEPTING AND SUBMITTING SHOP DRAWINGS AND SUPPLEMENTAL DATA, THE CONTRACTOR REPRESENTS THAT HE HAS DETERMINED AND VERIFIED ALL FIELD MEASUREMENTS, THE PHYSICAL CONSTRUCTION, THE QUALITY OF MATERIALS, THE APPLICABILITY OF CATALOG NUMBERS, AND SIMILAR DATA, OR WILL DO SO, AND THAT HE HAS CHECKED AND COORDINATED EACH SHOP DRAWINGS WITH THE REQUIREMENTS OF THE TRADES SHALL BE RESOLVED BY THE CONTRACTOR IN THE SHOP DRAWINGS, IF POSSIBLE, BUT IN ANY EVENT PRIOR TO THE ACTUAL CONSTRUCTION.

D. ALL SHOP DRAWINGS SHALL BE DRAWN ACCURATELY ON PAPER SUITABLE FOR DUPLICATE COPYING BY BLACK, OR BLUE LINE PRINTING PROCESSES, OR XEROX.

E. SUPPLEMENTAL DATA SHALL INCLUDE INFORMATION AS NOTED IN THE SPECIFICATION PARAGRAPHS REQUIRING THEM, OR AS REQUESTED BY THE ARCHITECT.

F. THE ENGINEER WILL REVIEW SHOP DRAWINGS AND SUPPLEMENTAL DATA SUBMITTED BY THE CONTRACTOR ONLY FOR GENERAL DESIGN CONFORMANCE WITH THE CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS.

G. IF MORE THAN ONE (1) SUBMISSION OF SHOP DRAWINGS OR SUPPLEMENTAL DATA IS REQUIRED FOR ANY GIVEN ITEM TO MEET THE PROJECT SPECIFICATIONS, THE COST OF REVIEWING THESE ADDITIONAL SUBMISSIONS SHALL BE CHARGED DIRECTLY AGAINST THE CONTRACTOR AND THE OWNER WILL WITHHOLD THE FUNDS NECESSARY TO COVER THESE COSTS.

H. SHOP DRAWINGS, IF REQUESTED, MUST BE SUBMITTED TO AND FAVORABLY REVIEWED BY THE ARCHITECT AND/OR ENGINEER BEFORE BEING USED BY THE CONTRACTOR ON THE JOB.

I. SHOP DRAWINGS DEADLINE: IN ADDITION TO REQUIREMENTS AS ESTABLISHED IN DIVISION 1 OF THE GENERAL CONDITIONS, THE CONTRACTOR SHALL, WITHIN 35 CALENDAR DAYS AFTER THE NOTICE TO PROCEED OF THE CONTRACT, SUBMIT TO THE ARCHITECT FOR APPROVAL THE SHOP DRAWINGS FOR EQUIPMENT AND/OR SPECIALTY ITEMS LISTED IN EACH DIVISION OF WORK. THE SHOP DRAWINGS SHALL BE SUBMITTED IN ADDITION TO THE LIST OF MATERIALS REQUIRED BY THE "SPECIFIED ITEMS – SUBSTITUTES" PARAGRAPH.

J. SHOP DRAWINGS DELINEATION: THE SHOP DRAWINGS SHALL BE DRAWN TO SCALE AND SHALL BE COMPLETELY DIMENSIONED, BRINGING THE PLAN TOGETHER WITH SUCH SECTIONS AS ARE NECESSARY TO CLEARLY SHOW CONSTRUCTION DETAIL.

K. RESPONSIBILITY: THESE SHOP DRAWINGS AND ALL SUPPORTING DATA, CATALOGS, ETC., SHALL BE PREPARED BY THE CONTRACTOR OR HIS SUPPLIERS, BUT SHALL BE SUBMITTED AS THE INSTRUMENTS OF THE CONTRACTOR. THEREFORE, THE CONTRACTOR SHALL CHECK THE DRAWINGS OF HIS SUPPLIERS AS WELL AS HIS OWN DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT. IN PARTICULAR, THE CONTRACTOR SHALL ASCERTAIN THAT THE SHOP DRAWINGS MEET ALL REQUIREMENTS OF THE FINAL DESIGN DRAWINGS AND SPECIFICATIONS AND ALSO CONFORM TO THE STRUCTURAL AND SPACE CONDITIONS. EACH SHOP DRAWING SUBMITTED FOR APPROVAL SHALL BEAR A STAMP CERTIFYING THAT IT HAS BEEN CHECKED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS. IF SUCH SHOP DRAWINGS SHOW VARIATIONS FROM CONTRACT DOCUMENTS, WHETHER BECAUSE OF STANDARD SHOP PRACTICE OR OTHER REASONS, THE CONTRACTOR SHALL MAKE SPECIAL MENTION THEREOF IN HIS LETTER TRANSMITTAL. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBSERVING THE NEED FOR AND MAKING ANY CHANGES IN THE ARRANGEMENT OF PIPING, CONNECTIONS, WIRING, MANNER OF INSTALLATION ETC., WHICH MAY BE REQUIRED BY THE EQUIPMENT HE PROPOSES TO SUPPLY BOTH AS IT PERTAINS TO HIS OWN WORK AND ANY WORK AFFECTED UNDER OTHER PARTS, HEADINGS, OR DIVISIONS OF DRAWINGS AND SPECIFICATIONS.

L. IDENTIFICATION: SHOP DRAWINGS SHALL BE ENTITLED WITH THE NAME OF THE PROJECT ON EACH SHEET AND SHALL OTHERWISE BE IDENTIFIED BY LISTING THE PARTICULAR DIVISION, SECTION, ARTICLE OR REFERENCE OF THE WORK PERTAINING. SUBMIT DIFFERENT ITEMS ON SEPARATE SHEETS. ALL SUBMITTALS SHALL BE NUMBERED SERIALLY.

M. MANNER: FURNISH FOR ARCHITECT'S APPROVAL SEPARATE SHEETS OF SUBMITTAL OF EACH SPECIALTY ITEM IN THE FOLLOWING MANNER:

1. CATALOG CUTS SHALL BE PHOTOCOPIED OR REPRODUCED IN SOME OTHER ACCEPTABLE MANNER AND SUBMITTED ON PDF, NOTING ONLY THE ITEMS IN QUESTION, TOGETHER WITH THE DESCRIPTIVE (SPECIFICATION) DATA COMPLETE. DRAWINGS SHALL BE SUBMITTED IN PDF FORM.
2. EACH SHEET SHALL BE IDENTIFIED WITH THE DIVISION, SECTION, ARTICLE OR REFERENCE IN THE CONTACT DOCUMENTS, WHICH COVERS THE ITEM SUBMITTED FOR APPROVAL.
3. EACH SHEET SHALL BE IDENTIFIED WITH THE PROJECT NAME AND THE ARCHITECT.
4. EACH SHEET SHALL BEAR THE CONTRACTOR'S STAMP AND SIGNATURE OF APPROVAL.

1.14 SPECIFIED ITEMS – SUBSTITUTES

A. WHEREVER CATALOG NUMBERS AND SPECIFIC BRANDS OR TRADE NAMES FOLLOWED BY THE DESIGNATION "OR APPROVED EQUAL" ARE USED IN CONJUNCTION WITH A DESIGNATED MATERIAL, PRODUCT, THICKNESS, OR SERVICE MENTIONED IN THIS SPECIFICATION, THEY ARE USED TO ESTABLISH THE STANDARDS OF QUALITY, UTILITY AND APPEARANCE REQUIRED. SUBSTITUTIONS, WHICH ARE EQUAL IN QUALITY, UTILITY, AND APPEARANCE TO THOSE SPECIFIED, WILL BE APPROVED, SUBJECT TO THE FOLLOWING PROVISIONS: ALL SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT AND/OR ENGINEER IN WRITING. FOR THIS PURPOSE, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, WITHIN 30_CALENDAR DAYS AFTER THE DATE OF COMMENCEMENT SPECIFIED IN THE NOTICE TO PROCEED, A TYPEWRITTEN LIST CONTAINING A DESCRIPTION OF EACH PROPOSED SUBSTITUTE ITEM OR MATERIAL. THE ARCHITECT MAY INCREASE THE SUBMITTAL PERIOD BEYOND 30 CALENDAR DAYS IF THE SCHEDULE ALLOWS. SUFFICIENT DATA, DRAWINGS, SAMPLES, LITERATURE OR OTHER DETAILED INFORMATION THAT WILL DEMONSTRATE TO THE ARCHITECT THAT THE PROPOSED SUBSTITUTE IS EQUAL IN QUALITY, UTILITY, AND APPEARANCE TO THE MATERIAL SPECIFIED SHALL BE APPENDED TO THIS LIST. THE ARCHITECT WILL APPROVE, IN WRITING, SUCH PROPOSED SUBSTITUTION WHICH AFFECT OTHER PARTS OF THE CONTRACTOR'S OWN WORK OR THE WORK OF OTHERS.

B. FAILURE OF THE CONTRACTOR TO SUBMIT PROPOSED SUBSTITUTIONS FOR APPROVAL IN THE MANNER DESCRIBED ABOVE AND WITHIN THE TIME PRESCRIBED SHALL BE SUFFICIENT CAUSE FOR DISAPPROVAL BY THE ENGINEER OF ANY SUBSTITUTIONS OTHERWISE PROPOSED.

C. WHEREVER CATALOG NUMBERS AND SPECIFIC BRANDS OR TRADE NAMES NOT FOLLOWED BY THE DESIGNATION "OR APPROVED EQUAL" MATERIAL, PRODUCT, THING OR SERVICE MENTIONED IN THESE SPECIFICATIONS, NO SUBSTITUTIONS WILL BE ACCEPTED FOR APPROVAL.

D. WHEREVER MORE THAN ONE MANUFACTURER'S PRODUCT IS SPECIFIED, THE FIRST–NAME PRODUCT IS THE BASIS FOR PROJECT DESIGN AND THE USE OF ALTERNATIVE NAME MANUFACTURER'S PRODUCTS OR SUBSTITUTES MAY REQUIRE MODIFICATIONS IN THE PROJECT DESIGN AND CONSTRUCTION. IF SUCH ALTERNATIVES ARE PROPOSED BY THE CONTRACTOR AND ARE FAVORABLY REVIEWED BY THE ENGINEER THE CONTRACTOR SHALL ASSUME COSTS REQUIRED TO MAKE NECESSARY REVISIONS AND MODIFICATIONS INCLUDING ADDITIONAL COSTS TO THE OWNER FOR EVALUATIONS OF MODIFICATIONS OF THE PROJECT DESIGN SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT.

E. WHEN MATERIALS ARE SPECIFIED BY THE FIRST MANUFACTURER'S NAME, AND PRODUCT NUMBER, SECOND MANUFACTURER'S NAME, OR APPROVED EQUAL, THE SECOND MANUFACTURER'S PROJECT SHALL BE SUBMITTED IN ACCORDANCE WITH THE ABOVE PARAGRAPH.

F. IF THE ENGINEER IN THIS REVIEW OF THE LIST OF MATERIALS AND EQUIPMENT REQUIRES REVISIONS OR CORRECTIONS TO BE MADE OR SHOP DRAWINGS AND/OR SUPPLEMENTAL DATA TO BE SUBMITTED, THE CONTRACTOR SHALL PROMPTLY DO SO. IF ANY PROPOSED MATERIAL IS JUDGED BY THE ENGINEER TO BE UNACCEPTABLE, THE SPECIFIED ITEM SHALL BE PROVIDED; FURTHER SUBMISSIONS WILL NOT BE ALLOWED, UNLESS DIRECTED BY THE ENGINEER.

G. PHYSICAL SAMPLES MAY BE REQUIRED. IF TESTS FOR THE DETERMINATION OF EQUALITY AND UTILITY ARE REQUIRED BY THE ENGINEER THEY SHALL BE MADE BY A TESTING LABORATORY, WITH ACCEPTANCE OF THE TEST PROCEDURE FIRST GIVEN BY THE ENGINEER, AND AT THE EXPENSE OF THE CONTRACTOR.

H. IN REVIEW OF THE DATA SUBMITTED IN SUPPORT OF SUBSTITUTIONS, THE ENGINEER WILL USE FOR PURPOSES OF COMPARISON ALL THE CHARACTERISTICS OF THE SPECIFIED ITEM AS THEY APPEAR IN THE MANUFACTURER'S PUBLISHED DATA EVEN THOUGH ALL THE CHARACTERISTICS OF THE SPECIFIED ITEM MAY NOT HAVE BEEN PARTICULARLY MENTIONED IN THE MANUFACTURER'S PUBLISHED DATA. IF MORE THAN TWO SUBMISSIONS OF DATA ARE REQUIRED, THE COST OF REVIEWING THE DATA GOES AGAINST THE CONTRACTOR, AND THE OWNER WILL WITHHOLD THE FUNDS NECESSARY TO COVER THESE COSTS. ONLY ONE (1) SUCH REQUEST MAY BE SUBMITTED. THE ENGINEER'S REJECTION OF ANY SUBSTITUTE SHALL AUTOMATICALLY REQUIRE THE CONTRACTOR TO FURNISH THE SPECIFIED ITEM WITHOUT FURTHER DISCUSSION OR DELAY.

1.15 EQUIPMENT IDENTIFICATION

A. THE MAIN SWITCHBOARD, AND ALL PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS, BOXES, ETC., SHALL BE PROPERLY IDENTIFIED WITH A DESCRIPTIVE NAMEPLATE. NAMEPLATES SHALL BE MADE OF 1/16 INCH LAMINATED PLASTIC WITH BLACK BACKGROUND AND WHITE LETTERS. SIZE OF LETTERS SHALL BE 1/4 INCH HIGH. LETTERS SHALL BE MACHINE ENGRAVED. ALL NAMEPLATES SHALL BE SCREW MOUNTED WITH OVAL HEAD MACHINE SCREWS TAPPED INTO FRONT OF PANEL.

B. PROVIDE HOLDERS WITH IDENTIFICATION CARDS FILLED OUT IN A TYPEWRITTEN FORMAT OF CIRCUIT DESIGNATIONS FOR EACH PANELBOARD.

C. EACH BRANCH CIRCUIT, CONTROL, AND SIGNAL CONDUCTOR SHALL BE LABELED WITH THE CIRCUIT NUMBER OR TERMINAL NUMBER IT IS CONNECTED TO. USE T&B VINYL OR BRANDY PERMASHIELD MYLAR MARKERS. CONDUCTORS SHALL BE LABELED AT EACH PANELBOARD, SWITCHBOARD, CONTROL CENTER, TERMINAL CABINET, PULL BOX, AND EACH POINT OF UTILIZATION SUCH AS FIXTURES, MOTORS, CONTROLS, ETC. LABELING SHALL CORRESPOND TO CONTROL DIAGRAMS WHERE APPLICABLE.

1.16 WARRANTY

A. GUARANTEE ALL WORK FOR ONE YEAR FROM DATE OF ACCEPTANCE AGAINST ALL DEFECTS IN MATERIAL, EQUIPMENT AND WORKMANSHIP.

1.17 RECORD AS–BUILT DRAWINGS

A. THE CONTRACTOR SHALL KEEP A SEPARATE S

ELECTRICAL SPECIFICATIONS (CONTINUED)

2.11 RACEWAY AND FITTINGS

A. RIGID STEEL CONDUIT:

1. COMPLY WITH UNDERWRITERS LABORATORIES UL 6 SPECIFICATION, ANSI C80.1 AND FEDERAL SPECIFICATION WW_C_581E OR LATEST REVISIONS. HOT DIP GALVANIZED ON THE EXTERIOR, ZINC OR ENAMEL ON THE INTERIOR.

2. COUPLINGS, LOCKNUTS, AND ALL OTHER FITTINGS SHALL BE GALVANIZED OR SHERARDIZED, WATERPROOF AND THREADED TYPE ONLY. APPLETON, CROUSE-HINDS OR APPROVED EQUAL.

B. INTERMEDIATE METALLIC CONDUIT (IMC):

1. COMPLY TO PROPOSED UNDERWRITERS LABORATORIES UL 1242 AND FEDERAL SPECIFICATION WW-C-581E OR LATEST REVISION. HOT DIPPED GALVANIZED ON THE EXTERIOR, CORROSION INHIBITING COATING ON THE INTERIOR.

2. COUPLINGS, LOCKNUTS, AND ALL OTHER FITTINGS SHALL BE GALVANIZED OR SHERARDIZED, WATERPROOF AND THREADED TYPE ONLY. SAME MATERIAL AS CONDUIT. APPLETON, EATON CROUSE-HINDS OR APPROVED EQUAL.

C. ELECTRICAL METALLIC TUBING (EMT):

1. COMPLY WITH UNDERWRITERS LABORATORIES UL 797, ANSI C80.3 AND FEDERAL SPECIFICATION WW-C-563 OR LATEST REVISIONS. EMT SHALL BE GALVANIZED OR SHERARDIZED.

2. COUPLINGS AND CONNECTORS FOR EMT SHALL BE GALVANIZED OR CADMIUM PLATED AND SHALL BE OF THE COMPRESSION TYPE REQUIRING THE TIGHTENING OF A NUT ON A GLAND RING OR AN APPROVED STEEL SET SCREW TYPE. APPLETON, EATON CROUSE-HINDS OR APPROVED EQUAL. NO DIE CAST TYPE ALLOWED.

D. FLEXIBLE METALLIC CONDUIT:

1. GALVANIZED INTERLOCKED SPIRALLY WOUND STEEL STRIP.

2. NEOPRENE JACKETED FLEXIBLE METALLIC CONDUIT SHALL BE USED IN ALL MOIST OR WEATHERPROOF LOCATIONS WHERE FLEXIBLE CONDUIT IS REQUIRED.

3. FITTINGS SHALL BE HOT DIPPED GALVANIZED COMPRESSION OR CLAMP TYPE. FITTINGS WHICH USE A SCREW TO BIND AGAINST TUBING OR WHICH SCREW INTO THE END OF THE CONDUIT, WILL NOT BE ACCEPTED. FITTINGS FOR NEOPRENE JACKETED FLEXIBLE CONDUIT SHALL BE OF THE SCREW IN TYPE. APPLETON STB SERIES. APPLETON, EATON CROUSE-HINDS OR APPROVED EQUAL MAY BE USED.

E. POLYVINYLCHLORIDE (PVC): RIGID HEAVY WEIGHT TYPE, SCHEDULE 40, COMPLETE WITH PVC FITTINGS.

F. ELECTRICAL NONMETALLIC TUBING (ENT): ELECTRICAL NONMETALLIC TUBING (ENT) IS NOT PERMISSIBLE FOR USE ON THIS PROJECT.

G. CONDUIT SUPPORTS:

1. PIPE HANGERS FOR INDIVIDUAL CONDUITS SHALL BE THREADED SUSPENSION ROD. THE PIPE RING SHALL BE MALLEABLE IRON, SPLIT AND HINGED, OR SHALL BE SPRINGABLE WROUGHT STEEL. RINGS SHALL BE BOLTED TO OR INTERLOCKED WITH THE SUSPENSION ROD SOCKET.

2. PIPE RACKS FOR GROUPS OF PARALLEL CONDUITS SHALL BE CONSTRUCTED OF GALVANIZED STRUCTURAL STEEL PREFORMED CHANNELS OF LENGTH AS REQUIRED, SUSPENDED ON THREADED RODS AND SECURED THERETO WITH NUTS ABOVE AND BELOW THE CROSS BAR.

3. FACTORY MADE PIPE STRAPS SHALL BE ONE-HOLE MALLEABLE IRON OR TWO-HOLE GALVANIZED CLAMPS.

4. STRUT CHANNEL SHALL BE: KINDORF, UNISTRUT, T&B, OR APPROVED EQUAL.

H. OUTLET BOXES: GALVANIZED STEEL. BOXES INSTALLED IN ANY EXTERIOR LOCATION, WHERE EXPOSED TO RAIN OR WHERE EXPOSED TO MOISTURE LADEN ATMOSPHERE SHALL BE CAST SCREW HUB TYPE WITH GASKETED WEATHERPROOF COVERS. BOXES FOR VAPOR PROOF OR EXPLOSION PROOF APPLICATIONS SHALL BE DESIGNED SPECIFICALLY FOR SUCH USE.

1. EACH BOX SHALL BE LARGE ENOUGH TO ACCOMMODATE THE REQUIRED NUMBER AND SIZES OF CONDUITS, WIRES, SPLICES AND DEVICES BUT NOT SMALLER THAN SIZE SHOWN OR SPECIFIED.

I. PULL BOXES AND CABINETS:

1. PREFABRICATED CONCRETE TYPE, CHRISTY CONCRETE PRODUCTS, BROOKS, OR APPROVED EQUAL. ALL BOXES SHALL HAVE STANDARD BRASS HOLDDOWN BOLTS AND HARDWARE. BOXES LOCATED IN PAVED AREAS OR OTHER AREAS OVER WHICH VEHICLES NORMALLY MAY TRAVEL SHALL HAVE TRAFFIC COVERS.

2. ALL PULL BOXES AND CABINETS SHALL BE CODE GAUGE GALVANIZED STEEL.

2.11 WIRE AND CABLE

A. LABELING:

MARKED ON 24 INCH CENTERS AS FOLLOWS:

1. UNDERWRITERS LABEL
2. GAUGE
3. VOLTAGE
4. KIND OF INSULATION
5. NAME OF MANUFACTURER
6. TRADE NAME

B. INSULATION:

1. ALL CONDUCTORS 10 AWG AND SMALLER, SHALL BE 600 VOLT, TYPE THWN, THW, TW OR THHN UNLESS NOTED OTHERWISE.

2. ALL CONDUCTORS FOR UNDERGROUND AND CONDUCTORS 8 AWG AND LARGER SHALL BE 600 VOLT, TYPE XHHW OR THWN UNLESS NOTED OTHERWISE.

3. INSULATION TYPE XHHW SHALL BE USED FOR WIRE SIZES 2 AWG AND LARGER.

4. ALL CIRCUIT CONDUCTORS INSTALLED WITHIN FLUORESCENT FIXTURE RACEWAYS SHALL BE 600 VOLT, 105-DEGREE TYPE RHH, OR THHN, EXCEPT IN FIXTURES THAT HAVE WIRING RACEWAYS SPECIFICALLY APPROVED FOR 75 DEGREE CENTIGRADE WIRE.

C. GROUNDING WIRE:

1. GROUNDING WIRE 1/0 AWG OR LARGER TINNED STRANDED COPPER CABLE. ALL SMALLER GROUND WIRES SHALL BE INSULATED WITH GREEN COLOR INSULATION

D. COLOR CODING OF CONDUCTORS:

1. THE GUIDELINES OF THE NEC SHALL BE FOLLOWED WHEN SELECTING WIRE COLORS. GENERALLY, ALL PHASE WIRES FOR POWER CONDUCTORS OF THE SAME SYSTEM MAY BE THE SAME COLOR EXCEPT AS FOLLOWS:

PHASE	120/208 VOLTS	277/480 VOLTS
PHASE A	BLACK	BROWN
PHASE B	RED	ORANGE
PHASE C	BLUE	YELLOW
NEUTRAL	WHITE	GRAY
GROUND	GREEN	GREEN
ISOLATED GROUND	LIGHT GREEN OR LIGHT GREEN WITH WHITE STRIPE	

2. THESE COLORS MAY BE THE CONDUCTOR INSULATION COLORS OR THE COLORS MAY BE APPLIED USING INDICATING TAPE MANUFACTURED FOR THE PURPOSE.

3. IN ADDITION TO COLOR CODING, ALL POWER, CONTROL, AND ALARM WIRING SHALL BE NUMBERED AND IDENTIFIED BY MEANS OF WIRE MARKERS AT ALL SWITCHBOARDS, PANELBOARDS, AUXILIARY GUTTERS, JUNCTION BOXES, PULL BOXES, RECEPTACLE OUTLETS, LIGHT OUTLETS, DISCONNECT SWITCHES, AND CIRCUIT BREAKERS. THESE MARKERS SHALL CORRESPOND TO NUMBERS ON SHOP DRAWINGS.

4. CONDUCTORS IN SIZES UP THROUGH 10 AWG SHALL HAVE SOLID COLOR FINISH AS LISTED ABOVE. 8 AWG AND LARGER SHALL BE CODED BY APPLICATION OF PHASE TAPE FOR MINIMUM OF 6 INCH LENGTH ON CONDUCTOR. CODING SHALL OCCUR ON ALL SPLICES AND TERMINATION AND PULL BOXES.

E. CONDUCTORS:

1. UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN, ALL CONDUCTORS FOR GENERAL WIRING SHALL BE A MINIMUM OF 98% CONDUCTIVITY, STRANDED, SOFT DRAWN COPPER.

2. CONDUCTORS FOR LIGHTING AND RECEPTACLE BRANCH CIRCUITS NO. 8 AND SMALLER SHALL BE SIMILAR TO THE ABOVE EXCEPT SOLID COPPER MAY BE USED.

3. EXCEPT WHERE NOTED ON THE PLANS OR IN THIS SPECIFICATION, THE MINIMUM CONDUCTOR SIZE FOR BRANCH CIRCUITS SHALL BE NO. 12. MINIMUM SIZE MECHANICAL EQUIPMENT CONTROL CIRCUITS WHERE COVERED UNDER THIS SPECIFICATION SHALL BE NO. 14.

4. ALUMINUM CONDUCTORS ARE NOT ALLOWED UNLESS SPECIFICALLY CALLED OUT FOR ON DRAWINGS.

F. PULLING LUBRICANT: UL APPROVED.

G. CONNECTIONS:

1. NUMBER 8 AWG AND SMALLER, PRE-INSULATED SPRING TYPE CONNECTORS. THREADED OR CRIMP TYPES WILL NOT BE ACCEPTED. USE: SCOTCHLOCK, HYDENT, T&B OR APPROVED EQUAL.

2. TERMINALS FOR STRANDED CONDUCTORS 8 AWG AND SMALLER SHALL BE A PRE-INSULATED CRIMP TYPE.

3. LUGS AND CONNECTORS FOR CONDUCTORS 6 AWG AND LARGER SHALL BE COMPRESSION TYPES OF ONE PIECE TUBULAR CONSTRUCTION WITH FLAT RECTANGULAR TONGUES. TWO HOLE LUGS SHALL BE USED FOR SIZES 4/0 AWG AND LARGER. FITTINGS FOR COPPER CONDUCTORS SHALL BE TIN-PLATED COPPER. FITTINGS FOR ALUMINUM CONDUCTORS SHALL BE TIN-PLATED ALUMINUM, FACTORY FILLED WITH A CORROSION INHIBITING AND OXIDE PENETRATING COMPOUND.

4. CAST RESIN KITS SHALL BE SCOTCHLOCK SEALING PACKS FOR WIRE SIZE TO 10 AWG AND SCOTCHLOCK KITS FOR LARGER SPLICES AS RECOMMENDED BY 3M COMPANY.

2.12 WIRING DEVICES

A. WALL SWITCHES:

1. UREA BASE, TOGGLE TYPE WITH 20A 120/277V. A.C. RATING FOR FULL CAPACITY OF CONTACTS FOR INCANDESCENT OR FLUORESCENT LAMP LOADS. SWITCHES SHALL BE BACK AND SIDE WIRED, SELF GROUNDING. CONTACTS SHALL BE SILVER-CADMIUM OXIDE DESIGNED FOR QUIET OPERATION. COMPLY WITH FEDERAL SPECIFICATION W_S_896E WITH NEMA WD-1-3.02 AND UL 20 TESTS OR LATEST REVISIONS. COLOR AS SELECTED BY ARCHITECT OR OWNER.

2. SCHEDULE OF ACCEPTABLE TYPES:

SWITCH TYPE	COOPER	LEVITON	HUBBELL
TOGGLE SWITCH:			
SINGLE POLE	1221I	1221-2I	1221I
DOUBLE POLE	1222I	1222-2I	1222I
THREE WAY	1223I	1223-2I	1223I
FOUR WAY	1224I	1224-2I	1224I
DECORATOR ROCKER SWITCH:			
SINGLE POLE	7621V	5621-2I	DS120I
DOUBLE POLE	7622V		DS220I
THREE WAY	7623V	5623-2I	DS320I
FOUR WAY	7624V	5624-2I	DS420I
SPECIAL:			
SPDT CNTR OFF	4356	1285	1385
DPDT CNTR OFF	4361	1285	1385
DPDT (2-POS)		1276	
MOMENTARY:			
SPDT CNTR OFF	4354	4921	1557
DOOR JAMB: N.O.	4029	2968	NA
DOOR JAMB: N.C.	4030	2969	NA

3. WEATHERPROOF SWITCH (SP 125V, 10A) - HUBBELL #5121-0, OR APPROVED EQUAL, COMPLETE WITH SWITCH AND GASKET.

4. KEY SWITCHES: EQUIVALENT TO LISTED SWITCHES, ACTIVATED WITH REMOVABLE KEY.

5. SWITCH WITH PILOT LIGHT - COOPER #2221PL, OR APPROVED EQUAL.

B. CONVENIENCE OUTLETS:

1. GROUNDING, 20 AMPERE, 125 VOLT, NEMA 5-20R CONFIGURATION, NYLON HOUSING, SELF GROUNDING. COMPLY TO FEDERAL SPECIFICATION W-C-596E, NEMA WD1-4.02 AND UL 498 OR LATEST REVISIONS. COLOR AS SELECTED BY ARCHITECT OR OWNER.

2. SCHEDULE OF APPROVED TYPES:

OUTLET TYPE	COOPER	LEVITON	HUBBELL
20 A, 125 V; HEAVY USE DUPLEX	5362	5362A	5362
20 A, 125 V; DUPLEX	5362	5362A	5352
30 A, 125/250 V	5744N*	278	9430A
50 A, 125/250 V	5754N**	279	9450A
20 A, 125 V; ISOLATED GND	IG5362	5362IG	IG5362
20 A, 125 V, GFI	GF5342	6899GFI	GF53522.03

3. WEATHERPROOF RECEPTACLE "GFCI" - HUBBELL #5103-0, OR APPROVED EQUAL.

4. WEATHERPROOF AND LOCKABLE RECEPTACLE, WEATHERPROOF WITH PROVISION FOR PADLOCK-BRYANT #63101-PL, OR APPROVED EQUAL.

5. WEATHERPROOF RECEPTACLE INTENDED FOR UNATTENDED USE (IRRIGATION CONTROLLER OUTLET, SUMP PUMP OUTLET, ETC) - COVER PLATE SHALL BE PROVIDED WITH A POLYCARBONATE CORD CAP GASKET ENCLOSURE LISTED "SUITABLE FOR WET LOCATIONS WHILE IN USE". USE TAYMAC SAFETY OUTLET ENCLOSURE OR OR APPROVED EQUAL.

6. ISOLATED GROUND RECEPTACLE, NEMA 5-20R WITH AN ORANGE COLOR TRIANGLE LOCATED ON THE FACE OF THE RECEPTACLE PER NEC 406.2(D).

C. PLATES: PLATES SHALL BE SUPPLIED FOR EVERY LOCAL SWITCH, RECEPTACLE, ETC. PLATES SHALL BE STAINLESS STEEL OR NYLON TO MATCH WALL FINISH. FURNISH WITH ENGRAVED OR ETCHED DESIGNATIONS UNDER ANY ONE OF THE FOLLOWING CONDITIONS:

1. THREE GANG OR LARGER GANG SWITCHES.

2. SWITCHES IN LOCATIONS FROM WHICH THE EQUIPMENT OR CIRCUITS CONTROLLED CANNOT BE READILY SEEN.

3. WHERE SO INDICATED ON THE DRAWINGS.

4. AS REQUIRED ON ALL CONTROL CIRCUIT SWITCHES, SUCH AS HEATER CONTROLS, ETC.

5. WHERE RECEPTACLES ARE OTHER THAN STANDARD DUPLEX RECEPTACLES, TO INDICATE VOLTAGE AND PHASE.

6. PROVIDE COVER PLATES FOR ALL TELEPHONE AND COMPUTER OUTLETS. SEE TECHNOLOGY DRAWINGS TO VERIFY AND COORDINATE.

2.13 LIGHTING FIXTURES AND ACCESSORIES

A. LIGHT FIXTURES: SUPPLY LIGHT FIXTURES AS INDICATED ON FIXTURE SCHEDULE.

1. MANUFACTURER OF FIXTURES: ALL FIXTURES OF ONE TYPE SHALL BE OF ONE MANUFACTURER AND OF IDENTICAL FINISH AND APPEARANCE.

B. ACCESSORIES: ALL FIXTURES SHALL BE COMPLETE WITH ACCESSORIES, END REQUIRED FOR THE SPECIFIC INSTALLATION.

C. DIMMABLE LED DRIVERS

1. DIMMING RANGE: CONTINUOUS DIMMING FROM 100 PERCENT TO 10 PERCENT RELATIVE LIGHT OUTPUT UNLESS DIMMING CAPABILITY TO LOWER LEVEL IS INDICATED, WITHOUT FLICKER.

F. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE FIXTURES WITH CEILING TYPES AND SUPPLY VOLTAGES.

G. FIXTURES INSTALLED IN RATED CEILINGS SHALL BE LISTED FOR USE IN SUCH CEILINGS.

2.14 LIGHTING CONTROL

A. REFER TO DRAWINGS FOR SCHEDULES AND/OR SPECIFICATION NOTES.

2.15 OCCUPANCY SENSORS

A. REFER TO DRAWINGS FOR SCHEDULES AND/OR SPECIFICATION NOTES.

2.16 TERMINAL CABINETS

A. ALL TERMINAL CABINETS SHALL BE SIZED PER APPLICABLE ELECTRICAL CODE, U.L. LISTED, AND SUITABLE FOR THE CONDITIONS OF INSTALLATION. EACH CABINET SHALL BE PROVIDED HAVING SUFFICIENT VOLUME, PROPER DIMENSIONS, AND GEOMETRY FOR THE DEVICE(S) TO BE INSTALLED AND THE NUMBER OF CONDUITS AND WIRES AT THAT LOCATION.

B. ALL TERMINAL CABINETS SHALL BE PROVIDED WITH HINGED LOCKABLE DOORS SUITABLE TO THE CONDITIONS OF THE INSTALLATION.

C. CONSTRUCTION OF TERMINAL AND DEVICE CABINETS SHALL BE SIMILAR TO PANELBOARDS, FLUSH COMBINATION LATCH AND LOCK, RECESSED IN FINISHED AREAS, ETC. ALL LOCKS SHALL BE KEYED ALIKE BUT DIFFERENT FROM PANELBOARDS. ENCLOSURE SHALL BE NEMA 3 (RAIN AND DUST TIGHT) WHERE INSTALLED OUTDOORS UNLESS OTHERWISE SPECIFIED. A "PLAN POUCH" SHALL BE FACTORY ASSEMBLED TO THE INTERIOR OF THE CABINET DOOR SUITABLE FOR HOLDING A PLAN OF THE ASSOCIATED CONTROL SCHEME.

D. BUILDING SIGNAL TERMINAL CABINET SIZES SHALL BE SUFFICIENT FOR THE RACEWAYS INDICATED ON THE DRAWINGS AND FOR THE TERMINATION AND CONTROL EQUIPMENT REQUIRED. THE CONTRACTOR SHALL SIZE THE CABINETS TO PROVIDE AMPLE WIRING AND TERMINATION SPACE FOR THE EQUIPMENT, WIRES, AND CABLES INDICATED ON THE DRAWINGS. THE SIZES SHALL NOT BE LESS THAN THOSE INDICATED ON THE DRAWINGS. MINIMUM TERMINAL CABINET SIZE FOR ANY LOCATION SHALL BE 24"H X 24"W X 6"D WHERE NOT NOTED OTHERWISE.

E. A BACKBOARD OF 5/8" MINIMUM PLYWOOD, UNLESS NOTED ON PLANS, OR A METAL EQUIPMENT MOUNTING PANEL PROVIDED BY THE CABINET MANUFACTURER HAVING A SIZE APPROXIMATELY THE SAME AS THE DOOR OPENING SHALL BE INSTALLED WITHIN THE CABINET.

F. METAL DIVIDERS SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS. FINISH SAME AS PANEL INTERIOR.

G. TERMINAL STRIPS OR BLOCKS SHALL BE DOUBLE ROW STRAP SCREW WITH CLAMP OR TUBE-SCREW TYPE WITH WRITE-ON STRIP DOWN THE CENTER. THEY SHALL ACCEPT WIRE SIZES AS INDICATED ON THE DRAWINGS AND HAVE BARRIERS BETWEEN THE POLES. EXCEPT WHERE NOTED OTHERWISE, PROVIDE AT LEAST 10% SPARE TERMINAL POINTS. PUNCH BLOCKS SHALL BE USED TO TERMINATE COMMUNICATIONS CABLES AND OTHER SMALL SIZE WIRES. SEE TECHNOLOGY DRAWINGS TO VERIFY AND COORDINATE.

H. EXCEPT WHERE OTHERWISE SPECIFICALLY NOTED, PROVIDE ALL TERMINAL STRIPS, WIRING CHANNELS, MARKERS, AND OTHER DEVICES AS REQUIRED. SEE TECHNOLOGY DRAWINGS TO VERIFY AND COORDINATE.

PART 3 - EXECUTION

3.01 EXCAVATION AND BACKFILL

A. PERFORM EXCAVATION AND BACKFILL REQUIRED FOR ELECTRICAL INSTALLATION. RESTORE ALL SURFACES, ROADWAYS, WALKS, CURBS, WALLS, EXISTING UNDERGROUND INSTALLATIONS, ETC., CUT BY INSTALLATIONS TO ORIGINAL CONDITION IN AN ACCEPTABLE MANNER.

B. DIG TRENCHES STRAIGHT AND TRUE TO LINE AND GRADE, WITH BOTTOM SMOOTHED OF ANY ROCK POINTS. SUPPORT CONDUIT FOR ENTIRE LENGTH ON UNDISTURBED, ORIGINAL EARTH. MINIMUM CONDUIT DEPTH TO PIPE CROWN SHALL BE 24 INCHES BELOW FINISHED GRADE. CONSULT SERVING UTILITY COMPANIES FOR MINIMUM UTILITY CONDUIT DEPTHS.

C. BACKFILL AND TAMP IN SIX-INCH LAYERS WITH EARTH FROM EXCAVATION TO FINISH GRADE. MAKE ALLOWANCES FOR SETTLEMENT.

3.02 INSTALLATIONS

A. CIRCUIT BREAKERS AND FUSES ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS. FUSES MUST SEAT SOLIDLY WITH ALL CONTACT SURFACES BEARING EVENLY. REPLACE WARPED, WEAK, OR BROKEN FUSE CLAMP TERMINALS. DO NOT ATTEMPT TO REPAIR OR BEND BACK INTO POSITION.

3.03 SWITCHBOARD INSTALLATION

A. INSTALL A CONCRETE PAD THAT IS 3 INCHES HIGHER THAN SURROUNDING GRADE OR FLOOR, UNLESS NOTED ON PLAN. INSTALL ANCHORS FOR EACH SECTION PROVIDED. SET THE SWITCHBOARD IN POSITION AND LEVEL THE ENTIRE UNIT. RIGIDLY SECURE THE SWITCHBOARD TO THE PAD AND GROUT AROUND THE BASE AS REQUIRED TO MAKE WATERTIGHT SEAL. PROVIDE SUPPORT FOR CABLES ENTERING THE SWITCHBOARD AS REQUIRED FROM POINT OF ENTRY TO THE TERMINATION POINT.

B. WHERE THE SWITCHBOARD IS INSTALLED OUTDOORS AND EXPOSED TO THE WEATHER, FORM A 1/4" MINIMUM DRAIN PATH FROM EACH SECTION OF THE SWITCHBOARD INTERIOR TO GRADE LEVEL BEYOND THE PAD. THIS MAY BE ACCOMPLISHED BY PLACING A 1/4" PLASTIC OR COPPER TUBE WITHIN THE PAD FORM PRIOR TO CONCRETE POUR. SECURE THE TUBE AGAINST MOVEMENT DURING THE POUR. CUT TUBES OFF FLUSH WITH PAD AFTER SWITCHBOARD IS SET.

C. THE GROUND FAULT COMPONENTS SHALL BE TESTED BY A QUALIFIED TECHNICIAN PRIOR TO ENERGIZING SWITCHBOARD.

D. NEATLY ARRANGE WIRING WITHIN THE EQUIPMENT. BUNDLE AND WRAP CONDUCTORS #8 AWG AND SMALLER WITH PLASTIC WIRE TIES.

E. EVERY CONDUIT ENTERING THE SWITCHBOARD SHALL BE IDENTIFIED, AND 100% ACCESSIBLE WITH INSULATED BUSHING INSTALLED.

F. FIELD ADJUSTMENTS:

1. THE CONTRACTOR SHALL PERFORM FIELD ADJUSTMENTS OF THE PROTECTIVE DEVICES AS REQUIRED TO PLACE THE EQUIPMENT IN FINAL OPERATING CONDITION. THE SETTINGS SHALL BE IN ACCORDANCE WITH THE ACCEPTED SHORT-CIRCUIT STUDY, PROTECTIVE DEVICE EVALUATION STUDY, AND PROTECTIVE DEVICE COORDINATION STUDY.

2. NECESSARY FIELD SETTINGS OF DEVICES, ADJUSTMENTS, AND MINOR MODIFICATIONS TO EQUIPMENT TO ACCOMPLISH CONFORMANCE WITH AN ACCEPTED SHORT CIRCUIT AND PROTECTIVE DEVICE COORDINATION STUDY SHALL BE CARRIED OUT BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

3.04 PANELBOARD INSTALLATION

A. PANELBOARDS ARE TO BE INSTALLED PLUMB AND RIGIDLY SECURED TO STRUCTURE WITH WOOD SCREWS, MACHINE BOLTS AND CONCRETE ANCHORS, OR MACHINE BOLTS AND LOCKNUTS AS APPLICABLE. INSTALL WITH TOP OF PANELBOARD AT 6'-6" ABOVE FLOOR.

B. NAME PLATES SHALL BE INSTALLED AS INDICATED IN THIS SECTION.

C. RECESSED PANELBOARDS SHALL HAVE COVERS FLUSH WITH THE WALL. INSTALL 1-SPARE 3/4" EMPTY CONDUIT FOR EACH (3) SINGLE POLE SPACES OR SPARE CIRCUIT BREAKER POLES. STUB AND CAP IN ACCESSIBLE ATTIC SPACE, ABOVE THE CEILING, OR BELOW THE FLOOR AS APPLICABLE. WHERE BOTH ACCESSIBLE FLOOR AND ATTIC SPACES ARE AVAILABLE, STUB SPARE CONDUITS HALF EACH WAY (ONE EACH WAY MINIMUM). IDENTIFY SPARE CONDUITS. WHERE BUILDING CONSTRUCTION IS FIRE RATED, ENCLOSE RECESSED PANEL IN 5/8" GYPSUM BOARD AS DIRECTED BY THE ARCHITECT.

D. COORDINATE FRAMING REQUIREMENTS WITH OTHERS TO ACCOMMODATE PANELBOARD LOCATIONS WITHOUT REQUIRING FRAMING MEMBERS TO BE CUT AWAY FOR INSTALLATION. PROVIDE ADEQUATE BLOCKING FOR SURFACE MOUNTED PANELBOARDS AS APPLICABLE.

3.05 RACEWAY INSTALLATION

A. CONDUIT APPLICATION:

1. MINIMUM SIZE OF CONDUIT SHALL BE 1/2 INCH. IN NO CASE SHALL THE CONDUIT SIZE BE SMALLER THAN THAT SHOWN ON THE DRAWINGS.

2. PVC CONDUIT, MINIMUM SIZE 1", MAY ONLY BE INSTALLED BENEATH GRADE OR IN CONCRETE; A MAXIMUM OF 4 FEET. PVC MAY BE INSTALLED IN ELECTRICAL ROOMS OR CONCEALED IN STUD SPACES WHEN DESIGNATED ON PLANS. PVC SHALL NOT BE INSTALLED IN FIRE RATED AREAS OR WHERE SUBJECT TO MECHANICAL DAMAGE. THE PVC IS TO EXTEND ONLY FROM THE CONCRETE SLAB TO THE BOTTOM OF THE SWITCHBOARD, PANELBOARD, OR SIMILAR EQUIPMENT. (CEC 300.5, 300.50, AND CEC 352).

3. ALL CONDUIT RUNS EXPOSED ABOVE GRADE AND UP TO 8 FEET ABOVE GRADE SHALL BE RIGID STEEL OR IMC., EXCEPT AS NOTED IN CONDUIT APPLICATIONS ITEMS 2 AND 4.

4. ELECTRICAL METALLIC TUBING (EMT) MAY BE INSTALLED IN PROTECTED ATTIC SPACES AND HOLLOW STUD SPACES. IT MAY BE EXPOSED ON THE SURFACE OF ELECTRICAL AND MECHANICAL ROOMS WHERE DESIGNATED ON THE PLANS.

5. FLEXIBLE METALLIC CONDUIT (MAXIMUM 6 FEET LENGTH) SHALL BE USED ONLY WHERE REQUIRED FOR CONNECTION TO MOTORS, ETC., OR WITH THE APPROVAL OF THE OWNER WHERE ABSOLUTELY NECESSARY DUE TO STRUCTURAL CONDITIONS.

6. BOXES INSTALLED INDOORS OR EMBEDDED IN CONCRETE SHALL BE GALVANIZED STEEL TYPE. BOXES INSTALLED EXPOSED OR OUTDOORS SHALL BE GALVANIZED CAST STEEL WITH THREADED HUBS.

7. CONDUIT FOR POWER COMPANY 12 KV PRIMARY LINES SHALL BE INSTALLED 54" BELOW GRADE.

8. BRANCH CIRCUIT CONDUITS UNDER SLAB SHALL BE SEPARATED BY AT LEAST ONE INCH. IN ALL CASES TWO OR MORE CONDUITS INSTALLED IN A COMMON CONCRETE ENCASEMENT SHALL BE SEPARATED BY AT LEAST THREE INCHES.

9. CONDUIT SHALL BE SECURELY FASTENED IN PLACE SO THAT ABSOLUTELY NO SHIFTING WILL OCCUR DURING PLACING OF CONCRETE ENCASEMENT.

10. JOINTS IN ALL CONDUIT INSTALLED IN CONCRETE, OR EXPOSED TO WEATHER, SHALL BE LIQUID AND GAS TIGHT.

B. CONDUIT LOCATION:

1. ALL CONDUITS SHALL BE RUN CONCEALED IN ALL FINISHED AREAS.

2. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED PARALLEL TO OR AT RIGHT ANGLES TO THE STRUCTURAL MEMBERS.

3. EXPOSED CONDUIT STUBBING UP THROUGH THE FLOOR INTO THE BOTTOM OF EXPOSED PANELS, CABINETS OR EQUIPMENT SHALL BE LINED UP, PROPERLY SPACED AND SHALL BE STRAIGHT AND PLUMB. CONDUITS SHALL BE INSTALLED AT SUFFICIENT DEPTH BELOW THE FLOOR TO ELIMINATE ANY PART OF THE BEND ABOVE.

4. MAINTAIN 12-INCH SEPARATION BETWEEN POWER AND INTERCOMMUNICATION CABLES.

5. CONDUIT SHALL BE KEPT AT LEAST 6" FROM THE COVERING ON HOT WATER PIPES, AND 18" FROM THE COVERING ON FLUES AND BREECHINGS.

C. CONDUIT SUPPORT:

1. CONDUIT SHALL BE SUPPORTED WITH FACTORY MADE PIPE STRAPS OR SUSPENDED WITH PIPE HANGERS OR RACKS.

2. HANGER STRAPS, RODS, OR PIPE SUPPORTS UNDER WOOD SHALL BE ATTACHED TO THE WOOD STRUCTURE USING BOLTS, LAG BOLTS, OR LAG SCREWS. ATTACH TO TRUSSES USING BEAM CLAMPS.

3. CONDUITS, WHICH ARE SUSPENDED ON RODS MORE THAN 2 FEET LONG SHALL BE RIGIDLY BRACED TO PREVENT HORIZONTAL MOTION OR SWAYING.

4. CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 10 FEET AND IN ALL CASES WITH A SUPPORT NOT MORE THAN 3 FEET FROM THE OUTLET AND AT ANY POINT WHERE IT CHANGES IN DIRECTION.

5. PERFORATED STRAP AND PLUMBER'S TAPE SHALL NOT BE USED IN THE SUPPORT OF CONDUITS.

6. CONDUIT PLACED AGAINST CONCRETE OR MASONRY ABOVE GROUND SHALL BE FASTENED TO THE CONCRETE WITH PIPE STRAPS OR ONE-SCREW CONDUIT CLAMPS ATTACHED TO THE CONCRETE BY MEANS OF EXPANSION ANCHORS AND SCREWS. EXPANDERS AND SHIELDS SHALL BE STEEL OR MALLEABLE IRON. SIZES OF SHIELDS AND BOLTS SHALL BE SUCH THAT THE PROOF TEST LOAD WILL NOT BE LESS THAN FOUR TIMES THE ACTUAL WORKING LOAD.

D. CONDUIT BENDS:

1. FIELD BENDS OR OFFSETS ARE PERMITTED IN 1 INCH AND SMALLER CONDUIT ONLY.

2. ELBOWS IN 1-1/4 INCH CONDUIT AND LARGER SIZES SHALL BE FACTORY MADE.

3. MINIMUM RADIUS BEND FOR TELEPHONE SERVICE ENTRANCE CONDUIT SHALL BE 36". SEE TECHNOLOGY DRAWINGS TO VERIFY AND COORDINATE.

4. CONDUIT BENDS, OTHER THAN FACTORY ELBOWS, SHALL HAVE A RADIUS OF NOT LESS THAN 10 TIMES THE INTERNAL DIAMETER OF THE CONDUIT.

5. 90 DEGREE BENDS IN PVC LARGER THAN 2 INCHES SHALL BE STEEL.

6. USE OF A BLOW TORCH TO BEND CONDUIT IS SPECIFICALLY PROHIBITED.

E. EMPTY CONDUITS: ALL CONDUITS, WHICH ARE INSTALLED AT THIS TIME AND LEFT EMPTY FOR FUTURE USE OR WHERE CONDUCTORS ARE TO BE INSTALLED BY A REPRESENTATIVE OF THE TELEPHONE COMPANY SHALL HAVE A 3/16 INCH POLYPROPYLENE ROPE LEFT IN PLACE FOR FUTURE USE.

F. CONDUIT PROTECTION:

1. CAP ALL CONDUIT DURING CONSTRUCTION BY MEANS OF MANUFACTURED SEALS. SWAB OUT ALL CONDUITS BEFORE PULLING IN WIRE.

2. ALL CONDUIT SYSTEMS MUST BE INSTALLED COMPLETE BEFORE CONDUCTORS ARE PULLED IN.

G. OUTLET BOXES:

1. BOXES MUST BE ACCURATELY PLACED FOR FINISH, INDEPENDENTLY AND SECURELY SUPPORTED BY MANUFACTURED BOX HANGERS. FIXTURE OUTLETS SHALL BE LOCATED SYMMETRICALLY.

2. LOCAL SWITCHES SHALL BE LOCATED +46 INCHES ABOVE THE FLOOR (TOP OF BOX) UNLESS OTHERWISE NOTED.

3. CONVENIENCE OUTLETS SHALL BE LOCATED +16 INCHES ABOVE THE FINISHED FLOOR (BOTTOM OF BOX) UNLESS OTHERWISE NOTED.

4. CHANGES IN OUTLET LOCATIONS OF FIXTURES, WALL SWITCHES, RECEPTACLES, AND SPECIAL EQUIPMENT FOUND NECESSARY DUE TO INTERFERENCE WITH STRUCTURE, PIPES, DUCTS, ETC. SHALL BE REPORTED TO THE OWNER FOR APPROVAL.

5. ALL BOXES SHALL BE OF PROPER CODE SIZE FOR THE NUMBER OF WIRES OR CONDUITS PASSING THROUGH OR TERMINATING THEREIN, BUT IN NO CASE SHALL ANY BOX BE LESS THAN 4" SQUARE, UNLESS SPECIFICALLY NOTED AS SMALLER. COVERS SHALL BE OF THE TYPES MOST SUITABLE FOR THE FIXTURE OR DEVICE USED AT THE OUTLET, AND SHALL FINISH FLUSH WITH PLASTER OR OTHER FINISHED SURFACE. APPROVED FACTORY MADE KNOCKOUT SEALS SHALL BE USED IN ALL BOXES WHERE KNOCKOUTS ARE NOT INTACT. BOXES IN CONCRETE SHALL BE A TYPE, WHICH WILL ALLOW THE PLACING OF CONDUIT WITHOU

ELECTRICAL SPECIFICATIONS (CONTINUED)

3.07 LIGHTING FIXTURE INSTALLATION

A. MOUNTING:

1. UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL LIGHTING FIXTURES SHALL BE PLACED SYMMETRICALLY WITH RESPECT TO THE CEILING TILE PATTERN OR OTHER ARCHITECTURAL CEILING AND WALL MODULES.

B. SUPPORT:

1. IN SUSPENDED GRID LAY-IN CEILINGS, IN ADDITION TO SUPPORTING FROM CEILING TEES, SUPPORT ALL LUMINAIRE HOUSINGS FROM STRUCTURAL MEMBERS WITH A MINIMUM OF FOUR NO.12 GALVANIZED WIRES FOR EACH LUMINAIRE.

2. ALL FIXTURE MOUNTING SHALL MEET SEISMIC REQUIREMENTS OF THE STATE OF CALIFORNIA.

3. PROVIDE SUPPORT FOR ALL FIXTURES FROM (OR ON) BUILDING STRUCTURAL WALL MEMBERS. SUPPORT FROM CEILING TILES ONLY IS SPECIFICALLY PROHIBITED.

C. FIRE PROTECTION:

1. ALL RECESSED FIXTURES SHALL BE PROTECTED FROM CONTACT WITH COMBUSTIBLE BUILDING MATERIALS, SUCH AS WOOD FRAMING MEMBERS AND INSULATION VAPOR BARRIERS, AS REQUIRED BY APPLICABLE CODES.

2. FIXTURES INSTALLED IN RATED 1-HOUR CEILINGS SHALL BE ENCASED BY A 1-HOUR ENCLOSURE TO MAINTAIN THE FIRE INTEGRITY OF THE CEILING. ALL FIXTURE ENCLOSURES WILL COMPLY WITH UL FIRE RESISTANCE DIRECTORY DESIGN REQUIREMENTS.

D. CLEANING UP:

1. ALL FIXTURES SHALL BE LEFT IN A CLEAN CONDITION, FREE OF DIRT AND DEFECTS, BEFORE ACCEPTANCE BY THE OWNER.

3.08 RECEPTACLE INSTALLATION

A. ALL RECEPTACLES IN FLUSH TYPE OUTLET BOXES SHALL BE INSTALLED WITH A BONDING JUMPER FOR GROUND BETWEEN THE GROUNDED OUTLET BOX AND THE RECEPTACLE GROUND TERMINAL, EXCEPT WHERE RECEPTACLE IS EQUIPPED WITH A UL APPROVED SELF-GROUNDING DEVICE. GROUNDING THROUGH THE RECEPTACLE MOUNTING STRAPS IS NOT ACCEPTABLE. BONDING JUMPER SHALL BE ATTACHED AT EACH OUTLET TO THE BACK OF THE BOX USING DRILLED AND TAPED HOLES AND WASHED HEAD SCREWS 6/32" OR LARGER. FOR RECEPTACLES IN SURFACE MOUNTED OUTLET BOXES DIRECT METAL TO METAL CONTACT BETWEEN RECEPTACLE MOUNTING STRAP (IF IT IS CONNECTED TO THE GROUNDING CONTACTS) AND OUTLET BOX MAY BE USED.

3.09 TERMINAL CABINET INSTALLATION

A. CABINETS ARE TO BE INSTALLED PLUMB AND RIGIDLY SECURED TO STRUCTURE WITH WOOD SCREWS, BOLTS AND CONCRETE ANCHORS, OR MACHINE BOLTS AND LOCKNUTS AS APPLICABLE.

B. RECESSED CABINETS SHALL HAVE COVERS FLUSH WITH THE WALL. WHERE BUILDING CONSTRUCTION IS FIRE RATED, ENCLOSE RECESSED CABINET IN 5/8" GYPSUM BOARD AS DIRECTED BY THE ARCHITECT.

C. INSTALL (2) 1" EMPTY CONDUITS FROM ALL RECESSED CABINETS TO ACCESSIBLE SPACE ABOVE CEILINGS AND/OR BELOW FLOOR AS APPLICABLE (4 CONDUITS IF BOTH CAVITIES EXIST). IDENTIFY THE EMPTY CONDUITS.

D. COORDINATE FRAMING REQUIREMENTS WITH OTHERS TO ACCOMMODATE CABINET LOCATIONS WITHOUT REQUIRING FRAMING MEMBERS TO BE CUT AWAY FOR INSTALLATION. PROVIDE ADEQUATE BLOCKING FOR SURFACE MOUNTED CABINETS AS APPLICABLE.

E. FOR CONTROL EQUIPMENT CABINETS, A DRAWING OF THE CONTROL SCHEME SHALL BE PLACED IN THE DOOR RACK PROVIDED.

F. ALL CONDUCTORS ENTERING OR LEAVING THE CABINET SHALL BE TERMINATED ON TERMINAL STRIPS OR PUNCH BLOCKS. EACH TERMINAL POINT SHALL BE LABELED, AND ALL WIRES WITHIN THE ENCLOSURE SHALL BE IDENTIFIED WITH BRADY OMNI-GRIP WIRE MARKERS OR OTHER SIMILAR METHOD.

G. WIRES SHALL BE NEATLY ARRANGED WITHIN THE CABINET AND SECURED WITH TY-RAP OR RUN IN PANDUIT WIRE WAYS AS REQUIRED OR AS INDICATED ON THE DRAWINGS.

3.10 GROUNDING AND BONDING

A. THE ENTIRE ELECTRICAL RACEWAY SYSTEM SHALL FORM A CONTINUOUS METALLIC ELECTRICAL CONDUCTOR FROM SERVICE POINT TO EVERY OUTLET AND SHALL BE GROUNDED BY CONNECTION TO THE MAIN SERVICE GROUND.

B. A GROUND WIRE SHALL BE INSTALLED IN ALL PVC AND FLEXIBLE CONDUIT.

C. ALL RACEWAY SYSTEMS, SUPPORTS, CABINETS, SWITCHBOARDS, CONTROL EQUIPMENT, MOTOR FRAMES, LIGHTING FIXTURES, AND UTILIZATION APPARATUS SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED.

D. WHERE CABINETS ARE FURNISHED WITH GROUNDING BUS, ALL REQUIRED BONDING CONDUCTORS SHALL CONNECT THERETO, EACH WITH A SEPARATE LUG.

E. ALL GROUNDING CONDUCTORS ARE TO BE COPPER ONLY. ALUMINUM WILL NOT BE ALLOWED.

3.11 TESTS

A. UPON COMPLETION OF THE WORK AND ADJUSTMENTS OF ALL EQUIPMENT, ALL SYSTEMS SHALL BE TESTED TO DEMONSTRATE THAT ALL EQUIPMENT FURNISHED, INSTALLED, AND/OR CONNECTED UNDER THE PROVISIONS OF THESE SPECIFICATIONS SHALL FUNCTION IN THE REQUIRED MANNER.

B. ALL SYSTEMS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS, AND BE FREE FROM MECHANICAL AND ELECTRICAL DEFECTS. ALL CIRCUITS SHALL BE TESTED FOR THE PROPER NEUTRAL CONNECTION, AND ROTATION OF MOTORS.

C. WHERE TESTS INDICATE FAULTY INSTALLATION OR OTHER DEFECTS, THEY SHALL BE LOCATED, REPAIRED, AND RETESTED AT THE CONTRACTOR'S EXPENSE.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-122322 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/26/2025

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

DATE
- ○ DSA PLAN CHECK
- ○ DSA BACK CHECK
- ○ BIDDING
- ○ CONSTRUCTION

KEY PLAN

HUMBOLDT COUNTY
OFFICE OF EDUCATION
901 MYRTLE AVENUE
EUREKA, CA 95501

CONSTRUCTION DESIGN

HUMBOLDT COUNTY
OFFICE OF EDUCATION
FRANKLIN SITE GENERATOR
901 MYRTLE AVENUE
EUREKA, CALIFORNIA 95501

ELECTRICAL
SPECIFICATIONS

Date	Project Number
01/09/2025	23051
Application Number	Drawing Number
01-122322	E3.3
Drawn: LPCE	Checked: LPCE

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