MILLARD MCCOLLAM ELEMENTARY SCHOOL

3311 LUCIAN AVE.,
SAN JOSE, CA 95127
ALUM ROCK UNION SCHOOL DISTRICT

DSA File No. 43-4
App. No. 01-120631
PTN. 69369-91



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TOTAL SHEET COUNT: 111

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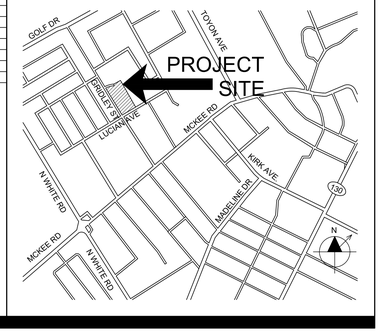
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VICINITY MAP



DSA REQUIREMENTS

1. ALL WORK SHALL CONFORM TO THE 2019 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 CONSTRUCTION CHANGE DOCUMENT (CCD) 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 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 C.C.R.
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 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 REQUIRED 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 SECTION 11B-303.
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 LABORATORY. COSTS FOR 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 2 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. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AN IN COMPLIANCE WITH THE ENERGY CODE.
    A. LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).
    B. MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECT SUBMITTED ON OR AFTER OCTOBER 1, 2021.
    C. ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TEST SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.
    D. 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.
    E. THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, 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.
    F. PROJECT INSPECTOR WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.
19. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION WILL BE ENFORCED IN ACCORDANCE WITH CBC & CFC CHAPTER 33.

DEFERRED APPROVALS

1. NONE

ADD ALTERNATES

1. NONE

CODES AND REGULATIONS

APPLICABLE STATE CODES AND REGULATIONS WITH LATEST AMENDMENTS AND SUPPLEMENTS:

1. 2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 CCR
2. 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 IBC & CALIFORNIA AMENDMENTS)
3. 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2017 NATIONAL ELECTRICAL CODE & CALIFORNIA AMENDMENTS)
4. 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2018 UNIFORM MECHANICAL CODE & CALIFORNIA AMENDMENTS)
5. 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 UNIFORM PLUMBING CODE & CALIFORNIA AMENDMENTS)
6. 2019 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CBSC
7. 2019 CALIFORNIA HISTORICAL BUILDING CODE, PART 8, TITLE 24 CCR
8. 2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE & CALIFORNIA AMENDMENTS).
9. 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
10. 2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 CCR
11. TITLE 8 CCR, CH. 4, SUB-CH. 6 - ELEVATOR SAFETY ORDERS
12. TITLE 19 CCR, PUBLIC SAFETY, SFM REGULATIONS
13. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE PART 11, TITLE 24

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), 2016 EDITION
17. NFPA 24, PRIVATE FIRE MAINS (CA AMENDED), 2022 EDITION
18. NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED), 2022 EDITION
19. NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVES, 2019 EDITION
20. NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, 2018 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2022 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

PROJECT DESCRIPTION

THE PROJECT INCLUDES HVAC REPLACEMENT IN EXISTING BUILDINGS: ADMINISTRATION/KINDERGARTEN, CLASSROOMS - A,B,C,D, MULTI-PURPOSE, AND ASSOCIATED SITE WORK RELATED TO THE INSTALLATION OF THE CONDENSING UNITS/PUMPS INCLUDING PLUMBING, MECHANICAL, AND ELECTRICAL WORK. INTERIOR LIGHTING AND FIRE ALARM UPGRADES IN BUILDINGS: ADMINISTRATION/KINDERGARTEN, CLASSROOMS - A,B,C,D & MULTI-PURPOSE. ACCESSIBILITY UPGRADES TO RESTROOMS IN ADMINISTRATION/KINDERGARTEN AND PARKING.

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. 01-120631
File No. 43-4

[X] The drawings or sheets listed on the cover or index sheet (all S, M, E, P, and FA 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* 04/24/2023

Architect or Engineer designated to be in general responsible charge.

Brian P. Whitmore
Print Name

C 30345 — ***License Number***
09-30-2023 — ***Expiration Date***

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

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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.
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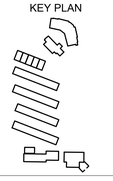
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

COVER SHEET

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	A0.1
Drawn KT	Checked CD

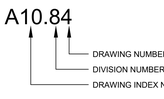
DRAWING DISCIPLINE PREFIX

A. ARCHITECTURAL
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D. INTERIOR DESIGN / FURNITURE
E. ELECTRICAL
FA. FIRE SPRINKLER SYSTEM
FP. FIRE PROTECTION
FS. DIETARY / FOOD SERVICE
G. GRAPHICS
H. HAZARDOUS MATERIALS
L. LANDSCAPING
M. MECHANICAL
P. PLUMBING
S. STRUCTURAL
T. TELECOMMUNICATION

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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).

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DIVISION 44 POLLUTION AND WASTE CONTROL EQUIPMENT
DIVISION 45 INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT
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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 CONTRACTORS 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. REQUESTS FOR SUBSTITUTIONS SHALL BE MADE IN ACCORDANCE WITH GENERAL CONDITIONS & DIVISION 1
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.
   H. DOOR AND WINDOW OPENINGS SHALL BE LOCATED ADJACENT TO PERPENDICULAR WALL UNLESS DIMENSIONED OTHERWISE.
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/HER OPERATIONS AT THE CONCLUSION OF THE INSTALLATION. HE/SHE 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.
13. 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 DRAWING 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 MATERIALS AND 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 ON 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. THIS DRAWING SET SHALL BE USED IN CONJUNCTION WITH THE CSI FORMAT PROJECT MANUAL PUBLISHED IN BOOK FORM, COMBINED, THEY ARE THE "CONTRACT DOCUMENTS".
20. 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.
21. 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.
22. ALL EQUIPMENT/CABINETS SHALL BE FABRICATED FROM FIELD VERIFIED DIMENSIONS AND APPROVED SHOP DRAWINGS. COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT WITH THIS WORK.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE AND COSTS ATTRIBUTED TO RAIN WATER DAMAGE DURING THE DURATION OF THIS PROJECT.
24. 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.
25. MAINTAIN EXISTING PEDESTRIAN ACCESS ALONG EXISTING ADJACENT STREETS.
26. ALL PUBLIC IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST ADOPTED CITY/COUNTY STANDARDS.
27. ALL TYPICAL DETAILS SHALL APPLY UNLESS NOTED OTHERWISE.
28. 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.
29. 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.
30. 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.
31. PROVIDE ACCESS DOORS REQUIRED FOR ACCESS TO CONCEALED MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT.
32. ALL NOTED WORK IS UNDERSTOOD TO BE NEW, UNLESS LABELED AS "(E)" OR "EXISTING"
33. MATERIALS AND THEIR INSTALLATION SHALL COMPLY WITH APPLICABLE CODES, STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
34. EXISTING ACCESSIBLE ROUTES TO ALL FACILITIES AND BUILDING THAT ARE OPERATIONAL DURING CONSTRUCTION PHASE SHALL REMAIN UNOBSTRUCTED, SAFE AND USABLE BY PEOPLE WITH DISABILITIES.
35. "N.I.C." (NOT INCLUDED IN CONTRACT) ITEMS SHOWN IN PLANS, IF APPLICABLE, MUST BE SUBMITTED UNDER A SEPARATE APPLICATION FOR REVIEW AND APPROVAL, IF NOT EXEMPTED BY DSA IR A-22.
36. PER CBC SECTION 11B-401 "ALL DIMENSIONS ARE SUBJECT TO CONVENTIONAL INDUSTRY TOLERANCES EXCEPT WHERE THE REQUIREMENT STATED AS A RANGE WITH SPECIFIC MINIMUM AND MAXIMUM END POINTS"
    A) WHERE CODE SPECIFIES A MAXIMUM OR MINIMUM DIMENSION, THE DIMENSION INDICATED ON THE PLANS NEED TO BE:
        - AS MAXIMUM OR MINIMUM ACCORDINGLY OR
        - PROVIDE ABSOLUTE DIMENSION THAT EXCEEDS CODE MINIMUM OR MAXIMUM REQUIREMENTS WITH APPROPRIATE INDUSTRY CONSTRUCTION TOLERANCE.
    B) WHERE CODE SPECIFIES A DIMENSION AS A RANGE THE DIMENSION INDICATED ON THE PLANS SUGGESTED TO BE:
        - AS RANGE PER CODE OR
        - ABSOLUTE MID-RANGE CODE PRESCRIBED DIMENSION.

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 SHALL COMPLY WITH 2019 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 PROVISION 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 PROVISION 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:
      B.A. NSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.
      B.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
      B.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.
      B.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).
      B.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.
      B.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.
      B.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
10. SPECIFICATIONS FOR AUTOMATIC END WELDED STUDS
   A. MATERIAL: AUTOMATIC END WELDED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED SHEAR CONNECTOR OR ANCHOR STUDS (OR APPROVED EQUAL). STUDS SHALL BE MANUFACTURED OF G-1015 COLD ROLLED STEEL WHICH CONFORMS TO ASTM A108.
   B. INSTALLATION: THE STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" AND UNDER, AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE WELDING INSPECTOR.
   C. INSPECTION AND TESTS: INSPECTION, IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 2212A.3 AND 1704A.3.1 OF ALL THE SHOP AND FIELD WELDING OPERATIONS FOR THE AUTOMATIC END WELDED STUDS SHALL BE MADE BY A QUALIFIED WELDING INSPECTOR (APPROVED BY THE DIVISION OF THE STATE ARCHITECT). THE TYPE AND CAPACITY OF THE WELDING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CHECKED AND APPROVED BY A WELDING INSPECTOR.
   D. AT THE BEGINNING OF EACH DAY'S WORK, A MINIMUM OF TWO TEST STUD WELDS SHALL BE MADE WITH THE EQUIPMENT TO BE USED TO METAL WHICH IS THE SAME AS THE ACTUAL WORK PIECE. THE TEST STUDS SHALL BE BEND TEST BY STRIKING THEM WITH A SUBJECTED TO A 900 HEAVY HAMMER. AFTER THE ABOVE TEST, THE WELD SECTION SHALL NOT EXHIBIT ANY TEARING OUT OR CRACKING.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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DATE SIGNED: 04/24/2023

GENERAL NOTES
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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.
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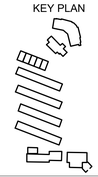
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

GENERAL NOTES

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number A0.2
Drawn KT	Checked CD

ARCHITECTURAL DRAWINGS ABBREVIATIONS

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

WORK POINT

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

MATCH LINE AND AREA DESIGNATOR
SHADED PORTION IS THE SIDE CONSIDERED

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

WINDOW, STOREFRONT, OR CURTAINWALL
SEE WINDOW SCHEDULE

DOOR NUMBER, SEE DOOR SCHEDULE

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

REVISION

SIGNAGE TAG

CASEWORK TAG
102 = ARCHITECTURAL WOODWORK STANDARD (AWS) NUMBER
W x H x L = WIDTH, HEIGHT, AND LENGTH
~ = COMMENTS

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

PANIC HARDWARE 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: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED 04/24/2023	

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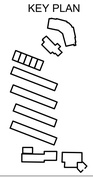
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

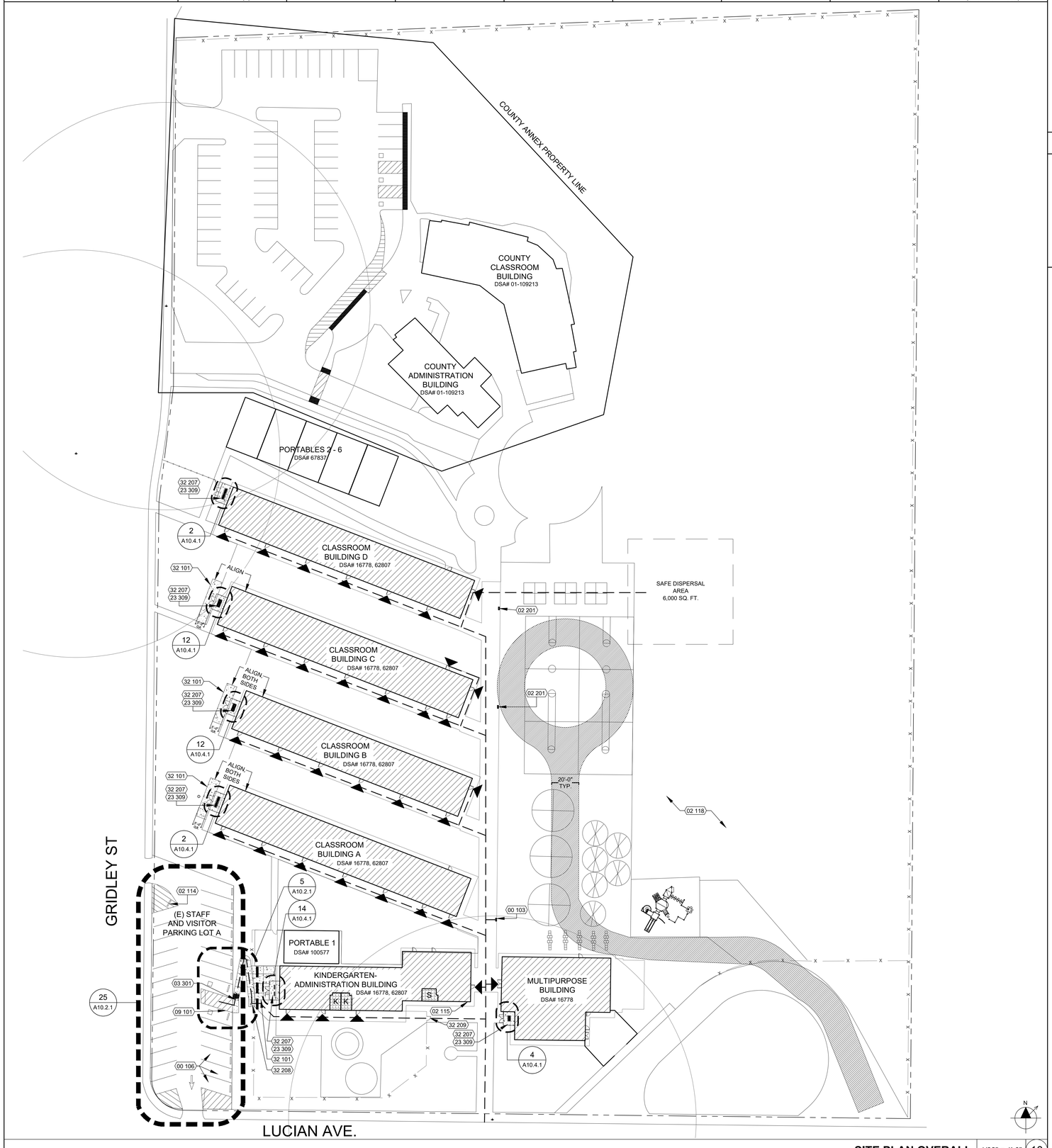
MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ARCHITECTURAL SYMBOLS AND ABBREVIATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A0.3
Drawn / Checked	
KT / CD	

CODE ANALYSIS

BUILDING NAME	KINDERGARTEN/ADMIN.	MULTI-PURPOSE	BUILDING 'A' CLASSROOMS	BUILDING 'B' CLASSROOMS	BUILDING 'C' CLASSROOMS	BUILDING 'D' CLASSROOMS	PORTABLE 'P1'	PORTABLES 'P2-P6'
OCCUPANCY (CBC SECTION 302)	B/E	A-3	E	E	E	E	E	E
TYPE OF CONSTRUCTION	V-B	V-B	V-B	V-B	V-B	V-B	V-B	V-B
SPRINKLERS	NO	NO	NO	NO	NO	NO	NO	NO
ALTERNATIVE PROTECTION (CBC 903.1.1)	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
SEPARATED? (CBC TABLE 508.4)	YES	NO	NO	NO	NO	NO	NO	NO
EXISTING BUILDING STORIES / BUILDING HEIGHT	1 / 15'-0"	1 / 20'-0"	1 / 16'-0"	1 / 16'-0"	1 / 16'-0"	1 / 16'-0"	1 / 11'-0"	1 / 11'-0"
TOTAL BUILDING AREA	2,888 SF (B) 1,835 SF (E)	4,303 SF	5,707 SF	5,355 SF	5,707 SF	5,715 SF	960 SF	960 SF (EACH PORTABLE)



SITE PLAN OVERALL 1/32" = 1'-0" 10

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT

(BASED ON DSA PROCEDURE PR 15-01)

THE P.O.T IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T THAT WERE DETERMINED TO BE NONCOMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF P.O.T ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECTS BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

ACC. PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP-RESISTANT. CROSS SLOPE SHALL NOT BE STEEPER THAN 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT BE STEEPER THAN 1:20. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND FREE OF OBJECTS PROTRUDING MORE THAN 4" FROM THE WALL, ABOVE 27" AND LESS THAN 80" ABOVE THE FLOOR. ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

KEY NOTES

NUMBER	NOTE
00 103	REMOVE AND REPLACE (E) DRINKING FOUNTAIN WITH A NEW FREE-STANDING HI-LO DRINKING FOUNTAIN, SEE DETAIL 17/A10.2.1
00 106	REMOVE ACCESSIBLE STRIPING, SIGNS, & SYMBOLS AND REPAINT PARKING STALL LINES WHITE. SEE DETAIL 25/A10.2.1
02 114	(E) TOW AWAY SIGNAGE
02 115	(E) CAMPUS ADDRESS SIGNAGE PER CBC 502.1, SEE DETAIL 12/A10.10.1
02 118	AREA FOR STORAGE UNITS. CONTRACTOR SHALL MOVE ALL FURNITURE AND EQUIPMENT FROM ALL ROOMS INTO STORAGE UNITS PRIOR TO CONSTRUCTION WORK AND MOVE BACK AFTER COMPLETION OF WORK. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF STORAGE UNITS ON SITE, COORDINATE LOCATION IN FIELD WITH OWNER.
02 201	(E) EXTERIOR DRINKING FOUNTAIN TO REMAIN
03 301	NEW ACCESSIBLE SLOPED WALK, SEE DETAIL 5/A10.2.1
09 101	STRIPE NEW ACCESSIBLE STALLS AND PROVIDE SIGNAGE, SEE DETAIL 5/A10.2.1
09 102	EXTEND ALL STALL LINES ON EAST SIDE OF PARKING LOT PER 25/A10.2.1
23 309	MECHANICAL UNIT O/ CONCRETE PADS, SEE MECHANICAL DRAWINGS.
32 101	NEW A.C. WALKWAY, SEE DETAIL 18/A10.2.1
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAILS 2, 4 , 12, & 14/A10.4.1
32 208	(E) 6'-0" GATE MODIFIED TO HAVE (N) HARDWARE PER DETAIL 6/A10.2.1
32 209	(E) 4'-0" GATE MODIFIED TO HAVE (N) HARDWARE PER DETAIL 7/A10.2.1

SAFE DISPERSAL AREA

- TOTAL 'EDUCATIONAL' OCCUPIED AREA = 15,775 SF
  15,775 SF @ 20 SF/OCC. = 789 OCCUPANTS
- TOTAL ' BUSINESS' OCCUPIED AREA = 6,020 SF
  6,020 SF @ 150 SF/OCC. = 41 OCCUPANTS
- TOTAL 'ASSEMBLY (UNCONCENTRATED)' OCCUPIED AREA = 4,303 SF
  4,303 SF @ 15 SF/OCC. 287 OCCUPANTS

TOTAL OCCUPANTS (PER CBC TABLE 1004.5) **= 1,117**
MINIMUM DISPERSAL AREA REQUIRED PER CBC 1028.5.1:
TOTAL OCCUPANTS X 5 SF/OCC. = 1,117 OCC. X 5 SF/OCC. = **5,585 SF**

DISPERSAL AREA PROVIDED = 6,000 SF > 5,585 SF = OK

ACCESSIBLE PARKING

BASED ON CBC TABLE 11B-208.2 "PARKING SPACES"

PARKING LOT	STANDARD STALLS	ACCESSIBLE STALLS REQUIRED	ACCESSIBLE STALLS PROVIDED
A	24	1	2*
TOTAL	24	1	2

*INCLUDING VAN ACCESSIBLE STALL

GENERAL NOTES

1. REFER TO MECHANICAL, ELECTRICAL, DRAWINGS FOR EXTENT OF MECHANICAL AND ELECTRICAL WORK.
2. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE ON-SITE AND / OR OFF-SITE STORAGE AND PROPER PROTECTION AGAINST LOSS, DAMAGE OR DETERIORATION OF NEW MATERIALS & EQUIPMENT ACQUIRED PRIOR TO THE START OF CONSTRUCTION. ON-SITE DELIVERY AND INSTALLATION OF PORTABLE CONSTRUCTION STORAGE CONTAINERS MUST BE COORDINATED IN FIELD WITH THE CONSTRUCTION MANAGER
3. GENERAL CONTRACTOR IS RESPONSIBLE FOR MOVING, STORAGE, AND PROTECTION OF EXISTING FURNITURE AND EQUIPMENT WITHIN THE AREA OF CONSTRUCTION. GC WILL DOCUMENT EXISTING CONDITIONS AND COORDINATE WITH THE CONSTRUCTION MANAGER PRIOR TO START OF CONSTRUCTION.
4. 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.
5. CONTRACTOR TO BRING IN OFFICE TRAILER TO CONSTRUCTION AREA.
6. CONTRACTOR SHALL ACCESS THE SITE FROM LUCIAN AVE. ANY DAMAGE TO FIRE LANE WILL BE AT THE CONTRACTOR'S EXPENSE.
7. CONTRACTOR TO REPAIR BACK TO EXISTING CONDITIONS ALL LAY DOWN AREAS AT THE END OF CONSTRUCTION. THIS INCLUDES LANDSCAPE AREAS AND ANY BROKEN SPRINKLERS, VALVE BOXES, CONCRETE, ASPHALT, ETC.
8. 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.
9. 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.
10. 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.
11. GATES IN PATH OF TRAVEL SHALL COMPLY WITH EXIT DOOR REQUIREMENTS WITH PROPER LEVER HARDWARE AND KICK PLATES.

LEGEND

- (E) BUILDING WITHIN SCOPE OF WORK
- (E) BUILDING, N.I.C.
- (E) 20'-0" WIDE MINIMUM CLEAR FIRE ACCESS LANE
- (N) CONCRETE
- (E) ACCESSIBLE RESTROOMS WITHIN SCOPE
  - **S** - (E) ALL GENDER STAFF RESTROOM
  - **K** - (E) ALL GENDER KINDERGARTEN RESTROOM
- (E) FENCE & GATES TO REMAIN
- (N) FENCE & GATES
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL, SEE DEFINITION ON THIS SHEET
- LOCATION OF ACCESSIBLE EXTERIOR EXIT DOORS, ENTRANCES, AND EGRESS
- FIRE HYDRANT AND 150' RADIUS CIRCLE

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LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED 04/24/2023	

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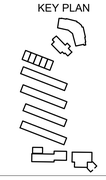
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
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● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



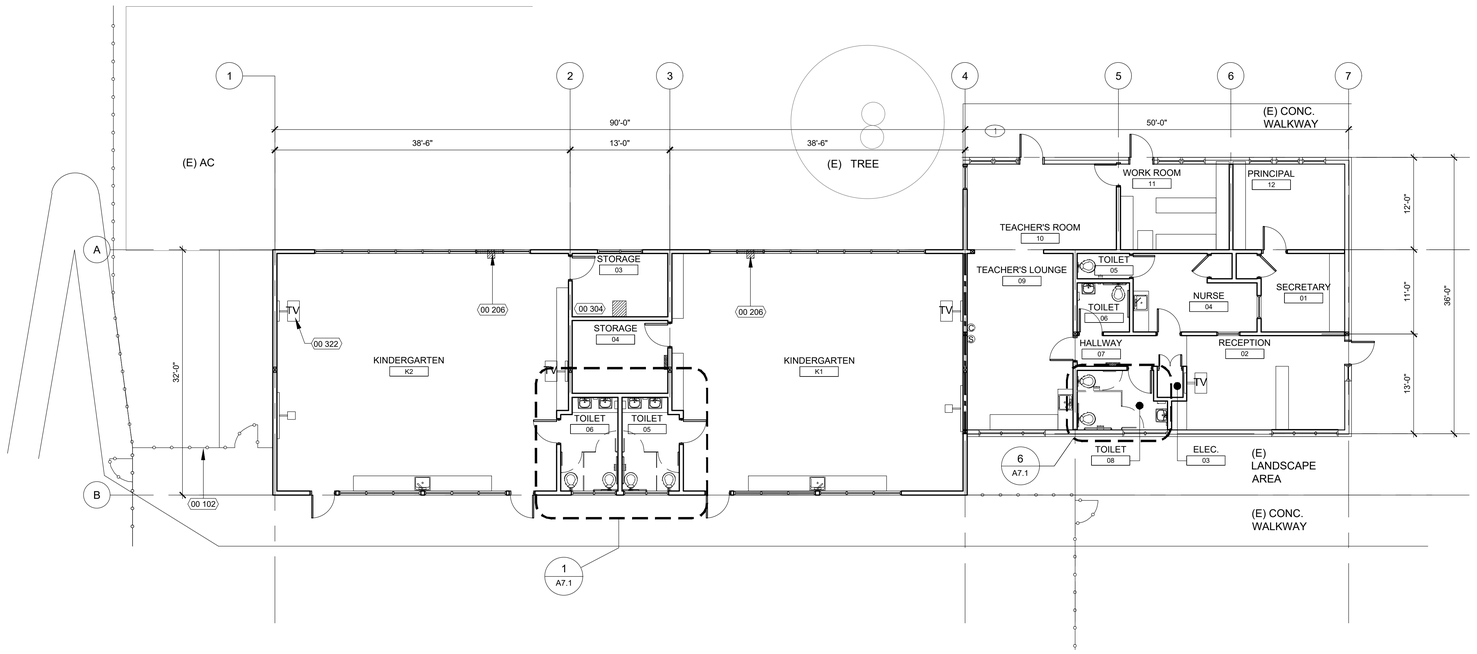
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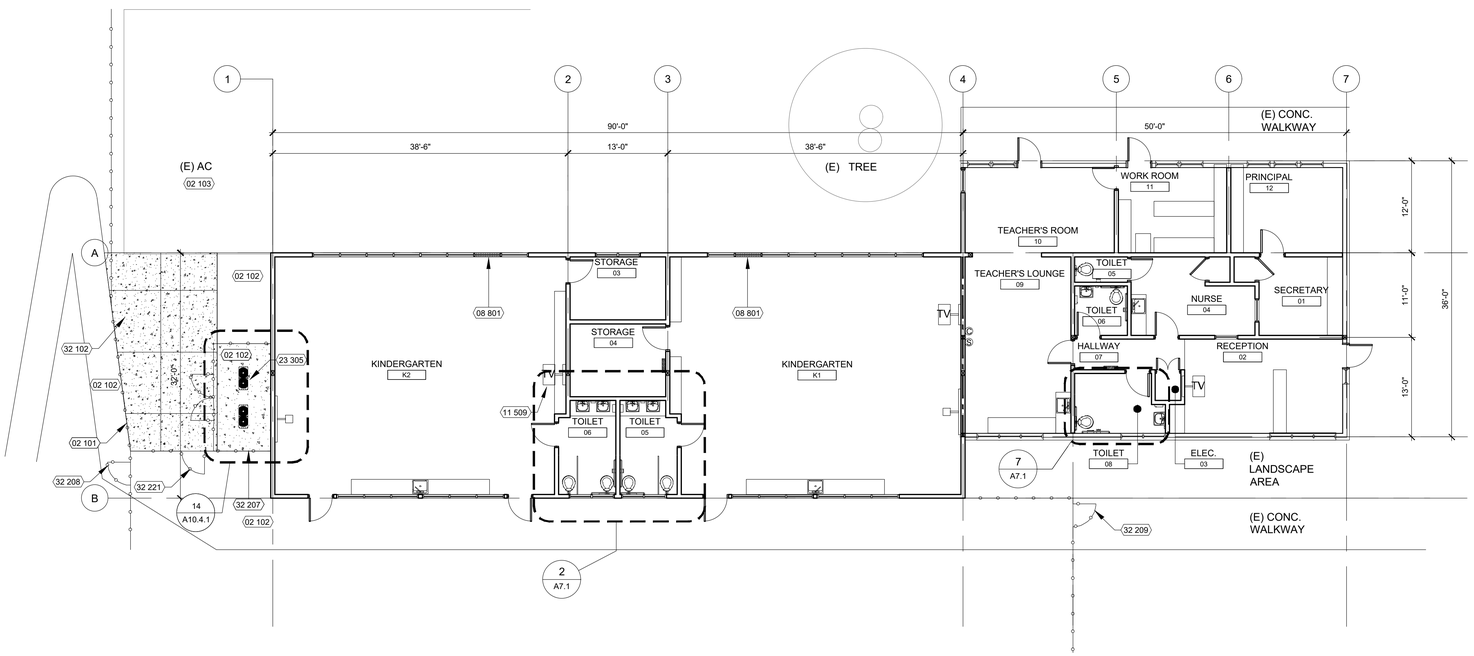
SITE PLAN OVERALL

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A1.1
Drawn / Checked	
KT / CD	



N

DEMO FLOOR PLAN - ADMIN. & KINDERGARTEN - BUILDING 1 | 1/8" = 1'-0" | 5



N

NEW FLOOR PLAN - ADMIN. & KINDERGARTEN - BUILDING 1 | 1/8" = 1'-0" | 10

KEY NOTES

NUMBER	NOTE
00 102	REMOVE EXISTING CHAIN LINK FENCE AND GATE SYSTEM.
00 206	REMOVE (E) PORTABLE INDOOR AC UNIT SYSTEM, WINDOW MOUNTED EXHAUST VENT AND CONDENSATE DRAIN PIPE; RETURN UNIT TO THE DISTRICT AND INFILL WINDOW FRAME WITH SHEET METAL OR GLASS TO MATCH ADJACENT. TYPICAL AT ALL CLASSROOMS AND WHERE OCCURS. VERIFY QUANTITIES AND LOCATIONS IN FIELD.
00 322	REMOVE (E) TV AND MOUNT SYSTEM. STORE FOR REINSTALLATION IN DIFFERENT LOCATION. PATCH AND REPAIR WALL TO MATCH ADJACENT FINISHES.
02 101	(E) CHAIN LINK FENCE.
02 102	(E) CONCRETE WALKWAY.
02 103	(E) ASPHALT PAVING.
08 801	NEW GLAZING AND/OR ALUMINUM PANEL WITHIN EXISTING FRAME TO MATCH ADJACENT.
11 509	EXISTING TV AND MOUNT SYSTEM RELOCATED TO NEW LOCATION WITHIN SAME ROOM. SEE 4/S1.0 FOR TYP. WALL BLOCKING.
23 305	NEW OUTDOOR HEAT PUMP OVER NEW CONCRETE PAD, O/EXISTING CONC. PAVING.
32 102	NEW CONCRETE PAVING LEVEL TO CONFIRM WITH EXISTING ADJACENT CONC. PAVING SLOPE. SEE CONCRETE PAVING DETAIL 20/A10.4.1.
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAIL 14/A10.4.1.
32 208	(E) 3'-0"W x 6'-0"H GATE MODIFIED TO HAVE (N) HARDWARE PER DETAIL 6/A10.2.1.
32 209	(E) 3'-0"W x 4'-0"H GATE MODIFIED TO HAVE (N) HARDWARE PER DETAIL 7/A10.2.1.
32 221	NEW CHAIN LINK FENCE AND SINGLE GATE PER DETAILS 27/A10.2.1 & 29/A10.2.1.

GENERAL NOTES

GENERAL

1. GENERAL CONTRACTOR SHALL SURVEY AREA FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO DEMOLITION AND NEW WORK ON SITE.
2. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
3. REFER TO MECHANICAL/PLUMBING AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL/PLUMBING AND ELECTRICAL DEMOLITION WORK AND NEW CONSTRUCTION.
4. PAINT ALL EXPOSED CONDUITS, FITTINGS, AND CONDUIT COVERS ASSOCIATED WITH THE NEW WORK TO MATCH EXISTING ADJACENT SURFACE AT BOTH EXTERIOR AND INTERIOR LOCATIONS.
5. REMOVE ALL EXISTING ITEMS TO ALLOW THE NEW WORK, INCLUDING BUT NOT LIMITED TO TREES, SHRUBS, ASPHALT PAVING, FENCING.
6. COORDINATE EXACT LOCATION OF NEW HVAC UNITS IN FIELD WITH THE OWNER AND ARCHITECT PRIOR TO INSTALLATION. PATCH AND REPAIR ADJACENT FLOOR AND WALL SURFACE AREAS ASSOCIATED WITH THE INSTALLATION OF THESE UNITS.
7. FOR HVAC UNIT REFRIGERANT LINES THROUGH WALL, SEE MECHANICAL DRAWINGS AND DETAILS 1 & 7/A9.1 FOR CONDUIT SPACING, SPACE PENETRATIONS TO CLEAR STUDS. COORDINATE LAYOUT IN FIELD. PATCH, REPAIR, AND PAINT EXTERIOR WALL SOFFIT, AND INTERIOR CEILING AFTER INSTALLATION TO MATCH EXISTING ADJACENT FINISHES.
8. REMOVE AND REINSTALL PROJECTORS PER DETAIL 16/A9.3.
9. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK. PROTECT FLOOR SURFACES DURING CONSTRUCTION, REPLACE IF DAMAGED AS RESULT OF DEMOLITION/NEW WORK.
10. COORDINATE LOCATION OF NEW THERMOSTATS IN FIELD, AVOID SWING OF DOORS, CASEWORK, AND WALL MOUNTED EQUIPMENT. SEE MECH. DWGS.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DEMOLITION OF (E) CONCRETE PADS AFTER DEMOLITION OF MECHANICAL/PLUMBING EQUIPMENT AND TO REPAIR/PATCH & INFILL CONCRETE SLAB AS NEEDED.
12. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF PARTIAL ROOF FOR NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECH. PLANS FOR LOCATIONS & WITH GARLAND ROOFING FOR PATCHING OF (E) ROOFING..
13. CONTRACTOR TO REFERENCE DEMOLITION & ABATEMENT REPORT PRIOR TO DEMOLITION WORK.
14. PROVIDE WALL-MOUNTED TACTILE EXIT SIGNS TYPICAL AT ALL EXIT DOORS SEE DETAIL 1/A0.4.
15. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, STORAGE AND RE-INSTALLATION OF ALL WINDOW SHADES AND TRACK SYSTEM, INCLUDING ADJUSTING/CUTTING OF SHADES TO FIT FOR RE-INSTALLATION AND TO ALLOW THE INSTALLATION OF NEW CEILING SYSTEMS.

DEMOLITION

1. ALL DEMOLITION WORK SHALL COMPLY WITH CFC CHAPTER 14 OF THE FIRE CODE AND CBC CHAPTER 33 OF THE BUILDING CODE FOR SAFETY DURING CONSTRUCTION AND DEMOLITION AND CALIFORNIA EXISTING BUILDING CODE (PART 10) FOR EXISTING STRUCTURES.
2. ALL DIMENSIONS SHOWN ON THIS SHEET ARE EXISTING AND APPROXIMATE. VERIFY IN FIELD.
3. VERIFICATION OF EXISTING CONDITIONS:
   A. IN THE REMODELING OF AN EXISTING BUILDING CERTAIN ASSUMPTIONS HAVE BEEN MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY, OR DESTROYING OTHERWISE SERVICEABLE PORTIONS OF THE BUILDING. NOTIFY THE ARCHITECT IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED WHEN CONDITIONS ARE DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THE DRAWINGS.
4. SEE HAZARDOUS MATERIALS REPORT IN APPENDIX FOR ABATEMENT REQUIREMENTS DURING DEMOLITION.
5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

LEGEND

- LINE OF ROOF, SKYLIGHT, OR SOFFIT OVERHEAD - SHOWN DASHED
- (E) EXTERIOR/INTERIOR STUD WALL
- (E) 1 HR RATED INTERIOR STUD WALL

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KEY PLAN



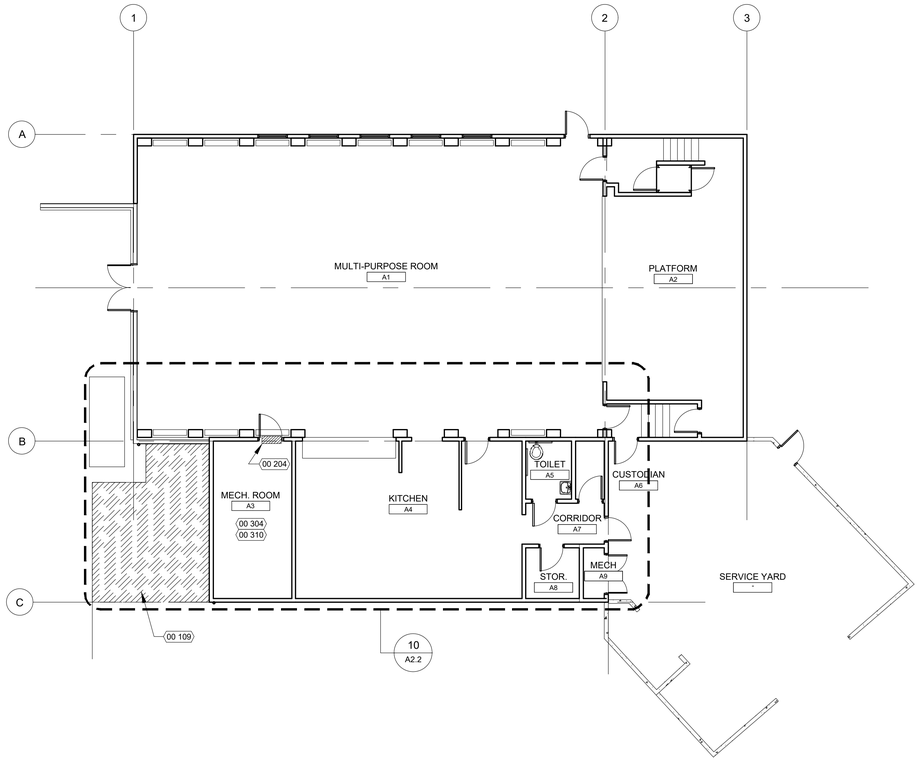
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DEMO & NEW FLOOR PLAN - ADMIN. & KINDERGARTEN - BUILDING 1

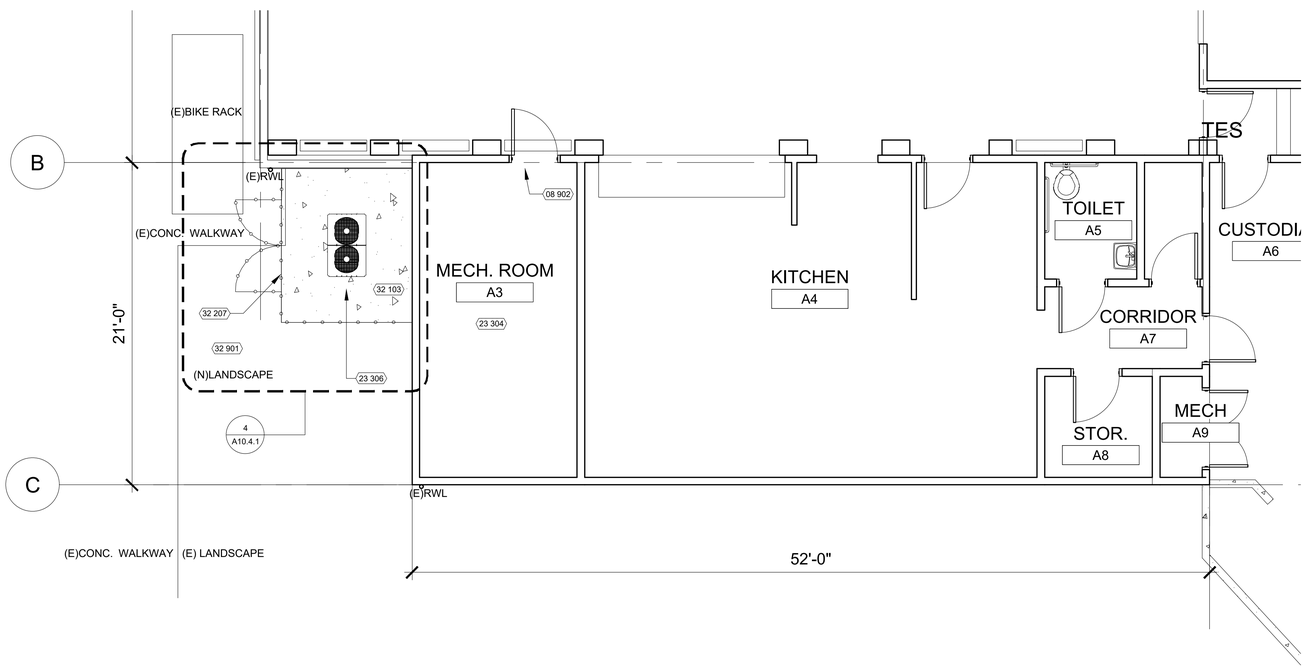
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A2.1
Drawn / Checked	
KT / CD	



N

DEMO FLOOR PLAN - MULTI-PURPOSE - BUILDING 2

1/8" = 1'-0" 5



N

ENLARGED NEW FLOOR PLAN - MULTI-PURPOSE - BUILDING 2

1/4" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 109	REMOVE (E) FENCE, LANDSCAPE, AND RE-ROUTE IRRIGATION LINES TO ALLOW THE NEW WORK. (E) GROUND AND WALL MOUNTED UTILITIES BOXES TO REMAIN VERIFY IN FIELD, PROVIDE NEW BOX COVERS TO BE FLUSHED WITH NEW CONC. WORK.
00 204	REMOVE PORTION OF WALL ABOVE DOOR FOR NEW LOUVER/DUCT PENETRATIONS. SEE STRUCT. DWGS FOR PORTION OF (E) FRAMING TO REMAIN.
00 304	REMOVE AND REPLACE EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF DEMOLITION AND NEW WORK.
00 310	REMOVE ALL (E) CASEWORK, SHELVING, FURNITURE AND OR EQUIPMENT TO COMPLETELY EVACUATE ROOM PRIOR TO ANY DEMOLITION OR NEW WORK AND RETURN TO DISTRICT.
08 902	(N) LOUVER/DUCT PENETRATIONS ABOVE (E) DOOR. PATCH, REPAIR, AND PAINT WALL AFTER DUCT INSTALLATION TO MATCH ADJACENT FINISHES. SEE STRUCT. DWGS FOR (N) FRAMING AROUND PENETRATIONS, AND SEE MECH. DWGS FOR (N) LOUVER/DUCT LAYOUT.
23 304	NEW MECHANICAL EQUIPMENT, SEE MECH. DWGS FOR EXTENT OF WORK.
23 306	NEW CONDENSING UNIT OVER NEW CONCRETE PAD, SEE MECHANICAL/PLUMB. AND ELEC. DRAWINGS FOR EXTENT OF WORK.
32 103	NEW CONCRETE PADS.
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAIL 4/A10.4.1.
32 901	NEW LOW MAINTENANCE PLANTS (TOTAL 6) MULCH & EXTENDED IRRIGATION LINE.

GENERAL NOTES

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3. REFER TO MECHANICAL/PLUMBING AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL/PLUMBING AND ELECTRICAL DEMOLITION WORK AND NEW CONSTRUCTION.
4. PAINT ALL EXPOSED CONDUITS, FITTINGS, AND CONDUIT COVERS ASSOCIATED WITH THE NEW WORK TO MATCH EXISTING ADJACENT SURFACE AT BOTH EXTERIOR AND INTERIOR LOCATIONS.
5. REMOVE ALL EXISTING ITEMS TO ALLOW THE NEW WORK, INCLUDING BUT NOT LIMITED TO TREES, SHRUBS, ASPHALT PAVING, FENCING.
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8. REMOVE AND REINSTALL PROJECTORS PER DETAIL 16/A9.3.
9. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK. PROTECT FLOOR SURFACES DURING CONSTRUCTION, REPLACE IF DAMAGED AS RESULT OF DEMOLITION/NEW WORK.
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LEGEND

- LINE OF ROOF, SKYLIGHT, OR SOFFIT OVERHEAD - SHOWN DASHED
- (E) EXTERIOR/INTERIOR STUD WALL
- (N) CONCRETE PAD

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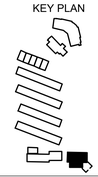
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



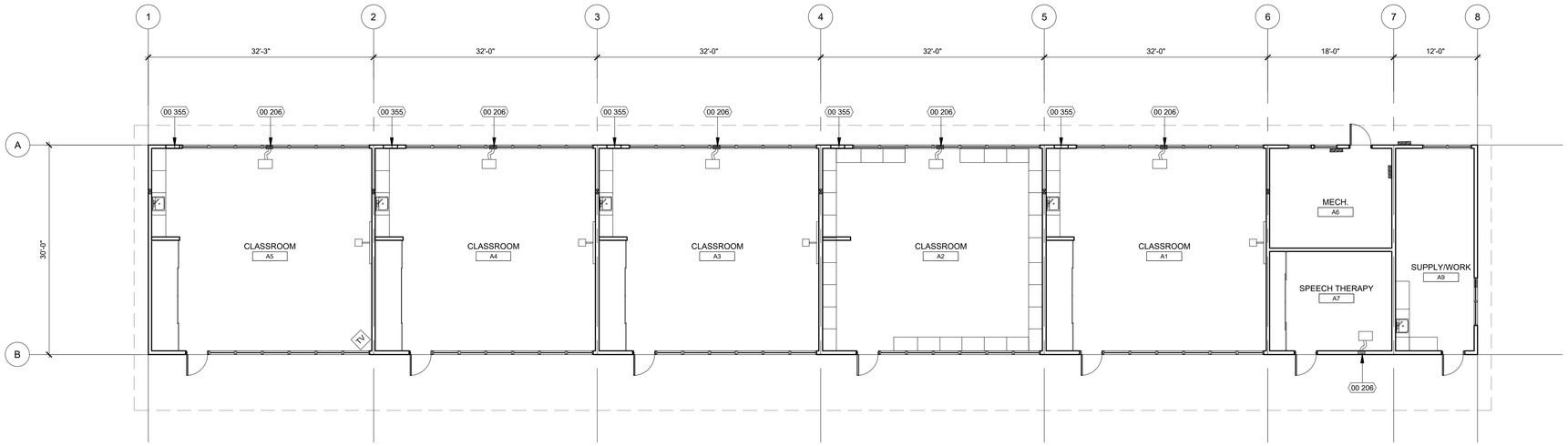
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
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DEMO & NEW FLOOR PLAN - MULTI-PURPOSE - BUILDING 2

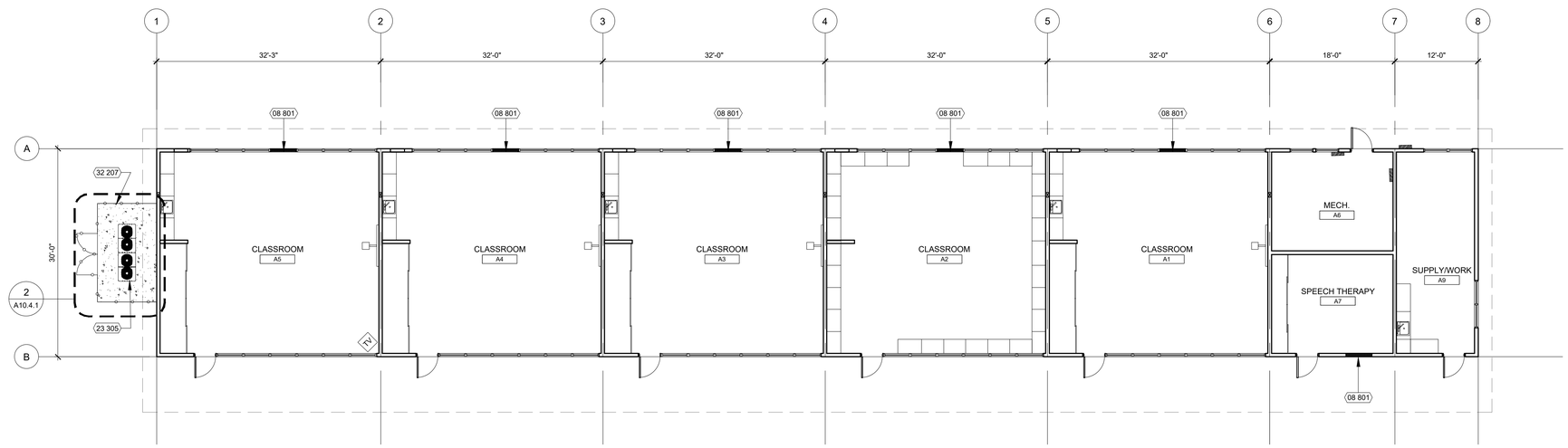
Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number A2.2
Drawn KT	Checked CD



N

DEMO FLOOR PLAN - CLASSROOM - BUILDING A

1/8" = 1'-0" | 5



N

NEW FLOOR PLAN - CLASSROOM - BUILDING A

1/8" = 1'-0" | 10

KEY NOTES

NUMBER	NOTE
00 206	REMOVE (E) PORTABLE INDOOR AC UNIT SYSTEM, WINDOW MOUNTED EXHAUST VENT AND CONDENSATE DRAIN PIPE, RETURN UNIT TO THE DISTRICT AND INFILL WINDOW FRAME WITH SHEET METAL OR GLASS TO MATCH ADJACENT. TYPICAL AT ALL CLASSROOMS AND WHERE OCCURS. VERIFY QUANTITIES AND LOCATIONS IN FIELD.
00 355	REMOVE (E) WALL GRILLE. INFILL/PATCH OPENING AND PAINT WALL TO MATCH ADJACENT.
08 801	NEW GLAZING AND/OR ALUMINUM PANEL WITHIN EXISTING FRAME TO MATCH ADJACENT.
23 305	NEW OUTDOOR HEAT PUMP OVER NEW CONCRETE PAD, O/EXISTING CONC. PAVING.
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAIL 2/A10.4.1.

GENERAL NOTES

GENERAL

1. GENERAL CONTRACTOR SHALL SURVEY AREA FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO DEMOLITION AND NEW WORK ON SITE.
2. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
3. REFER TO MECHANICAL/PLUMBING AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL/PLUMBING AND ELECTRICAL DEMOLITION WORK AND NEW CONSTRUCTION.
4. PAINT ALL EXPOSED CONDUITS, FITTINGS, AND CONDUIT COVERS ASSOCIATED WITH THE NEW WORK TO MATCH EXISTING ADJACENT SURFACE AT BOTH EXTERIOR AND INTERIOR LOCATIONS.
5. REMOVE ALL EXISTING ITEMS TO ALLOW THE NEW WORK, INCLUDING BUT NOT LIMITED TO TREES, SHRUBS, ASPHALT PAVING, FENCING.
6. COORDINATE EXACT LOCATION OF NEW HVAC UNITS IN FIELD WITH THE OWNER AND ARCHITECT PRIOR TO INSTALLATION. PATCH AND REPAIR ADJACENT FLOOR AND WALL SURFACE AREAS ASSOCIATED WITH THE INSTALLATION OF THESE UNITS .
7. FOR HVAC UNIT REFRIGERANT LINES THROUGH WALL, SEE MECHANICAL DRAWINGS AND DETAILS 1 & 7/A9.1 FOR CONDUIT SPACING. SPACE PENETRATIONS TO CLEAR STUDS. COORDINATE LAYOUT IN FIELD. PATCH, REPAIR, AND PAINT EXTERIOR WALL SOFFIT, AND INTERIOR CEILING AFTER INSTALLATION TO MATCH EXISTING ADJACENT FINISHES.
8. REMOVE AND REINSTALL PROJECTORS PER DETAIL 16/A9.3.
9. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK. PROTECT FLOOR SURFACES DURING CONSTRUCTION, REPLACE IF DAMAGED AS RESULT OF DEMOLITION/NEW WORK.
10. COORDINATE LOCATION OF NEW THERMOSTATS IN FIELD, AVOID SWING OF DOORS, CASEWORK, AND WALL MOUNTED EQUIPMENT. SEE MECH. DWGS.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DEMOLITION OF (E) CONCRETE PADS AFTER DEMOLITION OF MECHANICAL/PLUMBING EQUIPMENT AND TO REPAIR/PATCH & INFILL CONCRETE SLAB AS NEEDED .
12. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF PARTIAL ROOF FOR NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECH. PLANS FOR LOCATIONS & WITH GARLAND ROOFING FOR PATCHING OF (E) ROOFING..
13. CONTRACTOR TO REFERENCE DEMOLITION & ABATEMENT REPORT PRIOR TO DEMOLITION WORK.
14. PROVIDE WALL-MOUNTED TACTILE EXIT SIGNS TYPICAL AT ALL EXIT DOORS SEE DETAIL 1/A0.4.
15. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, STORAGE AND RE-INSTALLATION OF ALL WINDOW SHADES AND TRACK SYSTEM, INCLUDING ADJUSTING/CUTTING OF SHADES TO FIT FOR RE-INSTALLATION AND TO ALLOW THE INSTALLATION OF NEW CEILING SYSTEMS.

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4. SEE HAZARDOUS MATERIALS REPORT IN APPENDIX FOR ABATEMENT REQUIREMENTS DURING DEMOLITION.
5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

LEGEND

LINE OF ROOF, SKYLIGHT, OR SOFFIT OVERHEAD - SHOWN DASHED

(E) EXTERIOR/INTERIOR STUD WALL

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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Sacramento, California 95811
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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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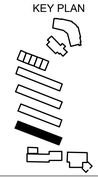
REVISION HISTORY

NO.	REMARKS	DATE

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KEY PLAN



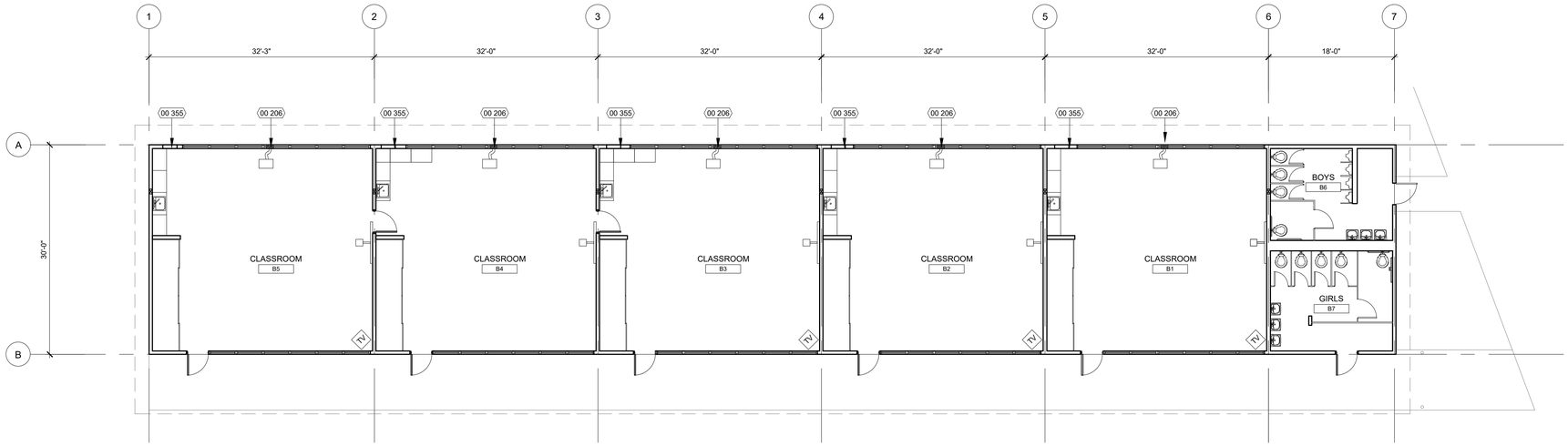
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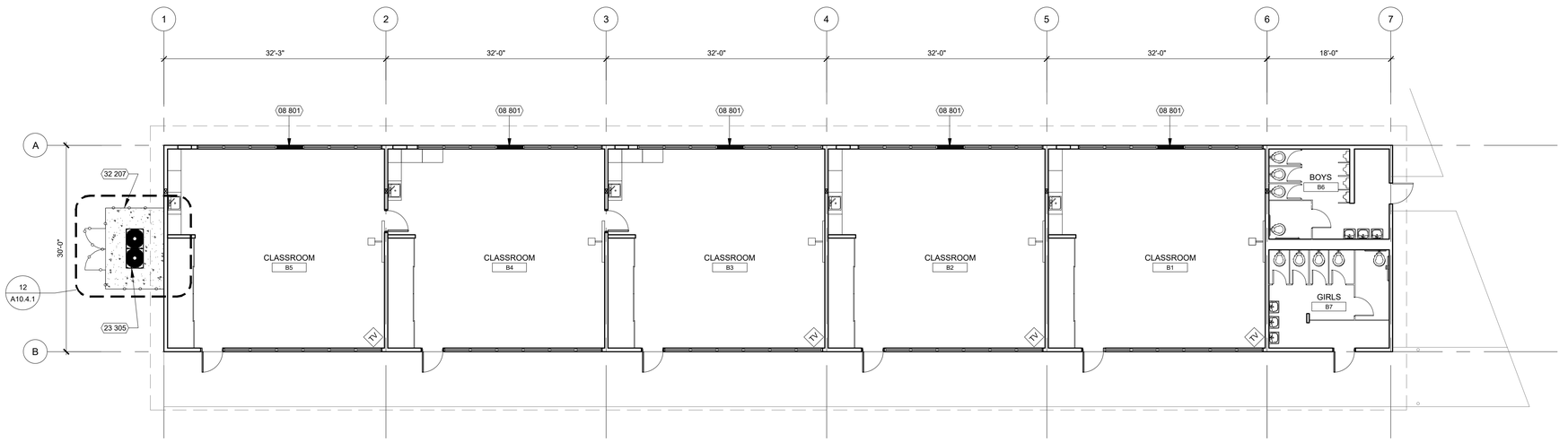
DEMO & NEW FLOOR PLAN - CLASSROOM - BUILDING A

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A2.3
Drawn / Checked	
KT / CD	



N

DEMO FLOOR PLAN - CLASSROOM - BUILDING B | 1/8" = 1'-0" | 5



N

NEW FLOOR PLAN - CLASSROOM - BUILDING B | 1/8" = 1'-0" | 10

KEY NOTES

NUMBER	NOTE
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LEGEND

- LINE OF ROOF, SKYLIGHT, OR SOFFIT OVERHEAD - SHOWN DASHED
- (E) EXTERIOR/INTERIOR STUD WALL
- 30" x 48" ACCESSIBLE CLEAR SPACE

DSA STAMP

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DATE: 5/4/2023

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[T] 916.254.5600
www.StudioW-Architects.com

ARCHITECT	ENGINEER
LICENSED ARCHITECT SETH P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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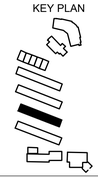
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

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KEY PLAN



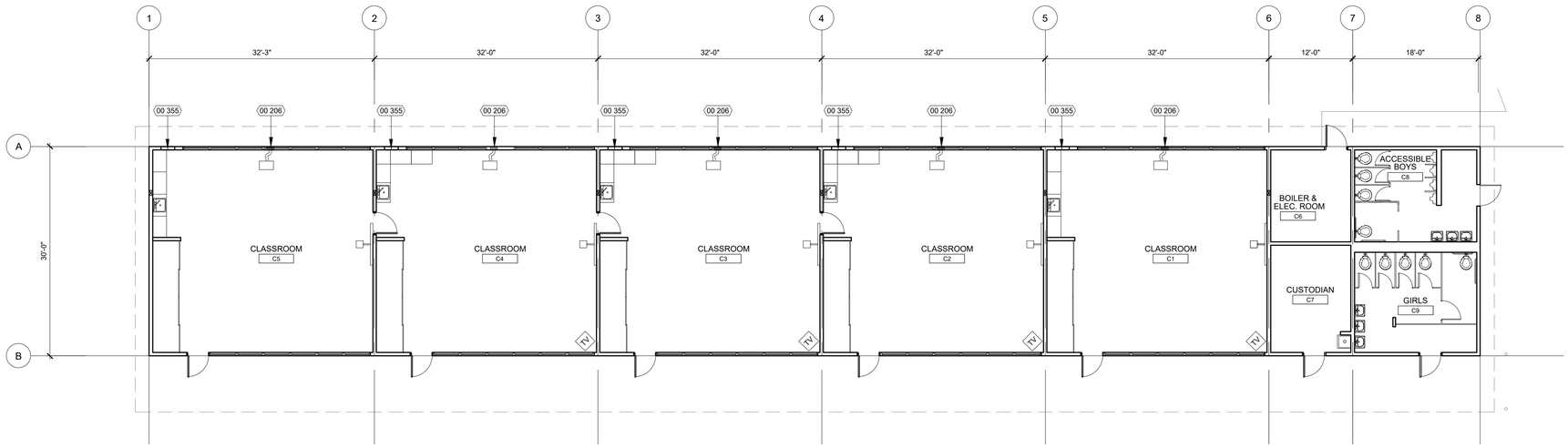
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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DEMO & NEW FLOOR PLAN - CLASSROOM - BUILDING B

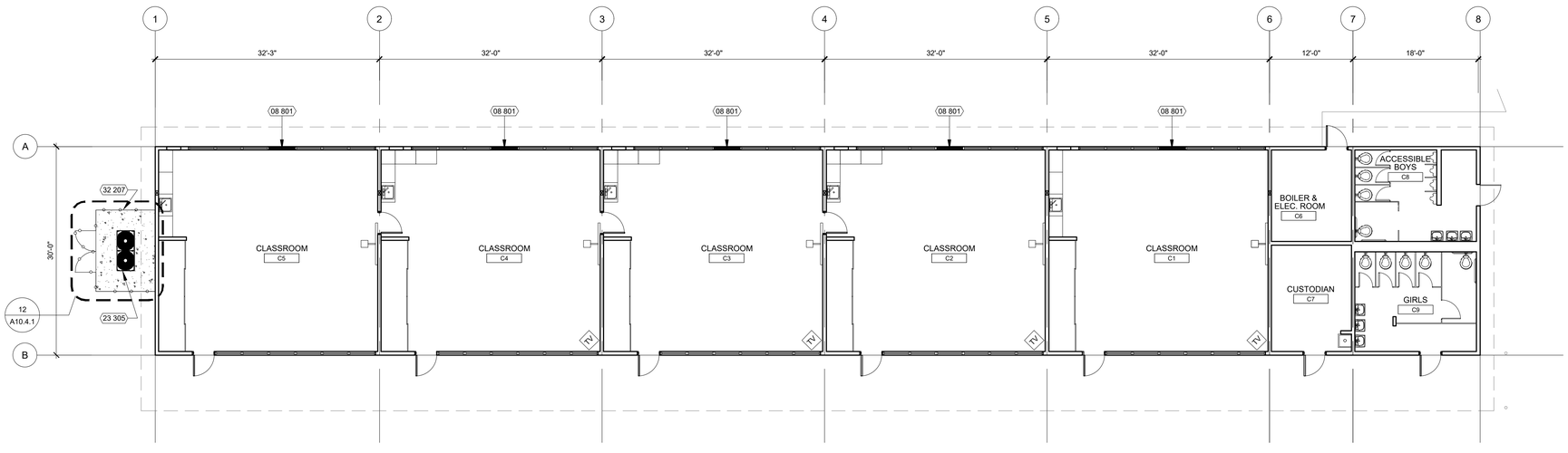
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A2.4
Drawn / Checked	
KT / CD	



DEMO FLOOR PLAN - CLASSROOM - BUILDING C

1/8" = 1'-0"

5



NEW FLOOR PLAN - CLASSROOM - BUILDING C

1/8" = 1'-0"

10

KEY NOTES

NUMBER	NOTE
00 206	REMOVE (E) PORTABLE INDOOR AC UNIT SYSTEM, WINDOW MOUNTED EXHAUST VENT AND CONDENSATE DRAIN PIPE. RETURN UNIT TO THE DISTRICT AND INFILL WINDOW FRAME WITH SHEET METAL OR GLASS TO MATCH ADJACENT. TYPICAL AT ALL CLASSROOMS AND WHERE OCCURS. VERIFY QUANTITIES AND LOCATIONS IN FIELD.
08 801	NEW GLAZING AND/OR ALUMINUM PANEL WITHIN EXISTING FRAME TO MATCH ADJACENT.
22 430	INSULATE EXPOSED LAVATORY PIPES OR OTHERWISE PROTECT AGAINST CONTACT.
23 305	NEW OUTDOOR HEAT PUMP OVER NEW CONCRETE PAD. O/EXISTING CONC. PAVING.
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAIL 12/A10.4.1.

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- (E) EXTERIOR/INTERIOR STUD WALL
- 30" x 48" ACCESSIBLE CLEAR SPACE

DSA STAMP

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ARCHITECT	ENGINEER
LICENSED ARCHITECT — BRYAN P. WHITMORE — No. C 30345 — Ren. 9/30/23 — STATE OF CALIFORNIA — DATE SIGNED: 04/24/2023	

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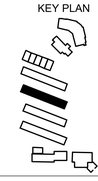
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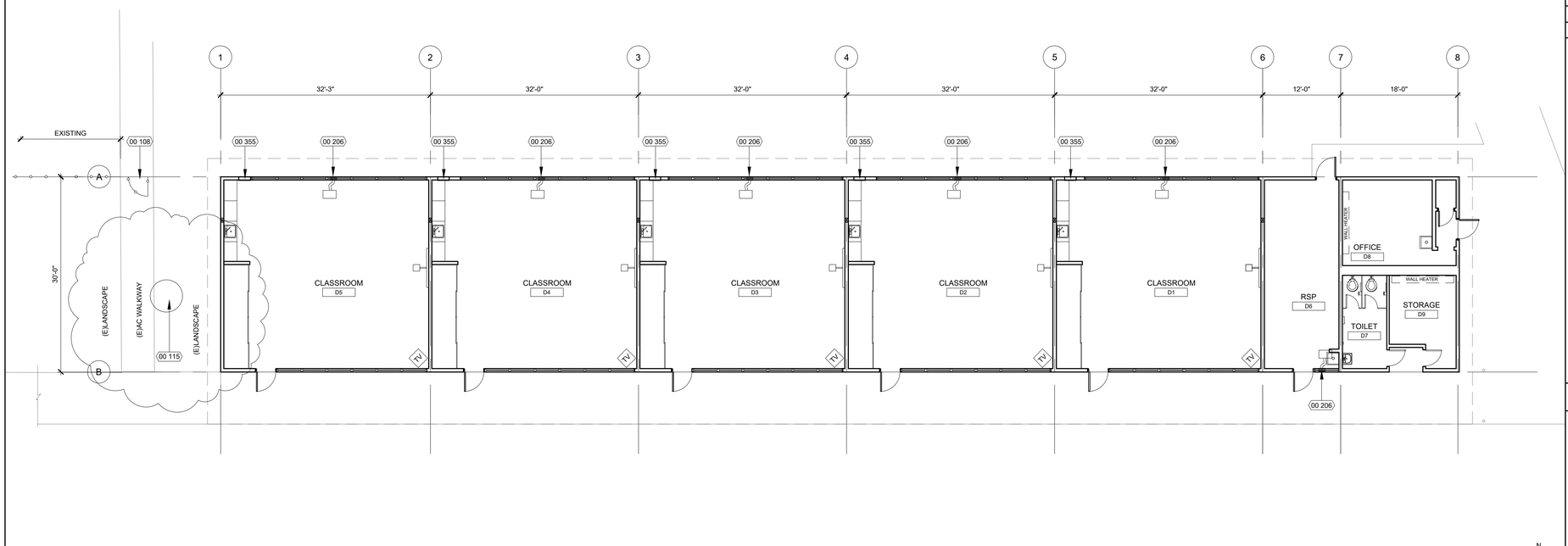
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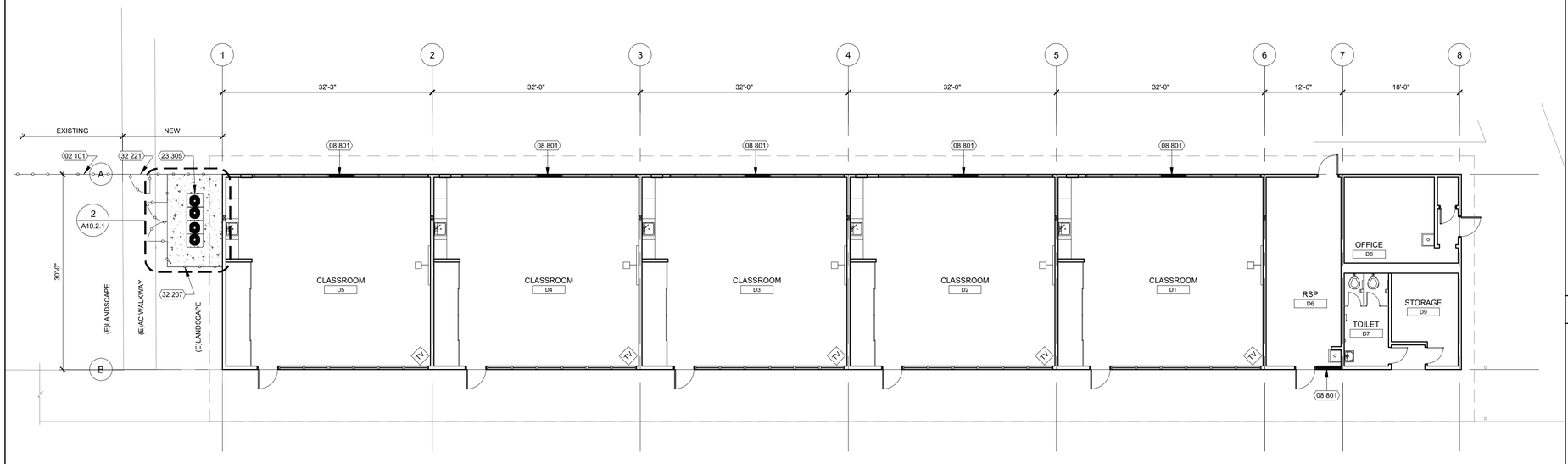
DEMO & NEW FLOOR PLAN - CLASSROOM - BUILDING C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A2.5
Drawn / Checked	
KT / CD	



DEMO FLOOR PLAN - CLASSROOM - BUILDING D

1/8" = 1'-0" 5



NEW FLOOR PLAN - CLASSROOM - BUILDING D

1/8" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 108	REPLACE (E) SINGLE GATE. TO BE REPLACED WITH NEW.
00 115	(E) EXISTING TREE. STUMP, ROOTS TO BE REMOVED. COORDINATE WITH CONSTRUCTION MANAGER IF CAN BE SALVAGED AND ALLOW FOR NEW WORK.
00 206	REMOVE (E) PORTABLE INDOOR AC UNIT SYSTEM, WINDOW MOUNTED EXHAUST VENT AND CONDENSATE DRAIN PIPE, RETURN UNIT TO THE DISTRICT AND INFILL WINDOW FRAME WITH SHEET METAL OR GLASS TO MATCH ADJACENT. TYPICAL AT ALL CLASSROOMS AND WHERE OCCURS, VERIFY QUANTITIES AND LOCATIONS IN FIELD.
00 355	REMOVE (E) WALL GRILLE. INFILL/PATCH OPENING AND PAINT WALL TO MATCH ADJACENT.
02 101	(E) CHAIN LINK FENCE TO REMAIN.
08 801	NEW GLAZING AND/OR ALUMINUM PANEL WITHIN EXISTING FRAME TO MATCH ADJACENT.
23 305	NEW OUTDOOR HEAT PUMP OVER NEW CONCRETE PAD, O/EXISTING CONC. PAVING.
32 207	NEW WIRE CAGES WITH TOP COVERS AROUND HVAC EQUIPMENT. SEE DETAIL 2/A10.4.1.
32 221	NEW CHAIN LINK SINGLE GATE TO MATCH EXISTING, SEE DETAILS 20/A10.2.1 & 29/A10.2.1.

GENERAL NOTES

GENERAL

1. GENERAL CONTRACTOR SHALL SURVEY AREA FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO DEMOLITION AND NEW WORK ON SITE.
2. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
3. REFER TO MECHANICAL/PLUMBING AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL/PLUMBING AND ELECTRICAL DEMOLITION WORK AND NEW CONSTRUCTION.
4. PAINT ALL EXPOSED CONDUITS, FITTINGS, AND CONDUIT COVERS ASSOCIATED WITH THE NEW WORK TO MATCH EXISTING ADJACENT SURFACE AT BOTH EXTERIOR AND INTERIOR LOCATIONS.
5. REMOVE ALL EXISTING ITEMS TO ALLOW THE NEW WORK, INCLUDING BUT NOT LIMITED TO TREES, SHRUBS, ASPHALT PAVING, FENCING.
6. COORDINATE EXACT LOCATION OF NEW HVAC UNITS IN FIELD WITH THE OWNER AND ARCHITECT PRIOR TO INSTALLATION. PATCH AND REPAIR ADJACENT FLOOR AND WALL SURFACE AREAS ASSOCIATED WITH THE INSTALLATION OF THESE UNITS .
7. FOR HVAC UNIT REFRIGERANT LINES THROUGH WALL, SEE MECHANICAL DRAWINGS AND DETAILS 1 & 7/A9.1 FOR CONDUIT SPACING, SPACE PENETRATIONS TO CLEAR STUDS. COORDINATE LAYOUT IN FIELD. PATCH, REPAIR, AND PAINT EXTERIOR WALL SOFFIT, AND INTERIOR CEILING AFTER INSTALLATION TO MATCH EXISTING ADJACENT FINISHES.
8. REMOVE AND REINSTALL PROJECTORS PER DETAIL 16/A9.3.
9. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK. PROTECT FLOOR SURFACES DURING CONSTRUCTION, REPLACE IF DAMAGED AS RESULT OF DEMOLITION/NEW WORK.
10. COORDINATE LOCATION OF NEW THERMOSTATS IN FIELD, AVOID SWING OF DOORS, CASEWORK, AND WALL MOUNTED EQUIPMENT. SEE MECH. DWGS.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DEMOLITION OF (E) CONCRETE PADS AFTER DEMOLITION OF MECHANICAL/PLUMBING EQUIPMENT AND TO REPAIR/PATCH & INFILL CONCRETE SLAB AS NEEDED.
12. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF PARTIAL ROOF FOR NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECH. PLANS FOR LOCATIONS & WITH GARLAND ROOFING FOR PATCHING OF (E) ROOFING.
13. CONTRACTOR TO REFERENCE DEMOLITION & ABATEMENT REPORT PRIOR TO DEMOLITION WORK.
14. PROVIDE WALL-MOUNTED TACTILE EXIT SIGNS TYPICAL AT ALL EXIT DOORS SEE DETAIL 1/A0.4.
15. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, STORAGE AND RE-INSTALLATION OF ALL WINDOW SHADES AND TRACK SYSTEM, INCLUDING ADJUSTING/CUTTING OF SHADES TO FIT FOR RE-INSTALLATION AND TO ALLOW THE INSTALLATION OF NEW CEILING SYSTEMS.

DEMOLITION

1. ALL DEMOLITION WORK SHALL COMPLY WITH CFC CHAPTER 14 OF THE FIRE CODE AND CBC CHAPTER 33 OF THE BUILDING CODE FOR SAFETY DURING CONSTRUCTION AND DEMOLITION AND CALIFORNIA EXISTING BUILDING CODE (PART 10) FOR EXISTING STRUCTURES.
2. ALL DIMENSIONS SHOWN ON THIS SHEET ARE EXISTING AND APPROXIMATE. VERIFY IN FIELD.
3. VERIFICATION OF EXISTING CONDITIONS:
   A. IN THE REMODELING OF AN EXISTING BUILDING CERTAIN ASSUMPTIONS HAVE BEEN MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY, OR DESTROYING OTHERWISE SERVICEABLE PORTIONS OF THE BUILDING. NOTIFY THE ARCHITECT IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED WHEN CONDITIONS ARE DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THE DRAWINGS.
4. SEE HAZARDOUS MATERIALS REPORT IN APPENDIX FOR ABATEMENT REQUIREMENTS DURING DEMOLITION.
5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

LEGEND

LINE OF ROOF, SKYLIGHT, OR SOFFIT OVERHEAD - SHOWN DASHED

(E) EXTERIOR/INTERIOR STUD WALL

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ARCHITECT	ENGINEER
LICENSED ARCHITECT SETH P WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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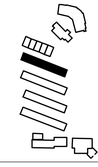
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



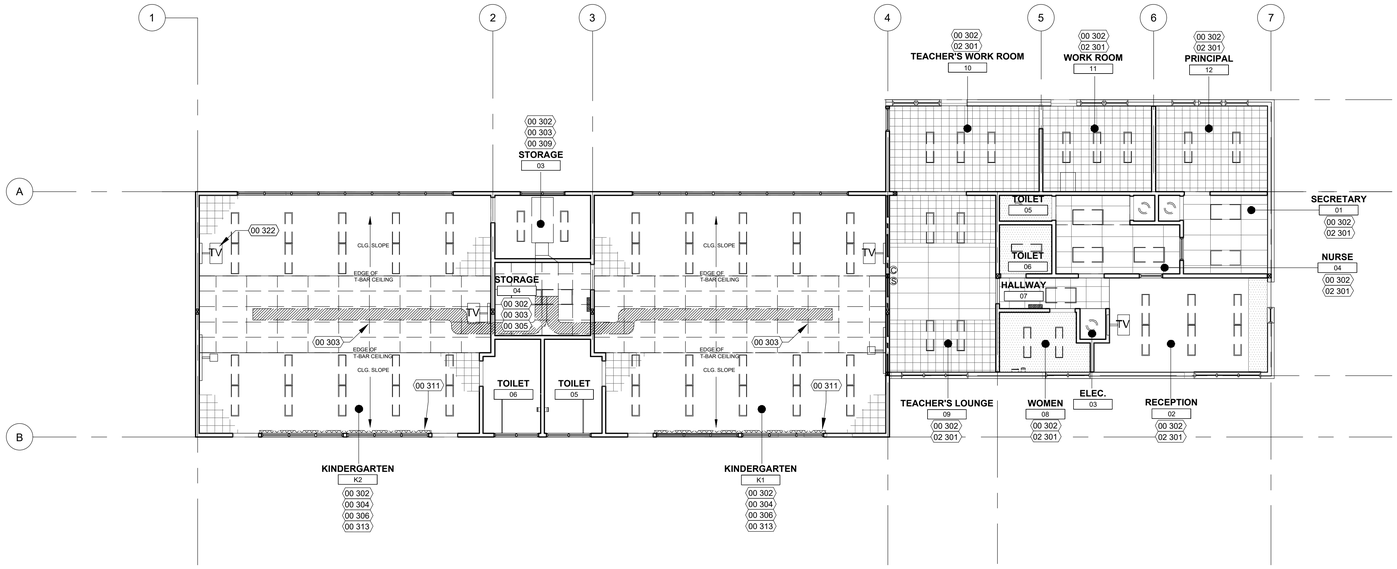
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CONSTRUCTION DOCUMENTS

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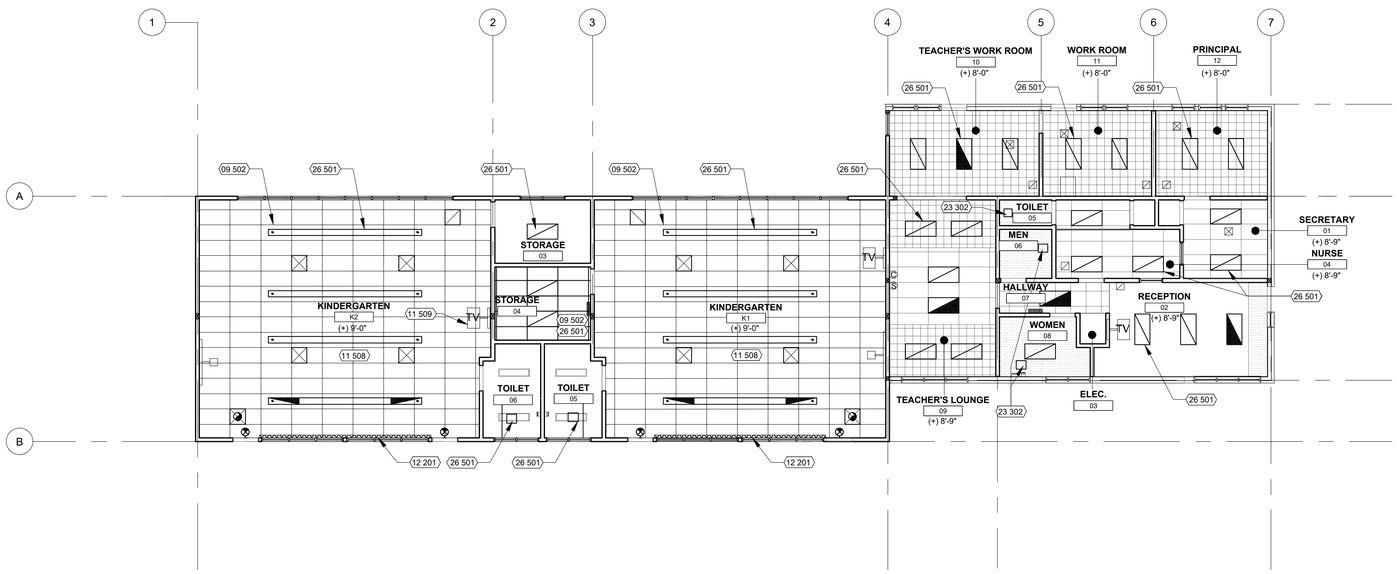
DEMO & NEW FLOOR PLAN - CLASSROOM - BUILDING D

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A2.6
Drawn / Checked	
KT / CD	



DEMO REFLECTED CEILING PLAN - ADMIN. & KINDER. - BUILDING 1

1/8" = 1'-0" 5



NEW REFLECTED CEILING PLAN - ADMIN. & KINDER. - BUILDING 1

1/8" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES , REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT, REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 304	REMOVE AND REPLACE EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF DEMOLITION AND NEW WORK.
00 305	REMOVE CEILING SYSTEM AND INSULATION PREPARE FOR NEW.
00 306	REMOVE (E) GLUE-ON ACOUSTICAL TILE CEILING SYSTEM, TO BARE RAFTER. PREPARE FOR NEW CEILING SYSTEM.
00 309	REMOVE PORTION OF (E) CEILING AS REQUIRED TO REMOVE THE (E) MECHANICAL SYSTEMS. PATCH, REPAIR, AND PAINT CEILING AS NEEDED AFTER REMOVAL OF THE (E) MECHANICAL SYSTEMS.
00 311	REMOVE (E) BLINDS AND TRACKS. INSTALL NEW VERTICAL BLINDS. & TRACK SYSTEM AFTER NEW CEILING SYSTEM HAS BEEN INSTALLED.
00 322	REMOVE (E) TV AND MOUNT SYSTEM. STORE FOR REINSTALLATION IN DIFFERENT LOCATION. PATCH AND REPAIR WALL TO MATCH ADJACENT FINISHES.
00 313	REMOVE CLOCK, SPEAKERS OR ANY OTHER EQUIPMENT ON WALLS THAT MAY INTERFERE WITH DEMOLITION WORK AND NEW CEILING SYSTEM. STORE ITEMS FOR RE-INSTALL AFTER NEW CEILING INSTALLATION.
02 301	(E) CEILING TO REMAIN, PATCH AND REPAIR AND PAINT.
09 502	NEW IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.1 & A10.9.2 FOR DETAILS.
11 508	RELOCATE CLOCK AND SPEAKER TO CLEAR NEW CEILING.
11 509	EXISTING TV AND MOUNT SYSTEM RELOCATED TO NEW LOCATION WITHIN SAME ROOM. SEE 4/S1.0 FOR TYP. WALL BLOCKING
12 201	INSTALL NEW BLINDS IN ROOM K1 AND K2.
23 302	NEW EXHAUST FANS. CONTRACTOR TO PATCH, REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT. SEE MECH. DWGS, SEE DETAIL 7/10.7.1
26 501	NEW LIGHT FIXTURE TYP., SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.

GENERAL NOTES

GENERAL
1. ALL HEIGHTS ARE REFERENCED FROM FINISH FLOOR ELEVATIONS = 0'-0"
2. ACCESS DOORS TO BE INSTALLED TO SERVICE EQUIPMENT SHOWN IN CONTRACT DOCUMENTS. EXACT NUMBER AND LOCATION OF ACCESS PANELS IS NOT SHOWN. SEE DETAIL 21/A10.9.2.
3. PROVIDE ACCESS PANELS TO ENCLOSED AREAS ABOVE GYPSUM BOARD CEILINGS. CENTER AND ALIGN TO LIGHT FIXTURES, AND OTHER CEILING FIXTURES PER PLAN.
4. CEILING SYSTEM SHOULD BE CENTERED WITHIN EACH ROOM AS WELL AS ALIGNED WITH THE STRUCTURAL GRID, U.O.N.
5. CEILING SYSTEM SHALL BE COORDINATED WITH THE LIGHTING & ELECTRICAL PLANS.
6. PAINT GYP. BD. CEILINGS AND SOFFITS P-1 U.O.N. (PAINT FINISH TO BE SAME AT FACE AND UNDERSIDE OF SOFFITS.) REFER TO ROOM FINISH SCHEDULE FOR COLOR SELECTIONS.
7. PAINT EXPOSED CEILINGS AND EQUIPMENT PER FINISH SCHEDULE.
8. NO EXPOSED NAILS OR SCREWS ARE ALLOWED.
9. REMOVE EXISTING PROJECTORS AS NEEDED FOR INSTALLATION OF NEW CEILINGS/SOFFITS, THEN RE-INSTALL PROJECTORS AFTER INSTALLATION OF NEW CEILINGS/SOFFITS.

EQUIPMENT
1. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SUPPORTS & BRACING. ELECTRICAL DEVICES ARE SHOWN FOR LOCATION IN RELATION TO LIGHT FIXTURES AND MECHANICAL DIFFUSERS IN SELECT AREAS. FOR FIXTURE INFORMATION SEE ELECTRICAL DRAWINGS.
2. SEE MECHANICAL AND PLUMBING DRAWINGS FOR DIFFUSERS AND PIPE CHASES.
3. SEE FIRE PROTECTION DETAILS FOR PENETRATIONS THROUGH RATED WALLS, WHERE OCCURS.
4. SINGLE LIGHT FIXTURES IN GYP. BD. CEILINGS SHALL BE CENTERED IN ROOM.
5. LIGHT FIXTURE DIMENSIONS ARE TO CENTERLINE OF FIXTURE OR GROUP OF FIXTURES, U.O.N.
6. CENTER AND ALIGN SMOKE DETECTOR, DIFFUSERS, GRILLS, AND SIMILAR ITEMS IN CEILING TILE GRID AND ALIGN WITH LIGHT FIXTURES, SEE DETAIL 16/A10.9.2.
7. SEE ELECTRICAL DRAWINGS FOR LOW LEVEL EXIT SIGN LOCATIONS.

DEMOLITION
1. ALL DEMOLITION WORK SHALL COMPLY WITH CFC CHAPTER 14 OF THE FIRE CODE FOR SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 34 OF THE BUILDING CODE FOR EXISTING STRUCTURES.
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LEGEND

- (E) CEILING SYSTEM TO BE REMOVED
- (E) TO REMAIN 2X4 SUSPENDED CEILING ACOUSTICAL CEILING PANEL SYSTEM. PATCH AND REPAIR AS NEEDED WITH (N) LIGHT FIXTURE INSTALLATION
- (E) TO REMAIN GYPSUM WALLBOARD CEILING
- (E) LIGHT FIXTURE TO BE REMOVED
- NEW 2x4 IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.2 & A10.9.3 FOR DETAILS.
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
- NURSE / A02 / (+) 8'-0" — ROOM TAG (+) 8'-0" = CEILING HEIGHT OF ROOM, U.O.N.

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ARCHITECT	ENGINEER
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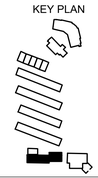
REVISION HISTORY

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○ DSA PLAN CHECK	12/23/2022
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KEY PLAN



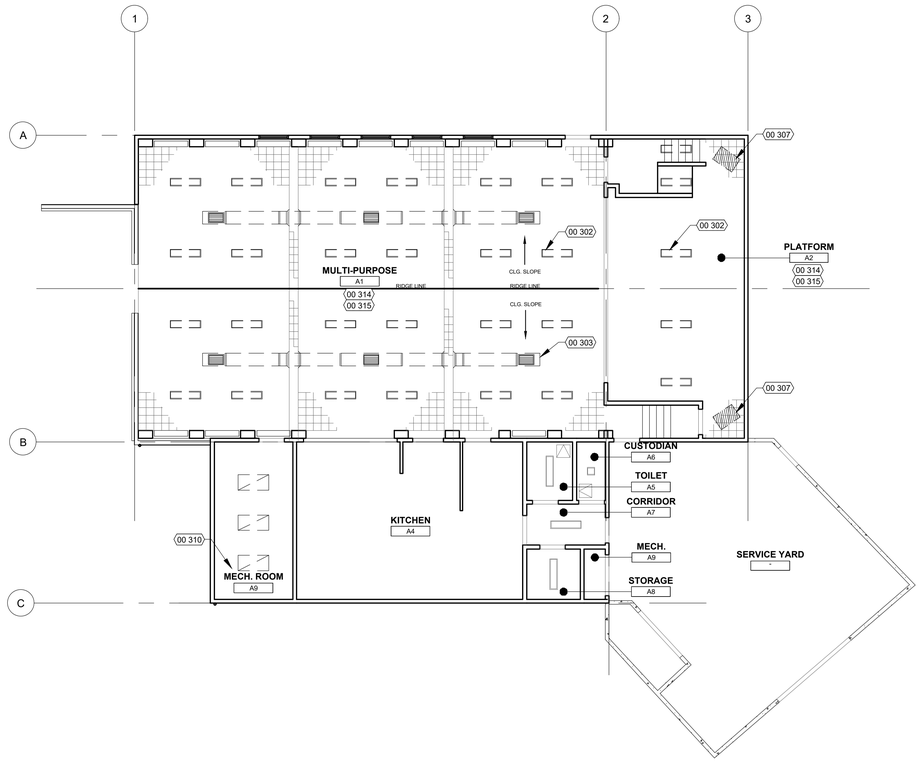
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DEMO & NEW REFLECTED CEILING PLAN - ADMIN. & KINDER. - BUILDING 1

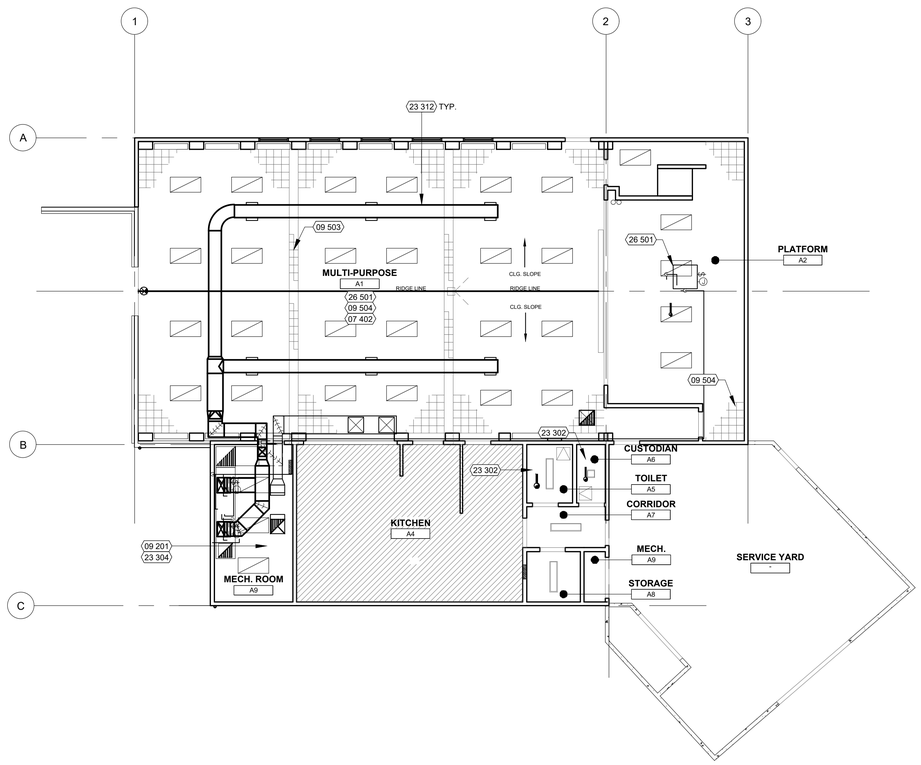
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.1
Drawn: KT	Checked: CD



DEMO REFLECTED CEILING PLAN - MULTI-PURPOSE - BUILDING 2

1/8" = 1'-0"

5



NEW REFLECTED CEILING PLAN - MULTI-PURPOSE - BUILDING 2

1/8" = 1'-0"

10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES , REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT, REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 305	REMOVE CEILING SYSTEM AND INSULATION PREPARE FOR NEW.
00 307	REMOVE AND REPLACE (E) MECHANICAL SYSTEMS, REFER TO MECHANICAL DWGS. FOR THE EXTENT OF DEMOLITION WORK.
00 310	REMOVE ALL (E) CASEWORK, SHELVING, FURNITURE AND OR EQUIPMENT TO COMPLETELY EVACUATE ROOM PRIOR TO ANY DEMOLITION OR NEW WORK AND RETURN TO DISTRICT. WHERE OCCURS. VERIFY QUANTITIES AND LOCATIONS IN FIELD.
00 314	REMOVE AND REPLACE (E) DAMAGED GLUE-ON ACOUSTICAL TILE CEILING SYSTEM, VERIFY IN FIELD.
00 315	REMOVE (E) PARTIAL CEILING TO ALLOW NEW HVAC COMPONENTS AND REPLACEMENT OF LIGHT FIXTURES, PATCH AND REPAIR.
07 402	INFILL EXISTING ROOF OPENING, PATCH AND REPAIR ROOF TO MATCH EXISTING, COORDINATE WITH GARLAND ROOFING INC., PROVIDE NEW CEILING TO MATCH ADJACENT.
09 201	PATCH AND PAINT EXISTING GYP. BD. CEILING.
09 503	PATCH, REPLACE AND PAINT ALL EXISTING CEILING TILES ON (E) BEAMS.
09 504	PATCH AND PAINT EXISTING GLUE-ON ACOUSTICAL CEILING TILE
23 302	NEW EXHAUST FANS, ROOF MOUNT. CONTRACTOR TO PATCH, REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT. SEE MECH. DWGS. SEE DETAIL 7/A10.7.1
23 312	NEW EXPOSED DUCTWORK WITH GALVANIZED FINISH PER MECH. DWGS
26 501	NEW LIGHT FIXTURE, TYP. SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.

GENERAL NOTES

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5. CEILING SYSTEM SHALL BE COORDINATED WITH THE LIGHTING & ELECTRICAL PLANS.
6. PAINT GYP. BD. CEILINGS AND SOFFITS P-1 U.O.N. (PAINT FINISH TO BE SAME AT FACE AND UNDERSIDE OF SOFFITS.) REFER TO ROOM FINISH SCHEDULE FOR COLOR SELECTIONS.
7. PAINT EXPOSED CEILINGS AND EQUIPMENT PER FINISH SCHEDULE.
8. NO EXPOSED NAILS OR SCREWS ARE ALLOWED.
9. REMOVE EXISTING PROJECTORS AS NEEDED FOR INSTALLATION OF NEW CEILINGS/SOFFITS, THEN RE-INSTALL PROJECTORS AFTER INSTALLATION OF NEW CEILINGS/SOFFITS.

EQUIPMENT

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2. SEE MECHANICAL AND PLUMBING DRAWINGS FOR DIFFUSERS AND PIPE CHASES.
3. SEE FIRE PROTECTION DETAILS FOR PENETRATIONS THROUGH RATED WALLS, WHERE OCCURS.
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LEGEND

- (E) CEILING SYSTEM TO BE REMOVED
- (E) TO REMAIN 2X4 SUSPENDED CEILING ACOUSTICAL CEILING PANEL SYSTEM. PATCH AND REPAIR AS NEEDED WITH (N) LIGHT FIXTURE INSTALLATION
- (E) TO REMAIN GYPSUM WALLBOARD CEILING
- (E) LIGHT FIXTURE TO BE REMOVED
- NEW 2x4 IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.2 & A10.9.3 FOR DETAILS.
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
- NURSE / A02 / (+) 8'-0" — ROOM TAG. (+) 8'-0" = CEILING HEIGHT OF ROOM, U.O.N.

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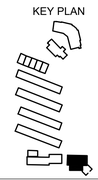
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NO.	REMARKS	DATE

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KEY PLAN



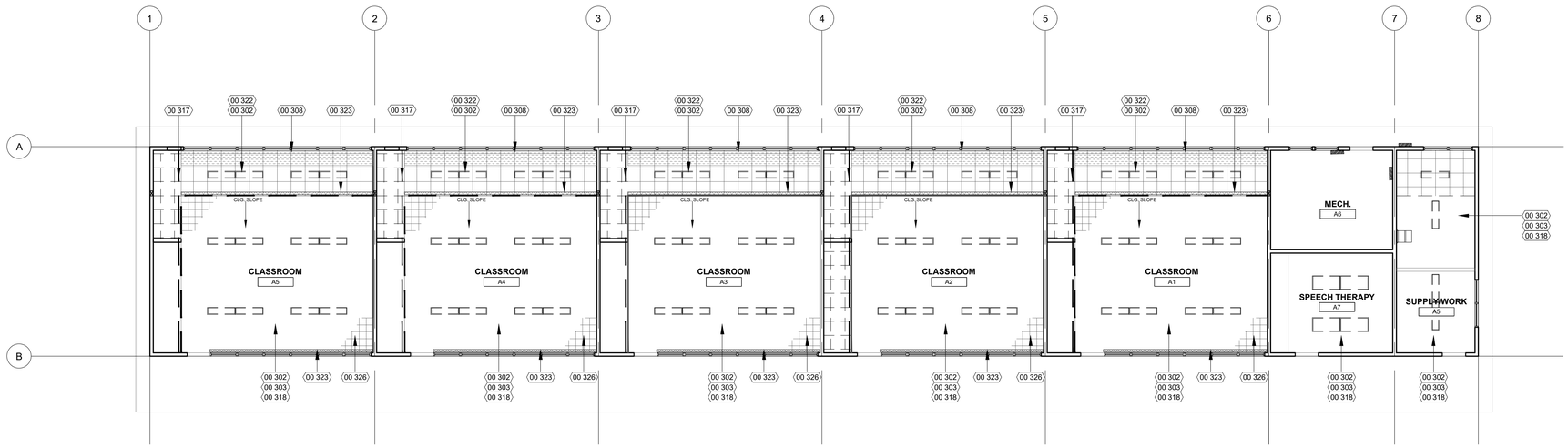
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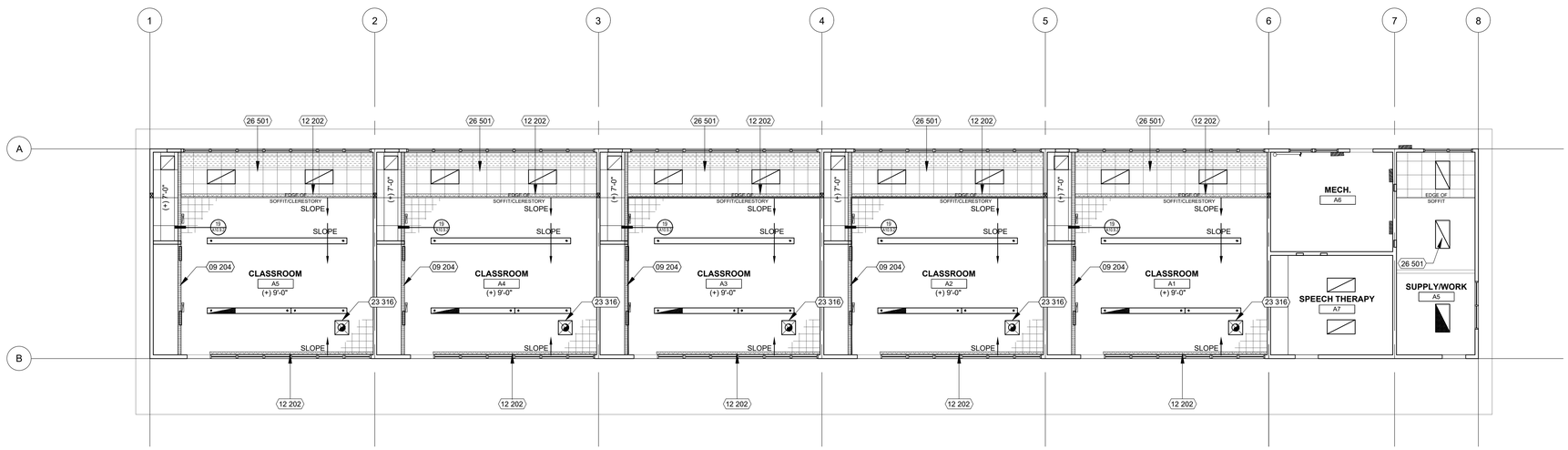
DEMO & NEW REFLECTED CEILING PLAN - MULTI-PURPOSE - BUILDING 2

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.2
Drawn: KT	Checked: CD



DEMO REFLECTED CEILING PLAN - BUILDING A - CLASSROOM

1/8" = 1'-0" 5



REFLECTED CEILING PLAN - BUILDING A - CLASSROOM

1/8" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES. REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT, REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 308	EXISTING HARD CEILING SYSTEM TO REMAIN.
00 317	REMOVE (E) T-BAR SOFFIT AND SIDE WIDE ABOVE CLOSET. NEW SOFFIT AND FINISH TO BE INSTALLED.
00 318	REMOVE ALL EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF WORK.
00 322	EXISTING ACOUSTICAL LAY-IN T-BAR SUSPENDED GRID SYSTEM TO REMAIN. REMOVE EXISTING ACOUSTICAL TILES TO ALLOW FOR NEW HVAC WORK, STORE CEILING TILES FOR REINSTALLATION, TYP.
00 323	REMOVE EXISTING BLINDS W/TRACKS WITHOUT DAMAGING AND STORE IN SAFE AREA AS NOT TO GET DAMAGED. BLINDS TO BE RE-INSTALLED AFTER NEW CEILING INSTALL. COORDINATE WITH ARCHITECT FOR INSTALLATION LOCATION/INSTRUCTIONS.
00 326	(E) GLUE-ON ACOUSTICAL TILE CEILING SYSTEM TO REMAIN. PATCH AND REPAIR AS REQUIRED AT NEW BULKHEAD AND AS NEEDED.
09 204	NEW ACT SOFFIT WITH GYP. BD. BULKHEAD, SEE DETAIL 19/A10.9.2.
12 202	RE-INSTALL BLINDS. BLINDS TO BE INSTALLED AFTER NEW CEILING INSTALL. COORDINATE WITH ARCHITECT FOR INSTALLATION INSTRUCTIONS.
23 302	NEW EXHAUST FAN. CONTRACTOR TO PATCH, REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT. SEE MECH. DWGS, SEE DETAIL 7/A10.7.1
23 316	NEW ROOF MOUNTED RELIEF HOOD PER MECH. DWGS. CONTRACTOR TO PATCH/REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT, SEE DETAIL 7/A10.7.1.
26 501	NEW LIGHT FIXTURE TYP., SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.

GENERAL NOTES

GENERAL
1. ALL HEIGHTS ARE REFERENCED FROM FINISH FLOOR ELEVATIONS = 0'-0"
2. ACCESS DOORS TO BE INSTALLED TO SERVICE EQUIPMENT SHOWN IN CONTRACT DOCUMENTS. EXACT NUMBER AND LOCATION OF ACCESS PANELS IS NOT SHOWN. SEE DETAIL 21/A10.9.2.
3. PROVIDE ACCESS PANELS TO ENCLOSED AREAS ABOVE GYPSUM BOARD CEILINGS. CENTER AND ALIGN TO LIGHT FIXTURES, AND OTHER CEILING FIXTURES PER PLAN.
4. CEILING SYSTEM SHOULD BE CENTERED WITHIN EACH ROOM AS WELL AS ALIGNED WITH THE STRUCTURAL GRID, U.O.N.
5. CEILING SYSTEM SHALL BE COORDINATED WITH THE LIGHTING & ELECTRICAL PLANS.
6. PAINT GYP. BD. CEILINGS AND SOFFITS P-1 U.O.N. (PAINT FINISH TO BE SAME AT FACE AND UNDERSIDE OF SOFFITS.) REFER TO ROOM FINISH SCHEDULE FOR COLOR SELECTIONS.
7. PAINT EXPOSED CEILINGS AND EQUIPMENT PER FINISH SCHEDULE.
8. NO EXPOSED NAILS OR SCREWS ARE ALLOWED.
9. REMOVE EXISTING PROJECTORS AS NEEDED FOR INSTALLATION OF NEW CEILINGS/SOFFITS, THEN RE-INSTALL PROJECTORS AFTER INSTALLATION OF NEW CEILINGS/SOFFITS.

EQUIPMENT
1. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SUPPORTS & BRACING. ELECTRICAL DEVICES ARE SHOWN FOR LOCATION IN RELATION TO LIGHT FIXTURES AND MECHANICAL DIFFUSERS IN SELECT AREAS. FOR FIXTURE INFORMATION SEE ELECTRICAL DRAWINGS.
2. SEE MECHANICAL AND PLUMBING DRAWINGS FOR DIFFUSERS AND PIPE CHASES.
3. SEE FIRE PROTECTION DETAILS FOR PENETRATIONS THROUGH RATED WALLS, WHERE OCCURS.
4. SINGLE LIGHT FIXTURES IN GYP. BD. CEILINGS SHALL BE CENTERED IN ROOM.
5. LIGHT FIXTURE DIMENSIONS ARE TO CENTERLINE OF FIXTURE OR GROUP OF FIXTURES, U.O.N.
6. CENTER AND ALIGN SMOKE DETECTOR, DIFFUSERS, GRILLS, AND SIMILAR ITEMS IN CEILING TILE GRID AND ALIGN WITH LIGHT FIXTURES, SEE DETAIL 16/A10.9.2.
7. SEE ELECTRICAL DRAWINGS FOR LOW LEVEL EXIT SIGN LOCATIONS.

DEMOLITION
1. ALL DEMOLITION WORK SHALL COMPLY WITH CFC CHAPTER 14 OF THE FIRE CODE FOR SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 34 OF THE BUILDING CODE FOR EXISTING STRUCTURES.
2. ALL DIMENSIONS SHOWN ON THIS SHEET ARE EXISTING APPROXIMATE. VERIFY IN FIELD.
3. VERIFICATION OF EXISTING CONDITIONS:
   A. IN THE REMODELING OF AN EXISTING BUILDING CERTAIN ASSUMPTIONS HAVE BEEN MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY, OR DESTROYING OTHERWISE SERVICEABLE PORTIONS OF THE BUILDING. NOTIFY THE ARCHITECT IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED WHEN CONDITIONS ARE DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THE DRAWINGS.

LEGEND

- (E) CEILING SYSTEM TO BE REMOVED
- (E) TO REMAIN 2X4 SUSPENDED CEILING ACOUSTICAL CEILING PANEL SYSTEM. PATCH AND REPAIR AS NEEDED WITH (N) LIGHT FIXTURE INSTALLATION
- (E) TO REMAIN GYPSUM WALLBOARD CEILING
- (E) LIGHT FIXTURE TO BE REMOVED
- NEW 2x4 IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.2 & A10.9.3 FOR DETAILS.
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
- NURSE / A02 / (+) 8'-0" — ROOM TAG (+) 8'-0" = CEILING HEIGHT OF ROOM, U.O.N.

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ARCHITECT	ENGINEER
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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

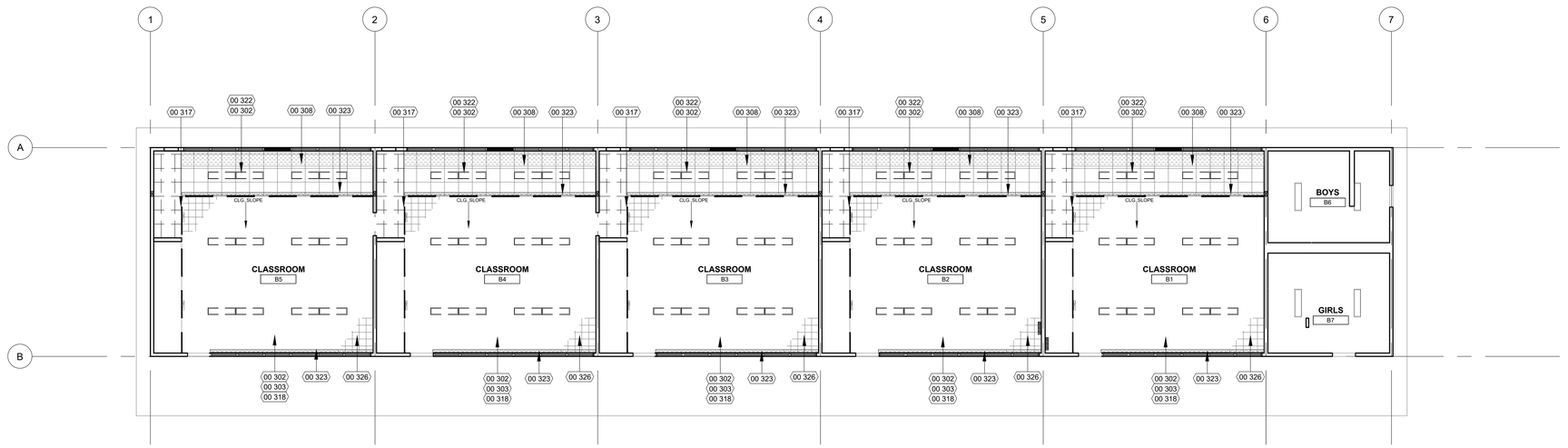
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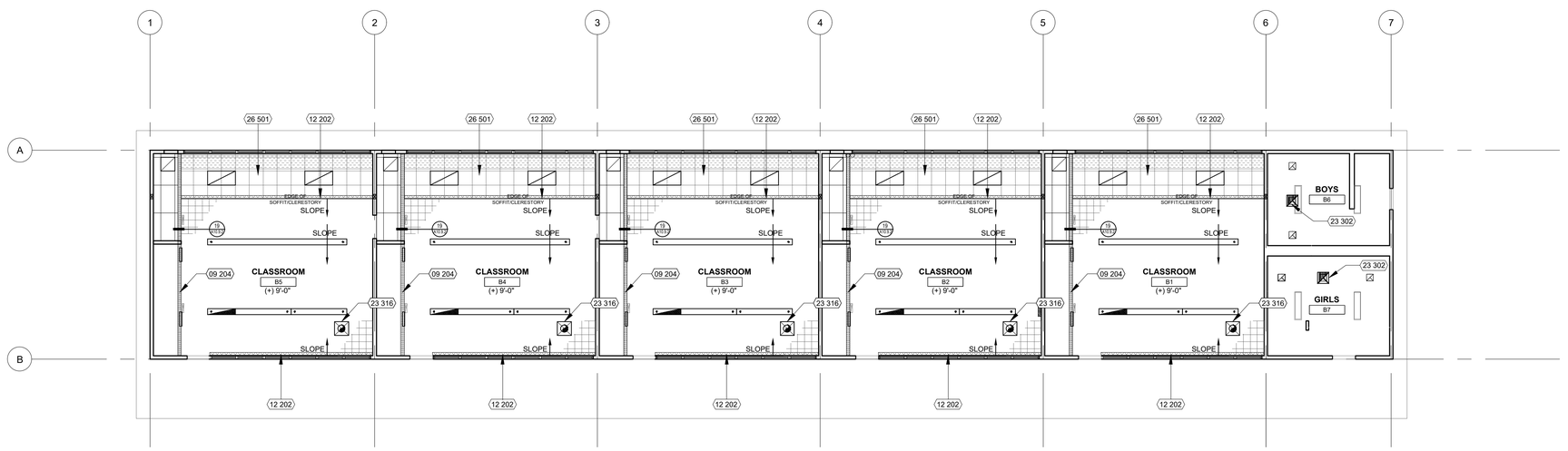
DEMO & REFLECTED CEILING PLAN - BUILDING A - CLASSROOM

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.3
Drawn / Checked	
KT / CD	



DEMO REFLECTED CEILING PLAN - CLASSROOM - BUILDING B

1/8" = 1'-0" 5



NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING B

1/8" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES , REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT, REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 308	EXISTING HARD CEILING SYSTEM TO REMAIN.
00 317	REMOVE EXISTING T-BAR SOFFIT AND SIDE WIDE ABOVE CLOSET. NEW SOFFIT AND FINISH TO BE INSTALLED.
00 318	REMOVE ALL EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF WORK.
00 322	EXISTING ACOUSTICAL LAY-IN T-BAR SUSPENDED GRID SYSTEM TO REMAIN, REMOVE EXISTING ACOUSTICAL TILES TO ALLOW FOR NEW HVAC WORK, STORE CEILING TILES FOR REINSTALLATION, TYP.
00 323	REMOVE EXISTING BLINDS W/TRACKS WITHOUT DAMAGING AND STORE IN SAFE AREA AS NOT TO GET DAMAGED. BLINDS TO BE RE-INSTALLED AFTER NEW CEILING INSTALL. COORDINATE WITH ARCHITECT FOR INSTALLATION LOCATION/INSTRUCTIONS.
00 326	(E) GLUE-ON ACOUSTICAL TILE CEILING SYSTEM TO REMAIN. PATCH AND REPAIR AS REQUIRED AT NEW BULKHEAD AND AS NEEDED.
09 204	NEW ACT SOFFIT WITH GYP. BD. BULKHEAD, SEE DETAIL 19/A10.9.2.
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23 316	NEW ROOF MOUNTED RELIEF HOOD PER MECH. DWGS. CONTRACTOR TO PATCH/REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT, SEE DETAIL 7/A10.7.1.
26 501	NEW LIGHT FIXTURE TYP., SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.

GENERAL NOTES

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LEGEND

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- (E) TO REMAIN 2X4 SUSPENDED CEILING ACOUSTICAL CEILING PANEL SYSTEM. PATCH AND REPAIR AS NEEDED WITH (N) LIGHT FIXTURE INSTALLATION
- (E) TO REMAIN GYPSUM WALLBOARD CEILING
- (E) LIGHT FIXTURE TO BE REMOVED
- NEW 2x4 IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.2 & A10.9.3 FOR DETAILS.
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
- NURSE / A02 / (+) 8'-0" — ROOM TAG (+) 8'-0" = CEILING HEIGHT OF ROOM, U.O.N.

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DATE: 5/4/2023

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ARCHITECT	ENGINEER
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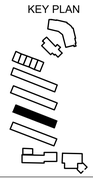
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



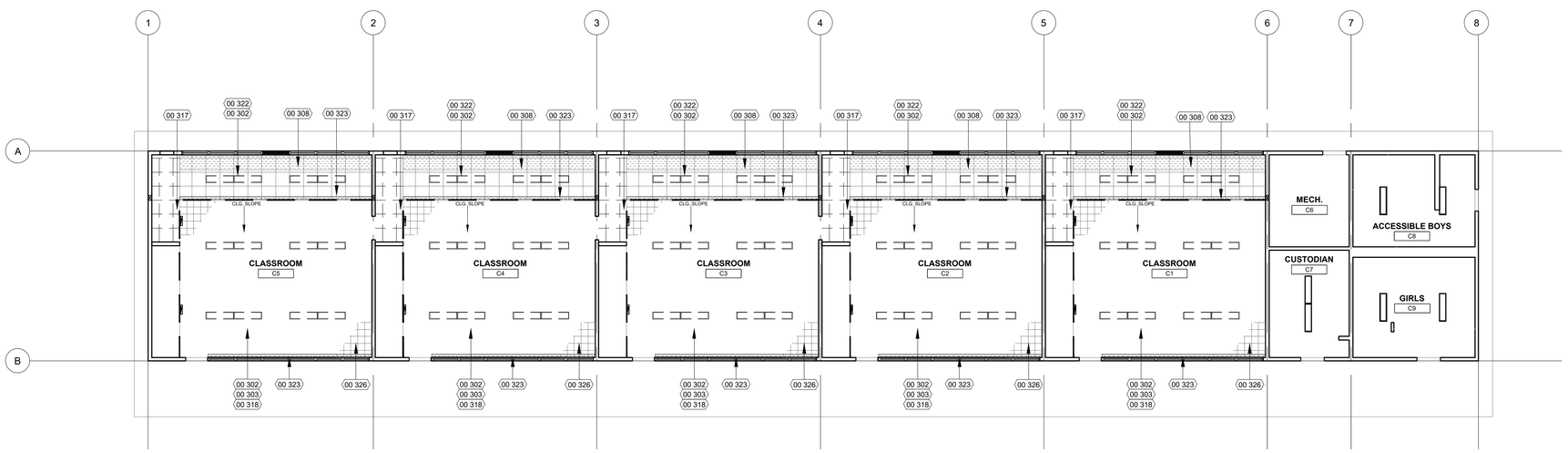
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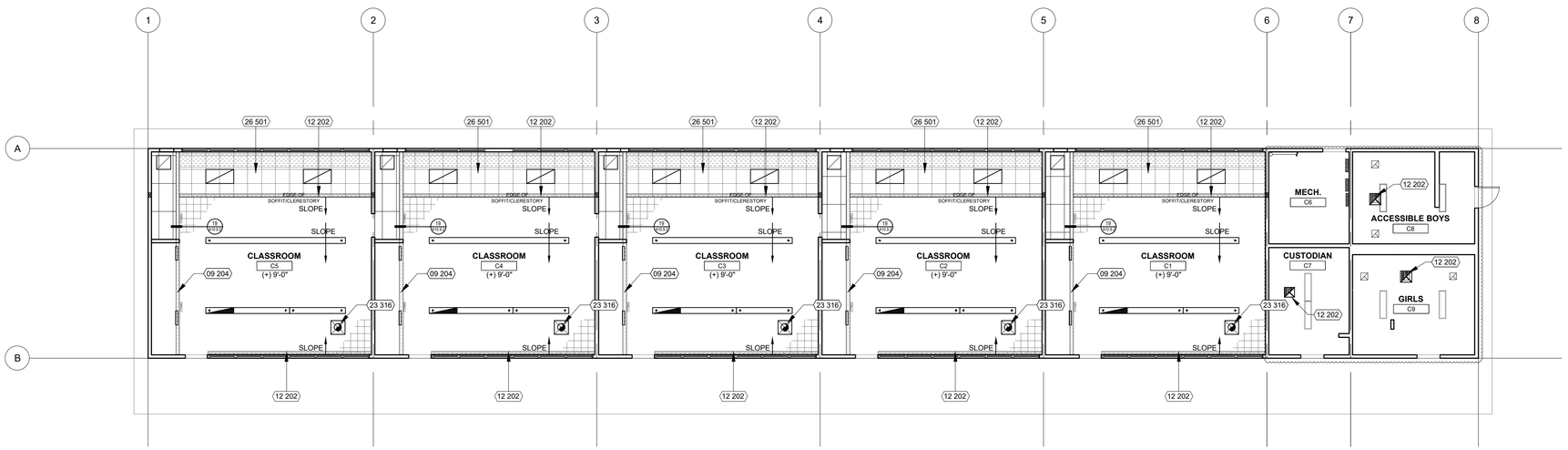
DEMO & NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING B

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.4
Drawn / Checked	
KT / CD	



DEMO REFLECTED CEILING PLAN - CLASSROOM - BUILDING C

1/8" = 1'-0" 5



NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING C

1/8" = 1'-0" 10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES , REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT. REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 308	EXISTING HARD CEILING SYSTEM TO REMAIN.
00 317	REMOVE EXISTING T-BAR SOFFIT AND SIDE WIDE ABOVE CLOSET. NEW SOFFIT AND FINISH TO BE INSTALLED.
00 318	REMOVE ALL EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING. REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF WORK.
00 322	EXISTING ACOUSTICAL LAY-IN T-BAR SUSPENDED GRID SYSTEM TO REMAIN, REMOVE EXISTING ACOUSTICAL TILES TO ALLOW FOR NEW HVAC WORK. STORE CEILING TILES FOR REINSTALLATION, TYP.
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LEGEND

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ARCHITECT	ENGINEER
LICENSED ARCHITECT — BRYAN P. WHITWORTH — No. C 30345 Ren. 9/30/23 — STATE OF CALIFORNIA — DATE SIGNED: 04/24/2023	

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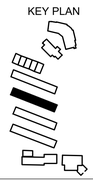
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
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● DSA BACK CHECK	04/24/2023
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○ CONSTRUCTION	

KEY PLAN



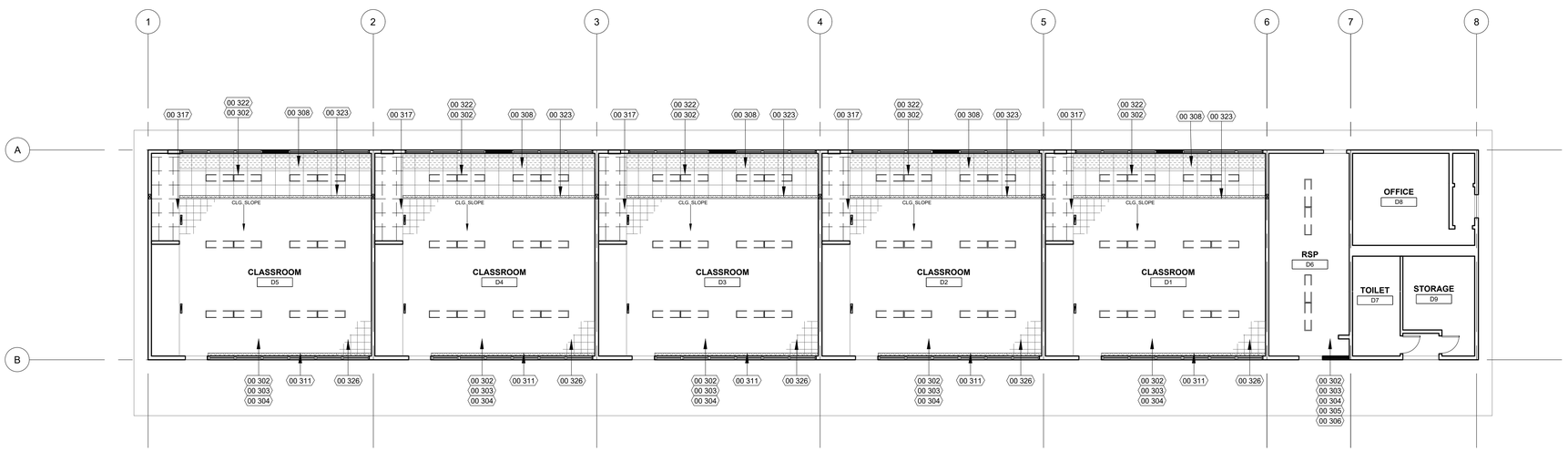
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

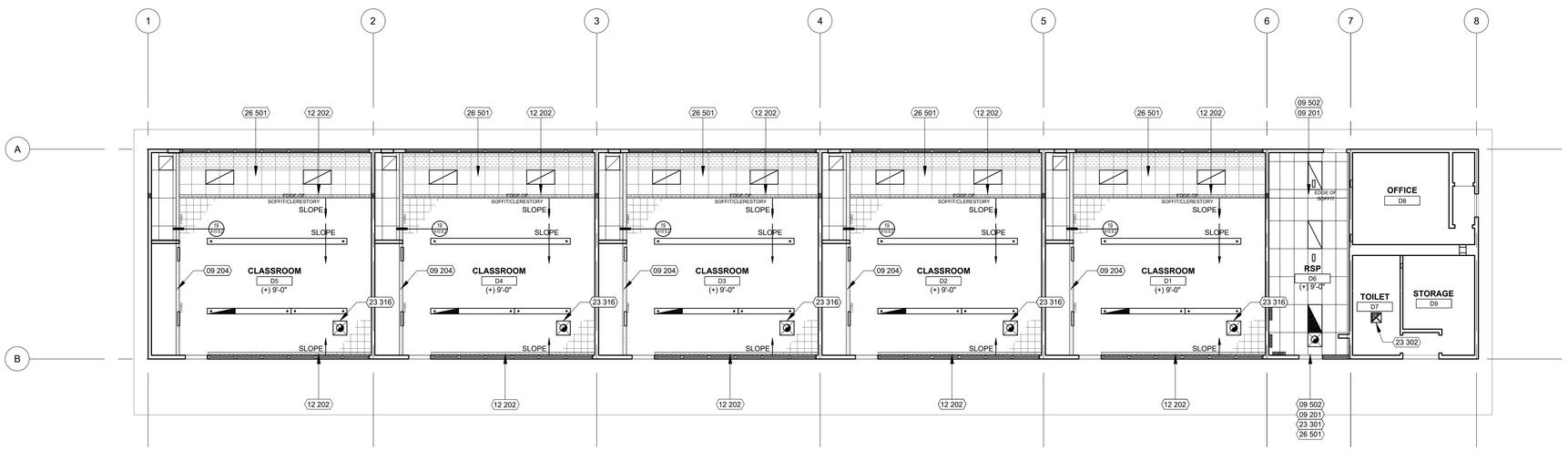
DEMO & NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.5
Drawn / Checked	
KT / CD	



N

DEMO REFLECTED CEILING PLAN - CLASSROOM - BUILDING D | 1/8" = 1'-0" | 5



N

NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING D | 1/8" = 1'-0" | 10

KEY NOTES

NUMBER	NOTE
00 302	REMOVE AND REPLACE ALL EXISTING LIGHT FIXTURES , REFER TO ELEC. DWGS. FOR EXTENT OF WORK. VERIFY QUANTITIES AND LAYOUT IN FIELD.
00 303	REMOVE AND REPLACE EXISTING HVAC DUCT, REFER TO MECHANICAL DWGS. FOR EXTENT OF WORK.
00 304	REMOVE AND REPLACE EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF DEMOLITION AND NEW WORK.
00 305	REMOVE CEILING SYSTEM AND INSULATION PREPARE FOR NEW.
00 306	REMOVE (E) GLUE-ON ACOUSTICAL TILE CEILING SYSTEM, TO BARE RAFTER, PREPARE FOR NEW CEILING SYSTEM.
00 308	EXISTING HARD CEILING SYSTEM TO REMAIN.
00 317	REMOVE EXISTING T-BAR SOFFIT AND SIDE WIDE ABOVE CLOSET. NEW SOFFIT AND FINISH TO BE INSTALLED.
00 318	REMOVE ALL EXISTING MECHANICAL/PLUMBING EQUIPMENT & PIPING, REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXTENT OF WORK.
00 319	REMOVE CEILING SYSTEM, SUBSTRATE, AND INSULATION PREPARE FOR NEW.
00 321	REMOVE AND REPLACE EXISTING MECHANICAL SYSTEMS, REFER TO MECHANICAL DWGS. FOR THE EXTENT OF DEMOLITION WORK
00 322	EXISTING ACOUSTICAL LAY-IN T-BAR SUSPENDED GRID SYSTEM TO REMAIN, REMOVE EXISTING ACOUSTICAL TILES TO ALLOW FOR NEW HVAC WORK, STORE CEILING TILES FOR REINSTALLATION, TYP.
00 323	REMOVE EXISTING BLINDS W/TRACKS WITHOUT DAMAGING AND STORE IN SAFE AREA AS NOT TO GET DAMAGED. BLINDS TO BE RE-INSTALLED AFTER NEW CEILING INSTALL. COORDINATE WITH ARCHITECT FOR INSTALLATION LOCATION/INSTRUCTIONS.
00 326	(E) GLUE-ON ACOUSTICAL TILE CEILING SYSTEM TO REMAIN. PATCH AND REPAIR AS REQUIRED AT NEW BULKHEAD AND AS NEEDED.
09 201	PATCH AND PAINT EXISTING GYP. BD. CEILING.
09 204	NEW ACT SOFFIT WITH GYP. BD. BULKHEAD. SEE DETAIL 19/A10.9.2.
09 502	NEW IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.1 & A10.9.2 FOR DETAILS.
12 202	RE-INSTALL BLINDS. BLINDS TO BE INSTALLED AFTER NEW CEILING INSTALL. COORDINATE WITH ARCHITECT FOR INSTALLATION INSTRUCTIONS.
23 302	NEW EXHAUST FAN. CONTRACTOR TO PATCH,REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT. SEE MECH. DWGS, SEE DETAILS 7/A10.7.1.
23 316	NEW ROOF MOUNTED RELIEF HOOD PER MECH. DWGS. CONTRACTOR TO PATCH/REPAIR CEILING AND ROOF PENETRATIONS TO MATCH ADJACENT. SEE DETAIL 7/A10.7.1.
26 501	NEW LIGHT FIXTURE TYP., SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.
26 502	NEW SURFACE MOUNTED LIGHT FIXTURE, TYP. SEE ELECTRICAL DRAWINGS FOR TYPE AND EXTENT OF WORK.

GENERAL NOTES

GENERAL
1. ALL HEIGHTS ARE REFERENCED FROM FINISH FLOOR ELEVATIONS = 0'-0"
2. ACCESS DOORS TO BE INSTALLED TO SERVICE EQUIPMENT SHOWN IN CONTRACT DOCUMENTS. EXACT NUMBER AND LOCATION OF ACCESS PANELS IS NOT SHOWN. SEE DETAIL 21/A10.9.2.
3. PROVIDE ACCESS PANELS TO ENCLOSED AREAS ABOVE GYPSUM BOARD CEILINGS. CENTER AND ALIGN TO LIGHT FIXTURES, AND OTHER CEILING FIXTURES PER PLAN.
4. CEILING SYSTEM SHOULD BE CENTERED WITHIN EACH ROOM AS WELL AS ALIGNED WITH THE STRUCTURAL GRID, U.O.N.
5. CEILING SYSTEM SHALL BE COORDINATED WITH THE LIGHTING & ELECTRICAL PLANS.
6. PAINT GYP. BD. CEILINGS AND SOFFITS P-1 U.O.N. (PAINT FINISH TO BE SAME AT FACE AND UNDERSIDE OF SOFFITS.) REFER TO ROOM FINISH SCHEDULE FOR COLOR SELECTIONS.
7. PAINT EXPOSED CEILINGS AND EQUIPMENT PER FINISH SCHEDULE.
8. NO EXPOSED NAILS OR SCREWS ARE ALLOWED.
9. REMOVE EXISTING PROJECTORS AS NEEDED FOR INSTALLATION OF NEW CEILINGS/SOFFITS, THEN RE-INSTALL PROJECTORS AFTER INSTALLATION OF NEW CEILINGS/SOFFITS.

EQUIPMENT
1. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SUPPORTS & BRACING. ELECTRICAL DEVICES ARE SHOWN FOR LOCATION IN RELATION TO LIGHT FIXTURES AND MECHANICAL DIFFUSERS IN SELECT AREAS. FOR FIXTURE INFORMATION SEE ELECTRICAL DRAWINGS.
2. SEE MECHANICAL AND PLUMBING DRAWINGS FOR DIFFUSERS AND PIPE CHASES.
3. SEE FIRE PROTECTION DETAILS FOR PENETRATIONS THROUGH RATED WALLS, WHERE OCCURS.
4. SINGLE LIGHT FIXTURES IN GYP. BD. CEILINGS SHALL BE CENTERED IN ROOM.
5. LIGHT FIXTURE DIMENSIONS ARE TO CENTERLINE OF FIXTURE OR GROUP OF FIXTURES, U.O.N.
6. CENTER AND ALIGN SMOKE DETECTOR, DIFFUSERS, GRILLS, AND SIMILAR ITEMS IN CEILING TILE GRID AND ALIGN WITH LIGHT FIXTURES, SEE DETAIL 16/A10.9.2.
7. SEE ELECTRICAL DRAWINGS FOR LOW LEVEL EXIT SIGN LOCATIONS.

DEMOLITION
1. ALL DEMOLITION WORK SHALL COMPLY WITH CFC CHAPTER 14 OF THE FIRE CODE FOR SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 34 OF THE BUILDING CODE FOR EXISTING STRUCTURES.
2. ALL DIMENSIONS SHOWN ON THIS SHEET ARE EXISTING APPROXIMATE. VERIFY IN FIELD.
3. VERIFICATION OF EXISTING CONDITIONS:
   A. IN THE REMODELING OF AN EXISTING BUILDING CERTAIN ASSUMPTIONS HAVE BEEN MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY, OR DESTROYING OTHERWISE SERVICEABLE PORTIONS OF THE BUILDING. NOTIFY THE ARCHITECT IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED WHEN CONDITIONS ARE DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THE DRAWINGS.

LEGEND

- (E) CEILING SYSTEM TO BE REMOVED
- (E) TO REMAIN 2X4 SUSPENDED CEILING ACOUSTICAL CEILING PANEL SYSTEM. PATCH AND REPAIR AS NEEDED WITH (N) LIGHT FIXTURE INSTALLATION
- (E) TO REMAIN GYPSUM WALLBOARD CEILING
- (E) LIGHT FIXTURE TO BE REMOVED
- NEW 2x4 IN-LAY ACOUSTICAL PANEL, T-BAR GRID SUSPENDED CEILING SYSTEM, TYP. SEE SHEET A10.9.2 & A10.9.3 FOR DETAILS.
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
- NURSE / A02 / (+) 8'-0" — ROOM TAG (+) 8'-0" = CEILING HEIGHT OF ROOM, U.O.N.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT — BRYAN P. WHITMORE — No. C 30345 Ren. 9/30/23 — STATE OF CALIFORNIA — DATE SIGNED: 04/24/2023	

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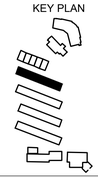
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



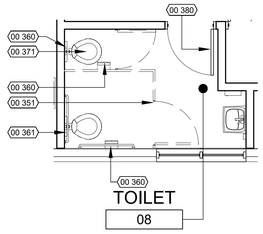
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

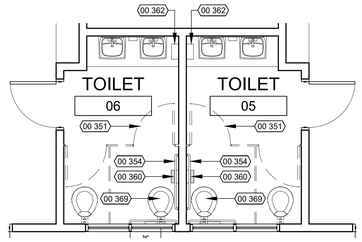
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DEMO & NEW REFLECTED CEILING PLAN - CLASSROOM - BUILDING D

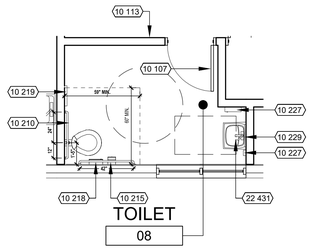
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A3.6
Drawn: KT	Checked: CD



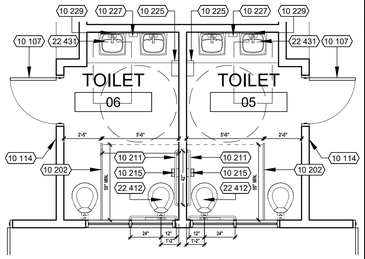
ENLARGED DEMO PLAN - STAFF RESTROOM 08 | 1/4" = 1'-0" | 6



ENLARGED DEMO PLAN - KINDERGARTEN RESTROOM 05 & 06 | 1/4" = 1'-0" | 1



ENLARGED NEW PLAN - STAFF RESTROOM 08 | 1/4" = 1'-0" | 7



ENLARGED NEW PLAN - KINDERGARTEN 05 & 06 | 1/4" = 1'-0" | 2

KEY NOTES

NUMBER	NOTE
00 351	DEMOLISH (E) TOILET DOORS AND PARTITIONS FOR NEW WORK.
00 354	REMOVE (E) GRAB BARS, SALVAGE FOR RE-INSTALLATION
00 360	REMOVE (E) JUMBO TOILET PAPER DISPENSER AND RETURN TO DISTRICT.
00 361	REMOVE (E) SEAT COVER DISPENSER AND SALVAGE FOR RE-INSTALLATION
00 362	REMOVE (E) PAPER TOWEL DISPENSER AND SALVAGE FOR RE-INSTALLATION
00 369	REMOVE (E) TOILET AND SALVAGE FOR RE-INSTALLATION. REMOVE TOILET SEAT AND RETURN TO DISTRICT.
00 371	REMOVE (E) TOILET AND RETURN TO DISTRICT.
00 380	REMOVE (E) DOOR SIGNAGE AND RETURN TO DISTRICT.
10 107	(N) DOOR SIGNAGE COMPLIANT PER 11/A10.10.1.
10 113	(N) WALL SIGNAGE COMPLIANT PER 9/A10.10.1.
10 114	(N) WALL SIGNAGE COMPLIANT PER 10/A10.10.1.
10 202	(N) TOILET PARTITIONS (SCHEDULE ON A10.10.2)
10 210	(E) GRAB BAR COMPLIANT PER SCHEDULE ON A10.10.2.
10 211	REINSTALL (E) GRAB BARS AT COMPLIANT HEIGHT FOR AGES 5-8 PER SCHEDULE ON A10.10.2.
10 215	(N) TOILET PAPER DISPENSER INSTALLED AT COMPLIANT HEIGHT AND LOCATION PER SCHEDULE A10.10.2.
10 218	(N) SANITARY NAPKIN DISPOSAL INSTALLED AT COMPLIANT HEIGHT AND LOCATION PER SCHEDULE A10.10.2.
10 219	REINSTALL (E) SEAT COVER DISPENSER AT COMPLIANT HEIGHT PER SCHEDULE ON A10.10.2.
10 221	(E) SOAP DISPENSER COMPLIANT PER SCHEDULE ON A10.10.2.
10 225	REINSTALL (E) PAPER TOWEL DISPENSER AT COMPLIANT HEIGHT PER SCHEDULE ON A10.10.2.
10 227	(E) PAPER TOWEL DISPENSER COMPLIANT PER SCHEDULE ON A10.10.2.
10 229	(E) MIRROR COMPLIANT PER SCHEDULE ON A10.10.2.
22 412	REINSTALL (E) TOILET WITH (N) SEAT AT COMPLIANT LOCATION FOR AGES 5-8 PER SCHEDULE ON A10.10.2.
22 431	(E) LAVATORY AT COMPLIANT HEIGHT WITH KNEE CLEARANCE PER SCHEDULE ON A10.10.2.

GENERAL NOTES

GENERAL
1. DIMENSIONS
   A. ALL MINIMUM CLEARANCE DIMENSIONS FOR PLUMBING FIXTURES ARE FROM FACE OF WALL FINISH TO CENTER OF FIXTURE, U.O.N.
   B. ALL DIMENSIONS MARKED "MIN. CLR" OR "CLR." ARE TO/ FROM FACE OF WALL FINISH (F.O.F.)
   C. CONTRACTOR TO REPORT ANY FIELD-VERIFIED DISCREPANCIES WITH THE DIMENSIONS NOTED ON THIS SHEET TO THE ARCHITECT.
2. PATCH/REPAIR TILE AND GYPBOARD AS NEEDED TO MATCH EXISTING ADJACENT AT ANY LOCATIONS WHERE FIXTURES, ACCESSORIES, OR PARTITIONS HAVE BEEN REMOVED OR RELOCATED.
3. PROVIDE GLASSMAT BACKER BOARD AT ALL TILED WALLS AND WALLS WITHIN 48" OF ANY PLUMBING FIXTURE
4. ALL DRINKING FOUNTAIN ALCOVES TO BE FINISHED WITH WATER RESISTANT WALL MATERIAL. SEE FINISH SCHEDULE AND INTERIOR ELEVATIONS.
5. ALL FLOOR SLOPES IN RESTROOMS ARE NOT TO EXCEED 1:48 IN ANY DIRECTION.

ACCESSORIES
1. ALL RESTROOM FIXTURES AND ACCESSORIES MOUNTING HEIGHTS AND LOCATIONS TO USE DIMENSIONS PER A/10.10.1.
2. FOR TYPICAL RESTROOM ACCESSORY MOUNTING HEIGHTS, ACCESSIBLE DIMENSIONS, SEE SHEET A10.10.1
3. TOILET ACCESSORIES LOCATED ON OR WITHIN WALLS SHALL BE INSTALLED AND SEALED TO PROTECT STRUCTURAL ELEMENTS FROM MOISTURE (CBC SECTION 1210.2.2)
4. PLUMBING FIXTURES TO HAVE SOLID BLOCKING AS REQUIRED BY CODE, SEE DETAIL 21/A10.10.1

STALLS AND PARTITIONS
1. ALL ACCESSIBLE TOILET PARTITION DOORS TO BE 36" WIDE MINIMUM AND ALL NON-ACCESSIBLE TOILET PARTITION DOORS SHALL NOT BE LESS THAN 2'-2".
2. PARTITION STILE WIDTHS SHALL NOT EXCEED 4".
3. FOR PARTITION DETAILS, SEE DETAIL 21/A10.10.1.
4. INSTALL (1) COAT HOOK CENTERED ON THE BACK OF EVERY STALL DOOR, 40" A.F.F. AT ACCESSIBLE STALLS AND 72" A.F.F. AT NON-ACCESSIBLE STALLS.
5. FLUSH VALVE TO BE LOCATED AT WIDE SIDE OF STALL/ SPACE.

LEGEND

30" x 48" ACCESSIBLE CLEAR SPACE

60" DIAMETER ACCESSIBLE CLEAR SPACE

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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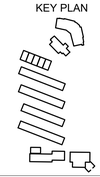
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
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KEY PLAN



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ENLARGED TOILET ROOM PLANS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A7.1
Drawn: KT	Checked: CD

WALL MATERIAL LEGEND

SYMBOL	MATERIAL	BASIS OF DESIGN MANUFACTURER	STYLE/COLOR
P-1	PAINT - EGGSHELL SHEEN	SHERWIN WILLIAMS	0053 PORCELAIN
T-1	PORCELAIN TILE	TBD	TBD

CEILING MATERIAL LEGEND

SYMBOL	MATERIAL	BASIS OF DESIGN MANUFACTURER	STYLE/COLOR
ACT-1	2X4 SUSPENDED ACOUSTICAL CEILING PANELS	ARMSTRONG	ULTIMA/WHITE
ACT-2	2X2 SUSPENDED ACOUSTICAL CEILING PANELS	ARMSTRONG	ULTIMA/WHITE
GB	GYPSUM BOARD SOFFITS & BULKHEAD	GEORGIA PACIFIC	PAINT P-1
P-1	PAINT - EGGSHELL SHEEN	SHERWIN WILLIAMS	0053 PORCELAIN

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	CEILING	COMMENTS
K1	KINDERGARTEN	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
K2	KINDERGARTEN	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
01	SECRETARY	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
02	RECEPTION	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
03	ELECTRICAL	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
04	NURSE	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
05	TOILET	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
06	TOILET	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
06	MEN	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
07	HALLWAY	ACT-2	PATCH/REPAIR ANY DAMAGED EXISTING 2X2 ACT PANELS
08	WOMEN	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
09	TEACHER'S LOUNGE	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
10	TEACHER'S ROOM	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
11	WORK ROOM	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
12	PRINCIPAL	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A1	MULTI-PURPOSE ROOM	P-1, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A2	PLATFORM	P-1, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A3	MECHANICAL ROOM	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A4	KITCHEN	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A5	TOILET	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
A6	CUSTODIAN	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A7	CORRIDOR	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A8	STORAGE	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A9	MECHANICAL	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A1	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A2	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A3	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A4	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A5	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
A6	MECHANICAL	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A7	SPEECH THERAPY	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
A9	SUPPLY/WORK	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
B1	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
B2	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
B3	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
B4	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
B5	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
B6	BOYS	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
B7	GIRLS	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
C1	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
C2	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
C3	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
C4	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
C5	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
C6	BOILER & ELEC. ROOM	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
C7	CUSTODIAN	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
C8	ACCESSIBLE BOYS	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
C9	GIRLS	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
D1	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D2	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D3	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D4	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D5	CLASSROOM	P-1, GB, ACT-1	PAINT EXISTING GLUE-UP CEILING TILES P-1. PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D6	RSP	ACT-1	PATCH/REPAIR ANY DAMAGED EXISTING 2X4 ACT PANELS
D7	TOILET	P-1	T-1 FOR WALLS WHERE FIXTURE RELOCATION OCCURS
D8	OFFICE	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.
D9	STORAGE	P-1	PAINT EXISTING GLUE-UP CEILING TILES P-1.

NOTES:
1. ALL FINISHES SHALL COMPLY WITH CBC CHAPTERS 3-8 & 10AND TITLE 19 C.C.R.
2. PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL RESTROOMS, MOP SINK AREAS AND WALL ADJACENT TO ANY SINK OR DRINKING FOUNTAIN WHERE GYPSUM BOARD IS SCHEDULED
3. DO NOT INSTALL MOISTURE RESISTANT GYPSUM BOARD AT CEILING PLANES
4. THINSET CERAMIS WALL TILE OVER STUD FRAMING TO BE OVER ½" MOISTURE RESISTANT GYPSUM BOARD
5. CERAMIC TILE AT FLOORS OVER DEPRESSED SLABS WITH FLOOR DRAINS SHALL BE FULL SET

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ARCHITECT	ENGINEER
LICENSED ARCHITECT SETH P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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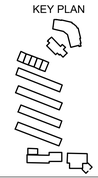
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NO.	REMARKS	DATE

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	DATE
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○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



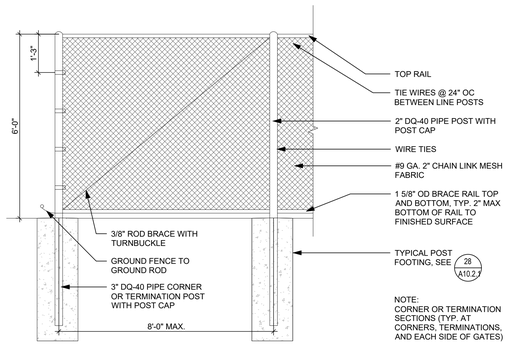
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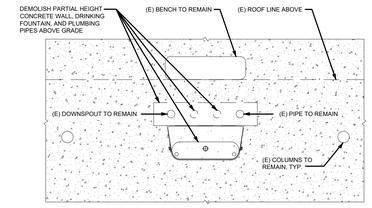
ROOM FINISH SCHEDULE

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A9.1
Drawn / Checked	
KT / CD	

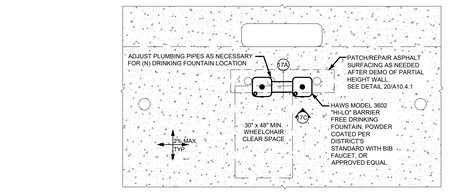


NOTE:
CORNER OR TERMINATION SECTIONS (TYP. AT CORNERS, TERMINATIONS, AND EACH SIDE OF GATES)

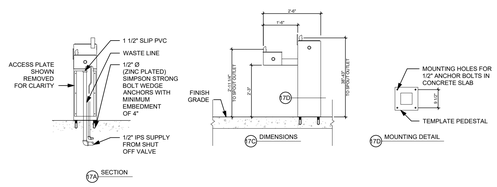
TYP. CHAINLINK FENCE SECTION | 1/2" = 1'-0" | 27



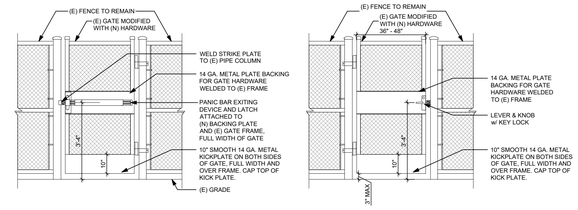
DEMOLITION PLAN



NEW FLOOR PLAN

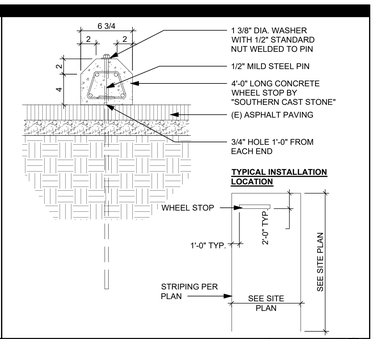


EXTERIOR DRINKING FOUNTAIN REPLACEMENT | 3/8" = 1'-0" | 17

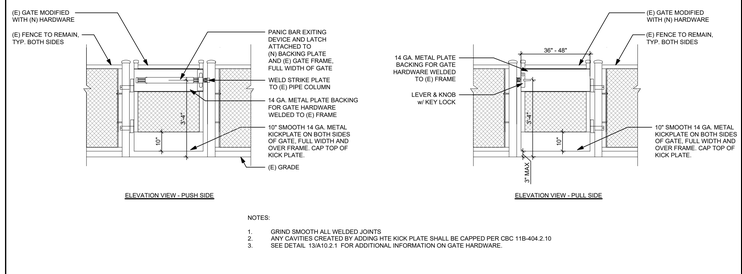


NOTES:
1. GRIND SMOOTH ALL WELDED JOINTS
2. ANY CAVITIES CREATED BY ADDING HTE KICK PLATE SHALL BE CAPPED PER CBC 11B-404.2.10
3. SEE DETAIL 13/A10.2.1 FOR ADDITIONAL INFORMATION ON GATE HARDWARE.

(E) GATE MODIFICATION DETAIL - 6' FENCE | 3/8" = 1'-0" | 6

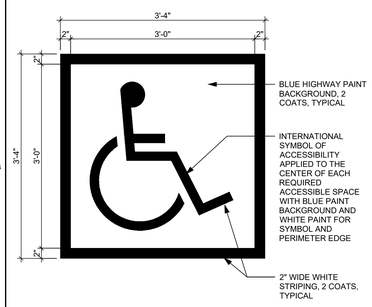


WHEEL STOP | 1-1/2" = 1'-0" | 1



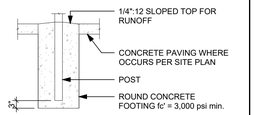
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1. GRIND SMOOTH ALL WELDED JOINTS
2. ANY CAVITIES CREATED BY ADDING HTE KICK PLATE SHALL BE CAPPED PER CBC 11B-404.2.10
3. SEE DETAIL 13/A10.2.1 FOR ADDITIONAL INFORMATION ON GATE HARDWARE.

(E) GATE MODIFICATION DETAIL - 4' FENCE | 3/8" = 1'-0" | 7



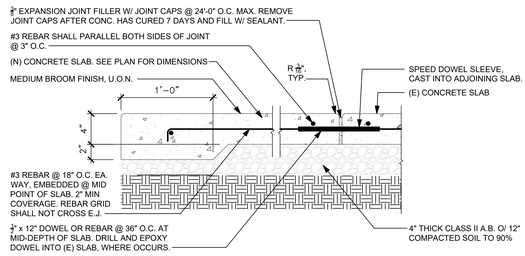
INTERNATIONAL SYMBOL OF ACCESSIBILITY | 1" = 1'-0" | 2

NOTE: DIAMETER SHALL BE 4X POST SIZE, MIN.



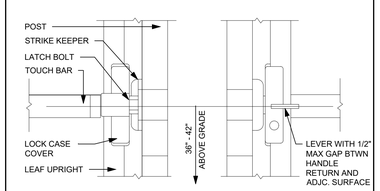
CHAIN LINK: 6'-0" HIGH	
TYPE	POST FOOTING
CORNER, END, AND PULL POSTS	39" x 14" DIA.
LINE POSTS	36" x 12" DIA.
GATE AND LATCH POSTS: 3'-0" TO 5'-0" WIDE	48" x 14" DIA.
GATE AND LATCH POSTS: 10'-0" WIDE	48" x 18" DIA.
GATE AND LATCH POSTS: 12'-0" WIDE	48" x 26" DIA.

FENCE POST FOOTING | 1/2" = 1'-0" | 28



NOTES:
1. SCORE JOINTS SHALL BE PLACED A MAX. OF 6'-0" O.C.
2. SCORE JOINTS SHALL BE ¼" WIDE MAXIMUM, ¼" RADIUS BOTH SIDES, AND ¼" DEEP
3. SEE STRUCTURAL DWGS, SHEET S1.0 FOR TYPICAL REINFORCING LAP SPLICE, HOOK BEND AND RADIUS.

(N) SIDEWALK PAVING | 1 1/2" = 1'-0" | 18

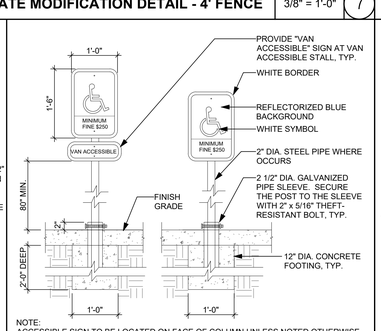


PANIC BAR EXITING DEVICE
VON DUPRIN 99L TOUCH BAR - FULL WITH OF GATE

PULL SIDE HARDWARE
VON DUPRIN SERIES 996L LEVER

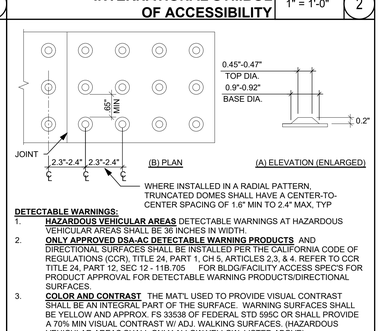
NOTE:
1. GATE HARDWARE TO COMPLY WITH CBC 11B-404
2. THE ENDS OF THE CROSS BAR SHALL BE CURVED, GUARDED, OR OTHERWISE DESIGNED TO PREVENT CATCHING ON THE CLOTHING OF PERSONS DURING EGRESS.

TYP. SWING GATE ACCESSORIES | 3" = 1'-0" | 13



NOTE:
ACCESSIBLE SIGN TO BE LOCATED ON FACE OF COLUMN UNLESS NOTED OTHERWISE

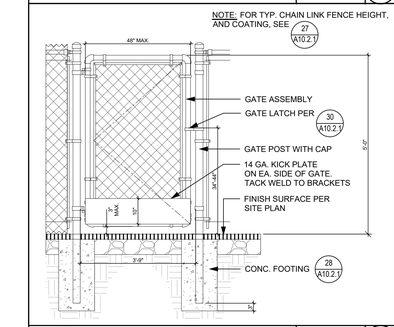
ACCESSIBLE STALL SIGNAGE | 3/4" = 1'-0" | 8



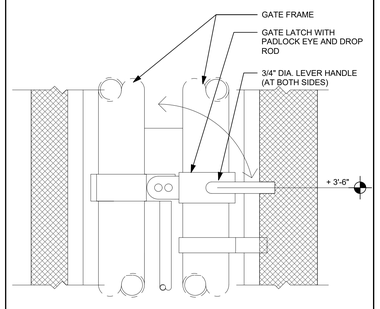
WHERE INSTALLED IN A RADIAL PATTERN, TRUNCATED DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MIN TO 2.4" MAX, TYP

DETECTABLE WARNINGS:
1. **HAZARDOUS VEHICULAR AREAS** DETECTABLE WARNINGS AT HAZARDOUS VEHICULAR AREAS SHALL BE 36 INCHES IN WIDTH.
2. **ONLY APPROVED DSA-AC DETECTABLE WARNING PRODUCTS** AND DIRECTIONAL SURFACES SHALL BE INSTALLED PER THE CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 1, CH 5, ARTICLES 2.3, & 4. REFER TO CCR TITLE 24, PART 12, SEC 12 - 11B.705 FOR BLDG/FACILITY ACCESS SPEC'S FOR PRODUCT APPROVAL FOR DETECTABLE WARNING PRODUCTS/DIRECTIONAL SURFACES.
3. **COLOR AND CONTRAST** THE MAT'L USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE SURFACE. WARNING SURFACES SHALL BE YELLOW AND APPROX. FS 33538 OF FEDERAL STD 595C OR SHALL PROVIDE A 70% MIN VISUAL CONTRAST W/ ADJ. WALKING SURFACES. (HAZARDOUS VEHICULAR AREAS SHALL ONLY ALLOW YELLOW, LISTED ABOVE)

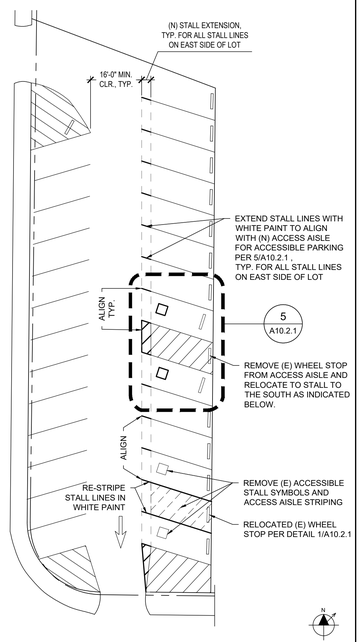
TRUCKTED DOMES | 1 1/2" = 1'-0" | 3



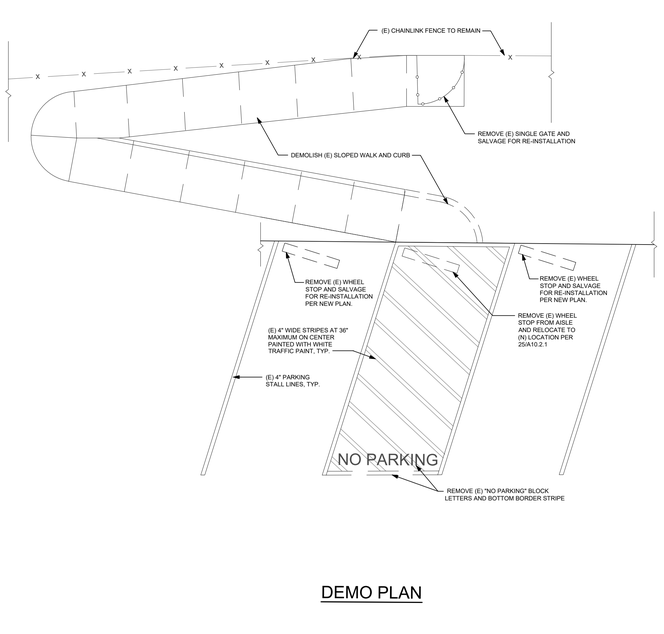
SINGLE GATE ELEVATION | 1/2" = 1'-0" | 29



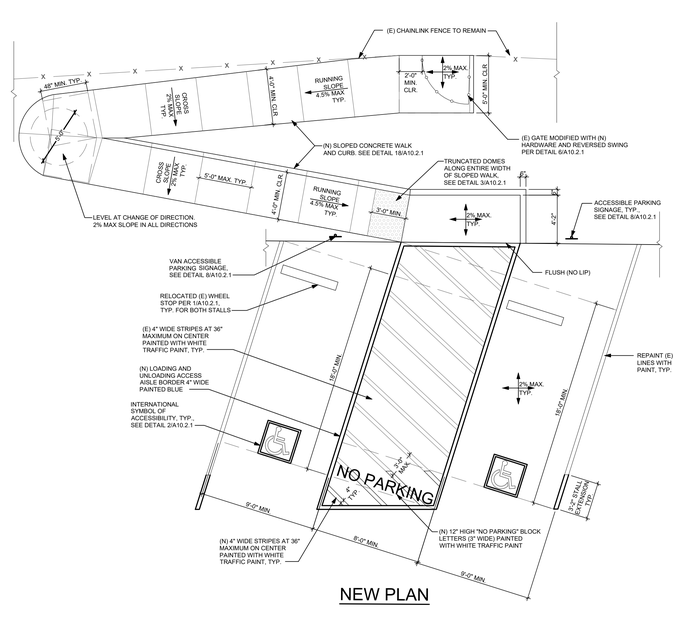
GATE LATCH DETAIL | 3" = 1'-0" | 30



ENLARGED PARKING PLAN | 1" = 20'-0" | 25



DEMO PLAN



NEW PLAN

DEMO AND NEW ENLARGED PLANS - ACCESSIBLE PARKING AND SLOPED WALK | 3/16" = 1'-0" | 5

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ARCHITECT	ENGINEER

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DATE SIGNED: 04/24/2023

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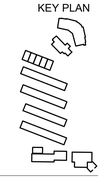
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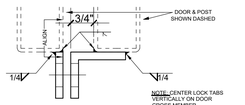
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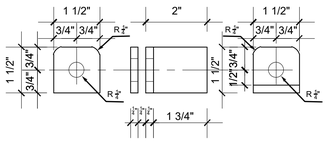
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SITE DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A10.2.1
Drawn / Checked	
KT / CD	

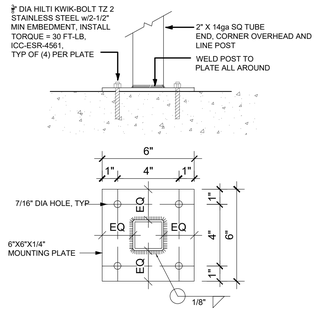


TOP VIEW

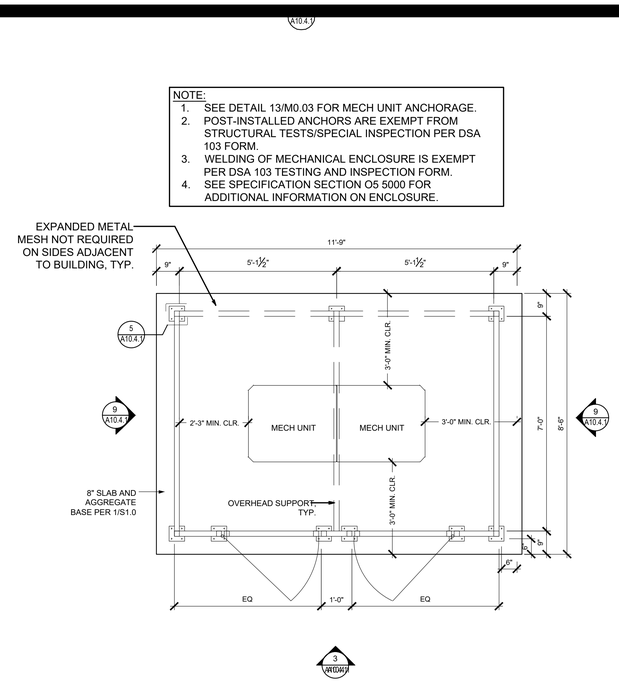


LEFT FRONT VIEW RIGHT

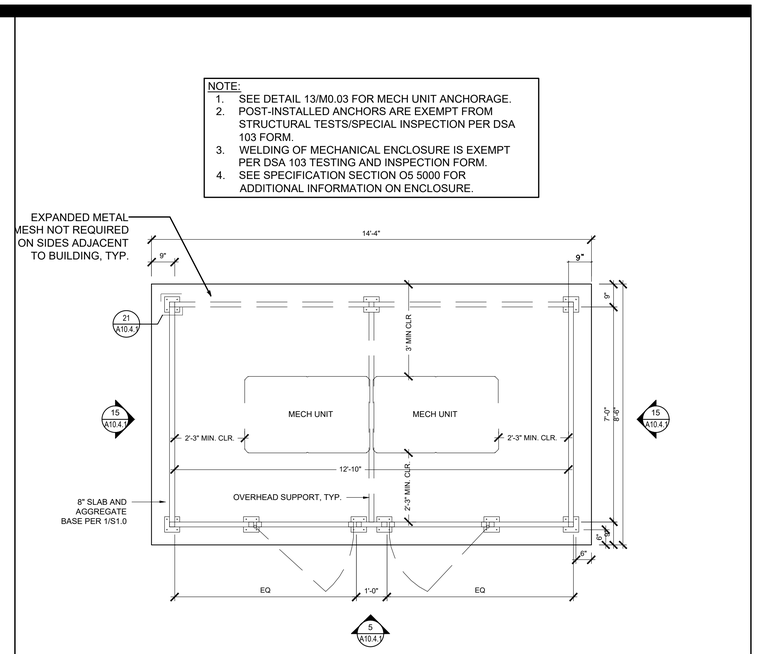
LOCK TABS 6" = 1'-0" 26



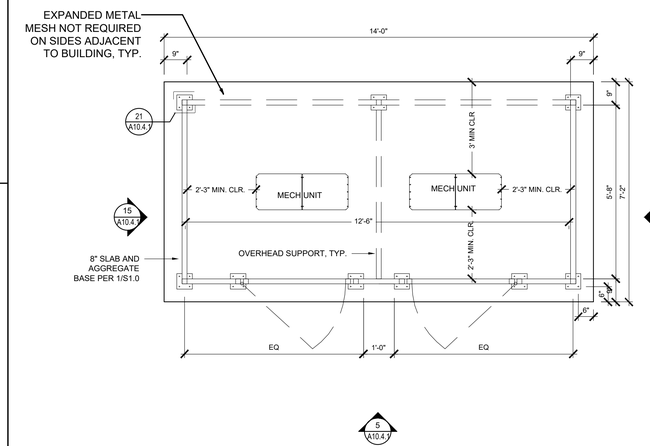
POST BASE 3" = 1'-0" 21



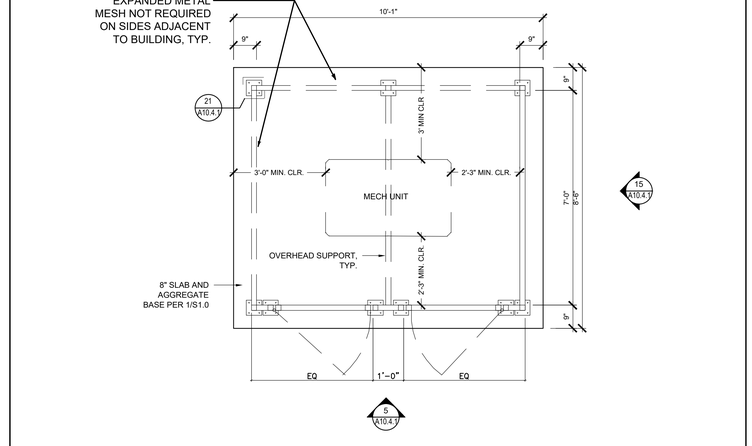
MECHANICAL ENCLOSURE TYPE 2 1/2" = 1'-0" 12



MECHANICAL ENCLOSURE TYPE 1 1/2" = 1'-0" 2



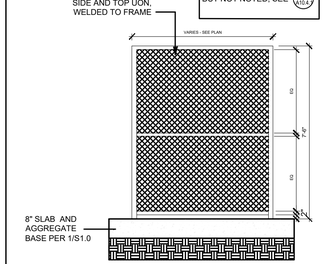
MECHANICAL ENCLOSURE TYPE 4 1/2" = 1'-0" 14



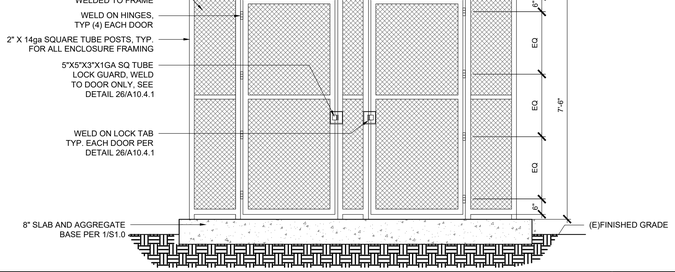
MECHANICAL ENCLOSURE TYPE 3 1/2" = 1'-0" 4



(N)ASPHALT PAVING 1 1/2" = 1'-0" 20



ENCLOSURE - SIDE ELEVATION 3/8" = 1'-0" 15



ENCLOSURE - FRONT ELEVATION 1/2" = 1'-0" 5

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ARCHITECT	ENGINEER
LICENSED ARCHITECT SETH P WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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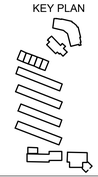
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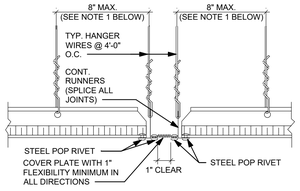
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2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

EXTERIOR DETAILS

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number A10.4.1
Drawn KT / Checked CD	



SEISMIC SEPARATION JOINT

NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

DSA IR 25-2.13 #2.45

SEISMIC SEPARATION JOINT | 3" = 1'-0" | 22

COMPRESSION STRUT TABLE

EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3'-11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6'-4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"

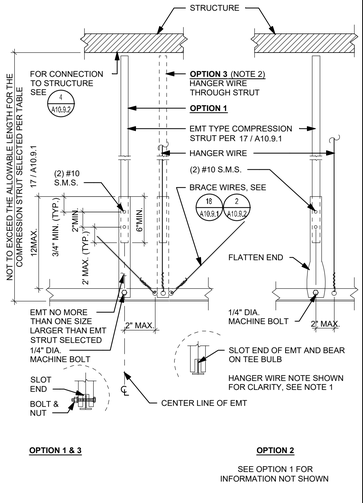
CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250S137-43	8'-10"
400S137-43	10'-10"

DSA IR 25-2.13 #3.21

COMPRESSION STRUT TABLE | 3" = 1'-0" | 17

DSA-IR 25.2.13 #3.10A

CHANNEL TYPE STRUT | 3" = 1'-0" | 18



OPTION 1 & 3

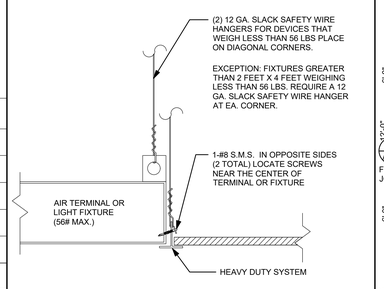
OPTION 2

SEE OPTION 1 FOR INFORMATION NOT SHOWN

NOTES:
1. MACHINE BOLT IS NOT REQUIRED ON OPTION 3.
2. APPLICABLE TO SAWN TIMBER WITHOUT GYPSUM BOARD ONLY.

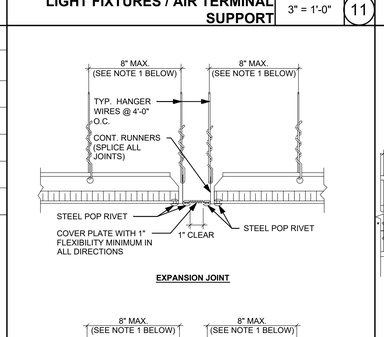
DSA IR 25-2.13 #3.20

EMT TYPE STRUT | 3" = 1'-0" | 20

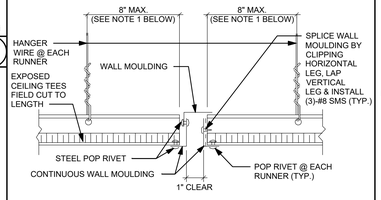


DSA IR 25-2.13 #2.80

LIGHT FIXTURES / AIR TERMINAL SUPPORT | 3" = 1'-0" | 11



EXPANSION JOINT



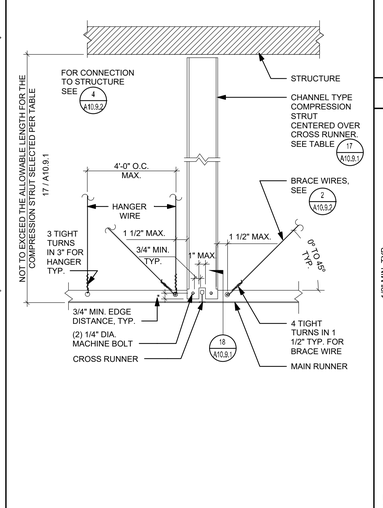
EXPANSION JOINT ALTERNATE

EXPANSION JOINTS AT THE INTERSECTION OF CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND LOBBIES OR OTHER SIMILAR AREAS

NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

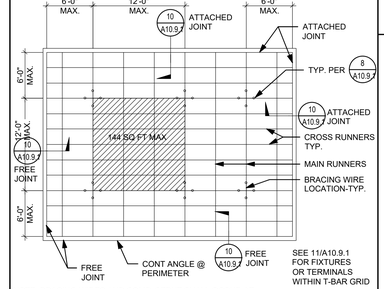
DSA IR 25-2.13 #2.40

EXPANSION JOINT AT INTERSECTIONS | 3" = 1'-0" | 13



DSA-IR 25.2.13 #3.10

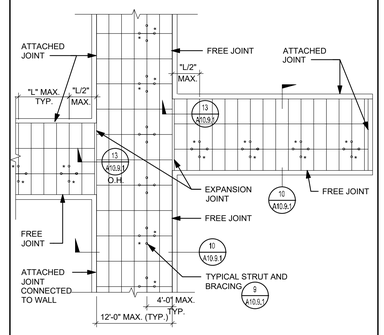
CHANNEL TYPE STRUT | 1 1/2" = 1'-0" | 15



NOTE: BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

DSA-IR 25.2.13 #2.12

TYP. CEILING PLAN - 12'X12' BRACE ASSEMBLY SPACING | 1/8" = 1'-0" | 6

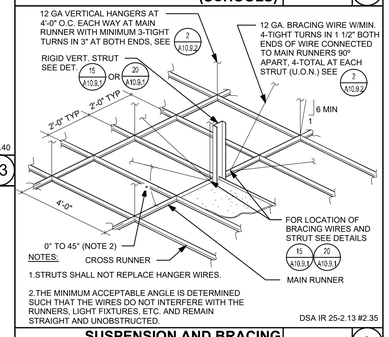


LOCATION OF EXPANSION/SLIP JOINTS IN CORRIDORS

NOTES:
1. "L" IS MAX. BRACE ASSEMBLY SPACING PER CEILING PLAN DETAIL 6 A10.9.1
   A. WHERE 8' x 8' SPACING IS SPECIFIED, USE "L" = 8'.

DSA IR 25-2.13 #2.30

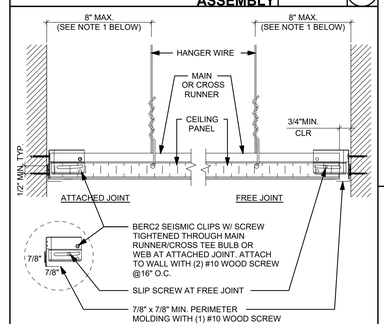
CORRIDOR CEILING PLAN (SCHOOLS) | 3" = 1'-0" | 7



NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

DSA IR 25-2.13 #2.35

SUSPENSION AND BRACING ASSEMBLY | 3" = 1'-0" | 8



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DSA-IR 25.2.13 #2.60

CEILING PERIMETER | 3" = 1'-0" | 10

ACOUSTICAL CEILING NOTES

DSA IR-25-2.19 - APPENDIX A (rev 03/18/22)

1. CEILING SYSTEM GENERAL NOTES:

1.01 Ceiling system components shall comply with ASTM C635 and Section 5.1 of ASTM E580.
1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635.
1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:
Manufacturer's Name: Armstrong
Product Evaluation Report Type and Number: ICC-ES, ESR-1308
Manufacturer's Model Number - main runner: 7301
Manufacturer's catalog number - cross runner: XL7341 4 ft cross tee and L7328 2 ft cross tee
1.04 Seismic Wall Clip:
Manufacturer's Model: BERC-2 clip (Beam End Retaining Clip)
1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.
1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide 3/4" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide 3/4" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

2. MATERIALS:

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641. Wire shall be #12 gauge (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.
2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653, or other equivalent sheet steel listed in Section A3.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members, (AISI S100). Material 43mil (18 gauge) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gauge) and heavier shall have a minimum yield strength of 50 ksi.
2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength (F_y) of 30 ksi and minimum ultimate strength (F_u) of 48 ksi.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all un-braced ducts, pipes, conduit, etc.
3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.
3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.
3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.
3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

4. FASTENERS AND WELDING:

4.01 Sheet metal screws shall comply with ASTM C1513, ASME B18.6.3. Penetration of screws through joined material shall not be less than three exposed threads.
4.02 Expansion anchors shall be:
4.03 Power-Actuated Fasteners shall be:
4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.
4.05 Power-actuated fasteners in concrete are not permitted for bracing wires.
4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.
4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

5. TESTING: All field testing must be performed in the presence of the project inspector.

5.01 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1913A.7.
5.02 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 10 percent. Power-actuated fasteners in concrete shall be field tested for 200 pounds in tension.All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5.
5.03 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5.

6. LUMINAIRES:

6.01 All luminaries shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the luminaire. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.
6.02 Surface-mounted luminaires shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gauge. Rotational spring catches do not comply. A #12 gauge slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when luminaries are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.
6.03 Luminaries weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.
6.04 Luminaries weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.
6.05 Luminaries weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above.
Exception: All luminaries greater than two by four feet weighing less than 56 lbs. shall have a #12 gauge slack safety wire at each corner.
6.06 All luminaries weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gauge wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

7. SERVICES WITHIN THE CEILING:

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.
7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gauge slack safety wire attached from the terminal or service to the structure above.
7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gauge slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.
7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gauge hanger wires attached from the terminal or service to the structure above or other approved hangers.

8. OTHER DEVICES WITHIN THE CEILING:

8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 lbs. shall have a #12 gauge slack safety wire anchored to the structure above. Devices weighing more than 20 lb. shall be supported independently from the structure above.

DSA STAMP

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DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT SETH P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED 04/24/2023	

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



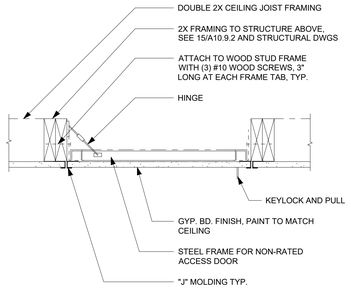
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CONSTRUCTION DOCUMENTS

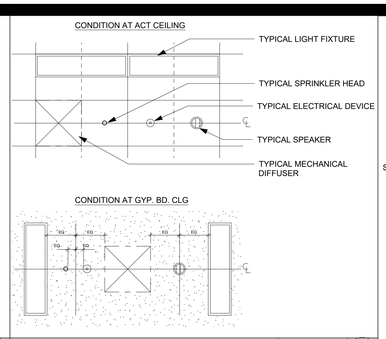
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TYPICAL SUSPENDED ACOUSTIC CEILING DETAILS

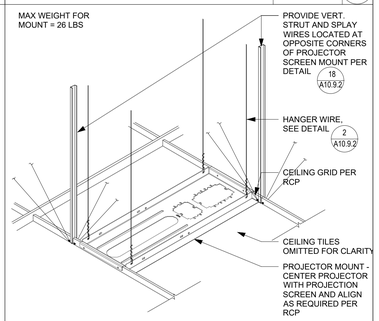
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01-120631	A10.9.1
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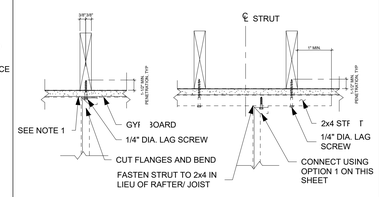
CEILING ACCESS PANEL 3" = 1'-0" 21



TYPICAL DEVICE LAYOUT 3/8" = 1'-0" 16



PROJECTOR MOUNT 1 1/2" = 1'-0" 17

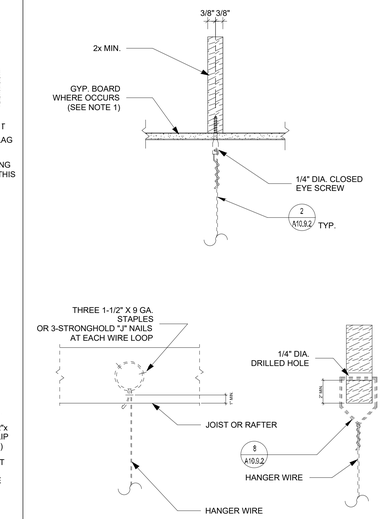


NOTES:

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF THE WOOD MEMBER.
2. FOR ANGLE ORIENTED IN THE STANDARD POSITION, VERTICAL LEG TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER

DSA IR 25-2.13 #5.50

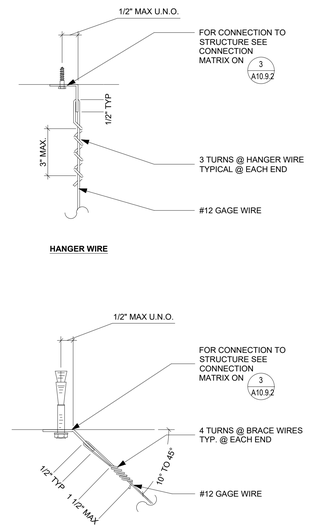
STRUT CONNECTION TO SAWN TIMBER WITH GYPSUM BOARD 1-1/2" = 1'-0" 12



NOTE:
1. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

DSA IR 25-2.13 #4.25

HANGER WIRE CONNECTION TO SAWN TIMBER 1-1/2" = 1'-0" 7



DSA IR 25-2.13 #4.10

HANGER AND BRACING WIRE TYPICAL WIRE TURNS 3" = 1'-0" 2

STRUCTURAL CONDITION OF FLOOR/ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
SAWN TIMBER	4.25 & 4.29 7 / A10.9.2 & 8 / A10.9.2	4.35 10 / A10.9.2

PROJECTOR MOUNTING HEIGHT 1" = 1'-0" 18

NOTES:

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. SEE PAGE 5.50 FOR ADDITIONAL INFORMATION.

DSA IR 25-2.13 #5.60

STRUT CONNECTION TO SAWN TIMBER WITHOUT GYPSUM BOARD 1-1/2" = 1'-0" 14

TYPICAL SADDLE TIE DETAIL

HANGER WIRE CONDITION SHOWN. BRACE WIRE CONDITION SIMILAR

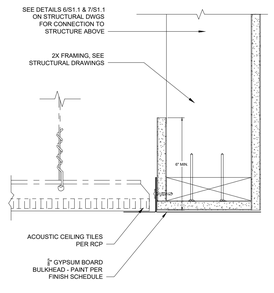
DSA IR 25-2.13 #4.29

TYPICAL SADDLE TIE DETAIL NTS 8

STRUCTURAL CONDITION OF FLOOR/ROOF ABOVE COMPRESSION STRUT	DETAIL
METAL DECK	5.20 (N/A)
CONCRETE OVER METAL DECK	5.21 (N/A)
CONCRETE SLAB, BEAM, OR JOIST	5.30 (N/A)
STRUCTURAL STEEL	5.40 (N/A)
SAWN TIMBER WITH GYPSUM BOARD	5.50 12 / A10.9.2
SAWN TIMBER WITHOUT GYPSUM BOARD	5.60 14 / A10.9.2

DSA IR 25-2.13 #5.10

HANGER AND BRACING WIRE CONNECTION MATRIX NTS 3



ACT CEILING AT GYP. BULKHEAD 3"= 1'-0" 19

BRACING WIRE CONNECTION TO SAWN TIMBER 1-1/2" = 1'-0" 10

NOTES:

WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTION.

DSA IR 25-2.13 #6.10

CEILING WIRE SPLICES 3"= 1'-0" 5

CEILING JOIST SCHEDULE

MAXIMUM SPAN FOR WOOD STUDS - DF #2 WITH DEFLECTION LIMIT L/240 - 13 PSF CEILING

MEMBER SIZE	O.C. SPACING	SPAN
2 X 4	12"	9'-5"
	16"	11'-3"
	24"	9'-3"
2 X 6	12"	19'-6"
	16"	17'-8"
	24"	14'-10"
2 X 8	12"	25'-8"
	16"	23'-0"
	24"	18'-9"
2 X 10	12"	NOTE A
	16"	NOTE A
	19.2"	25'-8"
	24"	22'-11"

NOTE A: SPAN EXCEEDS 26 FEET IN LENGTH

CEILING JOIST SCHEDULE NTS 20

GYPSUM BOARD CEILING 3"= 1'-0" 15

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DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT STEVEN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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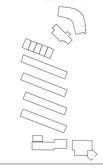
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KEY PLAN



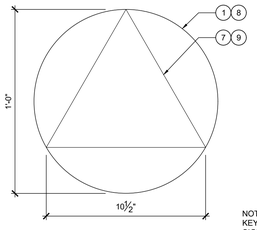
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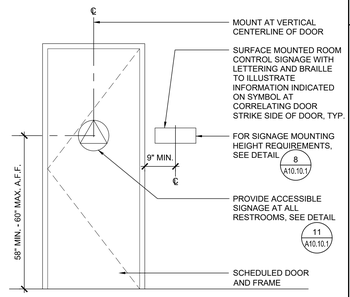
CEILING DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	A10.9.2
Drawn / Checked	
KT / CD	



NOTE: FOR SIGNAGE KEYNOTE LEGEND AND SIGNAGE GENERAL NOTES, SEE DETAIL 2 / A10.10.1

GENDER NEUTRAL DOOR SIGNAGE 3" = 1'-0" 11

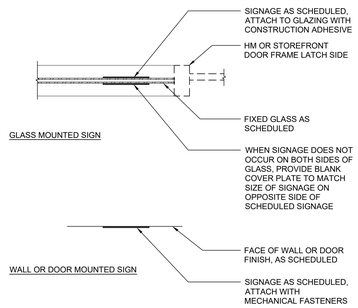


ROOM CONTROL SIGNAGE 1/2" = 1'-0" 6

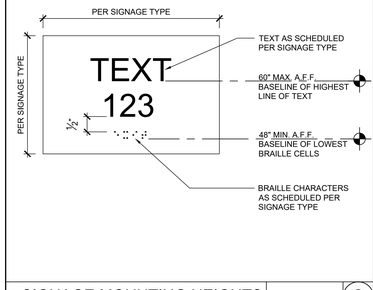


BUILDING ADDRESS MUST BE VISIBLE FROM THE MAIN ROAD (I.E., THE DIRECTION OF AN APPROACHING FIRST RESPONDER VEHICLE). THE NUMBERS MUST BE A MINIMUM OF 4" TALL WITH EACH STROKE A MINIMUM OF ½" WIDE. NUMBERS ARE REQUIRED TO BE ON A BACKGROUND OF A CONTRASTING COLOR. (CBC SECTION 502.1)

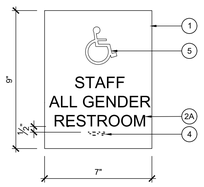
(E) ADDRESS SIGNAGE 3" = 1'-0" 12



SIGNAGE MOUNTING TYPES 1" = 1'-0" 7

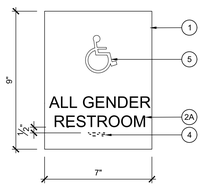


SIGNAGE MOUNTING HEIGHTS 6" = 1'-0" 8



NOTE: FOR SIGNAGE KEYNOTE LEGEND AND SIGNAGE GENERAL NOTES, SEE DETAIL 2 / A10.10.1

STAFF - GENDER NEUTRAL WALL MOUNTED SIGNAGE 3" = 1'-0" 9



NOTE: FOR SIGNAGE KEYNOTE LEGEND AND SIGNAGE GENERAL NOTES, SEE DETAIL 2 / A10.10.1

KINDER. - GENDER NEUTRAL WALL MOUNTED SIGNAGE 3" = 1'-0" 10

TYPICAL SIGNAGE NOTES

SIGNAGE GENERAL NOTES

1. FOR TYPICAL MOUNTING DISTANCE FROM DOOR FRAME, SEE DETAIL 6 / A10.10.1
2. FOR MOUNTING ATTACHMENTS, SEE DETAIL 7 / A10.10.1
3. FOR SIGNAGE MOUNTING HEIGHT REQUIREMENTS, SEE DETAIL 8 / A10.10.1

SIGNAGE KEYNOTES

1. EXTRUDED CLEAR ACRYLIC SIGN WITH A NON GLARE BACKGROUND OF 70% CONTRASTING COLOR TO TEXT AND ONE PIECE CONSTRUCTION PER SPECIFICATIONS
   BACKGROUND COLOR: MP2160 SAILBOAT BLUE
   THICKNESS: 1/4"
2A. 1/32" RAISED TEXT, CENTER JUSTIFIED ON PLAQUE
   TEXT STYLE: HELVETICA, ALL CAPS
   TEXT HEIGHT: 3/4" U.O.N.
   TEXT COLOR: 951 WHITE
2B. NOT USED
3. NOT USED
4. CALIFORNIA ROUNDED TOP CONTRACTED GRADE 2 BRAILLE BELOW RAISED TEXT (11B-703.3.2). DISTANCE FROM BOTTOM OF RAISED LETTERS TO TOP OF BRAILLE CHARACTERS SHALL BE 3/8" MINIMUM AND 1/2" MAXIMUM. BRAILLE TO BE CENTER JUSTIFIED OR LEFT JUSTIFIED TO MATCH RAISED TEXT. FOR MORE INFORMATION ON BRAILLE REQUIREMENTS, SEE DETAIL 5 / A10.10.1
5. INTERNATIONAL SYMBOL OF ACCESSIBILITY PICTOGRAM
   COLOR: 951 WHITE
6. 1/8" WIDE RAISED DECORATIVE STRIPE
   COLOR TO MATCH TEXT
7. RAISED IMAGE
   COLOR: 951 WHITE
8. CONTRAST 70% WITH DOOR COLOR
9. THE CIRCLE SYMBOL SHALL BE 1/4" THICK; TRIANGLE SYMBOL SHALL BE 1/4" THICK SUPERIMPOSED ON THE CIRCLE. THE TRIANGLE VERTICES SHALL BE MAX 1/4" FROM THE EDGE OF THE CIRCLE. THE CIRCLE COLOR SHALL CONTRAST WITH THE DOOR, THE TRIANGLE SHALL CONTRAST WITH THE CIRCLE. THE EDGES SHALL BE EASED OR ROUNDED AT 1/16" MIN. OR CHAMFERED AT 1/8" MAX. VERTICES SHALL BE RADIUSED BETWEEN 1/8" MIN. - 1/4" MAX. (11B-703.7.2.6.3, 11B-703.7.2.6.4)
   NO PICTOGRAM PERMITTED.

TYPICAL SIGNAGE NOTES 2

TABLE 11B-703.3.1
BRAILLE DIMENSIONS

MEASUREMENT RANGE	MINIMUM IN INCHES MAXIMUM IN INCHES
DOT BASE DIAMETER	0.059" (1.5MM) TO 0.063" (1.6MM)
DISTANCE BETWEEN TWO DOTS IN THE SAME CELL *	0.100" (2.5MM)
DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS *	0.300" (7.6MM)
DOT HEIGHT RANGE	0.025" (0.6MM) TO 0.037 (0.9MM)
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW *	0.395" (10MM) TO 0.400" (10.2MM)
* MEASURED CENTER TO CENTER	

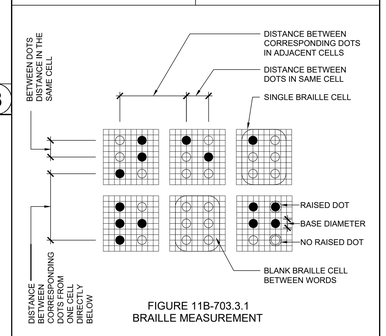
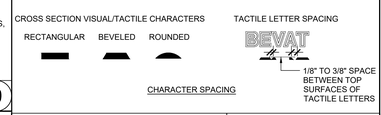


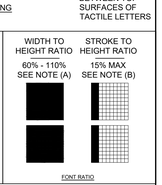
FIGURE 11B-703.3.1
BRAILLE MEASUREMENT

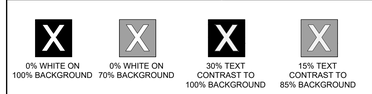


NOTE:

(A) "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE "T"

(B) STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER





MINIMUM 70% CONTRAST DIFFERENCE BETWEEN CHARACTERS/GRAPHICS AND BACKGROUND

CONTRAST

SIGNAGE DESIGN REQUIREMENTS 1-1/2" = 1'-0" 5

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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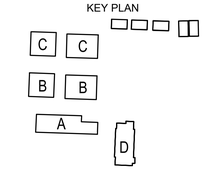
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



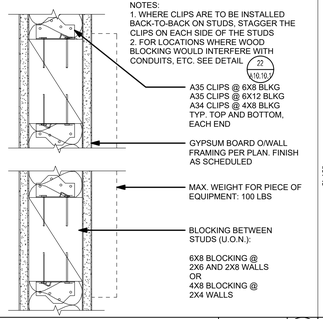
ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

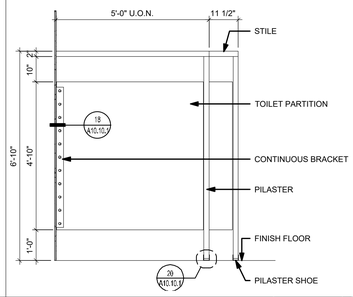
ADELANTE ACADEMY II
1970 CINDERELLA LN.,
SAN JOSE, CA 95116

SIGNAGE DETAILS

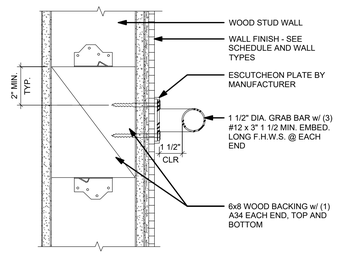
Date	Project Number
04/24/2023	22025
Application Number	Drawing Number
01-120630	A10.10.1
Drawn KT	Checked CD



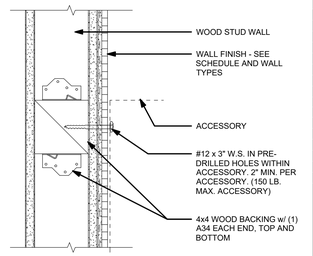
TYPICAL WALL BLOCKING 3" = 1'-0" 21



TYPICAL TOILET PARTITION 1/2" = 1'-0" 16



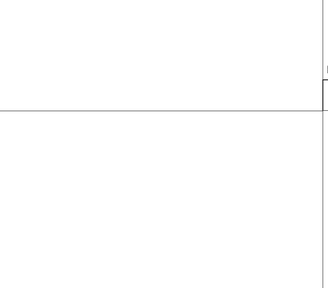
GRAB BAR ANCHORAGE 3" = 1'-0" 11



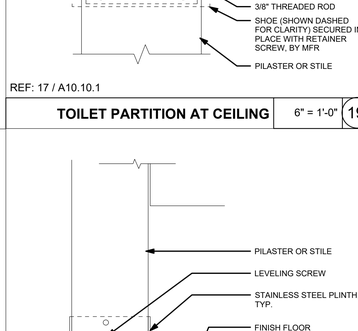
TYPICAL ACCESSORY MOUNTING 3" = 1'-0" 6

KEY NOTES

NUMBER	NOTE
10 201	TOILET PARTITION (SEE DETAIL 16/A10.10.1)
10 202	URINAL SCREEN (SEE DETAIL 17/A10.10.1)
10 203	GRAB BAR (SEE DETAIL 11/A10.10.1)
10 210	SANITARY NAPKIN DISPENSER, SEMI-RECESSED
10 211	TOILET SEAT COVER DISPENSER, SURFACE MOUNTED
10 212	TOILET PAPER DISPENSER, SURFACE MOUNTED
10 215	SANITARY NAPKIN DISPOSAL, SURFACE MOUNTED
10 220	MIRROR AS SCHEDULE
10 221	PROVIDE BACKING FOR SOAP DISPENSER (SEE DETAIL 21/A10.10.1)
10 227	PAPER TOWEL DISPENSER, RECESSED
10 901	COAT HOOK
22 410	WALL MOUNTED WATER CLOSET
22 420	URINAL
22 421	URINAL, ACCESSIBLE
22 426	ACCESSIBLE WATER CLOSET
22 431	LAVATORY

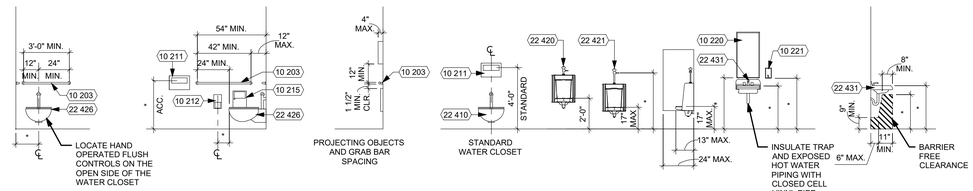


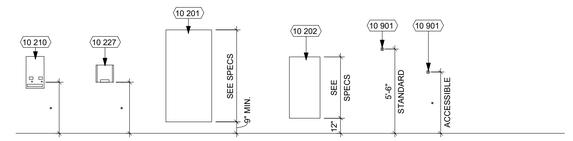
FLAT STRAP BACKING 3" = 1'-0" 22



TYPICAL URINAL SCREEN 1/2" = 1'-0" 17

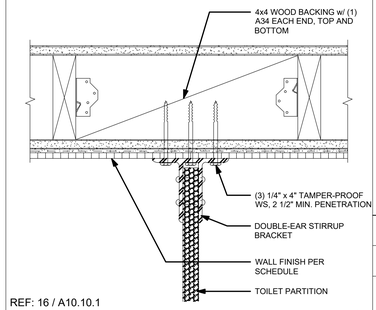
TYPICAL FIXTURE AND ACCESSORY DIMENSIONS





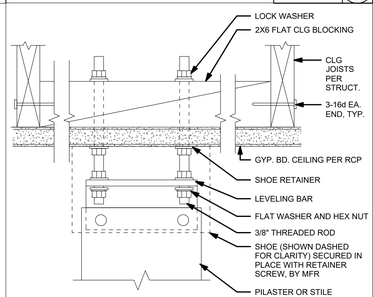
NOTES:
1. ALL DIMENSIONS MARKED * REFERENCE TOILET FIXTURES AND ACCESSORIES SCHEDULE BELOW.
2. FOR TYPICAL ACCESSORY MOUNTING SEE DETAIL 6 / A10.10.2
3. REFER TO KEYNOTE LIST FOR ADDITIONAL DETAILS.

TYPICAL ACCESSORY MOUNTING 2



REF: 16 / A10.10.1

TOILET PARTITION AT WALL 3" = 1'-0" 18



REF: 17 / A10.10.1

TOILET PARTITION AT CEILING 6" = 1'-0" 19

REF: 16 / A10.10.1

TOILET PARTITION AT FLOOR 3" = 1'-0" 20

TOILET FIXTURES AND ACCESSORIES SCHEDULE

KEY	FIXTURE	DIMENSION REFERENCE	ADULT DIMENSION	OVER TABLE 11B-609.4 (2019 CBC) SUGGESTED DIMENSION FOR CHILDREN			2019 CBC REFERENCES: T: TABLE S: SECTION F: FIGURE	RECOMMENDED TOILET ACCESSORIES MANUFACTURER (BASIS OF DESIGN)
				AGES 3-4	AGES 5-8	AGES 9-12		
10 203	GRAB BAR	TOP OF GRIPPING SURFACE	33" - 36"	18" - 20"	20" - 25"	25" - 27"	T: 11B-604.9	BOBRICK 5806 (STRAIGHT GRAB BARS)
10 201	TOILET PARTITION	TOE CLEARANCE	9" MIN.	12" MIN.				ASI GLOBAL PARTITIONS FLOOR ANCHORED/ OVERHEAD BRACED
10 202	URINAL SCREEN							ASI GLOBAL PARTITIONS POST-MOUNTED SCREEN
10 221	SOAP DISPENSER	ABOVE FINISH FLOOR	40" MAX. TO CENTERLINE OF OPERABLE PART				S: 11B-603.5	SURFACE MOUNTED, O.F.O.I.
10 227	PAPER TOWEL DISPENSER, RECESSED	ABOVE FINISH FLOOR	40" MAX. TO CENTERLINE OF OPERABLE PART				S: 11B-603.5	BOBRICK B-359033 (WITH TOWELMATE AND LOCK) RECESSED
10 211	SEAT COVER DISPENSER	ABOVE FINISH FLOOR	40" MAX. TO CENTERLINE OF OPERABLE PART				S: 11B-603.5	BOBRICK B-221 SEAT COVER DISPENSER SURFACE MOUNTED
10 219	MIRROR - STAINLESS STEEL	BOTTOM EDGE OF REFLECTING SURFACE	40" MAX. ABOVE LAVATORY OR COUNTERTOP 35" MAX. NOT ABOVE LAVATORY OR COUNTERTOP				S: 11B-603.3	BOBRICK B-1556 MIRROR 18" X 30"
10 220	MIRROR - GLASS	BOTTOM EDGE OF REFLECTING SURFACE	40" MAX. ABOVE LAVATORY OR COUNTERTOP 35" MAX. NOT ABOVE LAVATORY OR COUNTERTOP				S: 11B-603.3	BOBRICK B-290 MIRROR 24" X 36"
10 212	TOILET PAPER DISPENSER	OUTLET HEIGHT	19" MIN. AND BELOW GRAB BAR	14"	14" - 17"	17" - 19"	T: 11B-604.9 S: 11B-604.7	BOBRICK B-2888 TOILET TISSUE DISPENSER SURFACE MOUNTED
		FURTHEST IN FRONT OF WATER CLOSET	7" MIN. - 9" MAX. TO CENTERLINE OF DISPENSER					
10 210	SANITARY NAPKIN DISPENSER	ABOVE FINISH FLOOR	40" MAX. TO CENTERLINE OF OPERABLE PART				S: 11B-603.5	BOBRICK B-47064C NAPKIN/TAMPON VENDOR, FREE NO-COIN, SEMI RECESSED
10 215	SANITARY NAPKIN DISPOSAL	OPENING HEIGHT	19" MIN. AND BELOW GRAB BAR	14"	14" - 17"	17" - 19"		BOBRICK B-254 SANITARY NAPKIN DISPOSAL SURFACE MOUNTED
10 901	COAT HOOK	ABOVE FINISH FLOOR	40" - 48"				S: 11B-604.8.3	BOBRICK B-76717 ROBE HOOK
22 403	HI-LO DRINKING FOUNTAIN	HIGH SPOUT HEIGHT	38" MIN. - 43" MAX.				S: 11B-602.7	SEE PLUMBING DRAWINGS
		LOW SPOUT APPROACH, HEIGHT, AND LOCATION FROM FRONT EDGE OF THE UNIT INCLUDING BUMPERS	FRONT APPROACH PER 11B-306, 36" MAX. A.F.F., AND 5" MAX. FROM FRONT EDGE OF UNIT.				S: 11B-602.2 - EXCEPTION S: 11B-602.4 S: 11B-602.5	
		OPERABLE PARTS	6" MAX. FROM FRONT EDGE OF UNIT				S: 11B-602.3	
		PROJECTION	18" - 19"				S: 11B-602.9	
22 410	STANDARD WATER CLOSET							SEE PLUMBING DRAWINGS
22 426	ACCESSIBLE WATER CLOSET	CENTERLINE FROM WALL (TOILET OFFSET)	17" - 18" WHEEL CHAIR 17" - 19" AMBULATORY	12"	12" - 15"	15" - 18"	T: 11B-604.9	SEE PLUMBING DRAWINGS
		SEAT HEIGHT (TOP OF SEAT)	17" - 19"	11" - 12"	12" - 15"	15" - 17"	T: 11B-604.9	
22 420	STANDARD URINAL	RIM HEIGHT	24"					SEE PLUMBING DRAWINGS
22 421	ACCESSIBLE URINAL	RIM HEIGHT	17" MAX.				S: 11B-605.2	SEE PLUMBING DRAWINGS
		PROJECTION	13 1/2" MIN.				S: 11B-605.2	
		FLUSH CONTROL HEIGHT	44" MAX.				S: 11B-605.4	
22 431	LAVATORY (W/ INSULATED DRAIN)	SINK RIM HEIGHT	34" MAX.	31" MAX			S: 11B-606.2 S: 11B-606.3	SEE PLUMBING DRAWINGS
		SINK KNEE CLEARANCE	27" MIN. (29" AT APRON FOR LAVATORY)	PARALLEL APPROACH PERMITTED	AGE 5: PARALLEL APPROACH PERMITTED AGES 6-8: 24" MIN.	24" MIN.	S: 11B-606.2 F: 11B-306.3	

NOTES:
1. ALL FIXTURES AND ACCESSORIES ARE ACCESSIBLE UNLESS OTHERWISE NOTED OR DIMENSIONED.
2. SEE ENLARGED TOILET PLAN DRAWINGS FOR TOILET ACCESSORY LOCATIONS.
3. ALL ACCESSORIES ARE TO BE ACCESSIBLE WITH A MAXIMUM REACH HEIGHT OF 3'-4" FROM FLOOR TO CENTER OF FUNCTIONAL POINT.
4. ALL HEIGHT DIMENSIONS ARE A.F.F. (OR A.F.G. FOR EXTERIOR). ALL HORIZONTAL DIMENSIONS ARE TO FACE OF FINISH.
5. FOR TYPICAL ACCESSORY BACKING INFORMATION, SEE DETAIL 6 / A10.10.1

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DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA DATE SIGNED: 04/24/2023	

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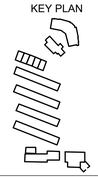
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

SPECIALTIES

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number A10.10.2
Drawn KT	Checked CD

General Notes

1. Construction shall conform to all applicable codes and regulations.
2. Shop Drawing Note:
   A) Prior to fabrication, shop drawings shall be submitted for review to the Structural Engineer. Shop drawings submittals shall include, but are not necessarily limited to reinforcing steel, structural steel, and glued laminated beams.
3. Safety Note:
   A) It is the Contractor's responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California latest edition, and all OSHA requirements.
   B) The owner and the Structural Engineer do not accept any responsibility for the Contractor's failure to comply with these requirements.
   C) The Contractor shall be responsible for adequate design and construction of all forms and shoring required.
4. The Contractor shall notify the Architect and Structural Engineer where a conflict or a discrepancy occurs between the structural drawings and any other portion of the contract documents or existing field conditions. Such notification shall be given in due time so as not to affect the construction schedule. In case of a conflict between structural drawings and specifications, the more restrictive condition shall take precedence unless written approval has been given for the least restrictive. Contractor shall verify all dimensions with architectural and structural drawings prior to commencing any work.
5. All drawings and written material appearing herein constitutes the original and unpublished work of the Structural Engineer and the same may not be duplicated, used or disclosed without written consent of the Structural Engineer and compensation.
6. The structure shown on these drawings is structurally sound only in its completed form. The stability of this structure depends on the diaphragm and the bracing members shown. The Contractor is to provide for the design and construction of shoring for all earth, forms, concrete, steel, wood, and masonry to resist gravity, wind, seismic, and construction loads. Shoring shall remain in place until all diaphragm and lateral resisting elements are in place in their entirety.

Design Criteria

1. Codes and Standards:
   a) 2019 California Building Code (CBC)
   b) Building Code Requirements for Structural Concrete - ACI 318-14
   c) Building Code Requirements for Masonry Structures - TMS 402-2016
   d) Specification for Masonry Structures - TMS 602-2016
   e) Specification for Structural Steel Buildings - AISC 360-16
2. Vertical Loads:
   Roof Live Load = 20 psf (reducible)
3. Soils Values:
   Allowable soil bearing pressures:
   a) DL+LL= 1500 psf
   b) DL+LL+wind/seismic= 1995 psf
4. Wind Load Design Criteria:
   a) Ult. Design Wind Speed, V_{ult}= 100 mph
   b) Nom. Design Wind Speed, V_{asd}= 78 mph
   c) Risk Category - III
   d) Wind Exposure - C
   e) Internal Pressure Coefficient, GC_{pi}= -0.18, +0.18
5. Seismic Load Design Criteria:
   a) Risk Category - III
   b) Seismic Importance Factor, I_e= 1.25
   c) Site Class = D
   d) S_s = 1.925 S_1 = 0.736
   e) S_{ds}= 1.540
   f) Seismic Design Category, SDC = D
   g) Seismic Force-Resisting System/s: Wood Shearwalls
   i) Analysis Procedure = Static
   j) F_{ps} = 1.00≤ ap 2.5 ≤2.500
   l) Horiz. Structural Irregularities: none
   m) Vert. Structural Irregularities: none
   n) Location of "Base" = FF (t.o. slab)

1) ap and Rp values indicated are for a hard anchorage. use Fp with correct ap and rp value to account for neoprene pad.

2) Show coefficient of Fp such as " Fp = 0.60Wp" instead of absolute value

Foundations

1. All foundation work shall be done in accordance with the requirements of the 2019 California Building Code (CBC).
2. All foundations shall bear on firm undisturbed soil.
3. Bottoms of all foundations shall be level. Changes in bottom of foundation elevation shall be constructed only as detailed on the drawings.
4. Foundations may be cast in neat excavations provided the footing excavations are stable and able to maintain a cut edge without sloughing. Provide formwork and planking at edges of excavations to protect against sloughing, as required.
5. Notify the Structural Engineer 48 hours before casting foundations.
6. Tests, inspections, and verifications of all work associated with the site preparation, soils, grading, excavations and fill compaction/materials and the like shall be per the approved DSA 103.

Concrete

General: All concrete construction shall conform to Chapter 19A of the California Building Code (CBC), and Building Code Requirements for Structural Concrete (ACI 318-14).

1. Structural concrete shall attain 28 day compressive strength as required in note #15.
2. Concrete shall be mixed, placed, and cured in accordance with ACI 318-14 and project specifications.
3. Cement shall conform to ASTM C-150 type I or II.
4. Concrete aggregates shall conform to ASTM C-33. Aggregates for lightweight concrete shall conform to ASTM C-330.
5. Construction joints shall be made rough and all loose materials removed from the surface. The entire surface of the joint shall be roughened by chipping, sand blasting or raking the surface to produce ¼" deep deformations.
6. Remove all debris and loose materials from forms and excavations before casting any concrete.
7. Reinforcing, dowels, bolts, anchors, sleeves, etc., to be embedded in concrete shall be tied securely in position before placing concrete.
8. Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with the recommended practices of ACI 309 to suit the type of concrete and project conditions.
9. No wood spreaders allowed. No wood stakes allowed in areas to be concreted.
10. Casting concrete during cold weather shall be in accordance with all provisions of ACI 306 (latest edition), Standard Specification for Cold Weather Concreting.
11. Casting concrete during hot weather shall be in accordance with all provisions of ACI 305 (latest edition), Specification for Hot Weather Concreting.
12. Tests and inspections of the concrete shall be per the approved DSA 103.
13. Concrete types:

Class	Item	f'c @ 28 days	Aggregate Size	Unit Weight (pcf)	Max W/C Ratio
A.	General use	3000 psi	1"	145	0.55

Notes:
a) Concrete shall have a maximum slump of 4".
b) A water-reducing admixture should be added where increased workability is needed or desired.

Reinforcing Steel

1. Reinforcing steel shall conform to ASTM A615- grade 60 for #4 and larger, and ASTM A615-grade 40 for #3 and smaller, except reinforcing steel to be welded shall conform to ASTM A706.
2. All preheating and welding of reinforcing bars shall be done in accordance with AWS D1.4 latest edition and shall be continuously inspected by a qualified laboratory.
3. Reinforcing steel shall be fabricated in accordance with the ACI "Manual of Standard Practice for Reinforced Concrete Construction", latest edition.
4. Wire fabric shall conform to ASTM A-185 and shall be lapped 12" minimum at splices.
5. Tests and inspections of the reinforcing steel shall be per the approved DSA 103.
6. Provide all accessories necessary to support and secure reinforcing steel in the positions shown on the plans. All reinforcing steel shall be tied securely in position prior to placing concrete.
7. The following minimum concrete cover shall be provided for reinforcing steel:
   a) For concrete cast against earth.....3"
   b) For concrete exposed to earth or weather:
      #5 and smaller bars.....1½"
      #6 and larger bars.....2"
      #8 and smaller bars in tilt-up panels.....1"
   c) For concrete not exposed to earth or weather.....½"
8. Splices in reinforcing steel shall be Class B unless noted otherwise and shall conform to the following schedule:

Lap Splice Length Schedule

Concrete Strength	Splice Class	Reinforcing Location	#3	#4	#5	#6	#7	#8	#9	#10	#11
3000 psi	B	Top Bars	21"	29"	42"	56"	90"	112"	134"	159"	184"
	B	Other Bars	16"	22"	32"	43"	69"	86"	103"	122"	141"
4000 psi	B	Top Bars	21"	25"	37"	49"	78"	97"	117"	138"	159"
	B	Other Bars	16"	19"	28"	37"	60"	74"	90"	106"	122"

Notes:
a) Schedule applies to uncoated, Grade 60 reinforcing steel, and normal weight, 3000 psi & 4000 psi concrete.
b) Top bars are located such that 12" or more of fresh concrete is cast below the splice.
c) For light weight concrete, multiply lap lengths by 1.30.
d) Schedule applies to uncoated bars with a clear spacing of not less than 1½ inches, and, to bars with concrete cover of at least 2½ inches.

Wood

1. Sawn lumber shall conform to the following minimum specifications unless noted otherwise:

Member	Species	Grade
2x joists, rafters, and sub-purlins	Douglas Fir-Larch	No. 2
2x and 3x studs, plates, and blocking	Douglas Fir-Larch	No. 2
4x and 6x posts	Douglas Fir-Larch	No. 1
4x and 6x beams, purlins, and headers	Douglas Fir-Larch	No. 1

2. Glued Laminated Beams shall be manufactured and identified as required in ANSI/AITC A 190.1 and ASTM D 3737. Glued laminated beams shall be combination 24F-V4 for simple span members and 24F-V8 for cantilevered members. All glued laminated beams shall be manufactured with a 2000 ft. radius camber (except cantilevers shall have no camber) unless noted otherwise. Each glued-laminated beam shall be fabricated with exterior glue and shall be assumed to be for exterior use. Each glued-laminated beam shall be sealed and wrapped per AITC 111.
3. Preservative-treated wood shall conform to the requirements of the applicable AWPA Standard U1 and M4 for the species, product, preservative, and end use. Preservative treated wood shall bear aquality mark stamp or label per CBC 2303.1.9.1.
4. Wood Structural Panel Sheathing shall conform to DOC PS 1 or PS 2.
5. All wood in direct contact with concrete or masonry shall be preservative-treated.
6. Bearing and shear walls shall have double top plates, lapped at wall and partition intersection with 3-16d nails. Splice double top plates as noted or detailed on the drawings.
7. Provide solid blocking between joists and rafters at all supports.
8. Provide blocking at all ceiling levels.
9. Holes for bolts in wood shall be bored with a bit equal in size to the diameter of the bolt plus 1/16 inch.
10. Holes for lag screws shall be bored as follows:
    a) The clearance hole for the shank shall have the same diameter as the shank, and the same depth of penetration as the length of unthreaded shank.
    b) The lead hole for the threaded portion shall have a diameter equal to 60% to 75% of the shank diameter and a length equal to at least the length of the threaded portion.
    c) Lag screws and wood screws shall be screwed and not driven into place. Soap may be used to lubricate the screws.
11. All bolts and lag screws shall be provided with metal washers under heads and nuts which bear on wood. Applies also to inserted expanding fasteners, Red Head, etc.
12. Lay all structural sheathing panels on roofs and floors with face grain perpendicular to supports unless noted otherwise.
13. Use plyclips at midspan of all unsupported roof sheathing edges.
14. Connector hardware model number are those for Simpson Strong-Tie Company. Equivalent connectors with ICC Evaluation Report may be substituted. All joist hangers shall be Simpson U series unless noted otherwise.
15. Nails shall have the following minimum dimensions (measured before application of any protective coatings):

Nail	Diameter	Length
16d common	0.162"	3½"
10d common	0.148"	3"
8d common	0.131"	2½"

16. Anchor bolts for foundation sill plates shall be ⅝" diameter with a 12" minimum length, & 7" minimum embedment into concrete. Anchor bolts shall conform to ASTM A307 with a standard hex head at the embedded end or, shall conform to ASTM A36 with a fully engaged hex nut on the embedded end. Anchor bolts shall be spaced at 48"cc unless noted otherwise. Provide at least two anchor bolts per each piece of foundation sill plate and, provide an anchor bolt not more than 12" nor less than 4" from the ends of each piece of foundation sill plate. All anchor bolts at non- shearwalls shall have standard cut washers, and, shearwalls shall have plate washers at all anchor bolts per the shearwall schedule.
17. Per CBC 2304.12.5, fasteners (including nuts, washers, and connector) for preservative-treated and fire-retardant-treated wood shall be of hot-dipped galvanized steel or stainless steel.
18. No upset threaded bolts allowed; use only cut-thread bolts with full diameter bodies. See table below for dimensional requirements for cut-thread bolts with full diameter bodies:

Nominal Bolt Size (inches)	Body or Shank Diameter (inches)	
	Max.	Min.
½" (0.500)	0.515	0.482
⅝" (0.625)	0.642	0.605
¾" (0.750)	0.768	0.729
⅞" (0.875)	0.845	0.852
1" (1.000)	1.022	0.976

Note: The body, or shank, of the bolt is the smooth part between the head and the threads.

Simpson SET-3G Adhesive Anchors in Concrete

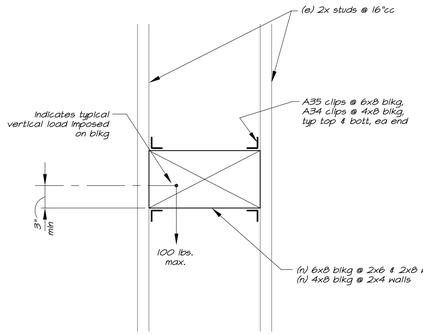
1. Use Simpson SET-3G Adhesive Anchors as manufactured by Simpson Strong Tie Company, Inc., ICC Report No. ESR-4057.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC report and these notes.
3. Holes for installation of the threaded rod or reinforcement bar must be cleaned of dust and debris, using a nylon brush and oil-free compressed air as required to remove particulate debris and to achieve a relatively dust-free surface.
4. Special Inspection is required for anchor installations.
5. When installing anchors do not cut or damage existing reinforcing bars.
6. Threaded anchor rods to be ASTM A307 Grade C, ASTM A193 Grade B7, or ASTM A193 Grades B6 or B8.
7. Deformed reinforcing bars (rebar) to conform to ASTM A615.
8. Concrete shall be normal weight with a minimum compressive strength of 2500 psi.
9. All anchors through pressure treated lumber shall be stainless steel.

NORMAL WEIGHT CONCRETE ANCHORS
f'c = 3000psi (min)

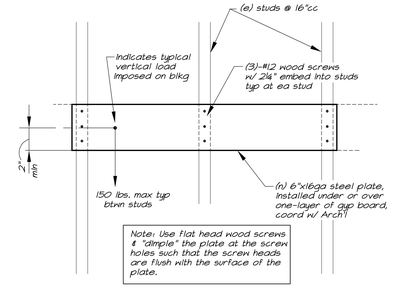
Simpson SET-3G — Carbon Steel Anchors ICBO Report NO. 4057

Anchor Diameter	Embed (u.n.o.)	Edge Distance	Spacing	ICBO Allowable Loads (lbs) * per ACI 318-14, Chapter 17		
				Allowable Shear	Allowable Tension	Tension Test
½"	3"	6"	6"	640	315	630
⅝"	4"	2⅜"	12"	460	230	460
⅝"	4"	8"	12"	1005	500	1000
¾"	6"	12"	12"	4550	920	1840

Notes:
1. *Tabulated loads are allowable stress design loads.
2. Tabulated loads listed in this table are not for use when both shear and tension forces are present.
3. The minimum concrete thickness is equal to 2.25 x embedment depth.
4. Tabulated loads are based on A307, Grade C material.
5. Tabulated loads are based on having no supplementary reinforcing present.
6. Tabulated loads are based on a seismic design category of type "D".
7. Tabulated loads are based on the assumption of a non-ductile connection and include the 2.5 factor required by ACI 318.
8. For conditions not covered by this table, contact the Engineer of Record for direction prior to proceeding.



4 S1.0 Typical Blocking for Wall-Mounted Equipment



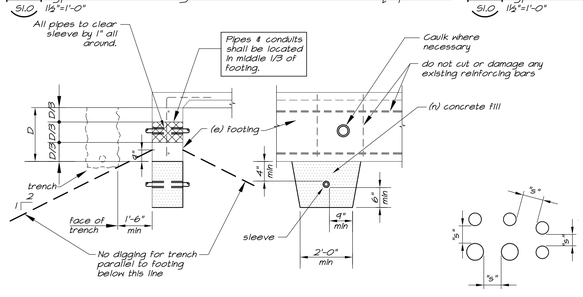
5 S1.0 Typical Plate for Wall-Mounted Equipment 1½"=1'-0"

Simpson Strong-Bolt 2 Expansion Anchor Notes

1. Use Simpson Strong-Bolt 2 Expansion Anchors as manufactured by Simpson Strong Tie Company, Inc., ICC-ES Report No. ESR-3037.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC report and these notes.
3. Holes for installation of the threaded rod or reinforcement bar must be cleaned of dust and debris, using pressurized air as required to remove particulate debris and to achieve a relatively dust-free surface. The anchor, nut, and washer must be assembled so that the top of the nut is flush with the top of the anchor. The anchor must be driven into the hole using a hammer until the proper embedment depth is achieved. The nut and washer must be tightened against the base material until the appropriate installation torque is achieved.
4. Special Inspection is required.
5. When installing anchors in existing concrete do not cut or damage existing reinforcing bars.

Inspection and Testing Of Post-Installed Anchors

1. Allowable shear and withdrawal loads shall be based on qualification tests in compliance with ICC acceptance criteria AC-193 for mechanical anchors and AC-308 for adhesive anchors, and ACI 355.2 for simulated seismic tests. Allowable loads shall be determined in compliance with ACI 318-19 Chapter 17 and the anchor's engineering evaluation report.
2. All anchors used shall possess an engineering evaluation report that is acceptable under the Division of the State Architect's Interpretation of Regulation IR A-5.
3. Anchor Installation shall be observed by the project Inspector of Record for compliance with the manufacturer's installation instructions.
4. Anchors shall be torque tested by the testing laboratory in compliance with CBC 1910A.5.2:
   4.1 Testing Frequency:
   For equipment, piping, or duct anchorage: 50%
   4.2 Testing Values: Torque test values are stated in the specific anchorage details.
   4.3 Test Acceptance: Anchors shall be tested with a calibrated torque wrench, and shall attain the specified torque within 1/4 turn of the nut.
   4.4 If any anchor fails testing, all anchors of the same type, not previously tested, which were installed by the same trade shall be tested until 20 consecutive anchors pass, then resume normal frequency.



3 S1.0 Pipes & Conduits at Existing Footings ⅜"=1'-0"

General Notes for Core-Drilling Existing Footings
1. Top, bottom, and vertical reinforcing shall be located by a non-destructive means prior to core-drilling footings.
2. All existing reinforcing steel shall not be interrupted or damaged by core-drilling operations.
3. In this detail, "s" indicates the center-to-center spacing of core-drilled holes.
4. The center-to-center spacing, "s", of any two holes shall not be less than three times the diameter of the larger hole.
5. The size of the core-drilled hole shall be the minimum size necessary to accommodate the pipe.
6. The maximum size of core-drilled hole shall not exceed 6" diameter.
7. Pipes shall not be placed under existing isolated spread footings.
8. Where pipes run perpendicular to, and under, continuous footings, pipes are to be wrapped with compressible foam pipe wrap (1" min all around) or sleeved. The trench under the footing shall be filled with concrete same width as the footing.

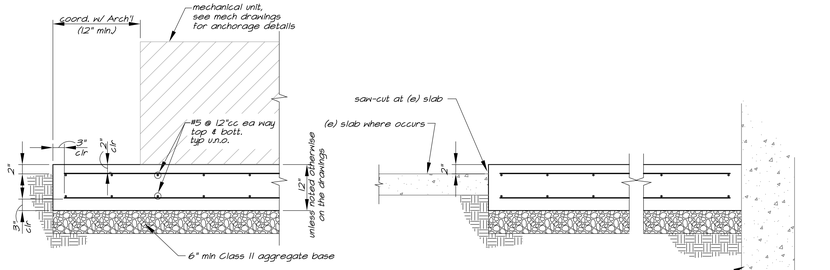
Standard Hooks & Bends for Bars Other than Stirrups, Ties and Hoops

Type of Hook	Bar Size	D, Minimum Inside Bend Diameter, in.	Diagram of Hook
90 degree hook	#3 thru #8	$6d_b$	d_b = bar diameter; 90°; D = bend diameter; $12d_b$
	#9 thru #11	$8d_b$	
	#14 thru #18	$10d_b$	
180 degree hook	#3 thru #8	$6d_b$	d_b = bar diameter; 180°; D = bend diameter; greater of $4d_b$ or 2½"
	#9 thru #11	$8d_b$	
	#14 thru #18	$10d_b$	

Standard Hooks & Bends for Stirrups, Ties, and Hoops

Type of Hook	Bar Size	D, Minimum Inside Bend Diameter, in.	L_{ext}	Diagram of Hook
90 degree hook	#3 thru #5	$4d_b$	greater of $6d_b$ and 3"	d_b = bar diameter; 90°; D = bend diameter; $12d_b$; L_{ext}
	#6 thru #8	$6d_b$	$12d_b$	
135 degree hook	#3 thru #5	$4d_b$	greater of $6d_b$ and 3"	d_b; 135°; D = bend diameter; L_{ext}
	#6 thru #8	$6d_b$		
180 degree hook	#3 thru #5	$4d_b$	greater of $6d_b$ and 3"	d_b; 180°; D = bend diameter; L_{ext}
	#6 thru #8	$6d_b$		

2 S1.0 Rebar Hooks & Bends ⅜"=1'-0"



Typical Condition

Edge Condition Where Pad Is Cut Into Existing Concrete Paving (all other information and details are as in detail to the left)

Edge Condition at Existing Building (all other information and details are as in detail to the left)

1 S1.0 Typical Housekeeping Pad ⅜"=1'-0"

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DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P WHITAKER No. C 30345 Ren.: 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER JOHN M. MANDSAGER No.3824 Exp.09/30/24 STRUCTURAL STATE OF CALIFORNIA

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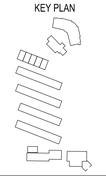
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



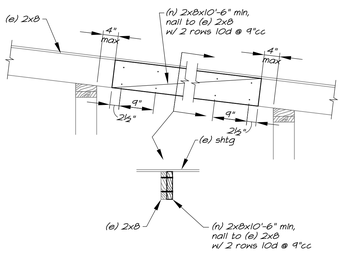
ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

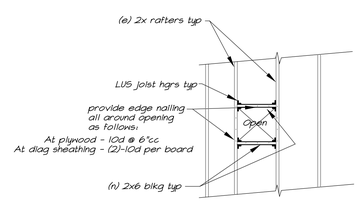
MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TYPICAL NOTES & DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	S1.0
Drawn GSL	Checked JMM

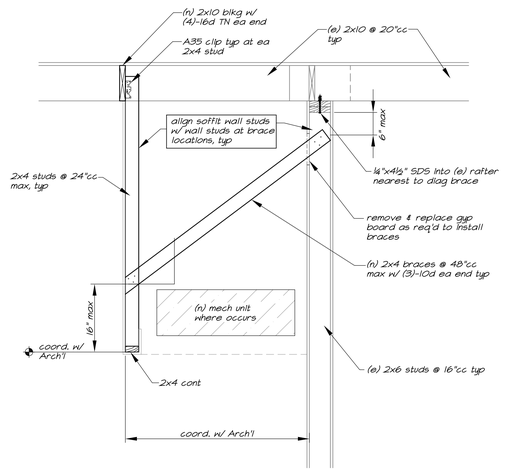


Detail 9/S1.1 ⅜"=1'-0"

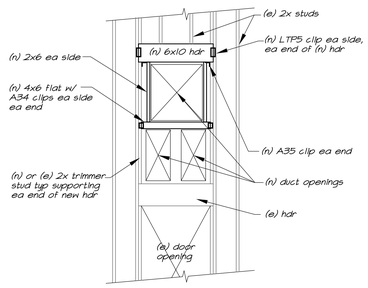


Maximum Opening - 2'-0"

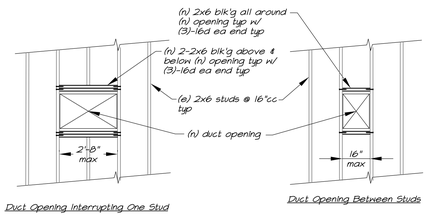
5 S1.1 Typical Opening in Roof Diaphragm ⅜"=1'-0"



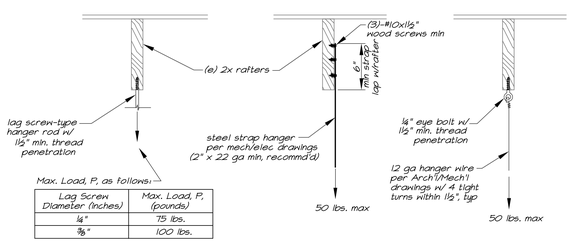
Hanging Soffit Detail 6/S1.1 ¾"=1'-0"



7 S1.1 New Duct Openings at MP Building ⅜"=1'-0"



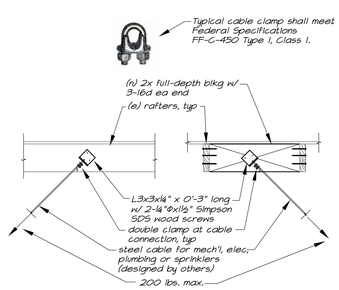
8 S1.1 New Duct Opening In Existing Non-Bearing Non-Shear Wall ⅜"=1'-0"



Lag Screw Diameter (Inches)	Max. Load, P, (pounds)
¼"	75 lbs.
⅜"	100 lbs.

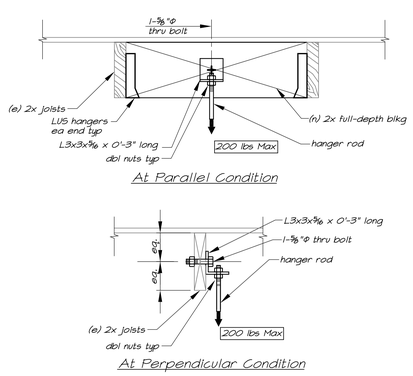
Notes:
1. No more than two of these hanging loads shall be installed on any one joist.
2. These hanging loads shall be spaced a minimum of 6'-0" apart.

1 S1.1 Typical Hanging Loads to 2x Connection 1½"=1'-0"

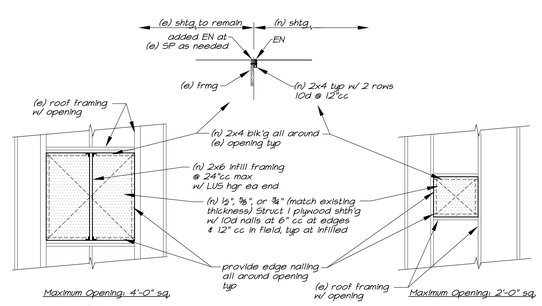


Note: Detail is similar for 12 gauge bracing wires. Provide 4 tight turns within 1½" at each end of wires, typical.

2 S1.1 Typical Connections for Cable Bracing at Mechanical Units ¾"=1'-0"



3 S1.1 Typical Hanger Rod Connection 1½"=1'-0"



4 S1.1 Typical Infill of Opening in Roof Framing ⅜"=1'-0"

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ARCHITECT	ENGINEER
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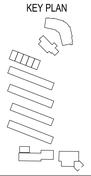
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



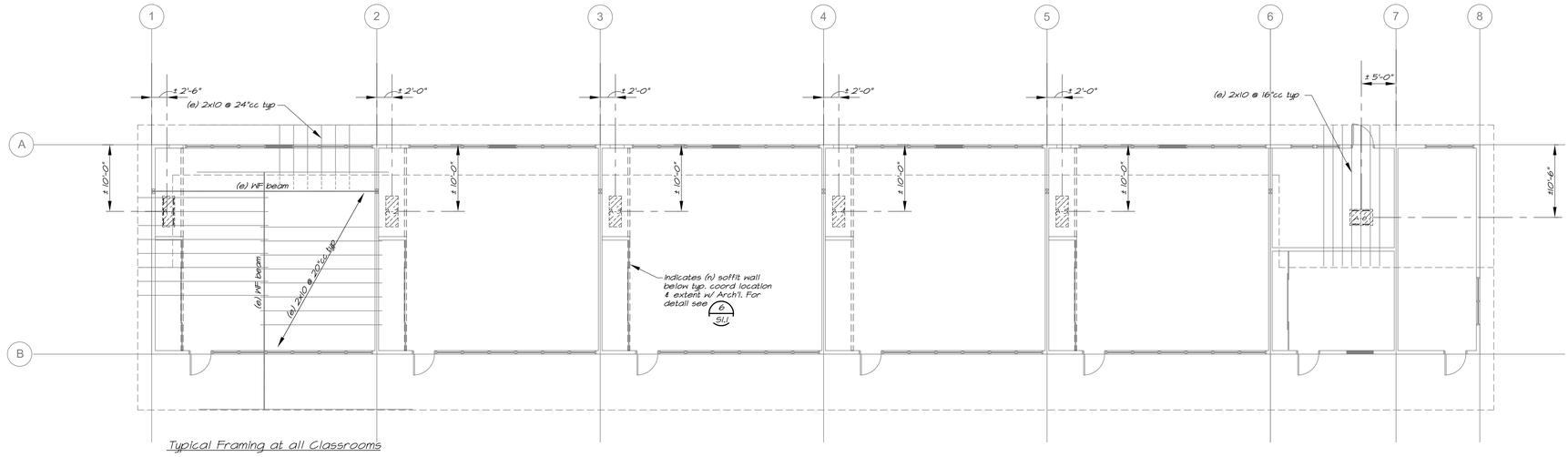
ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TYPICAL DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	S1.1
Drawn / Checked	
GSL / JMM	



Typical Framing at all Classrooms

Partial Roof Framing Plan - Buildings A (1/S2.1) 1/8"=1'-0"

Typical Framing at all Classrooms

Partial Roof Framing Plan - Buildings B (C similar, D similar at Classrooms) (2/S2.1) 1/8"=1'-0"

Partial Roof Framing Plan - Building D (3/S2.1) 1/8"=1'-0"

Note: Framing at classrooms is per Building B.

Roof Framing Plan Notes:

1. Coordinate all dimensions with architectural drawings. Notify Architect of any discrepancies for resolution prior to proceeding.
2. See sheet S1.0 thru S1.1 for typical notes and details. These notes and details apply to all construction unless noted or detailed otherwise.
3. At wood framed roof areas, at misc. small openings that occur between framing members, provide blocking etc. per (5/S1.1)
5. Existing roof openings to be infilled per (4/S1.1)
6. Indicates mechanical units. Coordinate/verify locations with mechanical drawings typ. Heights listed include weight of branch selectors where applicable. See mechanical drawings for anchorage details.

Unit/s	Max. Height	Notes
A-1 thru A-5	250 lbs.	see 6/M0.4
A-6	200 lbs.	see 6/M0.4
B-1 thru B-5	250 lbs.	see 6/M0.4
D-6	175 lbs.	see 6/M0.4

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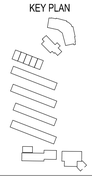
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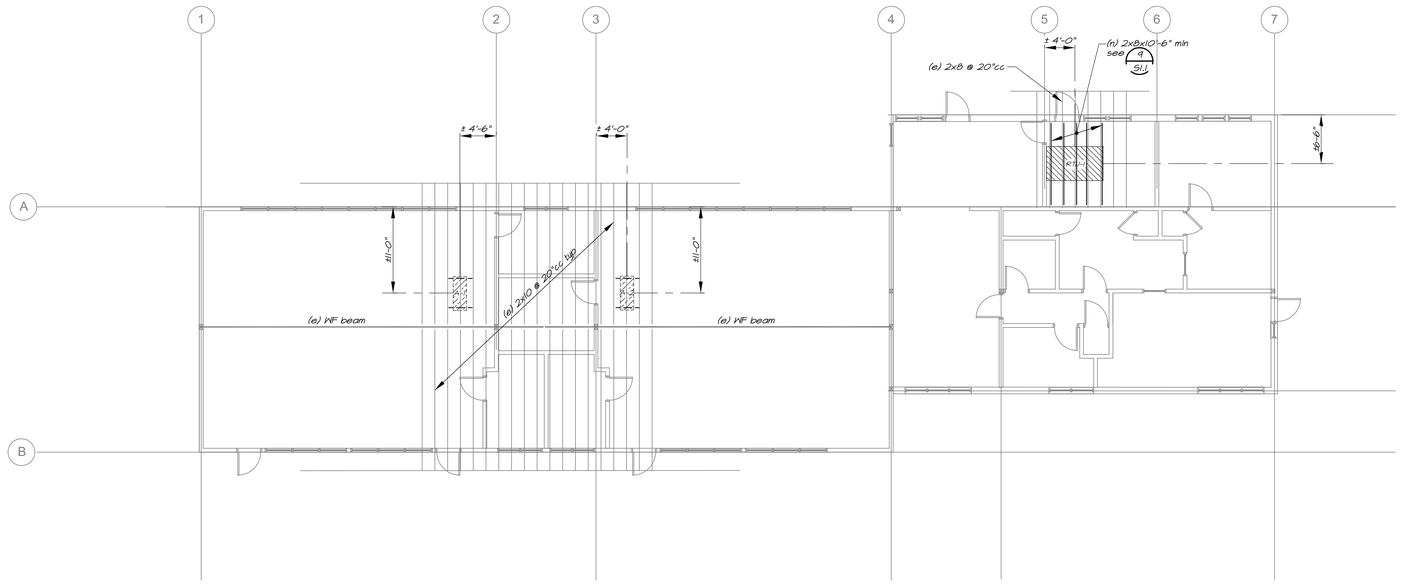
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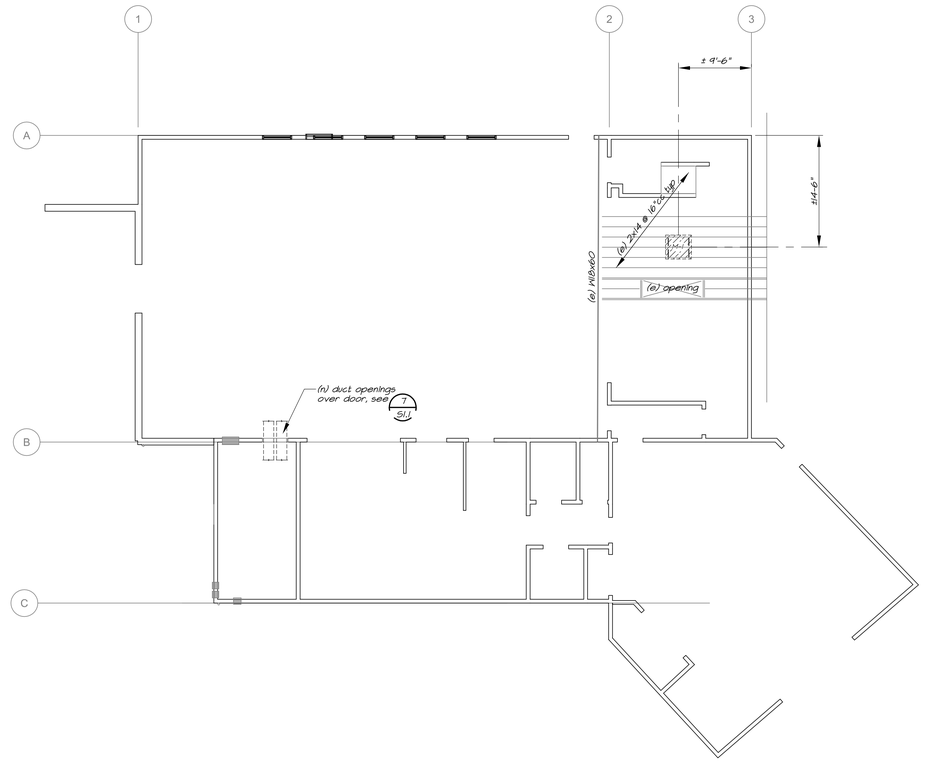
PARTIAL ROOF FRAMING PLANS - BUILDINGS A, B, & C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	S2.1
Drawn / Checked	
GSL / JMM	



Partial Roof Framing Plan - Kinder-Admin

1 S2.2 1/8"=1'-0"



Partial Roof Framing Plan - Multi-Purpose Building

2 S2.2 1/8"=1'-0"

Roof Framing Plan Notes:

1. Coordinate all dimensions with architectural drawings. Notify Architect of any discrepancies for resolution prior to proceeding.
2. See sheet S1.0 thru S1.1 for typical notes and details. These notes and details apply to all construction unless noted or detailed otherwise.
3. At wood framed roof areas, at misc. small openings that occur between framing members, provide blocking etc. per 3 S1.1
5. Existing roof openings to be infilled per 4 S1.1
6. Indicates mechanical units. Coordinate/verify locations with mechanical drawings typ. Weights listed include weight of branch selectors where applicable. See mechanical drawings for anchorage details.

Unit/s	Max. Weight	Notes
A-1 & A-2	250 lbs.	see 5/M0.4
RTU-1	1400 lbs.	see 9/M0.4
M-1	100 lbs.	see 6/M0.3

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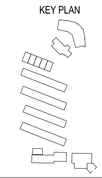
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KEY PLAN



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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MCCOLLAM ELEMENTARY SCHOOL

3311 LUCIAN AVE.,
SAN JOSE, CA 95127

PARTIAL ROOF FRAMING PLANS - KINDER-ADMIN & MULTI-PURPOSE BUILDINGS

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number S2.2
Drawn GSL	Checked JMM

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7–16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7–16 SECTION 13.3 AS DEFINED IN ASCE 7–16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE–APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP	MD	PP	E	
☐	☒	☐	☐	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
☐	☐	☐	☐	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE–APPROVAL (OPM#) #0043–13.

ASHRAE 15:8.10.1 - CMC 1109.4.1

PROTECTION FROM MECHANICAL DAMAGE. PASSAGES SHALL NOT BE OBSTRUCTED BY REFRIGERANT PIPING. REFRIGERANT PIPING SHALL NOT BE LOCATED IN AN ELEVATOR, DUMBWAITER, OR OTHER SHAFT CONTAINING A MOVING OBJECT, OR IN A SHAFT THAT HAS OPENINGS TO LIVING QUARTERS, OR TO MEANS OF EGRESS. REFRIGERANT PIPING SHALL NOT BE INSTALLED IN AN ENCLOSED PUBLIC STAIRWAY, STAIR LANDING, OR MEANS OF EGRESS.

MECHANICAL LEGEND

SYMBOL	ITEM	ABBR.
	SUPPLY AIR	SA
	RETURN AIR	RA
	EXHAUST AIR	EA
	OUTSIDE AIR	OSA
	TRANSFER AIR	TA
M-1	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN	
AC-1	EQUIPMENT DESIGNATION UNIT ABBREVIATION NUMBER	
A 10x10-4 12VL FD	GRILLE DESIGNATION NECK SIZE & BLOW (4 UON) FIRE DAMPER WHERE REQ'D CFM	
	ACOUSTIC LINED DUCT	L
	TURNING VANES	TV
	DUCT FLEXIBLE CONNECTION	
	DUCT RISER	
	DUCT DROP	
	RECTANGULAR TO ROUND FITTING	
	VOLUME CONTROL DAMPER	VD
FD	FIRE DAMPER W/ ACCESS	FD
FSD	FIRE SMOKE DAMPER W/ ACCESS	FSD
	OPPOSED BLADE DAMPER	OBD
	BACKDRAFT DAMPER	BDD
M	MOTORIZED DAMPER	
	TOP OF BOX	TOB
T	THERMOSTAT @ +48" AFF @ TOB	T-STAT
CO2	CO2 SENSOR @ +48" AFF @ TOB	
S	SENSOR @ +48" AFF @ TOB	
TC	TIMECLOCK @ +48" AFF @ TOB	
TCP	TEMPERATURE CONTROL PANEL	TCP
SD	DUCT SMOKE DETECTOR	SD
	PIPE RISER/DROP	(R)/(D)
	ABOVE FINISHED FLOOR	AFF
	UNLESS OTHERWISE NOTED	UON
	TYPICAL	(TYP)
	BOTTOM OF DUCT	BOD
	BOTTOM OF PIPE	BOP
	AUTOMATIC AIR VENT	AAV
	MANUAL AIR VENT	MAV
	TEMP. CONTROL CONTRACTOR	TCC
	TEMPERATURE CONTROL VALVE	TCV
	COMBUSTION AIR	CA
	NEW	(N)
	EXISTING	(E)
	POINT OF DIS/CONNECTION	POD/POC
	HEATING HOT WATER SUPPLY	HHWS
	HEATING HOT WATER RETURN	HHWR
	2-WAY CONTROL VALVE	
	BACKFLOW PREVENTER	BFP
	BALL VALVE	
	BUTTERFLY VALVE	
	CAP	
	CHECK VALVE	
	AUTOMATIC BALANCE VALVE (B&G ULTRA SET)	ABV
	AUTOMATIC BALANCE VALVE (B&G CIRCUIT SETTER)	CBV
	CONTROL VALVE (2-WAY)	
	FLEX CONNECTOR	FC
	FLOW ARROW	
	GATE VALVE	
	PRESSURE GAUGE	
	PLUG VALVE	
	REDUCER	
	STRAINER	
	TEMPERATURE SENSOR	TS
	TEST PORT (PETE'S PLUG)	PP
	THERMOMETER	
	TRIPLE DUTY VALVE	

MECHANICAL SPECIFICATIONS

A. THIS CONTRACTOR SHALL COMPLY WITH ALL CODES AND REGULATIONS IN EFFECT AT THE JOB SITE, INCLUDING, BUT NOT LIMITED TO:
- A.1. 2019 CALIFORNIA BUILDING CODE
- A.2. 2019 CALIFORNIA MECHANICAL CODE
- A.3. 2019 CALIFORNIA PLUMBING CODE
- A.4. 2019 CALIFORNIA ELECTRICAL CODE
- A.5. 2019 CALIFORNIA GREEN BUILDING STANDARDS
- A.6. 2019 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS – TITLE 24
- A.7. NATIONAL FIRE PROTECTION ASSOCIATION
- A.8. CALIFORNIA STATE FIRE MARSHAL

B. 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.

C. THE MECHANICAL CONTRACTOR SHALL PROVIDE THE OWNER COPIES OF OPERATION, MAINTENANCE AND PREVENTATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF MECHANICAL EQUIPMENT.

D. CHECK AND VERIFY EXISTING CONDITIONS AT THE JOB SITE BEFORE BEGINNING WORK. ADJUST THE LOCATION AND CONFIGURATION OF THE WORK NECESSARY TO SUIT ACTUAL CONDITIONS AND OTHER TRADES. ANY CHANGES REQUIRED MUST FIRST BE APPROVED BY THE ARCHITECT OR ENGINEER.

E. THE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK AND SYSTEMS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. CHANGES REQUIRED TO SUIT EXISTING CONDITIONS AND DUE TO COORDINATION WITH OTHER TRADES SHALL BE MADE AT NO EXTRA COST TO THE OWNER.

F. 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, AIR FLOW, EFFICIENCY, ETC. REQUIRED. WEIGHTS AND ELECTRICAL DATA SCHEDULED IS MAXIMUM AVAILABLE OR ALLOWABLE.

G. 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.

H. PROVIDE ACCESS DOORS WHERE ACCESS THROUGH FLOORS, WALLS OR CEILINGS IS REQUIRED TO ACCESS MECHANICAL CONTROL SYSTEM COMPONENTS, FIRE/SMOKE DAMPERS, SMOKE DETECTORS, ETC., OR OTHER SYSTEMS REQUIRING ACCESS FOR MAINTENANCE, TESTING OR OBSERVATION. COORDINATE THE EXACT TYPE AND LOCATION OF ACCESS DOORS TO PROVIDE PROPER ACCESS TO THE ITEM CONCEALED.

I. CHECK ALL PIPE AND DUCTWORK FOR LEAKS AND EXCESSIVE AIR LOSS AND NOISE. CORRECT ANY DEFICIENCIES AS SOON AS DISCOVERED. OPERATE THE SYSTEMS AS A TEST AND DEMONSTRATE TO THE OWNER AND ARCHITECT OR ENGINEER THAT THE SYSTEM IS FUNCTIONING PROPERLY.

J. GALVANIZED STEEL DUCTS SHALL BE ASTM A 653/A 653M GALVANIZED STEEL SHEET, FORMING STEEL (FS) DESIGNATION, WITH G90/Z275 ZINC COATING.

K. FABRICATE, SUPPORT AND SEAL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE, AND AS INDICATED. PROVIDE DUCT MATERIAL, GAGES, REINFORCING, AND SEALING FOR 4" STATIC PRESSURE UPSTREAM OF TERMINAL UNITS (VAV, CAV BOXES) AND 2" STATIC PRESSURE DOWNSTREAM OF TERMINAL UNITS (VAV, CAV BOXES).

L. CONSTRUCT DUCTWORK 1"S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE. WHERE NOT POSSIBLE RECTANGULAR ELBOWS MUST BE USED, PROVIDE AIR FOIL TURNING VANES. WHERE ACOUSTICAL LINING IS INDICATED, PROVIDE TURNING VANES OF PERFORATED METAL WITH GLASS FIBER INSULATION.

M. COMBINATION FIRE AND SMOKE DAMPERS SHALL MEET THE REQUIREMENTS OF NFPA 90A, UL 555, UL 555S, AND AS INDICATED. PROVIDE FACTORY SLEEVE AND COLLAR FOR EACH DAMPER.

N. ALL INSULATION AND LINER PRODUCTS SURFACE BURNING CHARACTERISTICS: FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E 84, NFPA 255, OR UL 723.

MECHANICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
M0.01	MECHANICAL LEGEND & NOTES
M0.02	MECHANICAL SCHEDULES
M0.03	MECHANICAL SCHEDULES
M0.04	MECHANICAL DETAILS
M1.00	MECHANICAL SITE PLAN
M3.10	MECHANICAL FLOOR PLAN – KINDER–ADMIN BLDG
M3.11	MECHANICAL FLOOR PLAN – CLASSROOM BLDG A
M3.12	MECHANICAL FLOOR PLAN – CLASSROOM BLDG B
M3.13	MECHANICAL FLOOR PLAN – CLASSROOM BLDG C
M3.14	MECHANICAL FLOOR PLAN – CLASSROOM BLDG D
M3.15	MECHANICAL FLOOR PLAN – MULTIPURPOSE BLDG
M5.10	MECHANICAL CONTROLS
M5.11	MECHANICAL CONTROLS
M5.12	MECHANICAL PIPING AND WIRING DIAGRAMS
M5.13	MECHANICAL PIPING AND WIRING DIAGRAMS

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LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03–31–25 MECHANICAL STATE OF CALIFORNIA

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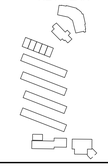
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
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SAN JOSE, CA 95127

MECHANICAL LEGEND AND NOTES

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	M0.01
Drawn / **Checked**	
KT / CD	

AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	DESCRIPTION
A	CEILING SUPPLY	STEEL LOUVERED FACE DIFFUSER WITH FRAME FOR LAY-IN T-BAR MOUNTING. TITUS MODEL MCD.
B	CEILING RETURN	EGGCRATE GRILLE WITH 1/2"x1/2"x1/2" GRID, FRAME FOR LAY-IN T-BAR MOUNTING. TITUS MODEL 50R.
E	SIDEWALL RETURN/ EXHAUST	SINGLE DEFLECTION, FIXED BLADE, 35° DEFLECTION, 3/4" BLADE SPACING, FRAME FOR SURFACE MOUNTING, OBD TITUS MODEL 350RL.
F	DUCT MOUNT SUPPLY	DOUBLE DEFLECTION, INDIVIDUALLY ADJUSTABLE BLADES WITH 3/4" SPACING FOR DUCT MOUNTING, AIR SCOOP DAMPER EXTRACTOR. TITUS MODEL S300FL.
G	SIDEWALL SUPPLY	DOUBLE DEFLECTION, ADJUSTABLE FRONT HORIZONTAL BLADE REGISTER WITH 3/4" BLADE SPACING. TITUS MODEL 300RL.
H	DOOR LOUVER	EXTRUDED ALUMINUM STORM PROOF LOUVER, COLOR BY ARCHITECT, PROVIDE VANDAL ROOF SECURITY SCREW FASTENERS. ANEMOSTAT MODEL SRDL.

NOTES:
1. EQUIVALENT MODELS OF TUTTLE & BAILEY, KRUEGER, ENVIROMENTAL AIR PRODUCTS, OR J & J ARE ACCEPTABLE. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN, AND FIRE DAMPER, IF REQUIRED.

OUTSIDE AIR SCHEDULE

SYSTEM NAME	MIN. OSA CFM	MAX. OSA CFM	DEMAND CONTROL VENT. (Y/N)
FC-A-1	370	–	N
FC-A-2	365	–	N
FC-A-3	365	–	N
FC-A-4	365	–	N
FC-A-5	365	–	N
FC-A-6	240	–	N
FC-B-1	370	–	N
FC-B-2	365	–	N
FC-B-3	365	–	N
FC-B-4	365	–	N
FC-B-5	365	–	N
FC-C-1	370	–	N
FC-C-2	365	–	N
FC-C-3	365	–	N
FC-C-4	365	–	N
FC-C-5	365	–	N
FC-D-1	370	–	N
FC-D-2	365	–	N
FC-D-3	365	–	N
FC-D-4	365	–	N
FC-D-5	365	–	N
FC-D-6	120	–	N
FC-AD-1	510	–	N
FC-AD-2	510	–	N
FC-MP-1	615	–	N
FC-MP-2	615	–	N
FC-MP-3	50	–	N
RTU-AD-1	90	610	Y

* OSA TO BE PER TITLE 24, 2019 BUILDING ENERGY EFFICIENY STANDARDS, SECTION 120.1, REQUIREMENTS.

* DEMAND VENTILATION CONTROLS SHALL MAINTAIN CO2 CONCENTRATIONS LESS THAN OR EQUAL TO 600 PPM PLUS THE OUTDOOR AIR CO2 CONCENTRATIONS IN ALL ROOMS WITH CO2 SENSORS.

ROOFTOP HP UNIT SCHEDULE

TYPE	MARK	NOM. TONS	ELECTRICAL VOLT	PHASE	FLA	MCA	MOCP	BLOWER MAX. CONT. BHP	DESIGN BHP	CFM	E.S.P. (IN WC)	MIN. OSA (CFM)	DRIVE	COOLING TYPE	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	E.A. DB (°F)	E.A. WB (°F)	AMBIENT TEMP (°F)	SEER/ EER	HEATING TYPE	INPUT (BTUH)	OUTPUT (BTUH)	COP (%)	POWER EXHAUST VOLT	PHASE	HP	FLA	MCA	MOCP	STATIC PRESS. (IN WC)	MFGR	MODEL	FILTER TYPE	FILTER SIZE (IN.)	SERVICE	OPERATING WEIGHT (LBS.)	MFGR	MODEL
RTU	AD-1	5	208	3	46	48	60	1.00	0.73	2,000	0.70	SEE OSA SCHED	DIRECT	DX	56,620	47,110	80	67	95	16.40/ 13.0	DX	–	39,330	3.8	208	3	1/2	3.9	4.9	8.8	–	MICROMETL	PECE	MERV-13	16X16X2	ADMIN	1,175	TRANE	WHC060

NOTES:
1. SEE ELECTRICAL DRAWINGS FOR UNIT DISCONNECT SWITCH.
2. SEE ELECTRICAL DRAWINGS FOR POWERED EXHAUST DISCONNECT SWITCH.
3. SEE ELECTRICAL DRAWINGS FOR CONVENIENCE OUTLET.
4. PROVIDE UNITS WITH: LOW AMBIENT KIT, CRANKCASE HEATER, HINGED ACCESS DOORS, LOUVERED CONDENSER COIL HAIL GUARDS, AND ANTI-SHORT CYCLE COMPRESSOR DELAY TIMER.
5. PROVIDE FLUE DISCHARGE EXTENSION WHERE FLUE IS WITHIN 10 FEET OF ANY OUTSIDE AIR INTAKE.
6. PROVIDE MERV 13 FILTERS.
7. PROVIDE MICROMETL 14" HIGH ROOF CURB.
8. PROVIDE MICROMETL MODULATING ULTRA LOW-LEAK 100% ECONOMIZER WITH FAULT DETECTION & DIAGNOSTICS (FDD), ADJUSTABLE DRY BULB CONTROL AND MODULATING CENTRIFUGAL 100% POWERED EXHAUST. POWERED EXHAUST TO BE SET TO MAINTAIN 0.03" W.C. SPACE PRESSURE. COORDINATE REQUIREMENTS WITH CONTROLS.
9. FOR ALL AC UNITS, PROVIDE CSFM LISTED DUCT SMOKE DETECTOR IN THE SUPPLY AIR PLENUM TO SHUT-OFF UNIT UPON DETECTION OF SMOKE. INSTALL IN STRICT ACCORDANCE WITH CALIFORNIA MECHANICAL CODE, SECTION 608. COORDINATE WITH ELECTRICAL AND/OR FIRE ALARM SYSTEM CONTRACTOR FOR COMPATIBILITY AND INSTALLATION.
10. PROVIDE ELECTRO-MECHANICAL CONTROL FOR CONTROL BY ALERTON DDC CONTROLLER VIA TERMINAL STRIP. SEE CONTROLS DRAWINGS FOR ADDITIONAL REQUIREMENTS.

FAN COIL SCHEDULE

TYPE	MARK	MOUNTING	ELECTRICAL VOLT	PHASE	MCA	MOCP	BLOWER WATTS	CFM	E.S.P. (IN WC)	RPM	MIN. OSA (CFM)	COOLING TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	E.A. DB (°F)	E.A. WB (°F)	AMBIENT TEMP (°F)	TYPE	HEATING TOTAL CAPACITY (BTUH)	E.A. DB (°F)	AMBIENT TEMP (°F)	FILTER TYPE	SERVICE	OPERATING WEIGHT (LBS.)	MFGR	MODEL	NOTES
FC	AD-1	HORIZONTAL	208	1	3.4	15	–	1,380	0.9	–	SEE OSA SCHED	48,000	35,800	–	–	94	DX	54,000	–	29	MERV-13	HP-AD-1	216	DAIKIN	FXMQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	AD-2	HORIZONTAL	208	1	3.4	15	–	1,380	0.9	–	SEE OSA SCHED	48,000	35,800	–	–	94	DX	54,000	–	29	MERV-13	HP-AD-2	216	DAIKIN	FXMQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	MP-1	VERTICAL	208	1	8.6	15	–	1,800	0.9	–	SEE OSA SCHED	54,000	39,300	–	–	94	DX	60,000	–	29	MERV-13	HP-MP-1	230	DAIKIN	FXTQ54	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. INSTALL DUCT SMOKE DETECTOR IN SUPPLY AIR PLENUM TO SHUT-OFF UNIT UPON DETECTION OF SMOKE. INSTALL IN STRICT ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE, SECTION 609. COORDINATE WITH ELECTRICAL AND/OR FIRE ALARM SYSTEM CONTRACTOR. COORDINATE WITH CONTROL CONTRACTOR FOR CONTROL SCOPE. VRF MAIN CONTROL PANEL LOCATION TBD. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	MP-2	VERTICAL	208	1	8.6	15	–	1,800	0.9	–	SEE OSA SCHED	54,000	39,300	–	–	94	DX	60,000	–	29	MERV-13	HP-MP-1	230	DAIKIN	FXTQ54	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. INSTALL DUCT SMOKE DETECTOR IN SUPPLY AIR PLENUM TO SHUT-OFF UNIT UPON DETECTION OF SMOKE. INSTALL IN STRICT ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE, SECTION 609. COORDINATE WITH ELECTRICAL AND/OR FIRE ALARM SYSTEM CONTRACTOR. COORDINATE WITH CONTROL CONTRACTOR FOR CONTROL SCOPE. VRF MAIN CONTROL PANEL LOCATION TBD. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	MP-3	CASSETTE	208	1	0.7	15	–	777	0.4	–	SEE OSA SCHED	23,000	20,000	–	–	94	DX	27,000	–	29	MERV-13	HP-MP-1	62	DAIKIN	FXFQ24	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	A-1 TO A-5	HORIZONTAL	208	1	6.5	15	–	1,520	0.9	–	SEE OSA SCHED	48,000	32,700	–	–	94	DX	54,000	–	29	MERV-13	HP-A-1	216	DAIKIN	FXTQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	A-6	HORIZONTAL	208	1	1.8	15	–	688	0.4	–	SEE OSA SCHED	24,000	18,800	–	–	94	DX	27,000	–	29	MERV-13	HP-A-1	124	DAIKIN	FXMQ24	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE FILTER BOX WITH MERV-13 FILTER. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	B-1 TO B-5	HORIZONTAL	208	1	6.5	15	–	1,520	0.9	–	SEE OSA SCHED	48,000	32,700	–	–	94	DX	54,000	–	29	MERV-13	HP-B-1	216	DAIKIN	FXTQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	C-1 TO C-5	HORIZONTAL	208	1	6.5	15	–	1,520	0.9	–	SEE OSA SCHED	48,000	32,700	–	–	94	DX	54,000	–	29	MERV-13	HP-C-1	216	DAIKIN	FXTQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	D-1 TO D-5	HORIZONTAL	208	1	6.5	15	–	1,520	0.9	–	SEE OSA SCHED	48,000	32,700	–	–	94	DX	54,000	–	29	MERV-13	HP-D-1	216	DAIKIN	FXTQ48	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.
FC	D-6	HORIZONTAL	208	1	1.8	15	–	688	0.4	–	SEE OSA SCHED	24,000	18,800	–	–	94	DX	27,000	–	29	MERV-13	HP-D-1	124	DAIKIN	FXMQ24	PROVIDE FACTORY FILTER BOX WITH MERV-13 FILTERS. SEE MECHANICAL CONTROLS DRAWINGS FOR CONTROLS REQUIREMENTS. SEE PIPING AND WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. PROVIDE FILTER BOX WITH MERV-13 FILTER. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION.

BRANCH SELECTOR BOX SCHEDULE

TYPE	MARK	MOUNTING TYPE	ELECTRICAL VOLT	PHASE	MCA	MOCP	REFRIGERANT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	SERVICE	OPERATING WEIGHT (LBS.)	MFGR	MODEL	NOTES
BS	A-1 TO A-5	CEILING	208	1	0.10	15	R-410A	60,000	–	HP-A-1	35	DAIKIN	BSQ60TAVJ	SERVICES ONE FC EACH FROM HP-A-1, TOTAL 5. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	A-6	CEILING	208	1	0.10	15	R-410A	36,000	–	HP-A-1	33	DAIKIN	BSQ36TVJ	SERVICES ONE FC ONE FROM HP-A-1. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	B-1 TO B-5	CEILING	208	1	0.10	15	R-410A	60,000	–	HP-B-1	35	DAIKIN	BSQ60TAVJ	SERVICES ONE FC EACH FROM HP-B-1, TOTAL 5. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	C-1 TO C-5	CEILING	208	1	0.10	15	R-410A	60,000	–	HP-C-1	35	DAIKIN	BSQ60TAVJ	SERVICES ONE FC EACH FROM HP-C-1, TOTAL 5. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	D-1 TO D-5	CEILING	208	1	0.10	15	R-410A	60,000	–	HP-D-1	35	DAIKIN	BSQ60TAVJ	SERVICES ONE FC EACH FROM HP-D-1, TOTAL 5. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	D-6	CEILING	208	1	0.10	15	R-410A	36,000	–	HP-D-1	33	DAIKIN	BSQ36TVJ	SERVICES ONE FC ONE FROM HP-D-1. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	MP-1	CEILING	208	1	0.10	15	R-410A	36,000	–	HP-MP-1	33	DAIKIN	BS4Q54TAVJ	SERVICES FC-MP-1 AND FC-MP-2 FROM HP-MP-1. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.
BS	MP-2	CEILING	208	1	0.10	15	R-410A	36,000	–	HP-MP-1	33	DAIKIN	BSQ36TVJ	SERVICES FC-MP-3 ONE FROM HP-MP-1. COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE ISOLATION VALVES FOR SERVICING OF BRANCH SELECTOR BOX AND FAN COIL UNIT. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROLS DRAWING FOR ADDITIONAL REQUIREMENTS.

OUTDOOR UNIT SCHEDULE

TYPE	MARK	ODU TYPE	MOUNTING TYPE	ELECTRICAL VOLT	PHASE	MCA	MOCP	SEER/ EER	HPSF	REFRIGERANT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	SERVICE	OPERATING WEIGHT (LBS.)	MFGR	MODEL	NOTES
HP	AD-1	HP	FLOOR	208	1	29.1	35	16/ 9.4	–	R-410A	48,000	54,000	FC-1	270	DAIKIN	RXTQ48	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	AD-2	HP	FLOOR	208	1	29.1	35	16/ 9.4	–	R-410A	48,000	54,000	FC-2	270	DAIKIN	RXTQ48	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	MP-1	VFV	FLOOR	208	3	47.8	50	–/ 12.00	–	R-410A	138,000	154,000	FC-3-5	942	DAIKIN	REYQ144	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	A-1	VRV	FLOOR	208	3	84.3	90	–/ 10.60	–	R-410A	252,000	282,000	FC-6-11	1800	DAIKIN	REYQ264	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	B-1	VRV	FLOOR	208	3	73.7	80	–/ 10.80	–	R-410A	228,000	256,000	FC-12-16	1,149	DAIKIN	REYQ240	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	C-1	VRV	FLOOR	208	3	73.7	80	–/ 10.80	–	R-410A	228,000	256,000	FC-17-21	1,149	DAIKIN	REYQ240	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
HP	D-1	VRV	FLOOR	208	3	84.3	90	–/ 10.60	–	R-410A	252,000	282,000	FC-22-27	1800	DAIKIN	REYQ264	COORDINATE WITH ELECTRICAL FOR POWER CONNECTION. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS. CONTRACTOR TO COORDINATE EXACT ROUTING OF REFRIGERANT PIPING WITH MANUFACTURER FOR SIZING, INSTALLATION AND REFRIGERANT CHARGE REQUIREMENTS PRIOR TO ORDERING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DSA STAMP

IDENTIFICATION STAMP
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APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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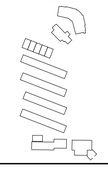
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

MECHANICAL SCHEDULES

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number M0.02
Drawn KT
Checked CD

GRAVITY VENTILATOR SCHEDULE

TYPE	MARK	MOUNTING	AIRFLOW					CONTROL	OPER. WEIGHT (LBS.)	MANUFACTURER	MODEL NUMBER
			CFM	THROAT SIZE (IN.)	THROAT AREA (SF)	THROAT VELOC. (FPM)	PRESS. DROP (IN-WC)				
RH	AD-1	ROOF	510	16X16	1.78	287	0.014	GRAVITY DAMPER	60	GREENHECK	FGR-16X16
RH	AD-2	ROOF	510	16X16	1.78	287	0.014	GRAVITY DAMPER	60	GREENHECK	FGR-16X16
RH	A-1	ROOF	370	12X12	1	370	0.023	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	A-2	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	A-3	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	A-4	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	A-5	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	B-1	ROOF	370	12X12	1	370	0.023	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	B-2	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	B-3	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	B-4	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	B-5	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	C-1	ROOF	370	12X12	1	370	0.023	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	C-2	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	C-3	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	C-4	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	C-5	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	D-1	ROOF	370	12X12	1	370	0.023	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	D-2	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	D-3	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	D-4	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	D-5	ROOF	365	12X12	1	365	0.018	GRAVITY DAMPER	45	GREENHECK	FGR-12X12
RH	MP-1	ROOF	1600	26X26	4.69	341	0.02	GRAVITY DAMPER	85	GREENHECK	FGR-12X12
IH	MP-1	ROOF	2500	32X32	7.11	352	0.021	GRAVITY DAMPER	145	GREENHECK	FGR-32X32
IH	MP-2	ROOF	1730	26X26	4.69	369	0.023	GRAVITY DAMPER	100	GREENHECK	FGR-26X26

NOTES:
1. PROVIDE FACTORY ROOF CURB.
2. PROVIDE FACTORY BIRDSCREEN AND INSECT SCREEN.
3. PROVIDE COUNTERBALANCED GRAVITY BACKDRAFT DAMPER INSTALLED FOR BUILDING INTAKE/RELIEF AS INDICATED AND SET TO OPEN AT 0.05" W.G..

FAN SCHEDULE

TYPE	MARK	FAN TYPE	MOUNT	ELECTRICAL				CFM	E.S.P. (IN.WC)	DRIVE	FAN RPM	SONES (FPM)	SERVICE	CONTROL	OPERATING WEIGHT	MANUFACTURER	MODEL	NOTES
				HP	WATTS	VOLT	PHASE											
CEF	AD-1	CENTRIFUGAL	CEILING	–	81	115	1	150	0.25	DIRECT	751	0.7	CLASSRM TOILET 06	INTERLOCK W/FAN COIL	30	GREENHECK	SP-A290	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	AD-2	CENTRIFUGAL	CEILING	–	81	115	1	150	0.25	DIRECT	751	0.7	CLASSRM TOILET 05	INTERLOCK W/FAN COIL	30	GREENHECK	SP-A290	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	AD-3	CENTRIFUGAL	CEILING	–	24	115	1	200	0.25	DIRECT	968	2.5	WOMEN RR – 08	BMS	30	GREENHECK	SP-A390-VG	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	AD-4	CENTRIFUGAL	CEILING	–	18	115	1	100	0.25	DIRECT	1053	0.5	MEN RR – 08	LIGHTS	25	GREENHECK	SP-A125	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	AD-5	CENTRIFUGAL	CEILING	–	12	115	1	50	0.25	DIRECT	827	0.3	ADMIN TOILET 05	LIGHTS	25	GREENHECK	SP-A70	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	MP-1	CENTRIFUGAL	CEILING	–	18	115	1	100	0.25	DIRECT	1053	0.5	TOILET A5	LIGHTS	25	GREENHECK	SP-A125	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
CEF	MP-2	CENTRIFUGAL	CEILING	–	12	115	1	50	0.25	DIRECT	827	0.3	CUSTODIAN A6	LIGHTS	25	GREENHECK	SP-A70	PROVIDE BACK DRAFT DAMPER, PROVIDE MOUNTING KIT, PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE WITH FACTORY ALUMINUM GRILLE. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	B-1	CENTRIFUGAL	ROOF	1/4	–	115	1	500	0.25	DIRECT	877	3.2	BOYS B7	BMS	65	GREENHECK	G-100-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	B-2	CENTRIFUGAL	ROOF	1/4	–	115	1	500	0.25	DIRECT	877	3.2	GIRLS B7	BMS	65	GREENHECK	G-100-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	C-1	CENTRIFUGAL	ROOF	1/4	–	115	1	500	0.25	DIRECT	877	3.2	BOYS C8	BMS	65	GREENHECK	G-100-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	C-2	CENTRIFUGAL	ROOF	1/4	–	115	1	500	0.25	DIRECT	877	3.2	GIRLS C9	BMS	65	GREENHECK	G-100-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	C-3	CENTRIFUGAL	ROOF	1/6	–	115	1	350	0.25	DIRECT	1020	4.1	CUSTODIAN C7	LIGHTS	55	GREENHECK	G-095-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
REF	D-1	CENTRIFUGAL	ROOF	1/15	–	115	1	200	0.25	DIRECT	1364	3.2	TOILET D7	BMS	40	GREENHECK	G-070-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. PROVIDE FACTORY ROOF CURB AND DAMPER TRAY. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.
SF	MP-1	CENTRIFUGAL	CEILING	3/4	–	115	1	2,500	0.5	DIRECT	1068	10.2	MECH RM A3	INTERLOCK WITH (E) TYP. HOOD EF	160	GREENHECK	SQ-160-VG	PROVIDE BACK DRAFT DAMPER AND BIRDSCREEN, PRE-WIRED DISCONNECT SWITCH WITH NEMA RATED ENCLOSURE FOR LOCAITON, MOTOR THERMAL OVERLOAD PROTECTION, MERV 13 FILTER BOX, SPRING ISOLATORS. PROVIDE WITH PRE-WIRED FAN SPEED CONTROLLER. FANS TO BE AMCA LICENSED FOR SOUND AND AIR PERFORMANCE.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITTHORN No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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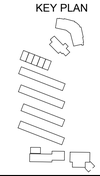
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

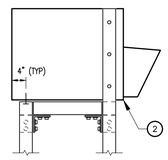
MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

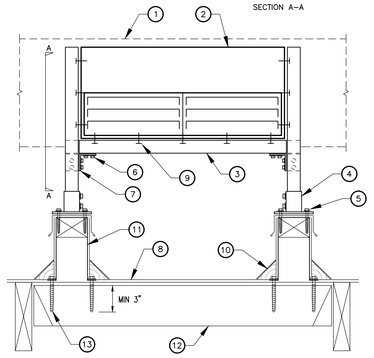
MECHANICAL SCHEDULES

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M0.03
Drawn: KT	Checked: CD

1. RETURN AIR DUCTWORK
2. POWERED EXHAUST MODULE, SEE SCHEDULE
3. (B-LINE) B22 CHANNEL, (TYP)
4. (B-LINE) B280FL CHANNEL POST BASE, (TYP)
5. 3/8"ø LAG BOLT WITH NEOPRENE WASHER, MIN. 2" INTO NAILER, (2) BOLTS PER POST AT OPPOSITE CORNERS, SILICONE SEAL PENETRATIONS WATERTIGHT
6. (4) 3/8"ø BOLT AND CHANNEL NUT PER ANGLE, (TYP)
7. (B-LINE) B115 FOUR HOLE ANGLE FITTING, (TYP)
8. ROOFING UP AND UNDER FLASHING
9. #12 SM SCREW AT 8" O.C., MIN. 2 PER SIDE.
10. CANT STRIP, TYP.
11. PREFAB. GALV. SHEET METAL EQUIP. CURB, 8" HIGH x 12" LONG WITH WOOD NAILER AND COUNTERFLASHING
12. 4X BLOCKING BETWEEN JOISTS W/ U44 HANGERS AT EA. END
13. 3/8"ø LAG SCREW WITH MIN. 1-1/2" INTO BLOCKING, (2) PER LONG SIDE, TYP.

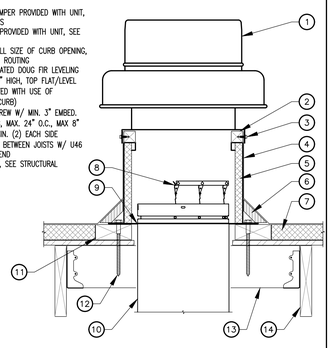
NOTE:
1. COORDINATE UNISTRUT SUPPORT LOCATIONS WITH POWERED EXHAUST DISCONNECT, ACCESS PANELS, SERVICE CLEARANCES AND ANY OTHER OBSTRUCTIONS.





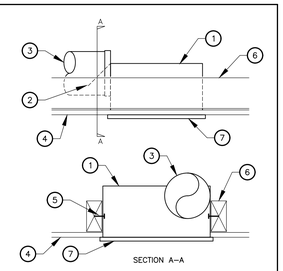
MEVE020A — POWER EXHAUST SUPPORT ON ROOF — NTS — 15

1. ROOF EXHAUST FAN, SEE SCHEDULES
2. WOOD NAILER PROVIDED WITH UNIT CURB
3. #12 TEK SCREWS WITH MIN. 3/4" EMBED. INTO WOOD NAILER, MIN. (2) PER SIDE, SILICONE SEAL PENETRATIONS WATERTIGHT
4. ROOFING UP AND UNDER FAN FLASHING
5. UNIT CURB, SEE SCHEDULES
6. CANT STRIP
7. ROOF INSULATION FORMED TO MEET CURB WHERE APPLICABLE, SEE ARCHITECTURAL DRAWINGS
8. BACKDRAFT DAMPER PROVIDED WITH UNIT, SEE SCHEDULES
9. DAMPER TRAY PROVIDED WITH UNIT, SEE SCHEDULES
10. DUCTWORK, FULL SIZE OF CURB OPENING, SEE PLAN FOR ROUTING
11. PRESSURE TREATED DOUG FIR LEVELING BLOCK, MIN. 2" HIGH, TOP FLAT/LEVEL (MAY BE OMITTED WITH USE OF PRE-SLOPED CURB)
12. 3/8"ø LAG SCREW W/ MIN. 3" EMBED. INTO BLOCKING, MAX. 24" O.C., MAX 8" FROM ENDS, MIN. (2) EACH SIDE
13. 4X6 BLOCKING BETWEEN JOISTS W/ U46 HANGERS EA. END
14. ROOF FRAMING, SEE STRUCTURAL



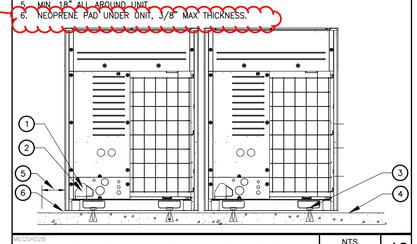
MEVE020B — ROOFTOP EXHAUST FAN (WOOD) — NTS — 11

1. CEILING EXHAUST FAN, SEE SCHEDULE
2. BACKDRAFT DAMPER FURNISHED WITH FAN
3. DUCTWORK, SEE PLAN FOR SIZE AND ROUTING
4. FINISHED GYP BOARD CEILING
5. #10 X 1-1/2" WOOD SCREWS, MIN (2) PER SIDE
6. 2X BLOCKING AROUND FAN, ATTACH TO CEILING FRAMING WITH SIMPSON A34, TYP.
7. CEILING GRILLE FURNISHED WITH FAN



MEVE020E — EXHAUST FAN - CEILING MOUNTING (CEF) — NTS — 12

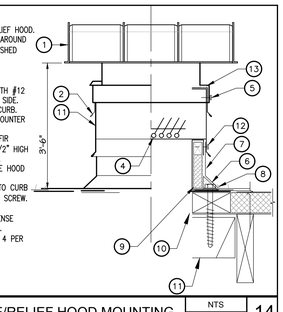
1. ACCESS TO REFRIGERANT SUCTION LINE CONNECTION.
2. ACCESS TO REFRIGERANT DISCHARGE LINE CONNECTION.
3. 1/2"ø SIMPSON STRONG BOLT-2 STAINLESS STEEL EXPANSION ANCHORS, 4" MIN EMBEDMENT. TORQUE TEST TO 65 FT-LBS. (TYP. 4 PER SECTION)
4. (N) CONCRETE PAD PER STRUCTURAL DRAWINGS.
5. MIN. 18" ALL AROUND UNIT.
6. NEOPRENE PAD UNDER UNIT, 3/8" MAX THICKNESS.



MEGSA02B — HEAT PUMP UNIT MOUNTING DETAIL — NTS — 13

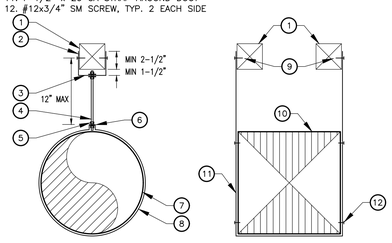
1. ROOF MOUNTED INTAKE/RELIEF HOOD.
2. GALV. SHT. MTL. FLASHING AROUND CURB. (CURB TO BE FURNISHED WITH HOOD).
3. METAL DECKING SEE ARCH.
4. BACKDRAFT DAMPER.
5. SECURE HOOD TO CURB WITH #12 GALV SCREWS, MIN. 4 PER SIDE.
6. CANT STRIP. ALL AROUND CURB.
7. ROOFING UP AND UNDER COUNTER FLASHING.
8. PRESSURE TREATED DOUG FIR LEVELING BLOCK, MIN 1-1/2" HIGH
9. ROOF CURB BY HOOD MFG.
10. CURB EXTENSION BY INTAKE HOOD MFG.
11. SECURE CURB EXTENSION TO CURB WITH 1/4" DIAMETER WOOD SCREW. MIN. 4 PER SIDE.
12. 2" X 1/4" CONTINUOUS DENSE NEOPRENE SPONGE GASKET.
13. PROVIDE 2-#12 SMS, MIN. 4 PER SIDE.

* (BY GENERAL CONTRACTOR)



MEGSA10E — INTAKE/RELIEF HOOD MOUNTING — NTS — 14

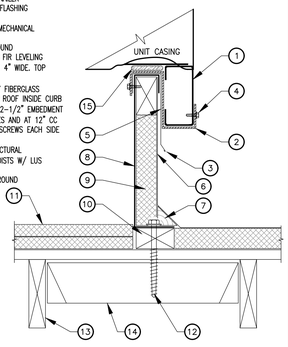
1. 4x4 BLOCKING BETWEEN JOISTS WITH U44 HANGERS AT EACH END, TYP.
2. #12x1-1/2" WOOD SCREWS, 2 PER SIDE
3. 3 WIDE x 16 GA BENT PLATE
4. 3/8"ø THREADED ROD
5. 3/8" NUT & 2" WASHER, TYP. TOP AND BOTTOM OF FLANGE
6. 2-1/2" WIDE X 20 GA STRAP WITH MIN. 3"x2" HIGH FLANGE, TYP.
7. ROUND DUCT
8. 2-1/2" x 20 GA STRAP
9. 1/4"ø x1-1/4" LAG BOLT, TYP. 2 EACH END
10. RECTANGULAR DUCT
11. 1-1/2" x 20 GA STRAP AROUND DUCT
12. #12x3/4" SM SCREW, TYP. 2 EACH SIDE



NOTE:
1. SUPPORT DUCTWORK AT 8'-0" O.C.
2. BLOCKING CONDITION IS SHOWN, 2x JOIST CONDITION IS SIMILAR WITH STRAPS AND LAG BOLTS ATTACHING DIRECTLY TO 2x ROOF JOISTS.
3. PER 2019 CBC, SEISMIC RESTRAIN IS NOT REQUIRED FOR RECTANGULAR DUCTS LESS THAN 6 SQ. FT. CROSS SECTION OR ROUND DUCTS LESS THAN 28"ø.

MEGSA07A — TYPICAL DUCT SUPPORT DETAIL — NTS — 8

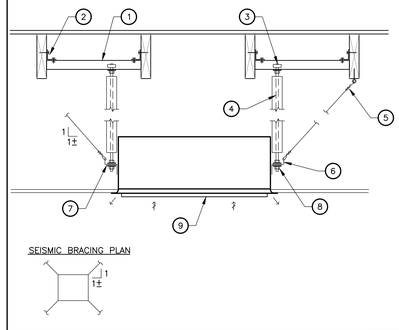
1. AC UNIT BASE RAIL
2. AC UNIT HOLD DOWN, 16 GA STEEL, 6" WIDE, TYP. 24" O.C. ON LONG SIDES AND 12" O.C. ON SHORT SIDES
3. 26 GA GALV. SM COUNTERFLASHING
4. SECURE HOLD DOWNS TO AC UNIT BASE RAIL WITH (4) #12 X 3/4" SM SCREWS, (2) PER SIDE, TYP.
5. NAIL FLASHING TO WOOD NAILER
6. ROOFING UP AND UNDER FLASHING
7. CANT STRIP
8. 14" AC UNIT CURB. SEE MECHANICAL SCHEDULE.
9. RIGID INSULATION ALL AROUND
10. PRESSURE TREATED DOUG FIR LEVELING BLOCK, MIN. 2" HIGH AND 4" WIDE. TOP FLAT/LEVEL
11. 2" THICK X 3 LB DENSITY FIBERGLASS INSULATION BOARD COVER ROOF INSIDE CURB
12. 1/4"ø LAG SCREWS WITH 2-1/2" EMBEDMENT AT 24" CC ON LONG SIDES AND AT 12" CC ON SHORT SIDES, MIN 2 SCREWS EACH SIDE AND 8" FROM END, TYP
13. ROOF FRAMING, SEE STRUCTURAL
14. 4X BLOCKING BETWEEN JOISTS W/ LUS HANGERS
15. NEOPRENE GASKET ALL AROUND



MEGSA09A — AC UNIT MOUNTING DETAIL — NTS — 9

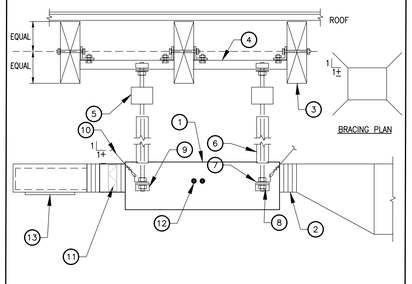
NOT USED — NTS — -

1. 1-5/8" UNISTRUT CHANNEL BETWEEN (E) JOISTS
2. UNISTRUT P1026 ANGLE, SECURE TO (E) JOISTS W/ 3/8"ø X 1-1/2" LAG SCREW, SECURE TO CHANNEL W/ 3/8"ø BOLT AND CHANNEL NUT, TYP EACH END
3. CHANNEL NUT, TYP
4. 3/8"ø THREADED ROD WITH UNISTRUT P1000T CHANNEL STIFFENER, TYP 4 AT EACH CORNER. PROVIDE CHANNEL WITH 3/8"ø BOLTS AT 10" MAX O.C.
5. 12 GA SLACK WIRE, TYP 4, (4) TIGHT TURNS WITH 1-1/2", TYP AT EACH END
6. 3"x2"x2" WIDE 16 GA. ANGLE, TYP
7. HANGER BRACKET PROVIDED BY FAN MANUFACTURER
8. LOCKNUT, TYP
9. CEILING CASSETTE AC UNIT, SEE SCHEDULES



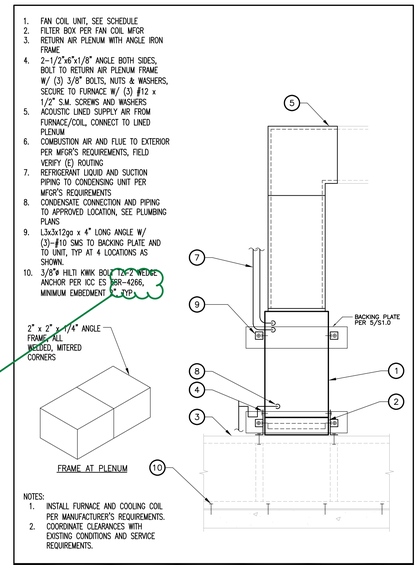
MEZSA02C — CASSETTE INDOOR UNIT MOUNTING — DETAIL SCALE — 5

1. FAN COIL, SEE SCHEDULE
2. FLEXIBLE CONNECTOR, TYP
3. WOOD JOIST, TYP.
4. UNISTRUT P1000 CHANNEL BETWEEN JOISTS, WITH P1821, 3" BY 1-7/8", AT EA. END, SECURE TO JOIST WITH (2) 3/8"ø THRU BOLT, SECURE TO CHANNEL WITH 3/8"ø BOLT AND CHANNEL NUT, TYP. EACH END
5. MASON PC3ON VIBRATION ISOLATORS, 1-1/2" DEFLECTION, TYP 4
6. 3/8"ø THREADED ROD WITH UNISTRUT P1000T CHANNEL STIFFENER WITH 3/8" BOLTS AT 10" O.C. MAX OVER ROD LENGTH, TYP 4
7. 3"x2"x2" WIDE x 16 GA. ANGLE, TYP
8. LOCKNUT, TYP
9. HANGING BRACKET BY FAN COIL MFR.
10. 12 GA SLACK WIRE, TYP 4, (4) TIGHT TURNS WITHIN 1-1/2", TYP EACH END. CONNECT TO STRUCTURE PER 2/S1.1
11. FILTER BOX
12. LIQUID AND VAPOR REFRIGERANT LINE CONNECTIONS.
13. RETURN AIR OPENING WITH 1"x1" WIRE MESH. SEE LOCATION ON PLANS.



MEZSA04B — FAN COIL MOUNTING DETAIL — NTS — 6

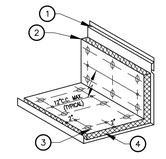
1. FAN COIL UNIT, SEE SCHEDULE
2. FILTER BOX PER FAN COIL MFGR
3. RETURN AIR PLENUM WITH ANGLE IRON FRAME
4. 2-1/2"x6"x1/8" ANGLE BOTH SIDES, BOLT TO RETURN AIR PLENUM FRAME W/ (3) 3/8" BOLTS, NUTS & WASHERS, SECURE TO FURNACE W/ (3) #12 x 1/2" S.M. SCREWS AND WASHERS
5. ACOUSTIC LINED SUPPLY AIR FROM FURNACE/COIL, CONNECT TO LINED PLENUM
6. COMBUSTION AIR AND FLUE TO EXTERIOR PER MFGR'S REQUIREMENTS, FIELD VERIFY (E) ROUTING
7. REFRIGERANT LIQUID AND SUCTION PIPING TO CONDENSING UNIT PER MFGR'S REQUIREMENTS
8. CONDENSATE CONNECTION AND PIPING TO APPROVED LOCATION, SEE PLUMBING PLANS
9. L3x3x12gs x 4" LONG ANGLE W/ (3)-#10 SMS TO BACKING PLATE AND TO UNIT, TYP AT 4 LOCATIONS AS SHOWN.
10. 3/8"ø HILTI KWIK BOLT TZ-2 WEDGE ANCHOR PER ICC ES ESR-4266, MINIMUM EMBEDMENT 3", TYP.

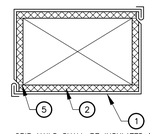


NOTES:
1. INSTALL FURNACE AND COOLING COIL PER MANUFACTURER'S REQUIREMENTS.
2. COORDINATE CLEARANCES WITH EXISTING CONDITIONS AND SERVICE REQUIREMENTS.

MEZSA04A — FAN COIL MOUNTING — NTS — 7

1. GALVANIZED SHEET METAL DUCT.
2. 1" THICK ACOUSTIC DUCT LINER, LINER TO BE ADHERED TO DUCT. w/ 100% ADHESIVE (MIRACLE PF96)
3. NOT MORE THAN 2" FROM LEDGE OF DUCT LINER.
4. ALL ENDS OF LINER TO BE COATED WITH ADHESIVE (MIRACLE PF96). ENDS OF LINER SHALL BE BUTTED FIRMLY TOGETHER.
5. TOP AND BOTTOM SECTIONS OF LINER SHALL OVERLAP THE SIDES.





METAL FASTENERS: OMARK INSUL-PINS. DURA DYNE FASTENERS OR GRIP NAILS.

GRIP NAILS SHALL BE INSULATED BY " GRIP NAIL AIR-HAMMER" OR BY AUTOMATIC FASTENER EQUIPMENT.

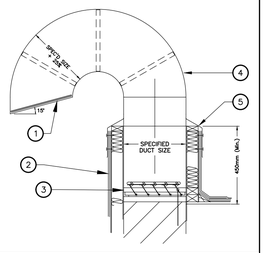
MEVE020A — ACOUSTIC LINED DUCTS — NTS — 1

DIMENSION OF LONGEST SIDE, INCHES	SHEET METAL GAGE (ALL FOUR SIDES)	MINIMUM REINFORCING ANGLE SIZE AND MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS, &/OR INTERMEDIATE REINFORCING	TRANSVERSE REINFORCING (1) AT JOINTS: MIN. HT. IN.	DRIVE SLIP / PLAIN S SLIP: RECOM-MENDED GAGE	HEMMED S SLIP: RECOM-MENDED GAGE	ALTER'NT BAR SLIP: RECOM-MENDED GAGE	REINFORCED BAR SLIP: RECOM-MENDED GAGE
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 - 18	24	NONE REQUIRED	1	24	24	24	24
19 - 30	24	1" x 1" x 1/8" @ 60 IN.	1		24	24	24
31 - 42	22	1" x 1" x 1/8" @ 60 IN.	1			22	22

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

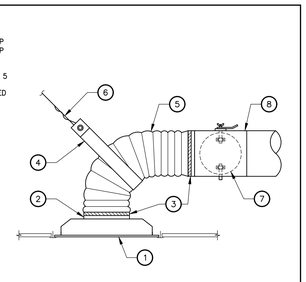
MDUSC07A — DUCT CONSTRUCTION STANDARDS — NTS — 2

1. STAINLESS STEEL MESH BIRDSCREEN.
2. FIELD-BUILT WOODEN CURB BY ARCH.
3. MANUAL VOLUME DAMPER.
4. MIN. 18GA. SEAMLESS WELDED STAINLESS STEEL GOOSENECK INTAKE AIR HOOD. PROVIDE INTERNAL BRACING AS REQ'D.
5. DRIP FLASHING; FASTEN ALL AROUND TO CURB.



MEVE020C — OUTSIDE AIR INTAKE — NTS — 3

1. GRILLE/DIFFUSER
2. ADAPTER WHERE REQUIRED
3. STEEL LOCKING STRAP
4. 4" WIDE SHEET STRAP
5. ACOUSTICAL FLEX DUCT, MIN. 150% RADIUS ELBOW, MAX. 5 FT LENGTH
6. 12 GA. WIRE ATTACHED TO STRUCTURE PER 2/S1.1
7. VOLUME DAMPER
8. SHEET METAL DUCTWORK



MDVEC07D — DIFFUSER/GRILLE INSTALLATION — NTS — 4

the calculations for seismic coefficient determination uses ap and Rp values for a hard anchorage.

Update calculation and seismic criteria to account for neoprene pad. use Fp with correct ap and rp value to match the proposed support conditions here.

4266

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DESIGNED BY
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Wind & Seismic Anchorage of Rooftop Mechanical Units

Unit Description/Type: Heat Pump

Seismic Design Criteria

Occupancy Category = III
Seismic Design Category = D
Importance Factor = 1.250

Sds = 1.540 | a_p = 2.50 | R_p = 6.00

x = 6.00 ft.
h = 1.00 ft.

Equipment Information

Width, x (in.) = 30.5 inches
Length, y (in.) = 98.0 inches
Height, z (in.) = 67.0 inches
H to cg (in.) = 34.9 inches

Weight, W_p (lbs.) = 2200 lbs.

d_{min}= lesser of x or y
d_{min}= 30.5 inches

Total # of Anchorage Points, N = 8
Total # of Anchors Effective in Resisting Tension (relative to d_{min}), N_1= 4

Determine Seismic Load (USD)

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ENGINEER: REGISTERED PROFESSIONAL ENGINEER — BRYAN ENNIS — M 41413 — REN. 03-31-25 — MECHANICAL — STATE OF CALIFORNIA

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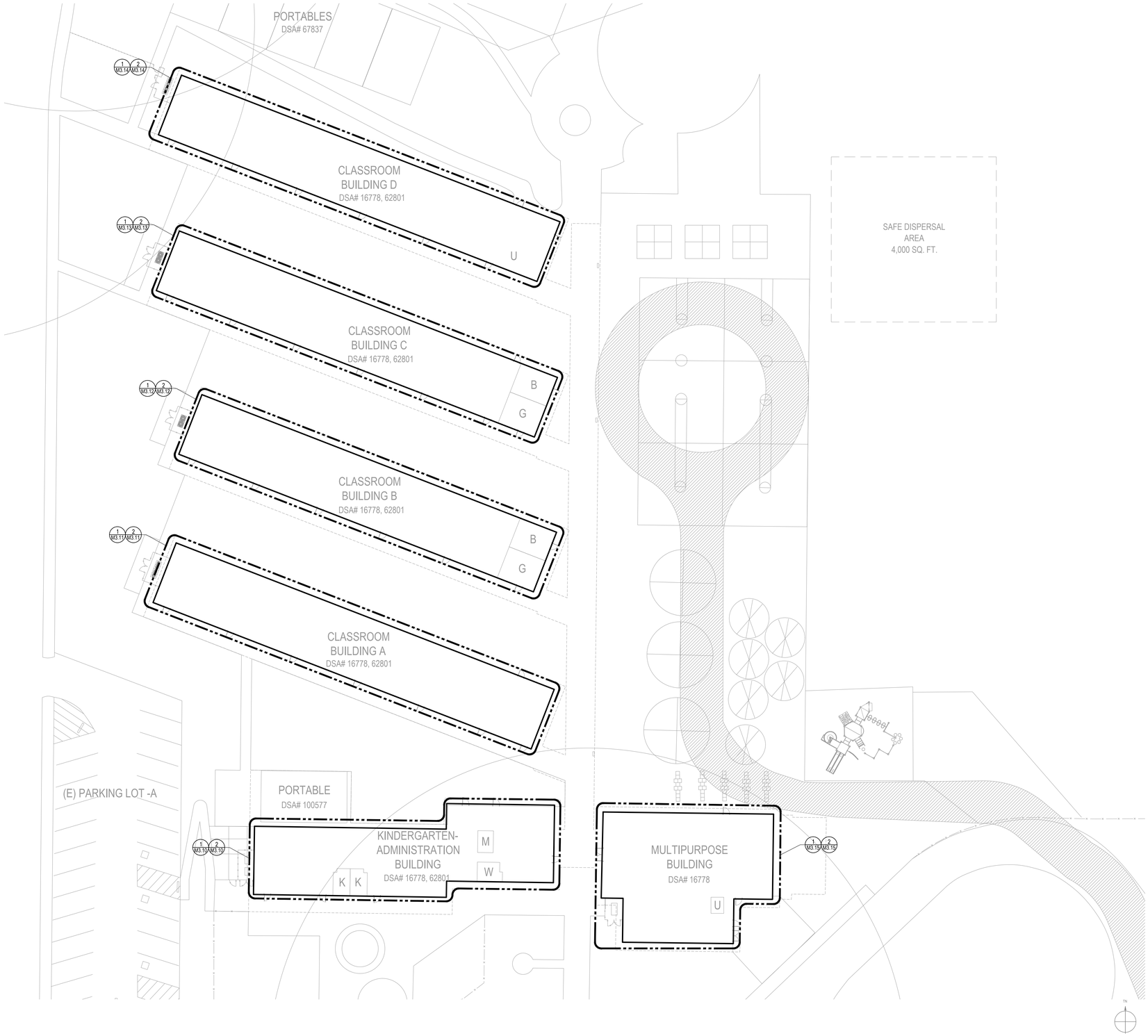
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MECHANICAL DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M0.04
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MECHANICAL SITE PLAN 1
1" = 20'-0"

KEY NOTES

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.
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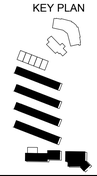
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● DSA BACK CHECK	04/24/2023
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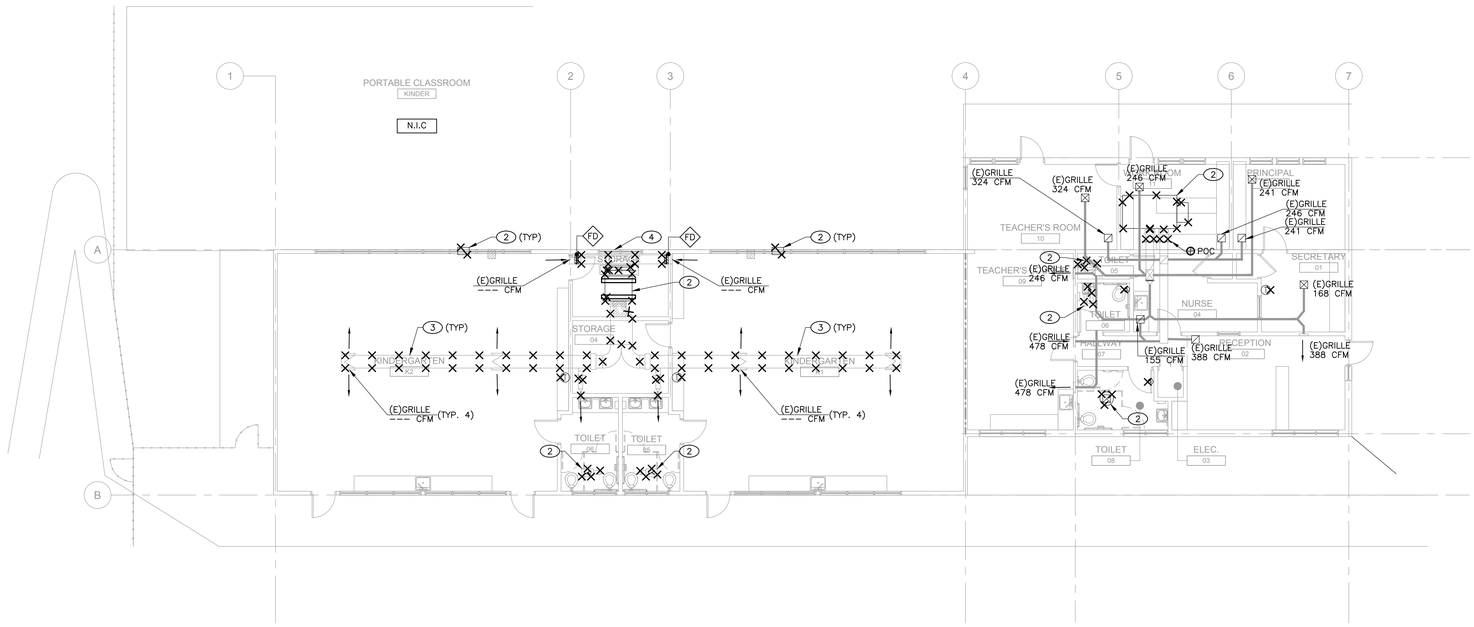
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MECHANICAL SITE PLAN

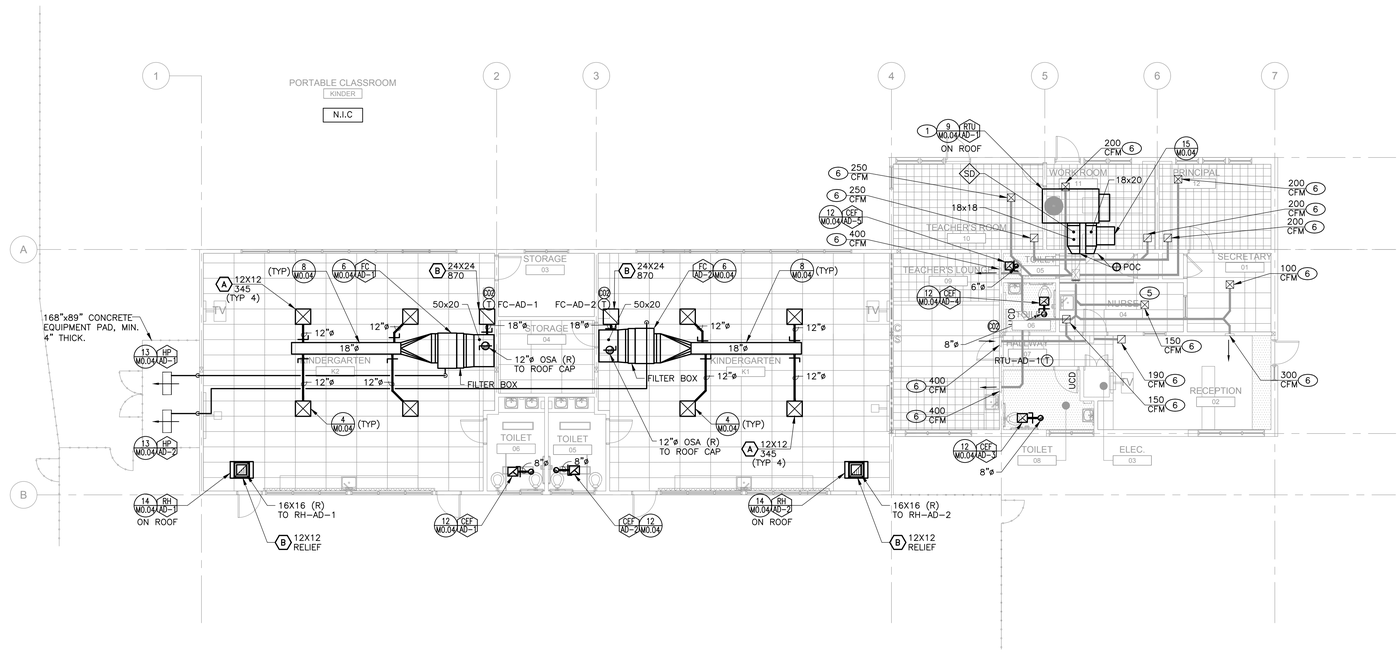
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04/24/2023	22026
Application Number	Drawing Number
01-120631	M1.00
Drawn / Checked	
KT / CD	



MECHANICAL DEMO FLOOR PLAN - KINDER-ADMIN BLDG

1

1/8" = 1'-0"



MECHANICAL FLOOR PLAN - KINDER-ADMIN BLDG

2

1/8" = 1'-0"

KEY NOTES

1. INSTALL NEW MECHANICAL UNIT ON NEW ROOF CURB.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING LOUVER AND PATCH WALL. REFER TO ARCHITECTURAL PLANS FOR WALL PATCHING.
5. CONTRACTOR TO VERIFY LOCATION OF EXISTING SUPPLY GRILLE. ADD NEW GRILLE AND DUCT WORK IF IT IS MISSING.
6. RE-BALANCE (E) OUTLET/INLET TO AIR QUANTITY SHOW.

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.
2. CLEAN EXISTING DUCTWORK PER SPECIFICATION NUMBER 23-01-30.51.

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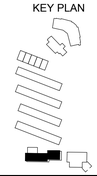
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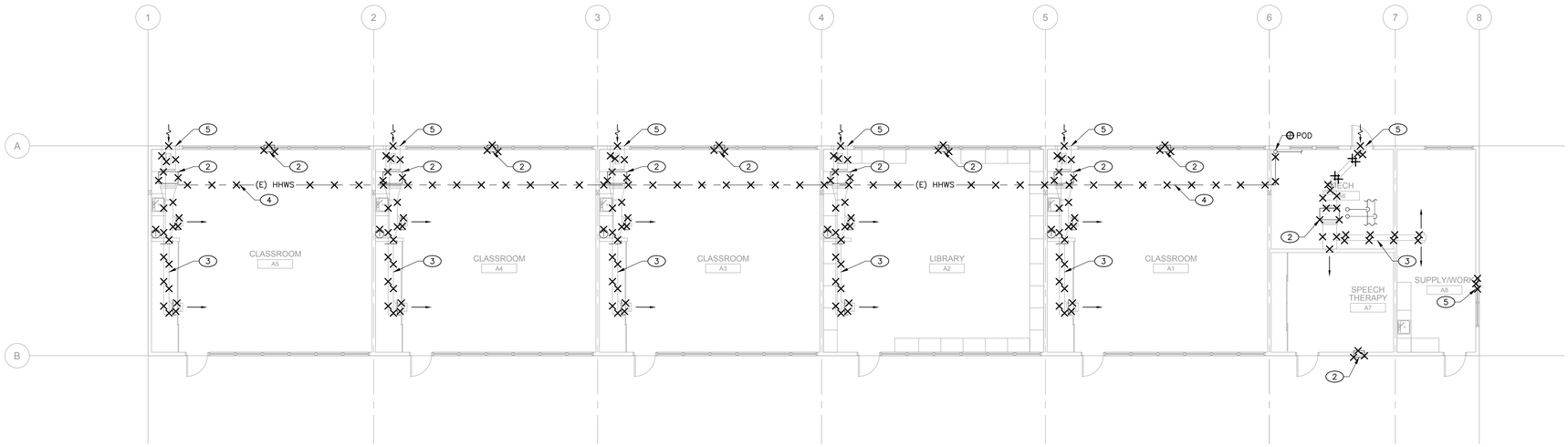
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MECHANICAL FLOOR PLAN - KINDER-ADMIN BLDG

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M3.10
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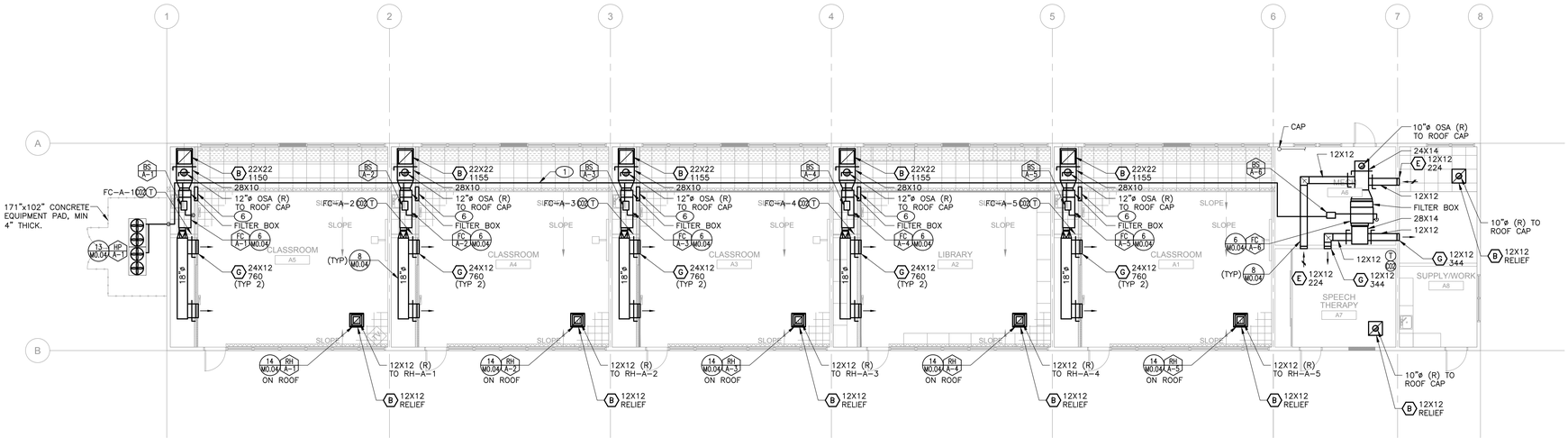


DEMO MECHANICAL FLOOR PLAN - CLASSROOM BLDG A | 1

1/8" = 1'-0"

KEY NOTES

1. REFRIGERANT LINE SET.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING MECHANICAL PIPING SHOWN HATCHED BACK TO POINT OF DISCONNECT.
5. REMOVE EXISTING LOUVER AND PATCH WALL. REFER TO ARCHITECTURAL PLANS FOR WALL PATCHING.
6. 24X24 ACCESS DOOR ON THE SIDE OF THE SOFFIT



MECHANICAL FLOOR PLAN - CLASSROOM BLDG A | 2

1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.
2. CLEAN EXISTING DUCTWORK PER SPECIFICATION NUMBER 23-01-30.51.

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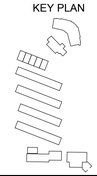
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KEY PLAN



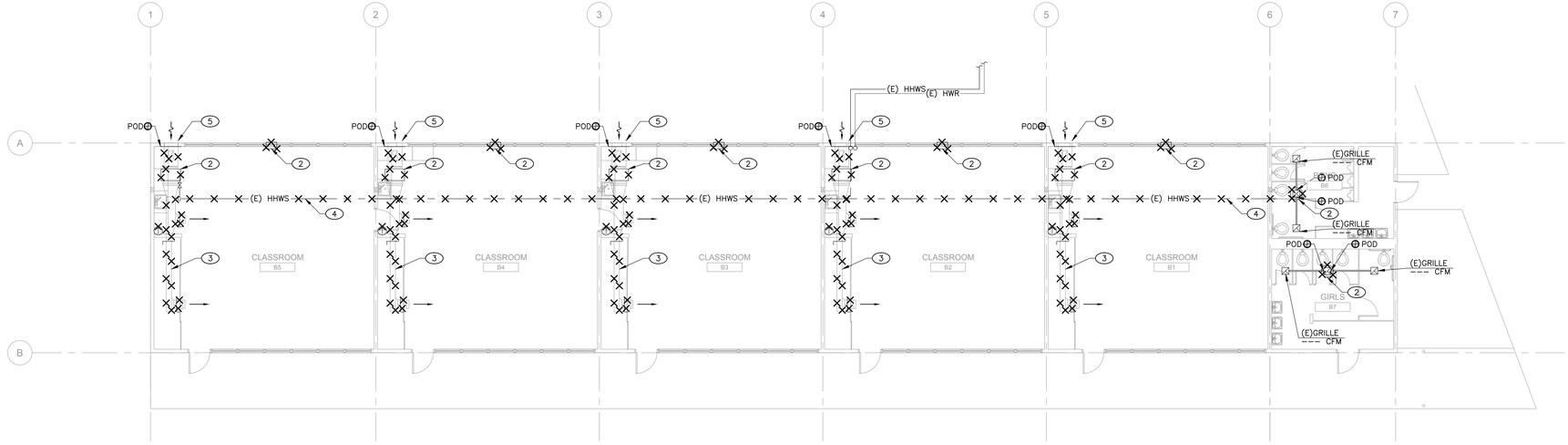
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MECHANICAL FLOOR PLAN - CLASSROOM BLDG A

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M3.11
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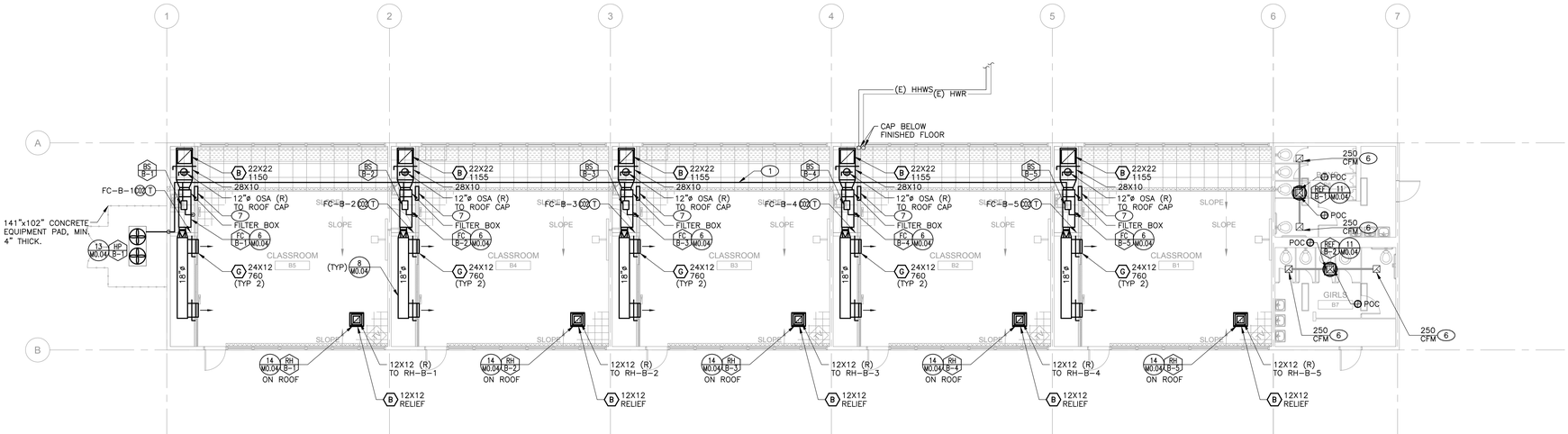


DEMO MECHANICAL FLOOR PLAN - CLASSROOM BLDG B | 1

1/8" = 1'-0"

KEY NOTES

1. REFRIGERANT LINE SET.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING MECHANICAL PIPING SHOWN HATCHED BACK TO POINT OF DISCONNECT.
5. REMOVE EXISTING LOUVER AND PATCH WALL. REFER TO ARCHITECTURAL PLANS FOR WALL PATCHING.
6. RE-BALANCE (E) OUTLET/INLET TO AIR QUANTITY SHOWN.
7. 24X24 ACCESS DOOR ON THE SIDE OF THE SOFFIT



MECHANICAL FLOOR PLAN - CLASSROOM BLDG B | 2

1/8" = 1'-0"

GENERAL NOTES

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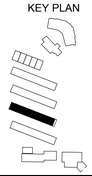
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KEY PLAN



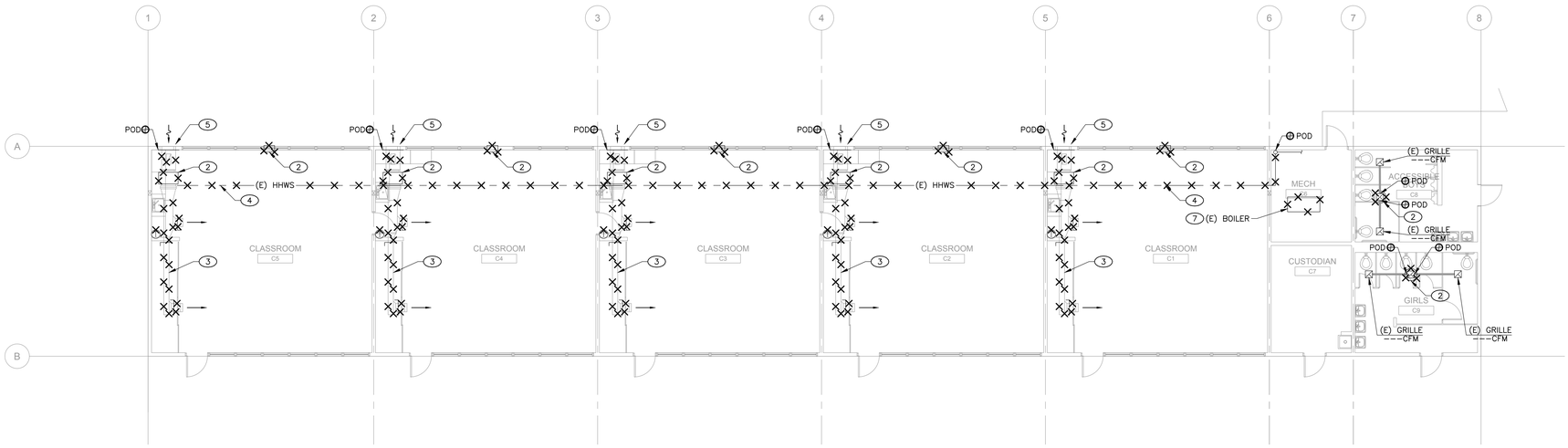
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MECHANICAL FLOOR PLAN - CLASSROOM BLDG B

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Application Number	Drawing Number
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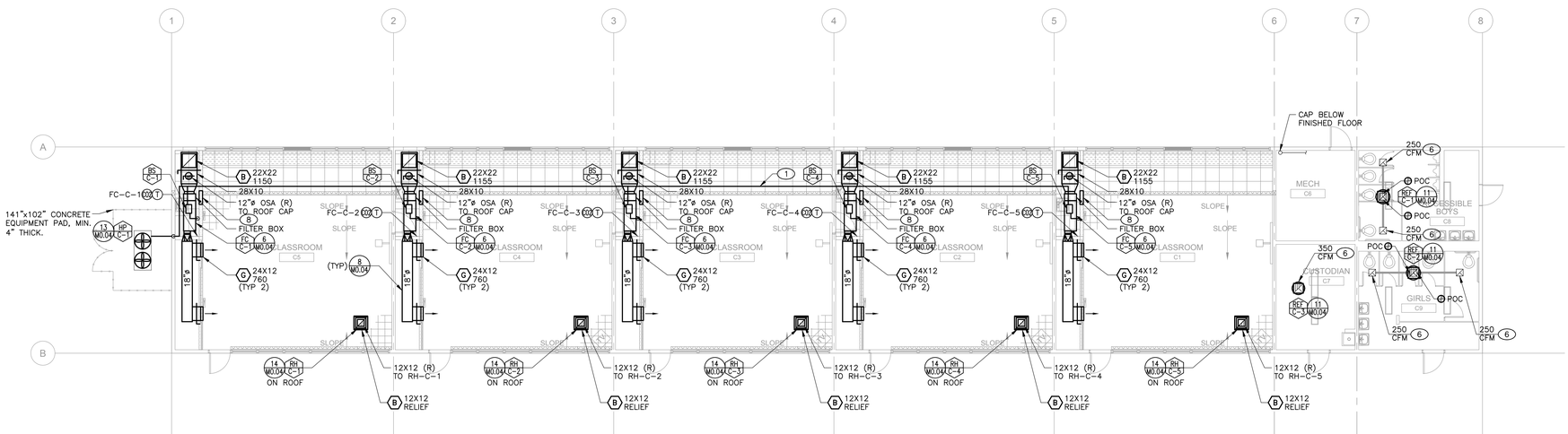


MECHANICAL DEMO FLOOR PLAN - CLASSROOM BLDG C | 1

1/8" = 1'-0"

KEY NOTES

1. REFRIGERANT LINE SET.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING MECHANICAL PIPING SHOWN HATCHED BACK TO POINT OF DISCONNECT.
5. REMOVE EXISTING LOUVER AND PATCH WALL. REFER TO ARCHITECTURAL PLANS FOR WALL PATCHING.
6. RE-BALANCE EXISTING OUTLET/INLET TO AIR QUANTITY SHOWN.
7. DEMO EXISTING BOILER AND ASSOCIATED PIPING. DEMO ALL HEATING HOT WATER PIPING AND GAS PIPING THAT ARE EASILY ACCESSIBLE IN THE SCHOOL. CONTRACTOR TO VERIFY THE LOCATION OF THESE EXISTING HEATING HOT WATER PIPES AND GAS PIPES BEFORE BIDDING.
8. 24X24 ACCESS DOOR ON THE SIDE OF THE SOFFIT



MECHANICAL FLOOR PLAN - CLASSROOM BLDG C | 2

1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.
2. CLEAN EXISTING DUCTWORK PER SPECIFICATION NUMBER 23-01-30.51.

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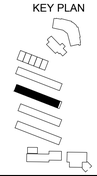
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KEY PLAN



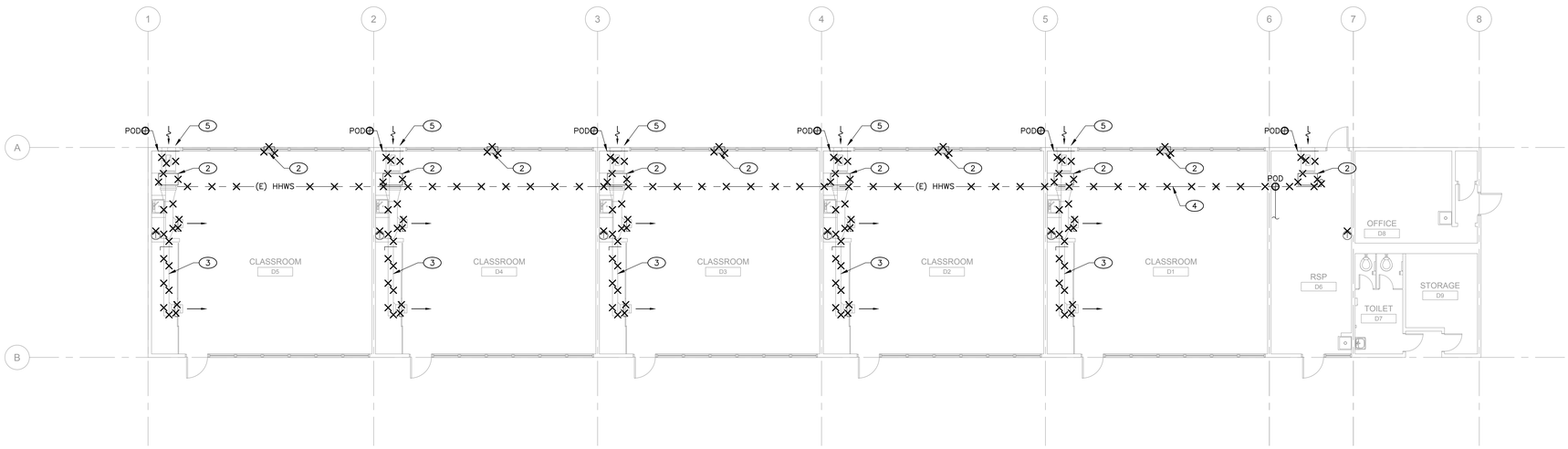
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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MECHANICAL FLOOR PLAN - CLASSROOM BLDG C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
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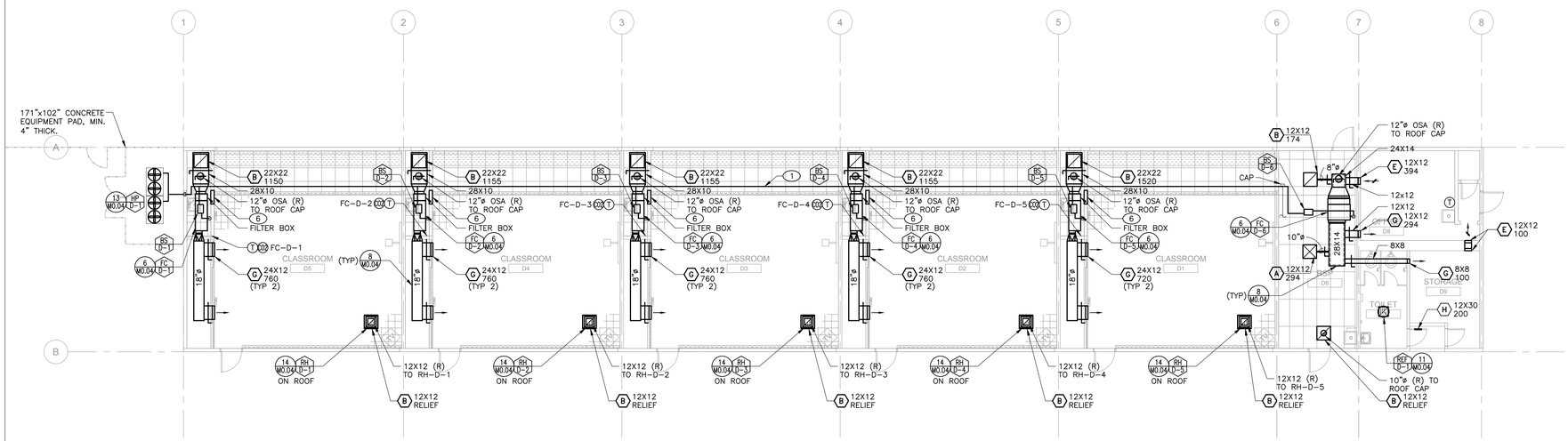


DEMO MECHANICAL FLOOR PLAN - CLASSROOM BLDG D | 1

1/8" = 1'-0"

KEY NOTES

1. REFRIGERANT LINE SET.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING MECHANICAL PIPING SHOWN HATCHED BACK TO POINT OF DISCONNECT.
5. REMOVE EXISTING LOUVER AND PATCH WALL. REFER TO ARCHITECTURAL PLANS FOR WALL PENETRATION.
6. 24X24 ACCESS DOOR ON THE SIDE OF THE SOFFIT.



MECHANICAL FLOOR PLAN - CLASSROOM BLDG D | 2

1/8" = 1'-0"

GENERAL NOTES

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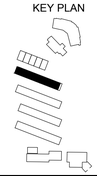
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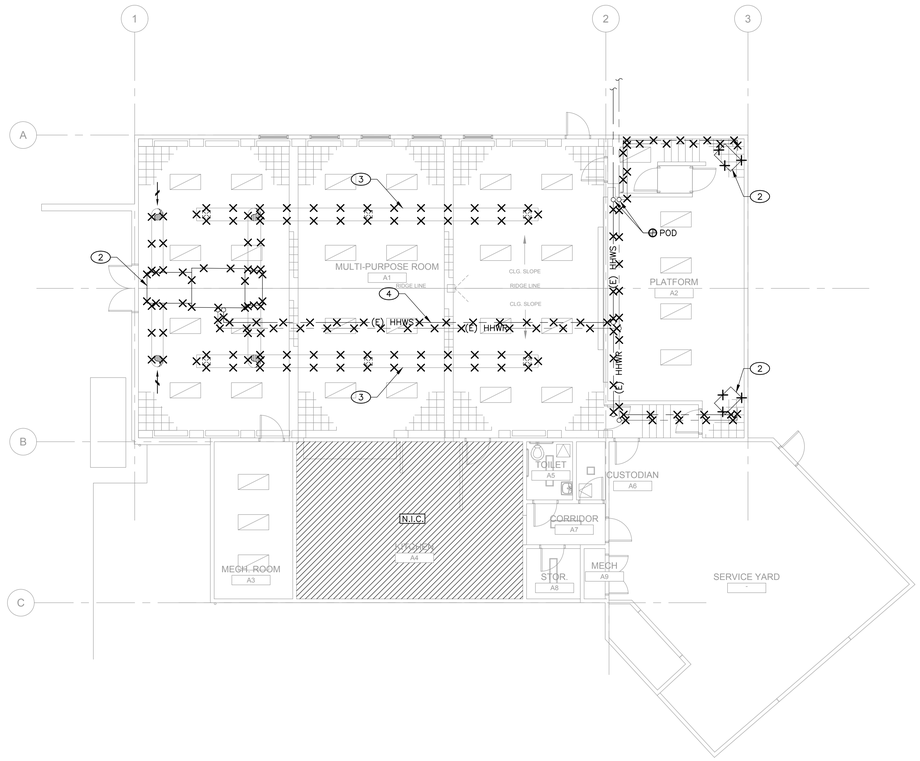
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MECHANICAL FLOOR PLAN - CLASSROOM BLDG D

Date	Project Number
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Application Number	Drawing Number
01-120631	M3.14
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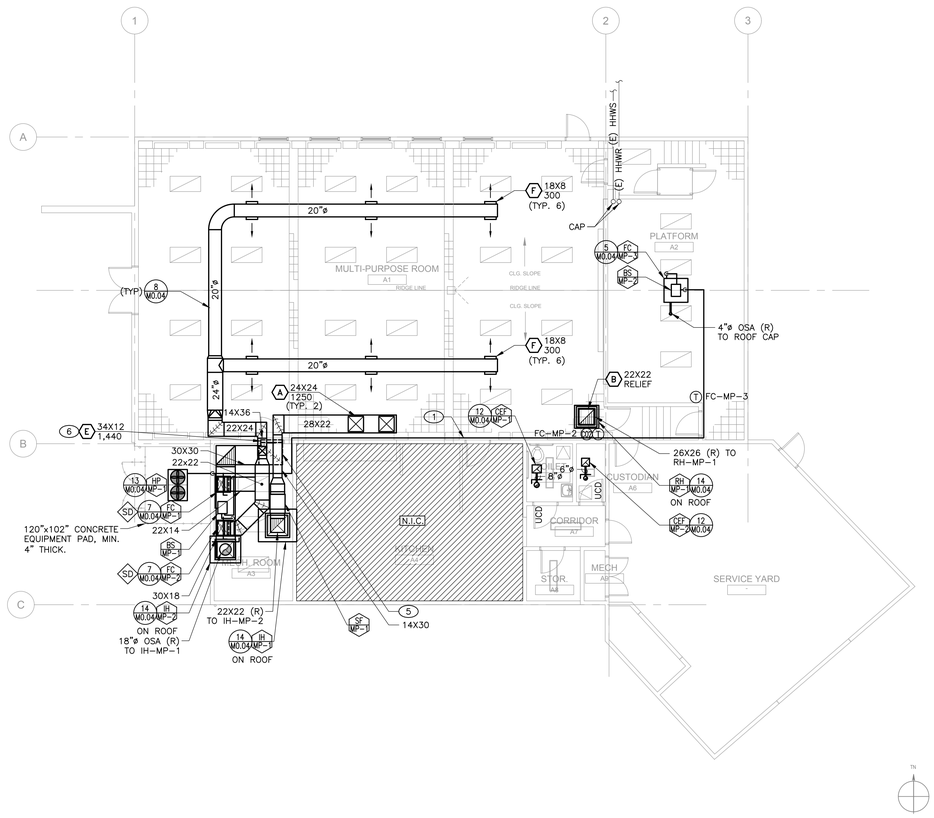


MECHANICAL DEMO FLOOR PLAN - MULTIPURPOSE BLDG | 1

1/8" = 1'-0"

KEY NOTES

1. REFRIGERANT LINE SET.
2. REMOVE EXISTING MECHANICAL EQUIPMENT SHOWN HATCHED AND RELATED DUCTWORK BACK TO POD.
3. REMOVE EXISTING DUCTWORK SHOWN HATCHED.
4. REMOVE EXISTING MECHANICAL PIPING SHOWN HATCHED BACK TO POINT OF DISCONNECT.
5. LOCATE SUPPLY & RETURN DUCT ABOVE DOOR.
6. LOCATE RETURN AIR GRILLE BELOW DUCT AND ABOVE DOOR.



MECHANICAL FLOOR PLAN - MULTIPURPOSE BLDG | 2

1/8" = 1'-0"

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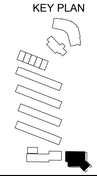
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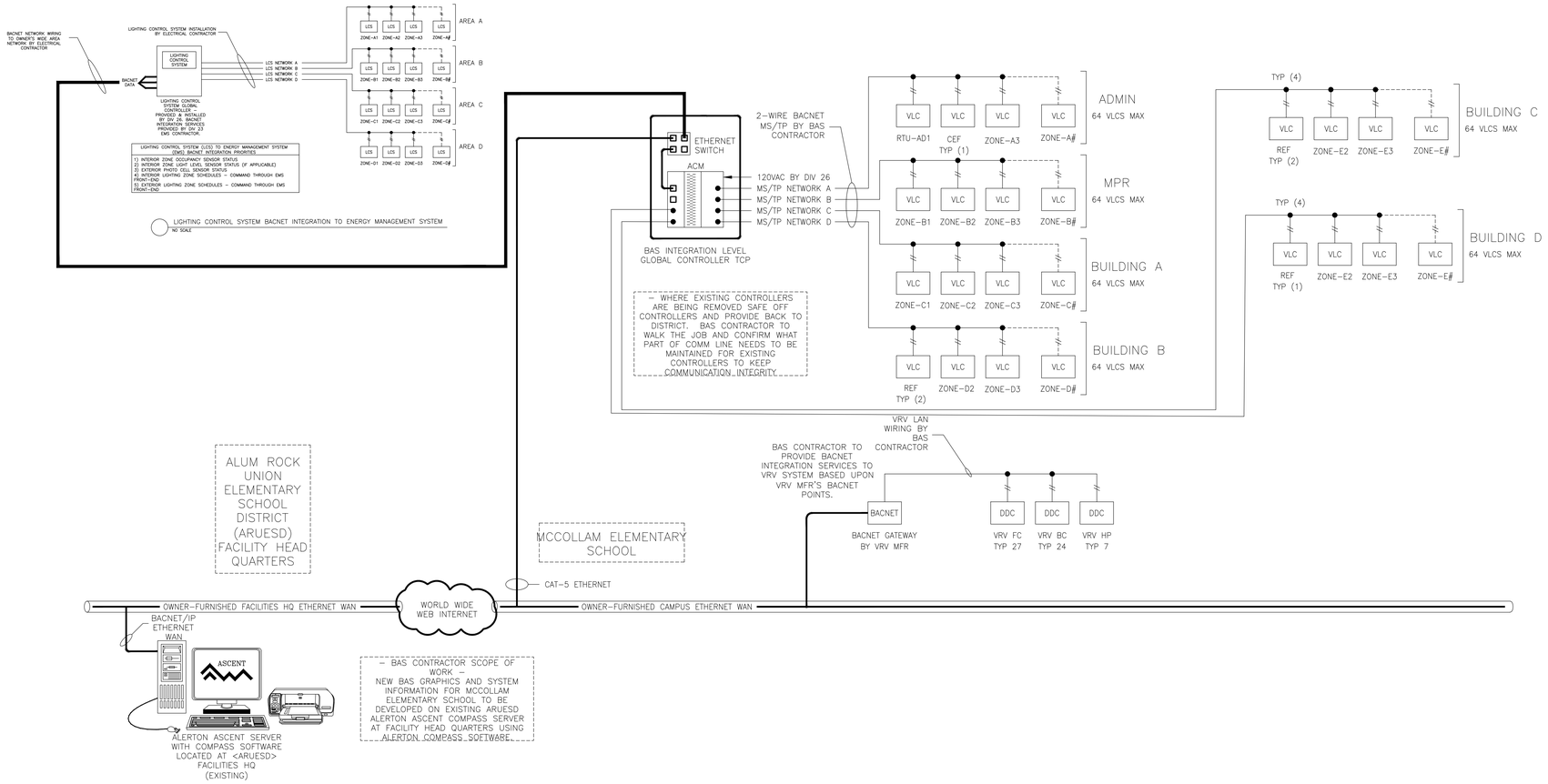
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MECHANICAL FLOOR PLAN - MULTIPURPOSE BLDG

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Application Number	Drawing Number
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ALERTON BACNET BAS SYSTEM - NETWORK ARCHITECTURE | NTS | 1

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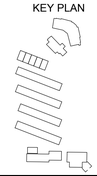
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KEY PLAN



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MECHANICAL CONTROLS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M5.10
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VRV System with Factory Controls

1.System Overview
a.Each outdoor condensing unit, indoor fan coil unit, and refrigerant branch selector box will be directly controlled by the VRV factory-provided global controller.
b.Each indoor fan coil unit will be connected (hard wired) to a VRV factory-provided dedicated zone controller (thermostat) as follows:
c.Electronic zone temperature sensors shall have a backlit LCD display and shall include: 1) physical push-buttons for warmer/cooler setpoint control; 2) physical push-button for indoor fan coil unit fan speed control; 3) visual display of room temperature, and current mode; and 4) physical push-button after-hours override control with user adjustable duration. The after-hours override duration shall have he ability to be limited from the controls front end user interface.
d.The owner standard (Alerton) EMS System shall interface with the VRF system global controller via the factory BACnet interface/gateway control module (by VRF manufacturer), to allow the EMS System to monitor (read), or command (write), certain VRF system control points. See integration points list.

2.Scheduling
a.Scheduled occupied and unoccupied hours shall be programmed thru the EMS Operator Workstation/Graphical User Interface according to EMS time schedule. Occupant manual override to provide 'after-hours' system operation shall occur at the local zone temperature sensor. Override duration parameters shall be programmed thru the EMS Operator Workstation/Graphical User Interface (30 minutes min., 2 hours max).

3.Room Temperature Setpoints (adjustable)
a.Room temperature setpoints for scheduled occupied and unoccupied hours shall be programmed thru the EMS Operator Workstation/Graphical User Interface. Occupant override of room temperature setpoint shall occur at the local zone temperature sensor and shall be limited to 2°F higher/lower than programmed setpoints. Room temperature setpoints are as follows:
•Occupied room heating setpoint: 68°F
•Unoccupied room heating setpoint: 58°F
•Occupied room cooling setpoint: 75°F
•Unoccupied room cooling setpoint: 85°F
b.During periods of Vacancy, whereas a zone is empty for more than 15 minutes during scheduled occupied hours (as seen by EMS via BACnet integration with lighting control system occupancy sensors), the EMS system shall setup/setback the room temperature setpoints by 2°F (adjustable). When room occupancy returns, EMS shall revert back to occupied room temperature setpoint.

4.Unit Fan Operation.
a.When the zone is in Occupied Mode or in Afterhours Mode, the fan shall run continuously.
b.During the Unoccupied Mode as determined by EMS time schedule, the unit fan cycles with demand as needed to maintain the unoccupied room heating and cooling temperature setpoints.

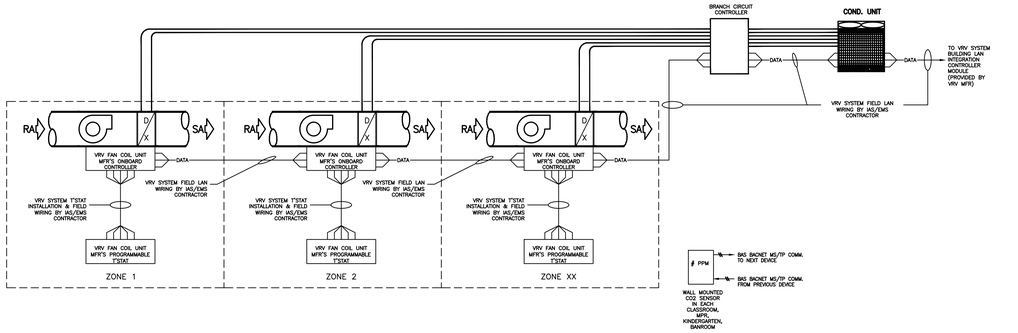
5.Automatic Demand Reduction Controls
a.EMS shall be programmed with capability to implement centralized demand shed for all non-critical zones upon call for Automatic Demand Reduction. Critical zones shall not be impacted by demand shed conservation measures.

6.Zone Pre-Occupancy Purge
a.The EMS shall schedule the zone to be in Occupied Mode one hour prior to the actual time of anticipated occupancy.

7.Heating operation
a.The VRF system global controller compares the zone heating setpoint with the space temperature and determines a need-heating control signal to provide mechanical heating.

8.Cooling operation
a.The VRF system global controller compares the zone cooling setpoint with the space temperature and determines a need-cooling control signal to provide mechanical cooling.

9.Integration Points List – The following VRF system control points shall be displayed on the EMS Operator Workstation/Graphical User Interface via the VRF system factory BACnet interface/gateway control module:
a.Fan coil unit tag identification number.
b.Unit occupancy command.
c.Unit status.
d.Zone setpoint.
e.Zone temperature.
f.Zone occupied cooling setpoint.
g.Zone occupied heating setpoint.
h.Zone unoccupied cooling setpoint.
i.Zone unoccupied heating setpoint.
j.Fan coil unit discharge air temperature.
k.Fan coil unit operating mode.
l.Room occupancy mode (via BACnet integration to lighting control system occupancy sensor).
m.Fan coil unit alarm status.
n.Compressor status.
o.Fan coil unit thermal conditioning status.
p.Fan coil unit thermal conditioning lockout status.
q.CO2 sensor.

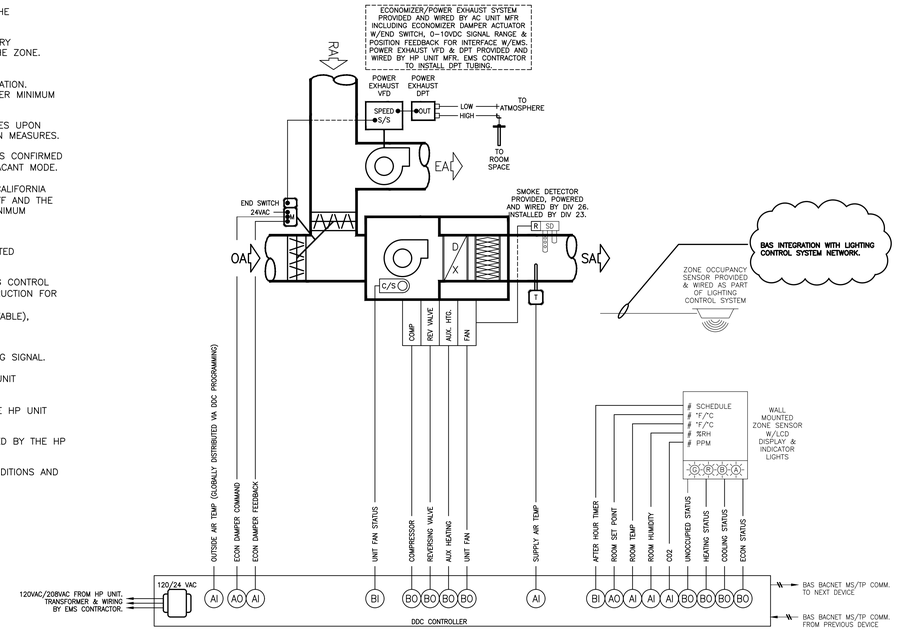


VRV FAN COIL SYSTEM - IAS/EMS FIELD WIRING DIAGRAM | NTS | 1

HEAT PUMP UNIT WITH ECONOMIZER, SMOKE DETECTOR, POWER EXHAUST, DEMAND CONTROL VENTILATION & ZONE OCCUPANCY MONITORING

1.SYSTEM OVERVIEW
a.EACH HEAT PUMP UNIT WILL BE DIRECTLY CONTROLLED BY ITS OWN DEDICATED EMS (ENERGY MANAGEMENT SYSTEM) UNITARY CONTROLLER.
b.EMS UNITARY CONTROLLER WILL BE CONNECTED TO A WALL MOUNTED ELECTRONIC ZONE TEMPERATURE SENSOR WITH INTEGRAL RELATIVE HUMIDITY SENSOR AND CO2 SENSOR.
c.ELECTRONIC ZONE TEMPERATURE SENSOR SHALL HAVE A TOUCH SCREEN LCD INTERFACE WHICH INCLUDES: 1) DIGITAL PUSHBUTTONS FOR WARMER/COOLER SETPOINT CONTROL; 2) VISUAL DISPLAY OF ROOM TEMPERATURE, ROOM HUMIDITY, ROOM CO2 AND AMBIENT OSA TEMPERATURE; AND 3) DIGITAL PUSHBUTTON AFTER-HOURS OVERRIDE TIMER CONTROL, WITH USER ADJUSTABLE DURATION. THE AFTER-HOURS OVERRIDE DURATION SHALL HAVE THE ABILITY TO BE LIMITED FROM THE FRONT-END.
2.OCCUPANCY/VACANCY MONITORING
a.ZONE OCCUPANCY AND VACANCY WILL BE ACTIVELY MONITORED BY CONNECTION TO LIGHTING CONTROL SYSTEM OCCUPANCY SENSOR(S). MONITORING SHALL BE ACCOMPLISHED VIA BACNET SYSTEM INTEGRATION.
3.UNIT FAN OPERATION
a.WHEN THE ZONE IS IN OCCUPIED MODE OR IN AFTERHOURS MODE, THE FAN SHALL RUN CONTINUOUSLY, UNLESS VACANT MODE HAS BEEN TRIGGERED.
b.DURING THE UNOCCUPIED MODE AS DETERMINED BY EMS TIME SCHEDULE, THE UNIT FAN CYCLES WITH DEMAND AND THE TEMPERATURE IS CONTROLLED BY THE UNOCCUPIED SPACE TEMPERATURE HEATING AND COOLING SETPOINTS.
4.MINIMUM OUTDOOR AIR VENTILATION
a.DURING OCCUPIED MODE OR AFTERHOURS MODE, THE ECONOMIZER DAMPER SHALL BE COMMANDED BY THE EMS UNITARY CONTROLLER TO MAINTAIN A POSITION WHICH SATISFIES THE MINIMUM OUTDOOR AIR VENTILATION REQUIREMENTS FOR THE ZONE. DAMPER POSITION(S) DETERMINED BY AIR BALANCING CONTRACTOR.
5.DEMAND CONTROL VENTILATION
a.EMS UNITARY CONTROLLER WILL BE CONNECTED TO A WALL MOUNTED CO2 SENSOR TO MONITOR ZONE CO2 CONCENTRATION.
b.DURING OCCUPIED MODE OR AFTERHOURS MODE, THE EMS UNITARY CONTROLLER SHALL RESET THE OUTSIDE AIR DAMPER MINIMUM POSITION TO MAINTAIN THE CO2 CONCENTRATION BELOW 1,000 PPM.
6.AUTOMATIC DEMAND REDUCTION CONTROLS
a.EMS SHALL BE PROGRAMMED WITH CAPABILITY TO IMPLEMENT CENTRALIZED DEMAND SHED FOR ALL NON-CRITICAL ZONES UPON CALL FOR AUTOMATIC DEMAND REDUCTION. CRITICAL ZONES SHALL NOT BE IMPACTED BY DEMAND SHED CONSERVATION MEASURES.
7.VACANT MODE CONTROL
a.WHEN THE ZONE HAS BEEN SCHEDULED FOR OCCUPANCY FOR AT LEAST ONE HOUR AND THE OCCUPANCY SENSOR HAS CONFIRMED THAT ZONE HAS BEEN VACANT FOR 5 MINUTES (ADJUSTABLE: MAXIMUM 30 MINUTES), ZONE SHALL BE PLACED INTO VACANT MODE.
b.RESET COOLING AND HEATING SETPOINTS UP AND DOWN BY 2°F (ADJUSTABLE) OR MORE.
c.VENTILATION AIR IN A VACANT ZONE SHALL BE REDUCED TO ZERO WHEN PERMITTED TO DO SO ACCORDING TO 2019 CALIFORNIA TITLE 24 TABLE 120.1A (ALL OCCUPANCY CATEGORIES WITH NOTE "F" DESIGNATION). THE UNIT FAN SHALL BE SHUT OFF AND THE ECONOMIZER SHALL BE CLOSED TO THE OUTSIDE AIR. FOR ALL OTHER ZONES, THE ECONOMIZER SHALL BE SET TO MINIMUM OUTDOOR AIR POSITION AND THE UNIT FAN SHALL OPERATE TO PROVIDE MINIMUM VENTILATION DURING VACANT MODE.
d.UPON DETECTION OF OCCUPANCY, VACANT MODE SHALL BE CLEARED.
8.ZONE PRE-OCCUPANCY PURGE
a.THE EMS SHALL SCHEDULE THE ZONE TO BE IN OCCUPIED MODE ONE HOUR PRIOR TO THE ACTUAL TIME OF ANTICIPATED OCCUPANCY.
9.HEATING OPERATION
a.THE CONTROLLER COMPARES THE HEATING SETPOINT WITH THE SPACE TEMPERATURE AND DETERMINES A NEED-HEATING CONTROL SIGNAL TO ENGAGE THE COMPRESSOR AND REVERSING VALVE (ACCORDING TO HEAT PUMP UNIT MANUFACTURER'S INSTRUCTION FOR HEATING CYCLE) TO MAINTAIN THE ROOM SET POINT.
b.IF FURTHER HEATING IS REQUIRED AFTER COMPRESSOR/REVERSING VALVE HEATING IS ACTIVE FOR 15 MINUTES (ADJUSTABLE), ENGAGE AUXILIARY ELECTRIC HEAT.
c.ECONOMIZER TO BE COMMANDED TO MIN CFM SETPOINT DURING HEATING MODE.
10.COOLING OPERATION
a.THE CONTROLLER COMPARES THE COOLING SETPOINT WITH THE SPACE TEMPERATURE AND DETERMINES A NEED-COOLING SIGNAL.
b.THE FIRST STAGE OF COOLING WILL ENABLE THE ECONOMIZER TO PROVIDE FREE COOLING FOR AS LONG AS POSSIBLE.
c.THE SECOND STAGE OF COOLING WILL ENABLE THE COMPRESSOR AND REVERSING VALVE (ACCORDING TO HEAT PUMP UNIT MANUFACTURER'S INSTRUCTION FOR COOLING CYCLE) TO MAINTAIN THE ROOM SET POINT.
11. SMOKE DETECTOR
a..WHEN PARTICLES OF COMBUSTION ARE DETECTED IN THE SUPPLY AIR STREAM BY THE HP UNIT SMOKE DETECTOR, THE HP UNIT SHALL SHUT DOWN VIA HARDWIRE INTERLOCK.
12. POWER EXHAUST
a.ALL POWER EXHAUST FAN OPERATIONS SHALL BE CONTROLLED BY SEPARATE NON-EMS EXTERNAL DEVICES AS PROVIDED BY THE HP UNIT MANUFACTURER.
13. FAULT DETECTION DIAGNOSTICS
a.THE EMS DDC CONTROLLER SHALL MONITOR THE FOLLOWING ECONOMIZER ACTUATOR FAULT DETECTION DIAGNOSTIC CONDITIONS AND BROADCAST RESULTS VIA EMS NETWORK:
- TEMPERATURE SENSOR FAILURE/FAULT
- ECONOMIZER NOT ECONOMIZING WHEN ENABLED
- ECONOMIZER ECONOMIZING WHEN DISABLED
- ECONOMIZER DAMPER MODULATION FAILURE
- EXCESS OUTDOOR AIR

14. MONITORING – THE FOLLOWING CONDITIONS SHALL BE MONITORED AND DISPLAYED AT EMS OPERATOR WORKSTATION/GRAPHICAL USER INTERFACE:
a.SUPPLY AIR TEMPERATURE.
b.ROOM TEMPERATURE.
c.ROOM HUMIDITY.
d.ROOM CO2 CONCENTRATION.
e.ROOM OCCUPANCY STATUS.
f.CURRENT MODE (HEATING/COOLING/FAN).
g.SUPPLY AIR TEMPERATURE ATTAINED LAST TIME UNIT WAS IN HEATING.
h.SUPPLY AIR TEMPERATURE ATTAINED LAST TIME UNIT WAS IN COOLING.
i. Current command status of fan, compressor, reversing valve and aux heat.
j.Run time meters on fan, compressor, reversing valve and aux heat.
k.Fan Status thru Current Switch.
l. Economizer actuator feedback status.



HEAT PUMP UNIT W/ SMOKE DETECTOR, POWER EXHAUST, DEMAND CONTROL VENTILATION & OCCUPANCY MONITORING | NTS | 2

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRIAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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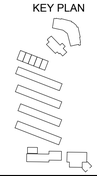
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
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● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



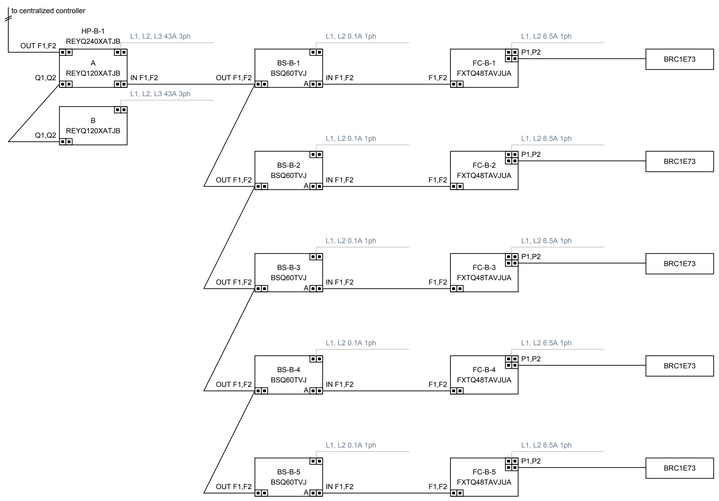
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

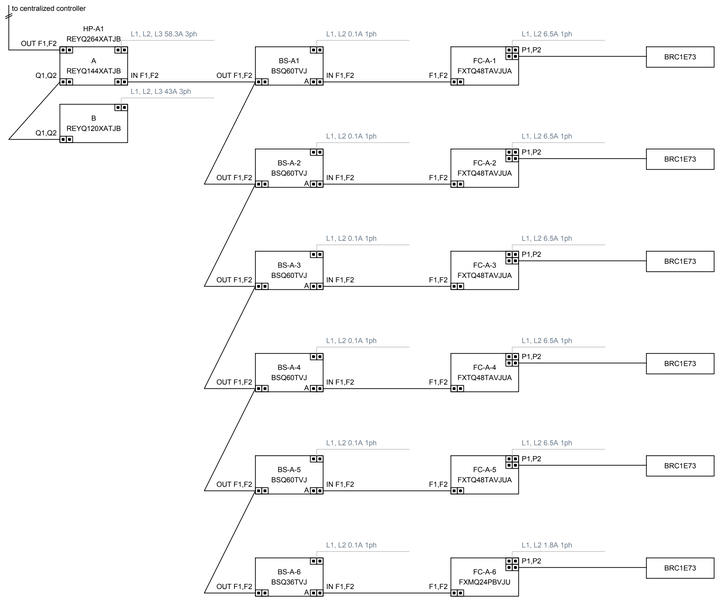
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MECHANICAL CONTROLS

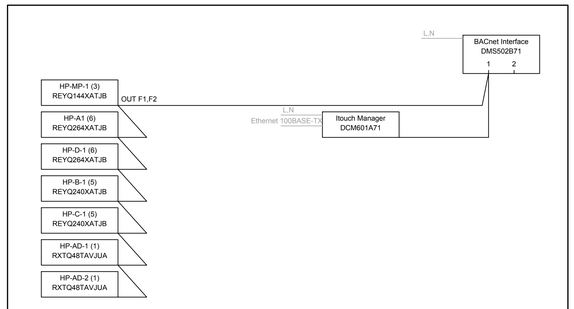
Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number M5.11
Drawn KT / Checked CD	



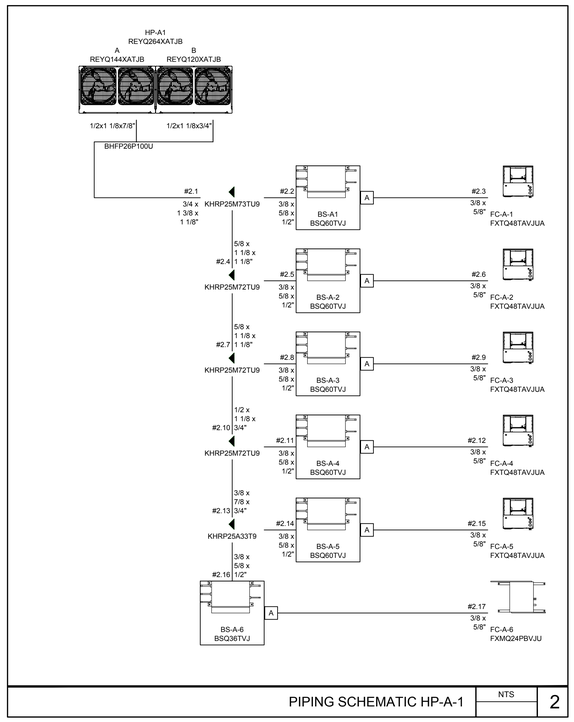
WIRING SCHEMATIC HP-B-1 | NTS | 8



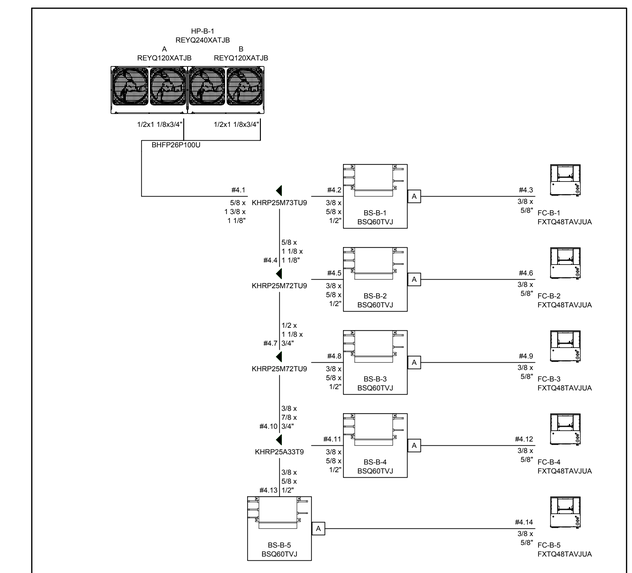
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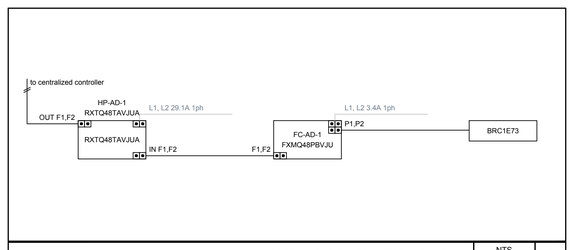
CONTROLLER WIRING SCHEMATICS | NTS | 1



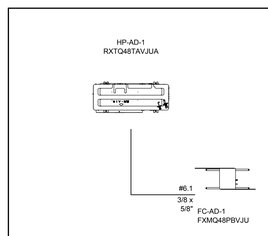
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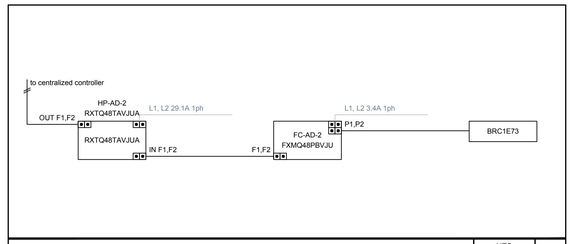
PIPING SCHEMATIC HP-B-1 | NTS | 9



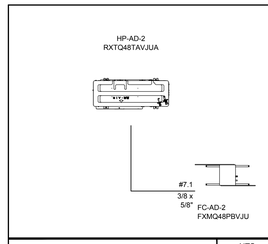
WIRING SCHEMATIC HP-AD-1 | NTS | 6



PIPING SCHEMATIC HP-AD-1 | NTS | 4



WIRING SCHEMATIC HP-AD-2 | NTS | 7



PIPING SCHEMATIC HP-AD-2 | NTS | 5

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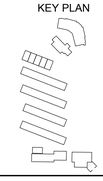
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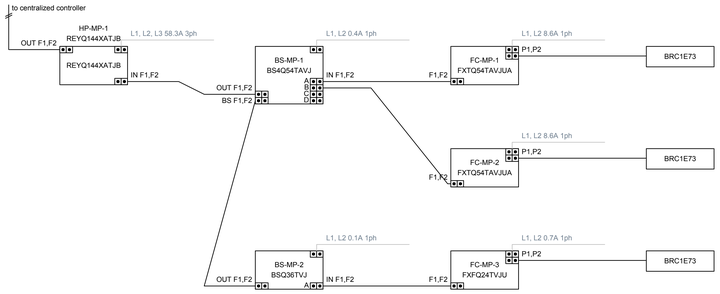
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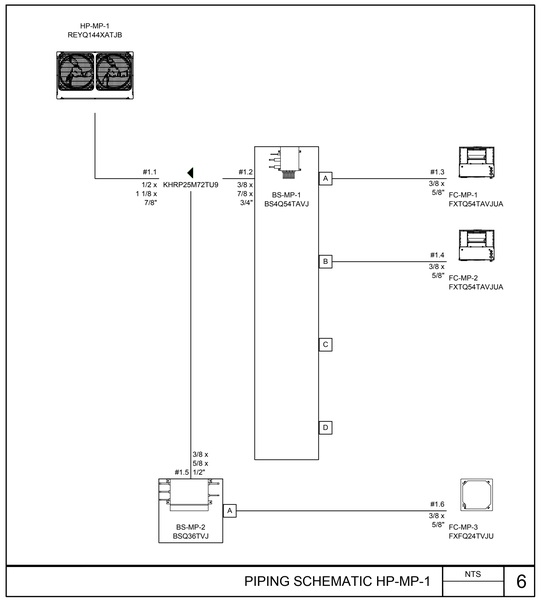
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MECHANICAL PIPING AND WIRING DIAGRAMS

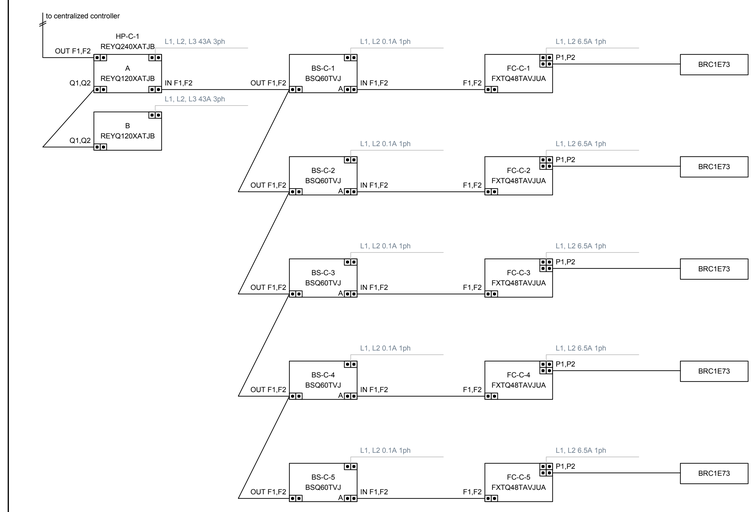
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04/24/2023	22026
Application Number	Drawing Number
01-120631	M5.12
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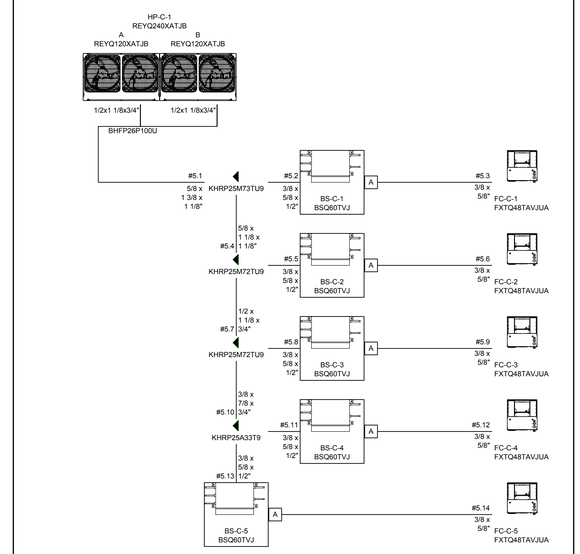
WIRING SCHEMATIC HP-MP-1 | NTS | 5



PIPING SCHEMATIC HP-MP-1 | NTS | 6



WIRING SCHEMATIC HP-C-1 | NTS | 3



PIPING SCHEMATIC HP-C-1 | NTS | 1

WIRING SCHEMATIC HP-D-1 | NTS | 4

PIPING SCHEMATIC HP-D-1 | NTS | 2

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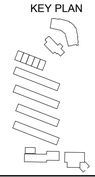
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KEY PLAN



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CONSTRUCTION DOCUMENTS

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MECHANICAL PIPING AND WIRING DIAGRAMS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	M5.13
Drawn: KT	Checked: CD

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
DF 1	DRINKING FOUNTAIN CBC ACCESS	2"	1-1/2"	1/2"	---	HAWS MODEL 3602, OUTDOOR HI-LO, BARRIER FREE, FREEZE RESISTANT, 14 GAUGE, TYPE 304, STAINLESS STEEL DRINKING FOUNTAIN, FLOOR MOUNTED. PUSH BUTTON VALVES. PROVIDE P-TRAP AND STOP. INSTALL PER CBC ACCESS REQUIREMENTS. LOCATION SHOWN ON PLUMBING SITE PLAN, P1.00.

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT
☐ ☐ ☒ ☐ SPECIFIC NOTES AND DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI PRE-APPROVAL
☐ ☐ ☐ ☐ (OPM#) #0043-13.

PLUMBING LEGEND

SYMBOL	ITEM	ABBR.
	FIXTURE DESIGNATION / UNIT ABBREVIATION / NUMBER	
	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
TP	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

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. 2019 CALIFORNIA BUILDING CODE
   A.2. 2019 CALIFORNIA MECHANICAL CODE
   A.3. 2019 CALIFORNIA PLUMBING CODE
   A.4. 2019 CALIFORNIA ELECTRICAL CODE
   A.5. 2019 CALIFORNIA GREEN BUILDING STANDARDS
   A.6. 2019 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS – TITLE 24
   A.7. NATIONAL FIRE PROTECTION ASSOCIATION
   A.8. CALIFORNIA STATE FIRE MARSHAL
B. 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.
C. THE PLUMBING CONTRACTOR SHALL PROVIDE THE OWNER COPIES OF OPERATION, MAINTENANCE AND PREVENTATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF PLUMBING EQUIPMENT.
D. CHECK AND VERIFY EXISTING CONDITIONS AT THE JOB SITE BEFORE BEGINNING WORK. ADJUST THE LOCATION AND CONFIGURATION OF THE WORK NECESSARY TO SUIT ACTUAL CONDITIONS AND OTHER TRADES. ANY CHANGES REQUIRED MUST FIRST BE APPROVED BY THE ARCHITECT OR ENGINEER.
E. THE LOCATIONS OF EQUIPMENT, PIPING, AND SYSTEMS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. CHANGES REQUIRED TO SUIT EXISTING CONDITIONS AND DUE TO COORDINATION WITH OTHER TRADES SHALL BE MADE AT NO EXTRA COST TO THE OWNER.
F. 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.
G. 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.
H. PROVIDE ACCESS DOORS WHERE ACCESS THROUGH FLOORS, WALLS OR CEILINGS IS REQUIRED TO ACCESS PLUMBING COMPONENTS OR OTHER SYSTEMS REQUIRING ACCESS FOR MAINTENANCE, TESTING OR OBSERVATION. COORDINATE THE EXACT TYPE AND LOCATION OF ACCESS DOORS TO PROVIDE PROPER ACCESS TO THE ITEM CONCEALED.
I. CHECK ALL SYSTEMS FOR LEAKS. CORRECT ANY DEFICIENCIES AS SOON AS DISCOVERED. OPERATE THE SYSTEMS AS A TEST AND DEMONSTRATE TO THE OWNER AND ARCHITECT OR ENGINEER THAT THE SYSTEM IS FUNCTIONING PROPERLY.
J. BEFORE COMMENCING WORK CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS AND ENSURE THAT THESE CAN BE PROPERLY CONNECTED WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. VERIFY THE LOCATION OF ALL SERVICES. NO EXTRA COSTS SHALL BE ALLOWED IF SERVICES ARE NOT AS SHOWN.
K. 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.
L. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.
M. MAKE ALL CONNECTIONS TO EQUIPMENT AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER AS FAR AS TRAPS, DRAINS, FLEXIBLE CONNECTIONS, ETC. AND AS REQUIRED BY THE EQUIPMENT AND LOCATION.
N. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, FIXTURE MOUNTING HEIGHTS AND ADA ACCESSIBILITY REQUIREMENTS.

PLUMBING SHEET INDEX

SHEET NUMBER	SHEET NAME
P0.01	PLUMBING SPECIFICATIONS, LEGEND & NOTES
P0.02	PLUMBING DETAILS
P1.00	PLUMBING SITE PLAN
P3.10	PLUMBING FLOOR PLAN – KINDER-ADMIN BLDG
P3.11	PLUMBING FLOOR PLAN – CLASSROOM BLDG A
P3.12	PLUMBING ROOF PLAN – CLASSROOM BLDG B
P3.13	PLUMBING FLOOR PLAN – CLASSROOM BLDG C
P3.14	PLUMBING ROOF PLAN – CLASSROOM BLDG D
P3.15	PLUMBING ROOF PLAN – MULTIPURPOSE BLDG

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Job #: 22-2197

ARCHITECT: LICENSED ARCHITECT, BRYAN P. WHITTIKER, No. C 30345, Ren. 9/30/23, STATE OF CALIFORNIA

ENGINEER: REGISTERED PROFESSIONAL ENGINEER, JORDAN ENNIS, M 41413, REN. 03-31-25, MECHANICAL, STATE OF CALIFORNIA

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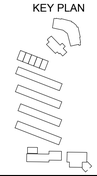
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



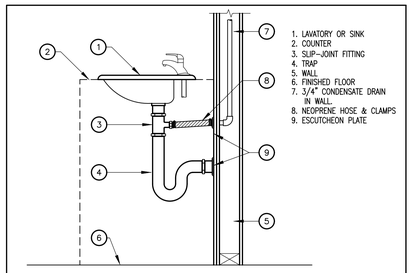
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PLUMBING SPECIFICATIONS, LEGEND & NOTES

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	P0.01
Drawn: KT	Checked: CD

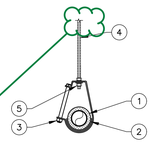


P*PCD02A

CONDENSATE TO TAILPIECE DETAIL | NTS | 5

provide / reference top connection to structure

1. PIPE, SEE PLAN FOR SIZE AND ROUTING
2. PIPE INSULATION WHERE APPLICABLE, SEE SPECIFICATIONS. PROVIDE INSULATION PROTECTION SADDLE, MIN. 12" LONG, B-LINE B3151 OR EQUAL. MAY BE SUBSTITUTED FOR PRE-INSULATED CALCIUM SILICATE SHIELD SUPPORT, B-LINE B338 OR EQUAL.
3. ADJUSTABLE 'J' PIPE HANGER, COATED OR PLATED TO ISOLATE HANGER FROM DISSIMILAR METAL PIPING, B-LINE B3690 OR EQUAL
4. 3/8"ø THREADED ROD, B-LINE ATR OR EQUAL
5. NUT AND WASHER, TOP AND BOTTOM.

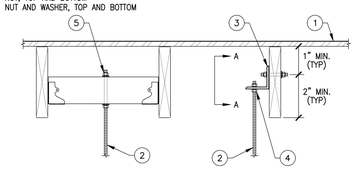


NON-SEISMIC SUPPORT

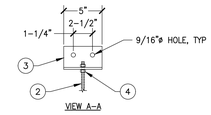
NOTES:
A. HANGER SPACING TO BE PER SPECIFICATIONS. MAXIMUM SPACING MAY NOT EXCEED 2019 CPC TABLE 313.3.
B. SEISMIC RESTRAINTS ARE NOT REQUIRED FOR 3/4" AND SMALLER GAS PIPING, AND FOR ALL OTHER PIPING 2" AND SMALLER.
C. SEISMIC RESTRAINTS ARE NOT REQUIRED FOR ALL PIPING SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS IN LENGTH FROM THE PIPE SUPPORT POINT TO THE CONNECTION AT THE SUPPORTING STRUCTURE, REF CBC 1617A.1.26 ITEM A1.
D. SEE DETAIL 2/P0.02 FOR HANGER UPPER ATTACHMENTS

PIPE HANGER DETAIL | NTS | 1

1. FLOOR/ROOF, SEE STRUCTURAL DRAWINGS
2. 3/8"ø THREADED ROD, B-LINE ATR OR EQUAL
3. 3"x3"x1/4" x 5" LONG GALVANIZED STEEL ANGLE, ATTACH TO FRAMING WITH (2) 1/2"ø BOLTS OR THREADED ROD WITH NUTS AND WASHER
4. NUT, TOP AND BOTTOM
5. NUT AND WASHER, TOP AND BOTTOM

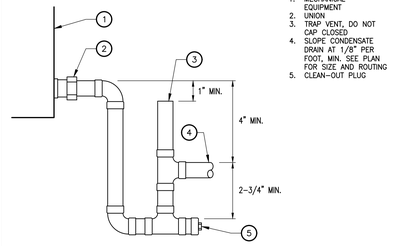


BETWEEN FRAMING MEMBERS AT FRAMING MEMBERS



VIEW A-A

PIPE HANGER DETAIL | NTS | 2



CONDENSATE CONNECTION DETAIL | NTS | 3

P*PSAD1A

NOT IN USED | NTS | 4

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LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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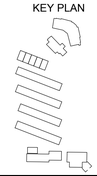
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○ CONSTRUCTION	

KEY PLAN



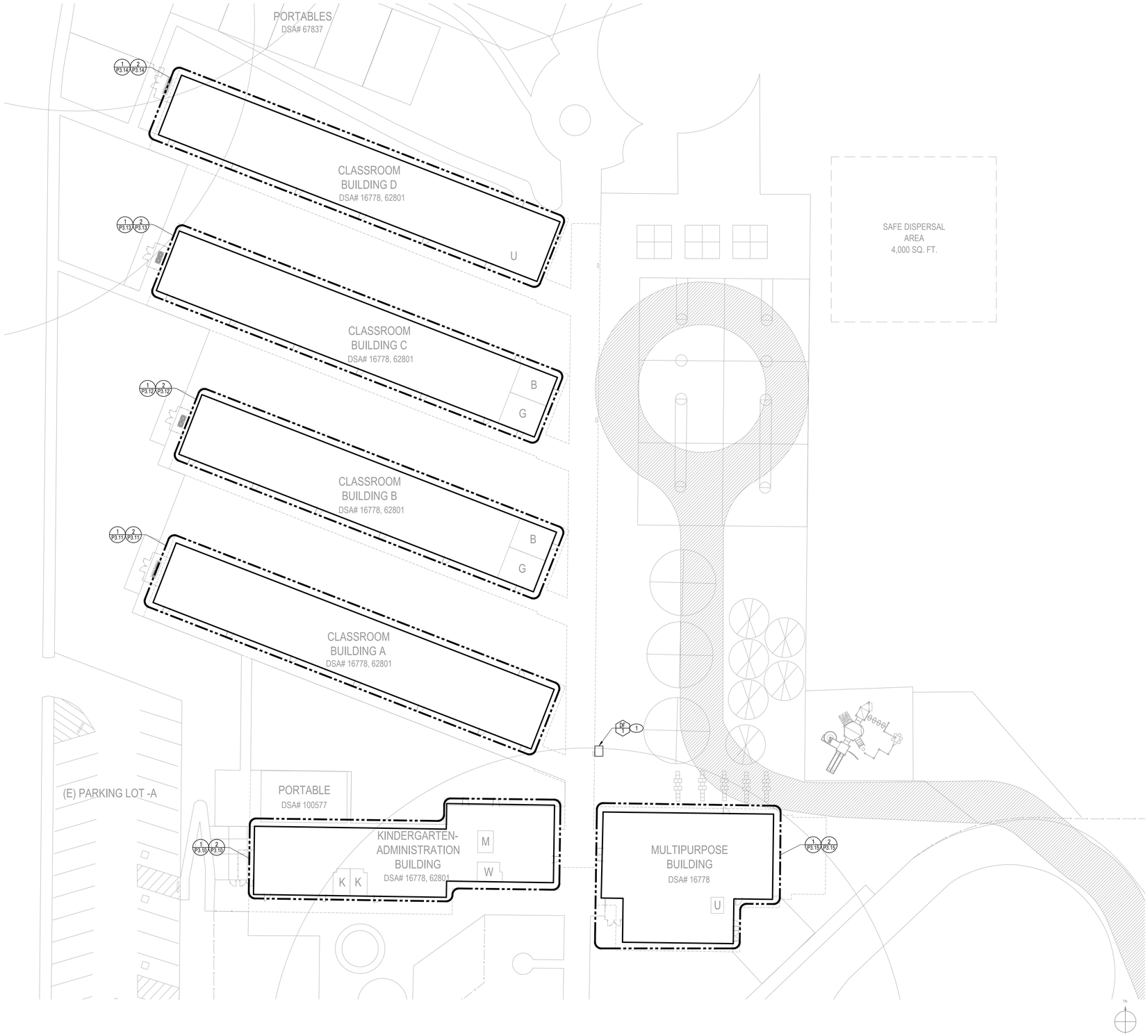
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PLUMBING DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P0.02
Drawn KT	Checked CD



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

KEY NOTES

(1) REMOVE AND REPLACE EXISTING DRINKING FOUNTAIN WITH NEW ACCESSIBLE DRINKING FOUNTAIN WITH GUARDRAILS.

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.

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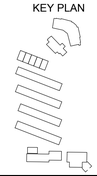
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● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



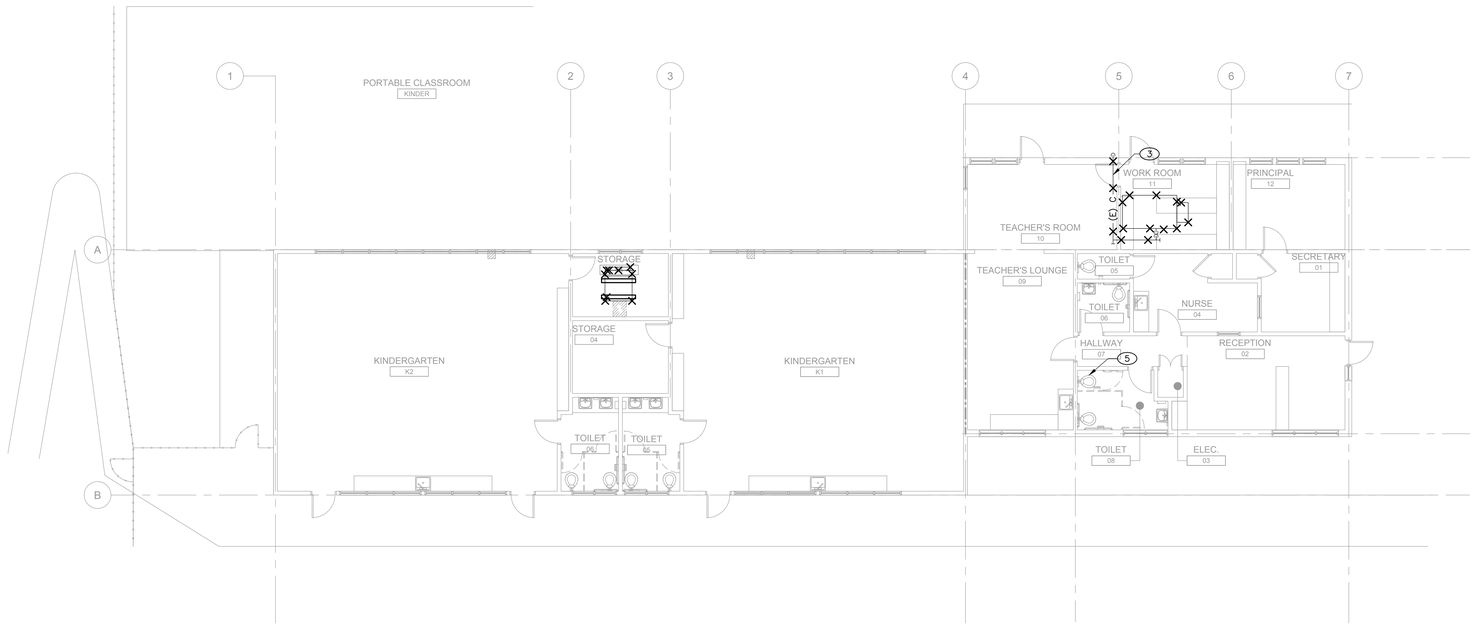
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PLUMBING SITE PLAN

Date	Project Number
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Application Number	Drawing Number
01-120631	P1.00
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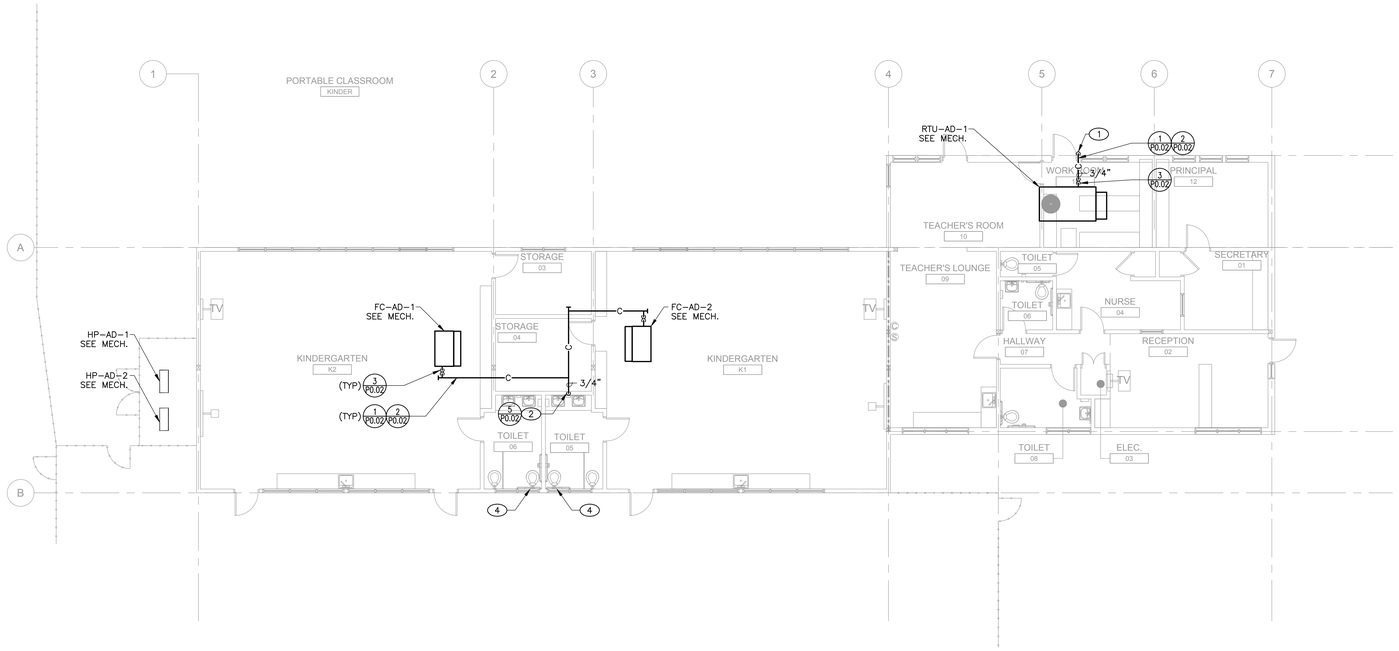
PLUMBING DEMO FLOOR PLAN - KINDER-ADMIN BLDG

1

1/8" = 1'-0"

KEY NOTES

1. DRAIN CONDENSATE PIPING IN ROOF GUTTER WITH AIR GAP.
2. DRAIN CONDENSATE PIPING TO EXISTING SINK TAIL PIECE.
3. DEMO ALL EXISTING GAS PIPING ON ROOF. CONTRACTOR TO VERIFY LOCATION IN FIELD.
4. PROVIDE KOHLER MODEL K-25875 TOILET SEAT COVER TO (E) TOILET.
5. DEMO EXISTING WATER CLOSET. CAP RELATED PIPING IN WALL AND BELOW FLOOR.



PLUMBING FLOOR PLAN - KINDER-ADMIN BLDG

2

1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.

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ARCHITECT	ENGINEER
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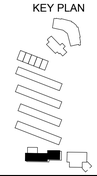
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NO.	REMARKS	DATE

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KEY PLAN



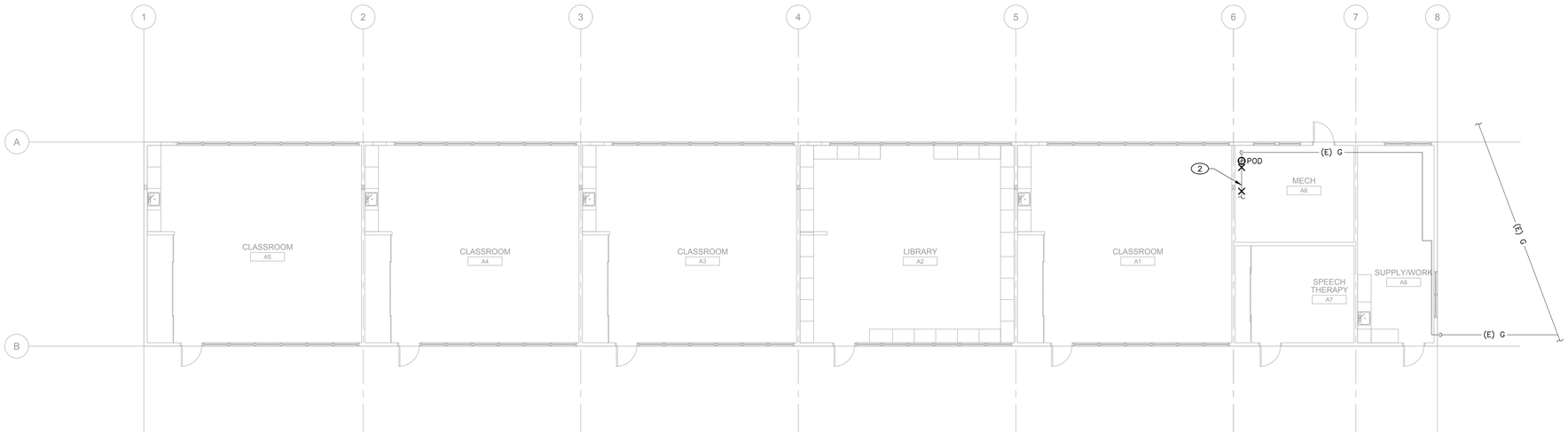
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PLUMBING FLOOR PLAN - KINDER-ADMIN BLDG

Date	Project Number
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Application Number	Drawing Number
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DEMO PLUMBING FLOOR PLAN - CLASSROOM BLDG A

1

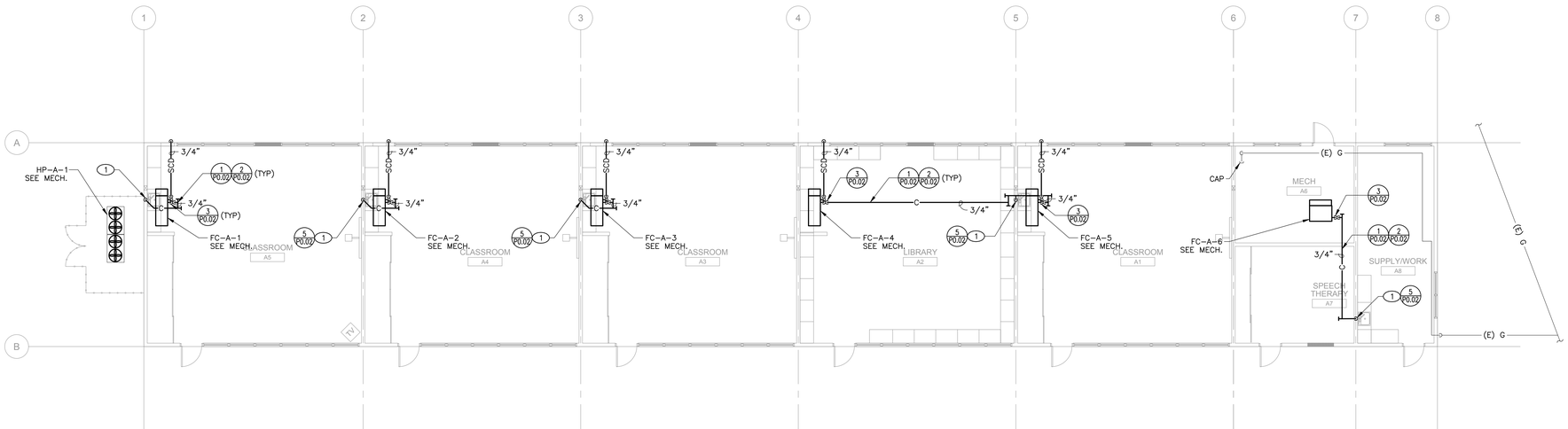
1/8" = 1'-0"

KEY NOTES

1. DRAIN CONDENSATE TO EXISTING SINK TAIL PIECE.
2. DEMO EXISTING PLUMBING EQUIPMENT AND RELATED GAS PIPING UP TO POINT OF DISCONNECT. CAP EXISTING GAS PIPING.

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.



PLUMBING FLOOR PLAN - CLASSROOM BLDG A

2

1/8" = 1'-0"

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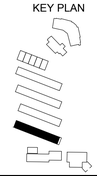
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DRAWING STATUS

	DATE
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● DSA BACK CHECK	04/24/2023
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○ CONSTRUCTION	

KEY PLAN



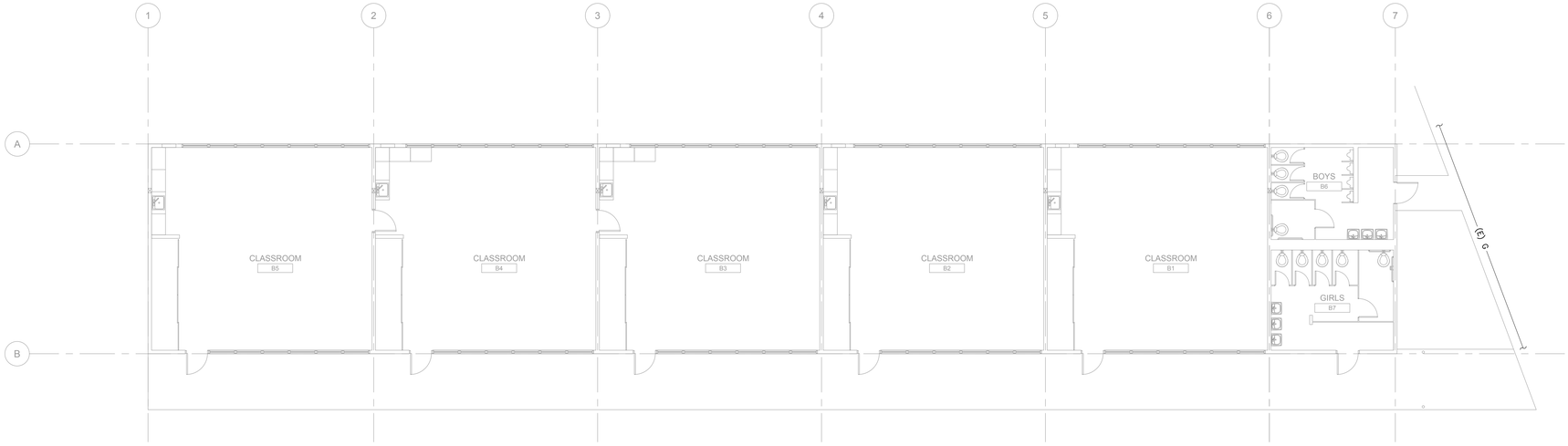
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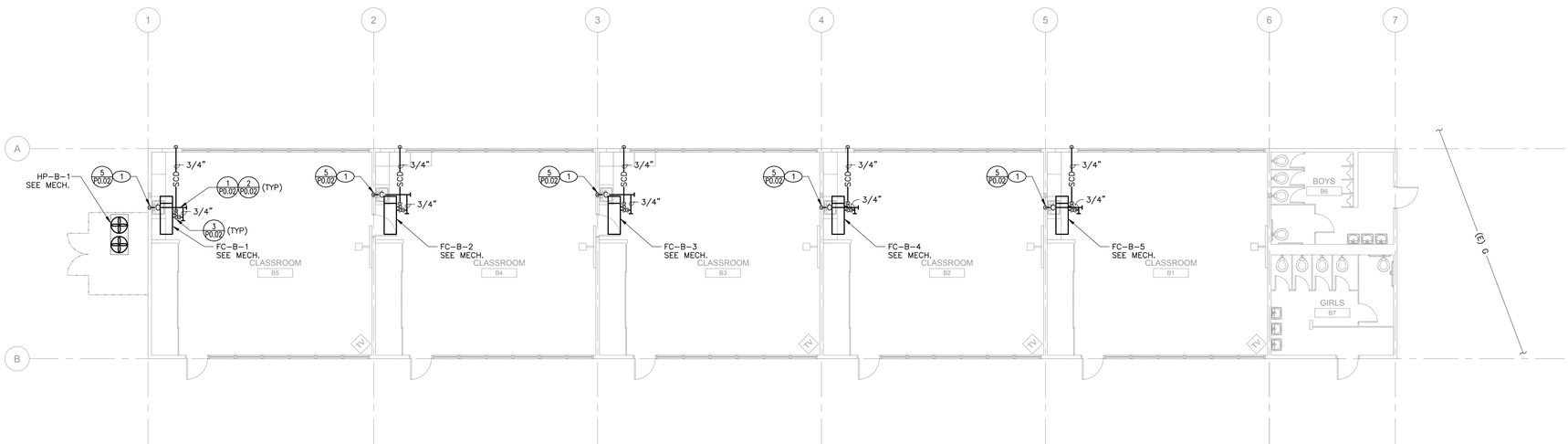
PLUMBING FLOOR PLAN - CLASSROOM BLDG A

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P3.11
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DEMO PLUMBING FLOOR PLAN - CLASSROOM BLDG B

1
1/8" = 1'-0"



PLUMBING FLOOR PLAN - CLASSROOM BLDG B

2
1/8" = 1'-0"

KEY NOTES

1. DRAIN CONDENSATE TO EXISTING SINK TAIL PIECE.

GENERAL NOTES

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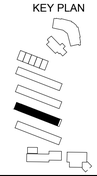
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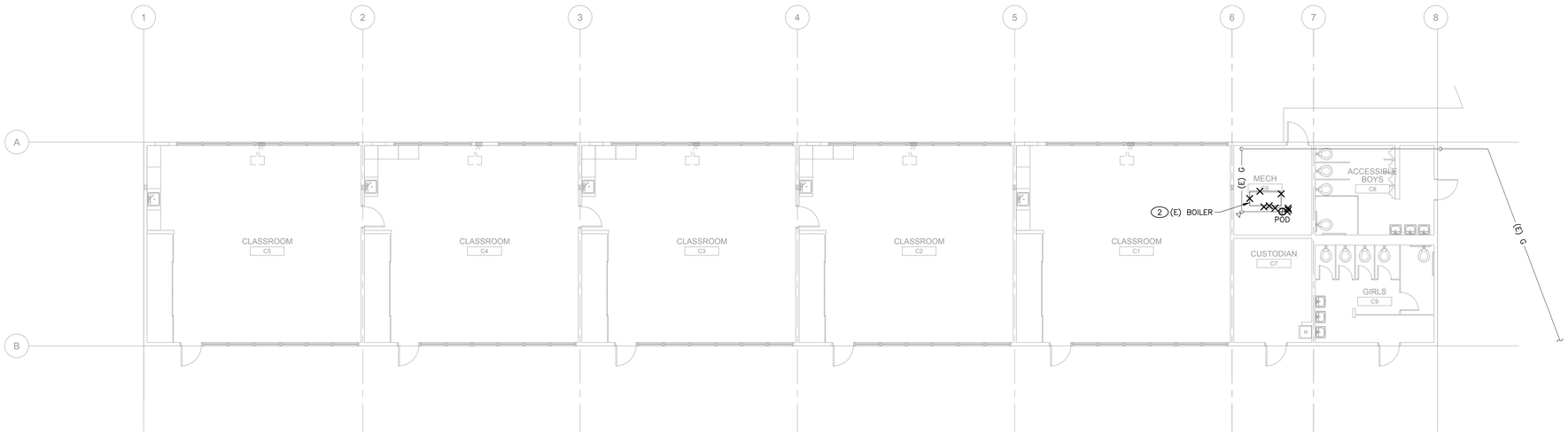
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PLUMBING FLOOR PLAN - CLASSROOM BLDG B

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P3.12
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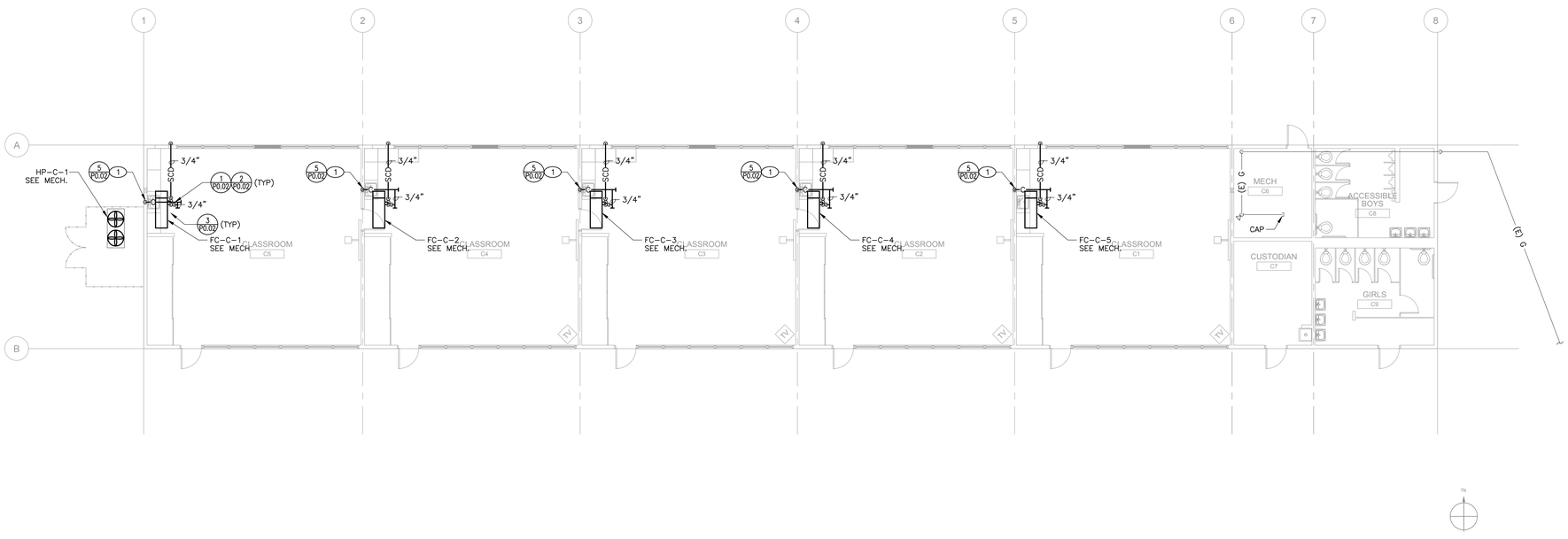
PLUMBING DEMO FLOOR PLAN - CLASSROOM BLDG C

1

1/8" = 1'-0"

KEY NOTES

1. DRAIN CONDENSATE TO EXISTING SINK TAIL PIECE.
2. DEMO EXISTING BOILER AND RELATED GAS PIPING UP TO POINT OF DISCONNECT. CAP EXISTING GAS PIPING.



PLUMBING FLOOR PLAN - CLASSROOM BLDG C

2

1/8" = 1'-0"

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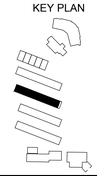
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
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KEY PLAN



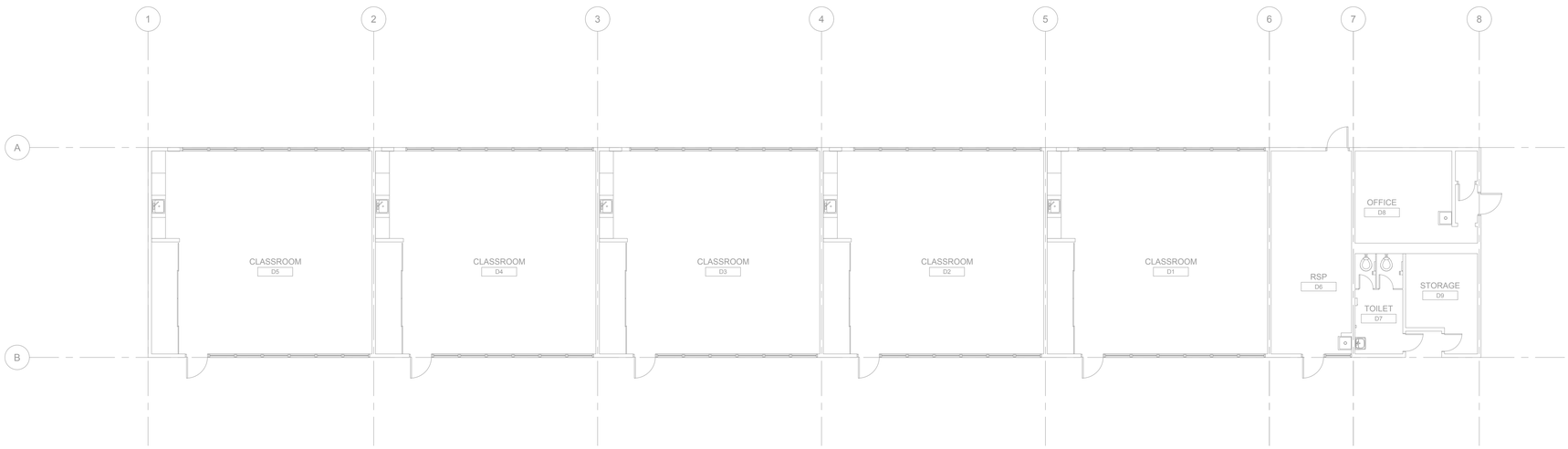
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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PLUMBING FLOOR PLAN - CLASSROOM BLDG C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P3.13
Drawn: KT	Checked: CD

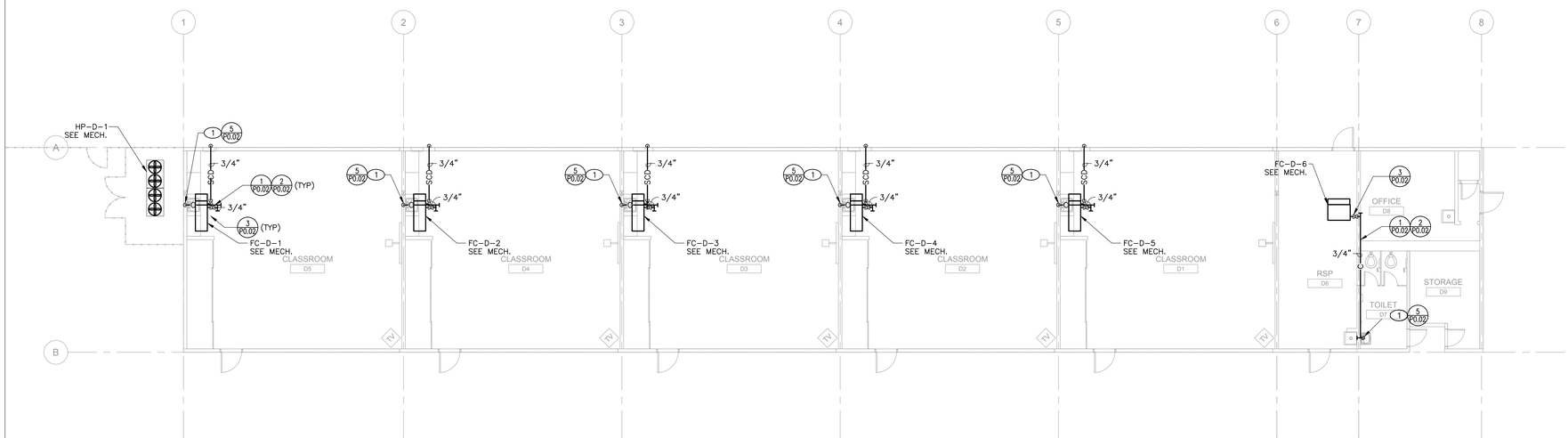


DEMO PLUMBING FLOOR PLAN - CLASSROOM BLDG D

1
1/8" = 1'-0"

KEY NOTES

1. DRAIN CONDENSATE TO EXISTING SINK TAIL PIECE.



PLUMBING FLOOR PLAN - CLASSROOM BLDG D

2
1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS OR DISCREPANCIES TO ARCHITECT/ENGINEER.

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DATE: 5/4/2023

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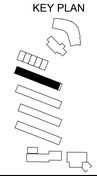
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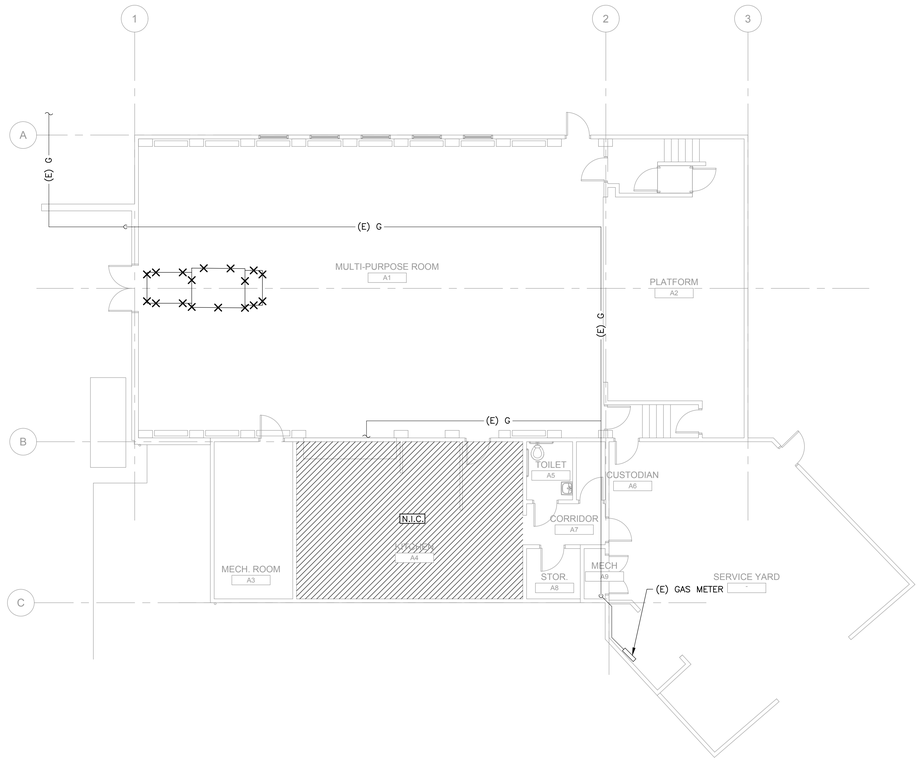
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PLUMBING FLOOR PLAN - CLASSROOM BLDG D

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P3.14
Drawn: KT	Checked: CD



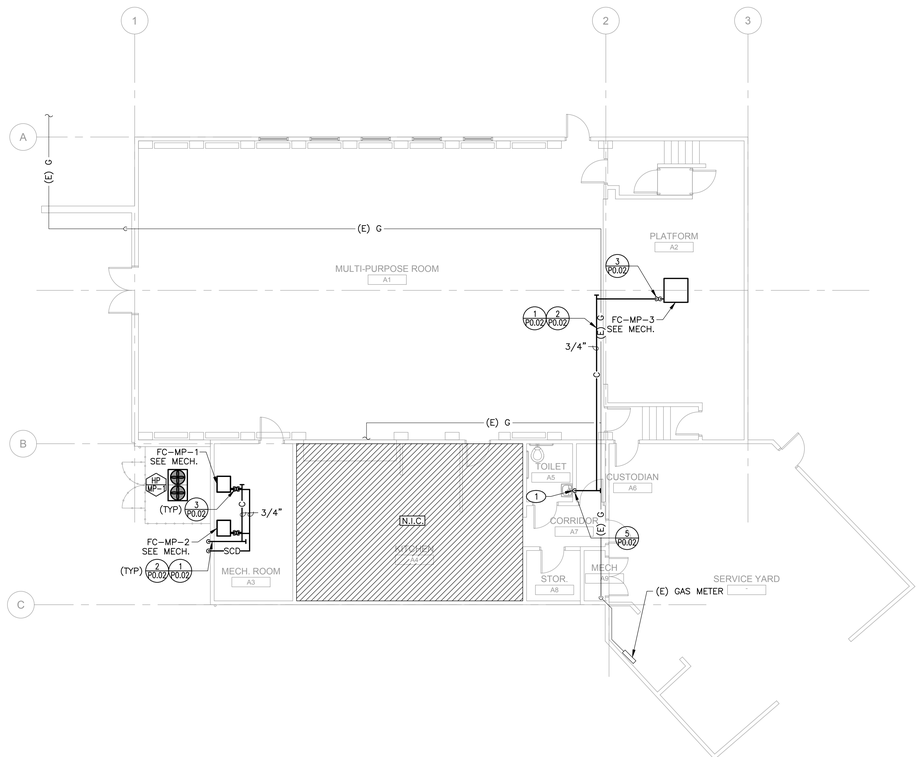
PLUMBING DEMO FLOOR PLAN - MULTIPURPOSE BLDG

1

1/8" = 1'-0"

KEY NOTES

1 DRAIN CONDENSATE TO EXISTING SINK TAIL PIECE.



PLUMBING FLOOR PLAN - MULTIPURPOSE BLDG

2

1/8" = 1'-0"

GENERAL NOTES

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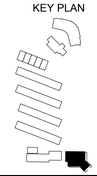
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KEY PLAN



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PLUMBING FLOOR PLAN - MULTIPURPOSE BLDG

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	P3.15
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EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7–16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7–16 SECTION 13.3 AS DEFINED IN ASCE 7–16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE–APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP MD PP E — ☐ ☐ ☐ ☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP MD PP E — ☐ ☐ ☐ ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE–APPROVAL (OPM#) #0043–13.

OCCUPANCY & DAYLIGHTING SENSOR NOTES

1. OCCUPANCY SENSORS AND DAYLIGHTING SENSORS SYSTEMS OPERATION:

   A. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN THE RANGE OF COVERAGE(S) OF CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE NINETY (90) TO ONE HUNDRED (100) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREA TO ACCOMMODATE OCCUPANCY HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S). THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS THAT ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOM.

   B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE– INSTALLATION MEETING WITH MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE OWNER'S FACILITY, TO VERIFY PLACEMENT OF SENSORS AND INSTALLATION CRITERIA.

   C. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE PROPER ADJUSTMENTS TO ASSURE OWNER'S SATISFACTION WITH THE OCCUPANCY SYSTEM. IF THE CONTRACTOR IS INCAPABLE TO MAKE PROPER ADJUSTMENTS, THE CONTRACTOR SHALL PROVIDE THE FACTORY STARTUP IN THAT THE MANUFACTURER'S RESPONSIBILITY TO VERIFY PROPER ADJUSTMENTS AND TRAIN OWNER'S PERSONNEL TO ENSURE OWNER'S SATISFACTION WITH THE OCCUPANCY SYSTEM.

   D. PROPER JUDGMENT MUST BE EXERCISED IN EXECUTING THE INSTALLATION SO AS TO ENSURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE AND TO OVERCOME LOCAL DIFFICULTIES DUE TO SPACE LIMITATIONS OR INTERFERENCE OF STRUCTURAL COMPONENTS. THE CONTRACTOR SHALL ALSO PROVIDE, AT THE OWNER'S FACILITY, THE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, ADJUSTMENT, AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES AND SYSTEMS.

2. OCCUPANCY SENSORS AND DAYLIGHTING SENSORS COMMISSIONING:

   A. UPON COMPLETION OF THE INSTALLATION, CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE–FREE OCCUPANCY–BASED LIGHTING CONTROL SYSTEM.

   B. UPON COMPLETION OF THE SYSTEM FINE TUNING, THE CONTRACTOR SHALL ARRANGE FOR THE FACTORY AUTHORIZED TECHNICIAN TO PROVIDE THE PROPER TRAINING TO THE OWNER'S PERSONNEL IN THE ADJUSTMENT AND MAINTENANCE OF THE SENSORS.

   C. LIGHTING CONTROLS COMMISSIONING, INSPECTIONS (INCLUDING STATE OF CALIFORNIA ENERGY COMMISSION INSPECTION FORMS AND APPLICATIONS), TESTING, PROGRAMMING AND TUNING OF LIGHTING CONTROL SENSORS, DEVICES AND COMPONENTS, ETC. SHALL BE INCLUDED IN THE LIGHTING CONTROL PACKAGE AND PRICE.ANY LABOR, TOOLS AND MATERIALS REQUIRED TO PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM SHALL BE AT NO EXTRA COST TO THE OWNERS OR END–USERS.

ELECTRICAL ABBREVIATIONS

SYMBOL	DESCRIPTIONS
AC	ABOVE COUNTER
AF	AMPERE FRAME OR FUSE
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFS	AUTOMATIC FIRE SPRINKLER
AIC	AMPS INTERRUPTING CAPACITY RATING
AMP, A	AMPERES
APPR	APPROVED
AS	AMPERE SWITCH RATING
AT	AMPERE TRIP RATING OF BREAKER
AUTO	AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BFC	BELOW FINISHED CEILING
BMS	BUILDING MANAGEMENT SYSTEM
BKR	BREAKER
C	CONDUIT
cd	CANDELA
CEC	CALIFORNIA ELECTRICAL CODE
CFL	COMPACT FLUORESCENT
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
CNTRL	CONTROL
CO	CONDUIT ONLY w/PULL STRING
CSFM	CALIFORNIA STATE FIRE MARSHALL
CT	CURRENT TRANSFORMER
CU	COPPER
CWP	COLD WATER PIPE
DEF	DEFROST
DISC	DISCONNECT
DIST	DISTRIBUTION
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EDF	ELECTRIC DRINKING FOUNTAIN
EL	EVENING LIGHT
ELEV	ELEVATION
EM	EMERGENCY LIGHT
EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE RESISTOR
EP	EMERGENCY POWER
EQPT	EQUIPMENT
EXH	EXHAUST
(E)	EXISTING
(ED)	EXISTING TO BE DEMOLISHED
(F)	FUTURE
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
GFCI	GROUND FAULT CURRENT INTERRUPTER
GND	GROUND
HP	HORSE POWER
HZ	HERTZ
IG	ISOLATED GROUND
INC	INCANDESCENT
ISC	SHORT CIRCUIT CURRENT
ISOL	ISOLATED
JBOX	JUNCTION BOX
kcmil	THOUSAND CIRCULAR MILS
kV	KILOVOLTS
kW	KILOWATTS
kVA	KILOVOLT AMPERES
LT, LTS	LIGHT, LIGHTS
LTG	LIGHTING
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MPOE	MAIN POINT OF ENTRY
MS	MOTION SENSOR
MSB	MAIN SWITCHBOARD
MT	CONDUIT ONLY w/PULL STRING
MTD	MOUNTED
(N)	NEW
NEMA	NATIONAL ELECTRIC MANUFACTURER ASSOCIATION
NIES	NOT IN ELECTRICAL SECTION OF THESE PLANS & SPECIFICATIONS
N.I.C.	NOT IN CONTRACT
NL	NIGHT LIGHT
NT	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD
PH, P	PHASE OR POLE
PB	PULLBOX
PFB	PROVIDE FOR FUTURE BREAKER
PIV	POST INDICATOR VALVE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PWR	POWER
(R)	RELOCATED
RCP	REFLECTED CEILING PLAN
RECPT	RECEPTACLE
REQD	REQUIRED
RGSC	RIGID GALVANIZED STEEL CONDUIT
SHLD	SHIELDED
SHT	SHEET
SPD	SURGE PROTECTION DEVICE
SPECS	SPECIFICATIONS
SW	SWITCH
SYM	SYMMETRICAL
TEMP	TEMPERATURE
TOF	TIMED OFF DELAY
TS	TAMPER SWITCH
TSTAT	THERMOSTAT
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UGPS	UNDERGROUND PULL SECTION
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTABLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
V	VOLTS
VL	VERIFY LOCATION
W	WATTS
w/	WITH
WP	WEATHERPROOF
WPL	WEATHERPROOF LOCKING
WPU	WEATHERPROOF WHILE IN USE
(X)	REMOVE
XFMR	TRANSFORMER

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 THNN/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 PLANS OR NOT.

DEMOLITION GENERAL NOTES

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

1. ALL EXISTING EQUIPMENT, DEVICES, CONDUIT, AND WIRING, ETC., WHERE SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DOCUMENTS AND LIMITED SITE SURVEYS AND ARE SHOWN FOR CLARITY. IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND BEFORE START OF ANY ELECTRICAL WORK, CONTRACTOR SHALL VERIFY ON–SITE ALL EXISTING LOCATIONS AND CONDITIONS TO ASCERTAIN ALL WORK REQUIRED.
2. EXISTING ELECTRICAL MAIN SERVICE IS BEING REPLACED WITH NEW THAT IS TO BE INCLUDED IN THE SCOPE OF WORK. CONTRACTOR SHALL VERIFY AND COORDINATE THE SEQUENCE OF WORK WITH THE LOCAL UTILITY COMPANY, THE OWNER/DISTRICT'S REPRESENTATIVE, AND OTHER TRADES AT THE EARLIEST START OF CONSTRUCTION FOR ALL REQUIREMENTS AND SCHEDULING OF THE REQUIRED WORK FOR A SMOOTH AND TIMELY TRANSFORMATION FROM THE EXISTING SERVICE TO THE NEW SERVICE TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY. LIMIT THE ELECTRICAL SHUTDOWN TO A MINIMUM SO IT WILL NOT AFFECT THE EXISTING FACILITY'S NORMAL DAILY FUNCTIONS AND OPERATION.
3. CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING UTILITIES AND/OR OTHER EXISTING FACILITY'S SYSTEMS AND SERVICES AS POSSIBLE. CONTRACTOR SHALL NOTIFY THE OWNER/DISTRICT'S REPRESENTATIVE AT LEAST 72 HOURS TO SCHEDULE ALL NECESSARY SHUTDOWN. SHUTDOWN WORK SHALL BE PERFORMED AFTER THE NORMAL OPERATION HOURS OF THE FACILITY, IF SO DIRECTED BY THE OWNER/DISTRICT'S REPRESENTATIVE.
4. ALL REMOVED AND/OR DEMOLISHED ELECTRICAL MATERIALS AND EQUIPMENT TO BE ACCOMPLISHED UNDER THIS CONTRACT, WHICH IN THE OPINION OF THE OWNER/DISTRICT'S REPRESENTATIVE ARE DEEMED SALVAGEABLE, SHALL REMAIN THE PROPERTY OF THE OWNER/DISTRICT. ALL ELECTRICAL MATERIAL AND EQUIPMENT CONSIDERED NOT SALVAGEABLE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR ACCORDINGLY.
5. WHERE REMOVAL OF AN EXISTING SYSTEM'S DEVICE WILL RESULT IN LOSS OF CIRCUIT CONTINUITY, THE ISOLATED PORTIONS OF THE CIRCUIT SHALL BE RECONNECTED TO PROVIDE SERVICE TO ALL REMAINING DEVICES. IF SITE CONDITIONS MAKE RECONNECTION IMPOSSIBLE, CONNECTION SHALL BE MADE FROM AN ADJACENT AVAILABLE DEVICE AS NOTED AND/OR AS DIRECTED BY THE ARCHITECT AND/OR THE OWNER/DISTRICT'S REPRESENTATIVE.
6. WHERE EXISTING CONCEALED CONDUITS, WHETHER SHOWN OR NOT, OR SPECIFIED TO BE REUSED, WHICH BECAME EXPOSED DUE TO CONSTRUCTION CHANGES, IT SHALL BE REROUTED TO THE NEAREST AVAILABLE REUSED OUTLET.
7. ALL EXISTING EXPOSED CONDUITS AND/OR WIRING THAT ARE DETERMINED BY THE DISTRICT AND ARCHITECT TO BE MAINTAINED FOR EXISTING SYSTEM FUNCTION AND CONTINUITY, WHETHER SHOWN ON PLAN OR NOT, ARE TO BE REROUTED CONCEALED IN WALL AND/OR CEILING FOR A CLEAN FINISHED SURFACE WITH NO EXPOSED CONDUITS AND/OR WIRING WITHIN THE REMODELED AREA.
8. REMOVE ALL EXISTING EXPOSED CONDUITS, WIRING, ELECTRICAL OUTLETS, DEVICES, AND EQUIPMENT THAT ARE DETERMINED BY THE DISTRICT REPRESENTATIVE/OWNER AND ARCHITECT TO BE NON FUNCTIONAL AND/OR NOT BEING USED FROM WITHIN THE REMODELED AREA FOR A CLEAN FINISHED SURFACE.
9. WHERE EXISTING WIRING OR EQUIPMENT IS ABANDONED AS A RESULT OF THIS CONTRACT, IT SHALL BE REMOVED INSOFAR AS POSSIBLE. THIS INCLUDES BUT IS NOT LIMITED TO:
   A. REMOVE ALL WIRE AND CABLE.
   B. REMOVE ALL DEVICES AND EQUIPMENT.
   C. REMOVE ALL EXPOSED CONDUIT AND CONDUIT IN ACCESSIBLE CONCEALED AREAS, AS FAR AS POSSIBLE.
   D. CUT OFF AND CAP ALL ABANDONED CONDUIT. STUBS SHALL NOT BE PROTRUDED ABOVE FLOOR AND/OR FINISHED WALLS AND CEILINGS.
10. WHEREVER EXISTING ELECTRICAL DEVICES, PANELS, CONDUITS, CABLES, ETC., CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS AS DIRECTED BY THE ARCHITECT AND/OR OWNER/DISTRICT'S REPRESENTATIVE.
11. WHERE SHOWN ON PLAN FOR REMOVAL OF EXISTING CONDUITS, REMOVE ALL PORTIONS OF CONDUITS WHERE IT IS ACCESSIBLE AND ABANDON PORTIONS OF CONDUITS WHERE IT IS INACCESSIBLE. CUT OFF AND CAP ALL ABANDONED CONDUITS. STUBS SHALL NOT BE PROTRUDED ABOVE FLOOR AND/OR FINISHED WALLS AND CEILINGS.
12. CONTRACTOR SHALL UPDATE WITH NEW TYPEWRITTEN PANEL DIRECTORIES TO EXISTING PANELS INVOLVED IN THIS RENOVATION WORK THAT SHALL REFLECT ALL CHANGES TO THE CIRCUIT DESIGNATIONS.
13. PROVIDE AND INSTALL PROTECTIVE COVERING OVER EXISTING EQUIPMENT IN AREA WHEN INSTALLING ANY NEW WORK.
14. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY.
15. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR HEATERS, EXHAUST FANS, WATER HEATERS, PUMPS, ETC., WHICH ARE REQUIRED TO BE DISCONNECTED BY THE ELECTRICAL CONTRACTOR FOR REMOVAL OR ABANDONMENT BY THE MECHANICAL AND/OR PLUMBING CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SEQUENCE OF WORK WITH THE MECHANICAL AND/OR PLUMBING CONTRACTOR FOR REMOVAL OF ALL APPLICABLE STARTERS, DISCONNECT SWITCHES, AND ASSOCIATED CONDUIT, AND WIRING.
16. ALL LIGHT FIXTURES INDICATED AS RELOCATED SHALL BE CLEANED AND RE–LAMPED PRIOR TO THE RE–INSTALLATION.

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET TITLE
E0.01	ELECTRICAL NOTES & ABBREVIATIONS
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E2.11	LIGHTING PLANS – CLASSROOM BLDG A
E2.12	LIGHTING PLANS – CLASSROOM BLDG B
E2.13	LIGHTING PLANS – CLASSROOM BLDG C
E2.14	LIGHTING PLANS – CLASSROOM BLDG D
E2.15	LIGHTING PLANS – MULTIPURPOSE BLDG
E3.10	ELECTRICAL POWER PLAN – KINDER–ADMIN BLDG
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DSA STAMP

IDENTIFICATION STAMP
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DATE: 5/4/2023

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LICENSED ARCHITECT — BRIAN P WHITMORE — No. C 30345 — Ren. 9/30/23 — STATE OF CALIFORNIA — DATE SIGNED: 04/24/2023	REGISTERED PROFESSIONAL ENGINEER — RAMI S. ZEIDAN — No. E 16762 — Exp. 9/30/24 — ELECTRICAL — STATE OF CALIFORNIA

GENERAL NOTES

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

STATUS	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL NOTES & ABBREVIATIONS

Date: 04/24/2023
Project Number: 22026
Application Number: 01-120631
Drawing Number: E0.01
Drawn: KT
Checked: CD

ELECTRICAL SYMBOL LEGEND

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

SYMBOL	DESCRIPTION
	LIGHTING
	FLUORESCENT/LED LUMINAIRE – T–BAR LAY–IN
	FLUORESCENT/LED LUMINAIRE – RECESSED IN GYPBOARD
	FLUORESCENT/LED LUMINAIRE – SURFACE FLUORESCENT/LED LUMINAIRE – SUSPENDED
	FLUORESCENT/LED DIRECT/INDIRECT LUMINAIRE – T–BAR LAY–IN
	FLUORESCENT/LED DIRECT/INDIRECT LUMINAIRE – RECESSED IN GYPBOARD
	FLUORESCENT/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
EM EM EM	HATCHED LUMINAIRE WITH "EM" ABBREVIATION INDICATES AN EMERGENCY LUMINAIRE WITH EMERGENCY POWER CONNECTION (UNSWITCHED).
	SINGLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED ON PLANS. (CEILING OR WALL)
	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 LUMIANIRE – CEILING
	SPOT/FLOOD LUMIANIRE – ABOVE GROUND
	EXTERIOR POLE FIXTURE – SINGLE HEAD
	EXTERIOR POLE FIXTURE – TWIN HEAD
	EXTERIOR PATHWAY POLE FIXTURE
	BOLLARD FIXTURE
	STEP LUMINAIRE
	LIGHTING CONTROLS
$	SINGLE POLE TOGGLE SWITCH, 20A, 120–277V @ +46" TO TOP OF BOX, UNO.
$3	THREE WAY TOGGLE SWITCH 20A,120–277V @ +46" TO TOP OF BOX, UNO.
$a,b,c	SUBSCRIPTS "a,b,c" DESIGNATE THE QUANTITY OF SWITCHES AT EACH LOCATION (TYPICAL FOR ALL SWITCH TYPES).
$T	THERMAL OVERLOAD SWITCH
$M	MOTOR RATED SWITCH
$K	SINGLE POLE KEYED TOGGLE SWITCH 20A, 120–277 @ +46" TO TOP OF BOX, UNO.
	PUSH BUTTON
	WALL MOUNTED DECORA IN LIEU OF ROCKER SWITCH
	WALL DIMMER SEE CONTROL DRAWINGS FOR TYPE @ +48" TO TOP OF BOX, UNO.
	WALL MOUNTED DIGITAL DIMMER CONTROL
OCC	WALL SWITCH OCCUPANCY SENSOR
OCC	PIR WALL SWITCH OCCUPANCY SENSOR
OCC	DUAL TECH WALL OCCUPANCY SENSOR
	DIGITAL WALL CONTROL (OVERRIDE SWITCH). RUN CABLING BACK TO LIGHTING CONTROL PANEL.
	CORNER MOUNT MOTION SENSOR. DUAL TECHNOLOGY, PIR OR ULTRASONIC
	CEILING MOTION SENSOR. DUAL TECHNOLOGY PIR & ULTRASONIC
	PIR DIGITAL CORNER SENSOR
	DUAL TECH DIGITAL CORNER SENSOR
	ULTRASONIC DIGITAL CEILING SENSOR
PC	PHOTO SENSOR
DS	SKYLIGHT PHOTOCONTROL SENSOR
OM	OPEN LOOP PHOTOCONTROL SENSOR
DC	CLOSED LOOP PHOTOCONTROL SENSOR
	CEILING EXHAUST FAN
	POWER
	MAIN SWITCHBOARD OR DISTRIBUTION PANEL,AS NOTED
	RECESSED MOUNTED LIGHTING OR DISTRIBUTION PANEL
	SURFACE MOUNTED LIGHTING OR DISTRIBUTION PANEL
	RECESSED TERMINAL CABINET w/ ¾"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UON.
	SURFACE MOUNTED TERMINAL CABINET w/ ¾"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UON.
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
	NON–FUSED / FUSED DISCONNECT; SEE DISCONNECT SWITCH SCHEDULE
	MOTOR STARTER/CONTROLLER
	COMBINATION CIRCUIT BREAKER DISCONNECT/MOTOR STARTER.
	COMBINATION FUSIBLE DISCONNECT/MOTOR CONTROLLER; PROVIDE FUSES PER MANUFACTURERE'S REQUIREMENTS. N.F. INDICATES NON–FUSED.
	MOTOR
	POWER CONNECTION
	DUPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP
	ISOLATED GROUND DUPLEX RECEPTACLE, 20A, 120V @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED DUPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI DUPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI DUPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH
	ISOLATED GROUND GFCI DUPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED GFCI DUPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO
	FOURPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	ISOLATED GROUNDED FOURPLEX RECEPTACLE 20A, 120V @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED FOURPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.

SYMBOL	DESCRIPTION
	GFCI FOURPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	GFCI FOURPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH
	ISOLATED GROUND GFCI FOURPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO.
	DEDICATED GFCI FOURPLEX RECEPTACLE OUTLET 20A, 120V, @ +16" TO BOTTOM OF BOX, UNO
	CONTROLLED/UNCONTROLLED FOURPLEX RECEPTACLE
	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 FOURPLEX RECEPTACLE, 20A, 125V FLUSH IN FINISHED FLOOR
	CEILING MOUNTED DUPLEX RECEPTACLE, 20A, 125V
	CEILING MOUNTED FOURPLEX RECEPTACLE, 20A, 125V
	JUNCTION BOX – SIZE AS REQUIRED BY CODE. (WALL MOUNTED AND REGULAR)
	JUNCTION BOX (FLOOR MOUNTED) – SIZE AS REQUIRED BY CODE.
	PLUGMOLD
	POWER POLE
	POWER AND TELEPHONE POKE THROUGH FOR PARTITION FURNITURE
	FLOOR MOUNTED COMBO DUPLEX RECEPTACLE / TELEPHONE/DATA
	FLOOR MOUNTED COMBO FOURPLEX RECEPTACLE / TELEPHONE/DATA
	TELECOM
1	TELEPHONE OUTLET, 4–11/16" SQ. x 2–1/8" DEEP BOX w/ SINGLE DEVICE RING & PLATE @ +16" TO BOTTOM OF BOX & ¾" CONDUIT STUB UP TO ACCESSIBLE CEILING SPACE, UNO
3	DATA OUTLET, 4–11/16" SQ. x 2–1/8" DEEP BOX w/ SINGLE DEVICE RING & PLATE @ +16" TO BOTTOM OF BOX & ¾" CONDUIT STUB UP TO ACCESSIBLE CEILING SPACE, UNO
1/3	TELE/DATA OUTLET, 4–11/16" SQ. x 2–1/8" DEEP BOX w/ SINGLE DEVICE RING & PLATE @ +16" TO BOTTOM OF BOX & (2) ¾" CONDUIT STUB UP TO ACCESSIBLE CLG SPACE, UNO
1/3A	TELE/DATA OUTLET, 4–11/16" SQ. x 2–1/8" DEEP BOX w/ SINGLE DEVICE RING & PLATE ABOVE COUNTER AND (2) ¾" CONDUIT STUB UP TO ACCESSIBLE CEILING SPACE, UNO
2	FLOOR MOUNTED DATA OUTLET, FLUSH IN FINISHED FLOOR – SIZE PER PLAN
1	FLOOR MOUNTED TELEPHONE OUTLET, FLUSH IN FINISHED FLOOR – SIZE PER PLAN
1/3	FLOOR MOUNTED TELEPHONE/DATA OUTLET, FLUSH IN FINISHED FLOOR – SIZE PER PLAN
2	CEILING MOUNTED DATA OUTLET, 4" SQ. BOX WITH SINGLE DEVICE RING & PLATE
	NUMBER BY DEVICE SYMBOL PARENTHESIS INDICATES NUMBER OF REQUIRED ACTIVE JACKS FOR VOICE/DATA OUTLETS, THE FIRST NUMBER REPRESENTS THE # OF VOICE PORTS AND THE SECOND NUMBER REPRESENTS THE # OF DATA PORTS.
WAP	WIRELESS ACCESS POINT
	TELEPHONE TERMINAL BACKBOARD
TV	COAXIAL CABLE OUTLET
	CLOCK
	INTERCOM SPEAKER AND CLOCK COMBINATION
	CEILING MOUNTED SPEAKER
	WALL MOUNTED SPEAKER
	SURVEILLANCE CAMERAS
	360 DEGREES CAMERA
	FIXED POSITION CAMERA
WP	WEATHERPROOF FIXED POSITION CAMERA
	ACCESS CONTROL
CR	CARD READER
EL	ELECTRONIC LOCK
	INTRUSION ALARM
KP	KEYPAD
	WALL/CEILING MOUNTED FIXED POSITION INTRUSION SENSOR
	CEILING MOUNTED 360 DEGREES INTRUSION SENSOR
	DOOR CONTACT
	GLASS BREAK
	POPPIT
	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAPS	FIRE ALARM POWER SUPPLY
ANNC	FIRE ALARM ANNUNCIATOR
	FIRE ALARM BELL
	HEAT DETECTOR
A	ABOVE CEILING HEAT DETECTOR
	SMOKE DETECTOR
	DUCT SMOKE DETECTOR
	MANUAL PULL STATION
	END OF LINE RESISTOR
TS	TAMPER SWITCH
FS	WATERFLOW SWITCH
MM	MONITOR MODULE
CM	CONTROL MODULE
PIV	POST INDICATOR VALVE
FSD	FIRE SMOKE DAMPNER
	HORN SPEAKER
X1–1 XXXcd	WALL MOUNTED SPEAKER STROBE (15cd, 30cd, 75cd, 110cd) "cd" IS CANDELA. X1–1 RESEMBLES THE NAC CIRCUIT AND QUANTITY ON THAT CIRCUIT.
X1–1 C XXXcd	CEILING MOUNTED SPEAKER STROBE (15cd, 30cd, 75cd, 110cd) "cd" IS CANDELA. X1–1 RESEMBLES THE NAC CIRCUIT AND QUANTITY ON THAT CIRCUIT.
X1–1 XXXcd	WALL MOUNTED STROBE (15cd, 30cd, 75cd, 110cd) "cd" IS CANDELA. X1–1 RESEMBLES THE NAC CIRCUIT AND QUANTITY ON THAT CIRCUIT.
X1–1 C XXXcd	CEILING MOUNTED STROBE (15cd, 30cd, 75cd, 110cd) "cd" IS CANDELA. X1–1 RESEMBLES THE NAC CIRCUIT AND QUANTITY ON THAT CIRCUIT.

SYMBOL	DESCRIPTION
	CIRCUITS
	ARROW
	STUB
	STUB AND ARROW
	CONTINUATION
	CONDUIT RISER – UP
	CONDUIT DROP – DOWN
	CONDUIT CONCEALED IN CEILING OR WALL.
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	EXISTING CONDUIT TO REMAIN.
	CONDUIT & CONDUCTORS 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 w/ CONDUCTORS AS NOTED
#	CIRCUIT CONDUTORS: LONG DASH INDICATES NEUTRAL CONDUCTOR; SHORT DASHES INDICATE PHASE CONDUCTORS; CURVED DASH INDICATES EQUIPMENT GROUNDING CONDUCTOR; ADDITIONAL CURVED DASH INDICATES ISOLATED GROUNDING CONDUCTOR. NUMBER BY DASHES INDICATE WIRE GAUGE OTHER THAN 12 AWG CU. NO DASHES INDICATE 2#12 CU, 1#12 CU GND, IN ½" CONDUIT. OTHERS AS NOTED ON PLAN.
	FLEXIBLE CONDUIT, 6'–0" LONG MAX. w/ #12 CU GROUND UON.
	TAGS AND LEADERS
	BRACKET
	LEADERS
X	KEY NOTE SHOWN ON SAME SHEET
X	LIGHT FIXTURE TAG
X	FEEDER DESIGNATION TAG
X	KITCHEN EQUIPMENT DESIGNATION TAG
X Ex.1	DETAIL DESIGNATION: TOP LETTER INDICATES DETAIL, BOTTOM LETTER/NUMBER INDICATES SHEET
REF X	MECHANICAL EQUIPMENT I.D. TAG – MP&S
	ONE LINE DIAGRAM
(N) PANEL "A" 100A	PANEL IDENTIFICATION
100A 3P	CIRCUIT BREAKER
100A 3P	FUSED SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	GROUND
	UNDERGROUND TERMINATION SERVICE LUG
M	UTILITY METER
M	UTILITY METER WITH C.T. COMPARTMENT METER SOCKET
	TRANSFORMER WITH GROUND
	UFER GROUND
	BOND TO COLD WATER PIPE, GAS PIPE, BUILDING STEEL
	AUTOMATIC TRANSFER SWITCH
	NEUTRAL LINK
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
	NURSE CALL
DL	DOME LIGHT MOUNTED OVER DOOR. PROVIDE 4–11/16" BACK BOX WITH 2 GANG RING AND STUB 3/4" CONDUIT ONLY WITH PULL ROPE UP TO ACCESSIBLE CEILING SPACE
M	MINI MASTER STATION. PROVIDE 4" SQUARE BACK BOX WITH 1 GANG RING.
EPC	EMERGENCY PULL CORD STATION WALL MOUNTED AT +48". PROVIDE 4" SQUARE BACK BOX WITH 1 GANG RING AND STUB 1/2" CONDUIT ONLY WITH PULL ROPE UP TO ACCESSIBLE CEILING SPACE.
EPB	EMERGENCY PUSH BUTTON – STAFF EMERGENCY WALL MOUNTED AT +48". PROVIDE 4" SQUARE BACK BOX WITH 1 GANG RING AND STUB 1/2" CONDUIT ONLY WITH PULL ROPE UP TO ACCESSIBLE CEILING SPACE.
EPB	EMERGENCY PUSH BUTTON – STAFF EMERGENCY/CODE BLUE WALL MOUNTED AT +48". PROVIDE 4" SQUARE BACK BOX WITH 1 GANG RING AND STUB 1/2" CONDUIT ONLY WITH PULL ROPE UP TO ACCESSIBLE CEILING SPACE.
EPB	SINGLE BED PATIENT STATION w/ CODE BLUE AND STAFF EMERGENCY WALL MOUNTED AT +48". PROVIDE 4 GANG BACK BOX (RACO #698 OR SIMILAR) AND STUB 3/4" CONDUIT ONLY WITH PULL ROPE UP TO ACCESSIBLE CEILING SPACE.
NCC	NURSE CALL CONTROLLER AND TERMINAL CABINET (36"x24"x6" METAL BOX WITH LOUVERED DOOR) BY OTHERS. PROVIDE 120V, 20A CIRCUIT PER ELECTRICAL PLANS.
PSU	POWER SUPPLY TERMINAL CAN (18"x22"x6" METAL BOX WITH LOUVERED DOOR) BY OTHERS. PROVIDE 120V, 20A CIRCUIT PER ELECTRICAL PLANS.

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LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

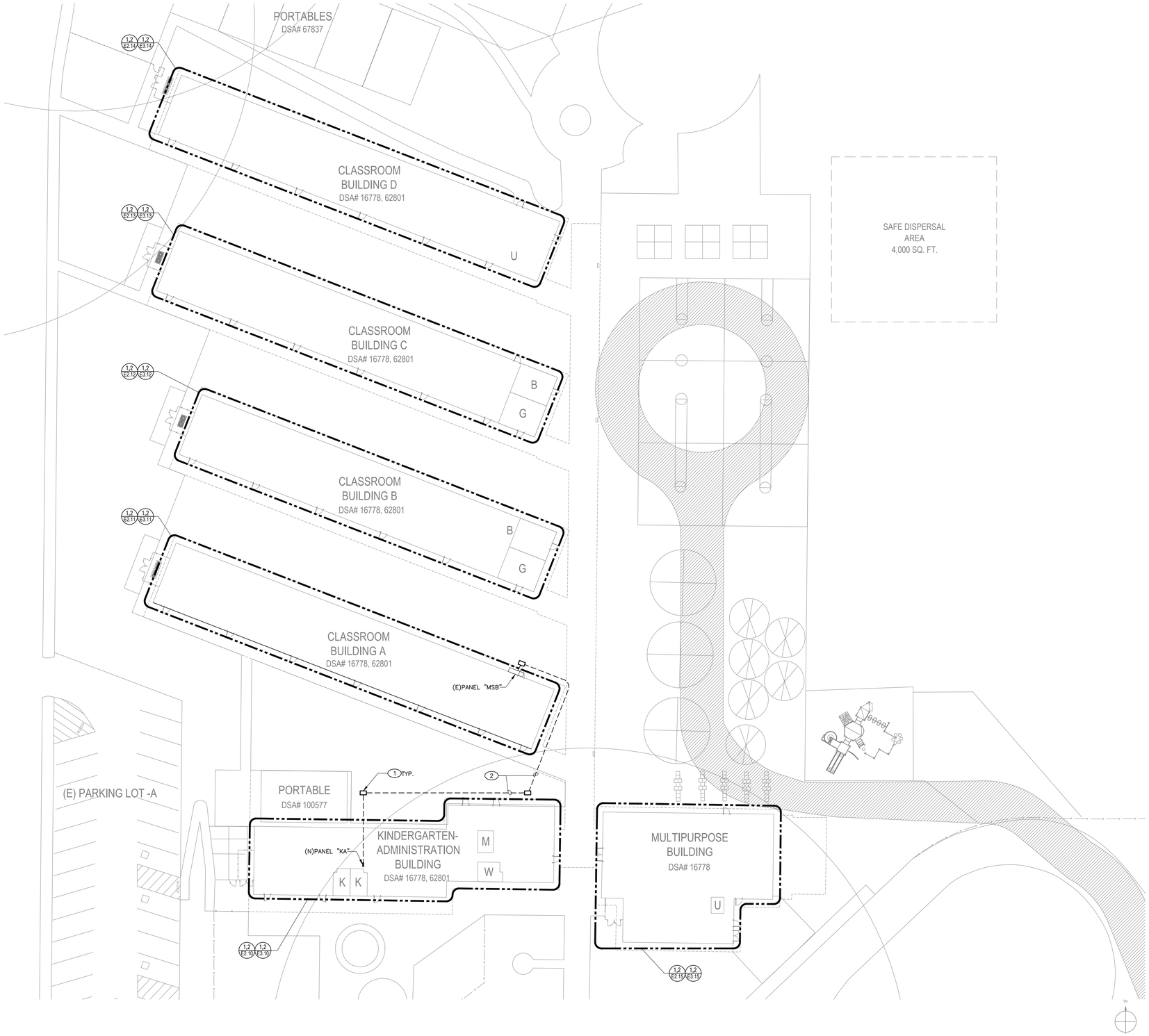
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL SYMBOL LEGEND

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E0.02
Drawn: KT	Checked: CD



ELECTRICAL SITE PLAN 1 — 1" = 20'-0"

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.

B. VERIFY EXACT LOCATIONS PRIOR TO CONSTRUCTION.

C. COORDINATE CONDUIT ROUTE AND PULL BOXES WITH DISTRICT AND FACILITIES.

D. UNDERGROUND CONDUITS SHALL BE SCH-40 PVC.

KEY NOTES

1. PROVIDE MIN. 18"X24" UNDERGROUND ELECTRICAL PULL BOX, TRAFFIC RATED, BOLT-ON REINFORCED LID AND "ELECTRICAL" ENGRAVED ON LID. SEE 7/E5.13 FOR TYPICAL PULL BOX DETAIL.

2. PROVIDE UNDERGROUND CONDUITS FOR PANEL "KA" FEEDER. SEE ONE LINE DIAGRAM ON SHEET E5.12 FOR FEEDERS INFO.

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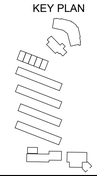
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○ CONSTRUCTION	

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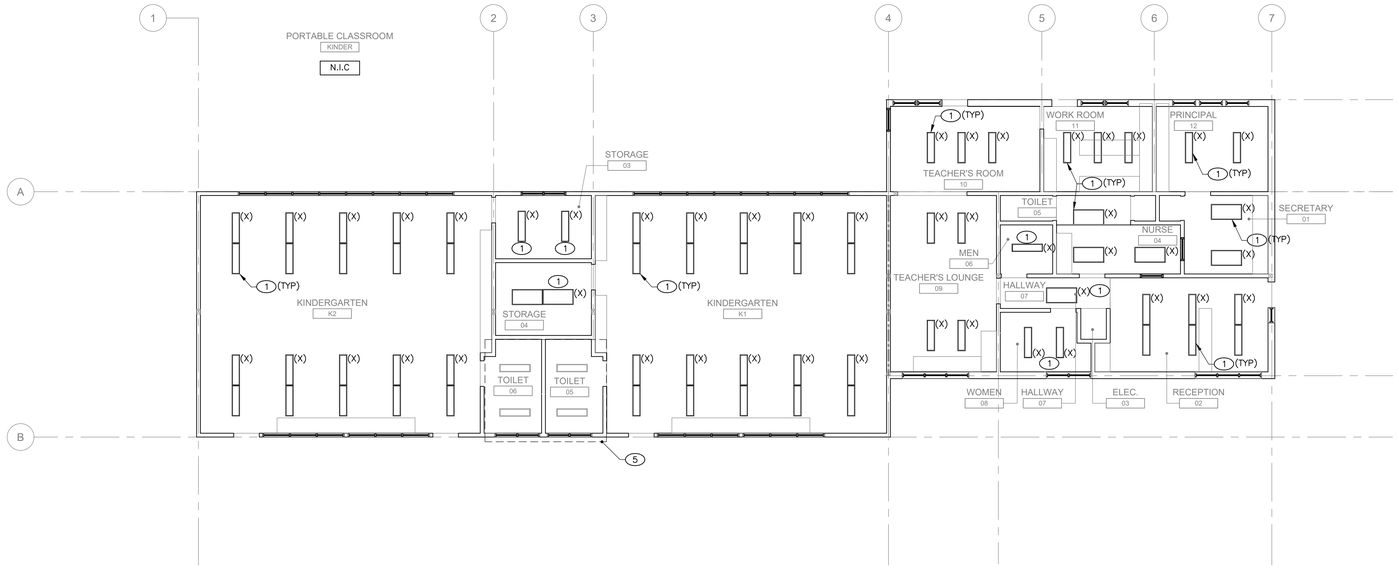
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ELECTRICAL SITE PLAN

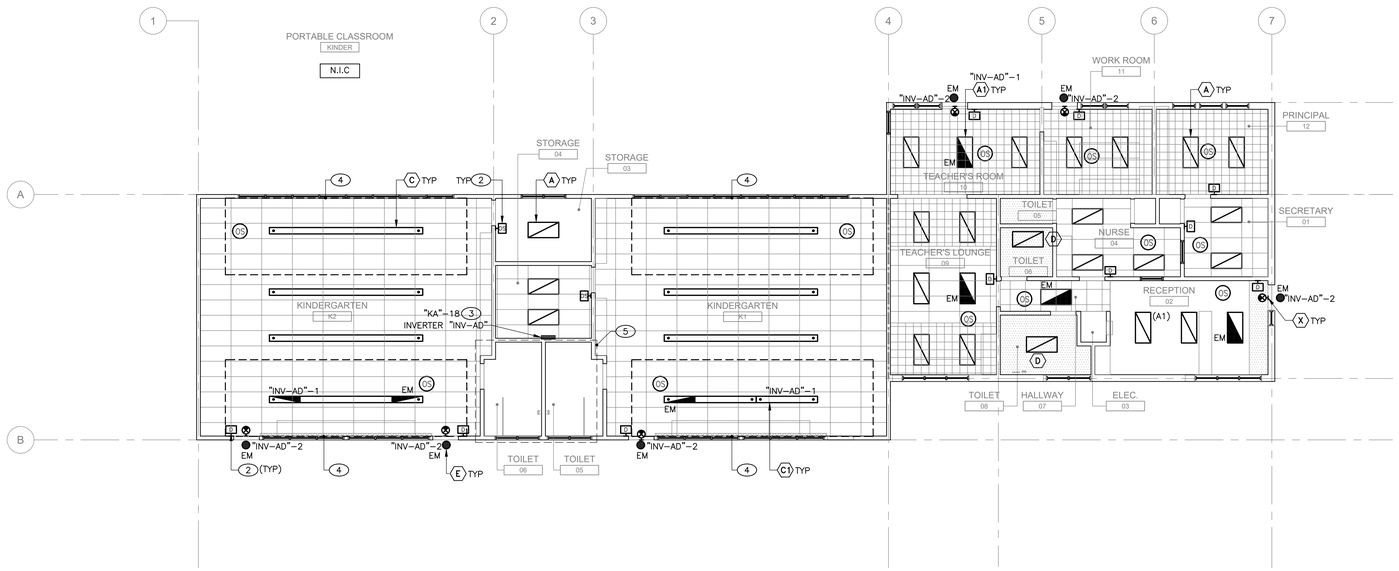
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E1.00
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DEMO LIGHTING PLAN - KINDER-ADMIN BLDG

1

1/8" = 1'-0"



NEW LIGHTING PLAN - KINDER-ADMIN BLDG

2

1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN–SWITCHED CIRCUIT IN THE AREA.
2. REPLACE EXISTING SWITCHES WITH NEW CONTROL AS SHOWN.
3. PROVIDE 1.6KW MYERS ILLUMINATOR EM EMERGENCY LIGHTING INVERTER SYSTEM, MODEL #1–EM–2–B–A–20–6.
4. PRIMARY SIDELIT LIT DAYLIT ZONE; LIGHT FIXTURE WITH SWITCHING DESIGNATION SHALL BE CONTROLLED BY PRIMARY SIDELIT DAYLIT ZONE PHOTO CONTROL SENSOR INDEPENDENTLY FROM OTHER FIXTURES.
5. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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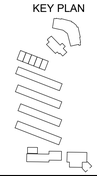
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○ CONSTRUCTION	

KEY PLAN



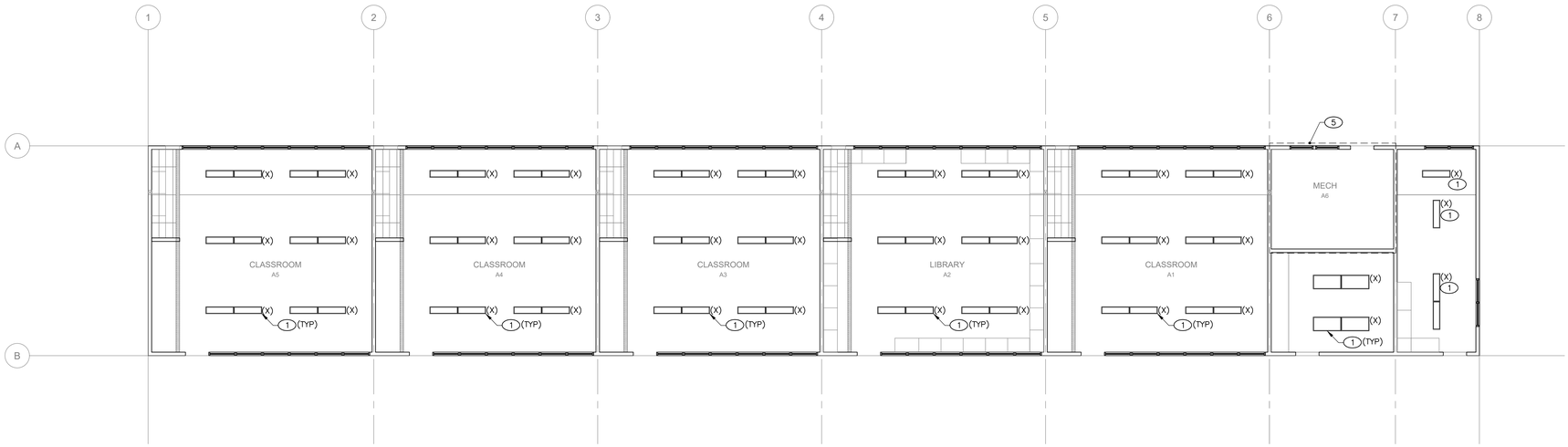
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LIGHTING PLANS - KINDER-ADMIN BLDG

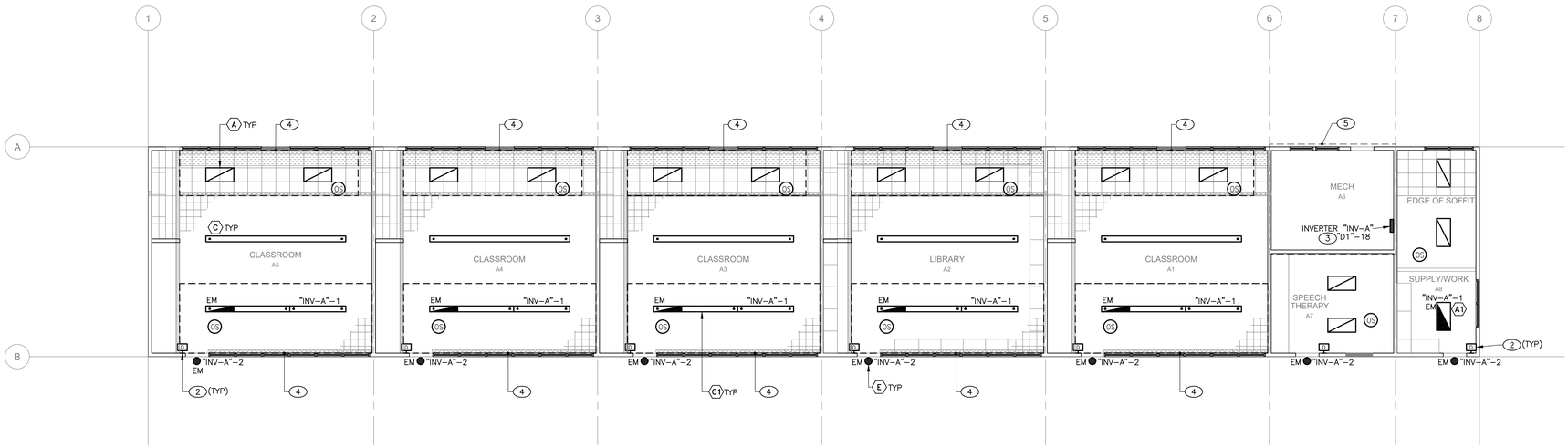
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.10
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DEMO LIGHTING PLAN - CLASSROOM BLDG A

1

1/8" = 1'-0"



NEW LIGHTING PLAN - CLASSROOM BLDG A

2

1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN–SWITCHED CIRCUIT IN THE AREA.
2. REPLACE EXISTING SWITCHES WITH NEW CONTROL AS SHOWN.
3. PROVIDE 1.6KW MYERS ILLUMINATOR EM EMERGENCY LIGHTING INVERTER SYSTEM, MODEL #1–EM–2–B–A–20–6.
4. PRIMARY SIDELIT LIT DAYLIT ZONE; LIGHT FIXTURE WITH SWITCHING DESIGNATION SHALL BE CONTROLLED BY PRIMARY SIDELIT DAYLIT ZONE PHOTO CONTROL SENSOR INDEPENDENTLY FROM OTHER FIXTURES.
5. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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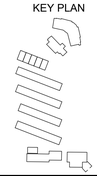
REVISION HISTORY

NO.	REMARKS	DATE

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○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



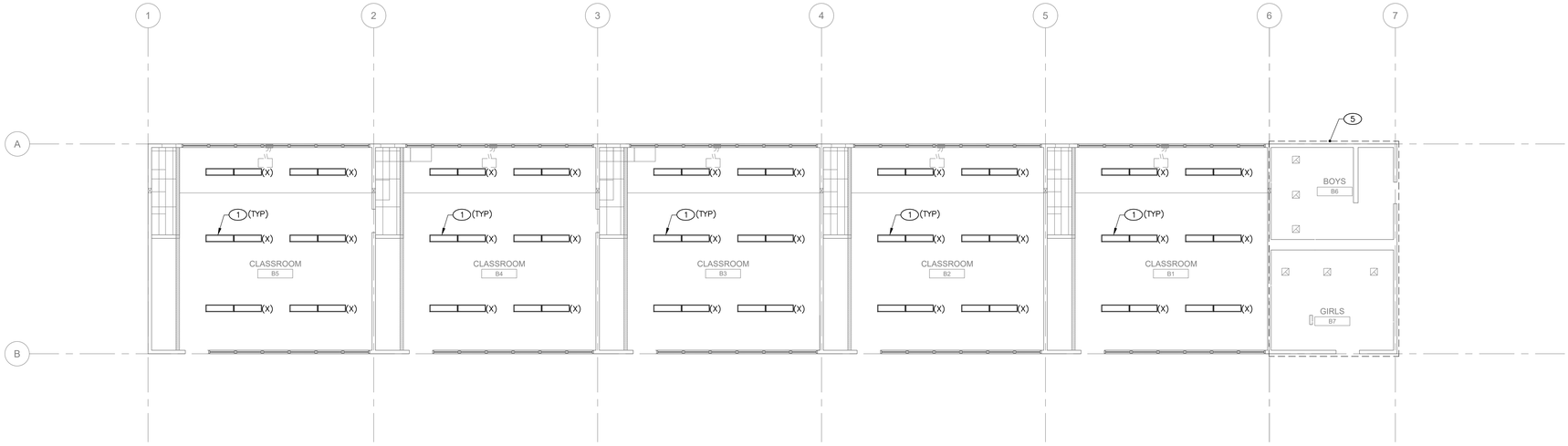
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LIGHTING PLANS
- CLASSROOM BLDG A

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.11
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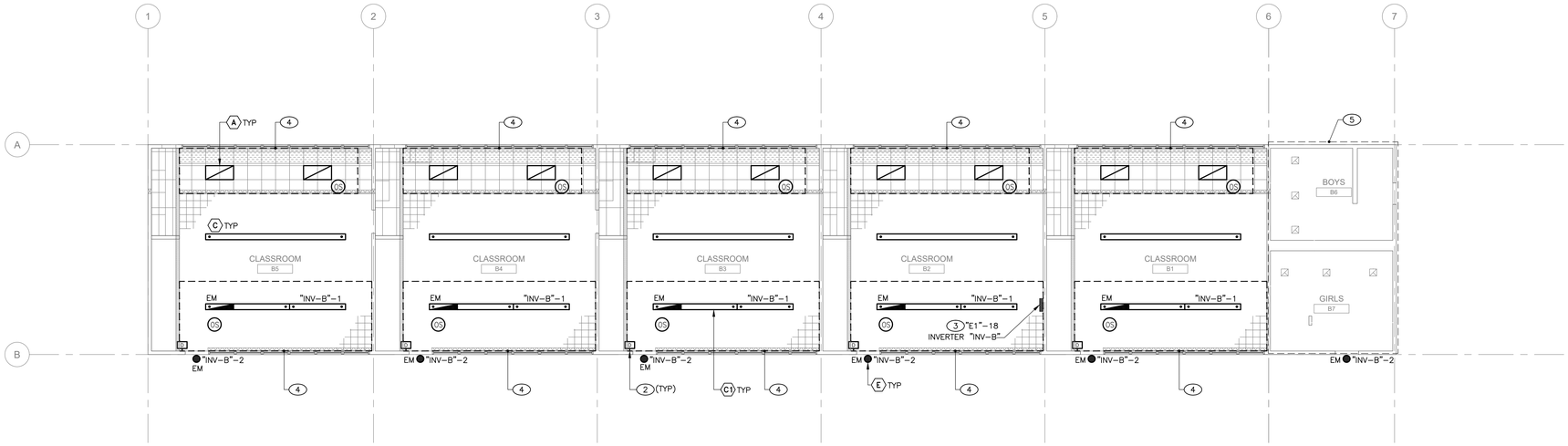


DEMO LIGHTING PLAN - CLASSROOM BLDG B

1
1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN-SWITCHED CIRCUIT IN THE AREA.
2. REPLACE EXISTING SWITCHES WITH NEW CONTROL AS SHOWN.
3. PROVIDE 1.6KW MYERS ILLUMINATOR EM EMERGENCY LIGHTING INVERTER SYSTEM, MODEL #1-EM-2-B-A-20-6.
4. PRIMARY SIDELIT LIT DAYLIT ZONE; LIGHT FIXTURE WITH SWITCHING DESIGNATION SHALL BE CONTROLLED BY PRIMARY SIDELIT DAYLIT ZONE PHOTO CONTROL SENSOR INDEPENDENTLY FROM OTHER FIXTURES.
5. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.



NEW LIGHTING PLAN - CLASSROOM BLDG B

2
1/8" = 1'-0"

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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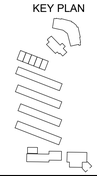
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KEY PLAN



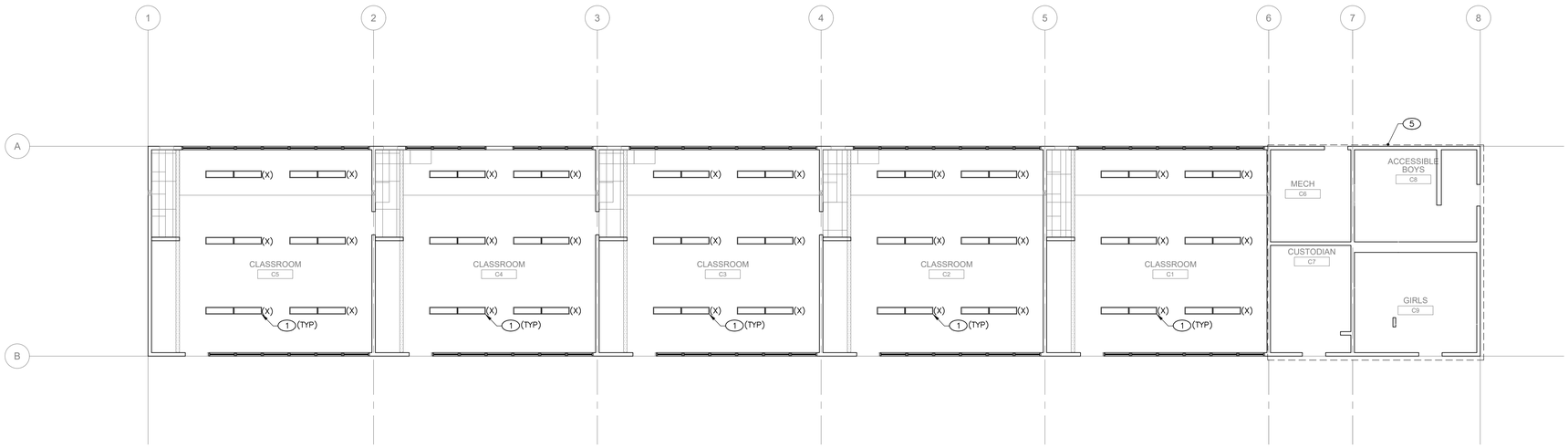
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LIGHTING PLANS - CLASSROOM BLDG B

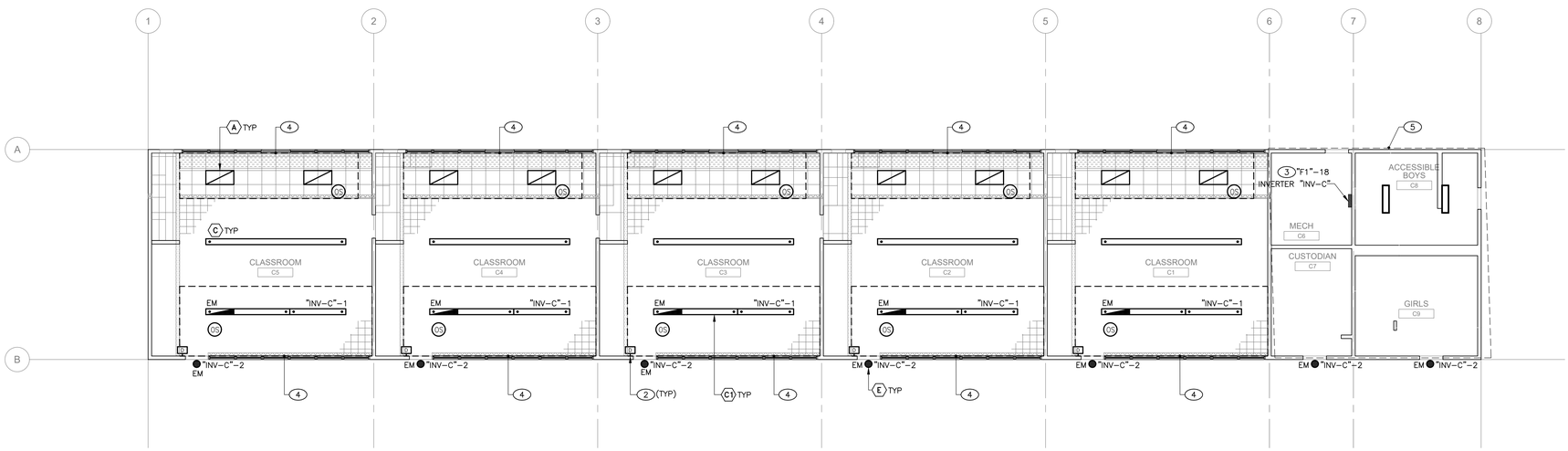
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.12
Drawn: KT	Checked: CD



DEMO LIGHTING PLAN - CLASSROOM BLDG C | **1** 1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN-SWITCHED CIRCUIT IN THE AREA.
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5. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.



NEW LIGHTING PLAN - CLASSROOM BLDG C | **2** 1/8" = 1'-0"

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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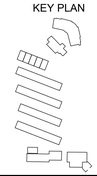
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KEY PLAN



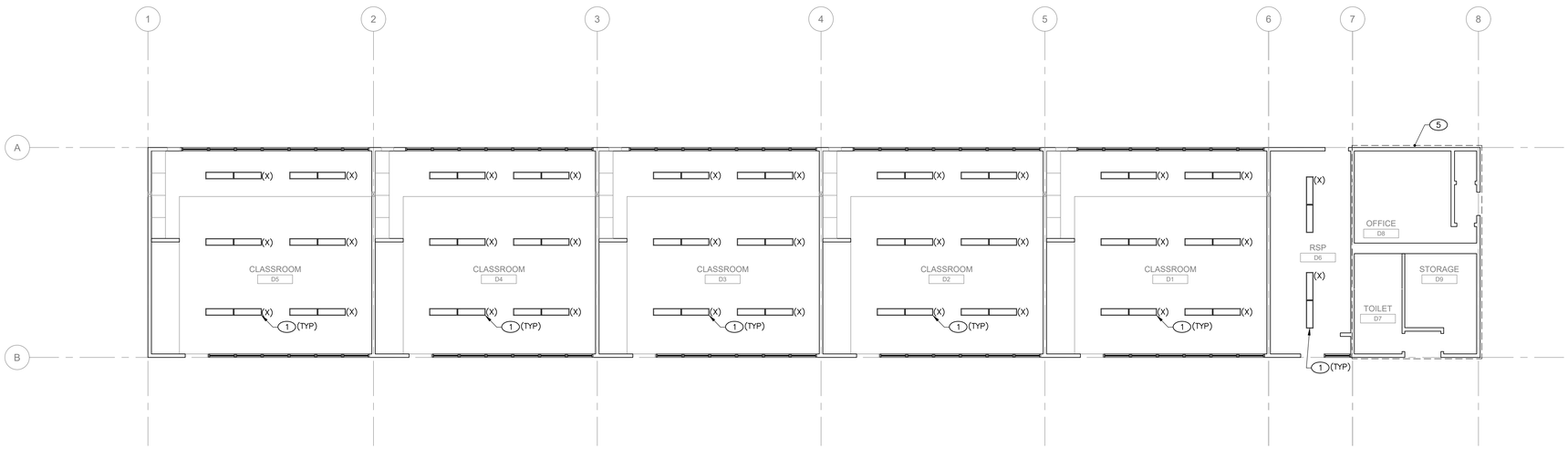
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SAN JOSE, CA 95127

LIGHTING PLANS - CLASSROOM BLDG C

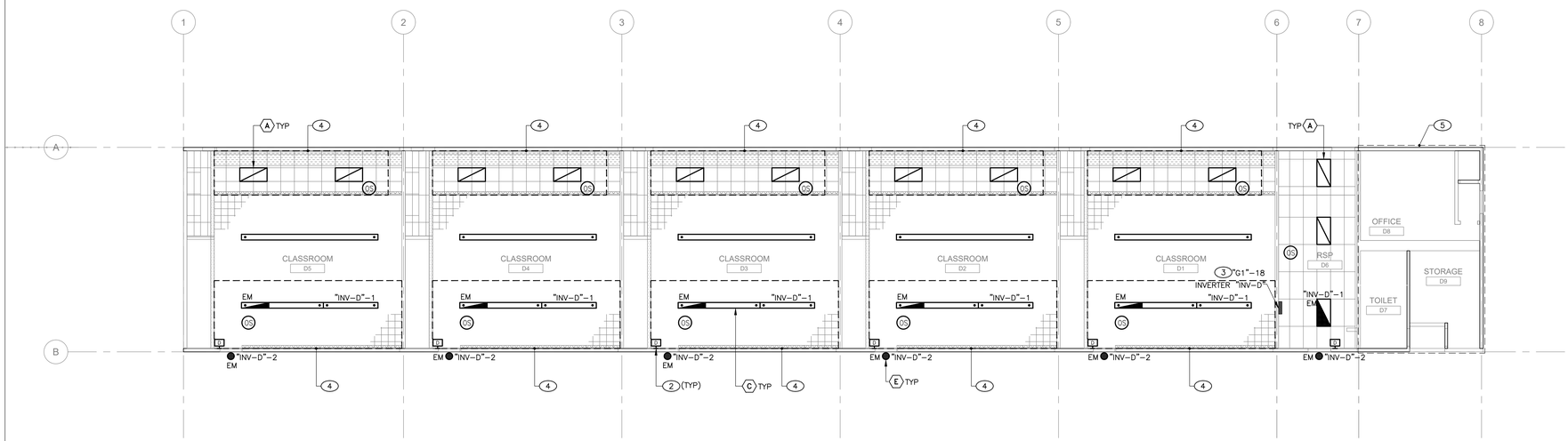
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.13
Drawn / Checked	
KT / CD	



DEMO LIGHTING PLAN - CLASSROOM BLDG D | **1** 1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN-SWITCHED CIRCUIT IN THE AREA.
2. REPLACE EXISTING SWITCHES WITH NEW CONTROL AS SHOWN.
3. PROVIDE 1.6KW MYERS ILLUMINATOR EM EMERGENCY LIGHTING INVERTER SYSTEM, MODEL #1-EM-2-B-A-20-6.
4. PRIMARY SIDELIT LIT DAYLIT ZONE; LIGHT FIXTURE WITH SWITCHING DESIGNATION SHALL BE CONTROLLED BY PRIMARY SIDELIT DAYLIT ZONE PHOTO CONTROL SENSOR INDEPENDENTLY FROM OTHER FIXTURES.
5. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.



NEW LIGHTING PLAN - CLASSROOM BLDG D | **2** 1/8" = 1'-0"

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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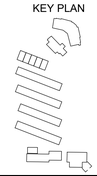
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



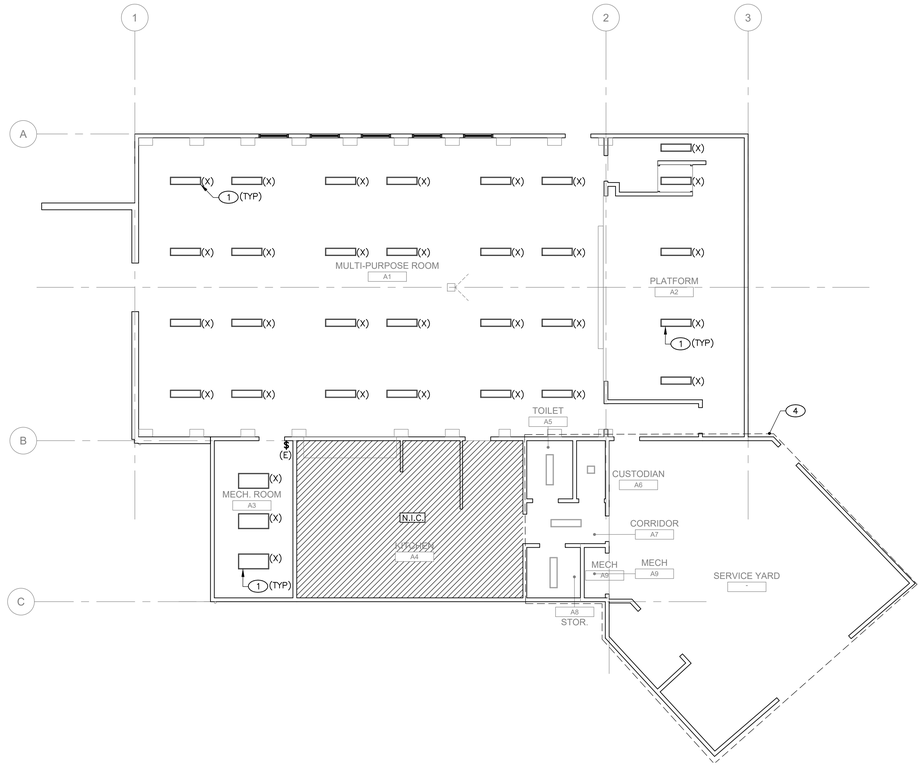
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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3311 LUCIAN AVE.,
SAN JOSE, CA 95127

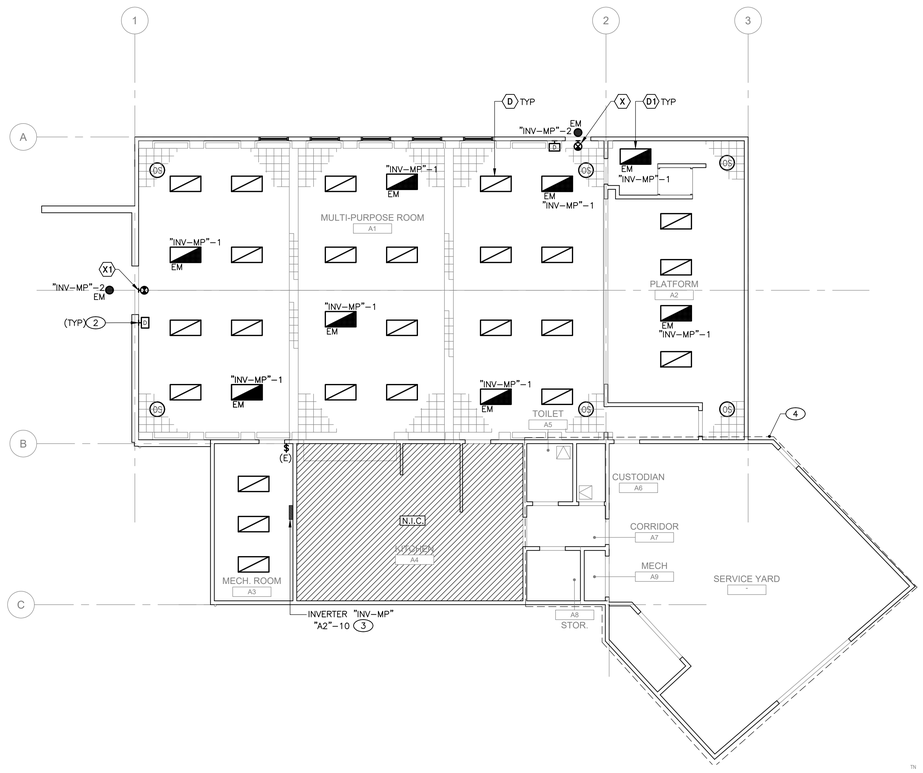
LIGHTING PLANS - CLASSROOM BLDG D

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.14
Drawn / Checked	
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DEMO LIGHTING PLAN - MULTIPURPOSE BLDG | 1

1/8" = 1'-0"



NEW LIGHTING PLAN - MULTIPURPOSE BLDG | 2

1/8" = 1'-0"

KEY NOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROLS FOR INSTALLATION OF NEW FIXTURE/CONTROLS AS SHOWN AT NEW CEILING AREA, UNLESS NOTED OTHERWISE. RETAIN AND MODIFY EXISTING CIRCUITRY FOR RECONNECTION OF NEW FIXTURES WITH SWITCHING ZONES AS SHOWN. CONNECT EMERGENCY LIGHT AND EXIT SIGN TO NEW INVERTER UN–SWITCHED CIRCUIT IN THE AREA.
2. REPLACE EXISTING SWITCHES WITH NEW CONTROL AS SHOWN.
3. PROVIDE 1.6KW MYERS ILLUMINATOR EM EMERGENCY LIGHTING INVERTER SYSTEM, MODEL #1–EM–2–B–A–20–6.
4. LIGHTING IN THIS AREA IS EXISTING TO REMAIN.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. REPORT ANY CONFLICTS/DISCREPANCIES TO ARCHITECT/ENGINEER.

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P WHITSON No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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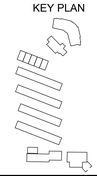
REVISION HISTORY

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DRAWING STATUS

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○ CONSTRUCTION	

KEY PLAN



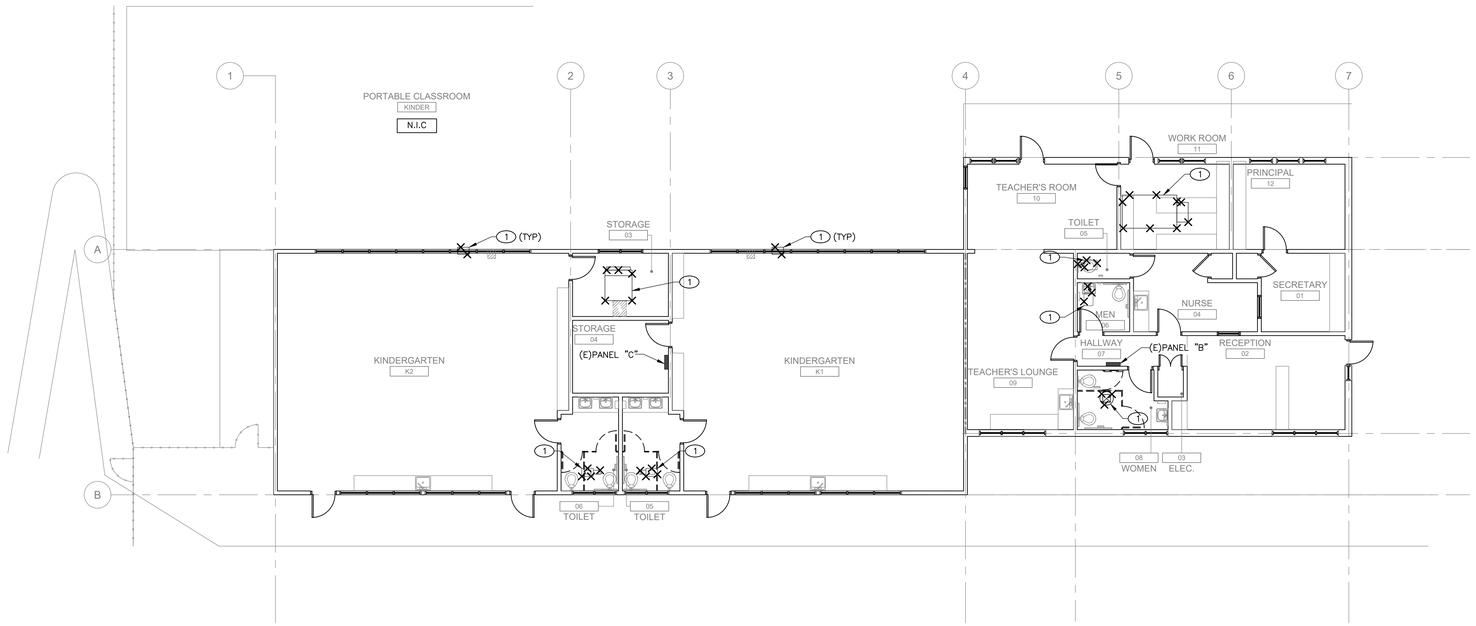
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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LIGHTING PLANS - MULTIPURPOSE BLDG

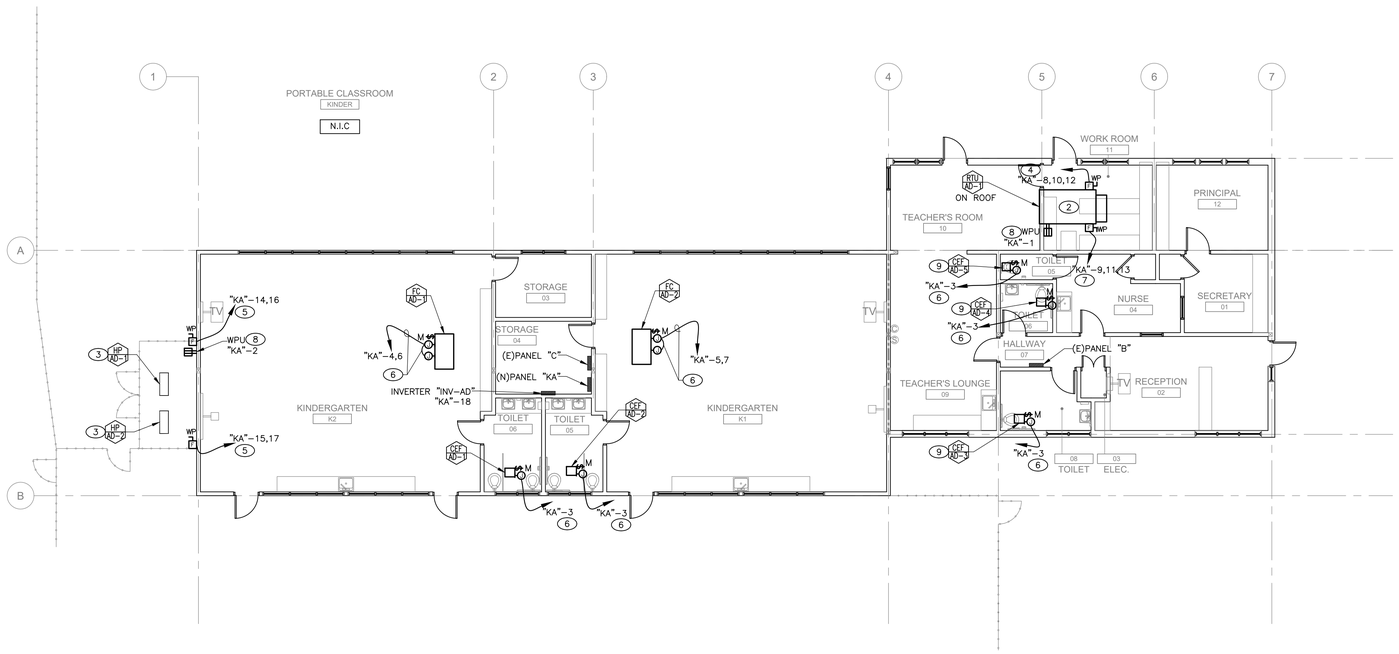
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E2.15
Drawn: KT	Checked: CD



DEMO ELECTRICAL FLOOR PLAN - KINDER-ADMIN BLDG

1

1/8" = 1'-0"



ELECTRICAL POWER PLAN - KINDER-ADMIN BLDG

2

1/8" = 1'-0"

KEY NOTES

1. REMOVE ALL ELECTRICAL DEVICES, APPURTENANCES AND WIRING ASSOCIATED WITH MECHANICAL DEMO EQUIPMENT. REMOVE CONDUCTORS UP TO THE SUPPLY SOURCE. REMOVE ACCESSIBLE CONDUITS AS POSSIBLE. MAINTAIN CIRCUIT CONTINUITY FOR THE DEVICES TO REMAIN. COORDINATE WITH MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
2. ROOFTOP RTU/AD-1: 208V/3PH, 46 FLA, 48 MCA, 60 MOCP AND POWERED EXHAUST; 208V/3PH, 3.9 FLA, 4.9 MCA, 8.8 MOCP. PROVIDE 60AF/60AS/3P FUSED DISCONNECT SWITCH FOR AC POWER AND 20AF/30AS/3P FUSED DISCONNECT SWITCH FOR POWER EXHAUST.
3. HP/AD-1 & AD-2: 208V/1PH, 29.1 MCA, 35 MOCP. PROVIDE 35AF/60AS/2P FUSED DISCONNECT SWITCH FOR HP.
4. PROVIDE 1"C – 3#6 CU + 1#10 CU GND.
5. PROVIDE 1"C – 3#8 CU + 1#10 CU GND.
6. PROVIDE 3/4"C – 2#12 CU + 1#12 CU GND.
7. PROVIDE 3/4"C – 3#10 CU + 1#10 CU GND.
8. 20A RATED WEATHER-RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE-IN-USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.
9. PROVIDE POWER CONNECTION FOR CEF UNIT. INTERLOCK THE UNIT CONTROL WITH LIGHTING CONTROL. PROVIDE PROPER RELAY /POWERPACK DEVICES TO MAKE THE CONTROL INTERLOCKING OPERATIONAL. COORDINATE WITH MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING ANY WORK. SHOULD ANY DISCREPANCY EXIST, CONTRACTOR SHALL NOTIFY ENGINEER AND SCHOOL DISTRICT REPRESENTATIVE.

B. ALL NEW CONDUITS IN A SCOPE OF WORK SHALL BE IMC TYPE WITH THREADED CONNECTORS AND FITTINGS.

C. EACH NEW DISCONNECT SWITCH SHALL BE PERMANENTLY MARKED WITH CORRESPONDING CIRCUIT NUMBER SERVING THAT UNIT.

D. IN INSTANCES WHERE MORE THAN 3 CURRENT-CARRYING CONDUCTORS SHARE A COMMON RACEWAY CONDUCTOR AMPACITIES SHALL BE ADJUSTED IN ACCORDANCE WITH CEC 310.15(B)(3)(a) AND 310.15(B)(2)(a).

E. CONTRACTOR SHALL UPDATE ELECTRICAL PANELBOARD DIRECTORIES TO REFLECT ANY CHANGES MADE TO A CIRCUIT ARRANGEMENT.

F. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL EQUIPMENT VENDOR FOR A SUITABLE DISCONNECT SWITCH MOUNTING LOCATION.

G. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA-DUTY" PER CEC 406.9(B)(1).

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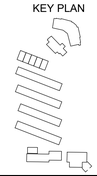
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



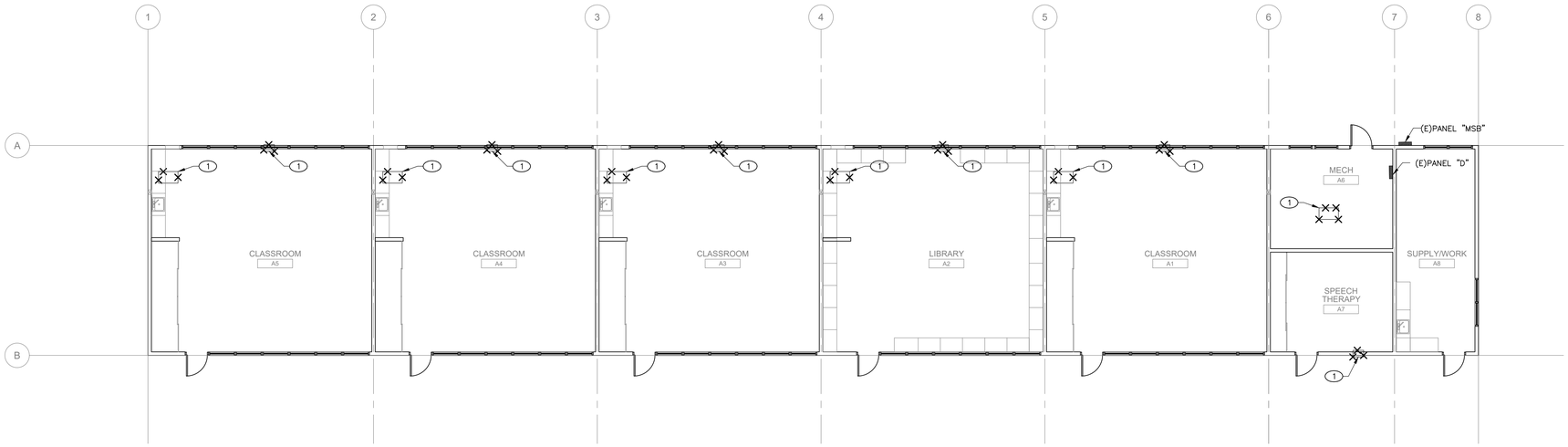
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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ELECTRICAL POWER PLAN - KINDER-ADMIN BLDG

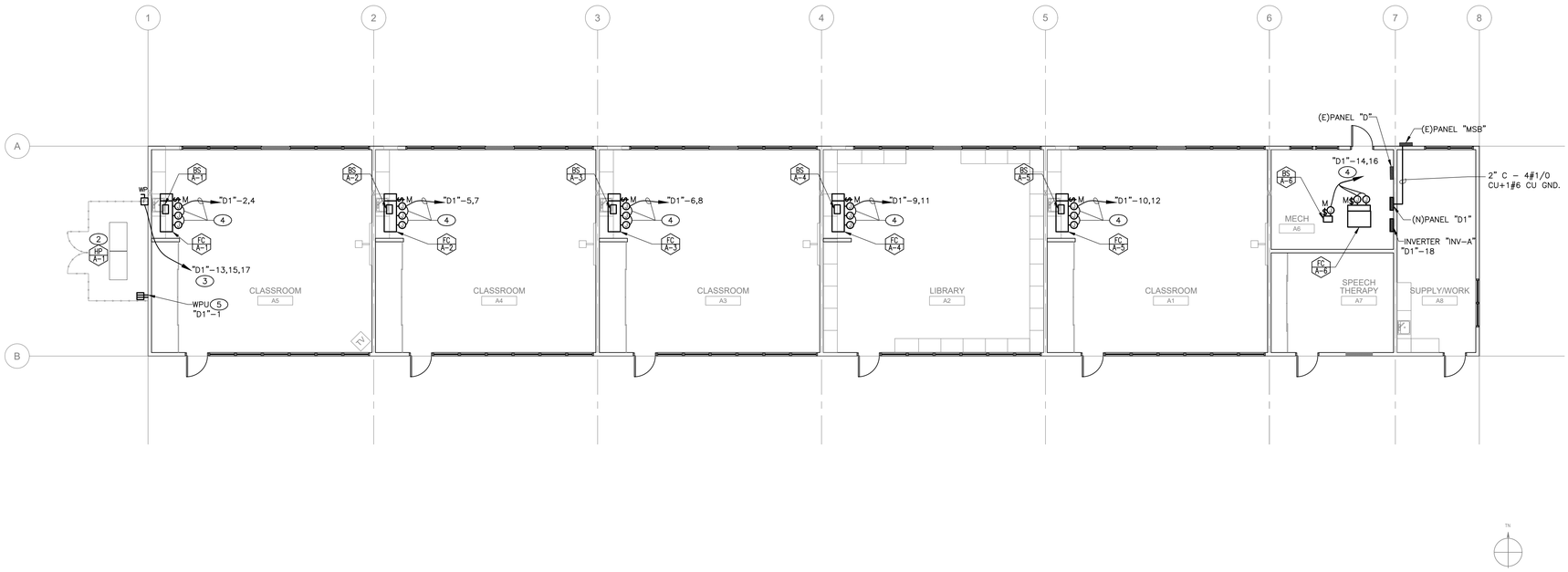
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.10
Drawn / Checked	
KT / CD	



DEMO ELECTRICAL POWER PLAN - CLASSROOM BLDG A

1

1/8" = 1'-0"



ELECTRICAL POWER PLAN - CLASSROOM BLDG A

2

1/8" = 1'-0"

KEY NOTES

1. REMOVE ALL ELECTRICAL DEVICES, APPURTENANCES AND WIRING ASSOCIATED WITH MECHANICAL DEMO EQUIPMENT. REMOVE CONDUCTORS UP TO THE SUPPLY SOURCE. REMOVE ACCESSIBLE CONDUITS AS POSSIBLE. MAINTAIN CIRCUIT CONTINUITY FOR THE DEVICES TO REMAIN. COORDINATE WITH MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
2. HP/A–1: 208V/3PH, 84.3 MCA, 90 MOCP. PROVIDE 90AF/100AS/3P FUSED DISCONNECT SWITCH FOR HP.
3. PROVIDE 1 1/2"C – 3#2 CU + 1#8 CU GND.
4. PROVIDE 3/4"C – 2#12 CU + 1#12 CU GND.
5. 20A RATED WEATHER–RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE–IN–USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING ANY WORK. SHOULD ANY DISCREPANCY EXIST, CONTRACTOR SHALL NOTIFY ENGINEER AND SCHOOL DISTRICT REPRESENTATIVE.

B. ALL NEW CONDUITS IN A SCOPE OF WORK SHALL BE IMC TYPE WITH THREADED CONNECTORS AND FITTINGS.

C. EACH NEW DISCONNECT SWITCH SHALL BE PERMANENTLY MARKED WITH CORRESPONDING CIRCUIT NUMBER SERVING THAT UNIT.

D. IN INSTANCES WHERE MORE THAN 3 CURRENT–CARRYING CONDUCTORS SHARE A COMMON RACEWAY CONDUCTOR AMPACITIES SHALL BE ADJUSTED IN ACCORDANCE WITH CEC 310.15(B)(3)(a) AND 310.15(B)(2)(a).

E. CONTRACTOR SHALL UPDATE ELECTRICAL PANELBOARD DIRECTORIES TO REFLECT ANY CHANGES MADE TO A CIRCUIT ARRANGEMENT.

F. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL EQUIPMENT VENDOR FOR A SUITABLE DISCONNECT SWITCH MOUNTING LOCATION.

G. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA–DUTY" PER CEC 406.9(B)(1).

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LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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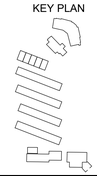
REVISION HISTORY

NO.	REMARKS	DATE

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	DATE
○ DSA PLAN CHECK	12/23/2022
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○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



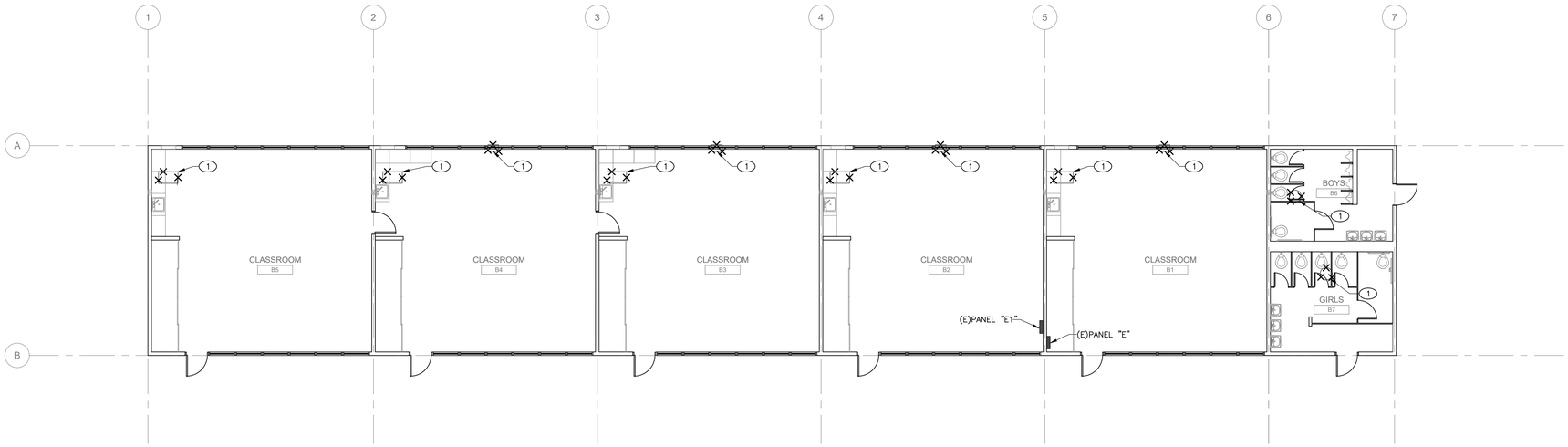
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CONSTRUCTION DOCUMENTS

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ELECTRICAL POWER PLAN - CLASSROOM BLDG A

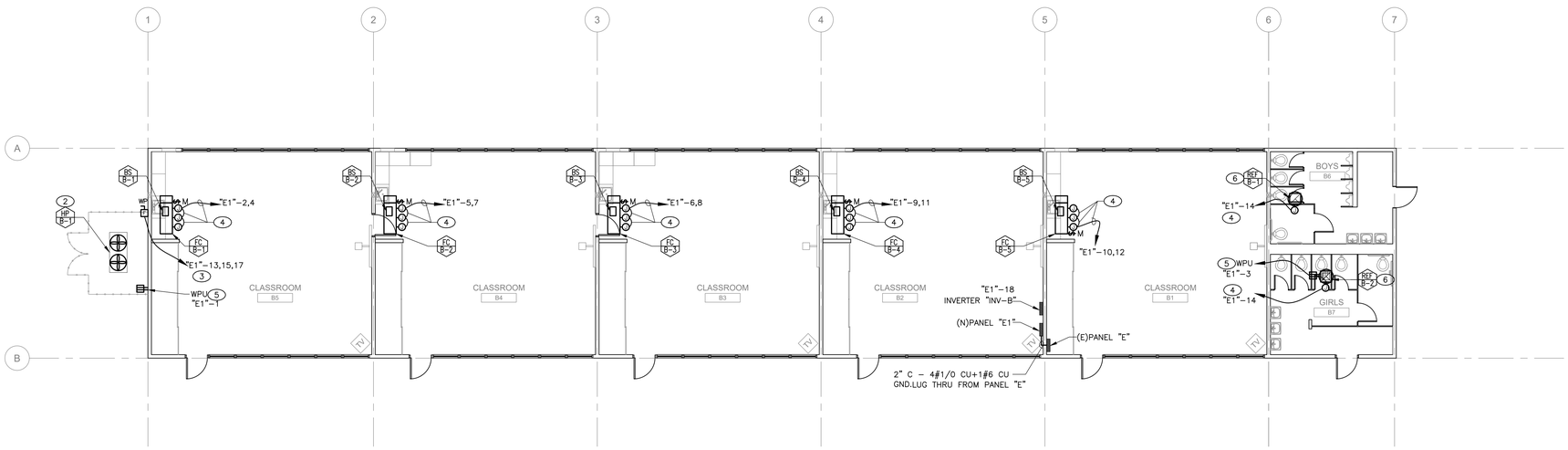
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.11
Drawn: KT	Checked: CD



DEMO ELECTRICAL POWER PLAN - CLASSROOM BLDG B

1

1/8" = 1'-0"



ELECTRICAL POWER PLAN - CLASSROOM BLDG B

2

1/8" = 1'-0"

KEY NOTES

1. REMOVE ALL ELECTRICAL DEVICES, APPURTENANCES AND WIRING ASSOCIATED WITH MECHANICAL DEMO EQUIPMENT. REMOVE CONDUCTORS UP TO THE SUPPLY SOURCE. REMOVE ACCESSIBLE CONDUITS AS POSSIBLE. MAINTAIN CIRCUIT CONTINUITY FOR THE DEVICES TO REMAIN. COORDINATE WITH MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
2. HP/B-1: 208V/3PH, 73.7 MCA, 80 MOCP. PROVIDE 80AF/100AS/3P FUSED DISCONNECT SWITCH FOR HP.
3. PROVIDE 1 1/4"C - 3#3 CU + 1#8 CU GND.
4. PROVIDE 3/4"C - 2#12 CU + 1#12 CU GND.
5. 20A RATED WEATHER-RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE-IN-USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.
6. PROVIDE POWER CONNECTION FOR REF UNIT. INTERLOCK THE UNIT CONTROL WITH LIGHTING CONTROL. PROVIDE PROPER RELAY /POWERPACK DEVICES TO MAKE THE CONTROL INTERLOCKING OPERATIONAL. COORDINATE WITH MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.

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D. IN INSTANCES WHERE MORE THAN 3 CURRENT-CARRYING CONDUCTORS SHARE A COMMON RACEWAY CONDUCTOR AMPACITIES SHALL BE ADJUSTED IN ACCORDANCE WITH CEC 310.15(B)(3)(a) AND 310.15(B)(2)(a).

E. CONTRACTOR SHALL UPDATE ELECTRICAL PANELBOARD DIRECTORIES TO REFLECT ANY CHANGES MADE TO A CIRCUIT ARRANGEMENT.

F. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL EQUIPMENT VENDOR FOR A SUITABLE DISCONNECT SWITCH MOUNTING LOCATION.

G. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA-DUTY" PER CEC 406.9(B)(1).

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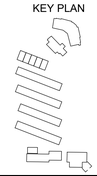
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○ CONSTRUCTION	

KEY PLAN



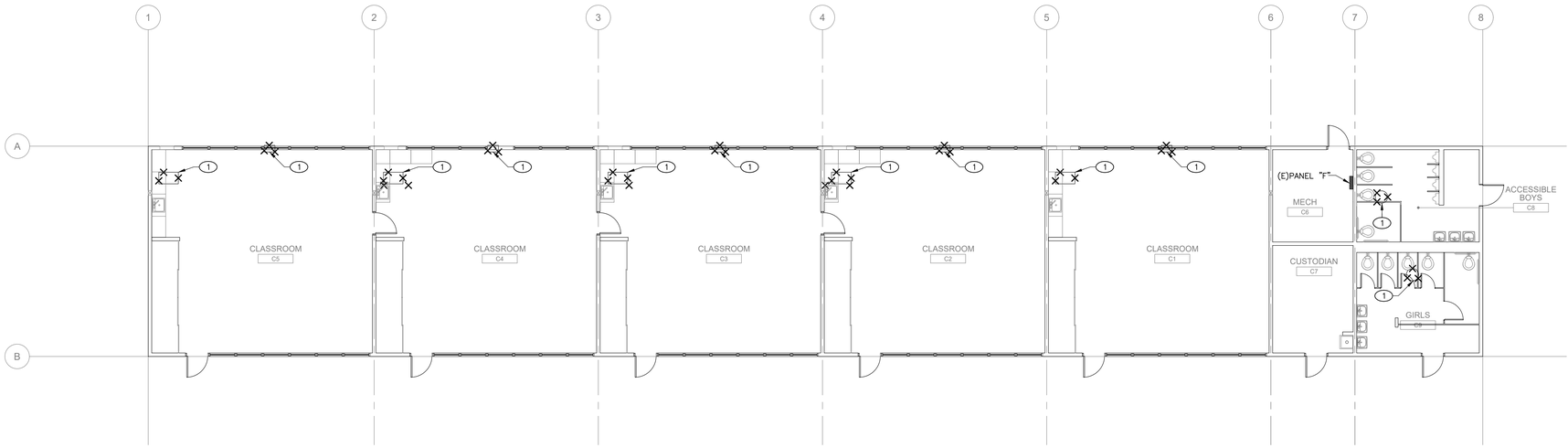
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL POWER PLAN - CLASSROOM BLDG B

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.12
Drawn / Checked	
KT / CD	



DEMO ELECTRICAL POWER PLAN - CLASSROOM BLDG C

1

1/8" = 1'-0"

KEY NOTES

1. REMOVE ALL ELECTRICAL DEVICES, APPURTENANCES AND WIRING ASSOCIATED WITH MECHANICAL DEMO EQUIPMENT. REMOVE CONDUCTORS UP TO THE SUPPLY SOURCE. REMOVE ACCESSIBLE CONDUITS AS POSSIBLE. MAINTAIN CIRCUIT CONTINUITY FOR THE DEVICES TO REMAIN. COORDINATE WITH MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
2. HP/B-1: 208V/3PH, 73.7 MCA, 80 MOCP. PROVIDE 80AF/100AS/3P FUSED DISCONNECT SWITCH FOR HP.
3. PROVIDE 1 1/4"C – 3#3 CU + 1#8 CU GND.
4. PROVIDE 3/4"C – 2#12 CU + 1#12 CU GND.
5. 20A RATED WEATHER-RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE-IN-USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.
6. PROVIDE POWER CONNECTION FOR REF UNIT. INTERLOCK THE UNIT CONTROL WITH LIGHTING CONTROL. PROVIDE PROPER RELAY /POWERPACK DEVICES TO MAKE THE CONTROL INTERLOCKING OPERATIONAL. COORDINATE WITH MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING ANY WORK. SHOULD ANY DISCREPANCY EXIST, CONTRACTOR SHALL NOTIFY ENGINEER AND SCHOOL DISTRICT REPRESENTATIVE.

B. ALL NEW CONDUITS IN A SCOPE OF WORK SHALL BE IMC TYPE WITH THREADED CONNECTORS AND FITTINGS.

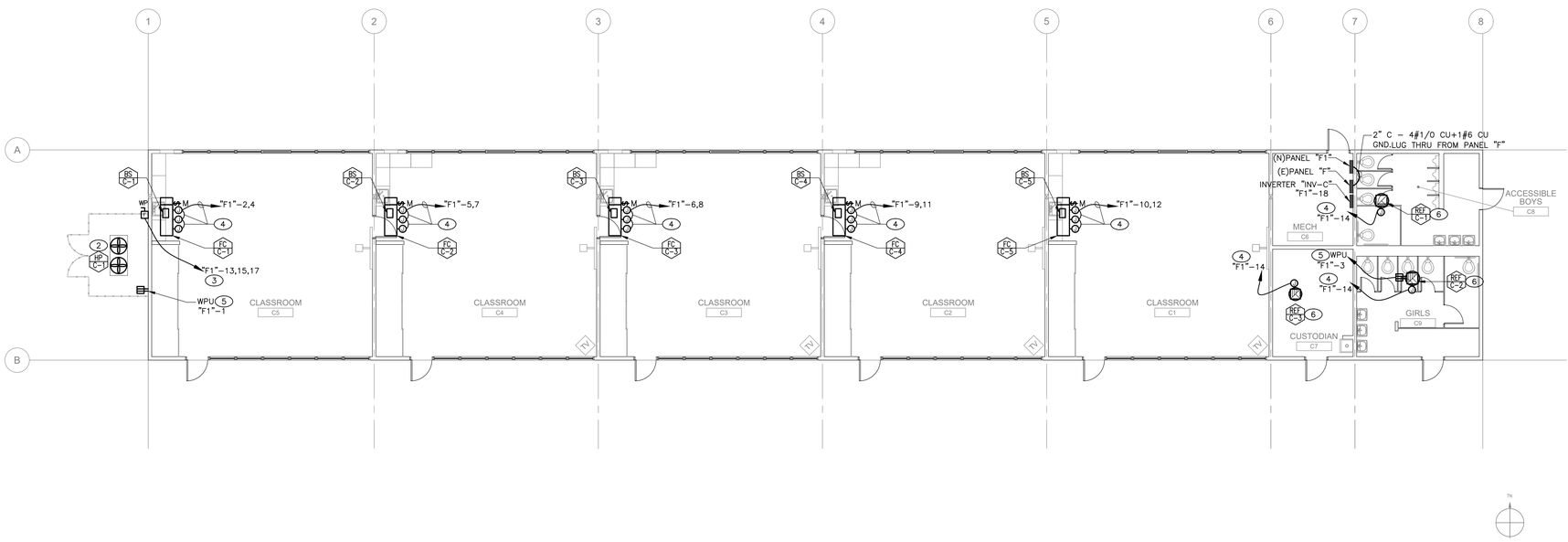
C. EACH NEW DISCONNECT SWITCH SHALL BE PERMANENTLY MARKED WITH CORRESPONDING CIRCUIT NUMBER SERVING THAT UNIT.

D. IN INSTANCES WHERE MORE THAN 3 CURRENT-CARRYING CONDUCTORS SHARE A COMMON RACEWAY CONDUCTOR AMPACITIES SHALL BE ADJUSTED IN ACCORDANCE WITH CEC 310.15(B)(3)(a) AND 310.15(B)(2)(a).

E. CONTRACTOR SHALL UPDATE ELECTRICAL PANELBOARD DIRECTORIES TO REFLECT ANY CHANGES MADE TO A CIRCUIT ARRANGEMENT.

F. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL EQUIPMENT VENDOR FOR A SUITABLE DISCONNECT SWITCH MOUNTING LOCATION.

G. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA-DUTY" PER CEC 406.9(B)(1).



ELECTRICAL POWER PLAN - CLASSROOM BLDG C

2

1/8" = 1'-0"

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16752 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

GENERAL NOTES

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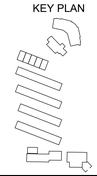
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



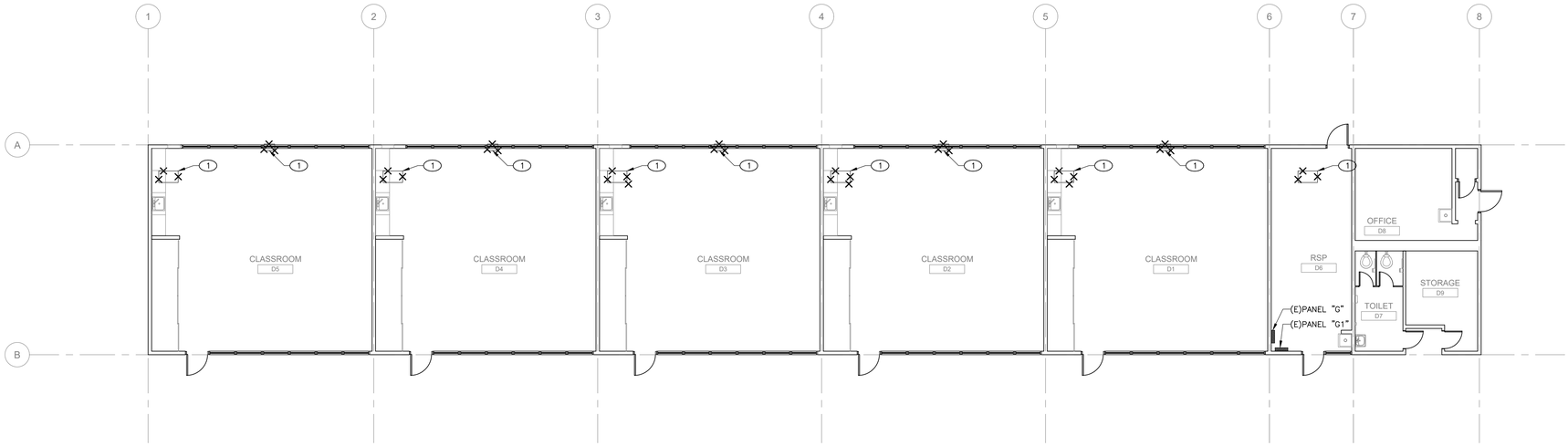
ALUM ROCK UNION SCHOOL DISTRICT
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CONSTRUCTION DOCUMENTS

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ELECTRICAL POWER PLAN - CLASSROOM BLDG C

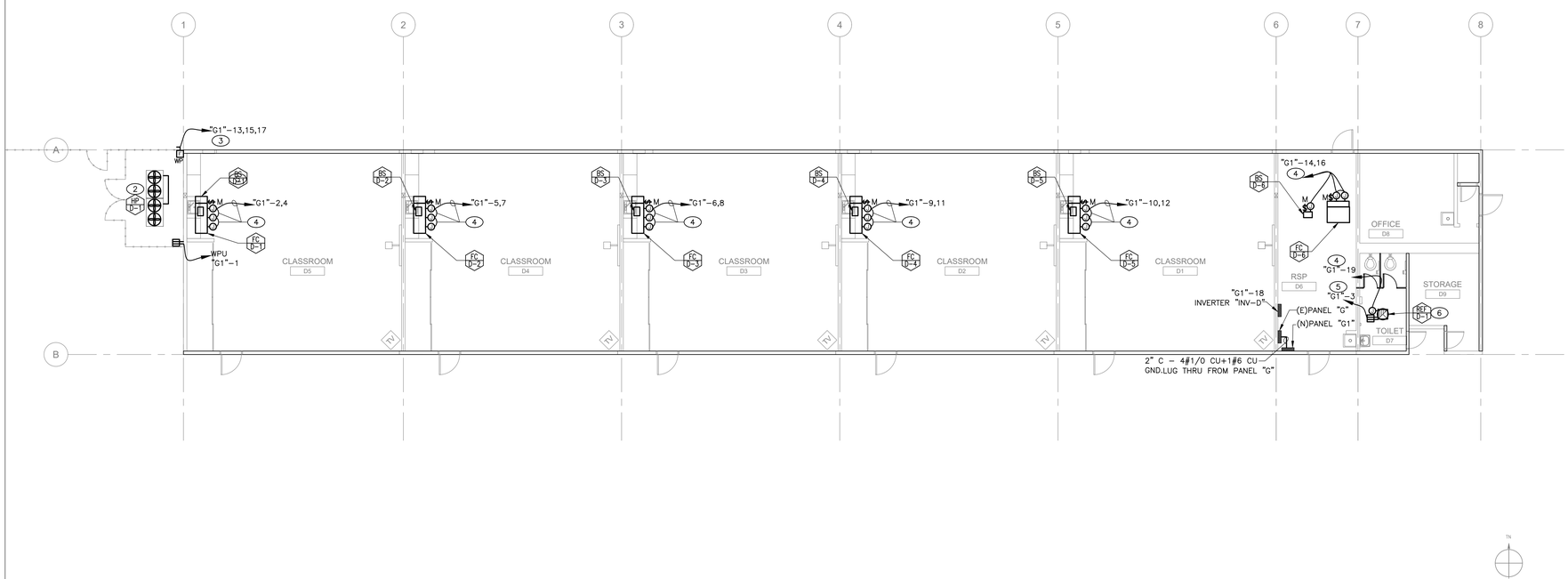
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.13
Drawn / Checked	
KT / CD	



DEMO ELECTRICAL POWER PLAN - CLASSROOM BLDG D

1

1/8" = 1'-0"



ELECTRICAL POWER PLAN - CLASSROOM BLDG D

2

1/8" = 1'-0"

KEY NOTES

1. REMOVE ALL ELECTRICAL DEVICES, APPURTENANCES AND WIRING ASSOCIATED WITH MECHANICAL DEMO EQUIPMENT. REMOVE CONDUCTORS UP TO THE SUPPLY SOURCE. REMOVE ACCESSIBLE CONDUITS AS POSSIBLE. MAINTAIN CIRCUIT CONTINUITY FOR THE DEVICES TO REMAIN. COORDINATE WITH MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
2. HP/A-1: 208V/3PH, 84.3 MCA, 90 MOCP. PROVIDE 90AF/100AS/3P FUSED DISCONNECT SWITCH FOR HP.
3. PROVIDE 1"C - 3#3 CU + 1#8 CU GND.
4. PROVIDE 3/4"C - 2#12 CU + 1#12 CU GND.
5. 20A RATED WEATHER-RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE-IN-USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.
6. PROVIDE POWER CONNECTION FOR REF UNIT. INTERLOCK THE UNIT CONTROL WITH LIGHTING CONTROL. PROVIDE PROPER RELAY /POWERPACK DEVICES TO MAKE THE CONTROL INTERLOCKING OPERATIONAL. COORDINATE WITH MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.

GENERAL NOTES

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B. ALL NEW CONDUITS IN A SCOPE OF WORK SHALL BE IMC TYPE WITH THREADED CONNECTORS AND FITTINGS.

C. EACH NEW DISCONNECT SWITCH SHALL BE PERMANENTLY MARKED WITH CORRESPONDING CIRCUIT NUMBER SERVING THAT UNIT.

D. IN INSTANCES WHERE MORE THAN 3 CURRENT-CARRYING CONDUCTORS SHARE A COMMON RACEWAY CONDUCTOR AMPACITIES SHALL BE ADJUSTED IN ACCORDANCE WITH CEC 310.15(B)(3)(a) AND 310.15(B)(2)(a).

E. CONTRACTOR SHALL UPDATE ELECTRICAL PANELBOARD DIRECTORIES TO REFLECT ANY CHANGES MADE TO A CIRCUIT ARRANGEMENT.

F. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL EQUIPMENT VENDOR FOR A SUITABLE DISCONNECT SWITCH MOUNTING LOCATION.

G. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA-DUTY" PER CEC 406.9(B)(1).

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DATE: 5/4/2023

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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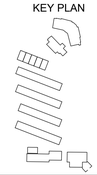
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



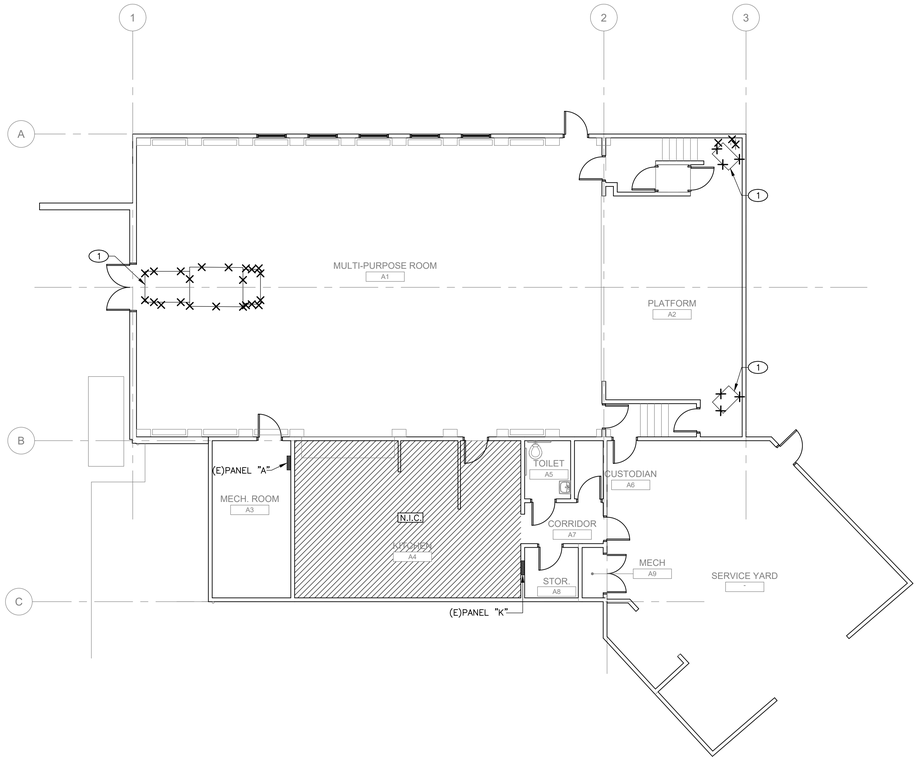
ALUM ROCK UNION SCHOOL DISTRICT
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

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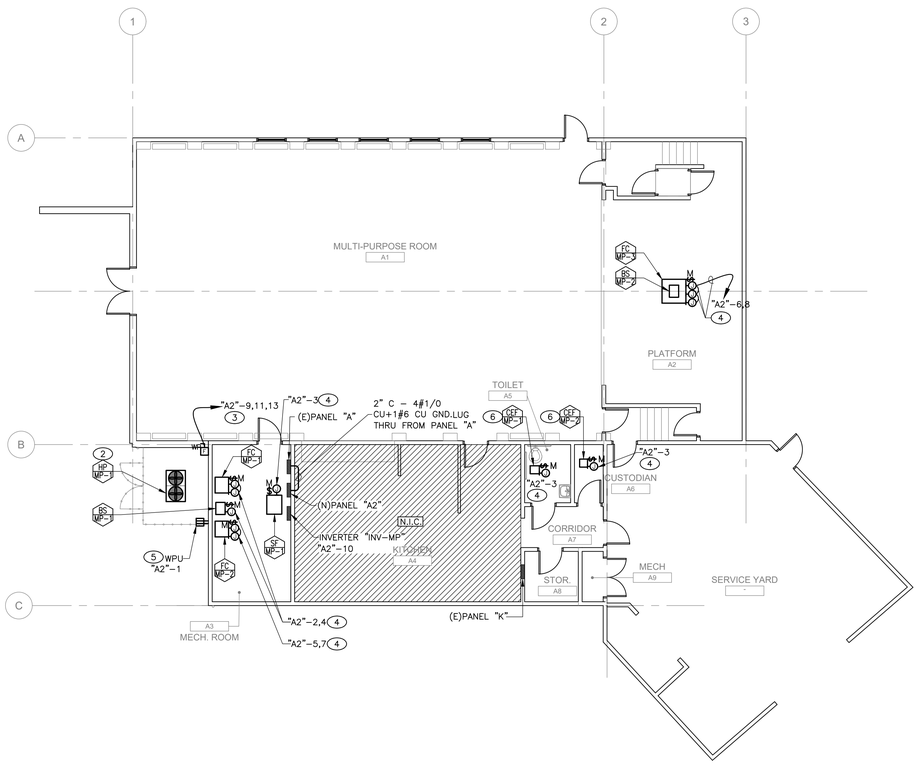
ELECTRICAL POWER PLAN - CLASSROOM BLDG D

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.14
Drawn / Checked	
KT / CD	



DEMO ELECTRICAL PLAN - MULTIPURPOSE BLDG

1
1/8" = 1'-0"



ELECTRICAL POWER PLAN - MULTIPURPOSE BLDG

2
1/8" = 1'-0"

KEY NOTES

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2. HP/MP-1: 208V/3PH, 47.8 MCA, 50 MOCP. PROVIDE 50AF/60AS/3P FUSED DISCONNECT SWITCH FOR HP.
3. PROVIDE 1"C - 3#6 CU + 1#10 CU GND.
4. PROVIDE 3/4"C - 2#12 CU + 1#12 CU GND.
5. 20A RATED WEATHER-RESISTANT GFCI OUTLET WITH WEATHERPROOF WHILE-IN-USE COVER. PROVIDE 3/4" CONDUIT WITH 2#10CU + 1#10CU GND TO A 120 VOLT, 20 AMP, 1 POLE CIRCUIT BREAKER IN THE ELECTRICAL PANEL INDICATED.
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DSA STAMP

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DATE: 5/4/2023

STUDIO W ARCHITECTS

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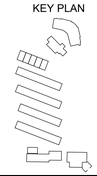
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL POWER PLAN - MULTIPURPOSE BLDG

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E3.15
Drawn: KT	Checked: CD

INVERTER-B "INV-B"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM ANEL E1
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-B INTERIOR LIGHTS	275
2	20/1	BUILDIN-B EXTEIOR LIGHTS	120
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	395

DEMAND LOADS		
LIGHTING / CONTINUOUS L	494	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	494	Watts
TOTAL DEMAND AMPS	4	AMPS

INVERTER-C "INV-C"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM Panel-F1
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-C INTERIOR LIGHTS	275
2	20/1	BUILDIN-C EXTEIOR LIGHTS	140
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	415

DEMAND LOADS		
LIGHTING / CONTINUOUS L	519	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	519	Watts
TOTAL DEMAND AMPS	4	AMPS

INVERTER-D "INV-D"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM Panel-G1
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-D INTERIOR LIGHTS	316
2	20/1	BUILDIN-D EXTEIOR LIGHTS	120
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	436

DEMAND LOADS		
LIGHTING / CONTINUOUS L	545	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	545	Watts
TOTAL DEMAND AMPS	5	AMPS

INVERTER-MP "INV-MP"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM Panel-A2
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-MP INTERIOR LIGHTS	295
2	20/1	BUILDIN-MP EXTEIOR LIGHTS	40
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	335

DEMAND LOADS		
LIGHTING / CONTINUOUS L	419	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	419	Watts
TOTAL DEMAND AMPS	3	AMPS

(N)PANEL "G1"

120/208 Volt, 3 Phase, 4 Wire
200 Amp BUS CU.
150 Amp MCB
Amp MLO

FEED FROM PANEL-G
10000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT	180					550		FC D-1 + BS D-1	20/2	2
3	20/1	RECPT ON ROOF		180					550	-	-	4
5	20/2	FC D-2 + BS D-2			550				550	FC D-3 + BS D-3	20/2	6
7	-	-	550				550			-	-	8
9	20/2	FC D-4 + BS D-4		550				550		FC D-5 + BS D-5	20/2	10
11	-	-			550				550	-	-	12
13	90/3	HP D-1	8,099				183			FC D-6 + BS D-6	20/2	14
15	-	-		8,099				183		-	-	16
17	-	-			8,099				2,000	INVERTER "INV-D"	25/1	18
19	20/1	REF D-1	50							SPARE	20/1	20
21	20/1	SPARE								SPARE	20/1	22
23	20/1	SPARE								SPARE	20/1	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 10,162	B 10,112	C 12,299							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	30,574	Watts
LARGEST MOTOR x 25%	2,025	Watts
TOTAL DEMAND LOADS	35,098	Watts
TOTAL DEMAND AMPS	97	AMPS

(N)PANEL "KA"

120/208 Volt, 3 Phase, 4 Wire
200 Amp BUS CU.
150 Amp MCB
Amp MLO

FEED FROM MSB
10000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT ON ROOF	180				180			RECPT	20/1	2
3	20/1	CEF- AD-1 THRU AD-5		270				541		FC AD-1	20/2	4
5	20/2	FC AD-2			541				541	-	-	6
7	-	-	541				5,524			RTU AD-1	60/3	8
9	20/3	RTU AD-1 - POWER EXHAUST		468				5,524		-	-	10
11	-	-			468				5,524	-	-	12
13	-	-	468				2,421			HP AD-1	35/2	14
15	35/2	HP AD-2		2,421				2,421		-	-	16
17	-	-			2,421				2,000	INVERTER "INV-AD"	25/1	18
19	PFB	SPACE								SPACE	PFB	20
21	PFB	SPACE								SPACE	PFB	22
23	PFB	SPACE								SPACE	PFB	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 9,314	B 11,645	C 11,495							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	30,453	Watts
LARGEST MOTOR x 25%	1,381	Watts
TOTAL DEMAND LOADS	34,334	Watts
TOTAL DEMAND AMPS	95	AMPS

(N)PANEL "A2"

120/208 Volt, 3 Phase, 4 Wire
100 Amp BUS CU.
Amp MCB
150 Amp MLO

FEED FROM A
10,000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT	180				734			FC MP-1 + BS MP-1	20/2	2
3	20/1	CEF MP-1, CEF MP-2 & SF MP-1		693				734		-	-	4
5	20/2	FC MP-2			734				80	FC MP-3 + BS MP-2	20/2	6
7	-	-	734				80			-	-	8
9	50/3	HP MP-1		4,592				2,000		INVERTER "INV-MP"	25/1	10
11	-	-			4,592					SPARE	20/1	12
13			4,592							SPARE	20/1	14
15	20/1	SPARE								SPARE	20/1	16
17	20/1	SPARE								SPARE	20/1	18
19	20/1	SPARE								SPARE	20/1	20
21	20/1	SPARE								SPARE	20/1	22
23	20/1	SPARE								SPARE	20/1	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 6,320	B 8,019	C 5,406							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	17,745	Watts
LARGEST MOTOR x 25%	1,148	Watts
TOTAL DEMAND LOADS	21,393	Watts
TOTAL DEMAND AMPS	59	AMPS

INVERTER-AD "INV-AD"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM Panel-KA
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-AD INTERIOR LIGHTS	274
2	20/1	BUILDIN-AD EXTEIOR LIGHTS	120
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	394

DEMAND LOADS		
LIGHTING / CONTINUOUS L	493	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	493	Watts
TOTAL DEMAND AMPS	4	AMPS

(N)PANEL "D1"

120/208 Volt, 3 Phase, 4 Wire
225 Amp BUS CU.
150 Amp MCB
Amp MLO

FEED FROM PANEL-MSB
10000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT	180					550		FC A-1 + BS A-1	20/2	2
3	20/1	SPARE							550	-	-	4
5	20/2	FC A-2 + BS A-2			550				550	FC A-3 + BS A-3	20/2	6
7	-	-	550				550			-	-	8
9	20/2	FC A-4 + BS A-4		550				550		FC A-5 + BS A-5	20/2	10
11	-	-			550				550	-	-	12
13	90/3	HP A-1	8,099				156			FC A-6 + BS A-6	20/2	14
15	-	-		8,099				156		-	-	16
17	-	-			8,099				2,000	INVERTER "INV-A"	25/1	18
19	20/1	SPARE								SPARE	20/1	20
21	20/1	SPARE								SPARE	20/1	22
23	20/1	SPARE								SPARE	20/1	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 10,085	B 9,905	C 12,299							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	30,289	Watts
LARGEST MOTOR x 25%	2,025	Watts
TOTAL DEMAND LOADS	34,814	Watts
TOTAL DEMAND AMPS	97	AMPS

(N)PANEL "E1"

120/208 Volt, 3 Phase, 4 Wire
225 Amp BUS CU.
150 Amp MCB
Amp MLO

FEED FROM PANEL-E
10000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT	180					550		FC B-1 + BS B-1	20/2	2
3	20/1	RECPT		180					550	-	-	4
5	20/2	FC B-2 + BS B-2			550				550	FC B-3 + BS B-3	20/2	6
7	-	-	550				550			-	-	8
9	20/2	FC B-4 + BS B-4		550				550		FC B-5 + BS B-5	20/2	10
11					550				550	-	-	12
13	80/3	HP A-1	7,080				368			REF B-1 + REF B-2	20/1	14
15	-	-		7,080						SPARE	20/1	16
17	-	-			7,080				2,000	INVERTER "INV-B"	25/1	18
19	20/1	SPARE								SPARE	20/1	20
21	20/1	SPARE								SPARE	20/1	22
23	20/1	SPARE								SPARE	20/1	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 9,278	B 8,910	C 11,280							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	27,468	Watts
LARGEST MOTOR x 25%	1,770	Watts
TOTAL DEMAND LOADS	31,738	Watts
TOTAL DEMAND AMPS	88	AMPS

(N)PANEL "F1"

120/208 Volt, 3 Phase, 4 Wire
225 Amp BUS CU.
150 Amp MCB
Amp MLO

FEED FROM PANEL-F
10000 KAIC Rating
SURFACE Mounted
NEMA-1 Type

CKT.	BKR	DESCRIPTION	PHASE SUMMARY (WATTS) A	B	C		A	B	C	DESCRIPTION	BKR	CKT.
1	20/1	RECPT	180					550		FC C-1 + BS C-1	20/2	2
3	20/1	RECPT		180					550	-	-	4
5	20/2	FC C-2 + BS C-2			550				550	FC C-3 + BS C-3	20/2	6
7	-	-	550				550			-	-	8
9	20/2	FC C-4 + BS C-4		550				550		FC C-5 + BS C-5	20/2	10
11	-	-			550				550	-	-	12
13	80/3	HP A-1	7,080				460			REF C-1, REF C-2 & REF C-3	20/1	14
15	-	-		7,080						SPARE	20/1	16
17	-	-			7,080				2,000	INVERTER "INV-C"	25/1	18
19	20/1	SPARE								SPARE	20/1	20
21	20/1	SPARE								SPARE	20/1	22
23	20/1	SPARE								SPARE	20/1	24
25	PFB	SPACE								SPACE	PFB	26
27	PFB	SPACE								SPACE	PFB	28
29	PFB	SPACE								SPACE	PFB	30
31	PFB	SPACE								SPACE	PFB	32
33	PFB	SPACE								SPACE	PFB	34
35	PFB	SPACE								SPACE	PFB	36
37	PFB	SPACE								SPACE	PFB	38
39	PFB	SPACE								SPACE	PFB	40
41	PFB	SPACE								SPACE	PFB	42
		PHASE TOTALS	A 9,370	B 8,910	C 11,280							

PANEL AND CIRCUIT BREAKER NOTES:
[1] PROVIDE NEW CIRCUIT BREAKER IN SPACE FOR NEW CIRCUIT. MATCH TYPE AND AIC RATING OF NEW CIRCUIT BREAKER WITH EXISTNG CIRCUIT BREAKER.

DEMAND LOADS		
LIGHTING / CONTINUOUS LOAD x 125%	2,500	Watts
RECEPTACLES / OTHER x 100%	27,560	Watts
LARGEST MOTOR x 25%	1,770	Watts
TOTAL DEMAND LOADS	31,830	Watts
TOTAL DEMAND AMPS	88	AMPS

INVERTER-A "INV-A"

120 Volt, 1 Phase, 2 Wire
25 Amp BUS CU.
30 Amp MCB
Amp MLO

FEED FROM Panel-D1
10 KAIC Rating
SURFACE Mounted
NEMA 1 Type

CKT.	BKR	DESCRIPTION	LOAD (WATTS)
1	20/1	BUILDIN-A INTERIOR LIGHTS	316
2	20/1	BUILDIN-A EXTEIOR LIGHTS	140
3	PFB	SPACE	
4	PFB	SPACE	
5	PFB	SPACE	
6	PFB	SPACE	
		LOAD TOTAL	456

DEMAND LOADS		
LIGHTING / CONTINUOUS L	570	Watts
RECEPTACLES / OTHER x		Watts
LARGEST MOTOR x 25%		Watts
TOTAL DEMAND LOADS	570	Watts
TOTAL DEMAND AMPS	5	AMPS

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APP: 01-120631 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS
- ○ DSA PLAN CHECK — 12/23/2022
- ● DSA BACK CHECK — 04/24/2023
- ○ BIDDING
- ○ CONSTRUCTION

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL PANEL SCHEDULES

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawn KT
Checked CD

E5.10

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER & CATALOG NUMBER	LAMP (CROSS SECTION)	VOLTS / VA	MOUNTING	REMARKS
A	FINELITE HRP-LED-WAV2X4-DCO-HO-3500K-120V-SC-C1	LED 3500K 90 CRI	120 / 41	RECESSED	2'X4' T BAR LAY IN LED LUMINAIRE WITH COLD ROLLED STEEL HOUSING, REFLECTORS, DIFFUSE CENTER OPTIC IMPACT RESISTANT FROSTED WAVE ACRYLIC LENS, 0-10V LED DIMMING DRIVER.
A1	FINELITE HRP-LED-WAV2X4-DCO-HO-3500K-120V-SC-C1-EM	LED 3500K 90 CRI	120 / 41	RECESSED	SIMILAR TO TYPE "A" WITH 1700 LUMEN - INVERTER.
C	FINELITE HP-41D-SO-HO-3500K-TG-120V-FA-SC-C1 OR APPROVAL EQUAL	LED 3500K	120 / 55	PENDANT	HIGH PERFORMANCE LED INDIRECT/INDIRECT AIRCRAFT CABLE SUSPENDED FIXTURE, EXTRUDED ALUMINUM BODY OF LENGTH AS SHOWN ON PLAN, DIE FORMED 20 GAUGE CRS REFLECTRO, FROSTED SHANP-IN LENS, 120V DIMMING DRIVER AND EMERGENCY BATTERY PACK AT LOCATION AS SHOWN ON PLAN.
C1	FINELITE HP-41D-SO-HO-3500K-TG-120V-FA-SC-C1 OR APPROVAL EQUAL	LED 3500K	120 / 55	PENDANT	SIMILAR TO TYPE "C" - INVERTER.
D	WILLIAMS 124-L52/935-FAF12125-DIM-120V OR APPROVED EQUAL	LED 3500K 90 CRI	120 / 59	SURFACE	2'X4' SURFACE MOUNTED LED LUMINAIRE WITH COLD ROLLED STEEL POST PAINTED HOUSING, FROSTED ACRYLIC LENS, FLAT DOOR FRAME, LED DIMMING DRIVER. 120VAC.
D1	WILLIAMS 124-L52/935-FAF12125-DIM-120V OR APPROVED EQUAL	LED 3500K 90 CRI	120 / 59	SURFACE	SIMILAR TO TYPE "D" WITH 1700 LUMEN - INVERTER.
E	RAB BRISKS11L-740	LED	120 / 20	CANOPY/CEILING MOUNTED	WALKWAY/CANOPY MOUNTED LED - INVERTER.
X	HE WILLIAMS EXIT/CA-G-WF-WHT-EM-SDT-D	LED	120 / 4.4	WALL/CEILING MOUNTED	SINGLE FACE LED EXIT SIGN. W/ TEST SWITCH AND LED INDICATOR LIGHT. PROVIDE 90 MINUTE MIN EMERGENCY BATTERY BACKUP.
X1	HE WILLIAMS EXIT/G-WHT-EM-SDT-D	LED	120 / 4.4	WALL/CEILING MOUNTED	DOUBLE FACE LED EXIT SIGN. W/ TEST SWITCH AND LED INDICATOR LIGHT. PROVIDE 90 MINUTE MIN EMERGENCY BATTERY BACKUP.

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Exp. 9/30/24
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STATE OF CALIFORNIA

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

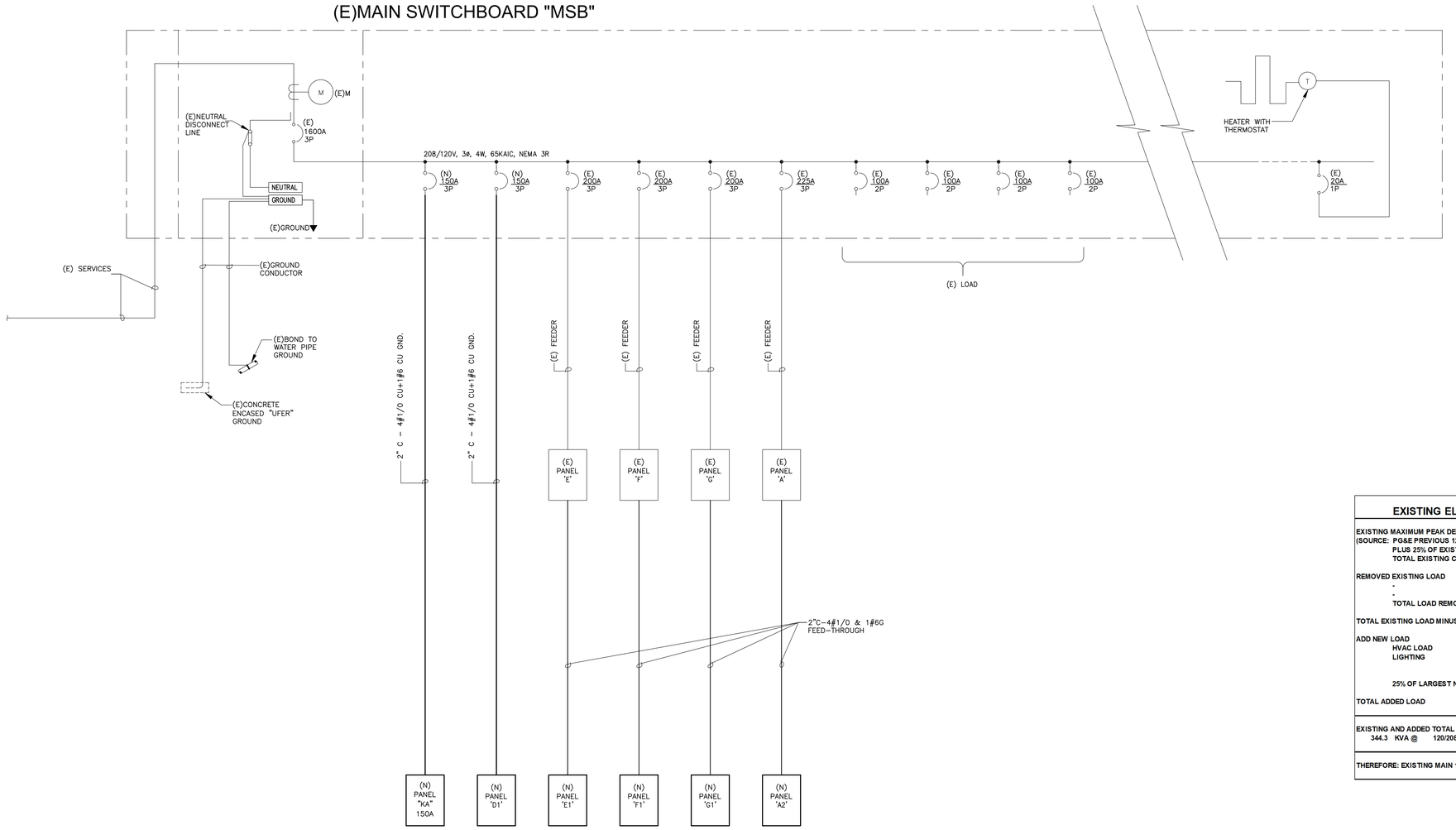
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

LIGHTING FIXTURE SCHEDULE

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	E5.11
Drawn / **Checked**	
KT / CD	



GENERAL NOTES

A. PROVIDE ALL NECESSARY AUXILIARY EQUIPMENT AND ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

B. LETTER FOR SHORT CIRCUIT CURRENT VALUE FROM UTILITY COMPANY SHALL BE AVAILABLE AT THE JOB SITE FOR INSPECTION.

C. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, UNLESS SPECIFIED OTHERWISE.

D. THE CONTRACTOR SHALL; PROVIDE A SHORT CIRCUIT, PROTECTIVE DEVICE COORDINATION STUDY AND ARC FLASH STUDY FOR THE PROJECT COMPLETE ELECTRICAL DISTRIBUTION SYSTEM, SUBMIT TO THE ELECTRICAL ENGINEER OF RECORD FOR REVIEW. PROVIDE ALL SHORT CIRCUIT DEVICE AND EQUIPMENT CHARACTERISTIC INFORMATION FOR ALL ELECTRICAL COMPONENTS PROVIDE TIME–CURRENT CURVES FOR ALL OVERCURRENT PROTECTIVE DEVICES IN THE SUBMITTAL. SET AND ADJUST ALL DEVICES IN ACCORDANCE WITH THE RESULTS OF THIS STUDY PRIOR TO ENERGIZING EQUIPMENT.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERTINENT INFORMATION NECESSARY IN ORDER TO PERFORM THE REQUIRED SHORT CIRCUIT PROTECTIVE DEVICE COORDINATION AND ARC FLASH STUDIES TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

1. CONTACTING THE SERVING POWER UTILITY TO OBTAIN THE AVAILABLE SHORT CIRCUIT CURRENT AT THE PROJECT POINT OF CONNECTION AND/OR SECONDARY OF THE SERVING UTILITY COMPANY SERVICE TRANSFORMER(S).
2. FIELD INVESTIGATION TO DETERMINE THE SHORT CIRCUIT CURRENT RATING FOR ANY EXISTING ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT.
3. ELECTRICAL CHARACTERISTICS FOR ALL PROPOSED NEW ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT.

F. THE CONTRACTOR SHALL PROVIDE APPROVED PERMANENT LABELS FOR ALL ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT TO CLEARLY IDENTIFY THE AVAILABLE SHORT CIRCUIT CURRENT AND ARC FLASH ENERGY LEVELS AND REQUIRED PPE (PERSONNEL PROTECTIVE EQUIPMENT).

G. ALL SWITCHBOARDS, DISTRIBUTION PANELS, AND PANELBOARDS SHALL BE FULLY RATED FOR INTERRUPTING CAPACITY. SERIES RATED EQUIPMENT SHALL NOT BE USED.

H. EACH SERVICE DISCONNECT SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A SERVICE DISCONNECT.

EXISTING ELECTRICAL SERVICE LOAD CALCULATION

EXISTING MAXIMUM PEAK DEMAND LOAD FOR THE MONTH OF 10/22/2022			
(SOURCE: PG&E PREVIOUS 12 MONTHS DATA)			**124.2 KVA**
PLUS 25% OF EXISTING CONNECTED LOAD			**31.0 KVA**
TOTAL EXISTING CONNECTED LOAD		=	**155.2 KVA**
REMOVED EXISTING LOAD			
-		**0.0**	**KVA**
-		**0.00**	**KVA**
TOTAL LOAD REMOVED		= **0.0**	**KVA**
TOTAL EXISTING LOAD MINUS REMOVED LOAD		=	**155.2 KVA**
ADD NEW LOAD			
HVAC LOAD			**177.1 KVA**
LIGHTING			**12.0 KVA**
25% OF LARGEST NEW MOTOR=	**0.0 KVA @ 25% =**		**0.0 KVA**
TOTAL ADDED LOAD		=	**189.1 KVA**
EXISTING AND ADDED TOTAL SERVICE LOAD		=	**344.3 kvA**
344.3 KVA @ 120/208 VOLT , 3 PHASE = 957 AMPERES			

THEREFORE: EXISTING MAIN 1600 AMP SERVICE HAS THE CAPACITY FOR THE NEW ADDED LOAD.

ELECTRICAL ONE LINE DIAGRAM | **1** NTS

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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

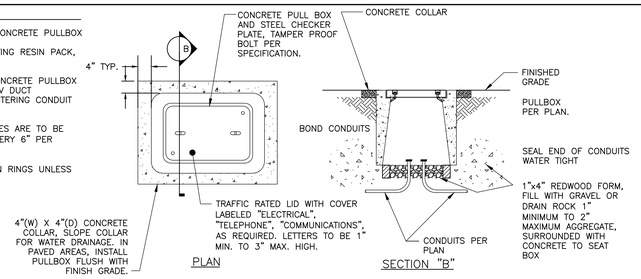
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ELECTRICAL ONE LINE DIAGRAM

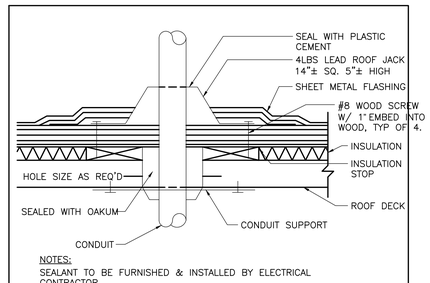
Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E5.12
Drawn / Checked	
KT / CD	

NOTES:

1. ALL SPLICES WITH-IN THE CONCRETE PULLBOX ARE TO BE SEALED WITH AN INSULATING AND ENCAPSULATING RESIN PACK, SCOTCHCAST 4 OR EQUAL.
2. ALL CONDUIT WITHIN THE CONCRETE PULLBOX ARE TO BE SEALED WITH RTV DUCT SEAL TO PREVENT WATER ENTERING CONDUIT SYSTEM.
3. ALL CONDUCTORS AND CABLES ARE TO BE GROUPED AND WIRE TIED EVERY 6" PER CONDUIT FILL.
4. PROVIDE TWO 12" EXTENSION RINGS UNLESS NOTED OTHERWISE

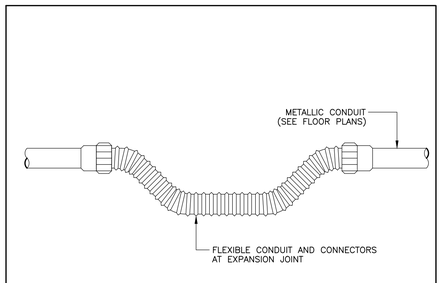


FILE NAME: TYPICAL UNDERGROUND CONCRETE PULLBOX DETAIL | NTS | 7



NOTES:
SEALANT TO BE FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR

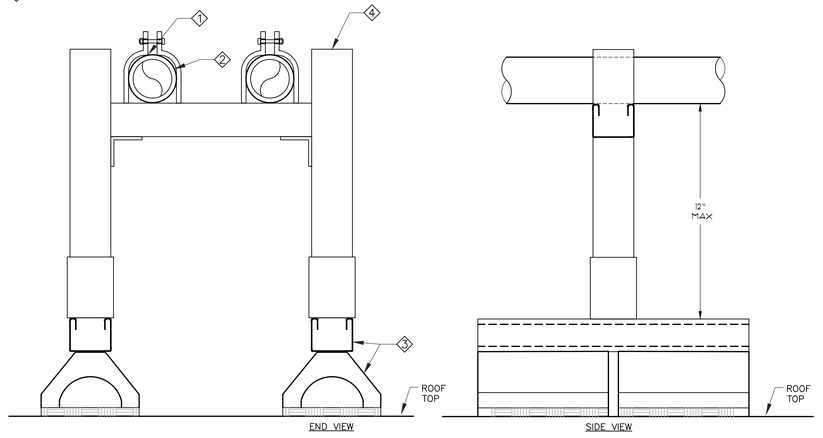
FILENAME: ELCE001B | ROOF CONDUIT PENETRATION DETAIL | NTS | 4



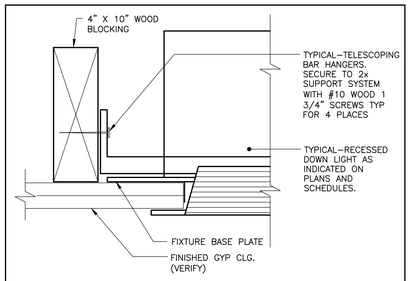
SEISMIC JOINT CONDUIT DETAIL | NTS | 1

KEY NOTES

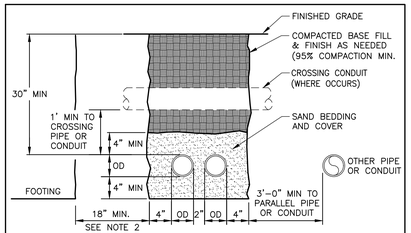
1. HOT-DIPPED GALVANIZED UNISTRUT CONDUIT CLAMP. SIZE AS REQUIRED.
2. CONDUIT AS NOTED ON DRAWINGS.
3. ROOFTOP SUPPORT BASE, B-LINE DB_DS SERIES WITH HOT-DIPPED GALVANIZED CHANNEL. SECURE TO ROOF WITH A FULL BED OF NON-HARDENING ADHESIVE TYPE MASTIC.
4. SH STYLE RISER CHANNEL



FILENAME: ROOF CONDUIT HIGH SUPPORT DETAIL | NTS | 11

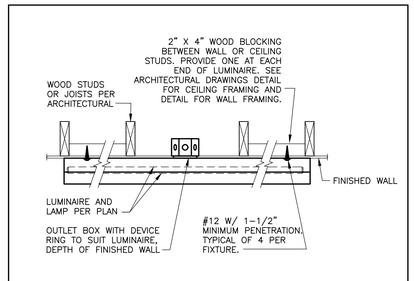


FILENAME: RECESSED DOWNLIGHT MOUNTING DETAIL WOOD FRAMING | NTS | 8

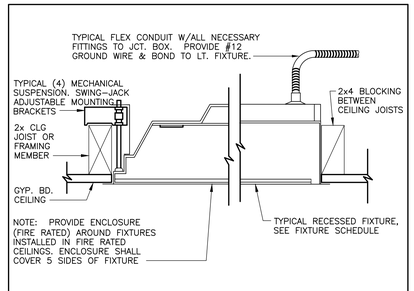


NOTES:
1. TRENCHING LOCATED IN PAVED AREAS – ALL EARTHWORK AND REPAIR SHALL BE IN ACCORDANCE WITH AGENCY THAT HAS JURISDICTION.
2. ALL PIPES AND TRENCHES MUST ALSO CONFORM WITH CBC 1809A.14

FILENAME: TYPICAL TRENCH DETAIL | NTS | 9



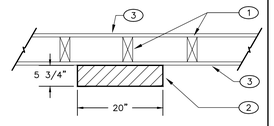
FILENAME: WALL/CEILING SURFACE LIGHT FIXTURE MOUNTING DETAIL FOR WOOD FRAMING | NTS | 5



FILENAME: RECESSED FIXTURE MOUNTING DETAIL | NTS | 6

KEY NOTES:

1. WOOD STUD
2. SURFACE MOUNTED PANEL CABINET, (SEE NOTE #1 FOR PANEL WEIGHT)
3. SHEET ROCK OR OTHER WALL SURFACE MATERIAL (SEE ARCH. DRAWINGS)
4. 4X MIN. WOOD BLOCK, FASTENED TO VERTICAL STUDS AT EACH END.
5. 5/16" LAG SCREWS WITH 2 1/2" MIN. EMBED TO BLOCK, (4) LAG SCREWS TOTAL. (INSTALLED BY ELECTRICAL CONTRACTOR)

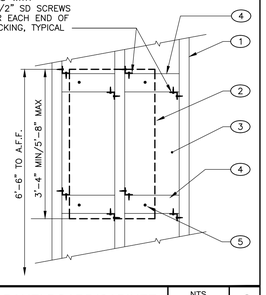


TOP VIEW

PROVIDE:
SIMPSON A34 CLIPS ATTACHED WITH #9x1-1/2" SD SCREWS STAGGER EACH END OF 4X BLOCKING, TYPICAL

NOTES:

A. PANEL WEIGHT:
REGULAR: 150 LBS.
LARGE: 250LBS. MAX
B. MOUNT TERMINAL CABINETS, J-BOXES, ETC., SIMILAR TO 30 CIRCUIT PANELBOARD.
C. REFER TO PANEL SCHEDULE SHEET Ex.x, FOR SIZES OF PANELS.
D. CENTER OF GRAVITY OF CABINET FROM TOP OF FLOOR = ±50".

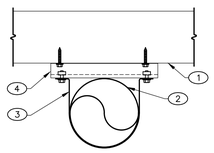


FRONT VIEW

FILENAME: SURFACE PANELBOARD/CABINET WOOD FRAMING MOUNTING DETAIL | NTS | 2

KEY NOTES

1. WOOD FRAMED COVER WALKWAY.
2. CONDUIT, SEE PLAN FOR NUMBER AND SIZE.
3. "B-LINE" B3180 SERIES PIPE CLAMP. ATTACH TO CHANNEL W/ CHANNEL NUT AND WASER.
4. "B-LINE" B22 CHANNEL, LENGTH AS NEEDED FOR NUMBER OF CONDUITS, MIN 12" LONG. ATTACH TO WOOD JOIST W/ (2) 5/8"ø LAG BOLTS, MIN 3-1/2" EMBEDMENT., AT 8" O.C.

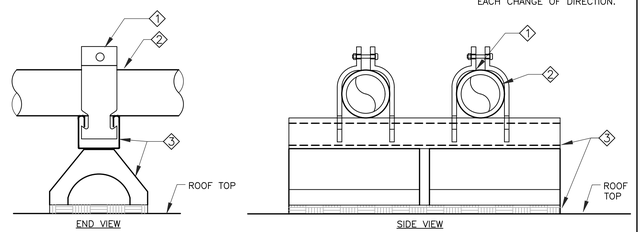


FILENAME: UNDER COVER WALKWAY CONDUIT MOUNTING DETAIL | NTS | 10

KEY NOTES

1. HOT-DIPPED GALVANIZED UNISTRUT CONDUIT CLAMP. SIZE AS REQUIRED.
2. CONDUIT AS NOTED ON DRAWINGS.
3. ROOFTOP SUPPORT BASE, B-LINE C6 SERIES WITH HOT-DIPPED GALVANIZED B12 CHANNEL. SECURE TO ROOF WITH A FULL BED OF NON-HARDENING ADHESIVE TYPE MASTIC.

NOTE:
INSTALL SUPPORT BLOCK 8'-0" O.C. MAX, WITHIN 36" OF A BOX CONNECTION, AND AT EACH CHANGE OF DIRECTION.



FILENAME: ROOF CONDUIT LOW SUPPORT DETAIL | NTS | 3

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITSON No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

GENERAL NOTES

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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.
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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

ELECTRICAL DETAILS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	E5.13
Drawn: KT	Checked: CD

CONTRACTOR(S) GUIDELINES:

28. ALL SPLICES SHALL UTILIZE 3M 710 MODULES. ALL CABLES MUST BE EQUIPPED TO PROVIDE A CONTINUOUS BOUND OF CABLE SHIELDS THROUGH ALL SPLICES.

29. PULL ROPES SHALL BE PLACED IN ALL VACANT CONDUITS.

30. ALL WORK MUST BE COMPLETED IN A NEAT AND PROFESSIONAL MANNER. THE WORK SITE SHALL BE KEPT CLEAN AND ALL DAMAGE TO OWNER'S PROPERTY REPAIRED.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING A FINAL CLEANUP OF THE WORK SITE PRIOR TO FINAL SYSTEM ACCEPTANCE.

32. CONTRACTOR SHALL REMOVE ALL COPPER, FIBER AND COAXIAL CABLES ABANDONED IN CONDUIT, CEILINGS AND WALLS PER CEC. CABLE SHALL INCLUDE ALL INTRABUILDING, RISER SYSTEMS AND STATION CABLES FOR ALL LOW VOLTAGE/TECHNOLOGY/STRUCTURED CABLING SYSTEMS.

33. CONTRACTOR(S) SHALL VERIFY ALL SITE CONDITIONS PRIOR TO BID.

34. IN ACCESSIBLE CEILING SPACES;

a. THE CONTRACTOR SHALL PROVIDE THE REQUIRED STUB UP(S) / OUT(S) AND BOXES WITH MUD-RINGS TO THE NEAREST ACCESSIBLE CEILING SPACE AND / OR NEAREST TECHNOLOGY PATHWAY INFRASTRUCTURE, REFERENCE PLANS AND SPECIFICATION FOR MORE INFORMATION.

b. THE DESIGNATED SCS / TECHNOLOGY CONTRACTOR(S) SHALL PROVIDE A J-HOOK PATHWAY SYSTEM AND REQUIRED SLEEVES. DO NOT USE CEILING TILE WIRE HANGERS, WATER OR ELECTRICAL PIPES, OR LIGHT FIXTURES TO HANG CABLE. CABLE MUST BE A MINIMUM OF 6 INCHES ABOVE THE CEILING TILE AND MUST NOT COME WITHIN TWELVE INCHES OF A LIGHT FIXTURE.

- THE SCS / TECHNOLOGY CONTRACTOR WILL PROVIDE THE PATHWAY REQUIRED FOR THE STRUCTURE CABLING SYSTEMS.
- THE DESIGNATED LOW VOLTAGE / TECHNOLOGY CONTRACTOR(S) FOR EACH "SUB-SYSTEM WILL PROVIDE THE PATHWAY REQUIRED FOR THE SYSTEMS, OUTSIDE WHAT IS CONSIDERED THE STRUCTURED CABLING SYSTEM.

35. IN INACCESSIBLE AND HARDLID CEILING SPACES;

a. THE CONTRACTOR SHALL PROVIDE ALL CONDUIT PATHWAYS, BOXES ETC. FOR A COMPLETE SYSTEM FROM THE MDF ROOM, IDF ROOM(S), IDF CABINET(S), AND ALL OTHER LOW VOLTAGE / TECHNOLOGY SYSTEMS HEADEND, CABINETS, TERMINAL CABINETS, ETC. TO THE POINT OF TERMINATION AT THE STATION END LOCATION PER PLANS AND SPECIFICATION.

TECHNOLOGY ABBREVIATIONS

ACP	ACCESS CONTROL PROCESSOR	(N)	NEW
AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED
AHJ	AUTHORITY HAVING JURISDICITON	NIC	NOT IN CONTRACT
AMP	AMPLIFIER	NO	NORMALLY OPEN
AOR	ARCHITECT OF RECORD	NTS	NOT TO SCALE
AUD	AUDIO	NVR	NETWORK VIDEO RECORDER
AUTO	AUTOMATIC	OC	ON CENTER
AUX	AUXILIARY	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
AV	AUDIOVISUAL		
AVc	AUDIOVISUAL CONTROLLER	OFOI	OWNER FURNISHED, OWNER INSTALLED
AWG	AMERICAN WIRE GUAGE		
BCT	BONDING CONDUCTOR FOR TELECOMMUNICATIONS CONDUIT	OSP	OUTSIDE PLANT
		PB	PULL BOX
C	CONDUIT	PIR	PASSIVE INFRARED
CATV	COMMUNITY ANTENNA TELEVISION	POE	POWER OVER ETHERNET
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	PR	PAIR OF CONDUCTORS
		PTZ	PAN TILT ZOOM
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	PVC	POLYVINYL CHLORIDE
		PWR	POWER
CL	CENTERLINE	RCP	REFLECTED CEILING PLAN
DIV	DIVISION	REX	REQUEST TO EXIT
DC	DOOR CONTACT	RFI	REQUEST FOR INFORMATION
(E)	EXISTING	RMC	RIGID METALLIC CONDUIT
EC	ELECTRICAL CONTRACTOR	SCS	STRUCTURED CABLING SYSTEM
ECS	EMERGENCY COMMUNICATION SYSTEM	SM	SINGLE MODE
EF	ENTRANCE FACILITY FOR TELECOMMUNICATION	STR	STRANDS (OF FIBER)
		STP	SHIELDED TWISTED PAIR
EMT	ELECTRIC METALLIC TUBING	SEC	SECURITY
ER	EQUIPMENT ROOM	TBB	TELECOMMUNICATIONS BONDING BACKBONE
EXT	EXTERIOR		
(F)	FUTURE	TELCO	TELEPHONE COMPANY
FACP	FIRE ALARM CONTROL PANEL	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
FATC	FIRE ALARM TERMINAL CABINET		
FB	FLOORBOX	TMGB	TELECOMMUNICATION MAIN GROUNDING BUSBAR
FO	FIBER OPTIC		
GC	GENERAL CONTRACTOR	TYP	TYPICAL
IC	INTERCOM	UON	UNLESS OTHERWISE NOTED
IDF	INTERMEDIATE DISTRIBUTION FRAME	UPS	UNINTERRUPTIBLE POWER SUPPLY
ICP	INTRUSION CONTROL PROCESSOR	UTP	UNSHIELDED TWISTED PAIR
INT	INTERIOR	V	VOICE
IP	INTERNET PROTOCOL	VSS	VIDEO SURVEILLANCE SYSTEM
IT	INFORMATION TECHNOLOGY	WB	WALL BOX
JB	JUNCTION BOX	WP	WEATHERPROOF
MDF	MAIN DISTRIBUTION FRAME		
MIC	MICROPHONE		
MM	MULTIMODE		
MPOE	MINIMUM POINT OF ENTRY		

EQUIPMENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR CBC), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0043-13.

MP ☐ MD ☐ PP ☐ E ■

MP ☐ MD ☐ PP ☐ E ☐

TECHNOLOGY PENETRATION NOTES:

1. UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE NO PENETRATION OF FLOORS, WALLS OR CEILING WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.

2. WALL PENETRATIONS:

a. THE SCS AND/OR LV CONTRACTOR SHALL PROVIDE FIRE STOPPING FOR ALL COMMUNICATIONS RATED (AND IN SOME CASES NON-RATED, THAT WILL BE DESCRIBED BELOW THIS SECTION) PATHWAYS AND SPACES. THESE FIRE STOPPING DEVICES SHALL CONFORM TO (BUT NOT LIMITED TO) UL 1479, ASTM E814, BICSI TDMM, FIRE STOPPING ANSI/TIA-568-C, STANDARD FOR INSTALLING COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING, SECTION 5, CLAUSE 5.1 THROUGH 5.2.3, MANUFACTURES GUIDELINES OR OTHER PREVAILING CODE AND MUST BE AN APPROVED UL LISTED SYSTEM.

b. CABLE TRAY FIRE-STOPPING SHALL UTILIZE THE MULTI GANG FIRE-STOPPING SYSTEM THAT WILL BE ABLE TO STACK THE UNITS HORIZONTALLY AND/OR VERTICALLY IF REQUIRED DUE TO CURRENT AND/OR FUTURE CABLING DESIGNS.

c. THE CONTRACTOR SHALL INSTALL PENETRATION FIRE-STOP SEAL MATERIALS IN ACCORDANCE WITH DESIGN REQUIREMENTS, AND MANUFACTURER'S INSTRUCTIONS.

d. THE CONTRACTOR'S INSTALLER SHALL BE CERTIFIED, LICENSED OR OTHERWISE QUALIFIED BY THE FIRE-STOPPING MANUFACTURER AS HAVING BEEN PROVIDED THE NECESSARY TRAINING TO INSTALL MANUFACTURER'S PRODUCTS PER SPECIFIED REQUIREMENTS.

e. ALL THROUGH-PENETRATION SHALL BE A MANUFACTURED, UL CLASSIFIED, FIRE-STOP DEVICE / SYSTEM DESIGNED TO ALLOW CABLES TO PENETRATE FIRE-RATED WALLS WITH A BUILT-IN FIRE SEALING SYSTEM THAT AUTOMATICALLY ADJUSTS TO THE AMOUNT OF CABLES INSTALLED. THE FIRE-STOPPING DEVICE SHALL BE CAPABLE OF INSTALLATION IN NEW CONSTRUCTION OR RETROFIT IN EXISTING STRUCTURES.

f. THE CONTRACTOR MUST NOT USE CONCRETE OR OTHER NON-REMOVABLE SUBSTANCE FOR FIRE STOPPING ON CABLE TRAYS, WIREWAYS OR CONDUITS. CONTRACTORS WHO USE THIS METHOD WILL BE REQUIRED TO REPLACE ALL CABLES AFFECTED AND PROVIDE THE ORIGINAL SPECIFIED ACCESS TO EACH EFFECTED AREA. THIS REQUIREMENT ALSO APPLIES TO MAINTAINING FIRE RATINGS OF ALL FLOORS PENETRATED BY CONDUITS OR DEVICES DESIGNATED FOR USE BY VOICE AND DATA CABLING.

g. ANY PENETRATIONS THROUGH FIRE-RATED WALLS FOR CABLE PATHWAYS / CABLES SHALL BE SEALED BY USE OF A NON-PERMANENT FIRE BLANKET OR OTHER METHOD IN COMPLIANCE. THE CONTRACTOR MUST USE FIRE STOPPING ON CABLE TRAYS, WIREWAYS AND CONDUITS EITHER VERTICAL OR HORIZONTAL. FOUR DIFFERENT METHODS OF FIRE-STOPPING HAVE BEEN IDENTIFIED FOR THE HORIZONTAL THROUGH PENETRATIONS BETWEEN WALLS, RATED, RATED WITH ACOUSTIC PROPERTIES, NON-RATED, AND NON-RATED WITH ACOUSTIC PROPERTIES.

BELOW ARE METHODS TO ACCOMPLISH THESE DIFFERENT TYPES:

- SEALING OF RATED OPENINGS BETWEEN FLOORS OR THROUGH RATED WALLS, WHETHER EXISTING OR CREATED BY THE CONTRACTOR FOR PLACEMENT OF CABLE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEALING MATERIAL AND APPLICATION SHALL BE AN APPROVED UL LISTED SYSTEM AND SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT IS ACCEPTABLE TO THE LOCAL FIRE AND BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS WORK. CREATION OF SUCH OPENINGS AS ARE NECESSARY FOR CABLE PASSAGE BETWEEN LOCATIONS AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY OPENINGS CREATED BY OR FOR THE CONTRACTOR AND LEFT UNUSED SHALL ALSO BE SEALED AS PART OF THIS WORK.
- RATED WALLS WITH THROUGH PENETRATIONS WITH ACOUSTIC PROPERTIES SHALL BE INSTALLED WITH FACTORY MANUFACTURED DEVICE. SUCH AS A STI "EZ PATH" OR WIREMOLD "FLAMESTOPPER" OR EQUAL. THE TYPICAL STC RATING IS TO BE EQUAL TO OR GREATER THAN THE WALL PENETRATED, (AVG IS A RATING OF 44 STC PER UBC RATINGS).
- NON-RATED PATHWAY, ALTHOUGH NOT REQUIRED TO BE FIRE-STOPPED, SHALL BE A MANUFACTURED DEVICE THAT WILL ALLOW FIRE-STOPPING TO BE INSTALLED IN THE FUTURE IF REQUIRED, (I.E. WIREMOLD "FLAMESTOPPER" OR EQUAL).
- A NON-RATED PATHWAY WITH ACOUSTIC PROPERTIES CAN BE FOUND IN AREAS SUCH AS, CONFERENCE ROOMS, HUMAN RESOURCE OFFICES, MEDICAL EXAMINATION ROOMS ETC. THESE ROOMS REQUIRE TO LIMIT THE AMOUNT OF AMBIENT NOISE THAT CAN TRAVEL FROM ONE ROOM TO THE OTHER THROUGH THE CEILING GRID. IF THIS WALL IS PENETRATED, INSTALL A SYSTEM THAT WILL RE-ESTABLISH THE STC RATING OF THE WALL, THE TYPICAL STC RATING IS AN AVERAGE OF 44 STC PER UBC RATINGS.

CONTRACTOR(S) GUIDELINES:

1. ALL TECHNOLOGY WORK SHALL COMPLY WITH DESIGN GUIDELINES AS WELL AS APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

2. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS AND/OR SPECIFICATIONS OR WITH CODE REQUIREMENTS, THE NOTE, CODE OR SPECIFICATION WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR THE HIGHER STANDARD SHALL PREVAIL.

3. OMISSIONS FROM THE DRAWINGS, SPECIFICATIONS OR THE MIS-DESCRIPTION OF DETAILS FROM WORK WHICH ARE CLEAR AND NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS, SPECIFICATIONS, OR WHICH ARE CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MIS-DESCRIBED DETAILS OF THE WORK BUT THEY SHALL BE PERFORMED AS IF FULLY AND CORRECTLY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.

4. THE CONTRACTOR SHALL CHECK ALL DRAWINGS FURNISHED, IMMEDIATELY UPON THEIR RECEIPT AND SHALL PROMPTLY NOTIFY THE OWNER OF ANY DISCREPANCIES.

5. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.

6. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

7. ALL CHANGES TO STRUCTURES (BUILDING, DRILLING, CORING, ETC.) NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED IN WRITING BY STRUCTURAL ENGINEER.

8. FOR PURPOSES OF CLEARNESS AND LEGIBILITY, THE TELECOM DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DATA INFORMATION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE SCS AND LOW VOLTAGE WORK INTERFACES WITH OTHER TRADES.

9. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS TO REFLECT ALL CHANGES MADE DURING CONSTRUCTION AND ANY DEVIATIONS FROM THE ELECTRICAL AND TECHNOLOGY DRAWINGS. THIS INCLUDES DEVIATIONS FROM OUTLET NUMBERS AND ANY ADDITION, DELETION OR RELOCATION OF OUTLETS SHOWN ON WORKING DRAWINGS, PATHWAY ADDITIONS, DELETIONS OR RELOCATIONS. THE CONTRACTOR SHALL AFTER COMPLETION OF JOB, PROVIDE THE OWNER AN ELECTRONIC AND HARD COPY OF AS-BUILT WORK.

10. ANY DEVIATIONS FROM PLANS OR SPECS MUST BE APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.

11. ALL FOOTAGES ON DRAWINGS ARE ESTIMATED AND MUST BE VERIFIED BY CONTRACTOR PRIOR TO ORDERING MATERIAL.

12. ALL STATION CABLES SHALL BE NEATLY DRESSED AND SECURED EVERY FIVE FEET AT A MINIMUM.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILING TILE INCLUDING REPLACEMENT OF BROKEN OR DAMAGED TILES.

14. ALL LOCATIONS PASSING THROUGH A FIRE OR A SMOKE BARRIER MUST BE FIRE STOPPED USING APPROVED (UL CLASSIFIED) FIRE STOP SYSTEM, INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS AND PROPERLY LABELED.

15. CONDUIT SHALL BE FILLED TO MAXIMUM CAPACITY (PER CODE, STANDARDS, AND NORMS) BEFORE UTILIZING ANOTHER VACANT CONDUIT.

16. ALL STATION OUTLETS AND TERMINALS SHALL BE PROPERLY IDENTIFIED USING THE OWNER'S STANDARD INTERNAL DISTRIBUTION NUMBERING SCHEME. ALL LABELS SHALL BE PREPRINTED OR TYPED.

17. EACH BACKBONE RISER AND/OR OSP CABLE SHALL BE EQUIPPED WITH A PERMANENT LABEL INDICATING CABLE TYPE, PAIR OR OPTIC COUNTS, DISTANT ENDS, AND CABLE LENGTH. BOTH ENDS OF EACH CABLE AND AT EVERY MAINTENANCE HOLE, HAND HOLE, AND PULL BOX, SHALL BE SO LABELED.

18. FIBER BACKBONE CABLE SHALL BE PLACED WITH 6 FOOT MAINTENANCE LOOP AT BOTH ENDS OF THE RUN. THE MAINTENANCE LOOP SHALL BE SECURED IN SUCH A MANNER TO PROVIDE PROTECTION DURING SUBSEQUENT CABLE PULLS.

19. ALL STATION CABLES/OUTLETS SHALL BE TESTED AND DOCUMENTED USING A PAIR SCANNER SPECIFICALLY DESIGNED TO TEST THE TYPE OF CABLE INSTALLED (E.G. CATEGORY 6A). TEST RESULTS SHALL BE ONE PAGE PER AND NOTED WITH THE STATION/JACK NUMBERING SCHEME THAT IS STANDARDIZED FOR THE OWNER.

20. ALL FIBER OPTIC STATION AND RISER CABLE SHALL BE TESTED END-TO-END AND THE RESULTS (LOSS IN dB) NOTED ON A SEPARATE TYPED SHEET.

21. AFTER STATION CABLE IS TESTED AND DOCUMENTED, ONE PAIR FROM EACH VOICE STATION SHALL BE CROSS CONNECTED THROUGH EACH CLOSET BACK TO THE MAIN DISTRIBUTION FRAME. TELEPHONE NUMBER ASSIGNMENTS FOR EACH JACK MUST BE APPROVED BY THE TELECOM STAFF PRIOR TO IMPLEMENTATION. A WRITTEN RECORD OF ALL CROSS CONNECT ASSIGNMENTS WILL BE PROVIDED TO THE OWNER BY THE SCS CONTRACTOR.

22. FIBER CABLES SHALL BE SPLICED TOGETHER USING A FUSION SPLICE AND PLACED IN A FIBER SPLICE CASE THAT IS RE-ENTERABLE, FULLY DRESSED AND ENCLOSED TO FIT THE NUMBER AND TYPE OF CABLES TERMINATED.

23. CABLE TRAY SHALL BE PLACED IN MDF AND IDF(S) AS SHOWN ON DRAWINGS AND AS REQUIRED TO PROPERLY SECURE CABLES AND WIRE.

24. A BACKBONE CABLE ASSIGNMENT RECORD SHEET SHALL BE PREPARED (TYPED) PRIOR TO START OF ACCEPTANCE TESTING. ALL FLOOR PLANS SHALL BE NEATLY HAND NOTED WITH STATION JACK NUMBER AND CABLE LENGTH.

25. ALL CABLES SHALL BE CLEARLY LABELED WITH CABLE NUMBERS, PAIR ASSIGNMENTS AND DESIGNATION.

26. ALL CABLE TRAYS, LADDER RACKS, CONDUITS, EQUIPMENT RACKS, PROTECTOR PANELS, AND CABLE SHEATHS SHALL BE BONDED & GROUNDED TO EQUIPMENT GROUND WITH #6 WIRE (MIN.)

27. ALL SPLICES SHALL BE CONTAINED WITHIN AN APPROVED SPLICE CASE DESIGNED FOR MULTIPLE CLOSURE.

TECHNOLOGY CABLING NOTES:

1. THE USE OF LUBRICANTS SUCH AS CLEAR GLIDE, TO FACILITATE THE INSTALLATION OF CABLES IN CONDUITS IS ENCOURAGED FOR FRICTION REDUCTION AND TO MAINTAIN THE REQUIRED PULL TENSION. YELLOW 77 AND POLYWATER "F" IS PERMISSIBLE FOR USE AS A LUBRICANT FOR ISP TECHNOLOGY CABLING. THE USE OF OSP, LOW TEMPERATURE CABLE LUBRICANTS SHALL NOT BE ACCEPTABLE IN AN INDOOR PLENUM ENVIRONMENT. UNDER NO CIRCUMSTANCES SHALL CABLE PULLING LUBRICANT BE ALLOWED TO ACCUMULATE ON WALLS, FLOORS, BACKBOARDS, OR OTHER SURFACES OUTSIDE THE CONDUIT.

2. ANY CABLE DAMAGED OR EXCEEDING RECOMMENDED INSTALLATION PARAMETERS DURING INSTALLATION SHALL BE REPLACED BY THE CONTRACTOR BEFORE FINAL ACCEPTANCE AT NO COST TO THE OWNER.

3. EACH RUN OF CABLE BETWEEN THE TERMINATION BLOCK OR PATCH PANEL AND THE STATION CONNECTOR SHALL BE CONTINUOUS WITHOUT ANY JOINTS OR SPLICES.

4. ALL STATION CABLE SHALL BE PLACED IN THE INTERIOR OF WALLS UNLESS OTHERWISE NOTED OR OBSTRUCTED.

5. PROVIDE BUSHINGS, GROMMETS AND STRAIN-RELIEF FOR CABLES TERMINATING AT WALL-MOUNTED OUTLETS AND PATCH PANELS TO ENSURE DURABLE AND ROBUST CONNECTIONS. THE BUSHINGS AND GROMMETS ARE INTENDED TO PROTECT THE CABLES FROM ANY SHARP EDGES THAT PRESENT A RISK TO THE CABLES. ENSURE THAT ALL SHARP EDGES ARE COVERED TO PROTECT THE CABLES FROM DAMAGE.

6. ALL CABLE BUNDLES EXITING FLOOR OR WALL PENETRATIONS AND RUNNING INTO FURNITURE OR CASEWORK SHALL BE WRAPPED IN SPIRAL WRAP OR SPLIT-LOOM TUBING TO PROTECT THE CABLING AND PROVIDE A NEAT INSTALLATION.

7. ALL CABLE OR INNERDUCT SHALL RUN PARALLEL OR AT RIGHT ANGLES TO BUILDING WALL STRUCTURES.

8. IN SUSPENDED CEILING AND RAISED FLOOR AREAS WHERE DUCT, CABLE TRAYS OR CONDUIT ARE NOT AVAILABLE, CABLE BUNDLES SHALL BE SUPPORTED VIA "J" HOOKS ATTACHED TO THE BUILDING STRUCTURE AND FRAMEWORK AT A MAXIMUM OF FIVE (5) FOOT INTERVALS. MINIMUM 1 " WIDE J-HOOKS SHALL BE APPROPRIATELY SIZED TO ALLOW A MINIMUM OF 60% SPARE CAPACITY FOR FUTURE CABLE INSTALLATION. THE CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID FOR ANY ADDITIONAL SUPPORTS/SEISMIC BRACING REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

9. THE CONTRACTOR SHALL BUNDLE, IN BUNDLES OF 48 OR LESS, STATION OR OTHER CABLING WITH 3/4" HOOK AND LOOP "VELCRO" STRIPS TIGHT ENOUGH TO HOLD THE BUNDLE TOGETHER IN A CYLINDRICAL SHAPE, BUT NOT SO TIGHT AS TO DEFORM THE CABLE GEOMETRY. IT SHALL BE POSSIBLE TO COMPLETELY ROTATE ALL HOOK AND LOOP TIES AROUND ALL CABLE BUNDLES. PLENUM RATED HOOK AND LOOP TIES WILL BE USED IN ALL PLENUM AREAS.

10. CABLES OR J-HOOKS SHALL NOT BE ATTACHED TO LIFT OUT CEILING GRID SUPPORTS OR LAID DIRECTLY ON THE CEILING GRID.

11. CABLES OR J-HOOKS SHALL NOT BE ATTACHED TO OR SUPPORTED BY FIRE SPRINKLER HEADS OR DELIVERY SYSTEMS OR ANY ENVIRONMENTAL SENSOR LOCATED IN THE CEILING AIR SPACE.

12. WHERE ADDITIONAL CONDUIT(S)/SLEEVE(S) ARE REQUIRED, BUT NOT PROVIDED BY THE CONTRACTOR, THE SCS AND/OR LV CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE SUCH CONDUIT(S)/SLEEVE(S). CONDUIT(S) AND SLEEVE(S) SHALL BE OF SUITABLE MATERIAL, SIZED, INSTALLED, FIRE-STOPPED, AND GROUNDED AS REQUIRED BY THE CEC 2022, ANSI/TIA-569-D STANDARD AND ALL OTHER APPLICABLE CODES AND STANDARDS. SLEEVES SHALL CONSIST OF METALLIC CONDUIT DE-BURRED AND GROMMETTED ON BOTH ENDS WITH FLANGES OR OTHER MEANS TO PREVENT THE SLEEVE FROM SLIPPING OR FALLING OUT OF THE PARTITION. SLEEVES SHALL EXTEND A MINIMUM OF 6" ON BOTH SIDES OF THE PARTITION. OUTSIDE PERIMETER OF SLEEVES SHALL BE SEALED AGAINST SOUND, AIR, WATER, HEAT, OR AS REQUIRED BY PARTITION DESIGN. INSIDE OF SLEEVE SHALL BE SEALED SIMILARLY AFTER INSTALLATION OF ALL CABLING. CABLES SHALL BE INDEPENDENTLY SUPPORTED ON EITHER SIDE OF THE SLEEVE. SLEEVES SHALL NOT BE USED AS CABLE SUPPORTS. ANY CONDUIT(S) AND SLEEVE(S) ADDED BY THE SCS CONTRACTOR SHALL BE APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO ROUGH-IN.

13. IN THE EVENT CONTRACTOR IS REQUIRED TO REMOVE CEILING TILES, SUCH WORK SHALL NOT BREAK OR DISTURB GRID. REMOVAL OF THE CEILING GRID MUST BE COORDINATED WITH THE OWNERS REPRESENTATIVE. ALL INSULATION SHALL BE REPLACED IN ITS ORIGINAL LOCATION.

14. THE NUMBER OF CABLES IN EACH CONDUIT SHALL BE CONTROLLED TO ALLOW FOR FUTURE CABLE INSTALLATION AND TO STAY WITHIN THE MANUFACTURER'S MAXIMUM ALLOWABLE CABLE PULLING TENSION. CONDUIT FILL RATIOS SHALL NOT EXCEED THE CURRENT REQUIREMENTS OF THE CEC 2022, ANSI/TIA-569-D, REFERENCE SECTION B.2, TABLES 1 AND 2 OF THIS DOCUMENT FOR ADDITIONAL REQUIREMENTS.

15. CONDUITS:

- ALL BACKBONE CABLING WILL RUN THROUGH DEDICATED CONDUITS.
- ALL NEW CONDUITS WILL BE SUPPLIED WITH A PULL STRING BY THE CONTRACTOR.
- EXISTING CONDUITS SHALL BE PROVEN TO BE CLEAR BY THE SCS AND/OR LV CONTRACTOR PRIOR TO PULLING OF CABLES.
- SCS AND/OR LV CONTRACTOR SHALL SUPPLY PULL STRING AND PULL ROPE FOR THE INSTALLATION OF ALL CABLES IN EXISTING CONDUITS.
- FOR ALL CONDUITS LEFT WITH AVAILABLE CAPACITY, SCS AND/OR LV CONTRACTOR SHALL REPLACE PULL STRINGS DURING THE COURSE OF HIS WORK.
- SCS AND/OR LV CONTRACTOR MUST SEAL ALL CONDUITS WITH AN APPROVED SEALING COMPOUND.

TECHNOLOGY GROUNDING SYSTEM NOTES:

1. THE CONTRACTOR SHALL PROVIDE A TELECOMMUNICATION GROUNDING BUSSBAR (TGB) AND TELECOMMUNICATION BONDING BACKBONE (TBB) CABLE(S) AT EACH MDF ROOM AND IDF LOCATION. TERMINATE THE TBB ON GROUND BARS LOCATED AT EACH MDF ROOM AND IDF CABINET FROM BUILDING STEAL OR MAIN ELECTRICAL GROUND, OR AS OTHERWISE INDICATED ON THE DRAWINGS.

2. THE SCS CONTRACTOR SHALL UTILIZE A TELECOMMUNICATIONS BONDING BACKBONE (TBB) AS INDICATED IN THE DRAWINGS. GROUNDING MUST BE IN ACCORDANCE WITH THE CEC 2022, ANSI/TIA-607-B AND ALL LOCAL CODES AND PRACTICES.

3. THE SCS CONTRACTOR SHALL BE RESPONSIBLE FOR BONDING ALL METALLIC SHEATH COMMUNICATIONS CABLES ENTERING THE BUILDING PER MANUFACTURER SPECIFICATIONS AND CEC 770-33, 800-33 AND 800-40. ALL GROUNDS SHALL CONSIST OF # 6-AWG COPPER WIRE AND SHALL BE SUPPLIED FROM AN APPROVED BUILDING GROUND AND BONDED TO THE MAIN ELECTRICAL GROUND. ALL CABLE SHEATHS AND SPLICE CASES SHALL BE GROUNDED TO A TELECOMMUNICATIONS GROUND BUS.

4. THE SCS CONTRACTOR SHALL PROVIDE GROUNDING AND BONDING FROM ALL HORIZONTAL EQUIPMENT INCLUDING DISTRIBUTION AND CROSS CONNECT FRAMES, PATCH PANELS, CABLE TRAYS, EQUIPMENT RACKS, LADDER TRAYS, CONDUITS, ACTIVE TELECOMMUNICATION EQUIPMENT, SLEEVES, TEST APPARATUS. EQUIPMENT SHALL BE BONDED TO THE TBB GROUND BARS UTILIZING A #6-AWG GREEN CONDUCTOR WITH 2-HOLE LONG BARREL COMPRESSION GROUNDING LUGS.

a. EACH EQUIPMENT CABINET AND RACK REQUIRES ITS OWN DEDICATED RACK GROUNDING BUSBAR (RGB) WITH A BONDING CONNECTION TO THE GROUNDING INFRASTRUCTURE. THE GROUNDING INFRASTRUCTURE CONSIST OF A TB, BY PROVIDING EVERY RACK/CABINET WITH ITS OWN DEDICATED #6 WAG (MIN.) GREEN CONDUCTORS BACK TO THE TOMB/TB. ALL GROUND CONDUCTOR ATTACHMENTS SHALL UTILIZE 2-HOLE LONG BARREL COMPRESSION LUGS.

b. HORIZONTAL CABLES SHALL BE GROUNDED IN COMPLIANCE WITH ANSI/TIA-607-C, FP 70 (EEC) AND LOCAL REQUIREMENTS AND PRACTICES.

c. IN RAISED-FLOOR ENVIRONMENTS, THE GROUND CONDUCTOR SHALL ATTACH TO THE LOWEST HOLES ON THE FRONT RAIL OF EACH RACK/CABINET.

d. RACK MOUNTED EQUIPMENT SHALL BE GROUNDED VIA THE CHASSIS, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

e. BONDING OF LADDER RACK SECTIONS: ATTACH BONDING STRAPS TO EACH LADDER RACK SECTION BY UTILIZING EITHER TWO (2) TRI-LOBULAR THREAD-FORMING SCREWS (NOT SELF-TAPPING OR SHEET METAL SCREWS) OR BY USING TWO (2) STANDARD BOLTS WITH TWO (2) "TYPE B" INTERNAL / EXTERNAL TOOTH LOCK WASHERS PER BOLT. IF THREAD-FORMING SCREWS ARE NOT USED, REMOVE PAINT AT EACH CONNECTION POINT AND USE AN APPROVED ANTI-OXIDANT PRIOR TO ATTACHING THE BONDING STRAP.

TECHNOLOGY TERMINAL BACKBOARD NOTES:

1. WHERE INDICATED ON DRAWINGS, CONTRACTOR TO PROVIDE NEW PLYWOOD TERMINAL BACKBOARDS. USE DOUGLAS FIR PLYWOOD, INTERIOR A/C GRADE, FINISHED ONE SIDE AND PRIME COAT PAINTED ON ALL SURFACES WITH A FINISH COAT OF FIRE RETARDANT WHITE ENAMEL. ON EACH PLYWOOD SHEET LEAVE ONE (1) FIRE MARSHAL STAMP UNPAINTED FOR INSPECTION. UNLESS OTHERWISE INDICATED, USE 8'-0" HIGH X LENGTH AS SHOWN ON DRAWINGS X 3/4" THICK PLYWOOD. REFERENCE BACKBOARD ELEVATIONS FOR MORE INFORMATION.

TECHNOLOGY PATHWAY NOTES:

1. PATHWAYS CAN BE DIVIDED UP INTO TWO SEPARATE CATEGORIES, OUTSIDE PLANT (OSP) AND INSIDE PLANT (ISP). IT IS THE SCS AND/OR LV SYSTEM(S) CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL EXISTING PATHWAYS (CONDUIT, CABLE TRAY, ETC) THAT WILL BE UTILIZED ON THE PROJECT, AND COORDINATE WITH THE ON-SITE ELECTRICAL OR GENERAL CONTRACTOR TO PROVE ALL PATHS SUBJECT TO BE USED ON THIS PROJECT, BEFORE INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION ALL UNDERGROUND (OSP) PATHWAYS, NON-ACCESSIBLE AND OPEN CEILING SPACE PATHWAYS AS DESCRIBED IN SECTION F, CONTRACTOR GUIDELINES OF THESE TECHNOLOGY GENERAL NOTES.

2. ALL PULL-BOXES SHALL BE SIZED AND INSTALLED PER ANSI/TIA-569-D. PULL-BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL-BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL-BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL-BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING: FOR FILL RATIO BASED CONDUIT SIZING REFER TO THE FILL RATIO TABLE 1A - 2B BELOW AND REFERENCE TO ANSI/TIA-569-D.

PULLBOX SIZING PER ANSI/TIA 569-D

Conduit Size	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	15"...	3"	2"
2"	8"	36"	4"	5"
3"	61	48"	5"	6"
4"	101	60"	8"	8"

FILL RATIO TABLE 1A - Conduit

Conduit Size	.13	.18	.19	.20	.21	.22	.23	.24	.25	.26	.27	.28	.29	.30	.31	.32	.33	.34	.35	.37	.39
3/4"	16	8	7	6	6	5	5	4	4	4	3	3	3	3	2	2	2	2	2	1	1
1"	26	13	12	11	9	9	8	7	7	6	6	5	5	4	4	4	4	3	3	3	2
1 1/4"	45	23	21	19	17	15	14	13	12	11	10	9	9	8	7	7	6	6	6	5	5
1 1/2"	61	32	28	25	23	21	19	18	16	15	14	13	12	11	10	10	9	8	8	7	6
2"	101	52	47	42	38	35	32	29	27	25	23	21	20	18	17	16	15	14	13	12	11
2 1/2"	176	92	82	74	67	61	56	51	47	44	40	38	35	33	31	29	27	25	24	21	19
3"	266	139	124	112	102	93	85	78	72	66	61	57	53	50	46	43	41	38	36	32	29
3 1/2"	347	181	162	146	133	121	111	102	94	86	80	74	69	65	61	57	53	50	47	42	38
4"	444	231	208	187	170	155	142	130	120	111	103	95	89	83	78	73	68	64	61	54	49

FILL RATIO TABLE 2A - Cable Tray / Wire Basket / Raceway per NEC 2017 Article 725

Tray Size (WxD)	.13	.18	.19	.20	.21	.22	.23	.24	.25	.26	.27	.28	.29	.30	.31	.32	.33	.34	.35	.37	.39
4x4	482	251	225	203	184	168	154	141	130	120	111	103	96	90	84	79	74	70	66	59	53
6x4	723	377	338	305	277	252	231	212	195	180	167	155	145	135	127	119	112	105	99	89	80
12x4	1447	754	677	661	554	505	462	424	391	361	335	311	290	271	254	238	224	211	199	178	160
18x4	2170	1132	1016	917	831	758	693	636	587	542	503	467	436	407	381	358	336	317	299	267	241
24x4	2894	1509	1355	1222	1109	1010	924	849	782	732	671	623	581	543	509	477	449	423	399	357	321
6x6	1085	566	508	458	415	379	346	318	293	271	251	233	218	203	190	179	168	158	149	133	120
12x6	2170	1132	1016	917	831	758	693	636	587	542	503	467	436	407	381	358	336	317	299	267	241
18x6	3256	1698	1524	1375	1247	1137	1040	955	880	814	754	701	654	611	572	537	505	476	449	401	361
24x6	4341	2264	2032	1834	1663	1516	1387	1273	1174	1085	1006	935	872	815	763	716	673	634	598	535	482

PATHWAY SEPARATION FROM SOURCE OF ELECTROMAGNETIC ENEGRY:

CONDITION	<2KVA	2-5 KVA	>5KVA
Unshielded Power Lines in Proximity to open PVC Pathways	5" (In.)	12" (In.)	24" (In.)
Unshielded Power Lines in Proximity to Grounded Metallic Pathways	2.5" (In.)	6" (In.)	12" (In.)
Power Lines enclosed in Metal Grounded Pathways in proximity to Grounded Metallic...	<1" (In.)	3" (In.)	6" (In.)

3. FOR ALL FIRESTOPPING OF SCS AND LV SYSTEMS PATHWAY RESPONSIBILITIES REFERENCE SECTION G, PENETRATION OF WALLS, FLOOR AND CEILINGS OF THESE TECHNOLOGY GENERAL NOTES.

4. FOR ALL OTHER SCS AND/OR LV SYSTEMS PATHWAY RESPONSIBILITIES REFERENCE SECTION F, CONTRACTOR GUIDELINES OF THESE TECHNOLOGY GENERAL NOTES.

5. OUTSIDE PLANT (OSP) PATHWAYS CAN BE BROKEN DOWN INTO THE FOLLOWING ITEMS, MAINTENANCE HOLES, HAND HOLES, PULLBOXES, AND CONDUITS.

a. WHILE ENTERING MAINTENANCE HOLES, HAND HOLES, PULLBOXES, FOLLOW ALL CODES AND SAFETY PRACTICES OF A "CONFINED SPACE". UTILIZE NECESSARY EQUIPMENT TO MAINTAIN ALL SAFE PULLING TENSIONS FOR THE CABLES TO BE INSTALLED. THIS INFORMATION CAN BE FOUND ON THE CABLE MANUFACTURER'S SPECIFICATIONS SHEETS.

b. BEFORE EXITING THE MAINTENANCE HOLE, HAND HOLE, PULLBOX, NOTE ON PAPER OR DIGITAL MEANS THE EXISTING AND NEW CABLE(S) LOCATION(S) AND ROUTE(S), AND PROVIDE A "BUTTERFLY" PRINT TO AHJ AND OWNER'S REPRESENTATIVE. LABEL THE INSTALLED MEDIA PER SPECIFICATIONS.

c. WITH DIRECTION OF OWNER OR OWNER'S REPRESENTATIVE, CHOOSE AND PROVE ALL CONDUITS BEFORE THE INSTALLATION OF THE MEDIA. MEASURE ALL PATHWAYS WITH MULE-TAPE PRIOR TO ORDERING MATERIAL. ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH DISCREPANCIES BETWEEN DRAWINGS AND VERIFIABLE SITE CONDITIONS SHALL BE BORNE BY CONTRACTOR. COORDINATE WITH THE ELECTRICAL OR GENERAL CONTRACTOR (EC OR GC), IF CONDUITS ARE PLUGGED OR MISSING PULL ROPE.

d. TRAIL ALL BACKBONE MEDIA (I.E. COPPER, FIBER OR INNERDUCT) WITH A 3/8" YELLOW POLY-NYLON ROPE, LABEL THE ROPE, AND TIE OFF EITHER END, FOR FUTURE INSTALLATIONS.

e. PROVIDE AND INSTALL ALL HARDWARE NECESSARY TO SUPPORT THE CABLING TO THE WALLS OF THE MAINTENANCE HOLE, HAND HOLES, PULLBOX. (IF IT DOES NOT ALREADY EXIST) THIS HARDWARE IS TO BE CONSTRUCTED FOR THE AREA IT IS TO BE INSTALLED AND DESIGNED FOR THE PURPOSE INTENDED FOR ITS USE.

f. SCS AND/OR LV CONTRACTOR TO PROVIDE EXPANSION PLUGS IN ALL DUCTS/CONDUITS ENTERING THE BUILDING. SEAL ALL UNUSED DUCTS/CONDUITS WITH PLUGS THAT ALLOW THE PULL-STRING TO BE TIED OFF ON THE INSIDE.

6. INSIDE PLANT (ISP) PATHWAYS CAN BE BROKEN DOWN INTO THE FOLLOWING ITEMS, HOLLOW WALL PENETRATION, MEMBRANE PENETRATION, ACCESSIBLE CEILING (I.E. "J" HOOKS), AND CONDUIT. 7. CABLE RACEWAYS AND CONDUITS SHALL NOT BE FILLED GREATER THAN THE CEC 2017, ARTICLE 725 AND BICSI RECOMMENDED FILL FOR THE PARTICULAR RACEWAY OR CONDUIT SIZE FOR CLASS 2/3 WIRE/CABLE.

a. CONDUIT AND PATHWAY ROUTING SHOWN FOR THE SCS AND LV SYSTEMS ARE STRICTLY DIAGRAMMATICAL FOR THE PURPOSE OF THE BID TO ILLUSTRATE GENERAL METHODOLOGY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE BEST MEANS & METHODS FOR SCS & TECHNOLOGY CONDUIT AND PATHWAY INSTALLATION. ADDITIONALLY IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE INSTALLATION PLAN WITH THE OWNERS REPRESENTATIVE AND ALL TRADES PRIOR TO INSTALLATION. REFER TO PLANS AND GENERAL ELECTRICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

b. CONDUIT PATHWAYS SHALL BE SUPPLIED BY THE ELECTRICAL OR GENERAL CONTRACTOR AS PER THE DRAWINGS, OTHER CONDUITS (IF ANY) MAY NEED TO BE COORDINATED WITH THE EC AND/OR GC OF THE PROJECT.

c. NO CABLE IS TO BE PULLED THROUGH A CONDUIT L-BEND "LB" (CONDULETS).

d. ALL EXPOSED CONDUIT AND HARDWARE SHALL BE PAINTED TO MATCH SURROUNDING SURFACES. CONTRACT DISTRICT REPRESENTATIVE FOR PAINT COLORS.

e. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.

f. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2"-3" ABOVE THE FLOOR SURFACE.

g. INSTALL BUSHINGS AND BELL ENDS AS REQUIRED ON ALL CONDUITS.

h. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.

i. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.

j. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.

k. REINSTALL PULL-STRINGS IN ALL SCS AND LV ISP PATHWAYS AFTER USE TO FACILITATE FUTURE ADDITION OF CABLES.

l. IT IS THE SCS AND/OR LV CONTRACTOR'S RESPONSIBILITY TO REPORT ANY UNUSABLE OR INADEQUATE CONDUIT RUNS TO THE OWNER PRIOR TO PULLING ANY CABLE.

m. PULL BOXES ARE NOT TO BE USED IN LIEU OF A BEND, AND THE CONDUIT SHALL EXIT A PULLBOX ON THE WALL OPPOSITE THE WALL ENTERED.

n. CONDUITS SHALL; • CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.) • CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULLBOX SIZED PER STANDARDS & CODE. • SPLIT CONDUITS IN PLACE OF PULLBOXES ARE UNACCEPTABLE.

o. CONDUIT BEND RADIUS SHALL BE;

- A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2" IN DIAMETER OR LESS.
- A MINIMUM OF10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2" IN DIAMETER.

p. POWER SEPARATION:

- THE CONTRACTOR SHALL NOT PLACE ANY DISTRIBUTION CABLING ALONGSIDE POWER LINES, OR SHARE THE SAME CONDUIT, CHANNEL OR SLEEVE WITH ELECTRICAL APPARATUS. AT NO POINT SHALL THE COMMUNICATIONS CABLES BE TIED TO POWER CABLES OR OTHER BUILDING SERVICES. STATION CABLES AND TIE CABLES INSTALLED WITHIN CEILING SPACES SHALL BE ROUTED THROUGH THESE SPACES AT RIGHT ANGLES TO ELECTRICAL POWER CIRCUITS.
- AVOID ELECTROMAGNETIC INTERFERENCE (EMI) BY MAINTAINING ADEQUATE PHYSICAL SEPARATION BETWEEN TECHNOLOGY CABLING AND POSSIBLE SOURCES SUCH AS, BUT NOT LIMITED TO, ELECTRIC MOTORS, ELECTRIC PENCIL SHARPENERS, TRANSFORMERS, FLUORESCENT LIGHTS THAT SHARE DISTRIBUTION SPACE WITH TELECOMMUNICATIONS CABLING, COPIERS THAT SHARE WORK AREA SPACE WITH LINE CORDS AND TERMINALS, LARGE FAX MACHINES AND POWER CORDS THAT SUPPORTS SUCH EQUIPMENT.

PROJECT CODES AND STANDARDS:

PARTIAL LIST OF APPLICABLE CODES AND STANDARDS EFFECTIVE : JANUARY 1, 2023

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC)

2022 CALIFORNIA BUILDING CODE (CBC)

2022 CALIFORNIA ELECTRICAL CODE (CEC)

2022 CALIFORNIA ENERGY CODE

2022 CALIFORNIA FIRE CODE (CFC)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

2022 CALIFORNIA REFERENCED STANDARDS CODE

2022 NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE, NATIONAL FIRE PROTECTION ASSOCIATION

TECHNOLOGY DESIGN TEAM

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EMAIL:---------- jzamora@lpengineers.com

DESIGNER / SUPPORT:
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CONTRACTOR SUBMITTALS:

(SHOP DRAWINGS / PRODUCT SUBMITTALS / QUALIFICATIONS)

1. ORDERING AND INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL THE FOLLOWING:

a. CONTRACTOR FURNISHED SHOP DRAWINGS (SEE BELOW FOR LISTED SHOP DRAWING REQUIREMENTS)

b. PRODUCT SUBMITTAL DOCUMENTS

c. APPLICABLE TRADES QUALIFICATION CERTIFICATIONS HAVE BEEN APPROVED BY THE SYSTEMS ENGINEER AND/OR ARCHITECT AND IF (A. APPLICABLE, APPROVED BY THE DIVISION OF THE STATE ARCHITECT).

2. ANY DESIGN AND/OR INSTALLATION DISCREPANCIES/CHANGE ORDERS/REWORK (INCLUDING LABOR AND MATERIALS) INCURRED BEFORE OR AFTER CONTRACTOR FURNISHED SHOP DRAWINGS HAVE BEEN APPROVED SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR INSTALLATION SHOP DRAWINGS

1. IT SHALL BE UNDERSTOOD THAT THE DRAWINGS, DETAILS, AND ONE-LINES PROVIDED WITH THE DESIGN PACKAGE ARE DIAGRAMMATIC. DATA PRESENTED ON DESIGN DRAWINGS ARE AS ACCURATE AS PRELIMINARY SURVEYS AND PLANNING CAN DETERMINE UNTIL FINAL EQUIPMENT SELECTION IS MADE. ACCURACY IS NOT GUARANTEED AND FIELD VERIFICATION, OF ALL DIMENSIONS, ROUTING, ETC., BY THE CONTRACTOR IS REQUIRED.

2. DRAWINGS ARE PROVIDED TO SHOW THE INTENT OF THE DESIGN AND SPECIFICATION AND TO ASSIST THE CONTRACTOR IN SUBMITTING A BID. CONTRACTOR IS DIRECTED TO MAKE FIELD SURVEYS AS PART OF HIS WORK PRIOR TO SUBMITTING SYSTEM LAYOUT DRAWINGS (SHOP DRAWINGS). THE CONTRACTOR SHALL MAKE ALLOWANCE IN THE PROPOSAL TO COVER WHATEVER WORK IS REQUIRED TO COMPLY WITH THE INTENT OF THE DESIGN AND PROVIDE A FULLY FUNCTIONING COMPLETE, OPERABLE, AND INTEGRATED SYSTEM.

3. IN CASE OF DOUBT OF WORK INTENDED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REQUEST INSTRUCTIONS FROM THE ENGINEER OR OWNER PRIOR TO BID. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE, OPERABLE, AND INTEGRATED FUNCTIONING SYSTEM.

4. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED CONTRACTOR FURNISHED SHOP DRAWINGS (IN AUTOCAD 2010/ OR SIMILAR PROFESSIONAL DRAWING FORMAT) AND PRODUCT SUBMITTALS HAVE BEEN APPROVED BY THE DESIGNER AND/OR ARCHITECT AND IF (A. APPLICABLE, APPROVED BY THE DIVISION OF THE STATE ARCHITECT).

5. ANY AND ALL DESIGN AND/OR INSTALLATION DISCREPANCIES, CHANGE ORDERS, (INCLUDING LABOR, MATERIALS, AND SHIPPING) INCURRED WITHOUT CONTRACTOR SHOP DRAWINGS OR AFTER CONTRACTOR SHOP DRAWINGS HAVE BEEN APPROVED SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

6. ANY WORK PERFORMED WITHOUT APPROVED CONTRACTOR FURNISHED SHOP DRAWINGS AND SUBMITTALS SHALL NOT BE ALLOWED. IF WORK PERFORMED PRIOR TO APPROVE SHOP DRAWINGS, CONTRACTOR WILL DO SO AT THEIR OWN RISK.

7. ANY PRODUCTS THAT HAVE DEVIATED FROM THE SPECIFICATION OR DRAWINGS SHALL BE FLAGGED AS "SUBSTITUTION REQUEST".

TECHNOLOGY GENERAL NOTES:

1. ALL STRUCTURED CABLING SYSTEM (SCS) & LOW VOLTAGE (LV) CABLING USED THROUGHOUT THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS AS OUTLINED IN THE STANDARDS, CODES AND LOCAL REGULATIONS FOR THE FOLLOWING: ANSI/TIA-568-C, ANSI/TIA-569-D, ANSI/TIA-606-B, ANSI/TIA-607-B, BICSI TDMM (CURRENT VERSION), CEC ARTICLE 90, ARTICLE 300, CEC ARTICLE 645, CEC ARTICLE 646, CEC ARTICLE 725, CEC ARTICLE 760, CEC ARTICLE 770, CEC ARTICLE 800, CEC ARTICLE 830. THE SCS & TECHNOLOGY SYSTEM(S) MUST MEET ALL LOCAL AND OTHER PREVAILING CODES.

2. ALL SCS & LV CABLING SHALL BEAR UL LISTED TYPE CMP (PLENUM RATED) AND/OR CM/G (GENERAL PURPOSE) AND/OR CMR (RISER RATED). ALL FIBER OPTIC CABLING SHALL BEAR OFNP (PLENUM RATED) AND/OR OFNR (RISER RATED) AND/OR OFN/G (GENERAL PURPOSE). THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATELY RATED CABLE FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED.

3. ALL INSTALLATION SHALL BE DONE IN CONFORMANCE WITH ANSI/TIA-568-C STANDARDS AND MANUFACTURERS INSTALLATION GUIDELINES. THE CONTRACTOR SHALL ENSURE THAT THE CABLE'S MINIMUM BEND RADIUS AND, MAXIMUM PULLING TENSIONS OF THE SPECIFIED DISTRIBUTION CABLES ARE NOT EXCEEDED. THE CABLE BENDS MUST MAINTAIN THE PROPER RADIUS DURING THE PLACEMENT OF THE FACILITIES. FAILURE TO FOLLOW THE APPROPRIATE GUIDELINES WILL REQUIRE THE CONTRACTOR TO PROVIDE, IN A TIMELY FASHION, ANY ADDITIONAL MATERIAL AND LABOR NECESSARY TO PROPERLY RECTIFY THE SITUATION TO THE SATISFACTION AND WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE. THIS SHALL ALSO APPLY TO ANY AND ALL DAMAGES SUSTAINED TO THE CABLES BY THE CONTRACTOR DURING THE IMPLEMENTATION.

4. ALL SCS AND/OR LV INSTALLATIONS SHALL BE PERFORMED BY QUALIFIED TECHNICIANS FOR THAT SYSTEM. THE LABOR EMPLOYED BY THE CONTRACTOR SHALL BE REGULARLY EMPLOYED IN THE INSTALLATION AND REPAIR OF SCS AND/OR LV SYSTEMS AND SHALL BE ACCEPTABLE TO THE OWNERS REPRESENTATIVE TO ENGAGE IN THE INSTALLATION AND SERVICE OF THIS SYSTEM.

5. THE MDF AND IDF SPACES ARE DESCRIBED BELOW, AND ENCOMPASS THE AREAS THE COMMUNICATIONS CABLING EXISTS IN. THESE AREAS INCLUDE (BUT NOT LIMITED TO) THE BACKBOARDS, CABINETS, RACKS, FRAMES, LADDER RACKS, TERMINATION FIELDS, AND PATCH CORDS. (WALL AND RACK TYPES FOR COPPER AND FIBER). THE SCS CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE STANDARDS, CODES AND LOCAL REGULATIONS FOR THESE SPACES, (E.G. ANSI/TIA-568-C, ANSI/TIA-569-D, ANSI/TIA-606-B, ANSI/TIA-607-B , BICSI TDMM (CURRENT VERSION), CEC ARTICLE 90, ARTICLE 300, CEC ARTICLE 645, CEC ARTICLE 646, CEC ARTICLE 725, CEC ARTICLE 770, CEC ARTICLE 800, CEC ARTICLE 830.

6. THE WIRING OF THE SYSTEM SHALL BE EXECUTED IN ACCORDANCE WITH THE DRAWINGS AND THE EQUIPMENT MANUFACTURER'S WIRING DIAGRAMS. SHOULD ANY VARIATIONS IN THESE REQUIREMENTS OCCUR, THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE BEFORE MAKING ANY CHANGES. IT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER - AUTHORIZED INSTALLER OF THE APPROVED EQUIPMENT TO INSTALL THE EQUIPMENT AND GUARANTEE THE SYSTEM TO OPERATE AS PER PLANS AND SPECIFICATIONS.

7. ALL MATERIALS SHALL BE NEW. NO USED OR RE-MANUFACTURED PARTS OR COMPONENTS SHALL BE ACCEPTED.

8. CABLE STORAGE: THE CONTRACTOR SHALL NOT ROLL OR STORE CABLE REELS WITHOUT AN APPROPRIATE UNDERLAY AND THE PRIOR WRITTEN APPROVAL OF OWNERS REPRESENTATIVE.

9. SPECIAL EQUIPMENT AND TOOLS: IN ORDER TO ENSURE THE LEAST AMOUNT OF CABLE UNTWISTING, IT IS REQUIRED THAT ALL CABLES SHALL BE STRIPPED USING A CABLE MANUFACTURER'S RECOGNIZED SPECIAL TOOL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH ANY SPECIAL INSTALLATION EQUIPMENT OR TOOLS NECESSARY TO PROPERLY COMPLETE THE SYSTEM. THIS MAY INCLUDE, BUT IS NOT LIMITED TO, TOOLS FOR TERMINATING CABLES, TESTING AND SPLICING EQUIPMENT FOR COPPER/FIBER CABLES, COMMUNICATION DEVICES, JACK STANDS FOR CABLE REELS, OR CABLE WINCHES.

10. UNDER NO CIRCUMSTANCE ARE "CHANNEL LOCKS" OR OTHER PLIERS NOT DESIGNED BY THE SCS MANUFACTURE TO BE USED TO TERMINATE WAO JACKS.

TECHNOLOGY SHEET INDEX

SHEET NO.	SHEET TITLE
T0.01	TECHNOLOGY ABBREVIATIONS, AND NOTES
T0.02	TECHNOLOGY SYMBOL AND LEGEND
T0.03	TECHNOLOGY DETAILS
T1.00	TECHNOLOGY SITE PLAN
T3.10	TECHNOLOGY FLOOR PLAN – CLASSROOM BLDG A
T3.11	TECHNOLOGY FLOOR PLAN – CLASSROOM BLDG B
T3.12	TECHNOLOGY FLOOR PLAN – CLASSROOM BLDG C
T3.13	TECHNOLOGY FLOOR PLAN – CLASSROOM BLDG D
T3.14	TECHNOLOGY FLOOR PLAN – MULTIPURPOSE BLDG
T3.15	TECHNOLOGY FLOOR PLAN – KINDER–ADMIN BLDG
T4.10	TECHNOLOGY RISER DIAGRAM

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DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRIAN P WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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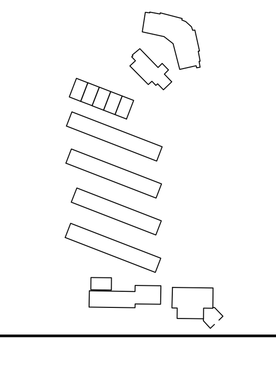
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY ABBREVIATIONS, AND NOTES

Date: 04/24/2023
Project Number: 22026
Application Number: 01-120631
Drawing Number: T0.01
Drawn: RL (LPCE)
Checked: DPCE

SYMBOL KEYNOTES AND IDENTIFIERS

SYMBOL	DESCRIPTIONS
X	NUMBERED SHEET NOTE. APPLIES TO SHEET ON WHICH NOTE IS FOUND ONLY.
DETAIL NUMBER / X / X.XX / SHEET NUMBER	ELEVATION REFERENCE - REFER TO ELEVATION AS NOTED IN REFERENCE CALL-OUT
DETAIL NUMBER / X / X.XX / SHEET NUMBER	SECTION REFERENCE - REFER TO SECTION AS NOTED IN REFERENCE CALL-OUT
DETAIL NUMBER / X / X.XX / SHEET NUMBER	DETAIL REFERENCE OR CALL-OUT

TECHNOLOGY SYMBOL LEGEND:

ALL NOTES ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS

MARK	SYMBOL	DESCRIPTION	BACK BOX	PLASTER RING	MOUNTING HEIGHT	CONDUIT	MANUFACTURER	PART NUMBER / MODEL	MAX. LOAD	INSTALLATION NOTES
1	MDF	MAIN DISTRIBUTION FRAME	N/A	N/A	V.I.F.	N/A	EXISTING	EXISTING	N/A	N/A
2	IDF	INTERMEDIATE DISTRIBUTION FRAME	N/A	N/A	V.I.F.	N/A	EXISTING	EXISTING	N/A	N/A
3	2 WP BMS	WEATHER PROOF DATA OUTLET	5" SQ., 2-1/8" DEEP	2-DEVICE	+18" TO BOTT.	1 EA. 1"C	LEVITON	CAT6A: 11140627 JACK: 6110G-R*6	N/A	N/A
4	2 LCP	DATA OUTLET	5" SQ., 2-1/8" DEEP	2-DEVICE	+16" TO BOTT.	1 EA. 1"C	LEVITON	CAT6A: 11140627 JACK: 6110G-R*6	N/A	N/A
5	PB	12X12X4 PULL BOX	N/A	N/A	N/A	N/A	LEVITON	N/A	N/A	N/A
6	UP ○ ● DOWN	CONDUIT UP / DOWN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	## / ##	TRANSITION ELEVATION MARK UP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	———	CONDUIT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

1. USE EXTENSION RINGS IF NEEDED, ON ALL LOCATIONS.
2. REFERENCE EIA/TIA STANDARDS.
3. ROUTE CONDUIT INWALL TO NEAREST TO ACCESSIBLE CEILING SPACES.

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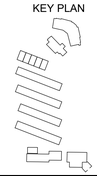
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



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CONSTRUCTION DOCUMENTS

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3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY SYMBOL LEGEND

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	T0.02
Drawn: RTE (LPCE)	Checked: CHECK

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

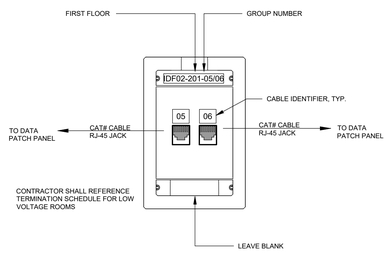
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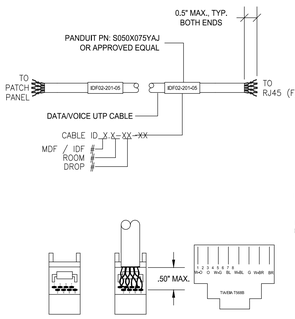
NOT USED

NOT USED

2-PORT RJ45 JACK FACE PLATE END POINT

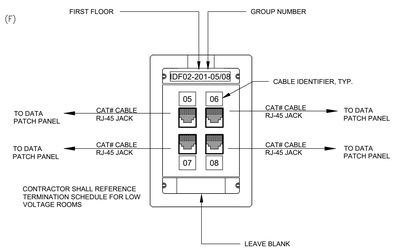


DATA 2-PORT WORKSTATION FACE PLATE & JACK LAYOUT

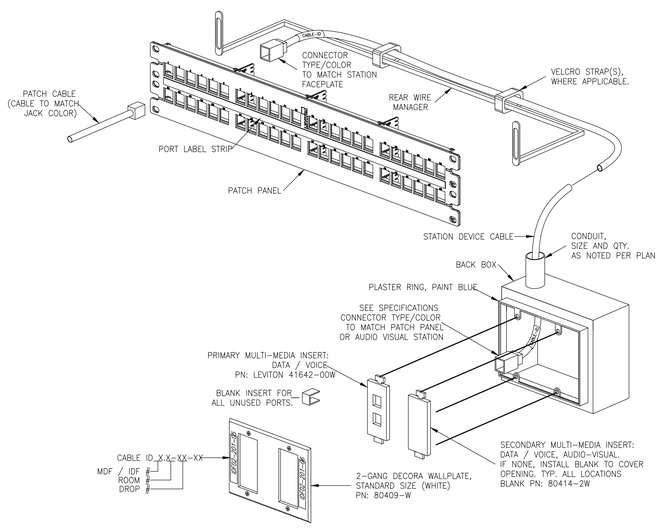


DATA/VOICE CABLE LABELING - AT JACK AND PATCH PANEL

4-PORT RJ45 JACK FACE PLATE END POINT



DATA 4-PORT WORKSTATION FACE PLATE & JACK LAYOUT



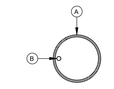
PATCH PANEL CONNECTION, 8P8C (RJ45) TERMINATION AND LABELING | SCALE: EDIT | 8

(A) (1) EA. 1" CONDUIT
(B) 1/2" NYLON MULE STRING, PN: NEPTCO WP900P

1

NOTE: AT ALL GROUND BOX, PULL BOX AND JUNCTION BOX LOCATIONS, THE ENDS OF CONDUITS SHALL BE PAINTED AND LABELED WITH A NUMBER. (SEE DETAIL FOR COLOR AND NUMBER).

BACKBONE/HORIZONTAL CONDUITS

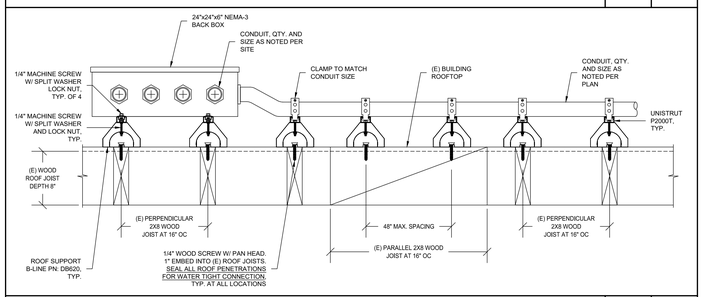


CONDUIT 1: DATA

CONDUIT FILL CHART 40% FILL RATIO MAXIMUM	
CONDUIT DIA.	FILL RATIO (0.250" DIA.)
1"	6-CABLES
1-1/4"	10-CABLES
2"	26-CABLES
4"	102-CABLES

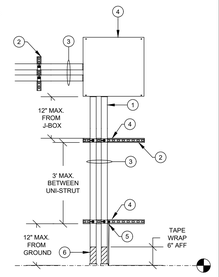
NOTE: CONTRACTOR SHALL BE REQUIRED TO UPSIZE CONDUIT AND/OR QTY AS NOTED PER FILL RATIO CABLE CAPACITY.

TECHNOLOGY CONDUIT LAYOUT, BACKBONE/HORIZONTAL PATHWAY | SCALE: N.T.S. | 1



TECHNOLOGY CONDUIT AND BACK BOX ON (E) BUILDING ROOFTOP | SCALE: N.T.S. | 2

1. INSTALL CONDUIT AS CLOSE AS POSSIBLE AND TO ONE SIDE OF J-BOX TO ACCOMODATE FUTURE INSTALLATIONS
2. UNI-STRUT TO BE CUT THE SAME LENGTH AS J-BOX
3. RIGID CONDUIT
4. CAULKING ACCORDING TO FIRE RATING-TYPICAL
5. 10 AWG WIRE OR METAL TRACING TAPE PLACED ON TOP OF CONDUITS AND CONTINUOUS THROUGHOUT ENTIRE TRENCH LENGTH AND TERMINATING ON RISER UNISTRUT OR GROUNDING BAR IN GROUNDBOX.
6. FLEX BETWEEN RISER AND GROUND CONDUIT.



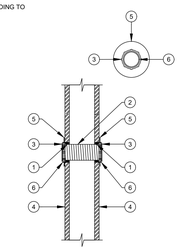
EXTERIOR PULL BOX W/ CONDUIT RISER | SCALE: N.T.S. | 6

SCHEDULE 1.1

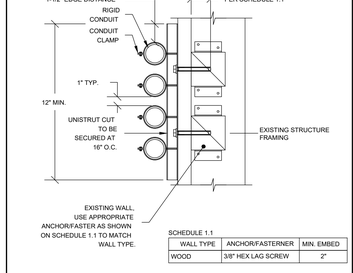
WALL TYPE	ANCHOR/FASTERNER	MIN. EMBED
WOOD	3/8" HEX LAG SCREW	2"

CONDUIT SUPPORT, VERTICAL (WOOD) | SCALE: N.T.S. | 3

1. DRAFT STOP OR FIRE CAULK ACCORDING TO WALL PENETRATION DETAILS
2. THREADED, RIGID, OR IMC CONDUIT
3. SCREW ON BUSHING
4. WALL
5. REDUCING WASHER OR PLATE
6. SCREW ON LOCKING RINGS FRONT & BACK (TYP.)



CONDUIT SLEEVE PENETRATION | SCALE: N.T.S. | 7



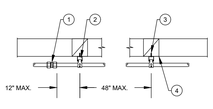
SCHEDULE 1.1

WALL TYPE	ANCHOR/FASTERNER	MIN. EMBED
WOOD	3/8" HEX LAG SCREW	2"

MULTIPLE-CONDUIT SUPPORT, VERTICAL (WOOD) | SCALE: N.T.S. | 4

1. WEATHERPROOF COUPLING DEVICE BOX OR JUNCTION, TYP.
2. UNISTRUT P1000T, TYP.
3. 1/4" DIA. WOOD SCREW W/ HEX HEAD AND WASHER, 1-1/4" MIN. EMBED, 2-MIN. PER UNISTRUT CHANNEL
4. EXISTING STRUCTURE FRAMING

UNISTRUT UNIVERSAL PIPE CLAMP FOR 1/2" TO 2" CONDUIT
- 1/2" - P1211 (16 GA)
- 3/4" - P1212 (16 GA)
- 1" - P1213 (16 GA)
- 1 1/4" - P1214 (14 GA)
- 1 1/2" - P1215 (14 GA)
- 2" - P1217 (14 GA)



CONDUIT STRAP SPACING (WOOD) | SCALE: N.T.S. | 5

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LICENSED ARCHITECT BRYAN P. WHITSON No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RAMI S. ZEIDAN No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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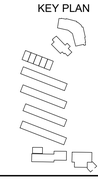
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



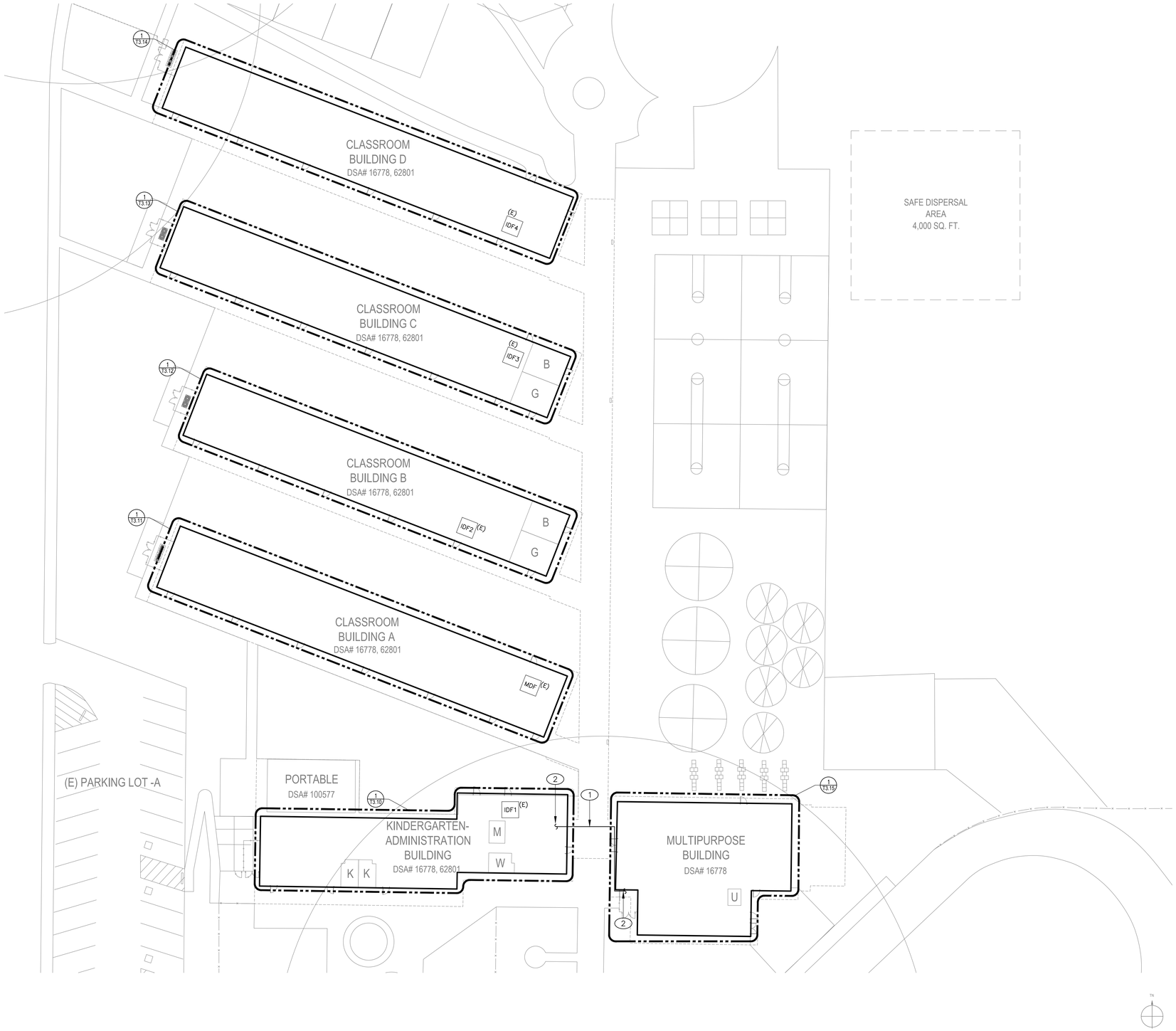
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY DETAILS

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number T0.03
Drawn RCE (LPCE)	Checked CPCE



TECHNOLOGY SITE PLAN | **1** 1" = 20'-0"

GENERAL NOTES

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3. REFER TO ELECTRICAL DRAWINGS FOR ALL TECHNOLOGY POWER CIRCUIT REQUIREMENTS.
4. ALL EQUIPMENT SHOWN ON CONSTRUCTION DOCUMENTS IS TO BE NEW CONTRACTOR FURNISHED/CONTRACTOR INSTALLED UNLESS SPECIFIED ON DRAWINGS AND/OR SCHEDULES.
5. ALL EXPOSED CONDUITS SHALL BE PRIMED WHITE AND PAINTED TO MATCH THE SURROUNDING AREA.
6. NETWORK STATION CABLING SHALL BE TERMINATED IN THE PATCH PANEL(S) IN SEQUENTIAL ORDER OF ROOM NUMBER, DROP ID. CABLES SHALL BE MACHINE LABELED AT THE PATCH PANEL FACE, AND AT CATEGORY CABLE (BOTH ENDS AS SHOWN ON DETAILS/SPECIFICATIONS).
7. ALL CONDUIT SHALL BE ROUTED AWAY AND/OR AROUND THE WINDOW.

KEY NOTES

(1) PROVIDE NEW (1) 1" CONDUIT FROM THE NEW BMS DATA DROP TO EXISTING IDF.

(2) TRANSITION CONDUIT TO ABOVE CANOPY TO THE ADMIN BUILDING. FOLLOW THE EXISTING TECHNOLOGY CONDUIT PATHWAY ABOVE THE CANOPY.

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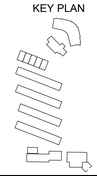
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

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○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



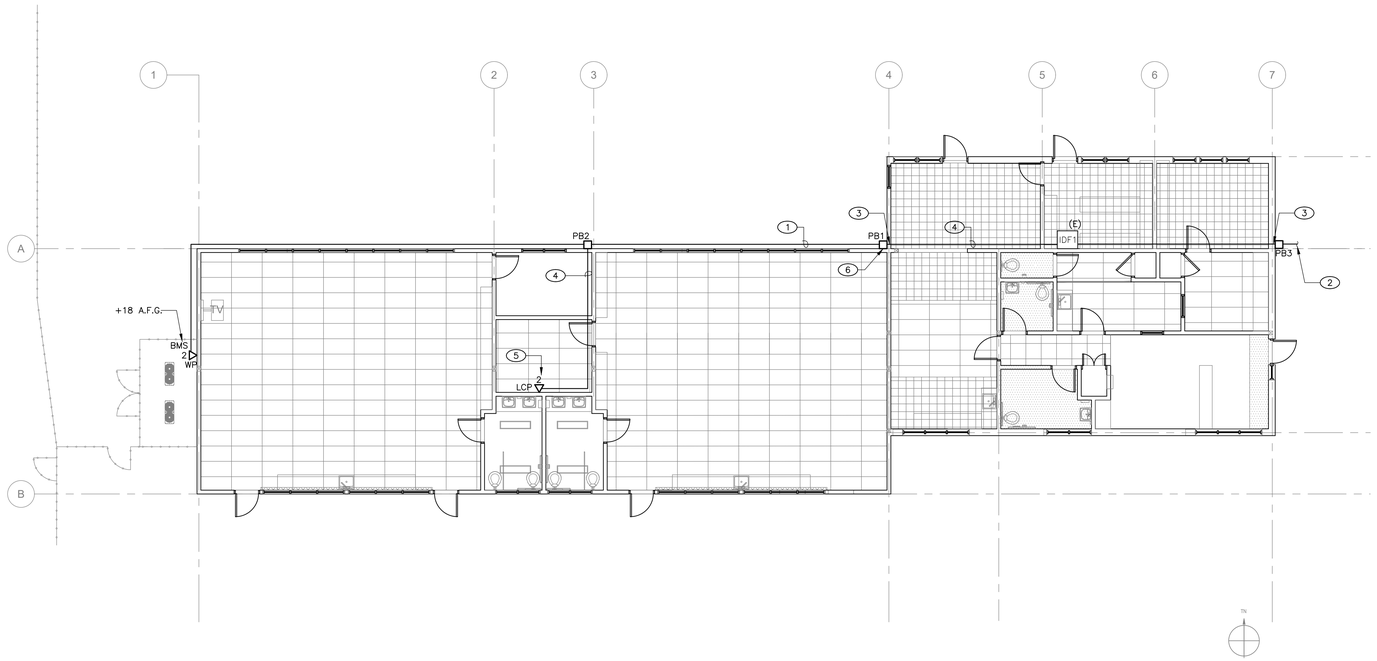
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SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

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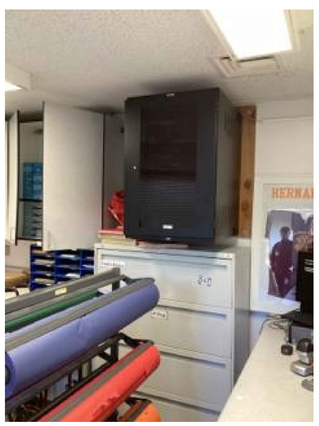
MILLARD MCCOLLAM
ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY
SITE PLAN

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T1.00
Drawn	Checked
RE (LPCE)	CPCE



TECHNOLOGY FLOOR PLAN - KINDER-ADMIN BLDG | **1**
1/8" = 1'-0"



IDF SITE CONDITION | **2**
NTS

GENERAL NOTES

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5. ALL EXPOSED CONDUITS SHALL BE PRIMED WHITE AND PAINTED TO MATCH THE SURROUNDING AREA.
6. NETWORK STATION CABLING SHALL BE TERMINATED IN THE PATCH PANEL(S) IN SEQUENTIAL ORDER OF ROOM NUMBER, DROP ID. CABLES SHALL BE MACHINE LABELED AT THE PATCH PANEL FACE, AND AT CATEGORY CABLE (BOTH ENDS AS SHOWN ON DETAILS/SPECIFICATIONS).

KEY NOTES

1. PROVIDE NEW (1) 1" CONDUIT FROM THE NEW BMS DATA DROP TO EXISTING IDF.
2. TRANSITION CONDUIT TO ABOVE CANOPY TO THE MULTIPURPOSE BUILDING. FOLLOW THE EXISTING TECHNOLOGY CONDUIT PATHWAY ABOVE THE CANOPY.
3. NEW 1 EA. 2" CONDUIT SLEEVE. CAULK AND SEAL ALL SLEEVE ROUGH-IN GAPS, AND OPENINGS IN ACCORDANCE WITH REQUIRED FIRE RATINGS.
4. PROVIDE NEW WIREMOLD 2300(AB).
5. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.
6. NEW 12"x12"x6" NEMA3R WALL MOUNTED PULL BOX WITH HINGED LOCKING KEYED LID. CAULK AND SEAL EXTERIOR PULL BOX AT ALL EXTERIOR WALL FINISH EDGES AND BOX FASTENER LOCATIONS FOR WATER-TIGHT CONNECTION.

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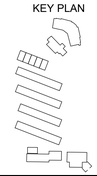
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



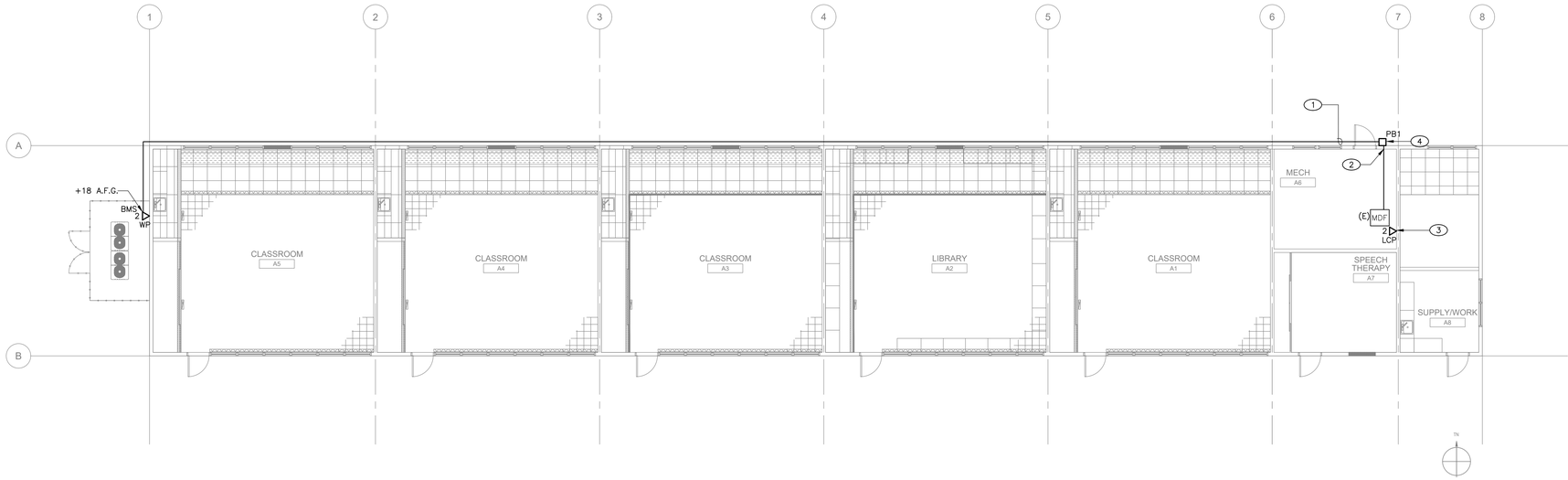
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

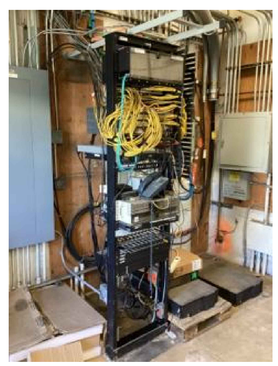
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SAN JOSE, CA 95127

TECHNOLOGY FLOOR PLAN - KINDER-ADMIN BLDG

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	T3.10
Drawn: RE (LPCE)	Checked: DECE



TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG A | **1**
1/8" = 1'-0"



MDF SITE CONDITION | **2**
NTS

GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS, PRIOR TO ANY WORKS, AND REPORT TO ENGINEERS ANY DISCREPANCIES.
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KEY NOTES

1. PROVIDE NEW (1) 1" CONDUIT UNDER THE SOFFIT FROM THE NEW BMS DATA DROP TO EXISTING IDF.
2. NEW 1 EA. 2" CONDUIT SLEEVE. CAULK AND SEAL ALL SLEEVE ROUGH-IN GAPS, AND OPENINGS IN ACCORDANCE WITH REQUIRED FIRE RATINGS.
3. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.
4. NEW 12"x12"x6" NEMA3R WALL MOUNTED PULL BOX WITH HINGED LOCKING KEYED LID. CAULK AND SEAL EXTERIOR PULL BOX AT ALL EXTERIOR WALL FINISH EDGES AND BOX FASTENER LOCATIONS FOR WATER-TIGHT CONNECTION.

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ARCHITECT	ENGINEER
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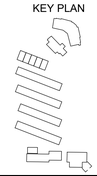
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



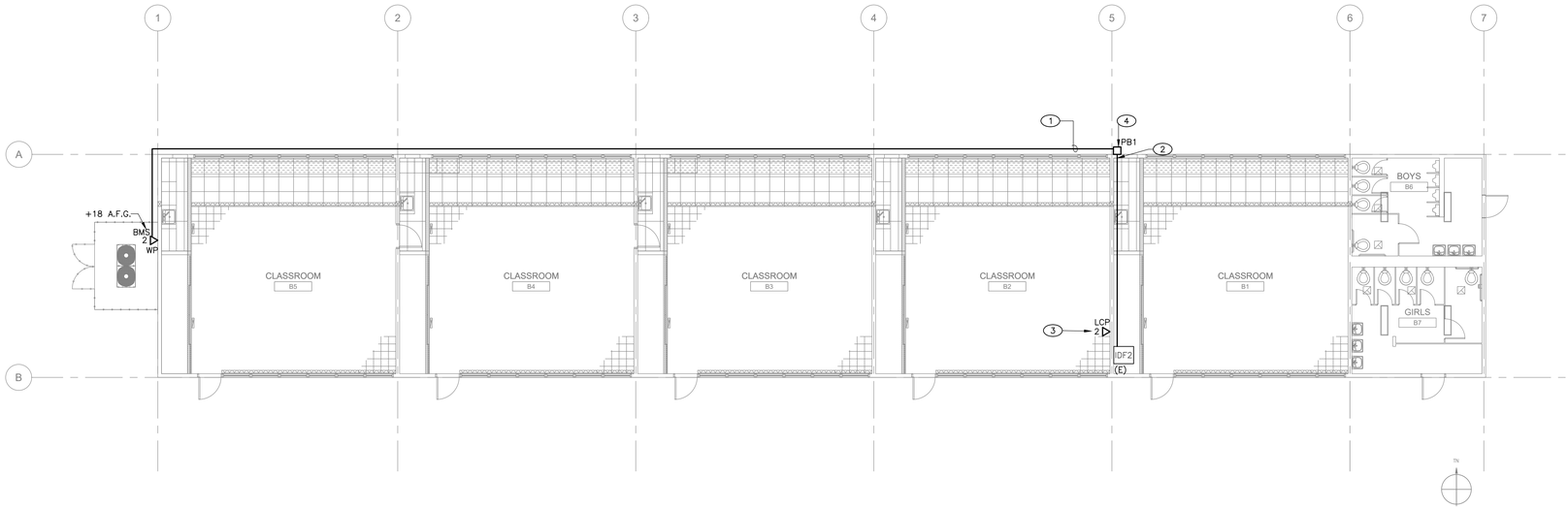
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

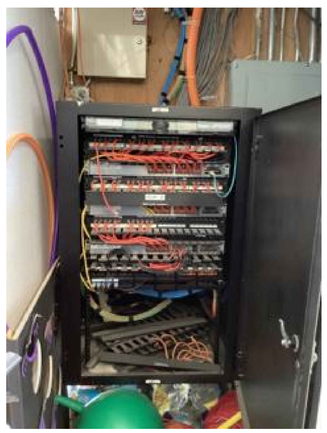
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3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG A

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T3.11
Drawn	Checked
RE (LPCE)	DRCE



TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG B | **1**
1/8" = 1'-0"



IDF SITE CONDITION | **2**
NTS

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KEY NOTES

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3. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.
4. NEW 12"x12"x6" NEMA3R WALL MOUNTED PULL BOX WITH HINGED LOCKING KEYED LID. CAULK AND SEAL EXTERIOR PULL BOX AT ALL EXTERIOR WALL FINISH EDGES AND BOX FASTENER LOCATIONS FOR WATER-TIGHT CONNECTION.

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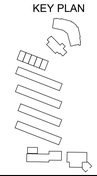
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



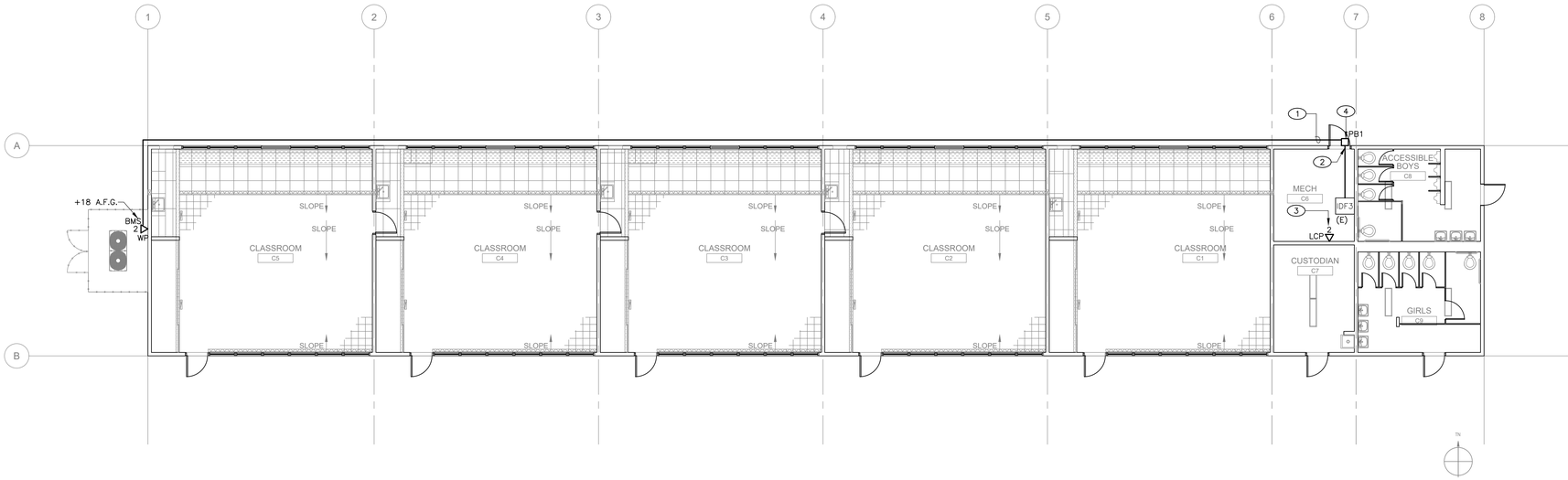
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SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG B

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	T3.12
Drawn: RE (LPCE)	Checked: DRCE



TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG C | 1

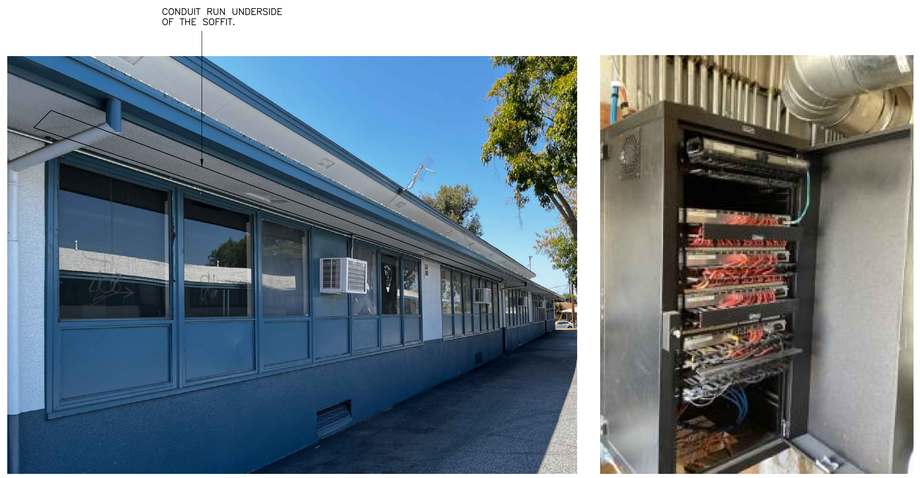
1/8" = 1'-0"

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KEY NOTES

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3. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.
4. NEW 12"x12"x6" NEMA3R WALL MOUNTED PULL BOX WITH HINGED LOCKING KEYED LID. CAULK AND SEAL EXTERIOR PULL BOX AT ALL EXTERIOR WALL FINISH EDGES AND BOX FASTENER LOCATIONS FOR WATER-TIGHT CONNECTION.



IDF & SOFFIT SITE CONDITION | 2

NTS

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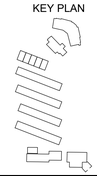
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● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



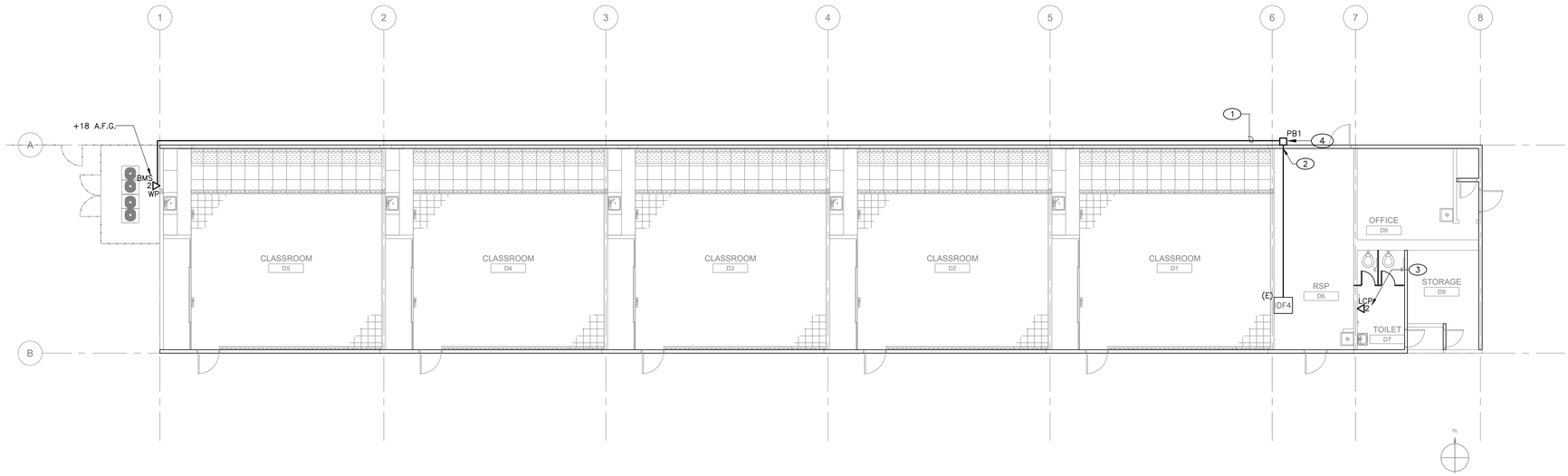
ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
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TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG C

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T3.13
Drawn	Checked
RE (LPCE)	DRCE



TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG D | **1**
1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS, PRIOR TO ANY WORKS, AND REPORT TO ENGINEERS ANY DISCREPANCIES.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL BUILDING PLANS AND DIMENSIONS.
3. REFER TO ELECTRICAL DRAWINGS FOR ALL TECHNOLOGY POWER CIRCUIT REQUIREMENTS.
4. ALL EQUIPMENT SHOWN ON CONSTRUCTION DOCUMENTS IS TO BE NEW CONTRACTOR FURNISHED/CONTRACTOR INSTALLED UNLESS SPECIFIED ON DRAWINGS AND/OR SCHEDULES.
5. ALL EXPOSED CONDUITS SHALL BE PRIMED WHITE AND PAINTED TO MATCH THE SURROUNDING AREA.
6. NETWORK STATION CABLING SHALL BE TERMINATED IN THE PATCH PANEL(S) IN SEQUENTIAL ORDER OF ROOM NUMBER, DROP ID. CABLES SHALL BE MACHINE LABELED AT THE PATCH PANEL FACE, AND AT CATEGORY CABLE (BOTH ENDS AS SHOWN ON DETAILS/SPECIFICATIONS).

KEY NOTES

1. PROVIDE NEW (1) 1" CONDUIT UNDER THE SOFFIT FROM THE NEW BMS DATA DROP TO EXISTING IDF.
2. NEW 1 EA. 2" CONDUIT SLEEVE. CAULK AND SEAL ALL SLEEVE ROUGH-IN GAPS, AND OPENINGS IN ACCORDANCE WITH REQUIRED FIRE RATINGS.
3. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.
4. NEW 12"x12"x6" NEMA3R WALL MOUNTED PULL BOX WITH HINGED LOCKING KEYED LID. CAULK AND SEAL EXTERIOR PULL BOX AT ALL EXTERIOR WALL FINISH EDGES AND BOX FASTENER LOCATIONS FOR WATER-TIGHT CONNECTION.



IDF SITE CONDITION | **2**
NTS

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Job #: 22-2197

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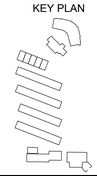
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○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
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○ CONSTRUCTION	

KEY PLAN



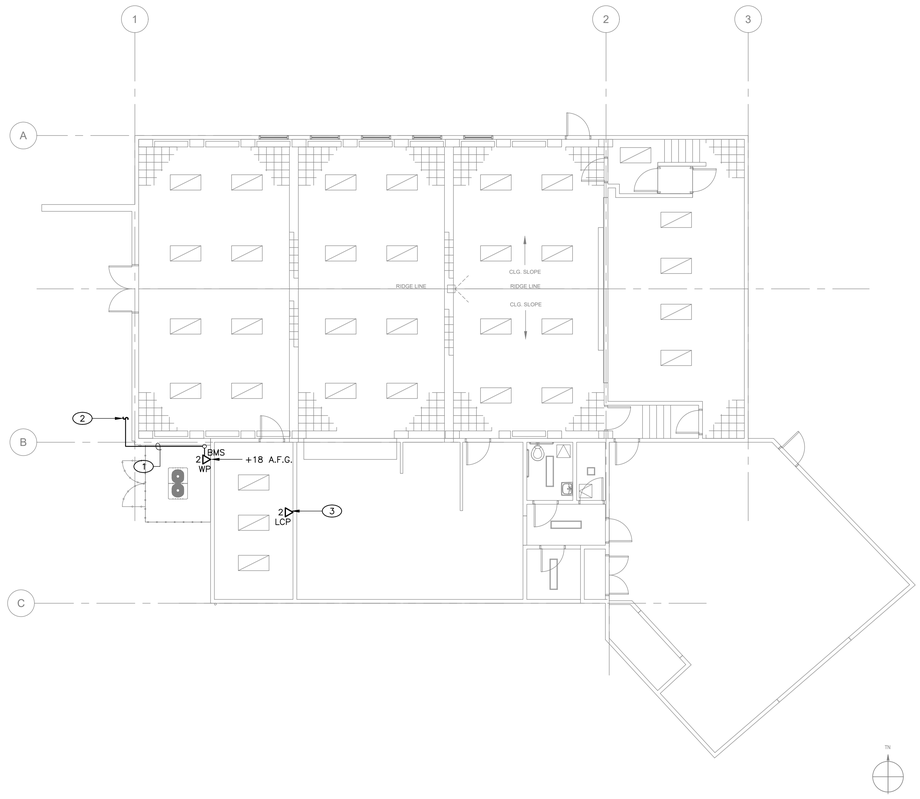
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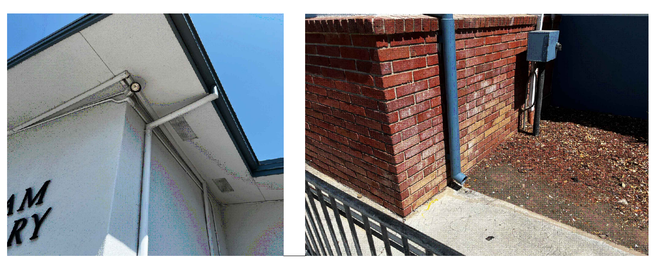
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TECHNOLOGY FLOOR PLAN - CLASSROOM BLDG D

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T3.14
Drawn	Checked
RE (LPCE)	DRCE



TECHNOLOGY FLOOR PLAN - MULTIPURPOSE BLDG | **1**
1/8" = 1'-0"



SITE CONDITION | **2**
NTS

GENERAL NOTES

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5. ALL EXPOSED CONDUITS SHALL BE PRIMED WHITE AND PAINTED TO MATCH THE SURROUNDING AREA.
6. NETWORK STATION CABLING SHALL BE TERMINATED IN THE PATCH PANEL(S) IN SEQUENTIAL ORDER OF ROOM NUMBER, DROP ID. CABLES SHALL BE MACHINE LABELED AT THE PATCH PANEL FACE, AND AT CATEGORY CABLE (BOTH ENDS AS SHOWN ON DETAILS/SPECIFICATIONS).

KEY NOTES

1. PROVIDE NEW (1) 1" CONDUIT FROM THE NEW BMS DATA DROP TO EXISTING IDF.
2. TRANSITION CONDUIT TO ABOVE CANOPY TO THE ADMIN BUILDING. FOLLOW THE EXISTING TECHNOLOGY CONDUIT PATHWAY ABOVE THE CANOPY.
3. PROVIDE NEW DATA DROPS WITH IN 3FT OF LIGHTING CONTROL PANEL.

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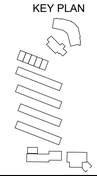
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KEY PLAN



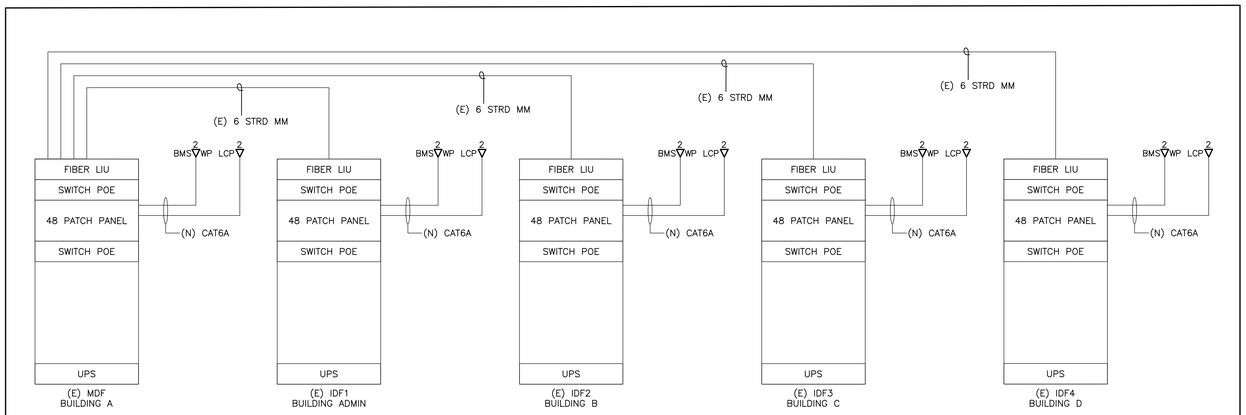
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TECHNOLOGY FLOOR PLAN - MULTIPURPOSE BLDG

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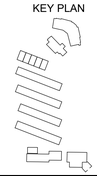
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TECHNOLOGY RISER DIAGRAM

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FIRE ALARM ABBREVIATIONS/SYMBOLS

SYMBOL	DESCRIPTIONS	SYMBOL	DESCRIPTIONS
A	ABOVE CEILING	PAP	PRE-ACTION PANEL
AFF	ABOVE FINISHED FLOOR	PIV	POST INDICATE VALVE
AHJ	AUTHORITY HAVING JURISDICTION	(R)	RELOCATE / RELOCATED
ALM	ALARM	(RC)	EXISTING TO REMOVE AND COVER
ANN	ANNUNCIATOR	(RD)	EXISTING DEVICE TO BE RELOCATED
BMS	BUILDING MANAGEMENT SYSTEM	(RL)	RELOCATED DEVICE
C	CONDUIT	(RR)	REMOVE EXISTING & REPLACE WITH NEW
CBC	CALIFORNIA BUILDING CODE	SCC	STATUS COMMAND CENTER
CEC	CALIFORNIA ELECTRICAL CODE	SLC	SIGNALING LINE CIRCUIT
CFC	CALIFORNIA FIRE CODE	SMK	SMOKE
CM	CEILING MOUNTED	SUPV	SUPERVISORY
CD	CANDELA RATING	TOS	TOP OF SHAFT
DET	DETECTOR	TRBL	TROUBLE
DGP	DATA GATHERING PANEL	TS	TAMPER SWITCH
(E)	EXISTING TO REMAIN	TYP	TYPICAL
EC	EMPTY CONDUIT	UNO	UNLESS NOTED OTHERWISE
EM	EMERGENCY	VCC	VOICE COMMAND CENTER
EMT	ELECTRICAL METALLIC TUBING	VT	VALVE TAMPER
EOL	END OF LINE	W	WATTAGE
EPO	EMERGENCY POWER OFF	W/	WITH
FAA	FIRE ALARM ANNUNCIATOR	W/O	WITHOUT
FACP	FIRE ALARM CONTROL PANEL	WF	WATERFLOW
FAPS	REMOTE FIRE ALARM POWER SUPPLY	WG	WIRE GUARD
FATC	FIRE ALARM TERMINAL CABINET	WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS	(X)	REMOVE
FCC	FIRE COMMAND CENTER	XFMR	TRANSFORMER
FSD	FIRE SMOKE DAMPER		
FTR	FIRE ALARM TRANSPONDER		
H	HIGH HUMIDITY		
HT	HEIGHT		
HVAC	HEATING VENTILATION & AIR CONDITIONING		
IMS	INFORMATION MANAGEMENT SYSTEM		
MAX	MAXIMUM		
MIN	MINIMUM		
(N)	NEW		
N/A	NOT APPLICABLE		
NA	NOT AVIALABLE		
NAC	NOTIFICATION APPLIANCE CIRCUIT		
NDU	NETWORK DISPLAY UNIT		
NEC	NATIONAL ELECTRICAL CODE		
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
NIC	NOT IN CONTRACT		
NPU	NETWORK PROCESSING UNIT		
NTS	NOT IN CONTRACT		

FIRE ALARM GENERAL DEMO NOTES

1. ALL EXISTING FIRE ALARM EQUIPMENT, DEVICES, CONDUIT AND WIRING, ETC., WHERE SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DOCUMENTS AND LIMITED SITE SURVEY AND ARE SHOWN FOR CLARITY. IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND BEFORE START OF ANY ELECTRICAL WORK, CONTRACTOR SHALL VERIFY ON-SITE ALL EXISTING LOCATIONS AND CONDITIONS TO ASCERTAIN ALL WORK REQUIRED.
2. EXISTING FIRE ALARM SYSTEM SHALL REMAIN ACTIVE UNTIL CONSTRUCTION IS COMPLETED. CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING FIRE ALARM SYSTEMS AND/OR OTHER EXISTING FACILITY'S SYSTEMS AND SERVICES AS POSSIBLE. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST 72 HOURS TO SCHEDULE ALL NECESSARY SHUTDOWNS. SHUTDOWN WORK SHALL BE PERFORMED AFTER THE NORMAL OPERATION HOURS OF THE FACILITY, IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE.
3. FIRE WATCH IN CONFORMANCE WITH THE CALIFORNIA FIRE CODE SHALL BE PROVIDED AT THE DIRECTION OF THE CONTRACTOR FOR EVERY OFF-LINE BUILDING. THE SCHOOL SHALL ASSIST WITH FIRE WATCH ACTIVITIES DURING SCHOOL HOURS AND WHENEVER THE CAMPUS IS OCCUPIED BY STUDENTS, TEACHERS AND STAFF. THE CONTRACTOR SHALL PROVIDE ALL FIRE WATCH ACTIVITIES AFTER SCHOOL HOURS AND WHENEVER THE CAMPUS IS NOT OCCUPIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING ALL FIRE WATCH LOGS.
4. ALL REMOVED AND/OR DEMOLISHED ELECTRICAL MATERIALS AND EQUIPMENT TO BE ACCOMPLISHED UNDER THIS CONTRACT, WHICH IN THE OPINION OF THE OWNER'S REPRESENTATIVE ARE DEEM SALVAGEABLE, SHALL REMAIN THE PROPERTY OF THE OWNER. ALL FIRE ALARM MATERIAL AND EQUIPMENT CONSIDERED NOT SALVAGEABLE SHALL BE REMOVED FROM THE SITE AND DISPOSED BY THE CONTRACTOR ACCORDINGLY.
5. WHERE REMOVAL OF AN EXISTING SYSTEM'S DEVICE WILL RESULT IN LOSS OF CIRCUIT CONTINUITY, THE ISOLATED PORTIONS OF THE CIRCUIT SHALL BE RECONNECTED TO PROVIDE SERVICE TO ALL REMAINING DEVICES. IF SITE CONDITIONS MAKE RECONNECTION IMPOSSIBLE, CONNECTION SHALL BE MADE FROM AN ADJACENT AVAILABLE DEVICE AS NOTED AND/OR AS DIRECTED BY THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE.
6. WHEREVER EXISTING DEVICES, PANELS, CONDUITS, CABLES, ETC., CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS AS DIRECTED BY THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AND REPAIR ALL SURFACES.
7. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY.
8. WHERE EXISTING WIRING OR EQUIPMENT IS ABANDONED AS A RESULT OF THIS CONTRACT, IT SHALL BE REMOVED INSOFAR AS POSSIBLE. THIS INCLUDES BUT IS NOT LIMITED TO:
   a. REMOVE ALL WIRE AND CABLE.
   b. REMOVE ALL DEVICES AND EQUIPMENT.
   c. REMOVE ALL EXPOSED CONDUIT AND CONDUIT IN ACCESSIBLE CONCEALED AREA, AS FAR AS POSSIBLE.
   d. CUT OFF AND CAP ALL ABANDONED CONDUIT. STUBS SHALL NOT BE PROTRUDED ABOVE FLOOR AND/OR FINISHED WALLS AND CEILINGS.

FIRE ALARM GENERAL NOTES

1. THE INTENT OF THESE DRAWINGS AND/OR SPECIFICATIONS DESCRIBE A COMPLETE, FUNCTIONING FIRE ALARM SYSTEM (INCLUDING VOICE EVACUATION PER SB575) WITH DEVICES, WIRING AND FIRE ALARM CONTROL PANEL TO MEET THE REQUIREMENTS OF NFPA 72 AND 2019 CALIFORNIAN FIRE CODE AND APPLICABLE LOCAL FIRE MARSHALL REGULATIONS AND REQUIREMENTS.
2. LOCATIONS OF EXISTING EQUIPMENT AND DEVICES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-BUILT PLANS AND LIMITED SITE SURVEYS. CONTRACTOR SHALL THOROUGHLY INSPECT THE EXISTING SYSTEM AND SITE CONDITIONS BEFORE BID. ADVISE THE SCHOOL'S REPRESENTATIVE OF ALL CONDITIONS REQUIRING IMMEDIATE ATTENTION OR MIGHT CAUSE DIFFICULTIES THAT ARE NOT ADDRESSED, OR INFERRED TO, IN THE CONTRACT DRAWINGS AND SPECIFICATIONS PRIOR TO NEW CONSTRUCTION AND THE COMMENCEMENT OF THE GUARANTEE PERIOD.
3. CONTRACTOR SHALL SUBMIT ANY ALTERATIONS OF THE APPROVED CONSTRUCTION DOCUMENTS TO THE SPECIAL INSPECTOR AND DSA FOR NEW APPROVALS. START INSTALLATION OF THE SYSTEM AFTER DETAILED PLANS, SPECIFICATIONS, NEW SHOP DRAWINGS AND SUBMITTALS HAS BEEN APPROVED BY DSA. CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY DELAY.
4. FIRE WATCH IN CONFORMANCE WITH THE CALIFORNIA FIRE CODE SHALL BE PROVIDED AT THE DIRECTION OF THE CONTRACTOR FOR EVERY OFF-LINE BUILDING. THE SCHOOL SHALL ASSIST WITH FIRE WATCH ACTIVITIES DURING SCHOOL HOURS AND WHENEVER THE CAMPUS IS OCCUPIED BY STUDENTS, TEACHERS AND STAFF. THE CONTRACTOR SHALL PROVIDE ALL FIRE WATCH ACTIVITIES AFTER SCHOOL HOURS AND WHENEVER THE CAMPUS IS NOT OCCUPIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING ALL FIRE WATCH LOGS.
5. REQUEST FOR ADDITIONAL COSTS ASSOCIATED WITH RE-USE OF ANY EXISTING SYSTEM COMPONENT, INCLUDING CONDUITS, BOXES, CONTROL PANELS, ETC. WILL NOT BE CONSIDERED.
6. NO KNOWN EXISTING CEILING OR ATTIC SPACE IN ROOMS OR AREA WITH HARD CEILING. IF CEILING OR ATTIC SPACE OCCUR DURING FIELD CONSTRUCTION THAT REQUIRE ADDING DETECTORS ABOVE THE CEILING OR ATTIC SPACE, PROVIDE A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SHEET OF PLANS SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
7. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA FIRE CODE, ARTICLE 907, CBC 305 AND CALIFORNIA ELECTRICAL CODE, ARTICLE 760.
8. FIRE ALARM SYSTEM SHALL TRANSMIT ALARM, SUPERVISORY AND TROUBLE SIGNAL TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72 AND CBC 907.6.6.3.
9. CONTRACTOR SHALL PROVIDE A COMPLETE AND FUNCTIONAL CODE COMPLIANT SYSTEM WITH ALL REQUIRED HARDWARE, DEVICES, PROGRAMMING AND POINT/DEVICE DESCRIPTION SCHEDULES.
10. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.3.
11. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
12. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL, AND THE LOCAL FIRE MARSHAL.
13. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY AND SPECIAL INSPECTOR. THE SCHOOL SHALL NOT BE IN OPERATION UNTIL THE IOR AND THE LOCAL FIRE MARSHAL HAS VERIFIED AND/OR SIGNED OFF ON OPERATIONAL CAPACITY OF THE FIRE ALARM SYSTEM.
14. ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
15. CONTRACTOR SHALL SUBMIT THE SPECIAL INSPECTOR NFPA CERTIFICATE OF COMPLIANCE FORM TO THE SCHOOL REPRESENTATIVE FOR SUBMISSION TO THE FIRE DEPARTMENT.
16. BEFORE REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE SYSTEM INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE INSPECTOR OF RECORD TO THE EFFECT THAT THE SYSTEM HAS BEEN INSTALLED AND COMPLETELY TESTED IN ACCORDANCE WITH THE 2016 NFPA 72, SECTION 7.5.2 AND 7.6.
17. CONTRACTOR SHALL PROVIDE INTELLIGIBILITY TESTING USING INTELLIGIBILITY METERS APPROVED FOR SUCH USE. REFERENCE NFPA 72 CHAPTER 24. AN STI SCORE OF 7.0 IS A MINIMUM REQUIREMENT. CONTRACTOR SHALL IDENTIFY ALL ACOUSTICALLY DISTINGUISHABLE SPACES (ADS) ON CONTRACTOR SHOP DRAWINGS.
18. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
19. PROVIDE FIRE ALARM AUDIBLE SOUND LEVEL AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL IN ALL OCCUPIED AREA, BUT NOT LESS THAN 75 DBA AT 10 FEET OR MORE THAN 120 DBA IN TOTAL, THROUGHOUT. SYNCHRONIZED TEMPORAL CODE 3 SOUND. (NFPA 72, 18.4.2.1)
20. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
21. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
22. A FLASHING VISUAL WARNING DEVICE HAVING A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE [TWO (2) FLASHES OR LESS THAN ONE (1) FLASH PER SECOND] SHALL BE INSTALLED TO WARN THE HEARING-IMPAIRED AS SHOWN ON THE DRAWINGS. FLASHING VISUAL WARNING DEVICES VIEWABLE WITHIN THE SAME INTERIOR SPACE SHALL BE SYNCHRONIZED. (NFPA 72, 18.5.3.6, A18.5.3.6 AND 18.5.5.5.7)
23. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
24. LOCATE SMOKE AND HEAT DETECTORS AT LEAST ONE FOOT AWAY FROM FLUORESCENT LIGHT FIXTURES.
25. CONTRACTOR SHALL AFFIX TO EACH FIELD DEVICE A DEVICE LABEL. DEVICE LABEL SHALL BE ARRANGED FOLLOWING DETAIL "FIRE ALARM CIRCUIT IDENTIFIERS". INITIATION DEVICES CONNECTED TO EQUIPMENT BY OTHERS SHALL HAVE A LABEL AFFIXED TO MODULE INDICATING THE EQUIPMENT CONNECTED.
26. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
27. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
28. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
29. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT OR RACEWAY WHEN PASSING THROUGH A FLOOR OR WALL TO A HEIGHT OF 7 FEET ABOVE THE FLOOR. FIRE ALARM WIRING ABOVE CEILING SHALL BE SUPPORTED BY THE BUILDING STRUCTURE SO AS NOT TO DAMAGE THE CABLE..
30. NO SPLICES SHALL BE ALLOWED FOR FIRE ALARM SYSTEM UNDERGROUND CABLES.
31. NEW FIRE ALARM WIRING SHALL NOT BE INSTALLED IN ANY RACEWAY WITH WIRING IN EXCESS OF 24 VOLT.
32. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
33. ALL FIRE ALARM EQUIPMENT BRANCH CIRCUITS SHALL BE DEDICATED AS PER NFPA 72, 10.6.5.1 AND ITS LOCATION BE CLEARLY LABELED AT THE FIRE ALARM CONTROL PANEL.
34. ALL FIRE ALARM EQUIPMENT POWER SOURCE CIRCUITS SHALL BE IDENTIFIED AT THE POWER SOURCE PER NFPA 72, 10.6.5.2. USING A RED CLEARLY MARKED DISCONNECT WITH LOCK-ON CAPABILITY. COORDINATE WITH ELECTRICAL.
35. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
36. WHERE ACCESSIBILITY IS NOT AVAILABLE TO THE NEW FIRE ALARM DEVICES LOCATED ABOVE THE CEILING/ATTIC SPACES, PROVIDE ACCESS PANELS TO THESE DEVICES, COORDINATE PRIOR TO THE EXECUTION OF WORK.
37. THE CONTRACTOR SHALL PROVIDE AS-BUILT SHOP DRAWINGS INDICATING CIRCUITING OF ALL DETECTOR AS AND OTHER DEVICES IN ALL THE BUILDINGS OF THIS PROJECT. AS-BUILT DRAWINGS SHALL BE STORED IN FIRE ALARM DOCUMENT CABINET INSTALLED ADJACENT TO FIRE ALARM CONTROL PANEL OR LOCATION APPROVED BY AUTHORITY HAVING JURISDICTION.
38. PROVIDE DOCUMENTATION CABINET TO BE INSTALLED PROXIMAL TO FACP (NFPA 72, 7.7.2.1). ALL RECORD DOCUMENTATION SHALL BE STORED IN THE DOCUMENTATION CABINET (NFPA 72 7.7.2.3). THE DOCUMENTATION CABINET TO BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS" (NFPA 72 7.7.2.5).

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP	MD	PP	E	
☐	☐	☒	☐	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
☐	☐	☐	☐	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0043-13.

GOVERNING CODES & APPLICABLE STANDARDS

TITLE 24 CODES:
1. 2022 CALIFORNIA BUILDING STANDARD ADMINISTRATIVE CODE (CAC), (PART 1, TITLE 24, CCR).
2. 2019 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR), (2018 EDITION INTERNATIONAL BUILDING CODE WITH 2019 CALIFORNIA AMENDMENTS).
3. 2019 CALIFORNIA ELECTRICAL CODE, (PART 3, TITLE 24, CCR), (2017 EDITION NATIONAL ELECTRICAL CODE WITH 2019 CALIFORNIA AMENDMENTS).
4. 2019 CALIFORNIA MECHANICAL CODE (CMC), (PART 4, TITLE 24, CCR), (2018 EDITION IAPMO UNIFORM MECHANICAL CODE).
5. 2019 CALIFORNIA PLUMBING CODE (CPC), (PART 5, TITLE 24, CCR), (2018 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2019 CALIFORNIA AMENDMENTS).
6. 2019 CALIFORNIA ENERGY CODE, (PART 6, TITLE 24. CCR), (2019 EDITION CALIFORNIA ENERGY COMMISSION BUILDING ENERGY EFFICIENCY STANDARDS).
7. 2019 CALIFORNIA FIRE CODE (CFC), (PART 9, TITLE 24, CCR) (2018 EDITION INTERNATIONAL FIRE CODE WITH 2019 CALIFORNIA AMENDMENTS).
8. 2019 CALIFORNIA REFERENCE CODE, (PART 12, TITLE 24. CCR).

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:
1. 2019 CBC, CHAPTER 35.
2. 2019 CFC, CHAPTER 80.
3. 2016 NFPA 72, AS AMENDED.

FIRE ALARM MONITORING NOTE

AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY ARTICLE 91. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY DISTRICT.

FIRE ALARM SHEET INDEX

SHEET NO.	SHEET TITLE
FA0.01	FIRE ALARM LEGEND, ABBREVIATIONS, AND NOTES
FA0.02	FIRE ALARM DETAILS AND SEQUENCE OF OPERATION
FA1.00	FIRE ALARM SITE PLAN
FA3.10	FIRE ALARM FLOOR PLAN – KINDER-ADMIN BLDG
FA3.11	FIRE ALARM FLOOR PLAN – CLASSROOM BLDG A
FA3.12	FIRE ALARM FLOOR PLAN – CLASSROOM BLDG B
FA3.13	FIRE ALARM FLOOR PLAN – CLASSROOM BLDG C
FA3.14	FIRE ALARM FLOOR PLAN – CLASSROOM BLDG D
FA3.15	FIRE ALARM FLOOR PLAN – MULTIPURPOSE BLDG
FA4.01	FIRE ALARM RISER DIAGRAM
FA4.02	FIRE ALARM BATTERY CALCULATIONS

FIRE ALARM SYMBOL SCHEUELE (NEW DEVICES ONLY)

SYMBOL	QTY	NEW / EXISTING	MANUFACTURER	PART NO	DESCRIPTION	CSFM
FACU	1	EXISTING	SIMPLEX	4100ES	4100ES FIRE ALARM CONTROL UNIT, 120V	7165-0026:0251
H A	28	NEW	SIMPLEX	4098-9734	ADDRESSABLE HIGH HEAT SENSOR W/ BASE	7272-0026:0216
AOM	3	NEW	SIMPLEX	4090-9002	RELAY IAM	7300-0026:0223
S	3	NEW	SIMPLEX	4098-9756 W/4098-9714	DUCT SENSOR HOUSING WITH SUPERVISED MULTIPLE RELAY OUTPUT, REQUIRES SEPARATE 24 VDC FIRE ALARM POWER AND A4081-9008 END-OF-LINE RESISTOR HARNESS; INCLUDES ONE 4098-9843 RELAY	3240-0026:0241

FIRE ALARM CABLE SCHEDULE

TYPE	DESCRIPTION		JACKET COLOR	SERVES	ENVIRONMENT USE	NOTES
A	2#16 UTP	FPLR, SOLID	RED/BLK	SLC INTELLIGENT LOOP	INTERIOR	
B	2#14 UTP	FPLR, SOLID	RED/BLK	NAC STROBE (VISUAL)	INTERIOR	
C	2#16 STP	FPLR, SOLID	RED/BLK	VOICE (SPEAKER)	INTERIOR	
D	2#16 UTP	FPLR, SOLID	RED/BLK	IDC CIRCUIT	INTERIOR	
E	4#16 UTP	FPLR, SOLID	RED/BLK	FAA RS485 COMM	INTERIOR	
P	2#14 UTP	FPLR, SOLID	RED/BLK	24VDC POWER	INTERIOR	
R	2#16 STP	FPLR, SOLID	RED/BLK	SPEAKER RISER	INTERIOR	
AU	2#16 UTP	WP#AQ225	RED/BLK	SLC ADDRESS LOOP	EXTERIOR/UDGND	DIRECT BURIAL CABLE
BU	2#14 UTP	WP#AQ226	RED/BLK	NAC STROBE (VISUAL)	EXTERIOR/UDGND	DIRECT BURIAL CABLE
CU	2#16 STP	WP#AQ294	RED/BLK	NAC VOICE (SPEAKER)	EXTERIOR/UDGND	DIRECT BURIAL CABLE
DU	2#16 UTP	WP#AQ225	RED/BLK	INITIATE DEVICE CIRCUIT	EXTERIOR/UDGND	DIRECT BURIAL CABLE
EU	4#16 UTP	WP#AQ225	RED/BLK	FAA RS485 COMM	EXTERIOR/UDGND	DIRECT BURIAL CABLE
PU	2#14 UTP	WP#AQ226	RED/BLK	24VDC POWER	EXTERIOR/UDGND	DIRECT BURIAL CABLE
RU	4#16 STP	WP#AQ224	RED/BLK	SPEAKER RISER	EXTERIOR/UDGND	DIRECT BURIAL CABLE

NOTES:
1. ALL CONDUCTORS SHALL BE COPPER AND SOLID – STRANDED CONDUCTOR IS NOT ACCEPTABLE
2. MINIMUM CONDUIT SIZE IS 3/4" – CONCEALED IN CEILING SPACE OR APPROPRIATE WALLS.
3. ALL SURFACE ROUTED RACEWAYS SHALL BE WIREMOLD OR APPROVED EQUAL.

CABLE ABBREVIATIONS:

STP	SHIELDED TWISTED PAIR	PA	PUBLIC ADDRESS
SLC	SIGNAL LINE CIRCUIT	UTP	UNSHIELDED TWISTED PAIR
NAC	NOTIFICATION APPLIANCE CIRCUIT	WP	WEST PENN (CABLE MANUFACTURER)
IDC	INITIATE DEVICE CIRCUIT		

DEVICE DESIGNATION LEGEND

INITIATING DEVICES

EXAMPLE:

S L1D001

- DEVICE REFERENCE NUMBER
- DEVICE TYPE: D = DETECTORS, M = MODULES
- SIGNALING LINE CIRCUIT
- DEVICE SYMBOL (SMOKE SENSOR)

STYLE: 4
CLASS: B

AUDIBLE / VISUAL DEVICES

EXAMPLE:

110CD
N1-1-1

- APPLIANCE CANDELA RATING
- APPLIANCE REFERENCE NUMBER
- CIRCUIT REFERENCE NUMBER
- FACP/POWER SUPPLY REFERENCE NUMBER
- APPLIANCE SUMBOL (HORN/ STROBE)

STYLE: Y
CLASS: B

SCOPE OF WORK AND BUILDING INFORMATION

1. PROVIDE AND INSTALL NEW HIGH HEAT DETECTOR BY THE NEW HVAC UNITS

OCCUPANCY CLASSIFICATION: A3, E
TYPE OF CONSTRUCTION: V-B
NUMBER OF STORIES: 1 STORY
SPRINKLER PROTECTION: NO
ALTERNATIVE PROTECTION: NOT APPLICABLE
TYPE OF SYSTEM: MANUAL, AUTOMATIC FIRE ALARM SYSTEM

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
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DATE: 5/4/2023

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ARCHITECT	ENGINEER
LICENSED ARCHITECT, BRIAN P WHITMORE, No. C 30345, Ren. 9/30/23, STATE OF CALIFORNIA, DATE SIGNED: 04/24/2023	REGISTERED PROFESSIONAL ENGINEER, SAMI S. ZEIDAN, No. E 16762, Exp. 9/30/24, ELECTRICAL, STATE OF CALIFORNIA

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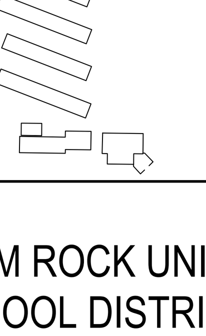
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KEY PLAN



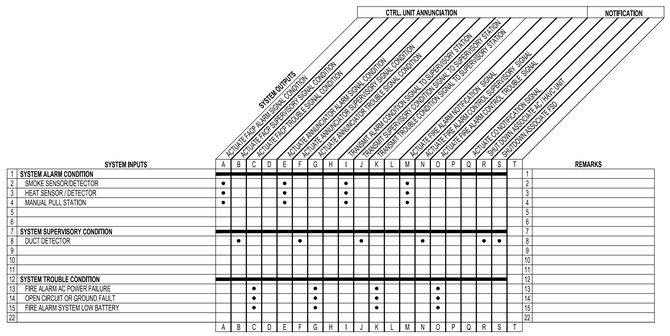
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CONSTRUCTION DOCUMENTS

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FIRE ALARM LEGEND, ABBREVIATIONS, AND NOTES

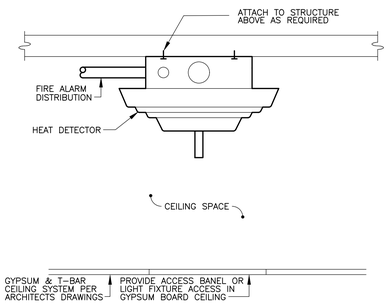
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Application Number	Drawing Number
01-120631	FA0.01
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FIRE ALARM SEQUENCE OF OPERATIONS

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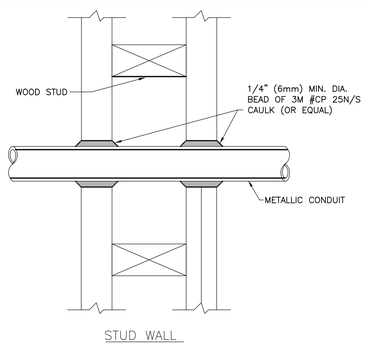
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HEAT DETECTOR MOUNTING

NTS

05

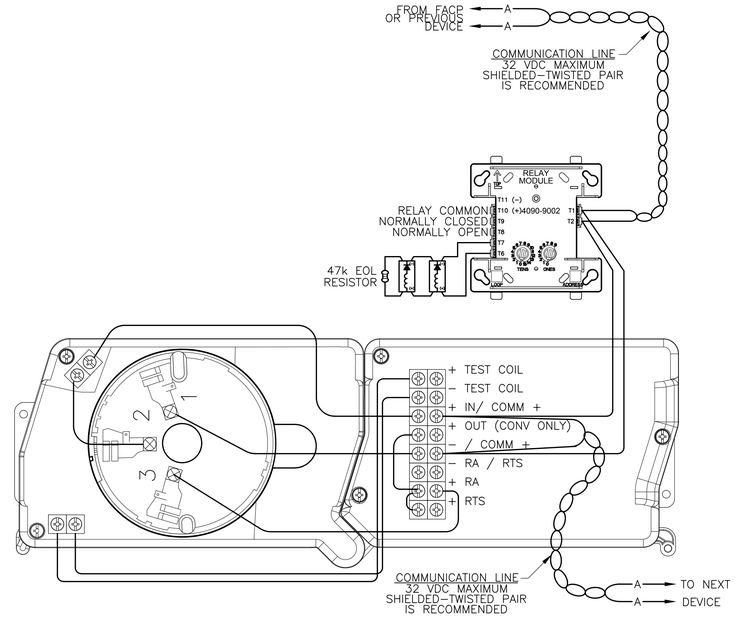


NOTES:
1. THE CAULK IS TO BE FORCED INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE
2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/S CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm).
4. INSTALL 3M FIRESTOP ON BOTH SIDES OF THE WALL.
5. THESE RECOMMENDATIONS ARE BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL THROUGH-PENETRATION FIRESTOP SYSTEM #WL1001.

CONDUIT PENETRATION FIRE STOP DETAIL

NTS

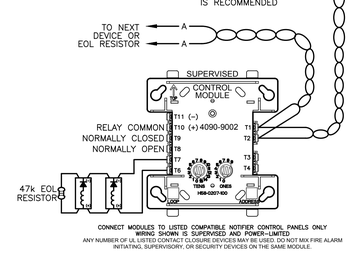
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DUCT SMOKE DETECTOR WITH 4090-9002 RELAY MODULE

NTS

01

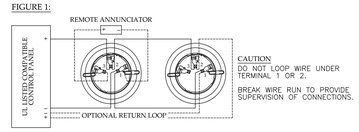


RELAY CONTROL MODULE

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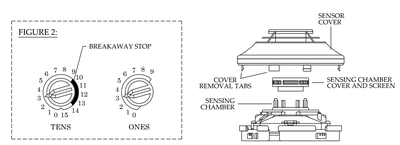
02

FIGURE 1:



1. WIRE THE SENSOR BASE (SUPPLIED SEPARATELY) PER THE WIRING DIAGRAM, SEE FIGURE 1.
2. SET THE DESIRED ADDRESS ON THE SENSOR ADDRESS SWITCHES, SEE FIGURE 2.
   NOTE:
   SOME PANELS SUPPORT EXTENDED ADDRESSING. IN ORDER TO SET THE SENSOR ABOVE ADDRESS 99 ON COMPATIBLE SYSTEMS, CAREFULLY REMOVE THE STOP ON THE UPPER ROTARY SWITCH WITH THUMB AS SHOWN IN FIGURE 2.
3. INSTALL THE SENSOR INTO THE SENSOR BASE. PUSH THE SENSOR INTO THE BASE WHILE TURNING IT CLOCKWISE TO SECURE IT IN PLACE.
4. AFTER ALL SENSORS HAVE BEEN INSTALLED, APPLY POWER TO THE CONTROL UNIT AND ACTIVATE THE COMMUNICATION LINE.
5. TEST THE SENSOR(S) AS DESCRIBED IN THE TESTING SECTION OF THE DETECTORS INSTALLATION AND MAINTENANCE INSTRUCTIONS MANUAL.

FIGURE 2:



HEAT DETECTOR

NTS

03

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ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P WHITTIER No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER Kami S. Zendeh No. E 16762 Exp. 9/30/24 ELECTRICAL STATE OF CALIFORNIA

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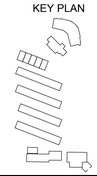
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KEY PLAN



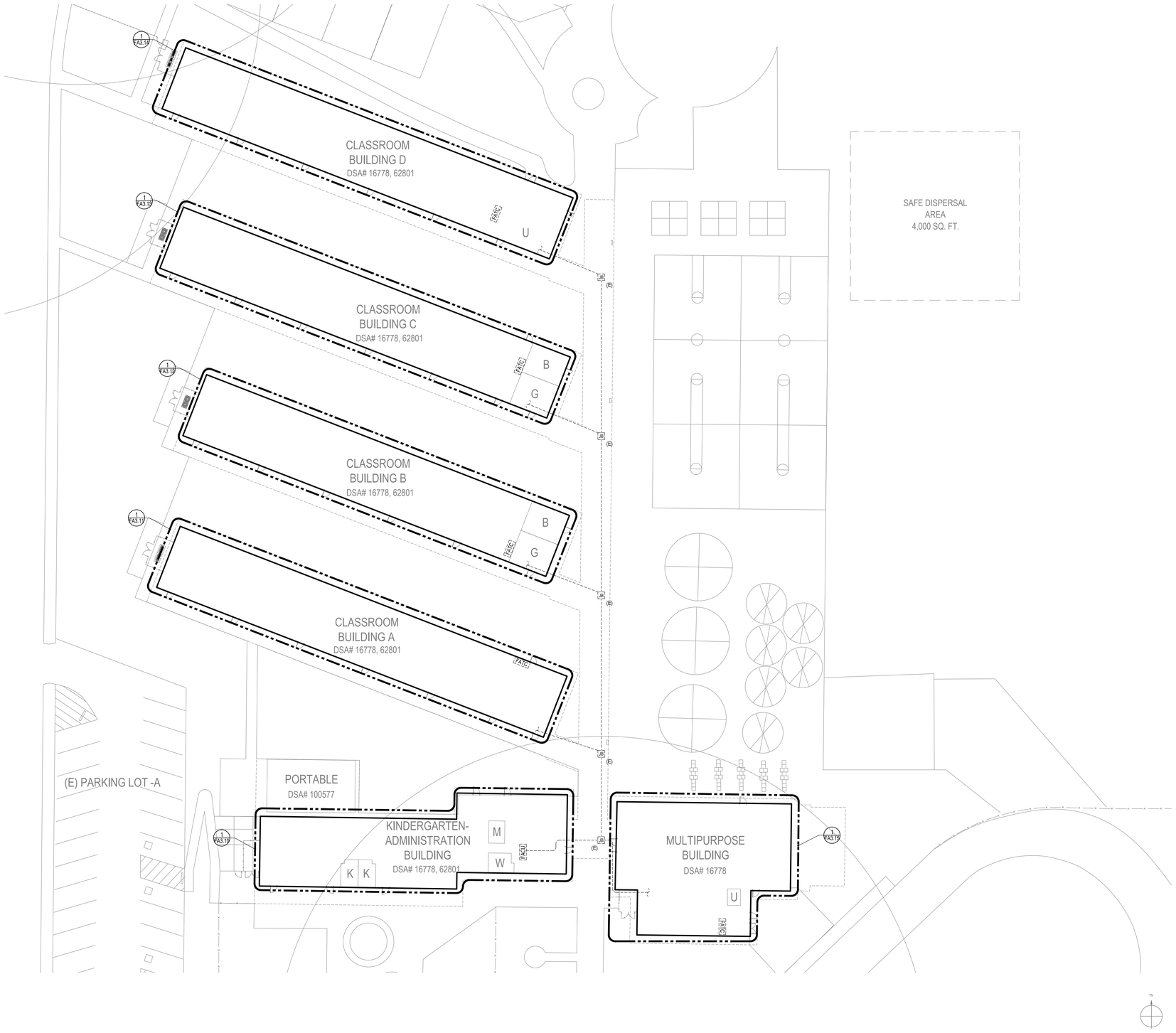
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FIRE ALARM DETAILS AND SEQUENCE OF OPERATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	FA0.02
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FIRE ALARM SITE PLAN | **1** | 1" = 20'-0"

GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS, PRIOR TO ANY WORKS, AND REPORT TO ENGINEERS ANY DISCREPANCIES.
2. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AN INDEPENDENT UTILITY LOCATER TO IDENTIFY ALL (E) UTILITIES PRIOR TO TRENCHING/BORING.
3.
4. UNDERGROUND CONDUITS SHALL BE SCH-40 PVC.
5. ALL EXISTING FIRE ALARM EQUIPMENT, DEVICES, CONDUIT AND WIRING, ETC., WHERE SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DOCUMENTS AND LIMITED SITE SURVEY AND ARE SHOWN FOR CLARITY. IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND BEFORE START OF ANY ELECTRICAL WORK, CONTRACTOR SHALL VERIFY ON-SITE ALL EXISTING LOCATIONS AND CONDITIONS TO ASCERTAIN ALL WORK REQUIRED.
6. EXISTING FIRE ALARM SYSTEM SHALL REMAIN ACTIVE UNTIL CONSTRUCTION IS COMPLETED, CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING FIRE ALARM SYSTEMS AND/OR OTHER EXISTING FACILITY'S SYSTEMS AND SERVICES AS POSSIBLE. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST 72 HOURS TO SCHEDULE ALL NECESSARY SHUTDOWNS. SHUTDOWN WORK SHALL BE PERFORMED AFTER THE NORMAL OPERATION HOURS OF THE FACILITY, IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. FIRE WATCH IN CONFORMANCE WITH THE CALIFORNIA FIRE CODE SHALL BE PROVIDED AT THE DIRECTION OF THE CONTRACTOR FOR EVERY OFF-LINE BUILDING. THE SCHOOL SHALL ASSIST WITH FIRE WATCH ACTIVITIES DURING SCHOOL HOURS AND WHENEVER THE CAMPUS IS OCCUPIED BY STUDENTS, TEACHERS AND STAFF. THE CONTRACTOR SHALL PROVIDE ALL FIRE WATCH ACTIVITIES AFTER SCHOOL HOURS AND WHENEVER THE CAMPUS IS NOT OCCUPIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING ALL FIRE WATCH LOGS.
8. ALL REMOVED AND/OR DEMOLISHED ELECTRICAL MATERIALS AND EQUIPMENT TO BE ACCOMPLISHED UNDER THIS CONTRACT, WHICH IN THE OPINION OF THE OWNER'S REPRESENTATIVE ARE DEEM SALVAGEABLE, SHALL REMAIN THE PROPERTY OF THE OWNER. ALL FIRE ALARM MATERIAL AND EQUIPMENT CONSIDERED NOT SALVAGEABLE SHALL BE REMOVED FROM THE SITE AND DISPOSED BY THE CONTRACTOR ACCORDINGLY.
9. WHERE REMOVAL OF AN EXISTING SYSTEM'S DEVICE WILL RESULT IN LOSS OF CIRCUIT CONTINUITY, THE ISOLATED PORTIONS OF THE CIRCUIT SHALL BE RECONNECTED TO PROVIDE SERVICE TO ALL REMAINING DEVICES. IF SITE CONDITIONS MAKE RECONNECTION IMPOSSIBLE, CONNECTION SHALL BE MADE FROM AN ADJACENT AVAILABLE DEVICE AS NOTED AND/OR AS DIRECTED BY THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE.
10. WHEREVER EXISTING DEVICES, PANELS, CONDUITS, CABLES, ETC., CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS AS DIRECTED BY THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AND REPAIR ALL SURFACES.
11. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY.
12. WHERE EXISTING WIRING OR EQUIPMENT IS ABANDONED AS A RESULT OF THIS CONTRACT, IT SHALL BE REMOVED INSOFAR AS POSSIBLE. THIS INCLUDES BUT IS NOT LIMITED TO:
    a. REMOVE ALL WIRE AND CABLE.
    b. REMOVE ALL DEVICES AND EQUIPMENT.
    c. REMOVE ALL EXPOSED CONDUIT AND CONDUIT IN ACCESSIBLE CONCEALED AREA, AS FAR AS POSSIBLE.
    d. CUT OFF AND CAP ALL ABANDONED CONDUIT. STUBS SHALL NOT BE PROTRUDED ABOVE FLOOR AND/OR FINISHED WALLS AND CEILINGS.

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ARCHITECT	ENGINEER
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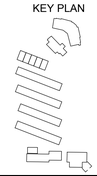
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KEY PLAN



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CONSTRUCTION DOCUMENTS

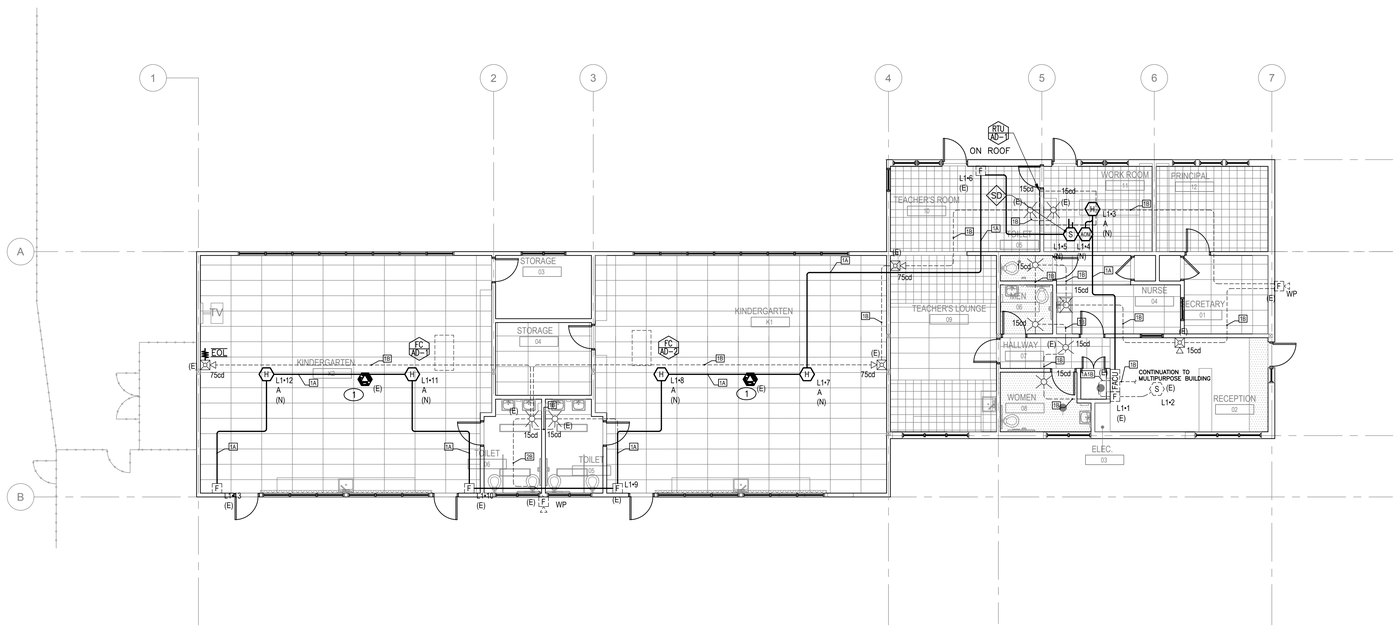
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FIRE ALARM
SITE PLAN

Date: 04/24/2023	Project Number: 22026
Application Number: 01-120631	Drawing Number: FA1.00
Drawn: KT	Checked: CD

KEY NOTES

(1) EXISTING CO DETECTOR WITH SOUNDER BASE (TYP). EXISTING CO DETECTOR INDEPENDENT FROM FIRE ALARM SYSTEM.



TN

FIRE ALARM FLOOR PLAN - KINDER-ADMIN BLDG | **1** 1/8" = 1'-0"

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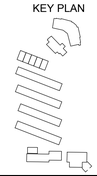
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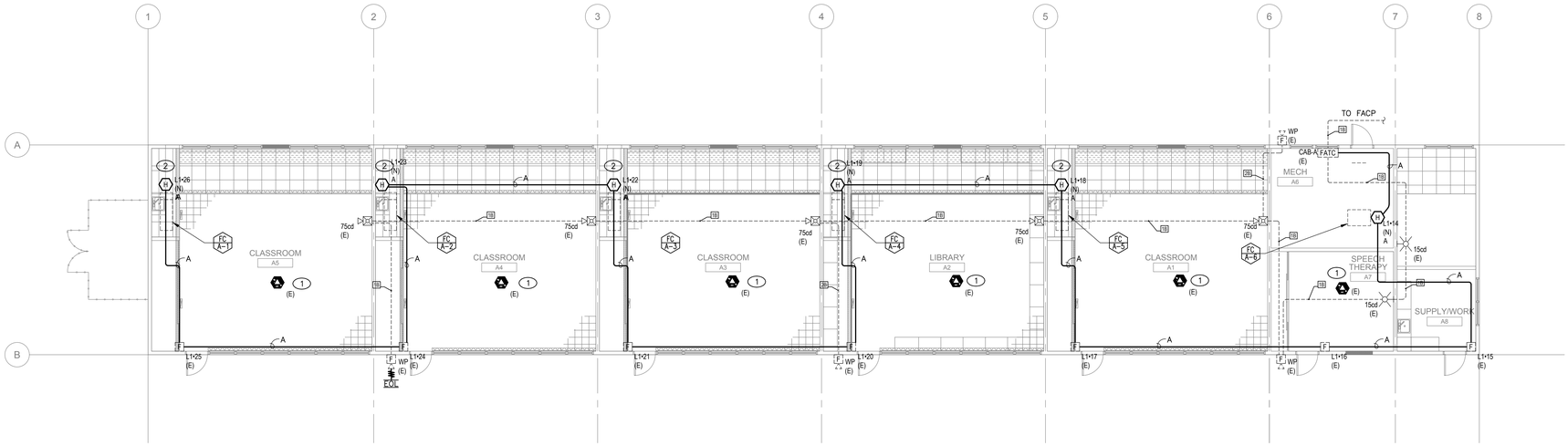
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FIRE ALARM FLOOR PLAN - KINDER-ADMIN BLDG

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	FA3.10
Drawn / Checked	
KT / CD	

KEY NOTES

1. EXISTING CO DETECTOR WITH SOUNDER BASE (TYP). EXISTING CO DETECTOR INDEPENDENT FROM FIRE ALARM SYSTEM.
2. NEW MECHANICAL UNIT WELLS.



FIRE ALARM FLOOR PLAN - CLASSROOM BLDG A | **1** 1/8" = 1'-0"

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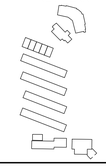
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DRAWING STATUS

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○ DSA PLAN CHECK	12/23/2022
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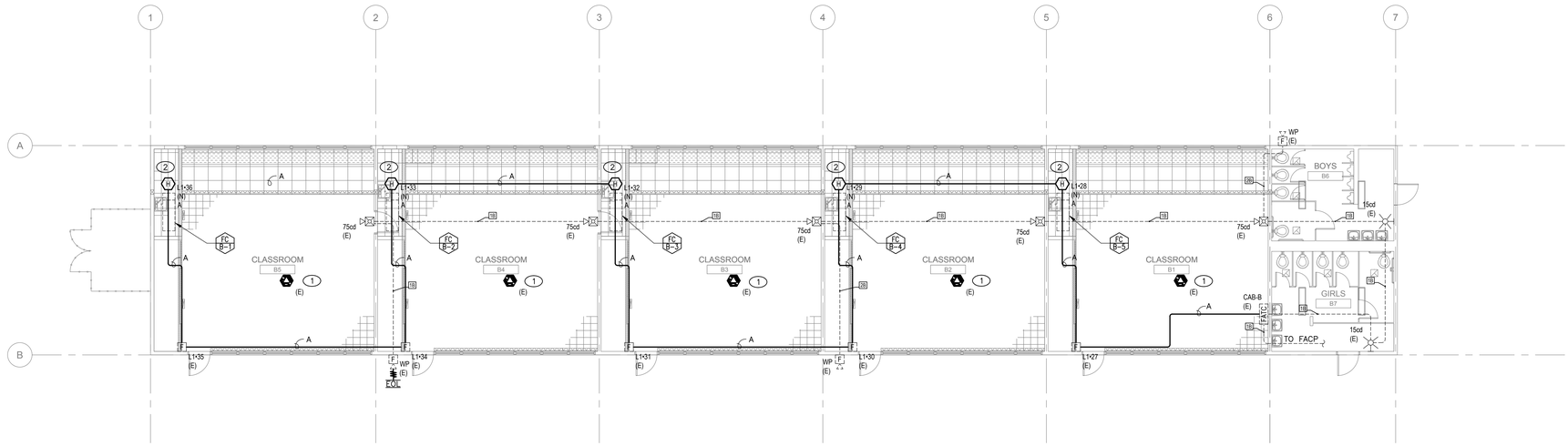
FIRE ALARM FLOOR PLAN - CLASSROOM BLDG A

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	FA3.11
Drawn: KT	Checked: CD

KEY NOTES

(1) EXISTING CO DETECTOR WITH SOUNDER BASE (TYP). EXISTING CO DETECTOR INDEPENDENT FROM FIRE ALARM SYSTEM.

(2) NEW MECHANICAL UNIT WELLS.



TN

FIRE ALARM FLOOR PLAN - CLASSROOM BLDG B | **1** 1/8" = 1'-0"

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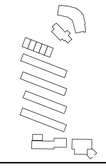
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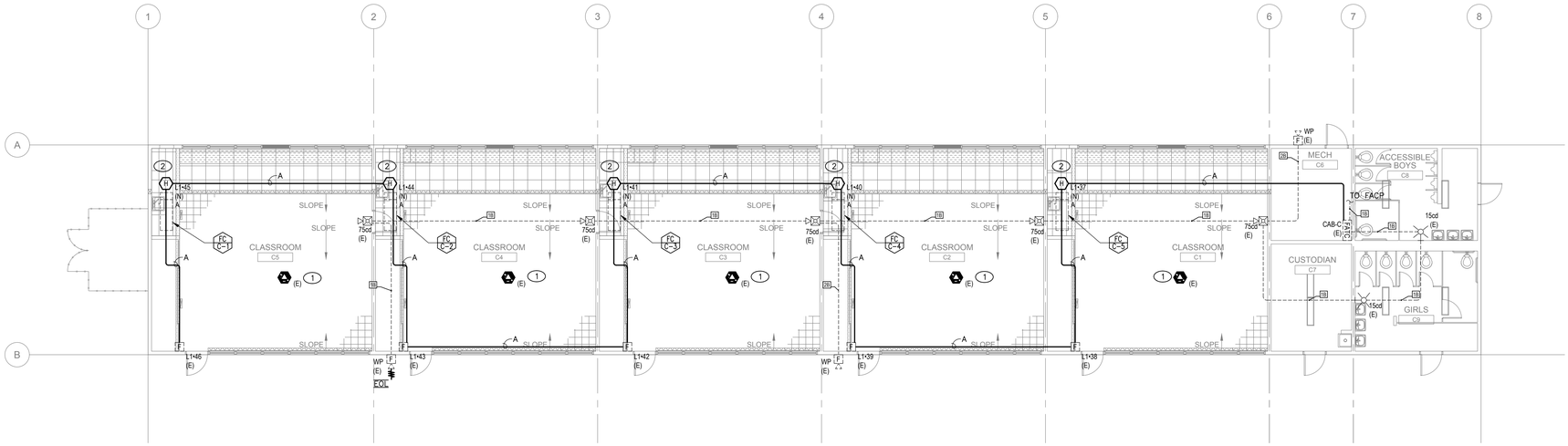
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FIRE ALARM FLOOR PLAN - CLASSROOM BLDG B

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	FA3.12
Drawn: KT	Checked: CD

KEY NOTES

1. EXISTING CO DETECTOR WITH SOUNDER BASE (TYP). EXISTING CO DETECTOR INDEPENDENT FROM FIRE ALARM SYSTEM.
2. NEW MECHANICAL UNIT WELLS.



FIRE ALARM FLOOR PLAN - CLASSROOM BLDG C | **1** 1/8" = 1'-0"

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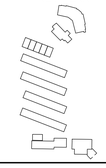
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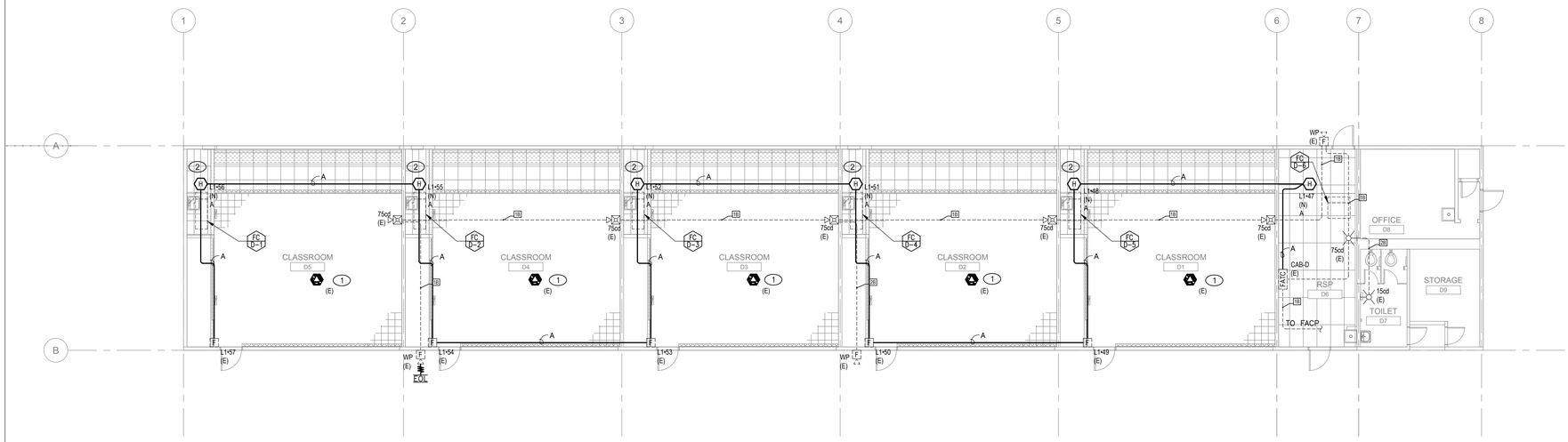
FIRE ALARM FLOOR PLAN - CLASSROOM BLDG C

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	FA3.13
Drawn: KT	Checked: CD

KEY NOTES

(1) EXISTING CO DETECTOR WITH SOUNDER BASE (TYP). EXISTING CO DETECTOR INDEPENDENT FROM FIRE ALARM SYSTEM.

(2) NEW MECHANICAL UNIT WELLS.



TN

FIRE ALARM FLOOR PLAN - CLASSROOM BLDG D | **1** 1/8" = 1'-0"

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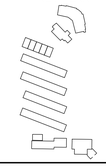
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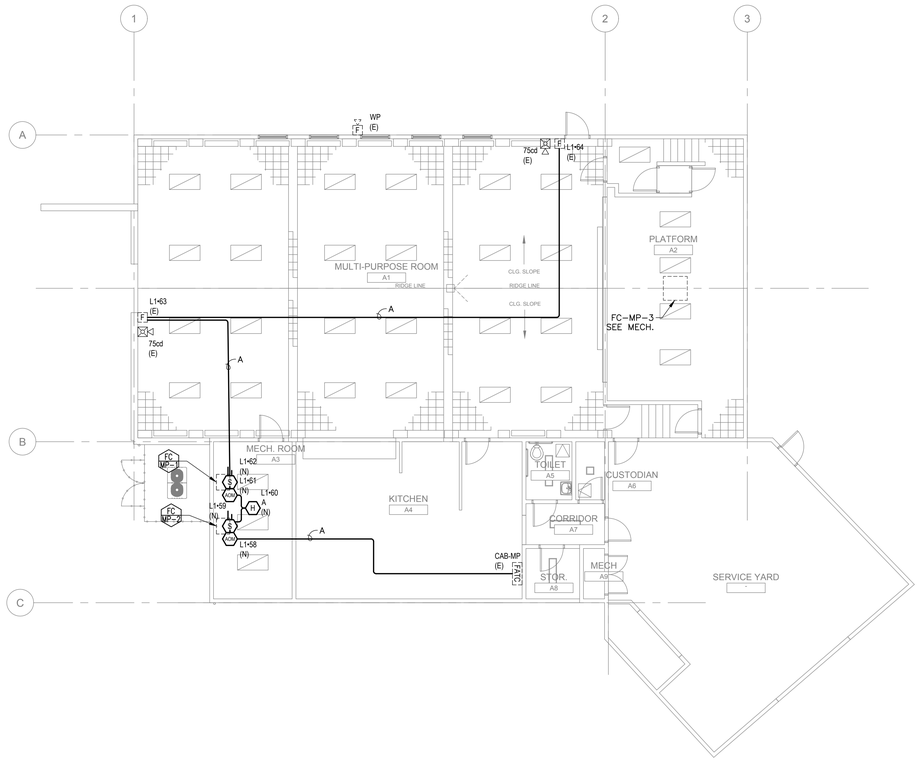
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FIRE ALARM FLOOR PLAN - CLASSROOM BLDG D

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	FA3.14
Drawn: KT	Checked: CD



FIRE ALARM FLOOR PLAN - MULTIPURPOSE BLDG | **1** 1/8" = 1'-0"

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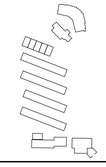
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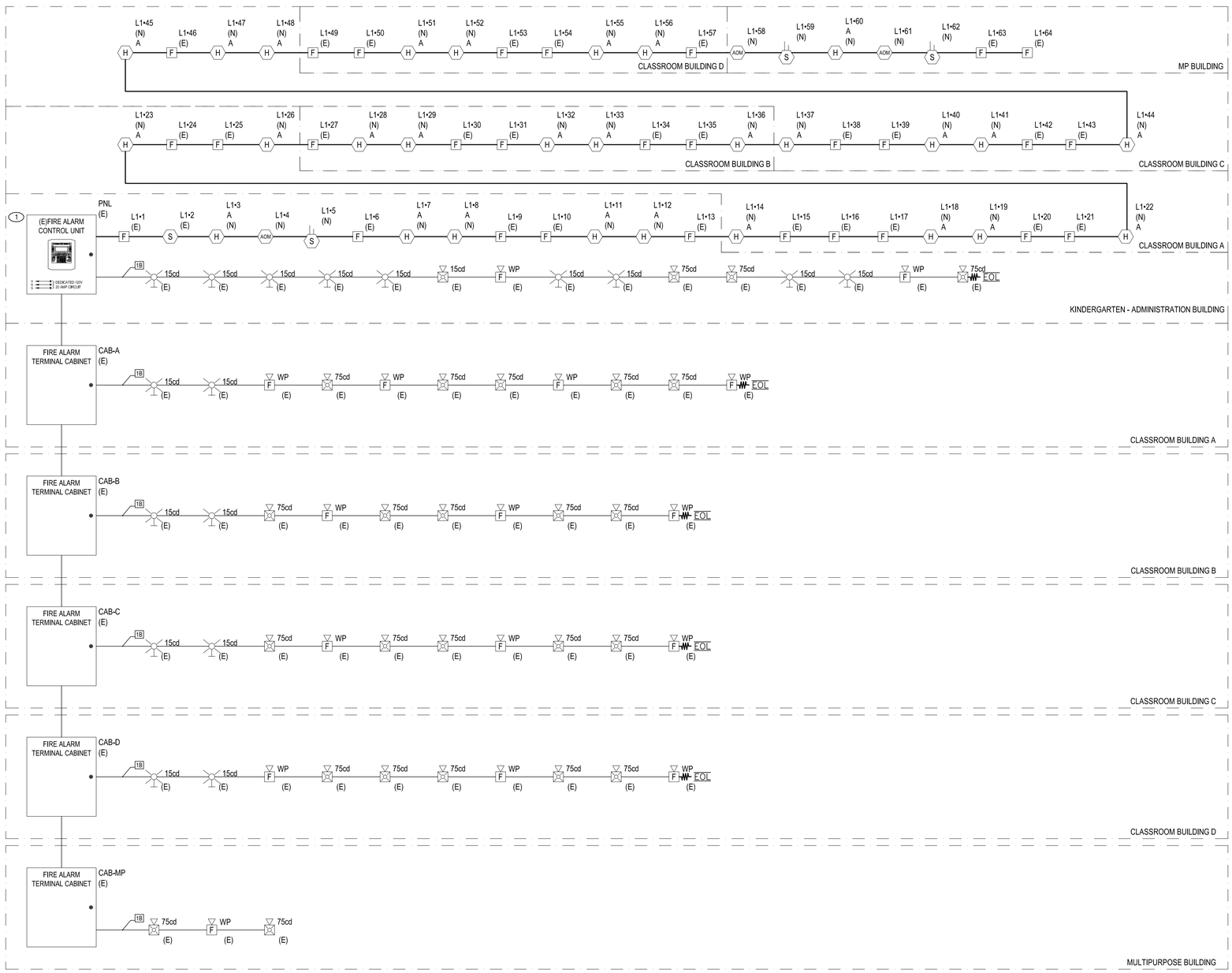
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FIRE ALARM FLOOR PLAN - MULTIPURPOSE BLDG

Date	Project Number
04/24/2023	22026
Application Number	**Drawing Number**
01-120631	FA3.15
Drawn: KT	Checked: CD

KEY NOTES

(1) CO DETECTOR IS INDEPENDENT OF EXISTING FIRE ALARM SYSTEM AND NOT SHOWN ON FIRE RISER.



FIRE ALARM RISER DIAGRAM 1 NTS

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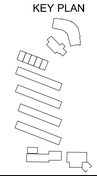
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FIRE ALARM RISER DIAGRAM

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	FA4.01
Drawn KT	Checked CD

BATTERY CALCULATION

(SECONDARY POWER SOURCE REQUIREMENTS)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		**QTY**	**PART NO.**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL**
		1	4100-9111 MAIN BOARD	4100ES PRECONFIG DOMESTIC 120V	0.373	**0.373**	0.47	**0.47**
CIRCUIT	**SYMBOL**	**QTY**	**PART NO**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL (A)**
L1	AOM	3	4090-9002	Relay IAM	0.0008	**0.0024**	0.001	**0.003**
	S	1	4098-9714 (E)	TrueAlarm Analog Sensors, Photoelectric smoke sensor, White	0.0008	**0.0008**	0.001	**0.001**
	H A	28	4098-9734 w/4098-9792	TrueAlarm High Temp Heat Detector w/TrueAlarm Sensor Standard Base	0.0008	**0.02240**	0.001	**0..028**
	S	3	4098-9756 w/4098-9714	Duct Sensor Housing with supervised multiple relay output, requires separate 24 VDC fire alarm power and A4081-9008 end-of-line resistor harness; includes one 4098-9843 relay	0.0008	**0.0024**	0.001	**0.003**
	F	29	4099-9004 (E)	Addressable manual station, Single Action, English	0.0008	**0.0232**	0.001	**0.029**
					TOTAL STANDBY (A)	**0.4242**	TOTAL ALARM (A)	**0.534**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)			**0.4242**		24		**10.18**	
SECONDARY ALARM LOAD (A)			**0.534**		0.08		**0.04**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**10.23**			
DERATING FACTOR					1.2			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**12.27**			
*RECOMMENDED BATTERY SIZES NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								

THE EXISTING FA SYSTEM IS NOT VOICE EVAC, 15 MINUTES ALARM IT'S NOT REQUIRED.

FIRE ALARM BATTERY CALCULATION | **1** NTS

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DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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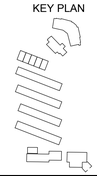
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

FIRE ALARM BATTERY CALCULATION

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	FA4.02
Drawn / Checked	
KT / CD	

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 3 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	7.3	-7.3	62.3	--	62.3
Space Cooling	13.9	10.3	3.6	--	--	--
Indoor Fans	40.4	15.9	24.5	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	44.2	44.2	0.0
Indoor Lighting	7.8	7.8	0.0	--	--	-->
Compliance Total	**62.1**	**41.3**	**20.8**	**106.5**	**44.2**	**62.3**
Receptacle	15.1	15.1	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	0.4	0.4	0.0	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**77.6**	**56.8**	**20.8**	**106.5**	**44.2**	**62.3**

D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 2 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ^{2}-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	23.00	33.20	-10.20
Space Cooling	109.58	85.12	24.46
Indoor Fans	224.80	88.64	136.16
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	14.58	14.58	--
Indoor Lighting	40.91	40.91	--
ENERGY STANDARDS COMPLIANCE TOTAL	**412.87**	**262.45**	**150.42 (36.4%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	78.29	78.29	--
Process	--	--	--
Other Ltg	2.03	2.03	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**493.19**	**342.77**	**150.4 (30.5%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 1 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN JOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	5,438 ft^2	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	270 ft^2	12	Permitted Scope of Work	ExistingAlterration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance				Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance ☐ Not Included	Covered Process: Commercial Kitchens	☐ Performance ☒ Not Included	*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
Mechanical (see Table H)	☒ Performance ☐ Not Included	Covered Process: Computer Rooms	☐ Performance ☒ Not Included	Indoor Lighting (Unconditioned)§140.6 Outdoor Lighting §140.7	*NRCC-LTI-E* *NRCC-LTO-E*
Domestic Hot Water (see Table I)	☐ Performance ☒ Not Included	Covered Process: Laboratory Exhaust	☐ Performance ☒ Not Included	Sign Lighting §140.8	*NRCC-LTS-E*
				Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance ☒ Not Included			*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)* Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance ☒ Not Included			Commissioning §120.8 Solar Ready §110.10	*NRCC-CXR-E* *NRCC-SRA-E*

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 6 of 12
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G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method[1]	Assembly Method	Area ft^2	Overall U-factor	Overall SHGC	Overall VT	Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	1685	1.19	0.83	0.77	E
Single Metal Clear_Clerestory	VerticalFenestration FixedWindow N/A			NaN	1.19	0.83	0.00	E

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*

[2] *Status: N - New, A – Altered, E – Existing*

G6. OVERHANG DETAILS

1	2	3	4	5	6
Fenestration Tag/ID	Orientation	Depth(ft.)	Height from Bottom of Sill to Overhang(ft)	Right Extent(ft)	Left Extent(ft)
Window7	North	2.0	6.1	2.0	2.0
Window8	North	2.0	3.1	2.0	2.0
Window21	North	2.0	6.1	2.0	2.0
Window22	North	2.0	3.1	2.0	2.0
Window31	North	2.0	6.1	2.0	2.0
Window32	North	2.0	3.1	2.0	2.0
Window41	North	2.0	6.1	2.0	2.0
Window42	North	2.0	3.1	2.0	2.0
Window51	North	2.0	6.1	2.0	2.0
Window52	North	2.0	3.1	2.0	2.0
Window67	North	2.0	6.1	2.0	2.0
Window69	East	2.0	6.1	2.0	2.0
Window77	North	2.0	6.1	2.0	2.0

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 5 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status[1]
Default Roof Prior to 19717	Roof	5708	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E
Interior of R-0 Wall19	InteriorWall	4698	NA	0	NA	U-Factor	0.314	Gypsum Board - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Gypsum Board - 1/2 in.	E

[1] *Status: N - New, A – Altered, E – Existing*

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-factor	Status[1]
Metal Door12	0.700	E

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 4 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft^2)	Total Fenestration Area (ft^2)	Window to Wall Ratio (%)
North-Facing[1]	2,376 ft^2	1,252 ft^2	52.7%
East-Facing[2]	507 ft^2	41 ft^2	08.1%
South-Facing[3]	1,961 ft^2	350 ft^2	17.8%
West-Facing[4]	375 ft^2	0 ft^2	00.0%
Total	**5,219 ft^2**	**1,643 ft^2**	**31.5%**
Roof	5,438 ft^2	0 ft^2	00.0%

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status[1]
Default Wall Prior to 1976	ExteriorWall	5417	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade15	UndergroundFloor	5708	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 8 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

H6. SYSTEM SPECIAL FEATURES

This Section Does Not Apply

H7. NONRESIDENTIAL VENTILATION

1	2	3	4	5	6	7
Zone Name	Mechanical Ventilation					DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of people	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
1-Class Room A5	Education - Classrooms (ages 5-8)	24.20	368	0	968	NA
2-Class Room A4	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
3-Class Room A3	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
4-Class Room A2	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
5-Class Room A1	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
6-Therapy and Supply Area	Education - Classrooms (ages 5-8)	15.75	239	0	630	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
2-Class Room A5-VRF	1-Class Room A5	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐

Project Name:	McCollam Elementry School-Bldng A	NRCC-PRF-01-E	Page 7 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:06, Thu, Dec 22, 2022
Input File Name:	Building-A-McCollam.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1	2	3	4	5	6	7	8	9	10	11	12
Equipment Name	Equipment Type	Qty	Heating				Cooling			Economizer Type (if present)	Status[1]
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtuh)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency		
HP A-1	VRF	1	282	NA	COP	3.20	252	EER	10.60	NA	N

[1] *Status: N - New, A – Altered, E – Existing*

H2. FAN SYSTEMS SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name or Item Tag	Qty	Design OA	Supply Fan					Return Fan					Status[1]
		CFM	CFM	Modeling Method	Power	Power Units	Control	CFM	Modeling Method	Power	Power Units	Control	
2-Class Room A5-VRF	1	368	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Class Room A4-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
4-Class Room A3-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
5-Class Room A2-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
6-Class Room A1-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
7-Therapy and Supply Area-VRF	1	239	688	BrakeHorsePower	0.401	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] *Status: N - New, A – Altered, E – Existing*

H3. EXHAUST FAN SUMMARY

This Section Does Not Apply

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ENGINEER

REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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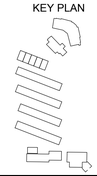
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

TITLE 24 SHEET INDEX

SHEET NUMBER	SHEET NAME
T24.01	TITLE 24 CALCULATIONS
T24.02	TITLE 24 CALCULATIONS
T24.03	TITLE 24 CALCULATIONS
T24.04	TITLE 24 CALCULATIONS
T24.05	TITLE 24 CALCULATIONS
T24.06	TITLE 24 CALCULATIONS
T24.07	TITLE 24 CALCULATIONS
T24.08	TITLE 24 CALCULATIONS
T24.09	TITLE 24 CALCULATIONS
T24.10	TITLE 24 CALCULATIONS
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T24.12	TITLE 24 CALCULATIONS
T24.13	TITLE 24 CALCULATIONS
T24.14	TITLE 24 CALCULATIONS
T24.15	TITLE 24 CALCULATIONS
T24.16	TITLE 24 CALCULATIONS
T24.17	TITLE 24 CALCULATIONS
T24.18	TITLE 24 CALCULATIONS

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number T24.01
Drawn KT
Checked CD

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 2 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04		05	06	07		08	09
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Additional §140.6(c)2G (+) (See Table J)	Tailored §140.6(c)3 (+) (See Table K)	=	**Total Allowed** (Watts)	Total Designed (Watts) (See Table F)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-) (See Table P)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 §140.6**
Conditioned					=		≥ 0	0	=	0	
Unconditioned		189	0		=	189	≥ 0	0	=	0	COMPLIES
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft^2)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft^2)	270
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1
• Classroom					

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft^2)	Calculation Method	Area (ft^2)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	270
Total Area of Work (ft^2)	0		270	

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
3-Class Room A4-VRF	2-Class Room A4	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
4-Class Room A3-VRF	3-Class Room A3	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
5-Class Room A2-VRF	4-Class Room A2	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
6-Class Room A1-VRF	5-Class Room A1	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
7-Therapy and Supply Area-VRF	6-Therapy and Supply Area	VRF	1	27.00	24.00	688	NA	NA	0.401	bhp	☐	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 4 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers, Inc	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-22
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:	
Company: LP Consulting Engineers Inc.		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 916-771-0778	Title: Electrical Engineer	License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:	
Company: LP Consulting Engineers Inc		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 9167710778	Title: Mechanical Engineer	License #: M41413

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
								13	
								Plan Sheet Showing Daylit Zones:	

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Undefined Zone	Classroom, Lecture, or Training Vocational Area	0.7	270	189	No	No
		TOTALS:	270	189	See Tables J, or P for detail	

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA
ALL SHEETS REVISED

ENGINEER
REGISTERED PROFESSIONAL ENGINEER RYAN J. ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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. 2023.

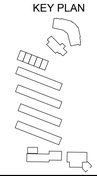
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.02
Drawn / Checked	
KT / CD	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results	
01		02		03		04		05	OR	06	=	07	08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)		Existing Power Allowance §141.0(b)2L (See Table N)		Total Allowed (Watts)	≥	Total Actual (Watts)	07 must be >= 08
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²) 0
02	Climate Zone	4		
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas		

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02
☐ New Lighting System	Must Comply with Allowances from §140.7
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ● No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b) [4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)

This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 2 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS

This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS

This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS

This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to sign lighting requirements.

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 1 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE

This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04		05	OR	06	OR	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)	OR	Compliant Light Sources (See Table G)	OR	ENERGY VERIFIED Label (See Table H)		Compliance Results

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS
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CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITTEMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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.
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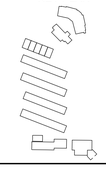
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.03
Drawn: KT	Checked: CD

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 2 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	23.94	31.45	-7.51
Space Cooling	103.27	80.64	22.63
Indoor Fans	210.51	90.47	120.04
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	19.28	19.28	--
Indoor Lighting	11.67	11.67	--
ENERGY STANDARDS COMPLIANCE TOTAL	**368.67**	**233.51**	**135.16 (36.7%)**

[1] Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	74.58	74.58	--
Process	--	--	--
Other Ltg	4.32	4.32	--
Process Motors	5.83	11.79	-5.96
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**453.40**	**324.20**	**129.2 (28.5%)**

[1] Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 1 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN-JOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	4,808 ft²	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	547 ft²	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☐ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.).*	
	☒ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Bldng A	**(Page 3 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:** 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 5 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Roof Prior to 19721	Roof	5355	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E
Interior R-0 Wall23	InteriorWall	4153	Wood	0	NA	U-Factor	0.376	Gypsum Board - 1/2 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E

[1] Status: N - New, A – Altered, E – Existing

G4. OPAQUE DOOR SUMMARY

1 Assembly Name	2 Overall U-factor	3 Status[1]
Metal Door16	0.700	E

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 4 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1 Opaque Surfaces & Orientation	2 Total Gross Surface Area (ft²)	3 Total Fenestration Area (ft²)	4 Window to Wall Ratio (%)
North-Facing[1]	2,244 ft²	1,210 ft²	53.9%
East-Facing[2]	0 ft²	0 ft²	00.0%
South-Facing[3]	1,763 ft²	350 ft²	19.9%
West-Facing[4]	375 ft²	0 ft²	00.0%
Total	**4,382 ft²**	**1,560 ft²**	**35.6%**
Roof	4,808 ft²	0 ft²	00.0%

Notes:
[1] North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
[2] East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
[3] South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
[4] West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Wall Prior to 19710	ExteriorWall	5160	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade19	UndergroundFloor	5355	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 3 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	6.1	-6.1	57.4	--	57.4
Space Cooling	11.3	8.6	2.7	--	--	--
Indoor Fans	33.4	14.4	19.0	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	51.7	51.7	0.0
Indoor Lighting	2.0	2.0	0.0	--	--	-->
Compliance Total	**46.7**	**31.1**	**15.6**	**109.1**	**51.7**	**57.4**
Receptacle	12.7	12.7	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	0.7	0.7	0.0	--	--	--
Process Motors	0.9	1.9	-1.0	--	--	--
TOTAL	**61.0**	**46.4**	**14.6**	**109.1**	**51.7**	**57.4**

D. EXCEPTIONAL CONDITIONS

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 8 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H_2O)	8 Status[1]

[1] Status: N - New, A – Altered, E – Existing

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

H6. SYSTEM SPECIAL FEATURES

1 System Name	2 Equipment Type	3 Window Interlocks per §140.4(n)	4 Other Special Features and Controls
Undefined Plant1 - SHW	Service Hot Water, Primary Only	NA	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H7. NONRESIDENTIAL VENTILATION

1 Zone Name	2 Mechanical Ventilation: Ventilation Function	3 # of people	4 Supply OA CFM	5 Exhaust CFM	6 Conditioned Area (sf)	7 DCV or Occupant Sensor Controls, or Both
1-Class Room B5	Education - Classrooms (ages 5-8)	24.20	368	0	968	NA
2-Class Room B4	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
3-Class Room B3	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
4-Class Room B2	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
5-Class Room B1	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 7 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1 Equipment Name	2 Equipment Type	3 Qty	4 Heating: Total Heating Output (kBtu/h)	5 Heating: Supp Heat Output (kBtuh)	6 Heating: Efficiency Unit	7 Heating: Efficiency	8 Cooling: Total Cooling Output (kBtu/h)	9 Cooling: Efficiency Unit	10 Cooling: Efficiency	11 Economizer Type (if present)	12 Status[1]
HP B-1	VRF	1	282	NA	COP	3.20	252	EER	10.60	NA	N

[1] Status: N - New, A – Altered, E – Existing

H2. FAN SYSTEMS SUMMARY

1 Name or Item Tag	2 Qty	3 Design OA CFM	4 Supply Fan CFM	5 Supply Fan Modeling Method	6 Supply Fan Power	7 Supply Fan Power Units	8 Supply Fan Control	9 Return Fan CFM	10 Return Fan Modeling Method	11 Return Fan Power	12 Return Fan Power Units	13 Return Fan Control	14 Status[1]
2-Class Room B5-VRF	1	368	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Class Room B4-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
4-Class Room B3-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
5-Class Room B2-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
6-Class Room B1-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] Status: N - New, A – Altered, E – Existing

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H_2O)	8 Status[1]
Boys Restroom72	6-Boys Restroom	1	500	0.250	0.436	2.06	N
Girls Restroom84	7-Girls Restroom	1	500	0.250	0.436	2.06	N

Project Name:	McCollam Elementry School-Bldng B	NRCC-PRF-01-E	Page 6 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:08, Thu, Dec 22, 2022
Input File Name:	Building-B-McCollam.cibd19x		

G5. FENESTRATION ASSEMBLY SUMMARY

1 Fenestration Assembly Name / Tag or I.D.	2 Fenestration Type / Product Type / Frame Type	3 Certification Method[1]	4 Assembly Method	5 Area ft²	6 Overall U-factor	7 Overall SHGC	8 Overall VT	9 Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	1560	1.19	0.83	0.77	E
Single Metal Clear_Clerestory	VerticalFenestration FixedWindow N/A			NaN	1.19	0.83	0.00	E

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered, E – Existing

G6. OVERHANG DETAILS

1 Fenestration Tag/ID	2 Orientation	3 Depth(ft.)	4 Height from Bottom of Sill to Overhang(ft)	5 Right Extent(ft)	6 Left Extent(ft)
Window11	North	2.0	6.1	2.0	2.0
Window12	North	2.0	3.1	2.0	2.0
Window27	North	2.0	6.1	2.0	2.0
Window28	North	2.0	3.1	2.0	2.0
Window39	North	2.0	6.1	2.0	2.0
Window40	North	2.0	3.1	2.0	2.0
Window51	North	2.0	6.1	2.0	2.0
Window52	North	2.0	3.1	2.0	2.0
Window63	North	2.0	6.1	2.0	2.0
Window64	North	2.0	3.1	2.0	2.0

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS
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CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA
ENGINEER
REGISTERED PROFESSIONAL ENGINEER RYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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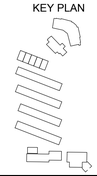
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number T24.04
Drawn KT
Checked CD

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Mechanical	NRCA-MCH-11-A Automatic Demand Shed Controls
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 2 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04		05	06	07		08	09
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Additional §140.6(c)2G (+) (See Table J)	Tailored §140.6(c)3 (+) (See Table K)	=	**Total Allowed** (Watts)	Total Designed (Watts) (See Table F)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-) (See Table P)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 §140.6**
Conditioned					=		≥ 0	0	=	0	COMPLIES
Unconditioned		355.6	0		=	356	≥				
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft²)	547
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Support Areas

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	547
Total Area of Work (ft²)	0		547	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
2-Class Room B5-VRF	1-Class Room B5	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
3-Class Room B4-VRF	2-Class Room B4	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
4-Class Room B3-VRF	3-Class Room B3	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
5-Class Room B2-VRF	4-Class Room B2	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
6-Class Room B1-VRF	5-Class Room B1	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	1st Hour Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
Default Gas Prior to 19992	Gas	Storage	1	50.00	28	kBtu/h	0.53	UEF	NA	NA	80	NA	NA

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 4 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers, Inc	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-22
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:	
Company: LP Consulting Engineers Inc.		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 916-771-0778	Title: Electrical Engineer	License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:	
Company: LP Consulting Engineers Inc		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 9167710778	Title: Mechanical Engineer	License #: M41413

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*							13	Plan Sheet Showing Daylit Zones:	

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Boys Restroom	Restrooms	0.65	263	171	No	No
Girls Restroom	Restrooms	0.65	284	184.6	No	No
		TOTALS:	547	355.6	See Tables J, or P for detail	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN J. ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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. 2023.

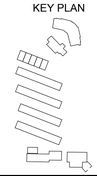
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.05
Drawn / Checked	
KT / CD	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results	
01		02		03		04		05	OR	06	=	07	≥	08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)		Existing Power Allowance §141.0(b)2L (See Table N)		**Total Allowed** (Watts)		**Total Actual** (Watts)	**07 must be >= 08**
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²) 0
02	Climate Zone	4		
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas		

B. PROJECT SCOPE
This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02
☐ New Lighting System	Must Comply with Allowances from §140.7
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ● No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE
This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL
This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)
This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE
For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)
This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS
This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)
This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION
This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 2 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS
This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS
This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS
This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to sign lighting requirements.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 1 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE
This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04	OR	05	OR	06	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)		Compliant Light Sources (See Table G)		ENERGY VERIFIED Label (See Table H)	**Compliance Results**

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng B	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:09:12

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS
Studio W Architects
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Sacramento, California 95811
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CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT: LICENSED ARCHITECT — BRYAN P. WHITTEMORE — No. C 30345 — Ren. 9/30/23 — STATE OF CALIFORNIA — DSA SIGNATURE

ENGINEER: REGISTERED PROFESSIONAL ENGINEER — BRYAN ENNIS — M 41413 — REN. 03-31-25 — MECHANICAL — STATE OF CALIFORNIA

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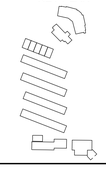
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date: 04/24/2023
Project Number: 22026
Application Number: 01-120631
Drawing Number: T24.06
Drawn: KT
Checked: CD

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 2 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ^{2}-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	24.01	31.20	-7.19
Space Cooling	101.22	79.65	21.57
Indoor Fans	205.29	90.43	114.86
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	19.46	19.46	--
Indoor Lighting	11.67	11.67	--
ENERGY STANDARDS COMPLIANCE TOTAL	**361.65**	**232.41**	**129.24 (35.7%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	80.17	80.17	--
Process	--	--	--
Other Ltg	6.07	6.07	--
Process Motors	5.83	11.79	-5.96
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**453.72**	**330.44**	**123.3 (27.2%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 1 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN-JOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	4,808 ft^2	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	907 ft^2	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	NonresIdential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☐ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.).*	
	☒ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Bldng B	**Report Page:**	**(Page 3 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 5 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft^2)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Roof Prior to 19720	Roof	5715	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E
Default Roof Prior to 197201	Ceiling	3778	Wood	11	NA	U-Factor	0.073	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	A
Default Wall Prior to 197101	InteriorWall	1014	Wood	0	NA	U-Factor	0.411	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E

[1] *Status: N - New, A – Altered, E – Existing*

G4. OPAQUE DOOR SUMMARY

1 Assembly Name	2 Overall U-factor	3 Status[1]
Metal Door15	0.700	E

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 4 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1 Opaque Surfaces & Orientation	2 Total Gross Surface Area (ft^2)	3 Total Fenestration Area (ft^2)	4 Window to Wall Ratio (%)
North-Facing[1]	2,244 ft^2	1,210 ft^2	53.9%
East-Facing[2]	0 ft^2	0 ft^2	00.0%
South-Facing[3]	1,763 ft^2	350 ft^2	19.9%
West-Facing[4]	375 ft^2	0 ft^2	00.0%
Total	**4,382 ft^2**	**1,560 ft^2**	**35.6%**
Roof	4,808 ft^2	0 ft^2	00.0%

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft^2)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Wall Prior to 19710	ExteriorWall	5424	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade18	UndergroundFloor	5715	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 3 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	6.1	-6.1	57.5	--	57.5
Space Cooling	11.1	8.4	2.7	--	--	--
Indoor Fans	32.6	14.4	18.2	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	52.2	52.2	0.0
Indoor Lighting	2.0	2.0	0.0	--	--	-->
Compliance Total	**45.7**	**30.9**	**14.8**	**109.7**	**52.2**	**57.5**
Receptacle	13.7	13.7	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	1.0	1.0	0.0	--	--	--
Process Motors	0.9	1.9	-1.0	--	--	--
TOTAL	**61.3**	**47.5**	**13.8**	**109.7**	**52.2**	**57.5**

D. EXCEPTIONAL CONDITIONS

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 8 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H$_2$O)	8 Status[1]

[1] *Status: N - New, A – Altered, E – Existing*

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

H6. SYSTEM SPECIAL FEATURES

1 System Name	2 Equipment Type	3 Window Interlocks per §140.4(n)	4 Other Special Features and Controls
Undefined Plant1 - SHW	Service Hot Water, Primary Only	NA	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H7. NONRESIDENTIAL VENTILATION

1 Zone Name	2 Mechanical Ventilation: Ventilation Function	3 # of people	4 Supply OA CFM	5 Exhaust CFM	6 Conditioned Area (sf)	7 DCV or Occupant Sensor Controls, or Both
1-Class Room C4	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
2-Class Room C3	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
3-Class Room C2	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
4-Class Room C1	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
9-Class Room C5	Education - Classrooms (ages 5-8)	24.20	368	0	968	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 7 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1 Equipment Name	2 Equipment Type	3 Qty	4 Heating: Total Heating Output (kBtu/h)	5 Heating: Supp Heat Output (kBtuh)	6 Heating: Efficiency Unit	7 Heating: Efficiency	8 Cooling: Total Cooling Output (kBtu/h)	9 Cooling: Efficiency Unit	10 Cooling: Efficiency	11 Economizer Type (if present)	12 Status[1]
HP C-1	VRF	1	282	NA	COP	3.20	252	EER	10.60	NA	N

[1] *Status: N - New, A – Altered, E – Existing*

H2. FAN SYSTEMS SUMMARY

1 Name or Item Tag	2 Qty	3 Design OA CFM	4 Supply Fan CFM	5 Supply Fan Modeling Method	6 Supply Fan Power	7 Supply Fan Power Units	8 Supply Fan Control	9 Return Fan CFM	10 Return Fan Modeling Method	11 Return Fan Power	12 Return Fan Power Units	13 Return Fan Control	14 Status[1]
2-Class Room C4-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Class Room C3-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
4-Class Room C2-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
5-Class Room C1-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
10-Class Room C5-VRF	1	368	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] *Status: N - New, A – Altered, E – Existing*

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H$_2$O)	8 Status[1]
Boys Restroom70	6-Boys Restroom	1	500	0.250	0.436	2.06	N
Girls Restroom85	8-Girls Restroom	1	500	0.250	0.436	2.06	N

Project Name:	McCollam Elementry School-Bldng C	NRCC-PRF-01-E	Page 6 of 12
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:12, Thu, Dec 22, 2022
Input File Name:	Building-C-McCollam.cibd19x		

G5. FENESTRATION ASSEMBLY SUMMARY

1 Fenestration Assembly Name / Tag or I.D.	2 Fenestration Type / Product Type / Frame Type	3 Certification Method[1]	4 Assembly Method	5 Area ft^2	6 Overall U-factor	7 Overall SHGC	8 Overall VT	9 Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	1560	1.19	0.83	0.77	E
Single Metal Clear_Clerestory	VerticalFenestration FixedWindow N/A			NaN	1.19	0.83	0.00	E

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A – Altered, E – Existing*

G6. OVERHANG DETAILS

1 Fenestration Tag/ID	2 Orientation	3 Depth(ft.)	4 Height from Bottom of Sill to Overhang(ft)	5 Right Extent(ft)	6 Left Extent(ft)
Window11	North	2.0	6.1	2.0	2.0
Window12	North	2.0	3.1	2.0	2.0
Window26	North	2.0	6.1	2.0	2.0
Window27	North	2.0	3.1	2.0	2.0
Window38	North	2.0	6.1	2.0	2.0
Window39	North	2.0	3.1	2.0	2.0
Window50	North	2.0	6.1	2.0	2.0
Window51	North	2.0	3.1	2.0	2.0
Window96	North	2.0	6.1	2.0	2.0
Window97	North	2.0	3.1	2.0	2.0

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

LP CONSULTING ENGINEERS

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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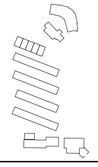
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number T24.07
Drawn KT	Checked CD

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Mechanical	NRCA-MCH-11-A Automatic Demand Shed Controls
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
2-Class Room C4-VRF	1-Class Room C4	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
3-Class Room C3-VRF	2-Class Room C3	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
4-Class Room C2-VRF	3-Class Room C2	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
5-Class Room C1-VRF	4-Class Room C1	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
10-Class Room C5-VRF	9-Class Room C5	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	1st Hour Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
Default Gas Prior to 19992	Gas	Storage	1	50.00	28	kBtu/h	0.53	UEF	NA	NA	80	NA	NA

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng C	**Report Page:**	**(Page 2 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04		05	06	07		08	09
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Additional §140.6(c)2G (+) (See Table J)	Tailored §140.6(c)3 (+) (See Table K)	=	Total Allowed (Watts)	Total Designed (Watts) (See Table F)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-) (See Table P)	=	Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 §140.6
Conditioned					=		≥			=	
Unconditioned		499.6	0		=	500	≥	0	0	=	0	COMPLIES
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.			
Project Name:	McCollam Elementry School - Bldng C	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft²)	907
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Support Areas

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	907
Total Area of Work (ft²)	0		907	

Registration Number: Registration Date/Time: Registration Provider: Energysoft

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers, Inc	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-22
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:	
Company: LP Consulting Engineers Inc.		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 916-771-0778	Title: Electrical Engineer	License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:	
Company: LP Consulting Engineers Inc		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 9167710778	Title: Mechanical Engineer	License #: M41413

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng C	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng C	**Report Page:**	**(Page 4 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

TOTALS:	907	499.6	See Tables J, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Bldng C	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*							13	Plan Sheet Showing Daylit Zones:	

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Undefined Zone	All Other Space Types	0.4	167	66.8	No	No
Boys Restroom	Restrooms	0.65	263	171	No	No
Undefined Zone	All Other Space Types	0.4	193	77.2	No	No
Girls Restroom	Restrooms	0.65	284	184.6	No	No

Registration Number: Registration Date/Time: Registration Provider: Energysoft

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN J. ENNIS No. M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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. 2023.

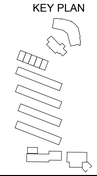
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.08
Drawn KT / Checked CD	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results	
01		02		03		04		05		06		07	08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²) 0
02	Climate Zone	4		
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas		

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02		
☐ New Lighting System	Must Comply with Allowances from §140.7		
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ● No		
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L	

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)

This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTS-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 2 of 3)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS

This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS

This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS

This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to sign lighting requirements.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTS-E
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This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE

This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04		05		06	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)	OR	Compliant Light Sources (See Table G)	OR	ENERGY VERIFIED Label (See Table H)	**Compliance Results**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng C	Report Page:	(Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:13:24

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT: LICENSED ARCHITECT — BRYAN P. WHITMORE — No. C 30345 — Ren. 9/30/23 — STATE OF CALIFORNIA

ENGINEER: REGISTERED PROFESSIONAL ENGINEER — BRYAN ENNIS — M 41413 — REN. 03-31-25 — MECHANICAL — STATE OF CALIFORNIA

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. 2023.

REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.09
Drawn: KT	Checked: CD

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 2 of 13
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Input File Name:	Building-D-McCollam.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	24.50	31.36	-6.86
Space Cooling	99.82	73.69	26.13
Indoor Fans	206.76	85.76	121.00
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	16.89	16.89	--
Indoor Lighting	11.30	11.30	--
ENERGY STANDARDS COMPLIANCE TOTAL	**359.27**	**219.00**	**140.27 (39.0%)**

[1] Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	79.87	79.87	--
Process	--	--	--
Other Ltg	0.77	0.77	--
Process Motors	0.75	1.36	-0.61
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**440.66**	**301.00**	**139.7 (31.7%)**

[1] Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 1 of 13
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Input File Name:	Building-D-McCollam.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN-JOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	5,602 ft²	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	114 ft²	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☐ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.).*	
	☒ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Bldng C	**(Page 3 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:** 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: Registration Date/Time: Registration Provider: Energysoft

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Input File Name:	Building-D-McCollam.cibd19x		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Roof Prior to 19721	Roof	5716	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E
Interior R-0 Wall23	InteriorWall	5200	NA	0	NA	U-Factor	0.314	Gypsum Board - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Gypsum Board - 1/2 in.	E

[1] Status: N - New, A – Altered, E – Existing

G4. OPAQUE DOOR SUMMARY

1 Assembly Name	2 Overall U-factor	3 Status[1]
Metal Door16	0.700	E

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Input File Name:	Building-D-McCollam.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1 Opaque Surfaces & Orientation	2 Total Gross Surface Area (ft²)	3 Total Fenestration Area (ft²)	4 Window to Wall Ratio (%)
North-Facing[1]	2,577 ft²	1,210 ft²	47.0%
East-Facing[2]	375 ft²	0 ft²	00.0%
South-Facing[3]	2,060 ft²	350 ft²	17.0%
West-Facing[4]	375 ft²	0 ft²	00.0%
Total	**5,387 ft²**	**1,560 ft²**	**29.0%**
Roof	5,602 ft²	0 ft²	00.0%

Notes:
[1] North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
[2] East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
[3] South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
[4] West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Wall Prior to 19710	ExteriorWall	5511	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade19	UndergroundFloor	5716	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

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C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	7.1	-7.1	68.4	--	68.4
Space Cooling	12.8	9.1	3.7	--	--	--
Indoor Fans	38.3	15.9	22.4	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	52.8	52.8	0.0
Indoor Lighting	2.2	2.2	0.0	--	--	-->
Compliance Total	**53.3**	**34.3**	**19.0**	**121.2**	**52.8**	**68.4**
Receptacle	15.9	15.9	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	0.2	0.2	0.0	--	--	--
Process Motors	0.1	0.3	-0.2	--	--	--
TOTAL	**69.5**	**50.7**	**18.8**	**121.2**	**52.8**	**68.4**

D. EXCEPTIONAL CONDITIONS

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 8 of 13
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H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H_2O)	8 Status[1]

[1] Status: N - New, A – Altered, E – Existing

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

H6. SYSTEM SPECIAL FEATURES

1 System Name	2 Equipment Type	3 Window Interlocks per §140.4(n)	4 Other Special Features and Controls
Undefined Plant1 - SHW	Service Hot Water, Primary Only	NA	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H7. NONRESIDENTIAL VENTILATION

1 Zone Name	2 Mechanical Ventilation: Ventilation Function	3 # of people	4 Supply OA CFM	5 Exhaust CFM	6 Conditioned Area (sf)	7 DCV or Occupant Sensor Controls, or Both
1-Class Room D5	Education - Classrooms (ages 5-8)	24.20	368	0	968	NA
2-Class Room D4	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
3-Class Room D3	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
4-Class Room D2	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
5-Class Room D1	Education - Classrooms (ages 5-8)	24.00	365	0	960	NA
6-D6 D8 D9	Office - Office space	3.97	119	0	794	NA

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 7 of 13
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Input File Name:	Building-D-McCollam.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1 Equipment Name	2 Equipment Type	3 Qty	4 Heating: Total Heating Output (kBtu/h)	5 Heating: Supp Heat Output (kBtuh)	6 Heating: Efficiency Unit	7 Heating: Efficiency	8 Cooling: Total Cooling Output (kBtu/h)	9 Cooling: Efficiency Unit	10 Cooling: Efficiency	11 Economizer Type (if present)	12 Status[1]
HP D-1	VRF	1	282	NA	COP	3.20	252	EER	10.60	NA	N

[1] Status: N - New, A – Altered, E – Existing

H2. FAN SYSTEMS SUMMARY

1 Name or Item Tag	2 Qty	3 Design OA: CFM	4 Supply Fan: CFM	5 Supply Fan: Modeling Method	6 Supply Fan: Power	7 Supply Fan: Power Units	8 Supply Fan: Control	9 Return Fan: CFM	10 Return Fan: Modeling Method	11 Return Fan: Power	12 Return Fan: Power Units	13 Return Fan: Control	14 Status[1]
2-Class Room D5-VRF	1	368	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Class Room D4-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
4-Class Room D3-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
5-Class Room D2-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
6-Class Room D1-VRF	1	365	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
7-D6 D8 D9-VRF	1	119	688	BrakeHorsePower	0.390	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] Status: N - New, A – Altered, E – Existing

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H_2O)	8 Status[1]
Toilet D799	7-Toilet D7	1	200	0.067	0.292	1.38	N

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 6 of 13
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Input File Name:	Building-D-McCollam.cibd19x		

G5. FENESTRATION ASSEMBLY SUMMARY

1 Fenestration Assembly Name / Tag or I.D.	2 Fenestration Type / Product Type / Frame Type	3 Certification Method[1]	4 Assembly Method	5 Area ft²	6 Overall U-factor	7 Overall SHGC	8 Overall VT	9 Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	1560	1.19	0.83	0.77	E
Single Metal Clear_Clerestory	VerticalFenestration FixedWindow N/A			NaN	1.19	0.83	0.00	E

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered, E – Existing

G6. OVERHANG DETAILS

1 Fenestration Tag/ID	2 Orientation	3 Depth(ft.)	4 Height from Bottom of Sill to Overhang(ft)	5 Right Extent(ft)	6 Left Extent(ft)
Window11	North	2.0	6.1	2.0	2.0
Window12	North	2.0	3.1	2.0	2.0
Window27	North	2.0	6.1	2.0	2.0
Window28	North	2.0	3.1	2.0	2.0
Window39	North	2.0	6.1	2.0	2.0
Window40	North	2.0	3.1	2.0	2.0
Window51	North	2.0	6.1	2.0	2.0
Window52	North	2.0	3.1	2.0	2.0
Window63	North	2.0	6.1	2.0	2.0
Window64	North	2.0	3.1	2.0	2.0

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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

MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT: LICENSED ARCHITECT BRYAN P. WHITMORE, No. C 30345, Ren. 9/30/23, STATE OF CALIFORNIA
ENGINEER: REGISTERED PROFESSIONAL ENGINEER, RYAN ENNIS, M 41413, REN. 03-31-25, MECHANICAL, STATE OF CALIFORNIA

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. 2023.

REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number T24.10
Drawn KT
Checked CD

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 11 of 13
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:18, Thu, Dec 22, 2022
Input File Name:	Building-D-McCollam.cibd19x		

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page:	(Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft²)	114
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Office ● Support Areas

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	114
Total Area of Work (ft²)	0		114	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 10 of 13
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:18, Thu, Dec 22, 2022
Input File Name:	Building-D-McCollam.cibd19x		

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page:	(Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS
This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS
This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 13 of 13
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:18, Thu, Dec 22, 2022
Input File Name:	Building-D-McCollam.cibd19x		

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers, Inc	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-22
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:	
Company: LP Consulting Engineers Inc.		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 916-771-0778	Title: Electrical Engineer	License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:	
Company: LP Consulting Engineers Inc		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-22	
City/State/Zip: Roseville CA 95678		
Phone: 9167710778	Title: Mechanical Engineer	License #: M41413

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
								Field Inspector	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Pass	Fail

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*

13

Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
					Additional Allowance / Adjustment	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Area Category	PAF
Toilet D7	Restrooms	0.65	114	74.1	No	No
		TOTALS:	114	74.1	See Tables J, or P for detail	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 9 of 13
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:18, Thu, Dec 22, 2022
Input File Name:	Building-D-McCollam.cibd19x		

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION
This Section Does Not Apply

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
				Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
System ID	Zone Name	System Type	Qty	Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
2-Class Room D5-VRF	1-Class Room D5	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
3-Class Room D4-VRF	2-Class Room D4	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
4-Class Room D3-VRF	3-Class Room D3	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
5-Class Room D2-VRF	4-Class Room D2	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
6-Class Room D1-VRF	5-Class Room D1	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
7-D6 D8 D9-VRF	6-D6 D8 D9	VRF	1	27.00	24.00	688	NA	NA	0.390	bhp	☐	☐

H10. EVAPORATIVE COOLER SUMMARY
This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY
This Section Does Not Apply

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	1st Hour Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
Default Gas Prior to 19992	Gas	Storage	1	50.00	28	kBtu/h	0.53	UEF	NA	NA	80	NA	NA

Project Name:	McCollam Elementry School-Bldng D	NRCC-PRF-01-E	Page 12 of 13
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	15:18, Thu, Dec 22, 2022
Input File Name:	Building-D-McCollam.cibd19x		

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Mechanical	NRCA-MCH-11-A Automatic Demand Shed Controls
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page:	(Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/22/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04	05		06	07	08		09
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Additional §140.6(c)2G (+) (See Table J)	Tailored §140.6(c)3 (+) (See Table K)	**Total Allowed** (Watts)		Total Designed (Watts) (See Table F)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-) (See Table P)	**Total Adjusted** (Watts) *Includes Adjustments		**05 must be >= 08 §140.6**
Conditioned					=				=		
Unconditioned		74.1	0		=	74	≥ 0	0	= 0		COMPLIES
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE
This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS
This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

GENERAL NOTES
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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.
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REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN

ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.11
Drawn / Checked	
KT / CD	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	4			
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):				

☐ LZ-0: Very Low - Undeveloped Parkland ☐ LZ-2: Moderate - Rural Areas ☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐ LZ-1: Low - Developed Parkland ☒ LZ-3: Moderately High - Urban Areas

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02		
☐ New Lighting System	Must Comply with Allowances from §140.7		
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ● No		
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L	

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1, 2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)

This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L														Compliance Results			
01		02		03		04		05		06		07		08		09	
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)		**07 must be >= 08**	
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0		COMPLIES	
Cutoff Compliance (See Table G for Details)																N/A	
Controls Compliance (See Table H for Details)																COMPLIES	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.		
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 1 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE

This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04		05		06	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)	OR	Compliant Light Sources (See Table G)	OR	ENERGY VERIFIED Label (See Table H)	**Compliance Results**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Bldng A	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/22/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-22 15:49:44

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

Studio W Architects
1930 H St.
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MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

LP CONSULTING ENGINEERS

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN E. ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

GENERAL NOTES

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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.
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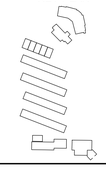
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.12
Drawn: KT	Checked: CD

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 1 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN-IOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	4,273 ft²	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	396 ft²	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☐ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC-LTS-E*
	☒ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)*	
	☒ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 3 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers, Inc	Signature Date: 2022-12-22
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-22
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number:
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time:
Report Version: 2019.1.003
Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-12-22 15:49:44

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Bldng A	**Report Page:**	**(Page 2 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/22/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS

This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS

This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS

This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to sign lighting requirements.

Registration Number:
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time:
Report Version: 2019.1.003
Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-12-22 15:49:44

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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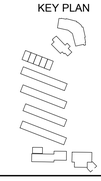
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.13
Drawn KT / Checked CD	

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 4 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	**Total Gross Surface Area (ft²)**	**Total Fenestration Area (ft²)**	**Window to Wall Ratio (%)**
North-Facing[1]	484 ft²	12 ft²	02.5%
East-Facing[2]	1,239 ft²	367 ft²	29.6%
South-Facing[3]	532 ft²	18 ft²	03.4%
West-Facing[4]	1,550 ft²	507 ft²	32.7%
Total	**3,805 ft²**	**904 ft²**	**23.7%**
Roof	4,286 ft²	0 ft²	00.0%

Notes:
[1] North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
[2] East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
[3] South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
[4] West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	**Surface Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**Units**	**Value**	**Description of Assembly Layers**	**Status[1]**
Default Wall Prior to 1976	ExteriorWall	4116	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Interior R-0 Wall9	InteriorWall	7670	Wood	0	NA	U-Factor	0.376	Gypsum Board - 1/2 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade17	UndergroundFloor	4682	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 3 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	3.5	-3.5	26.3	--	26.3
Space Cooling	7.8	8.8	-1.0	--	--	--
Indoor Fans	14.9	9.0	5.9	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	37.3	37.3	0.0
Indoor Lighting	6.1	6.1	0.0	--	--	-->
Compliance Total	**28.8**	**27.4**	**1.4**	**63.6**	**37.3**	**26.3**
Receptacle	12.4	12.4	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	0.6	0.6	0.0	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**41.8**	**40.4**	**1.4**	**63.6**	**37.3**	**26.3**

D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 2 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	12.56	19.96	-7.40
Space Cooling	92.74	94.79	-2.05
Indoor Fans	130.72	63.43	67.29
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	15.67	15.67	--
Indoor Lighting	41.04	41.04	--
ENERGY STANDARDS COMPLIANCE TOTAL	**292.73**	**234.89**	**57.84 (19.8%)**

[1] Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	81.72	81.72	--
Process	--	--	--
Other Ltg	3.79	3.79	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**378.24**	**320.40**	**57.8 (15.3%)**

[1] Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 7 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

H6. SYSTEM SPECIAL FEATURES

This Section Does Not Apply

H7. NONRESIDENTIAL VENTILATION

1	2	3	4	5	6	7
Zone Name	**Mechanical Ventilation**					**DCV or Occupant Sensor Controls, or Both**
	Ventilation Function	**# of people**	**Supply OA CFM**	**Exhaust CFM**	**Conditioned Area (sf)**	
1-Kindergarten K1	Education - Classrooms (ages 5-8)	33.33	507	0	1333	NA
2-Kindergarten K2	Education - Classrooms (ages 5-8)	33.52	510	0	1341	NA
3-RTU-1	Education - Classrooms (ages 5-8)	39.98	608	0	1599	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	**Zone Name**	**System Type**	**Qty**	**Rated Capacity (kBtuh)**		**Airflow (cfm)**			**Fan**			
				Heating	**Cooling**	**Design**	**Min.**	**Min. Ratio**	**Power**	**Power Units**	**Cycles**	**VSD**
2-Kindergarten K1-VRF	1-Kindergarten K1	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
3-Kindergarten K2-VRF	2-Kindergarten K2	VRF	1	54.00	48.00	1520	NA	NA	0.750	bhp	☐	☐
3-RTU-1-Trm	3-RTU-1	Uncontrolled	1	NA	NA	2000	NA	0.00	0.730	bhp	NA	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 6 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1	2	3	4	5	6	7	8	9	10	11	12
			Heating				**Cooling**				
Equipment Name	**Equipment Type**	**Qty**	**Total Heating Output (kBtu/h)**	**Supp Heat Output (kBtuh)**	**Efficiency Unit**	**Efficiency**	**Total Cooling Output (kBtu/h)**	**Efficiency Unit**	**Efficiency**	**Economizer Type (if present)**	**Status[1]**
RTU-1	SZHP (Packaged3Phase)	1	41	20	HSPF	9.00	54	SEER/EER	16.40/13.00	NoEconomizer	N
HP AD-1	VRF	1	54	NA	COP	9.30	48	EER	9.50	NA	N
HP AD-2	VRF	1	54	NA	COP	9.30	48	EER	9.50	NA	N

[1] Status: N - New, A – Altered, E – Existing

H2. FAN SYSTEMS SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Design OA	**Supply Fan**					**Return Fan**					
Name or Item Tag	**Qty**	**CFM**	**CFM**	**Modeling Method**	**Power**	**Power Units**	**Control**	**CFM**	**Modeling Method**	**Power**	**Power Units**	**Control**	**Status[1]**
RTU-1	1	608	2000	BrakeHorsePower	0.730	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
2-Kindergarten K1-VRF	1	507	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Kindergarten K2-VRF	1	510	1520	BrakeHorsePower	0.750	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] Status: N - New, A – Altered, E – Existing

H3. EXHAUST FAN SUMMARY

This Section Does Not Apply

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 5 of 11
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G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	**Surface Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**Units**	**Value**	**Description of Assembly Layers**	**Status[1]**
Default Roof Prior to 19719	Roof	4682	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E

[1] Status: N - New, A – Altered, E – Existing

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	**Overall U-factor**	**Status[1]**
Metal Door13	0.700	E

G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	**Fenestration Type / Product Type / Frame Type**	**Certification Method[1]**	**Assembly Method**	**Area ft²**	**Overall U-factor**	**Overall SHGC**	**Overall VT**	**Status[2]**
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	1009	1.19	0.83	0.77	E

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufactures, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered, E – Existing

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 10 of 11
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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Mechanical	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	NRCA-MCH-03-A Constant Volume Single Zone HVAC
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 9 of 11
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Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 8 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**Report Page:**	**(Page 2 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04		05	06	07		08	09
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Additional §140.6(c)2G (+) (See Table J)	Tailored §140.6(c)3 (+) (See Table K)	=	**Total Allowed** (Watts)	Total Designed (Watts) (See Table F)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-) (See Table P)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 §140.6**
Conditioned					=				=		
Unconditioned		277.2	0		=	277	59	0	=	59	COMPLIES
								Controls Compliance (See Table H for Details)			COMPLIES
								Rated Power Reduction Compliance (See Table Q for Details)			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)3	Design Watts	Field Inspector	
									Pass	Fail
D	D, 124-L52/935-FAF	No	No	59	Mfr. Spec	1	No	59	☐	☐
							Total Designed Watts: UNCONDITIONED SPACES		59	

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft²)	396
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1
• Classroom					

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	396
Total Area of Work (ft²)	0		396	

Registration Number: Registration Date/Time: Registration Provider: Energysoft

Project Name:	McCollam Elementry School- Kinder-Admin Bldng	NRCC-PRF-01-E	Page 11 of 11
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:45, Wed, Dec 14, 2022
Input File Name:	Building-AK-McCollam-22-11-22.cibd19x		

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers Inc.	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-14
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:
Company:	
Address:	Date Signed:
City/State/Zip:	
Phone:	Title: License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:
Company: LP Consulting Engineers Inc.	
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-15
City/State/Zip: Roseville CA 95678	
Phone: 916-771-0778	Title: Electrical Engineer License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:
Company: LP Consulting Engineers Inc	
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-15
City/State/Zip: Roseville CA 95678	
Phone: 9167710778	Title: Mechanical Engineer License #: M41413

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**Report Page:**	**(Page 5 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**Report Page:**	**(Page 4 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Unconditioned Spaces	Classroom, Lecture, or Training Vocational Area	0.7	396	277.2	No	No
		TOTALS:	396	277.2	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

F. INDOOR LIGHTING FIXTURE SCHEDULE

[1]FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

[2]Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*							13 Plan Sheet Showing Daylit Zones:		

Registration Number: Registration Date/Time: Registration Provider: Energysoft

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

Studio W Architects
1930 H St.
Sacramento, California 95811
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CONSULTING ENGINEERS
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1209 Pleasant Grove Blvd.
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p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN J. ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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. 2023.

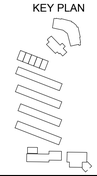
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023	Project Number 22026
Application Number 01-120631	Drawing Number T24.14
Drawn KT	Checked CD

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: if any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results
01		02		03		04		05		06		07		08		09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)		**07 must be >= 08**
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0		COMPLIES
Cutoff Compliance (See Table G for Details)																N/A
Controls Compliance (See Table H for Details)																COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 1 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²) 0
02	Climate Zone	4		
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐ LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐ LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02		
☐ New Lighting System	Must Comply with Allowances from §140.7		
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ● No		
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L	

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

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Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)

This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 2 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS

This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS

This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS

This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to sign lighting requirements.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTS-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 1 of 3)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE

This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04		05		06	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)	OR	Compliant Light Sources (See Table G)	OR	ENERGY VERIFIED Label (See Table H)	**Compliance Results**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	Report Page: (Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared: 12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
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Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:34:06

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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

CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT: LICENSED ARCHITECT — BRYAN P. WHITFIELD — No. C 30345 — Ren. 9/30/23 — STATE OF CALIFORNIA

ENGINEER: REGISTERED PROFESSIONAL ENGINEER — BRYAN ENNIS — M 41413 — REN. 03-31-25 — MECHANICAL — STATE OF CALIFORNIA

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. 2023.

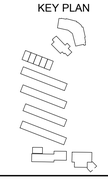
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date	Project Number
04/24/2023	22026
Application Number	Drawing Number
01-120631	T24.15
Drawn: KT	Checked: CD

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 2 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	22.09	43.04	-20.95
Space Cooling	74.26	58.45	15.81
Indoor Fans	147.64	73.78	73.86
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	18.65	18.65	--
Indoor Lighting	40.90	40.90	--
ENERGY STANDARDS COMPLIANCE TOTAL	**303.54**	**234.82**	**68.72 (22.6%)**

[1] Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	111.34	111.34	--
Process	--	--	--
Other Ltg	12.71	12.71	--
Process Motors	1.96	7.12	-5.16
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**429.55**	**365.99**	**63.6 (14.8%)**

[1] Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 1 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Jose	8	Standards Version	Compliance2019
2	CA Zip Code	95127	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	4	10	Weather File	SAN-JOSE-INTL_724945_CZ2010.epw
4	Total Conditioned Floor Area in Scope	3,182 ft²	11	Building Orientation (deg)	(E) 135 deg
5	Total Unconditioned Floor Area	1,103 ft²	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☐ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☒ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☐ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.).*	
	☒ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-LTS-E**
Project Name:	McCollam Elementry School - Kinder/Admiin Bldng	**(Page 3 of 3)**
Project Address:	3311 Lucian Ave	**Date Prepared:** 12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
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Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
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Registration Number: Registration Date/Time: Registration Provider: Energysoft

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 5 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status[1]
Default Roof Prior to 19718	Roof	4284	Wood	11	NA	U-Factor	0.078	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	E

[1] Status: N - New, A – Altered, E – Existing

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-factor	Status[1]
Metal Door8	0.700	E

G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method[1]	Assembly Method	Area ft²	Overall U-factor	Overall SHGC	Overall VT	Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	205	1.19	0.83	0.77	E

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered, E – Existing

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 8 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 4 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing[1]	672 ft²	0 ft²	00.0%
East-Facing[2]	429 ft²	0 ft²	00.0%
South-Facing[3]	686 ft²	0 ft²	00.0%
West-Facing[4]	1,200 ft²	115 ft²	09.6%
Total	**2,987 ft²**	**115 ft²**	**03.9%**
Roof	3,181 ft²	0 ft²	00.0%

Notes:
[1] North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
[2] East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
[3] South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
[4] West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status[1]
Default Wall Prior to 1976	ExteriorWall	4021	Wood	0	NA	U-Factor	0.537	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Interior R-0 Wall12	InteriorWall	4860	Wood	0	NA	U-Factor	0.376	Gypsum Board - 1/2 in. Wood framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.	E
Slab On Grade16	UndergroundFloor	4284	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 7 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

H6. SYSTEM SPECIAL FEATURES

This Section Does Not Apply

H7. NONRESIDENTIAL VENTILATION

1	2	3	4	5	6	7
Zone Name	Mechanical Ventilation					DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of people	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
1-Multi-purpose Room	Education - Multiuse assembly	61.10	1222	0	2444	NA
2-Stage	Education - Multiuse assembly	18.45	369	0	738	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
2-Multi-purpose Room-VRF	1-Multi-purpose Room	VRF	2	60.00	54.00	1800	NA	NA	1.000	bhp	☐	☐
3-Stage-VRF	2-Stage	VRF	1	27.00	23.00	777	NA	NA	0.055	bhp	☐	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 3 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	5.6	-5.6	35.0	--	35.0
Space Cooling	4.5	3.6	0.9	--	--	--
Indoor Fans	14.1	7.8	6.3	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	0.0	0.0	--	32.7	32.7	0.0
Indoor Lighting	4.6	4.6	0.0	--	--	-->
Compliance Total	**23.2**	**21.6**	**1.6**	**67.7**	**32.7**	**35.0**
Receptacle	12.6	12.6	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	1.4	1.4	0.0	--	--	--
Process Motors	0.2	0.8	-0.6	--	--	--
TOTAL	**37.4**	**36.4**	**1.0**	**67.7**	**32.7**	**35.0**

D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

Project Name:	McCollam Elementry School- Multipurpose Bldng	NRCC-PRF-01-E	Page 6 of 10
Project Address:	3311 Lucian Ave San Jose 95127	Calculation Date/Time:	14:40, Wed, Dec 14, 2022
Input File Name:	Building-MP-McCollam.cibd19x		

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1	2	3	4	5	6	7	8	9	10	11	12
Equipment Name	Equipment Type	Qty	Heating				Cooling			Economizer Type (if present)	Status[1]
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtuh)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency		
HP MP-1	VRF	1	154	NA	COP	3.30	138	EER	12.00	NA	N

[1] Status: N - New, A – Altered, E – Existing

H2. FAN SYSTEMS SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name or Item Tag	Qty	Design OA	Supply Fan					Return Fan					Status[1]
		CFM	CFM	Modeling Method	Power	Power Units	Control	CFM	Modeling Method	Power	Power Units	Control	
2-Multi-purpose Room-VRF	2	611	1800	BrakeHorsePower	1.000	bhp	ConstantVolume	NA	NA	NA	NA	NA	N
3-Stage-VRF	1	369	777	BrakeHorsePower	0.055	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

[1] Status: N - New, A – Altered, E – Existing

H3. EXHAUST FAN SUMMARY

1	2	3	4	5	6	7	8
System ID	Zone Name	Qty	CFM	Motor BHP	Power Per Flow (W/cfm)	Total Static Pressure (in. H_2O)	Status[1]
Toilet39	4-Toilet	1	100	0.200	1.744	8.25	N

[1] Status: N - New, A – Altered, E – Existing

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

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MEP & FS / Sustainability / CxA
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Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT
LICENSED ARCHITECT BRYAN P. WHITMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA
ENGINEER
REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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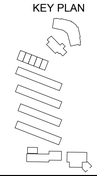
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number T24.16
Drawn KT
Checked CD

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.			
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	4	05	Total Unconditioned Floor Area (ft²)	1,103
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Support Areas

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	1103
Total Area of Work (ft²)	0		1103	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Signature:
Company: LP Consulting Engineers Inc.	
Address: 1209 Pleasant Grove Blvd	Signature Date: 2022-12-14
City/State/Zip: Roseville CA 95678	CEA/ HERS Certification Identification (if applicable):
Phone: 916.771.0778	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name: Rami Zeidan	Signature:	
Company: LP Consulting Engineers Inc.		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-15	
City/State/Zip: Roseville CA 95678		
Phone: 916-771-0778	Title: Electrical Engineer	License #: E16762
Responsible Mechanical Designer Name: Ryan Ennis	Signature:	
Company: LP Consulting Engineers Inc		
Address: 1209 Pleasant Grove Blvd	Date Signed: 2022-12-15	
City/State/Zip: Roseville CA 95678		
Phone: 9167710778	Title: Mechanical Engineer	License #: M41413

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Mechanical	NRCA-MCH-11-A Automatic Demand Shed Controls
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 4 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Undefined Zone	Classroom, Lecture, or Training Vocational Area	0.7	692	484.4	No	No
Toilet	Restrooms	0.65	52	33.8	No	No
Undefined Zone	Electrical Mechancial Telephone Room	0.4	259	103.6	No	No
Undefined Zone	Classroom, Lecture, or Training Vocational Area	0.7	100	70	No	No
		TOTALS:	1,103	691.8	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 3 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

F. INDOOR LIGHTING FIXTURE SCHEDULE

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. *EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*					13				
					Plan Sheet Showing Daylit Zones:				

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 2 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-)		**Total Adjusted** (Watts) *Includes Adjustments	
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned					=	≥			=		
Unconditioned		691.8	0		= 692	≥	177	0	=	177	COMPLIES
										Controls Compliance (See Table H for Details)	COMPLIES
										Rated Power Reduction Compliance (See Table Q for Details)	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)3	Design Watts	Field Inspector	
									Pass	Fail
D	D, 124-LS2/935-FAF	No	No	59	Mfr. Spec	3	No	177	☐	☐
							Total Designed Watts: UNCONDITIONED SPACES		177	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 1 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	4			

03 Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):

☐ LZ-0: Very Low - Undeveloped Parkland ☐ LZ-2: Moderate - Rural Areas ☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐ LZ-1: Low - Developed Parkland ☒ LZ-3: Moderately High - Urban Areas

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02	
☐ New Lighting System	Must Comply with Allowances from §140.7	
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes ● No
03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

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Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 6 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	**Report Page:**	**(Page 5 of 6)**
Project Address:	3311 Lucian Ave	**Date Prepared:**	12/15/2022

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

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MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
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p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITTIKER No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER RYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA

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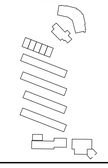
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023 — Project Number 22026
Application Number 01-120631 — Drawing Number T24.17
Drawn KT — Checked CD

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E | CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 4 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

K. LIGHTING ALLOWANCE: SALES FRONTAGE
This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL
This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)
This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Li or §141.0(b)2Lii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts			
				Allowance per §141.0(b)2Li :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E | CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTS-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12, §130.0, §130.3, §140.8, and §141.0(b)2M for sign lighting scopes using the prescriptive path. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.			
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 1 of 3)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Jose
02	Climate Zone	4
03	Building is a healthcare facility	**No**

B. PROJECT SCOPE
This table includes illuminated signs that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.8 or §141.0(b)2M for alterations. Exit signs and traffic signs are not required to comply with prescriptive requirements per exceptions to §140.8 and do not need to complete this compliance document.

01	02	03	04	05
Name or Item Tag	Complete Sign Description	Sign Status[1]	Sign Type	Compliance Method[2]

[1] *FOOTNOTE: Sign alterations that increase the connected lighting load, replace and rewire more that 50% of the ballasts, or relocate the sign to a different location must comply with §140.8. See §141.0(b)2M for more details.*
[2] *The ENERGY VERIFIED Label compliance method is only applicable if the sign has a permanent, factory-installed, ENERGY VERIFIED label certified by UL or comparable, confirming the sign complies with §140.8. Note that using an ENERGY VERIFIED label is an optional compliance path, not a mandatory requirement. See the tooltips for this table for more details.*

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables B through H. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03		04		05		06	07
Name or Item Tag (See Table B)	Complete Sign Description (See Table B)	Total Allowed (Watts) (See Table F)	≥	Total Designed (Watts) (See Table F)	OR	Compliant Light Sources (See Table G)	OR	ENERGY VERIFIED Label (See Table H)	**Compliance Results**

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E | CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 3 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE
For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
									Pass	Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)
This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS
This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)
This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION
This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E | CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 6 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Rami Zeidan	Responsible Designer Signature:
Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
City/State/Zip: Roseville CA 95678	Phone: 916-771-0778

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:36:01

STATE OF CALIFORNIA
Sign Lighting
NRCC-LTS-E | CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTS-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 2 of 3)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Leonard Yalong	Documentation Author Signature:
Company: LP Consulting Engineers Inc.	Signature Date: 2022-12-15
Address: 1209 Pleasant Grove Blvd	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Roseville CA 95678	Phone: 916.771.0778

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Company: LP Consulting Engineers Inc.	Date Signed: 2022-12-15
Address: 1209 Pleasant Grove Blvd	License: E16762
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Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Outdoor Lighting
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CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 2 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results				
01		02		03		04		05	06		07		08	09
General Hardscape Allowance §140.7(d1) (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0	COMPLIES
										Cutoff Compliance (See Table G for Details)					N/A
										Controls Compliance (See Table H for Details)					COMPLIES

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
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Outdoor Lighting
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CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 5 of 6)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no NRCA forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-LTS-E
Project Name:	McCollam Elementry School - Multipurpose Bldng	Report Page:	(Page 3 of 3)
Project Address:	3311 Lucian Ave	Date Prepared:	12/15/2022

F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS
This section does not apply to this project.

G. LIGHT SOURCES AND CONTROLS
This section does not apply to this project.

H. ENERGY VERIFIED LABELED SIGNS AND CONTROLS
This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTS-01-E - Must be submitted for all buildings	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to sign lighting requirements.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2022-12-15 15:36:01

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-120631 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/4/2023

STUDIO W ARCHITECTS

Studio W Architects
1930 H St.
Sacramento, California 95811
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CONSULTING ENGINEERS
MEP & FS / Sustainability / CxA
1209 Pleasant Grove Blvd.
Roseville, CA 95678
p 916-771-0778
www.lpengineers.com
Job #: 22-2197

ARCHITECT	ENGINEER
LICENSED ARCHITECT BRYAN P. WHITTEMORE No. C 30345 Ren. 9/30/23 STATE OF CALIFORNIA	REGISTERED PROFESSIONAL ENGINEER BRYAN ENNIS M 41413 REN. 03-31-25 MECHANICAL STATE OF CALIFORNIA
2021 USBC Update	

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.
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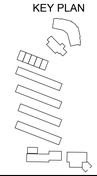
REVISION HISTORY

NO.	REMARKS	DATE

DRAWING STATUS

	DATE
○ DSA PLAN CHECK	12/23/2022
● DSA BACK CHECK	04/24/2023
○ BIDDING	
○ CONSTRUCTION	

KEY PLAN



ALUM ROCK UNION SCHOOL DISTRICT
2930 GAY AVE.
SAN JOSE, CA 95127

CONSTRUCTION DOCUMENTS

MILLARD MCCOLLAM ELEMENTARY SCHOOL
3311 LUCIAN AVE.,
SAN JOSE, CA 95127

TITLE 24 CALCULATIONS

Date 04/24/2023
Project Number 22026
Application Number 01-120631
Drawing Number T24.18
Drawn KT
Checked CD