SYMBOLS

DETAIL NUMBER/SHEET NUMBER — XX/S50X

HIDDEN OR BEYOND

DETAIL BUBBLE: 1 / S501 — TYP — SECTION, ELEVATION OR DETAIL NUMBER; OCCURS IN MULTIPLE LOCATIONS; SHEET REFERENCE NUMBER

CROSS SECTION REFERENCE: 1 / A301B

EXTERIOR ELEVATION REFERENCE: 1 / A201B

INTERIOR ELEVATION REFERENCE: A / D / 1 / A401B / B / C — INTERIOR ELEVATION NUMBER

DETAIL REFERENCE: 1 / A501

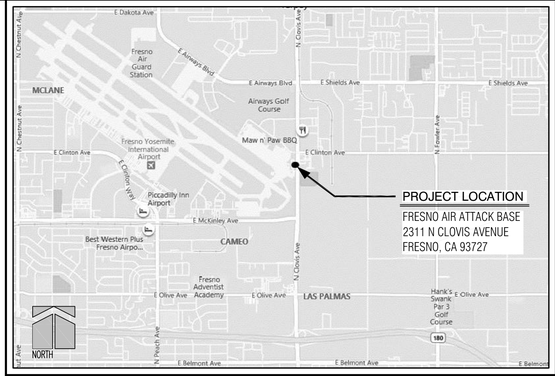
KEYNOTE IDENTIFIER: 1 — KEYNOTE NUMBER

DATUM POINT: +0'-0" FINISHED FLOOR

TRUE NORTH: N

PLAN NORTH: PLAN NORTH / TRUE NORTH

LOCATION MAP



DESIGN TEAM

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
TECHNICAL SERVICES SECTION

A&E UNIT SUPERVISOR:	CAMERON HENION	PHONE: (916) 539-1756
PROJECT DIRECTOR:	JONATHAN PIKE	PHONE: (916) 591-1928
SENIOR CIVIL ENGINEER:	ANTHONY ECCLESTON	PHONE: (916) 324-1183
FAX:	(916) 324-3400	
BUSINESS ADDRESS:	1131 "S" STREET, SACRAMENTO, CA. 95811	
MAILING ADDRESS:	POST OFFICE BOX 944246, SACRAMENTO, CA. 94244-2460	

ARCHITECTURE / ENGINEERING PROJECT TEAM

ASHLEY CRUZ	ASSISTANT CIVIL ENGINEER
MATTHEW HEINTZ	ARCHITECTURAL ASSOCIATE
RAYMOND GALLAGHER	SENIOR MECHANICAL ENGINEER
MARCEL MADISON	ASSOCIATE MECHANICAL ENGINEER
ERIC GIFFORD	ASSOCIATE ELECTRICAL ENGINEER
SPENCER THOMAS	ASSOCIATE ELECTRICAL ENGINEER

BUILDING CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2023

2022 BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24, PART 1, C.C.R.
2022 CALIFORNIA BUILDING CODE (CBC), TITLE 24, PART 2, C.C.R.
(2021 INTERNATIONAL BUILDING CODE AND CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ELECTRICAL CODE (CEC), TITLE 24, PART 3, C.C.R.
(2020 NATIONAL ELECTRICAL CODE AND CALIFORNIA AMENDMENTS)
2022 CALIFORNIA MECHANICAL CODE (CMC) TITLE 24, PART 4, C.C.R.
(2021 UNIFORM MECHANICAL CODE AND CALIFORNIA AMENDMENTS)
2022 CALIFORNIA PLUMBING CODE (CPC), TITLE 24, PART 5, C.C.R.
(2021 UNIFORM PLUMBING CODE AND CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ENERGY CODE (CEC), TITLE 24, PART 6, C.C.R. EFFECTIVE JANUARY 1, 2023
2022 CALIFORNIA FIRE CODE, TITLE 24, PART 9, C.C.R.
(2021 INTERNATIONAL FIRE CODE AND CALIFORNIA AMENDMENTS)
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), TITLE 24, PART 11, C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS, TITLE 24, PART 12, C.C.R.
STATE FIRE MARSHAL REGULATIONS, TITLE 19, DIVISION 1 C.C.R.

2022 NFPA 13	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS W/ CA AMENDMENTS
2019 NFPA 14	STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS W/ CA AMENDMENTS
2021 NFPA 17A	STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS
2019 NFPA 20	STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2019 NFPA 24	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES W/ CA AMENDMENTS
2022 NFPA 72	NATIONAL FIRE ALARM CODE W/ CA AMENDMENTS
2022 NFPA 241	STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, DEMOLITION OPERATIONS
2018 NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS W/ CA AMENDMENTS

FEDERAL CODES AND STANDARDS

ADA STANDARDS FOR ACCESSIBLE DESIGN (28 CFR PART 25 AND 36):
TITLE II: STANDARDS FOR STATE AND LOCAL GOVERNMENT FACILITIES
TITLE III: STANDARDS FOR PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF CONSTRUCTING THE FOLLOWING:

- 12 BED BARRACKS / MESS HALL (4,192 GSF)

ON SITE IMPROVEMENTS INCLUDE GRADING, PAVEMENT, UTILITIES, DRAINAGE, SITE CURB/GUTTER/SIDEWALKS, SITE LIGHTING, SITE FENCING, AND IRRIGATION.

DEMOLITION WORK INCLUDES REMOVAL OF A/C PAVING, CONCRETE, SIDEWALKS, CURBS, TREES AND RELATED UTILITIES.

DEFERRED SUBMITTALS

FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERED CALCULATIONS FOR THE ACTUAL SYSTEM TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT, MECHANICAL OR STRUCTURAL ENGINEER AND APPROVED BY THE STATE FIRE MARSHAL.

STATE FIRE MARSHAL DEFERRED ITEMS
- AUTOMATIC FIRE SPRINKLERS SYSTEMS
- ADDRESSABLE AUTOMATIC FIRE ALARM SYSTEM

THE OFFICE OF THE STATE FIRE MARSHAL (OSFM) DEFERRED SUBMITTAL ITEMS WILL BE SUPPLIED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW PRIOR TO SUBMITTING THE ITEMS TO THE OSFM. THE REGISTERED DESIGN PROFESSIONAL WILL PROVIDE NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE OSFM.

STATEMENT OF GENERAL CONFORMANCE

THE DRAWINGS LISTED IN DRAWING SHEET INDEX HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS WHO ARE LICENSED TO PREPARE SUCH DRAWINGS IN THIS STATE. THEY HAVE BEEN EXAMINED BY ME FOR:
1. DESIGN INTENT. THEY APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS, AND
2. COORDINATION WITH PLANS AND SPECIFICATIONS OF OTHER DISCIPLINES AND ARE 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 THE TITLE 24, PART 1.

I FIND THAT ALL DRAWINGS LISTED IN DRAWING SHEET INDEX ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN AND HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

SIGNATURE _____ DATE 07/19/2023

ARCHITECT / ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

PRINT NAME ANTHONY E. ECCLESTON

LICENSE NUMBER C 90716 EXPIRATION DATE DECEMBER 31, 2023

STATE OF CALIFORNIA

CALIFORNIA NATURAL RESOURCES AGENCY

DEPARTMENT OF FORESTRY & FIRE PROTECTION

C130 BARRACKS
FRESNO AIR ATTACK BASE

SOUTHERN REGION
FRESNO COUNTY
FRESNO-KINGS UNIT

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM 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.
3. A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE STATE AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE STATE SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS OF THE PROJECT.
5. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDUM, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION PER DSA IR A-6 AND SECTION 4-338(c) PART 1, TITLE 24 CCR.
6. 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)
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. DO NOT SCALE FROM THESE PLANS. FIGURED OR WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
9. IT IS INTENDED THAT THE DRAWINGS, DETAILS AND SPECIFICATIONS SHOULD AGREE. SHOULD ANY DISCREPANCY OR APPARENT ERROR OCCUR, THE CONTRACTOR SHALL NOTIFY THE STATE REPRESENTATIVE AT ONCE. UPON DISCOVERY OF CONFLICTS OR ERRORS, THE STATE'S REPRESENTATIVE SHALL SEEK GUIDANCE FROM THE DESIGNER OF RECORD TO RESOLVE THE PROBLEM.
10. APPROVAL OF THESE PLANS DO NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION.

BUILDING ANALYSIS

BUILDING DESIGNATOR:	BARRACKS
OSFM GOVMOTUS PERMIT NUMBER:	23-S-1342
OCCUPANCY CLASSIFICATION AND USE:	R2/B/A3: 4,192 SQ. FT.
BUILDING CONSTRUCTION TYPE:	V-B
NUMBER OF STORIES:	ONE
ACTUAL BUILDING HEIGHT:	16'-10" ±
BUILDING AREA:	4,192 S.F.
AREA OF PROJECT:	69,570 S.F.
SEPARATED OR NON-SEPARATED USE:	NON-SEPARATED
ALLOWABLE AREA PER C.B.C.:	24,000 S.F. (A3 S1)
AREA INCREASE:	N/A
HEIGHT INCREASE:	N/A
AUTOMATIC FIRE SPRINKLERS:	NFPA 13
FIRE ALARM SYSTEM:	YES
OTHER FIRE PROTECTION SYSTEMS:	NONE
SMOKE CONTROL SYSTEM:	NO
TOTAL OCCUPANT LOAD:	112
YEAR BUILDING WAS CONSTRUCTED:	N/A
BUILDING IN HIGH FIRE HAZARD SEVERITY ZONE:	NO
SEISMIC JOINTS:	N/A
EMERGENCY RESPONSE RADIO COVERAGE:	YES
MEETS EXIT ACCESS TRAVEL DISTANCE REQUIREMENTS:	YES

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
TITLE SHEET
PROJECT INFORMATION

SHEET NUMBER
G001
V3

PROJECT PATH: V:\PROJECT\Major Crdp Projects\2421 Fresno C-130 AAB\DRAWINGS\COMMON\2421G001.dwg
PLOT DATE: Jul 19, 2023 - 10:46AM
VER. 2020

DRAWING SHEET INDEX

TOTAL SHEETS = 90

SHEET	TITLE	REVIEW DSA AC	REVIEW OSFM
GENERAL			
G001	TITLE SHEET PROJECT INFORMATION	YES	YES
G002	DRAWING SHEET INDEX	YES	YES
G003	FIRE PROTECTION PLAN	NO	YES
SURVEYING			
VS101	TOPOGRAPHIC SURVEY	NO	NO
CIVIL			
CD101	DEMOLITION PLAN	YES	YES
CS101	CIVIL SITE PLAN	YES	YES
CS501	SITE ACCESSIBILITY DETAILS	YES	YES
CS502	CIVIL SITE DETAILS	YES	YES
CS503	CIVIL SITE DETAILS	YES	YES
CG101	GRADING PLAN	YES	YES
CG102	SITE GRADING PLAN	YES	YES
CU101	UTILITY PLAN	YES	YES
ARCHITECTURAL			
A001	ARCHITECTURAL GENERAL SHEET ABBREVIATIONS AND NOTES	YES	YES
A101	FLOOR PLAN	YES	YES
A111	ACCESSIBILITY AND EXITING PLAN	YES	YES
A121	REFLECTED CEILING PLAN	YES	YES
A131	ROOF PLAN	YES	YES
A201	EXTERIOR ELEVATIONS	YES	YES
A301	BUILDING SECTIONS	YES	YES
A401	ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS	YES	YES
A402	INTERIOR ELEVATIONS	YES	YES
A403	INTERIOR ELEVATIONS	YES	YES
A404	INTERIOR ELEVATIONS	YES	YES
A405	BEDROOM LOCKER PLAN AND DETAILS	YES	YES
A500	ACCESSIBILITY MOUNTING HEIGHTS, CLEARANCES AND SIGNAGE	YES	YES
A501	ARCHITECTURAL DETAILS	YES	YES
A502	ARCHITECTURAL DETAILS	YES	YES
A503	ARCHITECTURAL DETAILS	YES	YES
A504	ARCHITECTURAL DETAILS	YES	YES
A505	ARCHITECTURAL DETAILS	YES	YES
A601	DOOR AND WINDOW SCHEDULES	YES	YES
A602	ROOM FINISH SCHEDULE	YES	YES
STRUCTURAL			
S001	NOTES, ABBREVIATIONS AND SYMBOLS	YES	YES
S101	FOUNDATION PLAN	YES	YES
S111	FRAMING PLAN	YES	YES
S501	STANDARD FOUNDATION DETAILS	YES	YES
S502	FOUNDATION DETAILS	YES	YES
S511	STANDARD FRAMING DETAILS	YES	YES
S512	FRAMING DETAILS	YES	YES
S513	FRAMING DETAILS	YES	YES
MECHANICAL			
M001	MECHANICAL GENERAL NOTES	YES	YES
M002	MECHANICAL LEGEND AND ABBREVIATIONS	YES	YES
M101	MECHANICAL PLAN - DUCTING	YES	YES
M102	MECHANICAL PLAN - PIPING	YES	YES
M501	MECHANICAL DETAILS	YES	YES
M502	MECHANICAL DETAILS	YES	YES
M511	MECHANICAL FIRESTOPPING DETAILS	YES	YES
M601	MECHANICAL SCHEDULES	YES	YES
M602	MECHANICAL SCHEDULES	YES	YES
M603	MECHANICAL SCHEDULES	YES	YES
M611	MECHANICAL CONTROLS	YES	YES
M612	MECHANICAL SCHEMATIC - HVAC SYSTEM	YES	YES
M901	MECHANICAL ISOMETRIC VIEW - DUCTING	YES	YES

SHEET	TITLE	REVIEW DSA AC	REVIEW OSFM
PLUMBING			
P001	GENERAL PLUMBING NOTES	YES	YES
P002	PLUMBING LEGEND AND CALCULATIONS	YES	YES
P101	PLUMBING PLAN - SANITARY SEWER	YES	YES
P102	PLUMBING PLAN - DOMESTIC WATER PIPING	YES	YES
P501	PLUMBING DETAILS	YES	YES
P502	PLUMBING DETAILS	YES	YES
P504	PLUMBING FIRESTOPPING DETAILS	YES	YES
P601	PLUMBING SCHEDULES	YES	YES
P602	PLUMBING SCHEDULES	YES	YES
FIRE PROTECTION			
F101	FIRE SPRINKLER PLAN	NO	NO
ELECTRICAL			
ES101	ELECTRICAL SITE PLAN	YES	YES
ES102	SOLAR READY AREA PLAN	YES	YES
E001	ELECTRICAL LEGEND	YES	YES
E101	POWER PLAN	YES	YES
E111	VOICE/DATA/PA SYSTEM PLAN	YES	YES
E121	LIGHTING SYSTEM PLAN	YES	YES
E131	ATTIC LIGHTING SYSTEM PLAN	YES	YES
E141	PRIMARY & SECONDARY SIDELIT DAYLIT ZONES	YES	YES
E151	EGRESS PHOTOMETRIC ANALYSIS	YES	YES
E501	ELECTRICAL DETAILS	YES	YES
E502	ELECTRICAL DETAILS	YES	YES
E503	ELECTRICAL DETAILS	YES	YES
E601	SINGLE LINE DIAGRAM	YES	YES
E602	PANEL SCHEDULES	YES	YES
E603	ELEC, TELECOM, & FIRE ALARM SITE CONDUIT & CONDUCTOR SCHEDULE	YES	YES
E604	PLUG LOAD & LTG CTRL MATRIX, EQUIP, EM INV & FIXT SCHEDULES	YES	YES
E605	PLUG LOAD & LIGHTING CONTROL WIRING DIAGRAMS	YES	YES
E701	DEFERRED FIRE ALARM PLAN	NO	YES
ENERGY			
R001	ENERGY CODE CERTIFICATES OF COMPLIANCE COMMISSIONING	NO	NO
R011	ENERGY CODE CERTIFICATES OF COMPLIANCE PERFORMANCE	NO	NO
R012	ENERGY CODE CERTIFICATES OF COMPLIANCE PERFORMANCE	NO	NO
R013	ENERGY CODE CERTIFICATES OF COMPLIANCE PERFORMANCE	NO	NO
R021	ENERGY CODE CERTIFICATES OF COMPLIANCE INDOOR LIGHTING	NO	NO
R031	ENERGY CODE CERTIFICATES OF COMPLIANCE OUTDOOR LIGHTING	NO	NO
R041	ENERGY CODE CERTIFICATES OF COMPLIANCE ELEC PWR DISTRIBUTION	NO	NO
R051	ENERGY CODE CERTIFICATES OF COMPLIANCE PLUMBING	NO	NO
R061	ENERGY CODE CERTIFICATES OF COMPLIANCE SOLAR READY AREAS	NO	NO

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. F. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
DRAWING SHEET INDEX

SHEET NUMBER
G002
V3

PROJECT PATH: N:\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\COMMON\2421G002.dwg
PLOT DATE: Jul 19, 2023 - 9:15 AM
VER. 2020
1"

FIRE SEPARATION REQUIREMENTS

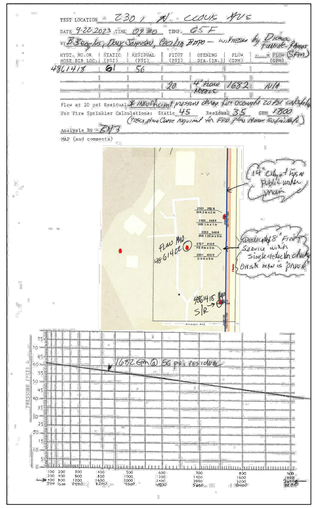
- PER 2022 CBC SECTION 201, FIRE SEPARATION DISTANCE (FSD) IS MEASURED FROM THE BUILDING FACE TO AN IMAGINARY LINE BETWEEN TWO BUILDINGS IN THE SAME LOT.
- PER 2022 CBC TABLE 705.2, PROJECTIONS SHALL BE 40" (MINIMUM) DISTANCE FROM THE IMAGINARY BOUNDARY LINE WHERE A 5' (MINIMUM) FSD EXISTS.
- PER 2022 CBC SECTION 705.2.2, PROJECTIONS FROM TYPE V CONSTRUCTION SHALL BE OF ANY APPROVED MATERIAL.
- PER 2022 CBC TABLE 705.5, EXTERIOR WALLS WITH A FIRE RESISTANCE RATING OF "0" HOURS ARE REQUIRED WHERE A 10' (MINIMUM) FSD EXISTS.
- PER 2022 CBC TABLE 705.8, EXTERIOR WALLS SHALL HAVE NO MORE THAN 45% OF UNPROTECTED OPENINGS FOR A SPRINKLERED BUILDING WHERE A 10' (MINIMUM) FSD EXISTS.

GENERAL NOTES

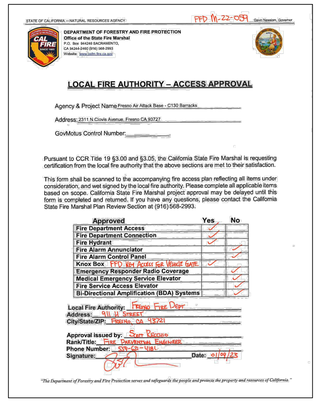
1. DURING CONSTRUCTION
   - 1.1. PER CFC 3313.1, CONTRACTOR SHALL ENSURE AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE BUILDING MATERIALS ARRIVE ON THE SITE. THIS REQUIREMENT SHALL STAY IN EFFECT UNTIL PERMANENT FIRE PROTECTION SYSTEM IS APPROVED AND FUNCTIONAL.
   - 1.2. PER CFC 3311.1, CONTRACTOR SHALL PROVIDE "ALL WEATHER" ACCESS ROAD(S) AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION ACTIVITIES TO ALLOW VEHICLE ACCESS FOR FIRE FIGHTING PURPOSES.
   - 1.3. PER NFPA 241 SECTION 8.3, CONTRACTOR SHALL PROVIDE DEDICATED COMBUSTIBLE MATERIAL STORAGE AREA NOT WITHIN AN UNPROTECTED STRUCTURE. STORAGE AREA SHALL BE A MINIMUM OF 30 FT FROM ALL STRUCTURES. AREA MAY BE RELOCATED AS NEEDED THROUGHOUT CONSTRUCTION, WHEREAS THE AREAS COMPLY WITH NFPA 241.
2. REQUIRED FIRE APPARATUS ACCESS LANES SHALL BE PROVIDED YEAR ROUND AND MAINTAINED WITH AN APPROVED ALL-WEATHER SURFACE, CAPABLE OF SUPPORTING 80,000-POUND VEHICLES. THE FIRE APPARATUS ACCESS LANES SHALL BE A MINIMUM OF 4-INCH BASE ROCK OVER COMPACTED OR UNDISTURBED NATIVE SOIL OR PER APPROVED ENGINEERING PLANS WITH A MINIMUM OF 24 FEET OF CLEAR WIDTH OR OTHER APPROVED METHOD, WHICH WOULD PREVENT SHOULDER DEGRADATION.
3. EMERGENCY VEHICLE ACCESS SHALL BE DESIGNATED BY PAINTING THE CURB RED (TOP AND SIDE) AND STENCILING "FIRE LANE NO PARKING" IN 3-INCH WHITE LETTERS ON THE MOST VERTICAL CURB, AT LEAST EVERY 50 FEET.

FIRE FLOW

BUILDING FIRE FLOW FOR THIS LOCATION IS 43 PSI AT 1500 GPM.



FIRE AUTHORITY ACCESS APPROVAL



STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY — PPD 10_22-0591 — Gavin Newsom, Governor

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
Office of the State Fire Marshal
P.O. Box 944246, Sacramento, CA 94244-2460
(916) 568-3843
Website: www.fire.ca.gov

LOCAL FIRE AUTHORITY – ACCESS APPROVAL

Agency & Project Name: Fresno Air Attack Base - C130 Barracks

Address: 2311 N Clovis Avenue, Fresno CA 93727

GovMotus Control Number:

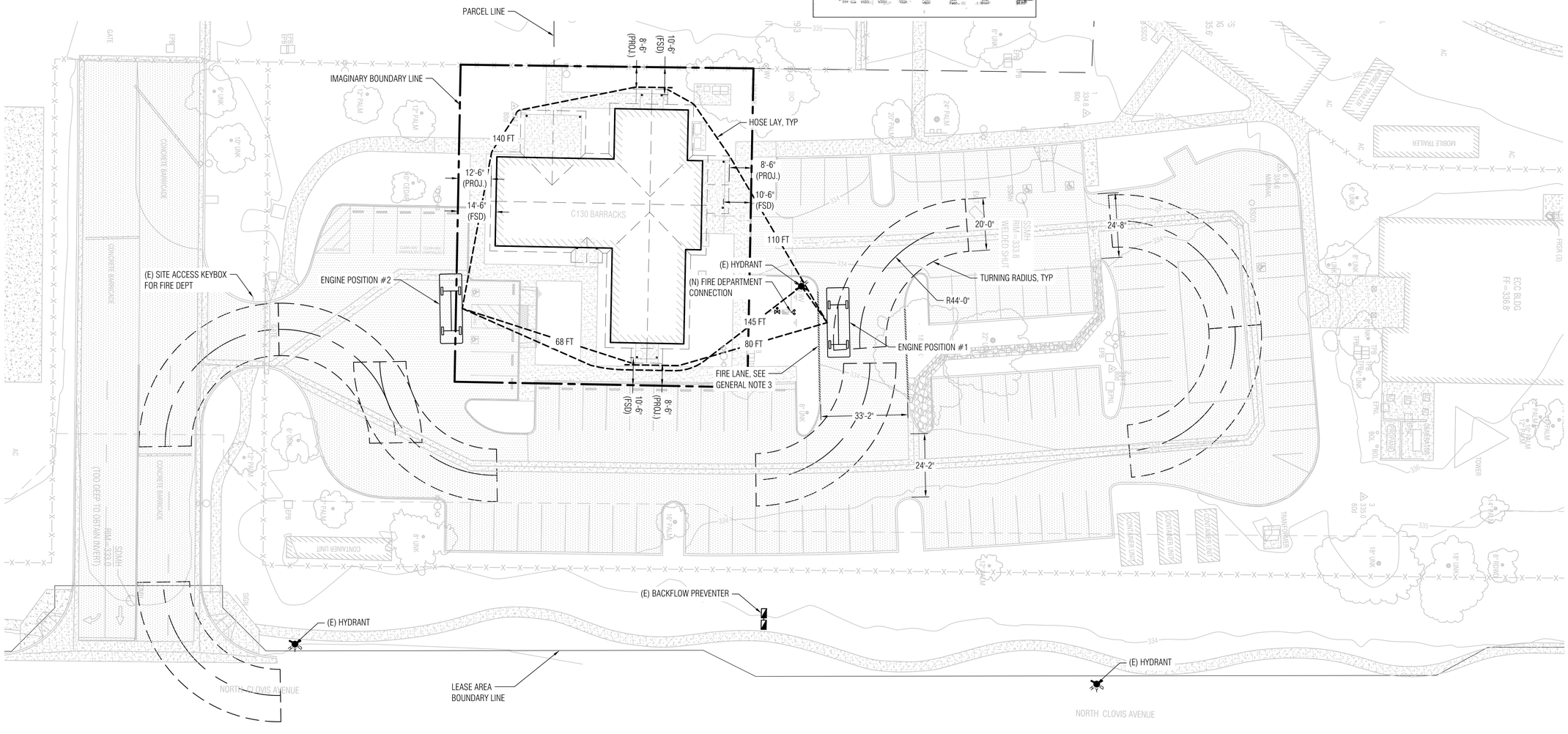
Pursuant to CCR Title 19 §3.00 and §3.05, the California State Fire Marshal is requesting certification from the local fire authority that the above sections are met to their satisfaction.

This form shall be scanned to the accompanying fire access plan reflecting all items under consideration, and wet signed by the local fire authority. Please complete all applicable items based on scope. California State Fire Marshal project approval may be delayed until this form is completed and returned. If you have any questions, please contact the California State Fire Marshal Plan Review Section at (916) 568-2993.

Approved	Yes	No
Fire Department Access	✓	
Fire Department Connection	✓	
Fire Hydrant	✓	
Fire Alarm Annunciator		✓
Fire Alarm Control Panel		✓
Knox Box FFD Key Access per Water Main	✓	
Emergency Responder Radio Coverage		✓
Medical Emergency Service Elevator		✓
Fire Service Access Elevator		✓
Bi-Directional Amplification (BDA) Systems		✓

Local Fire Authority: Fresno Fire Dept
Address: 911 H Street
City/State/ZIP: Fresno, CA 93721
Approval issued by: Sam Vasquez
Rank/Title: Fire Inspector, Engineer
Phone Number: 559-621-7081
Signature: Date: 01/09/24

"The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California."



FIRE PROTECTION PLAN

20 10 0 20 40
1" = 20'-0"

N

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

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CAL FIRE SINCE 1885

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

TECHNICAL SERVICES • CONSERVATION & ENVIRONMENTAL MANAGEMENT • EMERGENCY SERVICES • ADMINISTRATIVE & DIGITAL SERVICES

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — A. F. ECCLESTON — C 90716 — CIVIL — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: A.B. CRUZ
DRAWN BY: A.B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE:

SHEET TITLE:
FIRE PROTECTION PLAN

SHEET NUMBER
G003
V3

PROJECT PATH: C:\Users\Arcus\AppData\Local\Temp\AcPublish_22536\G003.dwg
PLOT DATE: Oct 09, 2023 - 9:09AM
VER 2020

SCALE

0 8 40 60 80 120

1 INCH = 40 FEET

CONTOUR INTERVAL = 1 FOOT

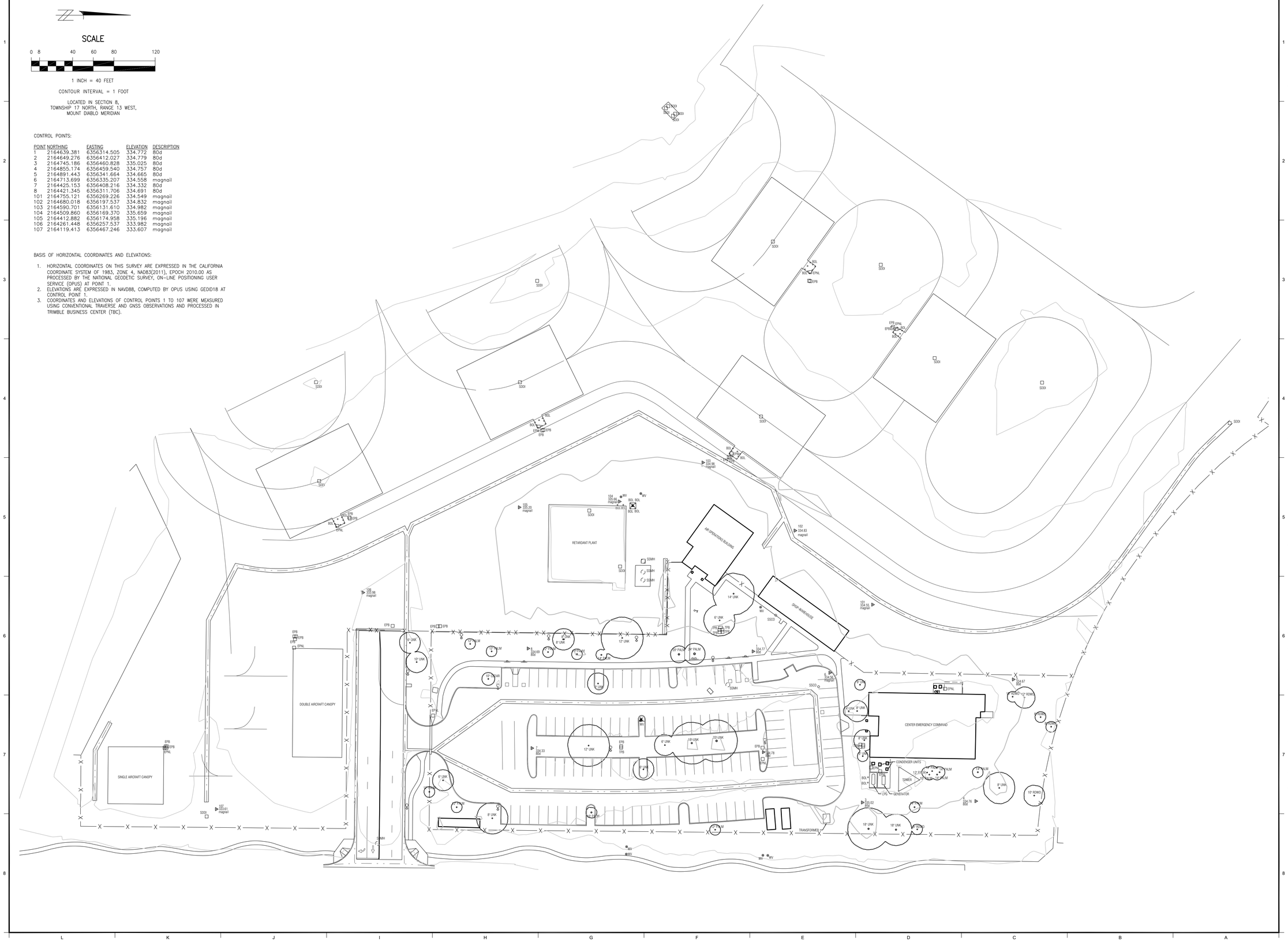
LOCATED IN SECTION 8,
TOWNSHIP 17 NORTH, RANGE 13 WEST,
MOUNT DIABLO MERIDIAN

CONTROL POINTS:

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2164639.381	6356314.505	334.772	80d
2	2164649.276	6356412.027	334.779	80d
3	2164745.186	6356460.828	335.025	80d
4	2164855.174	6356459.540	334.757	80d
5	2164891.443	6356341.664	334.665	80d
6	2164713.699	6356335.207	334.558	magnail
7	2164425.153	6356408.216	334.332	80d
8	2164421.345	6356311.706	334.691	80d
101	2164755.121	6356269.226	334.549	magnail
102	2164680.018	6356197.537	334.832	magnail
103	2164590.701	6356131.610	334.982	magnail
104	2164509.860	6356169.370	335.659	magnail
105	2164412.882	6356174.958	335.196	magnail
106	2164261.448	6356257.537	333.982	magnail
107	2164119.413	6356467.246	333.607	magnail

BASIS OF HORIZONTAL COORDINATES AND ELEVATIONS:

1. HORIZONTAL COORDINATES ON THIS SURVEY ARE EXPRESSED IN THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 4, NAD83(2011), EPOCH 2010.00 AS PROCESSED BY THE NATIONAL GEODETIC SURVEY, ON-LINE POSITIONING USER SERVICE (OPUS) AT POINT 1.
2. ELEVATIONS ARE EXPRESSED IN NAVD88, COMPUTED BY OPUS USING GEOID18 AT CONTROL POINT 1.
3. COORDINATES AND ELEVATIONS OF CONTROL POINTS 1 TO 107 WERE MEASURED USING CONVENTIONAL TRAVERSE AND GNSS OBSERVATIONS AND PROCESSED IN TRIMBLE BUSINESS CENTER (TBC).



DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

LICENSED LAND SURVEYOR
DAVID B. KAROLY
LS 7849
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: D. KAROLY
DRAWN BY: D. KAROLY
REVIEWED BY: N. LABEDZKI
FILE DATE:

SHEET TITLE:
TOPOGRAPHIC SURVEY

SHEET NUMBER
VS101
V3

PROJECT PATH: P:\PROJ\STG\Root\Data\Tech Services\AE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DWG\SURVEY\2421VS101.dwg
PLOT DATE: Jul 24, 2024 - 2:27PM
VER: 2020

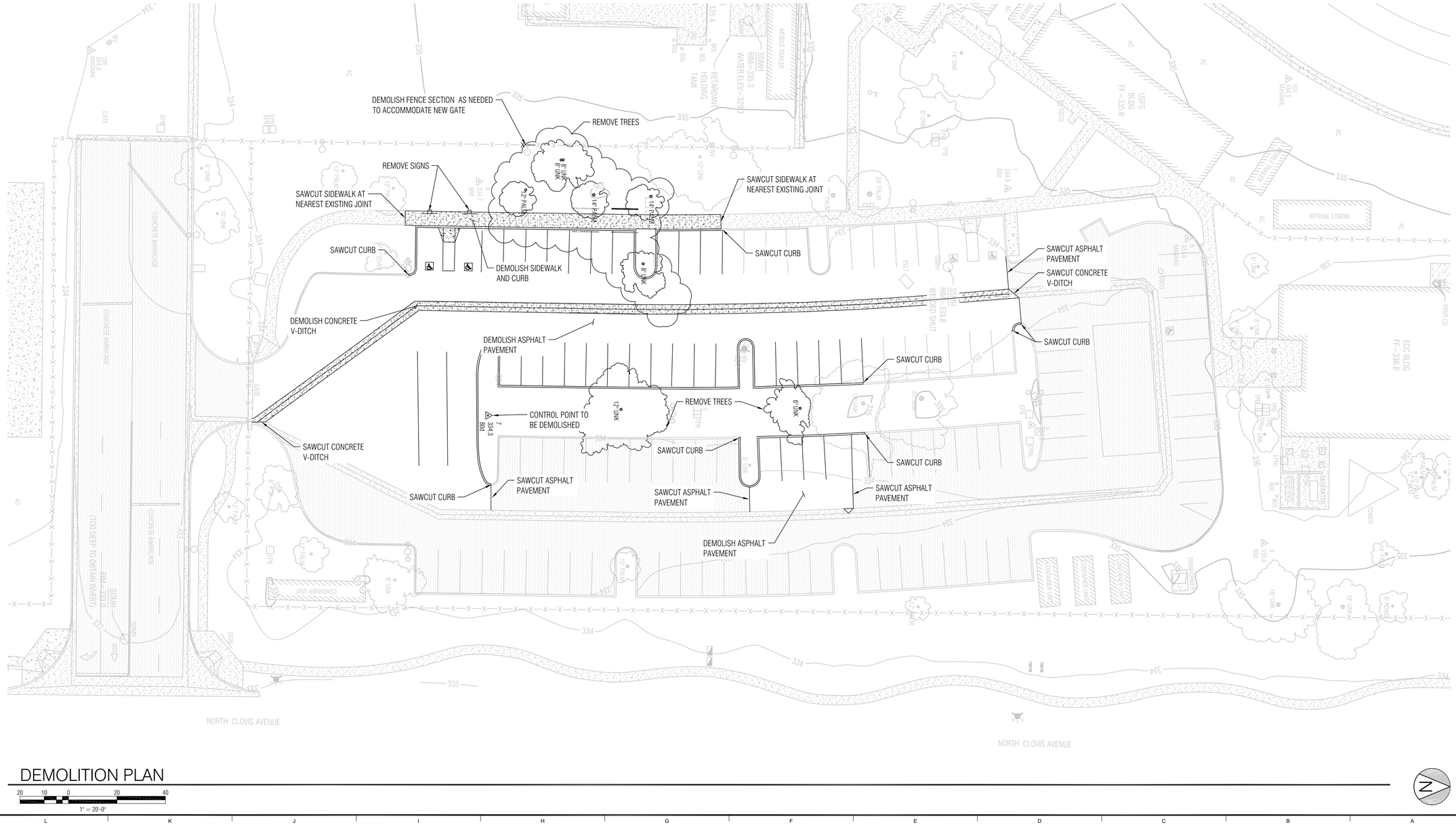
GENERAL NOTES

1. SURVEY CONTROL POINTS SHALL BE PRESERVED AND PROTECTED EXCEPT AS NOTED.
2. CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND PERPETUATION OF SURVEY BOUNDARY MONUMENTS AS REQUIRED BY THE BUSINESS AND PROFESSIONS CODE 8771.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE OR BELOW GROUND. CONTRACTOR SHALL REPORT ANY UNKNOWN SUB-SURFACE STRUCTURES TO THE STATE.
4. COMPLY WITH THE REGULATIONS OF THE UNDERGROUND SERVICE ALERT PRIOR TO ANY EXCAVATION.
5. TREES NOT IDENTIFIED TO BE DEMOLISHED SHALL BE PROTECTED FROM DEMOLITION ACTIVITY.
6. COORDINATE DEMOLITION OF FENCE WITH AIRPORT.

LEGEND/ABBREVIATIONS

—X—X—X—	CHAIN LINK FENCE
	SURVEY CONTROL POINT - AS NOTED
	BENCHMARK
	TELEPHONE POLE
	HOSE BIB
	HYDRANT
	LIGHT POST

AC	ASPHALT CONCRETE
BOL	BOLLARD
ELEV	ELEVATION
EPB	ELECTRIC PULL BOX
EPNL	ELECTRICAL PANEL
FF	FINISH FLOOR ELEVATION
INV	INVERT (FLOWLINE) ELEVATION
SDMH	STORM DRAIN MANHOLE
SSCO	STORMWATER-SEWER CLEANOUT
TPB	TELEPHONE PULL BOX
UNK	UNKNOWN
WV	WATER VALVE BOX
20C (TYP)	INDICATES TREE TYPE AND D.B.H.
UNK	UNKNOWN



DEMOLITION PLAN

20 10 0 20 40

1" = 20'-0"

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

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JOB NUMBER: 2421
DESIGNED BY: A.B. CRUZ
DRAWN BY: A.B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE:

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER
CD101
V3

PROJECT PATH: C:\Users\Arcus\AppData\Local\Temp\AcPublish_30\CD101(CD101).dwg
PLOT DATE: Jul 24, 2024 - 2:34PM
VER: 2020

GENERAL NOTES

1. PEDESTRIAN PATH OF TRAVEL (P.O.T.) INDICATED IS A BARRIER FREE, COMMON, ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2". VERTICAL CHANGES EXCEEDING 1/4" SHALL BE BEVELED AT 1:2 MAXIMUM SLOPE. THE PATH'S SURFACE SHALL BE AT LEAST 48" WIDE, SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACE SHALL BE AT LEAST 60" x 60" AND LOCATED NOT MORE THAN 200' APART. PARTS OF P.O.T. WITH CONTINUOUS GRADIENTS SHALL HAVE 60" LEVEL AREAS NOT MORE THAN 400' APART. THE CROSS-SLOPE SHALL NOT EXCEED 2% AND THE SLOPES IN THE DIRECTION OF TRAVEL THAT EXCEED 5% SHALL BE CONSTRUCTED AS ACCESSIBLE RAMPS. THE P.O.T. SHALL BE FREE OF OVERHEAD OBSTRUCTIONS UP TO 80" MINIMUM. OBJECTS PROJECTING FROM WALLS WITH LEADING EDGES BETWEEN 27" AND 80" A.F.F. SHALL NOT PROTRUDE MORE THAN 4" FROM THE WALL.

2. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: 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 NON-COMPLIANT 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.

3. 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 PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

4. PARKING STALL RATIO: 9 NEW SPACES TOTAL (2 ACCESSIBLE : 5 GENERAL : 2 CLEAN AIR/EV)

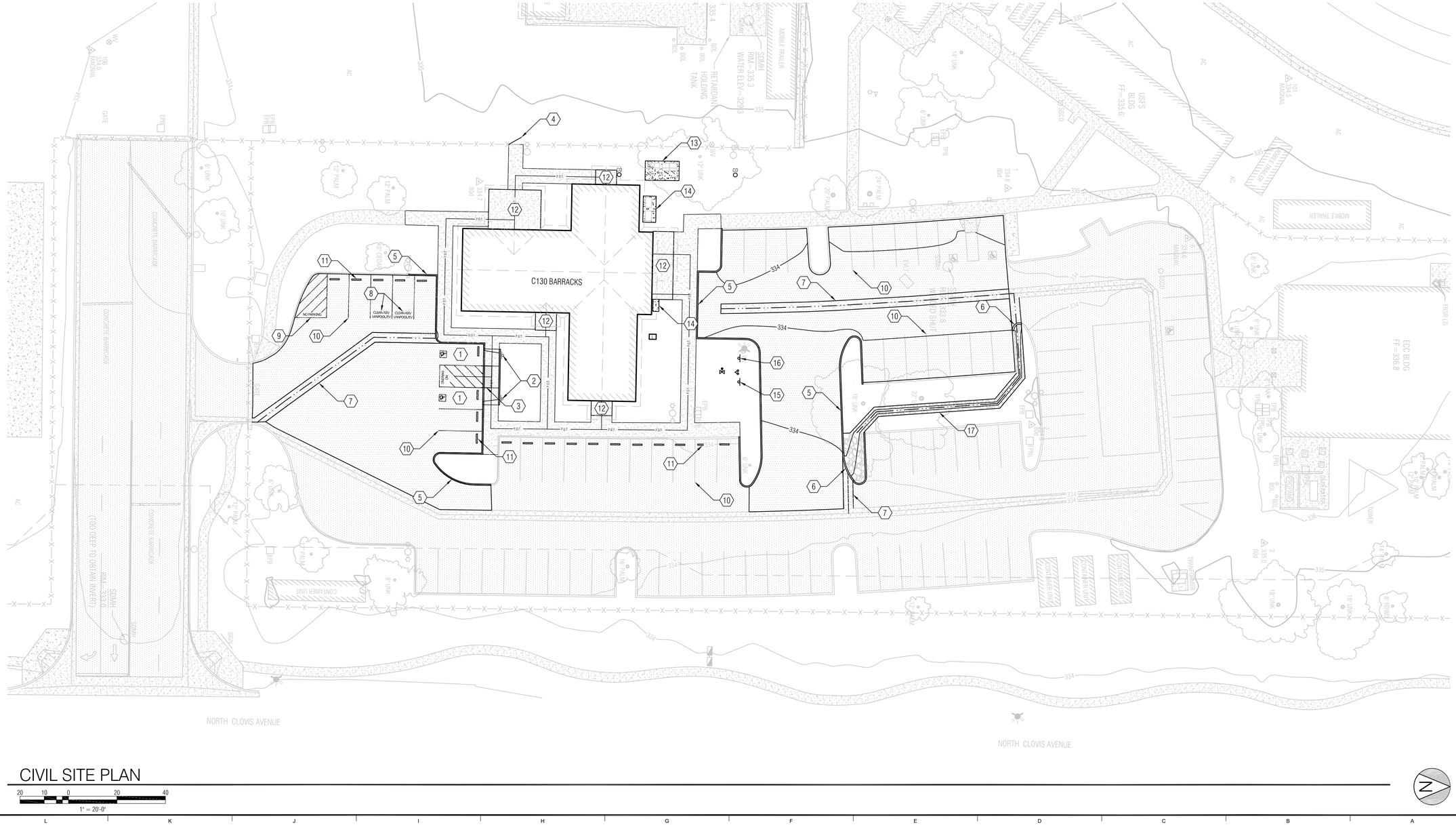
5. SURVEY CONTROL POINTS AND BOUNDARY MONUMENTS SHALL BE PRESERVED AND PROTECTED.

SHEET KEYNOTES

1.	ACCESSIBLE PARKING STALL	SEE 1/CS501
2.	TOW AWAY/ACCESSIBLE PARKING SIGN	SEE 3/CS501
3.	DETECTABLE WARNING	SEE 6/CS501
4.	SECURITY WALK-THRU GATE PER AIRPORT STANDARD	
5.	CONCRETE CURB	SEE 2/CS502
6.	CONCRETE CURB OPENING	
7.	CONCRETE VALLEY GUTTER	SEE 6/CS502
8.	"CLEAN AIR/VAN POOL/EV" 12 IN WHITE LETTERS	
9.	"NO PARKING" 12 IN WHITE LETTERS & TRANSVERSE MARKINGS	
10.	3 IN WIDE WHITE (UNO) PAVEMENT MARKINGS, TYP	
11.	CONCRETE PARKING BUMPER, TYP	SEE 1/CS502
12.	BUILDING FLATWORK	
13.	EQUIPMENT PAD FOR PANELBOARD, TRANSFORMER, AND SWITCHBOARD	SEE 8/CS502
14.	6" THICK PAD	SEE 5/CS502
15.	FIRE DEPARTMENT CONNECTION WARNING SIGN	SEE 6/CS503
16.	FIRE HYDRANT WARNING SIGN	SEE 6/CS503
17.	ROCK-LINED DRAINAGE SWALE	SEE 2/CS503

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- ACCESSIBLE PATH OF TRAVEL
- STORMWATER FLOW LINE
- 3.5" ASPHALT CEMENT OVER 5.5" COMPACTED AGGREGATE BASE.
- 4" THICK CONCRETE SIDEWALK/FLATWORK, PER 5/CS502. MAXIMUM JOINT SPACING 8 FT (NOT SHOWN). ALL PAVEMENT JOINTS SHALL CONTINUE THROUGH CURB.
- CONCRETE EQUIPMENT PAD, PER KEYNOTES.
- SANITARY SEWER CLEANOUT, SEE CU101.
- FIRE DEPARTMENT CONNECTION (FDC), SEE CU101.
- IRRIGATION WATER BOX, SEE CU101.
- POST INDICATOR VALVE (PIV). SEE CU101.



CIVIL SITE PLAN

20 10 0 20 40

1" = 20'-0"

N

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

• Timely & Quality • TECHNICAL SERVICES • Capital Outlay • Long Range Facilities Planning • Architecture & Engineering • Construction Management •

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

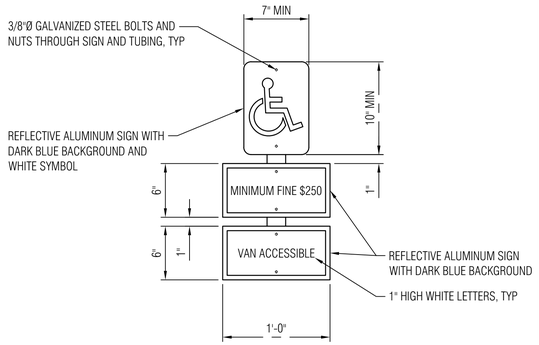
NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: A.B. CRUZ
DRAWN BY: A.B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE:

SHEET TITLE:
CIVIL SITE PLAN

SHEET NUMBER
CS101
V3

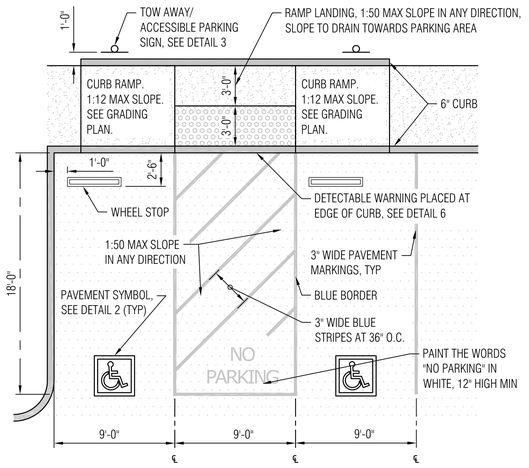
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PLOT DATE: Jul 24, 2024 - 3:03PM
VER: 2020



ACCESSIBLE PARKING SIGN

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

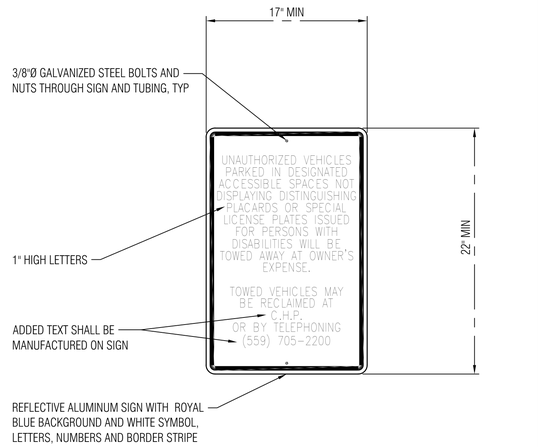
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ACCESSIBLE PARKING STALL

SCALE: 3/16" = 1'-0"

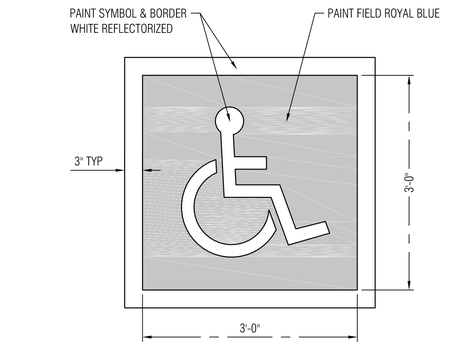
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TOW AWAY SIGN

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

5

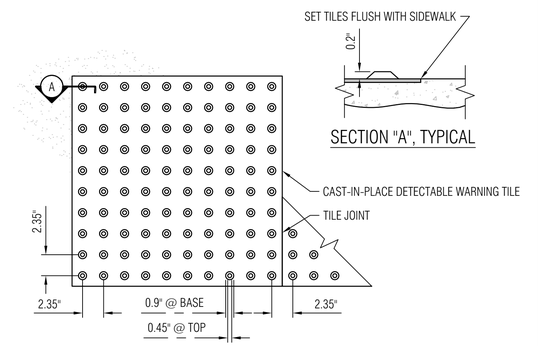


NOTE: CENTER ON ACCESSIBLE STALL ALIGNED WITH END OF STALL LINES.

PAVEMENT ACCESSIBILITY SYMBOL

SCALE: 1" = 1'-0"

2

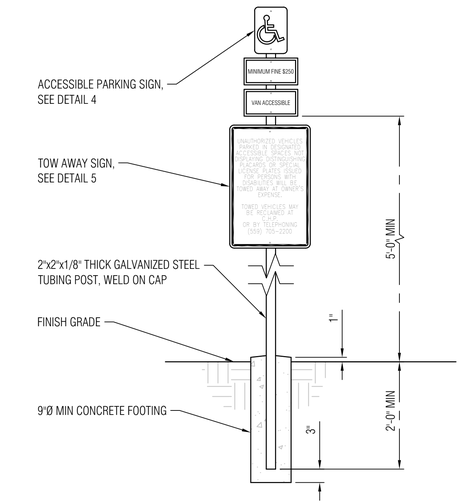


NOTES:
1. TILES FULL DEPTH OF WALKWAY EXTENDING 3 FEET IN THE DIRECTION OF TRAVEL. WIDTH PER PLAN.
2. COLOR: FEDERAL YELLOW FS 33538.

DETECTABLE WARNING

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

6



TOW AWAY/ACCESSIBLE PARKING SIGN

SCALE: 3/4" = 1'-0"

3

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

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FRESNO AIR ATTACK BASE

C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: A.B. CRUZ
DRAWN BY: A.B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:

SITE ACCESSIBILITY DETAILS

SHEET NUMBER

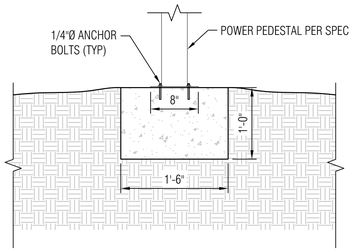
CS501

V3

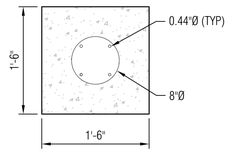
VER 2020

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PLOT DATE: Jul 24, 2024 - 3:18PM

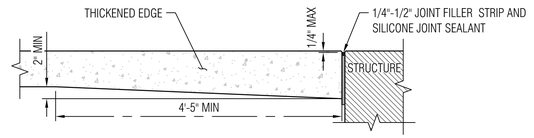


PLAN VIEW

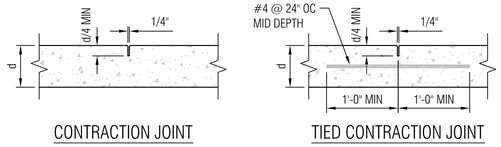


POWER PEDESTAL FOOTING

SCALE: 1" = 1'-0" | 7

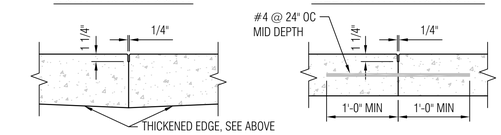


ISOLATION JOINT



CONTRACTION JOINT

TIED CONTRACTION JOINT

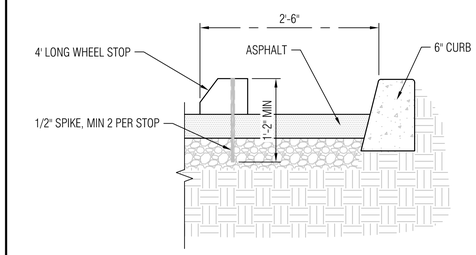


CONSTRUCTION JOINT

TIED CONSTRUCTION JOINT

CONCRETE JOINTS

SCALE: 1" = 1'-0" | 4



WHEEL STOP

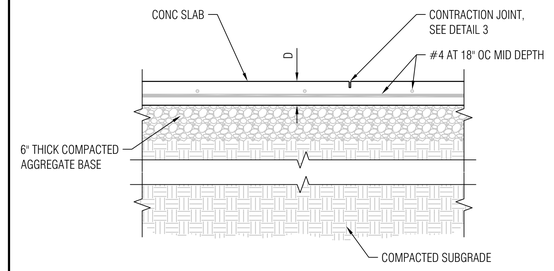
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ENLARGED DETAIL

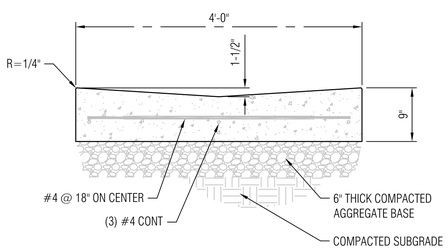
PANELBOARD, TRANSFORMER, AND SWITCHBOARD ELEVATION AND ANCHORAGE

SCALE: NOT TO SCALE | 8



EXTERIOR WALKS/SLAB/EQUIPMENT PAD SECTION

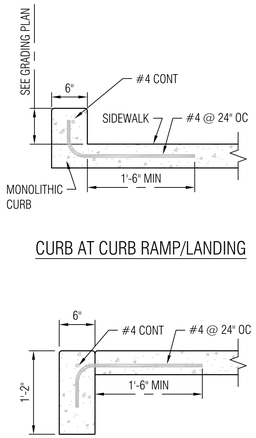
SCALE: 1" = 1'-0" | 5



NOTE: PROVIDE CONTROL JOINTS AT 10' 0.C. MAX

CONCRETE VALLEY GUTTER

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

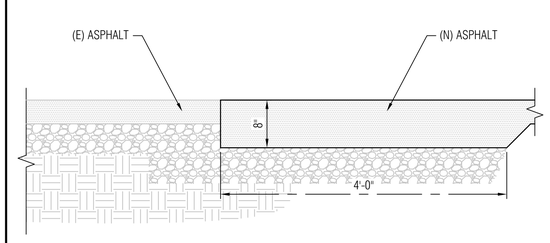


CURB AT CURB RAMP/LANDING

FLUSH CURB AT SIDEWALK

CONCRETE CURBS

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



ASHPHALT CONCRETE THICKENED EDGE

SCALE: 1" = 1'-0" | 3

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
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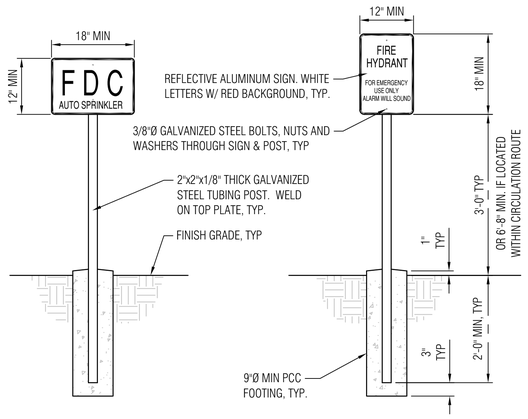
SHEET TITLE:
CIVIL SITE DETAILS

SHEET NUMBER
CS502
V3

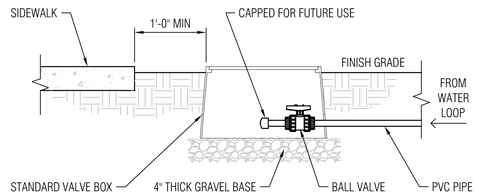
VER. 2020

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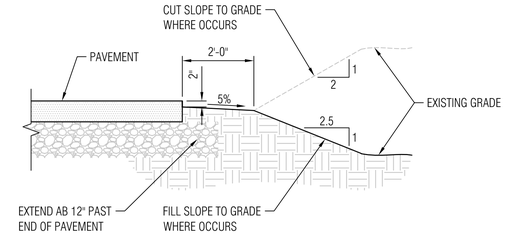
PLOT DATE: Aug 02, 2023 - 1:25PM



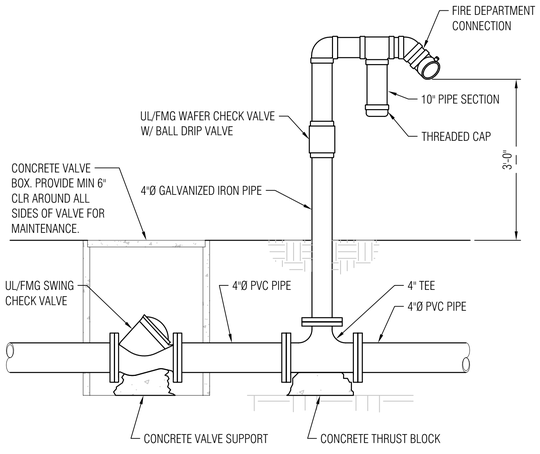
FDC/FIRE HYDRANT WARNING SIGN — SCALE: 3/4" = 1'-0" — 6



IRRIGATION WATER BOX — SCALE: 1" = 1'-0" — 4

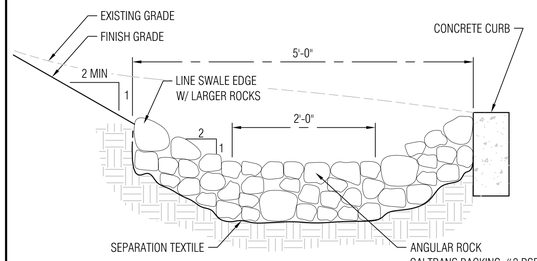


TYPICAL PAVEMENT SHOULDER — SCALE: 1/2" = 1'-0" — 1

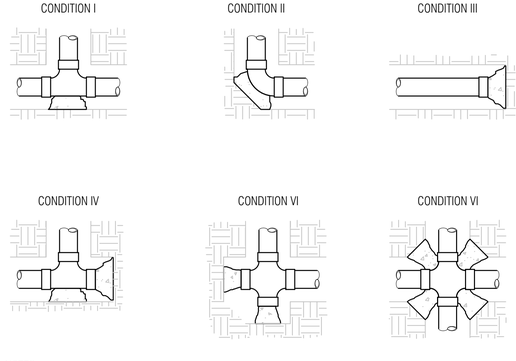


NOTE: SEE DETAIL 6 FOR FIRE DEPARTMENT CONNECTION SIGN

FIRE DEPARTMENT CONNECTION — SCALE: 3/4" = 1'-0" — 5



ROCK-LINED SWALE — SCALE: 1" = 1'-0" — 2



THRUST BLOCK BEARING AREA IN SQUARE FEET

PIPE SIZE	CONDITION							
	I	II	III	IV	V	VI	VII	VIII
<6"	2.0	2.9	2.0	2 @ 2.0	2 @ 2.0	4 @ 1.6	2.0	2 @ 1.6
6"	4.3	4.0	4.3	2 @ 4.3	2 @ 4.3	4 @ 3.3	4.3	2 @ 3.3
8"	7.4	10.6	7.4	2 @ 7.4	2 @ 7.4	4 @ 5.7	7.4	2 @ 5.7
10"	12.1	17.1	12.1	2 @ 12.1	2 @ 12.1	4 @ 9.3	12.1	2 @ 9.3
12"	17.2	24.1	17.2	2 @ 17.2	2 @ 17.2	4 @ 13.2	17.2	2 @ 13.2

NOTES:
1. THRUST BLOCK AREAS BASED ON 225 PSI AND 2,000 PSF SOIL PRESSURE WITH 2 ½ FEET OF COVER MINIMUM.
2. THRUST BLOCK BEARING FACES SHALL BE PLACED AGAINST UNDISTURBED SOIL, APPROVED COMPACTED BACKFILL, OR CLASS 100-E-100 SLURRY.
3. THRUST BLOCKS SHALL BE CLASS 560-C-3250 CONCRETE, UNLESS SPECIFIED OTHERWISE.
4. TO FACILITATE FUTURE REMOVAL OF THRUST BLOCKS AND LINE EXTENSION USE CARDBOARD SEPARATORS BETWEEN BLOCKS, IF NEEDED.
5. AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES SHALL BE CLEANED AND THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION-RETARDING MATERIAL.

CONCRETE THRUST BLOCKS — SCALE: NOT TO SCALE — 3

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: A.B. CRUZ
DRAWN BY: A.B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
CIVIL SITE DETAILS

SHEET NUMBER
CS503
V3

PROJECT PATH: C:\Users\AcrucA\AppData\Local\Temp\AcPublish_42\72\24CTC501_S03_503.dwg
PLOT DATE: Jul 24, 2023 - 3:16PM
VER 2020

GENERAL NOTES

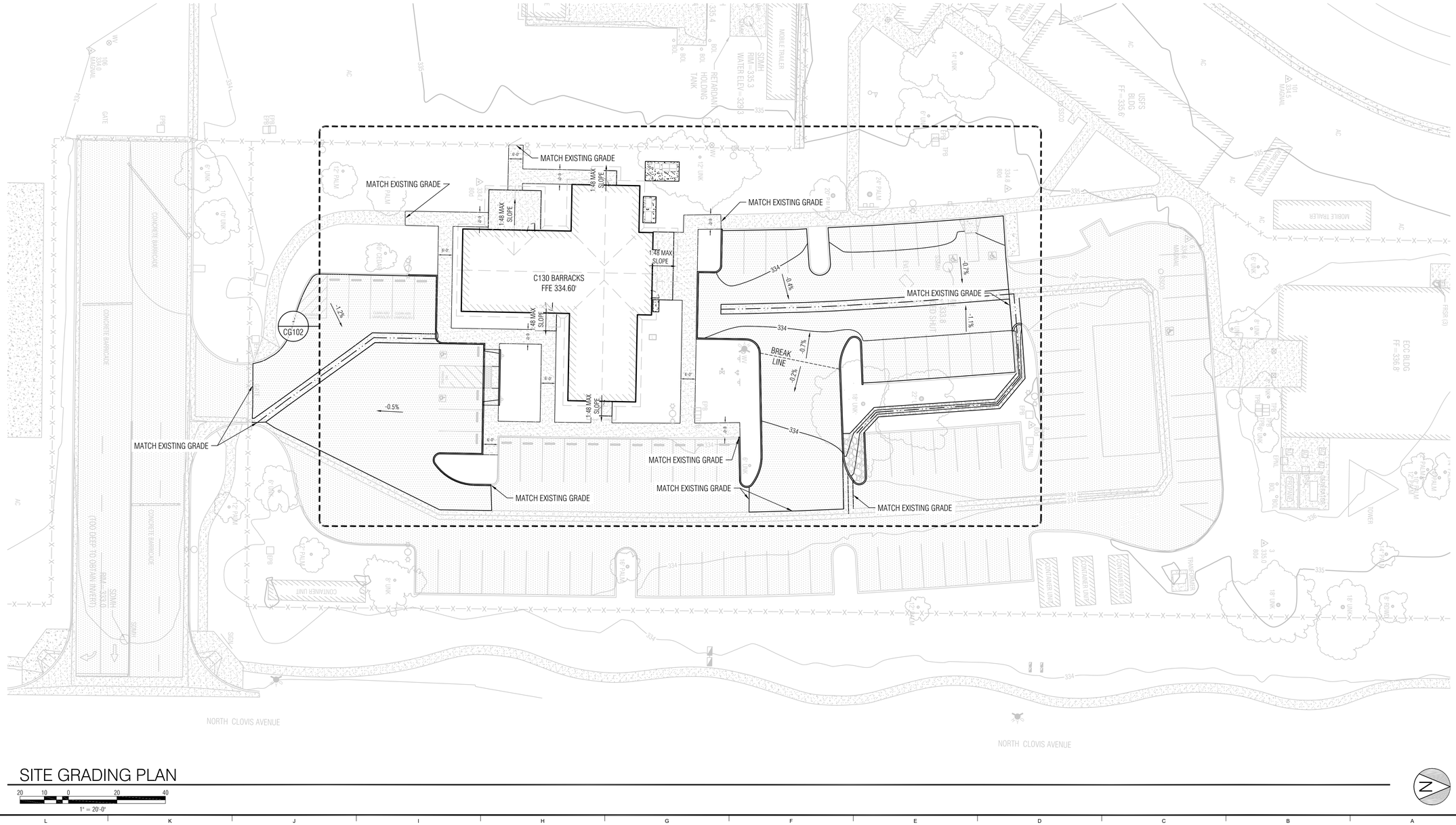
1. ALL ELEVATIONS ARE IN FEET.
2. ALL CONCRETE SIDEWALKS AND LANDINGS IMMEDIATELY ADJACENT TO BUILDING DOORS SHALL BE 0.02 FT LOWER THAN FINISH FLOOR ELEVATIONS, UNO.
3. FINISH GRADE IN LANDSCAPE AREAS IMMEDIATELY ADJACENT TO BUILDINGS SHALL BE 0.67 FT LOWER THAN SILL PLATE.
4. ALL GUTTER FLOW LINES OR FINISH GRADES ARE 0.5 FT BELOW THE TOP OF CURB ELEVATION, UNO.
5. ZERO HEIGHT CURBS ARE FLUSH WITH ADJACENT SURFACE. TOC ELEVATIONS LABELED INDICATES THE POINT AT WHICH A VARIABLE HEIGHT CURB REACHES THE STANDARD 6 INCHES.
6. LOCATION AND VERTICAL ELEVATION INFORMATION OF EXISTING UTILITIES IS NOT KNOWN OR PROVIDED. THE CONTRACTOR HAS THE TOTAL RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND TO NOTIFY UTILITY COMPANIES WHEN WORKING IN THEIR PROXIMITY. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL POTHOLE TO VERIFY EXISTING UTILITY ALIGNMENTS AND ELEVATIONS. THE CONTRACTOR SHALL PROVIDE CLEARANCES BETWEEN UTILITIES ACCEPTABLE TO APPROPRIATE UTILITY OWNER, AND ENGINEER OF RECORD. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF EXISTING UTILITIES ARE EXPECTED TO CONFLICT WITH PROPOSED CONSTRUCTION, UPON DISCOVERY, PRIOR TO CONTINUING WORK.
7. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "UNDERGROUND SERVICE ALERT" PRIOR TO CONSTRUCTION.
8. IN NEW LANDSCAPE AREAS, APPLY 1" TO 3" RIVER ROCK, WELL GRADED. IN EXISTING LANDSCAPE AREAS THAT ARE DISTURBED, APPLY MULCH TO MATCH.

EARTHWORK NOTES

1. ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE AND PROJECT SPECIFIC GEOTECHNICAL REPORT.
2. ENGINEERED FILL
   - 2.1. SOILS GENERATED ON SITE FROM CUT OPERATIONS ARE SUITABLE FOR USE AS ENGINEERED FILL PROVIDED THE GEOTECHNICAL ENGINEER APPROVES THAT THE SOILS WERE ADEQUATELY SAMPLED, TESTED, PROCESSED, STOCKPILED AND SELECTIVELY PLACED. SOILS SHALL NOT CONTAIN THE FOLLOWING:
     - 2.1.1. DELETERIOUS MATERIAL.
     - 2.1.2. ORGANIC MATERIAL.
     - 2.1.3. CEMENTATIONS OR ROCK LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.
   - 2.2. IMPORT SOIL
     - 2.2.1. SHALL BE WELL-GRADED MIXTURES OF GRAVEL, SAND, AND NON-PLASTIC SILT, WITH LITTLE TO NO CLAY, WITH A EXPANSION INDEX OF LESS THAN 50 AND PLASTICITY INDEX OF LESS THAN 15. IMPORT SHALL MEET REQUIREMENTS 2.1.1. - 2.1.3. ABOVE.
     - 2.2.2. SHALL BE SAMPLED, TESTED AND APPROVED PRIOR TO TRANSPORTATION TO SITE.
3. GRADING
   - 3.1. PRIOR TO GRADING OPERATIONS, A PRE-CONSTRUCTION MEETING SHALL BE ARRANGED BY CONTRACTOR WITH PROJECT CIVIL ENGINEER, INSPECTOR OF RECORD, REPRESENTATIVES OF GRADING CONTRACTOR, AND GEOTECHNICAL ENGINEER.
   - 3.2. MATERIAL GENERATED DURING STRIPPING IS NOT SUITABLE FOR USE WITHIN 5 FEET OF STRUCTURES OR WITHIN PAVEMENT AREAS BUT MAY BE PLACED IN LANDSCAPED OR NON-STRUCTURAL AREAS TO MEET GRADES SHOWN. EXCESS MATERIAL SHALL BE EXPORTED FROM SITE.
   - 3.3. THE TOP 6 INCHES OF FINAL VEHICULAR PAVEMENT AND CONCRETE FLATWORK SUBGRADE, WHETHER COMPLETED AT-GRADE, BY EXCAVATION, OR BY FILLING, SHOULD BE UNIFORMLY MOISTURE-CONDITIONED AT OR ABOVE OPTIMUM MOISTURE CONTENT, COMPACTED TO AT LEAST 95% RELATIVE COMPACTION AND BE STABLE.
   - 3.4. EXPOSED OVER-EXCAVATED SURFACE SHALL BE SCARIFIED AT LEAST 12 INCHES, UNIFORMLY MOISTURE-CONDITIONED AT OR ABOVE OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90 PERCENT RELATIVE COMPACTION. UNSUITABLE AREAS THAT CANNOT REACH COMPACTION CRITERIA SHALL BE OVER-EXCAVATED AND RE-COMPACTED WITH ENGINEERED FILL.
   - 3.5. ENGINEERED FILL SHALL BE COMPACTED IN HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES (LOOSE THICKNESS). EACH LIFT SHALL BE MOISTURE-CONDITIONED AT OR ABOVE OPTIMUM MOISTURE CONTENT.
4. CUT AND FILL SLOPES
   - 4.1. ALL TEMPORARY EXCAVATION SLOPES SHALL MEET CAL-OSHA STANDARDS.
   - 4.2. CONTRACTOR IS RESPONSIBLE TO PROVIDE SUFFICIENT AND SAFE EXCAVATION SUPPORT AND PROTECT NEARBY UTILITIES, STRUCTURES, AND IMPROVEMENT. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH NEIGHBORING PROPERTY OWNERS WHEN EXCAVATIONS AND EARTHWORK OPERATIONS ENCROACH UPON OR BEYOND THE PROPERTY LINE.
5. EXCAVATION
   - 5.1. EXCESS SOILS GENERATED FROM EXCAVATIONS SHALL BE EXPORTED FROM SITE.
   - 5.2. EXCAVATIONS ARE LIMITED TO THE EXTENT REQUIRED TO COMPLY WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR MAY NOT CONDUCT EXCAVATIONS SOLELY TO OBTAIN FILL MATERIAL.

LEGEND

- 335 — EXISTING CONTOURS
- 334 — PROPOSED CONTOURS
- FFE — FINISH FLOOR ELEVATION

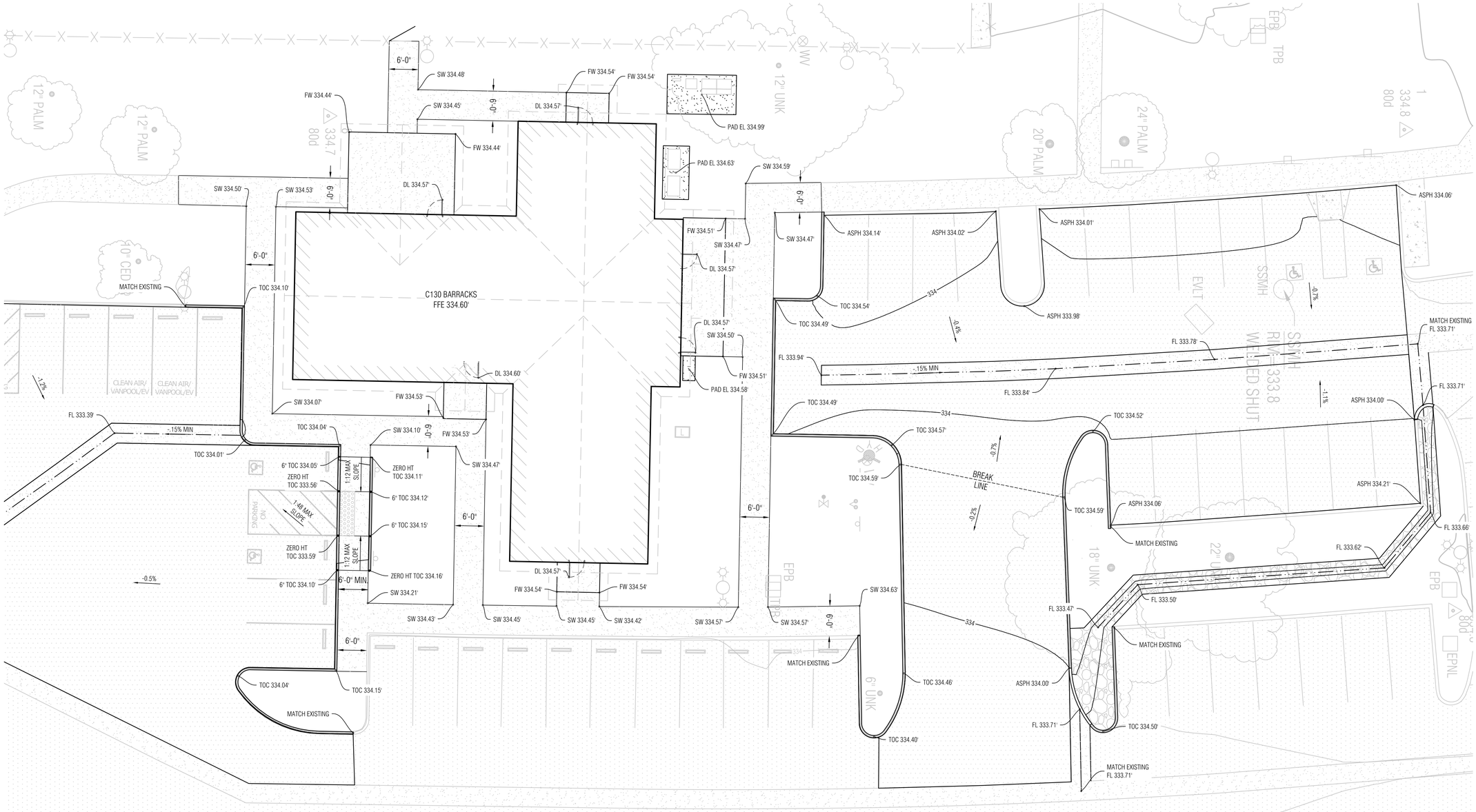

MATCH EXISTING GRADE
MATCH EXISTING GRADE
MATCH EXISTING GRADE
1.48 MAX SLOPE
1.48 MAX SLOPE
1.48 MAX SLOPE
1.48 MAX SLOPE
C130 BARRACKS
FFE 334.60'
CG102
-1.7%
-0.5%
-0.4%
-0.7%
-1.1%
-0.7%
-0.2%
BREAK LINE
MATCH EXISTING GRADE
MATCH EXISTING GRADE
MATCH EXISTING GRADE
MATCH EXISTING GRADE
MATCH EXISTING GRADE
334
335
RETARDANT HOLDING TANK
STORM RIM=335.3 WATER ELEV=329.3
MOBILE TRAILER
USFS BLDG FF=335.6'
ECC BLDG FF=336.6'
CONTAINER UNIT
CONTAINER UNIT
CONTAINER UNIT

GENERAL NOTES

1. SEE CG101 FOR GENERAL AND EARTHWORK NOTES.

LEGEND

335	EXISTING CONTOURS
334	PROPOSED CONTOURS
DL	EXTERIOR DOOR LANDING
EL	ELEVATION
FFE	FINISH FLOOR ELEVATION
FW	BUILDING FLATWORK
HT	HEIGHT
PVMT	PAVEMENT
SW	SIDEWALK
TOC	TOP OF CURB



PARTIAL GRADING PLAN

10 5 0 10 20

1" = 10'-0"

N

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

TECHNICAL SERVICES

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: A. B. CRUZ
DRAWN BY: A. B. CRUZ
REVIEWED BY: A. ECCLESTON
FILE DATE:

SHEET TITLE:
SITE GRADING PLAN

SHEET NUMBER
CG102
V3

VER 2020

PROJECT PATH: C:\Users\Acruz\AppData\Local\Temp\AcPublish_30\0723\421\CG101_102.dwg

PLOT DATE: Jul 24, 2024 - 3:25PM

UNDERGROUND FIRE WATER PIPING NOTES

1. PRIOR TO INSTALLATION, ALL PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE OFFICE OF THE STATE FIRE MARSHAL.
2. INSPECTIONS ARE REQUIRED: 1) PRIOR TO POURING THRUST BLOCKS, 2) FOR HYDROSTATIC TESTING, AND 3) FOR FLUSH. SCHEDULE ALL INSPECTIONS 72 HOURS IN ADVANCE. CALL THE LOCAL DEPUTY STATE FIRE MARSHAL FOR INSPECTION SCHEDULING.
3. INSTALLATION, INSPECTION, AND TESTING SHALL CONFORM TO THE NFPA 13, NFPA 24 WITH CALIFORNIA AMENDMENTS.
4. PRIVATE FIRE HYDRANTS SHALL BE OF AN APPROVED TYPE WITH A MINIMUM OF ONE 2 ½" AND ONE 4" OUTLET. THE 4" OUTLET SHALL FACE THE FIRE DEPARTMENT ACCESS ROAD. ALL OUTLETS SHALL BE PROVIDED WITH NATIONAL STANDARD THREADS (NST).
5. FIRE HYDRANT SUPPLY PIPING SHALL BE A MINIMUM OF 6" IN DIAMETER. THE LOWEST OPERATING NUT SHALL BE A MINIMUM OF 18" ABOVE GRADE AND THE HYDRANT FLANGE SHALL BE A MINIMUM OF 2" ABOVE GRADE.
6. FIRE HYDRANTS SHALL BE A MINIMUM OF 40 FEET FROM ALL STRUCTURES. A KEYED GATE VALVE SHALL BE PROVIDED FOR EACH HYDRANT IN AN ACCESSIBLE LOCATION WITHIN 20 FEET OF HYDRANTS. VALVES SHALL NOT BE LOCATED IN PARKING STALLS.
7. ALL PIPE SHALL BE APPROVED FOR USE IN FIRE SERVICE SYSTEMS, COMPLYING WITH NFPA 24.
8. ALL BURIED FITTINGS SHALL BE OF AN APPROVED TYPE WITH JOINTS AND PRESSURE CLASS RATINGS COMPATIBLE WITH THE PIPE USED.
9. ALL FERROUS PIPE AND FITTINGS SHALL BE PROTECTED WITH A LOOSE 8-MIL POLYETHYLENE TUBE. THE ENDS OF THE TUBE AND ANY SPLICES MADE FOR "T"S OR OTHER PIPING COMPONENTS SHALL BE SEALED WITH 2" TAPE, APPROVED FOR UNDERGROUND USE. ALL BOLTED JOINTS SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER ASSEMBLY AND PRIOR TO POLY-TUBE INSTALLATION.
10. BACKFILL SHALL CONSIST OF CLEAN FILL SAND OR PEA GRAVEL TO A MINIMUM 6" BELOW AND TO A MINIMUM 12" ABOVE THE PIPE (TOTAL 18") AND SHALL CONTAIN NO ASHES, CINDERS, REFUSE, ORGANIC MATTER OR CORROSIVE MATERIALS.
11. ALL BOLTS USED FOR UNDERGROUND CONNECTIONS SHALL BE APPROVED MATERIALS AND TIGHTNESS OF BOLTED JOINTS SHALL BE VERIFIED BY BOLT TORQUE OR BY THE METHOD DESCRIBED IN THE LISTING INFORMATION OR THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
12. A MINIMUM OF 30" OF COVER, FROM FINISH GRADE TO THE TOP OF THE PIPE, SHALL BE PROVIDED. WHEN SURFACE LOADS ARE EXPECTED, A MINIMUM OF 36" COVER SHALL BE PROVIDED.
13. THRUST BLOCKS, OR OTHER APPROVED METHOD OF THRUST RESTRAINT, SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION. (ALL TEES, PLUGS, CAMPAS, BENDS, REDUCERS, VALVES, AND HYDRANT BRANCHES SHALL BE RESTRAINED AGAINST MOVEMENT IN ACCORDANCE WITH THE 2019 EDITION OF NFPA 24.)
14. THE TRENCH SHALL BE EXCAVATED FOR THRUST BLOCKS AND INSPECTED *PRIOR* TO POUR. ALL CORROSION PROTECTION SHALL BE IN PLACE. THRUST BLOCKS SHALL BE PLACED BETWEEN UNDISTURBED EARTH AND THE FITTING TO BE RESTRAINED. THRUST BLOCK SHALL BE CAPABLE OF RESISTING THE CALCULATED THRUST FORCE. THRUST BLOCKS SHALL BE PLACED SO THAT THE JOINTS ARE ACCESSIBLE FOR REPAIR.
15. A HYDROSTATIC TEST (200 PSI FOR TWO HOURS OR 50 PSI OVER MAXIMUM STATIC PRESSURE, WHICHEVER IS GREATER) SHALL BE WITNESSED BY A DEPUTY STATE FIRE MARSHAL. THE TRENCH SHALL BE BACK-FILLED BETWEEN THE JOINTS TO PREVENT MOVEMENT OF THE PIPE.
16. THE SYSTEM SHALL BE THOROUGHLY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD PIPING. FLOW SHALL BE THROUGH A MINIMUM OF A 4" HOSE OR PIPE UNLESS OTHERWISE APPROVED BY THE DEPUTY STATE FIRE MARSHAL. A DEPUTY STATE FIRE MARSHAL SHALL WITNESS THE FLUSH.
17. PRIVATE HYDRANTS, SPRINKLER CONTROL VALVES, DETECTOR CHECK ASSEMBLIES, POST INDICATING VALVES AND FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED OSHA RED.
18. ALL CONTROL VALVES SHALL BE LOCKED IN THE OPEN POSITION. VALVES SHALL BE MONITORED IN ACCORDANCE WITH CBC/CFC AND NFPA WITH CALIFORNIA AMENDMENTS.
19. HYDRANTS SHALL BE PROTECTED FROM MECHANICAL DAMAGE. THE MEANS OF PROTECTION SHALL NOT INTERFERE WITH CONNECTION TO OR OPERATION OF HYDRANTS.
20. SUBJECT TO ADDITIONAL REQUIREMENTS NOT REFLECTED IN THIS LIST, PER THE CURRENT CBC, CFC, AND NFPA 24 WITH CALIFORNIA AMENDMENTS.

SHEET KEYNOTES

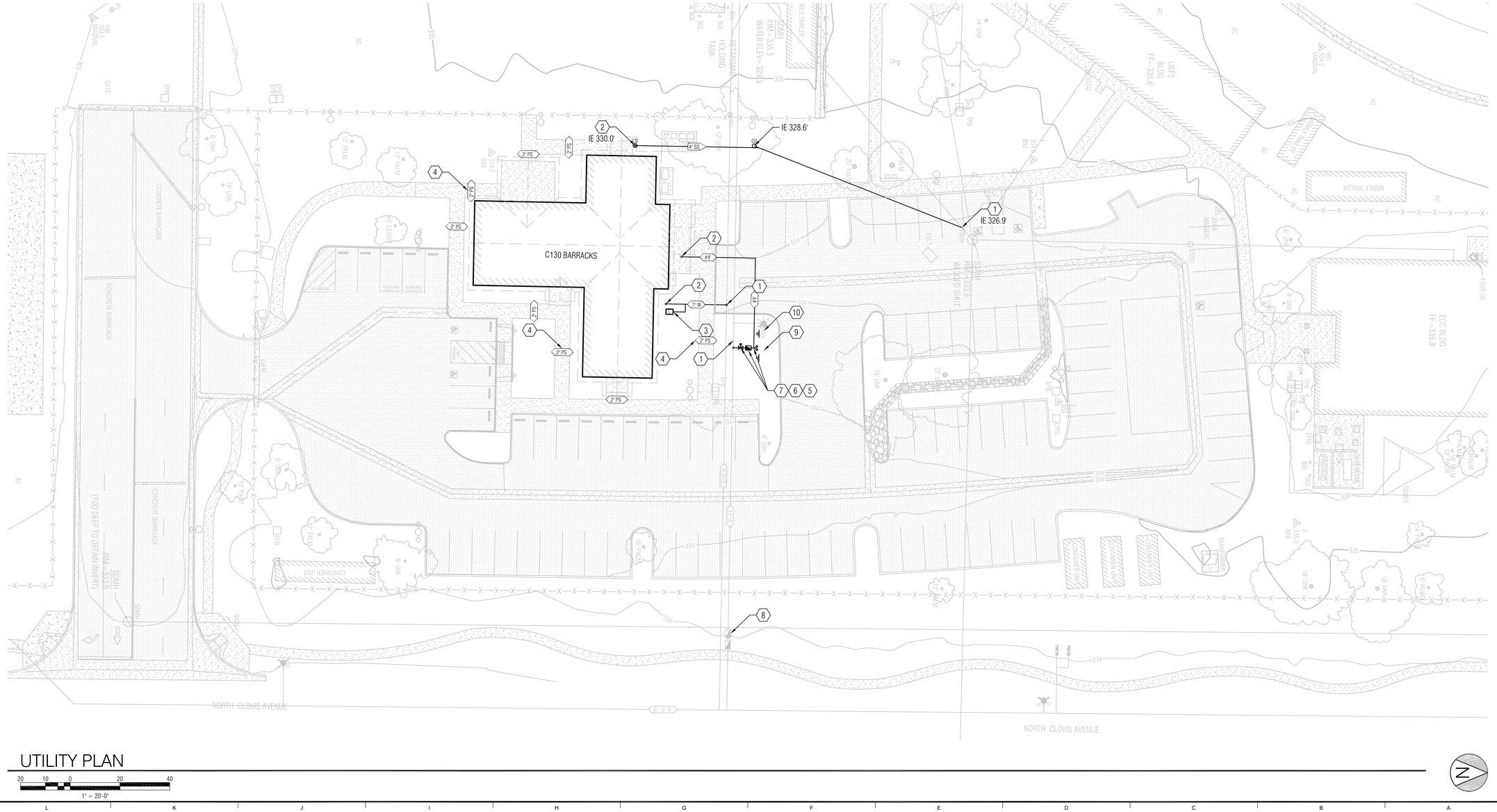
1. POINT OF CONNECTION TO EXISTING UTILITY LINE (FIELD VERIFY EXACT CONNECTION LOCATION)
2. POINT OF CONNECTION TO BUILDING
3. IRRIGATION WATER BOX — SEE 4/CS503
4. PVC PIPE SLEEVE WITH 12" COVER, TYP
5. FIRE DEPARTMENT CONNECTION — SEE 5/CS503
6. POST INDICATOR VALVE
7. CHECK VALVE
8. EXISTING FIRE WATER BACKFLOW PREVENTER
9. FIRE DEPARTMENT CONNECTION WARNING SIGN — SEE 6/CS503
10. FIRE HYDRANT WARNING SIGN — SEE 6/CS503

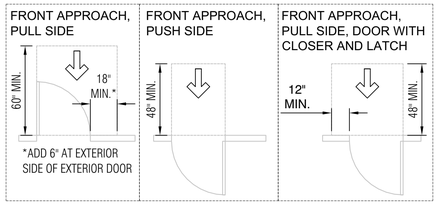
GENERAL NOTES

1. SEE 3/CS503 FOR CONCRETE THRUST BLOCK DETAILS AND REQUIREMENTS.
2. SEE STRUCTURAL SHEETS FOR UTILITY TRENCHING ADJACENT TO AND CROSSING FOOTINGS.
3. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "UNDERGROUND SERVICE ALERT" PRIOR TO CONSTRUCTION.

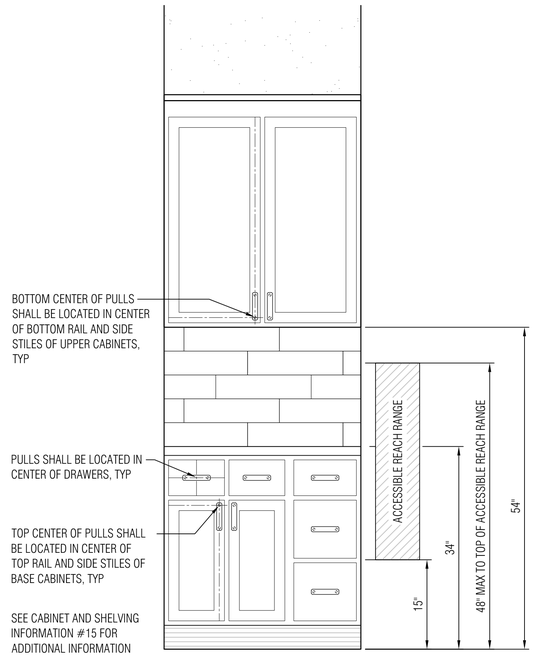
LEGEND

CO	SANITARY SEWER CLEAN OUT
	EXISTING FIRE HYDRANT
(E)	EXISTING
F	FIRE PROTECTION WATER PIPE
IE	INVERT ELEVATION
PS	PIPE SLEEVE
SS	SANITARY SEWER PIPE
W	DOMESTIC WATER PIPE


IE 330.0'
IE 328.6'
IE 326.9'
C130 BARRACKS
NORTH CLOVIS AVENUE
(E) 16' W
SOUTH RIM=333.3 (100 DEEP TO OBTAIN INVERT)
CONTAINER UNIT
CONTAINER BARRICADE
REFRIGERATED CONTAINER
REFRIGERATED CONTAINER
REFRIGERATED CONTAINER
MOBILE TRAILER
USFS BLDG FF=335.6'
ECC BLDG FF=336.8'
WATER HOLDING TANK
SOUTH RIM=335.3 WATER ELEV=329.3
GATE
CHAINLINK BARRICADE
CHAINLINK BARRICADE
CHAINLINK BARRICAD



ACCESSIBLE CLEARANCES AT DOORS — SCALE: NOT TO SCALE — 2



PULLS FOR DOORS AND DRAWERS — SCALE: 1" = 1'-0" — 1

CABINET AND SHELVING INFORMATION

CABINET CONSTRUCTION MATERIALS

1. FACE FRAMES, DOORS & DRAWER FRONTS SHALL BE 3/4" SOLID CHERRY HARDWOOD.
2. ENDS, BACKS, TOPS AND BOTTOMS SHALL BE 1/2" PLYWOOD.
3. TOE KICKS SHALL BE 1/4" MEDIUM OAK
4. CABINET SHELVES SHALL BE 3/4" PLYWOOD.
5. HANGING RAILS SHALL BE 3/4" PLYWOOD.
6. DRAWER BOXES SHALL BE 1/2" SOLID BIRCH HARDWOOD WITH DOVE TAIL JOINTED SIDES AND 1/2" SOLID BIRCH HARDWOOD FOR CAPTIVE BOTTOMS.
7. SUB TOPS SHALL BE 5/8" BIRCH PLYWOOD. COMPLETELY LEVEL ON TOP OF CABINET FRAME IN ORDER TO ACCEPT SOLID SURFACE COUNTERTOPS, UNLESS OTHERWISE NOTED. STAINLESS STEEL COUNTERTOPS HAVE DIFFERENT SUB TOPS, SEE DETAILS.
12. ALL WOOD USED FOR CONSTRUCTION OF CABINETS SHALL BE UNFINISHED.
13. DOOR HINGES SHALL BE CONCEALED, SOFT CLOSING AND SHALL BE FINISHED IN ONE OF THE FOLLOWING FINISHES: POLISHED NICKEL, SATIN NICKEL OR STAINLESS STEEL.
14. DRAWER CLOSURES SHALL BE HEAVY DUTY FULL EXTENSION CONCEALED SLIDES WITH SOFT CLOSER AND SHALL BE FINISHED IN ONE OF THE FOLLOWING FINISHES: POLISHED NICKEL, SATIN NICKEL OR STAINLESS STEEL.
15. DOOR AND DRAWER PULLS SHALL BE ACCESSIBILITY COMPLIANT PULLS, CENTER TO CENTER: 3 3/4", OVERALL LENGTH: 4 5/8", WIDTH: 7/8" AND PROJECTION: 13/16" WITH BRUSHED OIL RUBBED BRONZE FINISH.
16. DOORS, DRAWER FRONTS, TOE KICKS AND EXPOSED SURFACES SHALL BE PAINTED PER COLOR CHOICE AS SELECTED. SEE ARCHITECTURAL SHEETS FOR COLOR SELECTIONS.
17. INTERIOR SURFACES AND SHELVES SHALL BE PAINTED WHITE GLOSS ACRYLIC.
18. PAINTS SHALL BE SHERWIN WILLIAMS SOLO 100% ACRYLIC, GLOSS.
19. FINISH SHALL BE CENTURION WATER BASED CONVERSION FINISH.

SHELVING CONSTRUCTION MATERIALS

1. SHELVING SHALL BE 3/4" PLYWOOD.
2. EXPOSED MOUNTED / HUNG SHELVES SHALL BE PAINTED GLOSS ENAMEL TO MATCH ADJACENT CABINETRY UNLESS OTHERWISE NOTED, WHERE NO ADJACENT CABINETRY ARE PRESENT AND PAINT COLOR HAS NOT BEEN SELECTED, THEY SHALL BE PAINTED WHITE.
3. PAINTS SHALL BE SHERWIN WILLIAMS SOLO 100% ACRYLIC, GLOSS.
4. FINISH SHALL BE CENTURION WATER BASED CONVERSION FINISH.
5. SEE ARCHITECTURAL SHEETS / DETAILS FOR REQUIRED BRACKETS AND/OR FASTENING METHODS.

ARCHITECTURAL SYMBOLS

DOOR IDENTIFIER: (##) — DOOR NUMBER
WINDOW IDENTIFIER: (#) — WINDOW NUMBER
LOUVER IDENTIFIER: (L#) — LOUVER NUMBER
SIGNAGE IDENTIFIER: (X) — SIGNAGE NUMBER OR LETTER

CONSTRUCTION DETAIL CALLOUTS

1. SEE DETAIL #7 / A501 FOR EQUIPMENT CURB AT ROOF.
2. SEE DETAIL #9 /A501 FOR OPENINGS THROUGH EXTERIOR WALL FOR MECHANICAL, PLUMBING OR ELECTRICAL COMPONENTS.
3. SEE DETAIL #1 / A502 FOR SLOPED CEILING AT SHOWER.
4. SEE DETAIL #9 / A502 FOR FIRE EXTINGUISHER CABINET IN 1-HOUR RATED WALL ASSEMBLY.
5. SEE DETAIL #4 / A503 FOR INTERIOR WALL CONCRETE CURB.
6. SEE DETAIL #5 / A503 FOR WOOD TRIM AT SIDING.
7. SEE DETAIL #10 / A503 FOR OUTSIDE CORNER AND INSIDE CORNER TRIM FOR SIDING.
8. SEE DETAIL #10 / A504 FOR HEAD AND JAMB OF INTERIOR WALL CASE OPENING.
9. SEE DETAIL #15 / A504 FOR INTERIOR WALL CORNER.

ABBREVIATIONS

&	AND
@	AT
Ø	DIAMETER
℄	CENTER LINE
ℙ	PLATE / PROPERTY LINE
'	FOOT / FEET
"	INCH / INCHES
#	NUMBER
=	EQUAL
A	AIR
A/C	AIR CONDITIONING
ACP	ASPHALT CONCRETE PAVING
ADJ	ADJACENT / ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
AV	ATTIC VENT
AVG	AVERAGE
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
B/M	BENCH MARK
BOT	BOTTOM
C	CONDUIT
CAB	CABINET
CB	CATCH BASIN / CIRCUIT BREAKER
CBC	CALIFORNIA BUILDING CODE
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CIR	CIRCLE
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDENSER
CONT	CONTINUATION / CONTINUOUS
CMP	CORRUGATED METAL PIPE
CONT	CONTINUOUS
CORR	CORRIDOR
COTG	CLEAN OUT TO GRADE
COTF	CLEAN OUT TO FLOOR
CT	CERAMIC TILE
CTR	CENTER
CU FT	CUBIC FEET
CY	CUBIC YARD
CW	COLD WATER
(D)	DEMOLISH
D	DRYER / DAMPER
DBL	DOUBLE
DET	DETAIL
DF	DOUGLAS FIR / DRINKING FOUNTAIN
DI	DRAIN INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISC	DISCONNECT
DISP	DISPENSER / DISPOSAL
DIST	DISTANCE
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DW	DISH WASHER
DWG	DRAWING
DWR	DRAWER
(E)	EXISTING
E	EAST
EA	EACH
EA W	EACH WAY
EDF	ELECTRICAL DRINKING FOUNTAIN
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EN	EDGE NAILING
EOH	ELECTRICAL OVERHEAD
EOP	EDGE OF PAVING
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ET CETERA
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EUG	ELECTRICAL UNDERGROUND
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DRAIN / FIRE DAMPER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FG	FINISH GRADE / FLOOR GRILLE
FH	FIRE HYDRANT
FIN	FINISH
FIXT	FIXTURE
FL	FLOW LINE / FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FN	FIELD NAILING
FND	FOUNDATION
FO	FACE OF / FINISH OPENING
FOB	FACE OF BLOCK
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PANEL
FRZ	FREEZE
FS	FLOOR SINK
FT	FOOT / FEET
FTG	FOOTING
FURN	FURNACE / FURNITURE
G	GAS
G&O	GAS & OIL
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GI	GALVANIZED IRON
GND	GROUND
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GSM	GALVANIZED SHEET METAL
GSP	GALVANIZED SHEET PIPE
GYP	GYPSUM
GYP BD	GYPSUM BOARD
H2O	WATER
HB	HOSE BIB
HC	HOLLOW CORE
HD	HOLD DOWN
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR / HEAT WATER RETURN
HSE	HOUSE
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HW	HOT WATER
HW	HOT DOMESTIC WATER
I	CURRENT
ID	INSIDE DIAMETER / INSIDE DIMENSION
IN	INCH
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JB	JUNCTION BOX
JAN	JANITOR
JT	JOINT
JST	JOIST
KIT	KITCHEN
KM	KILOMETER
KVA	KILO VOLT AMPERE
L	LENGTH
LAV	LAVATORY / LAVATORY SINK
LAM	LAMINATE
LB	POUND
LF	LINEAR FEET
LPG	LIQUID PETROLEUM GAS
LSD	LIQUID SOAP DISPENSER
LTG	LIGHTING
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFG	MANUFACTURER
MICRO	MICROWAVE
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
MUL	MULLION
(N)	NEW
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
O/	OVER
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
O/E	OR EQUAL
OFF	OFFICE
OH	OVERHEAD
OPP	OPPOSITE
P	POLE / POWER
PL	PLATE / PROPERTY LINE
P LAM	PLASTIC LAMINATE
PLAS	PLASTER
PLN	PLAN
PLWD	PLYWOOD
PNL	PANEL
PP	POWER POLE
PPP	PERFORATED PLASTIC PIPE
PS	PIPE SLEEVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSP	PERFORATED STEEL PIPE
PT	PAINT / STAIN
PT	POINT / PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTDF	PRESSURE TREATED DOUGLAS FIR
PTN	PARTITION
PVMT	PAVEMENT
PLYWD	PLYWOOD
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
(R)	RELOCATE
R	RADIUS / RISER / RESISTANCE
RA	RETURN AIR
RCP	REFLECTED CEILING PLAN
RECEPT	RECEPTACLE
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCED
REQ	REQUIRED
RET	RETURN
REV	REVISION
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RT	RIGHT
RPM	REVOLUTIONS PER MINUTE
RV	RELIEF VALVE
RW	RETAINING WALL
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH / SANITARY
SA	SUPPLY AIR
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULED
SCR	SCREEN
SD	SOAP DISPENSER / STORM DRAIN
SECT	SECTION
SF	SQUARE FOOT / SQUARE FEET
SHT	SHEET
SHTG	SHEATHING
SHWR	SHOWER
SI	SQUARE INCH
SIM	SIMILAR
SK	SINK
SL	SLOPE
SM	SHEET METAL
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SNTV	SANITARY NAPKIN TAMPON VENDOR
SP	STRUCTURAL PLYWOOD
SPEC	SPECIFICATIONS
SPKR	SPEAKER
SQ	SQUARE
SQ FT	SQUARE FEET
SS	SANITARY SEWER / SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPENDED
SW	SANITARY WASTE
SWBD	SWITCHBOARD
SYM	SYMBOL / SYMMETRICAL
SYMM	SYMMETRICAL
SYS	SYSTEM
T	TREAD / TREE
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TB	TOWEL BAR
TEL	TELEPHONE
TEMP	TEMPERATURE / TEMPERED
TG	TEMPERED GLASS
TJ	TOOLED JOINT
TNK	TANK
TOF	TOP OF FOOTING
TOC	TOP OF CURB
TOG	TOP OF GRATE / TOP OF GRADE
TOH	TELEPHONE OVERHEAD
TOP	TOP OF PAVEMENT
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TS	TUBE STEEL
TSCD	TOILET SEAT COVER DISPENSER
TTB	TELECOMMUNICATION TERMINATION BOARD
TTC	TELEPHONE TERMINAL CABINET
TUG	TELEPHONE UNDERGROUND
TV	TELEVISION
TYP	TYPICAL
UGND	UNDERGROUND
UH	UNIT HEATER
UNFIN	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	VOLT
VAL	VALVE
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VENT	VENTILATOR
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
VR	VAPOR RETARDED / VENT RISER
VTR	VENT THROUGH ROOF
W	WEST / WASHER / WATER / WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WH	WATER HEATER / WHARF HYDRANT
WIND	WINDOW
WP	WATERPROOF
WR	WATER RESISTANT
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

DSA Approval

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APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

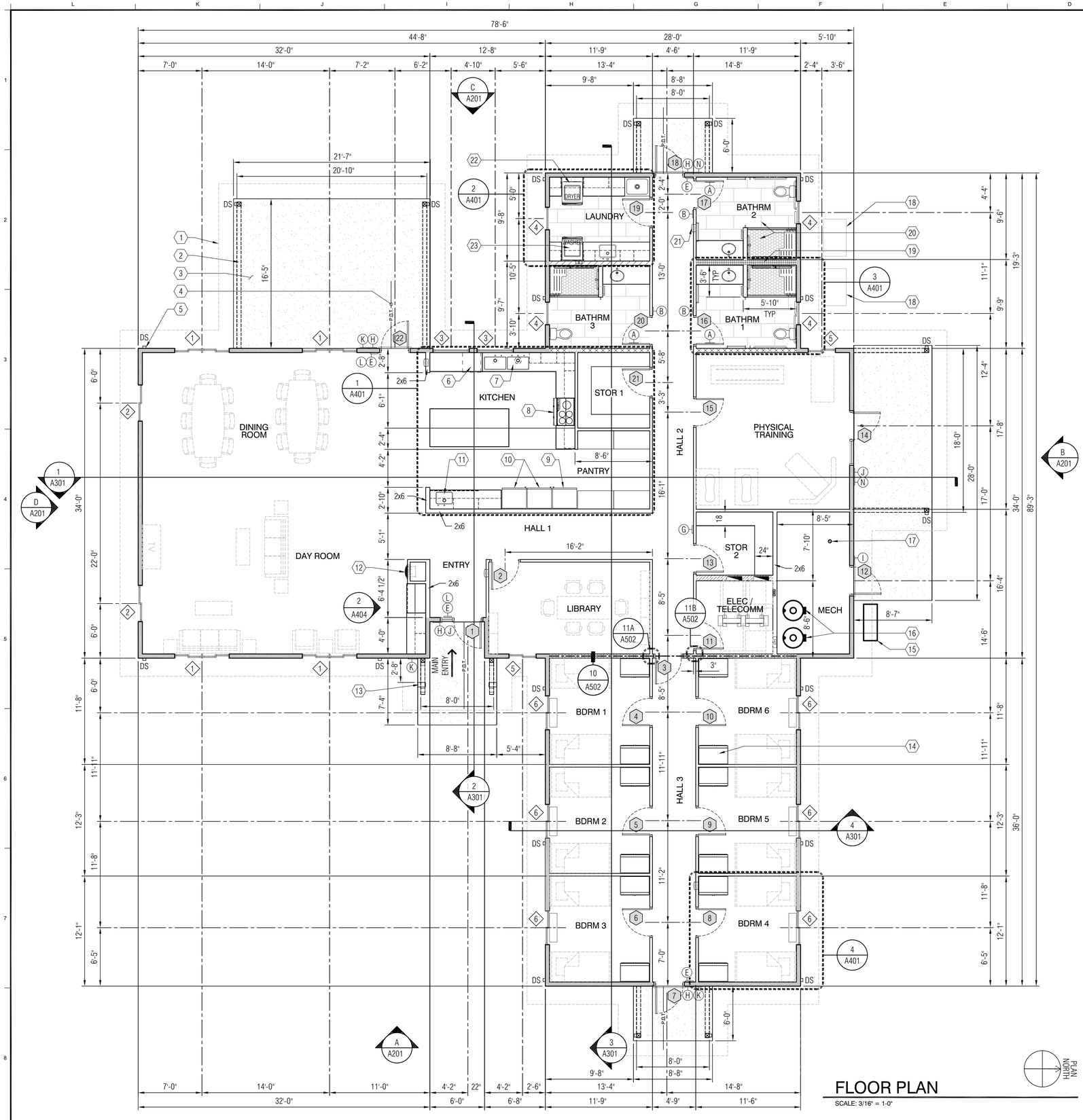
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

SHEET TITLE:
ARCHITECTURAL GENERAL SHEET ABBREVIATIONS AND NOTES

SHEET NUMBER
A001
V3

PROJECT PATH: C:\Users\mheintz\appdata\local\temp\AcPublish_12028\2421A001.dwg
PLOT DATE: Aug 14, 2025 - 10:29AM
VER. 2020



FLOOR PLAN

SCALE: 3/16" = 1-0"

GENERAL SHEET NOTES

1. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF OPENING TYP. (U.O.N.)
2. DIMENSIONS INDICATED AS "MIN. CLEAR" ARE TO FACE OF FINISH.
3. DIMENSION FROM DOOR OPENING TO ADJACENT PERPENDICULAR WALL SHALL BE 4", TYP. (U.O.N.)
4. ALL PORCHES OR STOOPS CONNECT TO WALKWAYS AS SHOWN ON CIVIL SITE PLAN.
5. INSULATION: CEILING SHALL HAVE R-49 THERMAL BATT. VAULTED ROOF ASSEMBLY SHALL HAVE R-37 THERMAL BATT. INSULATION AT ALL CONDITIONED SPACES. EXTERIOR WALLS SHALL HAVE R-21 BATT INSULATION AND EXTERIOR APPLIED RIGID INSULATION AT PERIMETER WALLS.
6. WALL FRAMING SHALL INCLUDE BLOCKING AT LOCATIONS TO RECEIVE CABINETRY AND EQUIPMENT INCLUDING, BUT NOT LIMITED TO, GRAB BARS, LOCKERS, WALL MOUNTED DOOR STOPS, SHELVING, AND DISPENSERS.
7. SEE ENLARGED PLANS MORE DETAILS.
8. SEE INTERIOR ELEVATIONS FOR MORE DETAILS.
9. SEE SHEET A111 FOR ACCESSIBILITY CLEARANCE & EXITING PLAN AND ROOM OCCUPANCY INFORMATION.
10. INSTALL 1 LB SOUND SAFE ACOUSTICAL BARRIER OVER STUDS ON INTERIOR SIDES OF BEDROOM WALLS AND HALL3 WALLS BOTH SIDES.

WALL LEGEND

EXTERIOR WALLS

2x6 WOOD STUDS @16" O.C. WITH R-21 BATT INSULATION. 1 1/2" RIGID INSULATION ON EXTERIOR, SEE STRUCTURAL FOR SHEAR SHEATHING, INTERIOR 5/8" GYP. BD. (U.O.N.)

INTERIOR WALLS

2x6 1-HOUR, SHEAR/FIRE WALL, GA FILE NO. WP 3661. SHEAR PANEL ADDED PER GENERAL EXPLANATORY NOTE: 22. ACCESSORY PENETRATIONS SHALL BE PER DETAILS ON A502

EXTENT OF OCCUPANCY SEPARATION WALL

2x6 SHEAR WALL/SOUND WALL, WOOD STUDS @ 16" OC, R-21 BATT INSULATION, SHEATHING PER STRUCTURAL, 5/8" GYP. BD. EACH SIDE

2 - 2x4 WITH 1/2" GAP WALL, WOOD STUDS AT 16" OC, R=21 BATT INSULATION, 5/8" GYP. BD. EACH SIDE

2x6 WALL, WOOD STUDS @ 16" OC, R-21 BATT INSULATION, 5/8" GYP. BD EACH SIDE (U.O.N.)

2x8 WALL, WOOD STUDS AT 16" OC, 5/8" GYP. BD. EACH SIDE (U.O.N.)

2x4 WALL, WOOD STUDS @16" OC, 5/8" GYPSUM BOARD EACH SIDE (U.O.N.)

GA FILE NO. WP 3661	GENERIC	1 HOUR FIRE

GYPSUM WALLBOARD, WOOD STUDS, MINERAL FIBER INSULATION

One layer 5/8" type X gypsum wallboard applied at right angles to each side of 2 x 6 wood studs 16" o.c. with 2¼" Type S or W drywall screws 12" o.c. 5½" mineral fiber insulation, nominal 2.5 pcf, friction fit in stud space.

Vertical joints staggered 16" o.c., horizontal joints staggered 24" o.c., on opposite sides.

Tested at 5,156 lbs per stud or 100 percent of design load. **(LOAD-BEARING)**

Thickness: 6¾"
Approx. Weight: 8.5 psf
Fire Test: ITS J99-22441.1, 10-99

1 HOUR FIRE WALL ASSEMBLY — SCALE: NOT TO SCALE — 1

GA FIRE RESISTANCE DESIGN MANUAL, EXPLANATORY NOTE #22

WHEN NOT SPECIFIED AS A COMPONENT OF A FIRE RESISTANCE RATED WALL OR PARTITION SYSTEM, WOOD STRUCTURAL PANELS SHALL BE PERMITTED TO BE ADDED TO ONE OR BOTH SIDES. SUCH PANELS SHALL BE PERMITTED TO BE APPLIED EITHER AS A BASE LAYER DIRECTLY TO THE FRAMING (UNDER THE GYPSUM BOARD), AS A FACE LAYER (OVER THE FACE LAYER OF GYPSUM BOARD), OR BETWEEN LAYERS OF GYPSUM BOARD IN MULTI-LAYER SYSTEMS. WHEN SUCH PANELS ARE APPLIED UNDER THE GYPSUM BOARD OR BETWEEN LAYERS OF GYPSUM BOARD THE LENGTH OF THE FASTENERS SPECIFIED FOR THE ATTACHMENT OF THE GYPSUM BOARD APPLIED OVER THE WOOD STRUCTURAL PANELS SHALL BE INCREASED BY NOT LESS THAN THE THICKNESS OF THE WOOD STRUCTURAL PANELS. FASTENER SPACING FOR THE GYPSUM BOARD AND THE NUMBER OF LAYERS OF GYPSUM BOARD SHALL BE AS SPECIFIED IN THE SYSTEM DESCRIPTION.

SHEET KEYNOTES

1. ROOF, TYP, SEE SHEET A131
2. BEAM, TYP, SEE STRUCTURAL SHEETS
3. FLATWORK, SEE GENERAL NOTE #4, TYP
4. PATH OF TRAVEL (P.O.T.), TYP
5. DOWNSPOUTS ARE 6" FROM CORNERS, U.O.N., TYP
6. DISHWASHER
7. DOUBLE SINKS WITH DISPOSAL, SEE #3 / A505
8. RANGE WITH VENT HOOD
9. FREEZER
10. REFRIGERATOR
11. ACCESSIBLE SINK, SEE #2 / A505
12. WATER BOTTLE FILLING STATION
13. CURB, 6" W x 6" H x 10" L, EACH SIDE OF MAIN ENTRANCE PORCH, SEE DETAIL #4 / A504
14. LOCKER TYP - SEE SHEET A405
15. MECHANICAL UNIT, SEE MECHANICAL SHEETS
16. WATER HEATER, SEE SHEET P102
17. FIRE RISER
18. MECHANICAL UNIT, SEE MECHANICAL SHEETS
19. WALL SHALL BE 2 - 2x4 WITH 1/2" GAP
20. CERAMIC TILE PATTERN IS ONLY AN INDICATION OF WHERE TILE IS TO BE SET, NOT PATTERN STYLE.
21. RECESSED FIRE EXTINGUISHER CABINET, TYP SEE DETAIL #9 / A502
22. DRYER
23. WASHER

LEGEND

FE — FIRE EXTINGUISHER CABINET, SEMI-RECESSED: COMMERCIAL GRADE 2A:10B:C MINIMUM. COORDINATE FINAL LOCATION WITH INTERIOR ELEVATIONS

DS — DOWNSPOUT, SEE CIVIL FOR TERMINATION CONFIGURATION

X — SIGN, SEE SHEET A500 FOR DOOR SIGNAGE TYPES

— DOOR TAG, SEE SHEET A601

— WINDOW TAG, SEE SHEET A602

DSA Approval

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APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

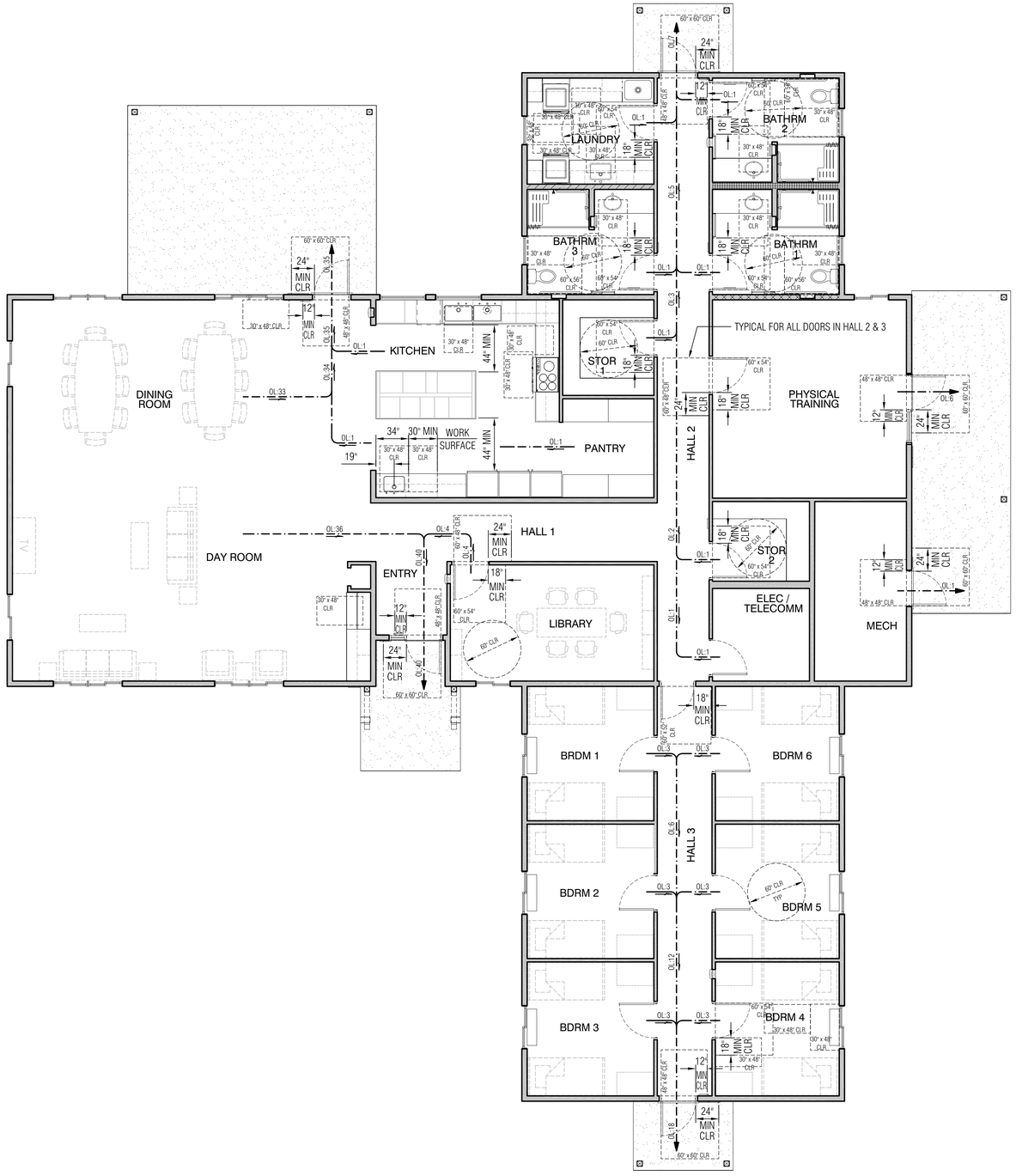
REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -
SHEET TITLE: FLOOR PLAN

SHEET NUMBER
A101
V3

PROJECT PATH: C:\Users\mheintz\appdata\local\temp\AcPublish_8052\ch1A101.dwg
PLOT DATE: Aug 24, 2023 - 5:57AM
VER 2020



ACCESSIBILITY & EXITING PLAN

SCALE: 3/16" = 1-0"

PLAN NORTH

GENERAL NOTES

1. CLEAR FLOOR AREA REQUIRED FOR SIGNAGE / ROOM IDENTIFICATION SIGNS ARE NOT SHOWN FOR CLARITY. PROVIDE CLEAR FLOOR AREA AT ALL SIGNS PER DETAIL #3 / A500.
2. OBJECTS WITH LEADING EDGE MORE THAN 27 INCHES AND NOT MORE THAN 80 INCHES ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE 4 INCHES MAXIMUM HORIZONTALLY INTO THE CIRCULATION SPACE.
3. ALL EXTERIOR EXITING DOORWAYS ARE 36" WIDE. BASED ON THE MEANS OF EGRESS CAPACITY FACTOR 0F 0.20 INCHES PER OCCUPANT, THEN A 36" WIDE EGRESS IS SUFFICIENT TO SERVE THE OCCUPANT LOADS PASSING THROUGH THEM. ALL EXITING DOORWAYS IN THIS PROJECT ARE WELL BEYOND THIS THRESHOLD.

ROOM OCCUPANCY INFORMATION

ROOM NAME	OCC. CLASS	SQ. FT.	O.L. FACTOR	O.L.
DAY ROOM	A-3	534.58	1/15	36
DINING ROOM	A-3	488.43	1/15	33
KITCHEN & PANTRY	A-3	349.87	1/200	2
STORAGE 1	B	65.64	1/300	1
BATHROOM 3	B	98.77	1/50	2
LAUNDRY	B	101.29	1/50	3
BATHROOM 2	B	97.85	1/50	2
BATHROOM 1	B	98.77	1/50	2
PHYSICAL TRAINING	B	289.67	1/50	6
STORAGE 2	B	58.22	1/300	1
MECHANICAL	B	126.61	1/300	1
ELEC / TELECOMM	B	70.49	1/100	1
BEDROOM 6	R2	125.42	1/50	3
BEDROOM 5	R2	125.42	1/50	3
BEDROOM 4	R2	124.97	1/50	3
BEDROOM 3	R2	127.87	1/50	3
BEDROOM 2	R2	128.33	1/50	3
BEDROOM 1	R2	128.33	1/50	3
LIBRARY	B	178.14	1/50	4
A-3 / B / R-2 WITH SPRINKLER BLDG IS ALLOWED 250 FEET FOR EXIT ACCESS TRAVEL DISTANCE. THIS BUILDING MEETS THESE REQUIREMENTS.			TOTAL O.L.	112

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C130 BARRACKS

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REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

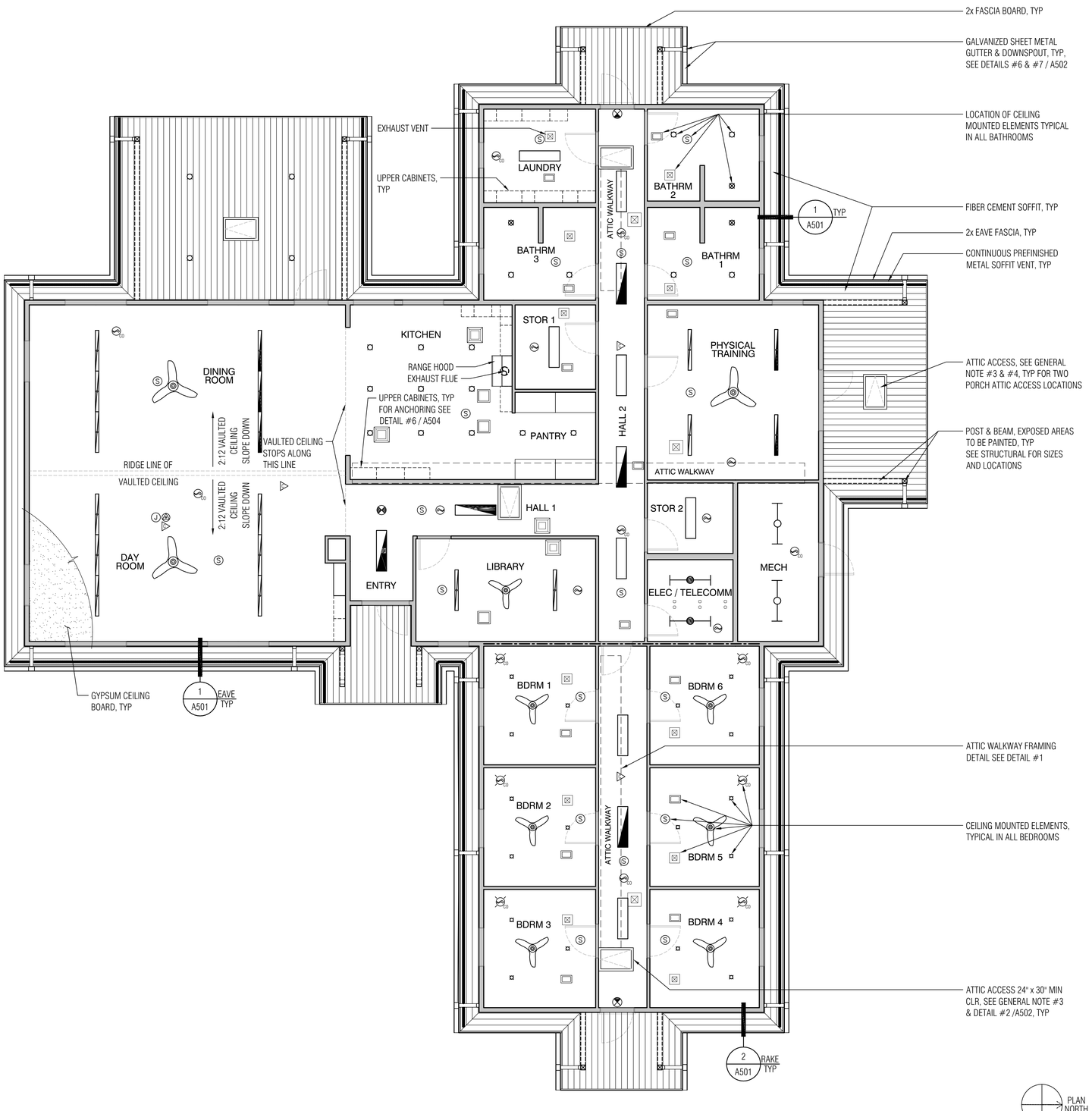
NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
ACCESSIBILITY AND EXITING PLAN

SHEET NUMBER
A111
V3

VER. 2020
PROJECT PATH: N:\PROJECT\Major Cap Projects\042421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\042421.dwg
PLOT DATE: Aug 23, 2023 - 9:01 AM



REFLECTED CEILING PLAN

SCALE: 3/16" = 1-0"

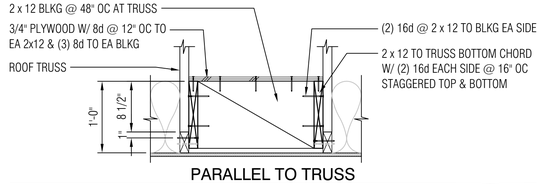
GENERAL NOTES

1. SEE ELECTRICAL FOR SPEAKER LOCATIONS.
2. SEE ELECTRICAL FOR SERVICE LIGHT AND OUTLET IN ATTIC SPACE / BY PULL DOWN ATTIC ACCESS LADDER.
3. INSTALL ATTIC ACCESS PER MANUFACTURER'S SPECIFICATIONS / DO NOT INTERRUPT CEILING JOIST / PROVIDE ALL REQUIRED BLOCKING / TRIM SURROUND WITH 1x PAINT GRADE MOULDING.
4. ATTIC ACCESS IN PORCHES SHALL BE ONE HOUR FIRE RATED AND HAVE LOCKABLE LATCH AND COMPLY WITH CBC CHAPTER 7A REQUIREMENTS.
5. COORDINATE ALL CEILING & SOFFIT PENETRATION LOCATIONS WITH CEILING JOIST LAYOUT.
6. CEILING HEIGHT, SEE ROOM FINISH SCHEDULE.
7. PROVIDE WALKWAY IN ATTIC SPACE. CONFIGURE AS REQUIRED TO PROVIDE ACCESS FROM ATTIC ACCESS TO ALL LOCATIONS THAT REQUIRE MAINTENANCE OR INSPECTION. SEE DETAIL #1
8. DIMENSIONS ARE TO FACE OF WALL TO CENTERLINE OF CEILING ELEMENT TYPICAL UNLESS OTHERWISE NOTED.

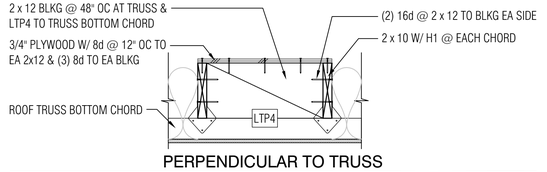
SYMBOL LEGEND

FOR ALL LIGHT FIXTURES, REFER TO ELECTRICAL LIGHT FIXTURE MOUNTING REQUIREMENTS. SEE ELECTRICAL AND MECHANICAL SHEETS FOR ADDITIONAL INFORMATION.

- SHADING OF ANY LUMINAIRE INDICATES CONNECTION TO ALTERNATE POWER SOURCE (EMERGENCY, UPS, STANDBY, ETC.)
- RECESSED CEILING LIGHT FIXTURE
- SURFACE MOUNTED CEILING LIGHT FIXTURE
- SURFACE MOUNTED CEILING LIGHT FIXTURE
- RECESSED DOWNLIGHT LIGHT FIXTURE FOR WET LOCATIONS
- RECESSED DOWNLIGHT LIGHT FIXTURE
- RECESSED LED EDGE-LIT EXIT SIGN
- CEILING MOUNTED SPEAKER/ENCLOSURE
- CEILING MOUNTED SMOKE DETECTOR
- CEILING MOUNTED COAXIAL OUTLET
- CEILING MOUNTED VOICE/DATA OUTLET
- CEILING MOUNTED COMMS J-BOX
- MULTI-CRITERIA DETECTOR (SMOKE,CO,LIGHT/FLAME,HEAT)
- MULTI-CRITERIA DETECTOR WITH LOW FREQ SOUNDER BASE
- SMOKE AND ACOUSTICAL PATHWAY
- CEILING FAN
- CEILING DIFFUSER, SEE MECHANICAL SHEETS
- RETURN GRILLE, SEE MECHANICAL SHEETS
- ATTIC WALKWAY, SEE DETAIL #3 / A502 FOR CONSTRUCTION DETAIL
- 24" x 36" ATTIC ACCESS, SEE DETAIL #2 / A502
  PROVIDE 1-HOUR F & T RATED HATCHES IN RATED CEILING ASSEMBLIES
- 1-HOUR RATED WALL ASSEMBLY, SEE DETAIL #10 / A502
- GYPSUM BOARD, SEE ROOM FINISH SCHEDULE



PARALLEL TO TRUSS



PERPENDICULAR TO TRUSS

ATTIC WALKWAY | SCALE: 1" = 1'-0" | 1

DSA Approval

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APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

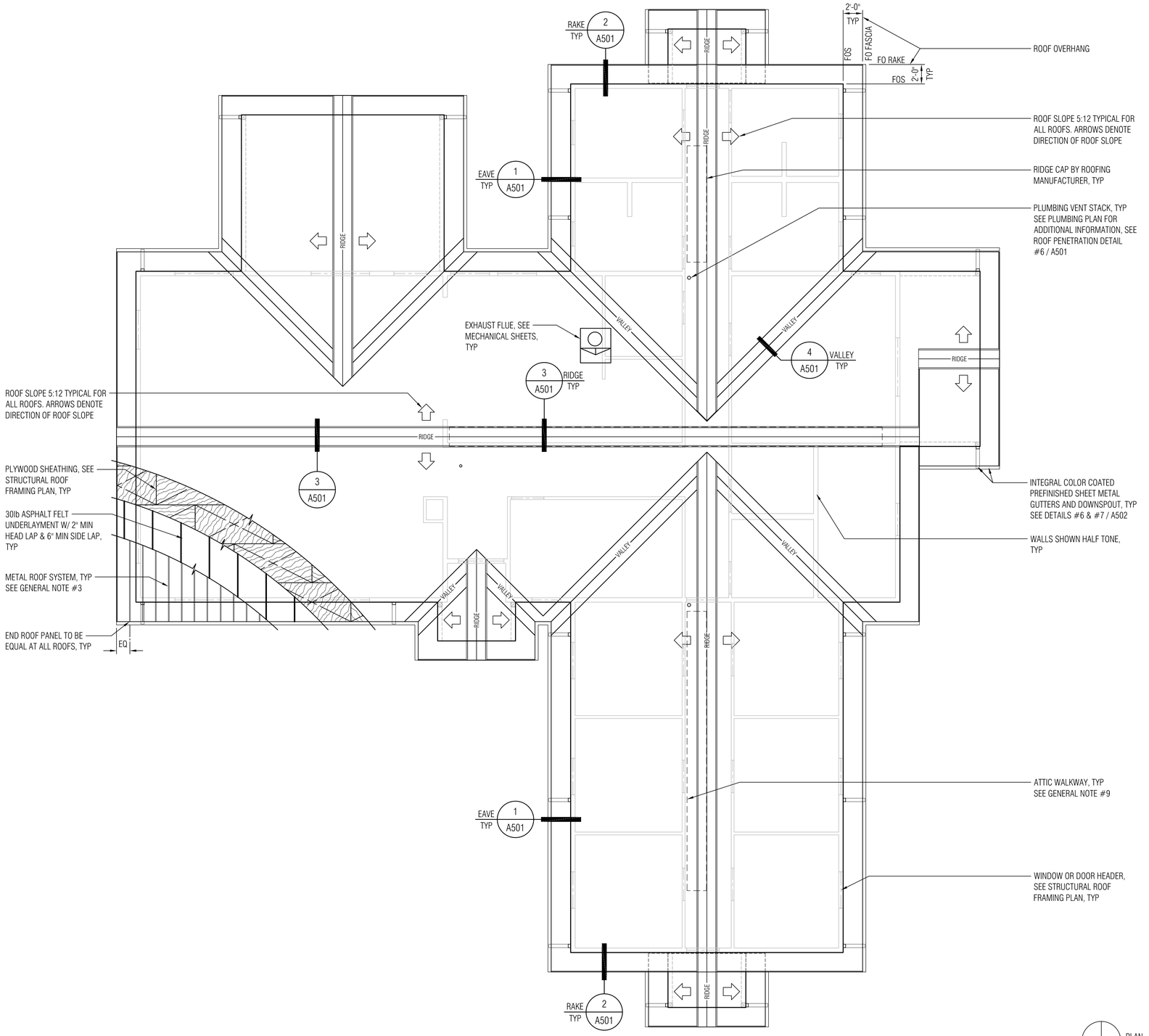
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
REFLECTED CEILING PLAN

SHEET NUMBER
A121
V3

PROJECT PATH: H:\PROJECT Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A121.dwg
PLOT DATE: Jul 19, 2023 - 2:20PM
VER 2020



REFLECTED ROOF PLAN

SCALE: 3/16" = 1-0"

GENERAL SHEET NOTES

1. METAL ROOFING: HIGH RIBBED CLASS "A" STANDING SEAM METAL ROOFING, DESIGN BASED ON AEP SPAN "DESIGN SPAN hp". STEEL ROOF PANELS SHALL BE 22 GAUGE MINIMUM, COLD FORMED, GALVANIZED, OR GALFAN STEEL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
2. SEE STRUCTURAL ROOF FRAMING SHEET FOR ITEMS NOT SHOWN HERE.
3. CENTER ROOF PENETRATIONS BETWEEN SEAMS & INSTALL AT 4'-0" MAX. FROM ALL RIDGES OR VALLEYS.
4. NOT ALL ROOF PENETRATIONS ARE SHOWN, SEE ELECTRICAL, MECHANICAL AND PLUMBING SHEETS.
5. FLASH AND WATERPROOF ALL REQUIRED ROOF PENETRATIONS INCLUDING, BUT NOT LIMITED TO PLUMBING VENT, WATER HEATER VENT, FURNACE VENT, KITCHEN EXHAUST VENT. REWORK CONFIGURATION AS REQUIRED TO SUIT PROJECTION AND SNOW LEVELS.
6. INSTALL RIB STIFFENERS AT ALL VALLEYS AND EAVES.
7. ALL RIBS/BATTENS SHALL RECEIVE SEALANT TAPE ALONG ENTIRE LENGTH.
8. APPLY EXTRA LAYER OF MODIFIED BITUMEN UNDERLAYMENT IN VALLEYS 24" FROM CENTER LINE.
9. ATTIC WALKWAY, SEE DETAILS #1 / A121. CONFIGURE AS REQUIRED TO PROVIDE ACCESS FROM ATTIC ACCESS PANEL TO ALL LOCATIONS THAT REQUIRE MAINTENANCE OR INSPECTION. INSTALL R-30 BATT INSULATION ONLY FOR AREAS BELOW ATTIC WALKWAY.

ROOFING PRODUCT

PRESCRIPTIVE REQUIREMENTS FOR ROOFING PRODUCTS

STEEP SLOPED APPLICATIONS:

MINIMUM AGED SOLAR REFLECTANCE:

0.20

MINIMUM THERMAL EMITTANCE OR MINIMUM SOLAR REFLECTANCE INDEX:

0.75 TE OR 16 SRI

ROOF PANEL NOTES

1. ROOF PANELS ARE 18" WIDE AND SNAP-LOCK INTO CLIPS THAT CONNECT PANELS TOGETHER ALONG OVERLAPPING PANEL EDGE SEAMS.
2. FIRST CLIP IS 8" MAX FROM FACE OF FASCIA.
3. CLIPS ARE THEN SPACED 24" MAX OC UP TO THE RIDGE.
4. CLIP FASTENERS: QTY 2 PER CLIP, #12, HWH, 5/16" HEX, 1" LENGTH, GIMLET POINT.
5. FIX PANELS AT RIDGE WITH 3 #12 x 1" SCREWS PER PANEL WITH 1" MIN EDGE DISTANCE.
6. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

WILDAND URBAN INTERFACE REQUIREMENTS

ROOF COVERING:
WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND ROOF DECKING, THE SPACE SHALL BE CONSTRUCTED TO RESIST THE INTRUSION OF FLAMES AND EMBERS, BE FIRESTOPPED WITH APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D3909 INSTALLED OVER THE COMBUSTIBLE DECKING.

ROOF VALLEYS:
WHERE VALLEY FLASHING IS INSTALLED, THE FLASHING SHALL NOT BE LESS THAN NUMBER 26 GAGE GALVANIZED SHEET CORROSION-RESISTANT METAL INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACE NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D3909, AT LEAST 36 INCH WIDE RUNNING THE FULL LENGTH OF THE VALLEY.

ROOF GUTTERS:
ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER.

ATTIC VENTILATION:
ROOF ATTIC VENTS SHALL RESIST THE INTRUSION OF FLAME AND EMBERS INTO THE ATTIC AREA OF THE STRUCTURE OR SHALL BE PROTECTED BY CORROSION-RESISTANT, NON-COMBUSTIBLE WIRE MESH WITH OPENINGS A MINIMUM OF 1/16" AND SHALL NOT EXCEED 1/8".

ROOF VENTING

ROOF VENTING: 1/300 50% HIGH, 50% LOW
TOTAL BUILDING AREA 4,731 SQ. FT. :

ROOF VENTING FOR THE BUILDING
AREA 4,731 SF / 300 = 15.77 SQ. FT. x 144 = 2,270.88 SQ. IN. TOTAL AREA REQUIRED
2,270.88 / 2 = 1,135 SQ. IN. FOR HIGH & LOW
HIGH VENTING AREA 1,135 SQ. IN. : RIDGE VENT, SEE DETAIL #3 / A501
210.11 L.F. x 144 = 30,256" x 2/3" OPEN FREE AREA = 20,171 SQ. IN.
0.1325 NET FREE AREA x 20,171 SQ. IN. = 2,673 SQ. IN.
LOW VENTING AREA 1,135 SQ. IN. : VENT BLOCKING, SEE DETAIL #1 & 5 / A501
4 HOLES @ 2" DIA. = 12.6 SQ. IN.
1,135 SQ. IN. / 12.6 SQ. IN. = 90 BLOCKS TOTAL (45 BLOCKS EA SIDE)
PREFERRED VENTING BLOCKS EVERY OTHER BAY
SOFFIT VENTS:
232 L.F. x 144 = 33,408" x 2" WIDE VENT = 66,816 SQ. IN.
66,816 SQ. IN. x 0.25 FREE AREA = 16,704 SQ. IN.

DSA Approval

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C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
ROOF PLAN

SHEET NUMBER
A131
V3

PROJECT PATH: N:\PROJECT\Major Cap\ Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A131.dwg
PLOT DATE: Jul 19, 2024 - 2:21 PM
VER 2020

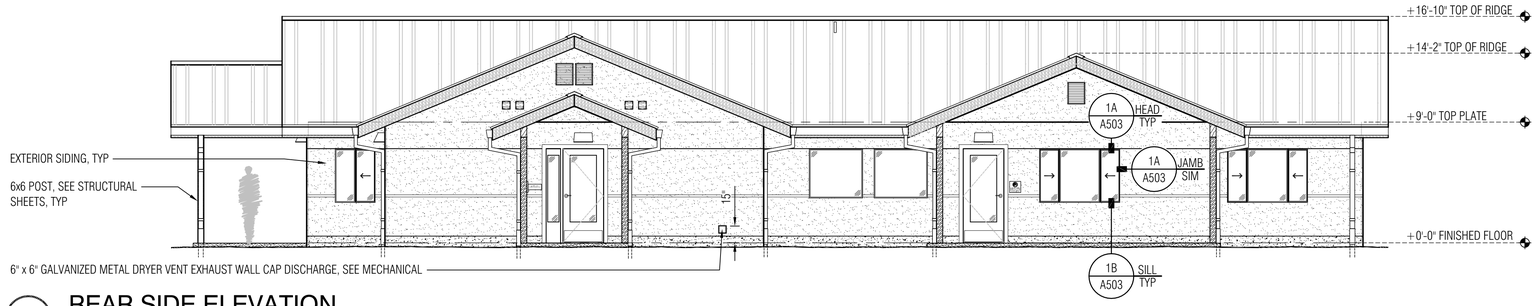


A FRONT SIDE ELEVATION

SCALE: 3/16" = 1'-0"

FINISH GRADE AND ACCESSIBLE PATH OF TRAVEL (SEE GENERAL NOTES THIS SHEET AND SITE PLAN FOR CONTINUATION), TYP

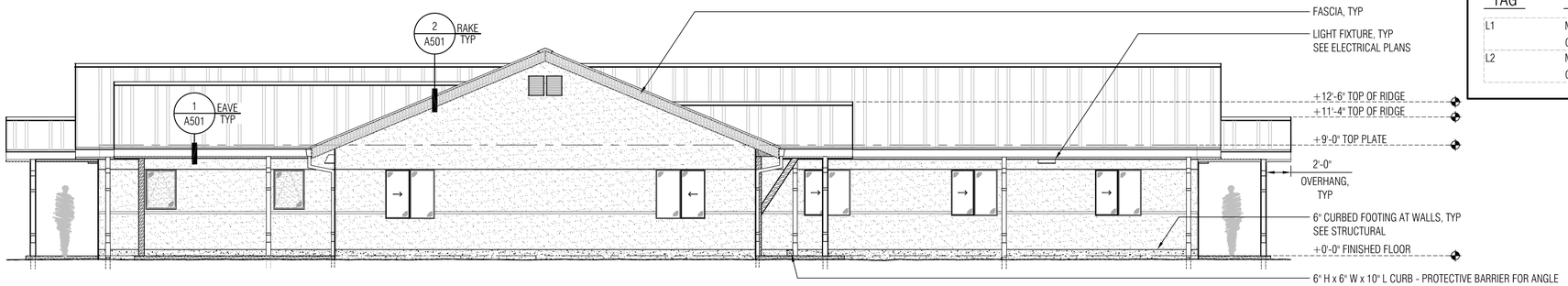
SEE OTHER ELEVATIONS FOR TYPICAL NOTES AND DIMENSIONS



C REAR SIDE ELEVATION

SCALE: 3/16" = 1'-0"

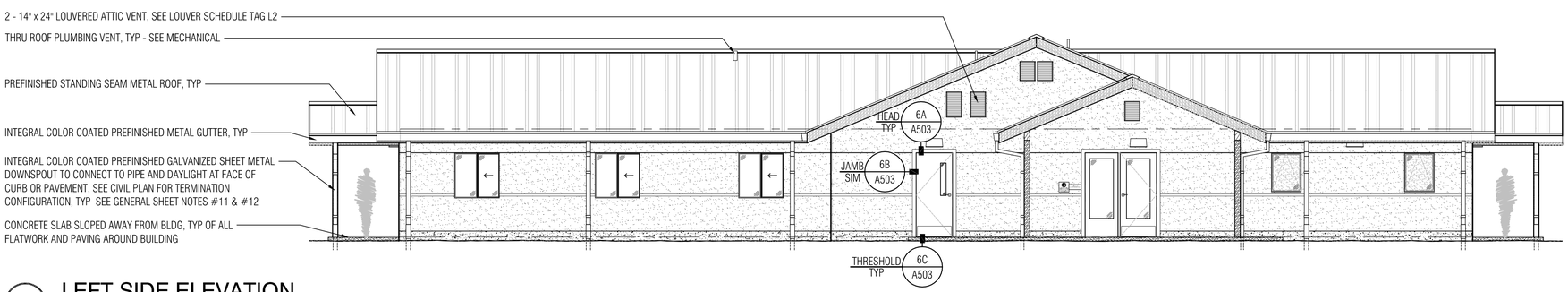
SEE OTHER ELEVATIONS FOR TYPICAL NOTES AND DIMENSIONS



D RIGHT SIDE ELEVATION

SCALE: 3/16" = 1'-0"

SEE OTHER ELEVATIONS FOR TYPICAL NOTES AND DIMENSIONS



B LEFT SIDE ELEVATION

SCALE: 3/16" = 1'-0"

SEE OTHER ELEVATIONS FOR TYPICAL NOTES AND DIMENSIONS

GENERAL SHEET NOTES

1. EXTERIOR SIDING SHALL BE CEMENT PLASTER SYSTEM, PAINTED TO MATCH COLOR OF SIDING ON ADJACENT EXISTING BUILDING.
2. FASCIA SHALL BE 2" x 8" REDWOOD, PAINTED TO MATCH COLOR OF FASCIA ON ADJACENT EXISTING BUILDING. SEE STRUCTURAL SHEETS.
3. SOFFIT SHALL BE FIBER CEMENT BY JAMES HARDIE (ARTISAN V-GROOVE RUSTIC) WITH 7" EXPOSURE, PAINTED TO MATCH COLOR OF SOFFIT ON ADJACENT EXISTING BUILDING.
4. TRIM SHALL BE FIBER CEMENT BY JAMES HARDIE (RUSTIC GRAIN) 5/4 x 3.5" PAINTED TO MATCH COLOR OF SOFFIT ON ADJACENT EXISTING BUILDING. EXTEND ALL TRIM TO CONCEAL SUB FRAMING.
5. ALL BEAMS SHALL EXTEND 3" BEYOND FACE OF POST. BEAMS AND POSTS SHALL BE PAINTED TO MATCH TRIM. COVER BEAM ENDS WITH 5" GALVANIZED FLASHING BEAM CAPS, PAINTED TO MATCH BEAM.
6. ALL EXPOSED METAL FLASHING TO BE PRIMED AND PAINTED TO MATCH THE OBJECT BEHIND IT.
7. WALL PENETRATIONS LARGER THAN 1/2" TO BE FILLED WITH EXPANDING FOAM INSULATION AND COVERED WITH ESCUTCHEON PLATE.
8. PENETRATIONS 1/2" AND SMALLER TO BE FILLED WITH EXPANDING FOAM INSULATION AND FINISHED WITH BACKER ROD AND SEALANT.
9. APPLY LIQUID APPLIED WATER/AIR BARRIER TO THE STRUCTURAL SHEATHING.
10. STANDING SEAM METAL ROOFING SHALL BE OF COOL ROOF TO MATCH COLOR OF ROOF ON ADJACENT EXISTING BUILDING.
11. GUTTERS SHALL BE GALVANIZED SHEET METAL SPACED 25'-0" MAX, SEE DETAILS #6 & #7 / A502. GUTTERS SHALL BE PAINTED TO MATCH COLOR OF GUTTERS ON ADJACENT EXISTING BUILDING.
12. DOWNSPOUTS SHALL BE PAINTED TO MATCH COLOR OF DOWNSPOUTS ON ADJACENT EXISTING BUILDING. SEE CIVIL FOR TERMINATION CONFIGURATION OF DOWNSPOUTS.
13. LOUVERED ATTIC VENT(S) EITHER ONE OR TWO AS SHOWN SHALL BE 14" X 18", SEE LOUVER SCHEDULE TAG L1. SEE DETAILS #15A & #15B / A503
14. 6" HIGH LETTERING FOR "BARRACKS" SIGNS SHALL BE OF FONT TYPE ARIAL-BOLD WITH A WIDTH FACTOR OF 1.00.
15. PORCHES OR STOOPS CONNECT TO WALKWAYS AS SHOWN ON SITE PLAN GRADING PLAN.
16. ADJACENT FLATWORK CONFIGURATION AND ELEVATIONS AS WELL AS ACCESSIBLE PATH OF TRAVEL ARE SHOWN ON SITE PLAN.
17. COORDINATE GABLE END TRUSS OR FRAMING CONFIGURATION WITH ATTIC VENT SIZE AND LOCATIONS, SEE STRUCTURAL SHEETS.
18. COORDINATE ALL PLUMBING ROOF PENETRATION WITH MECHANICAL SHEETS, INSTALL WATERPROOF FLASHING AS REQUIRED.
19. SEE SITE PLAN FOR ADJACENT FLATWORK CONFIGURATIONS AND ELEVATIONS.
20. OUTDOOR MECHANICAL UNITS NOT SHOWN IN THESE ELEVATION VIEWS.

LOUVER SCHEDULE & NOTES

DESCRIPTIONS

- DRAINABLE THIN LINE STATIONARY LOUVER
- TESTED IN ACCORDANCE WITH AMCA PUBLICATION 511
- ALUMINUM
- BIRD SCREEN
- COMPLIANCE W/ CBC CHAPTER 7A & OSFM APPROVAL
- PAINTED TO MATCH SIDING

TAG	FREE AREA	OPTION #1	OPTION #2
L1	MINIMUM FREE AREA GREATER OR EQUAL TO 78.00 SQ. IN.	VULCAN - VG1418	BRANDGUARD, OR EQUAL
L2	MINIMUM FREE AREA GREATER OR EQUAL TO 115.00 SQ. IN.	VULCAN - VG1424	BRANDGUARD, OR EQUAL

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FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER
A201
V3

PROJECT PATH: I:\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A201.dwg
PLOT DATE: Jul 19, 2023 - 6:57AM
VER: 2020

SPECIFICATIONS

BLANKET INSULATION:

MATERIALS:

1. OWENS-CORNING FIBERGLASS CORPORATION OR EQUIVALENT

LOCATIONS:

a. EXTERIOR WALLS WITH WOOD STUDS. KRAFT OR FOIL FACED: R-21 MINIMUM
b. ATTIC SPACES AND CEILINGS: R-49 MINIMUM

WIDTHS: AS REQUIRED TO FIT FRAMING

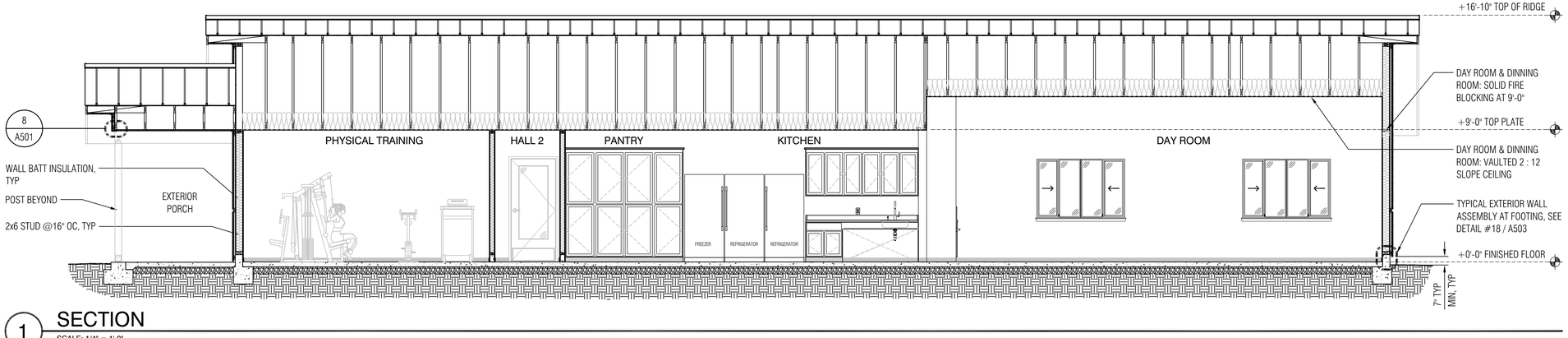
OTHER R-VALUE IN LOCATIONS AS SPECIFIED ON OTHER PLANS TAKE PRECEDENCE.

FLAME SPREAD / SMOKE DENSITY:

ALL INSULATION INSTALLED WITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, WALLS, CRAWL SPACES OR ATTICS SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED INDEX OF 450 WHEN TESTED IN ACCORDANCE WITH ASTM E84.

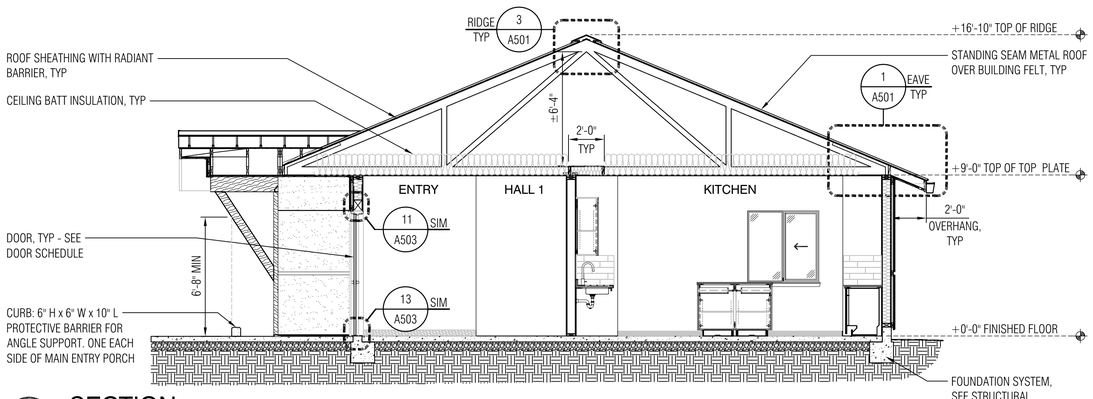
MAXIMUM FLAME SPREAD CLASS:

CLASS:	FLAME SPREAD INDEX:
CLASS A	0-25
CLASS B	26-75
CLASS C	76-200



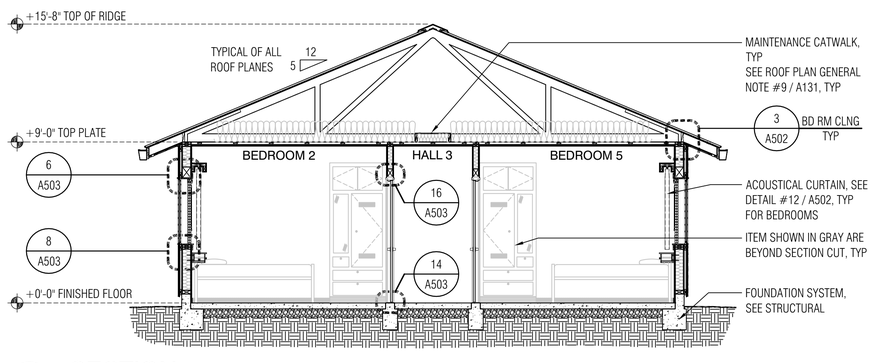
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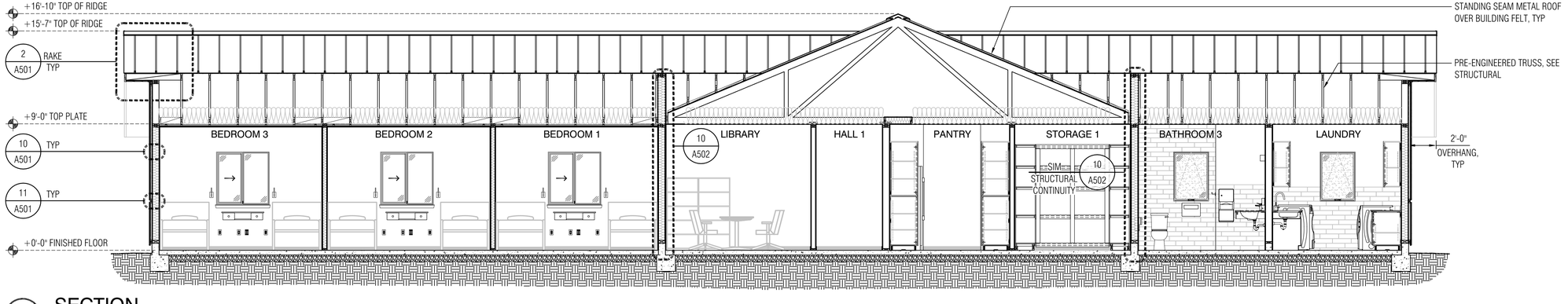
2 SECTION

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



4 SECTION

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



3 SECTION

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

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REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:

BUILDING SECTIONS

SHEET NUMBER

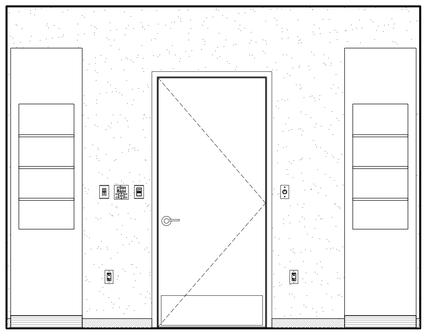
A301

V3

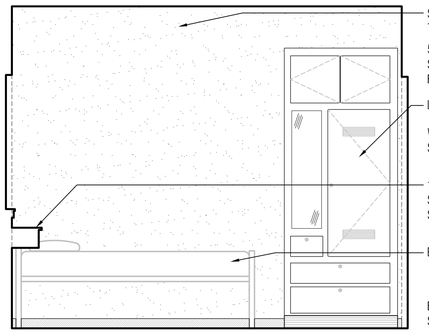
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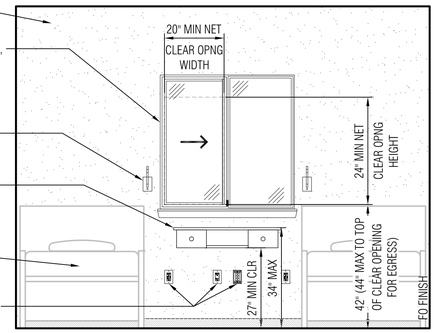
A



B



C



D

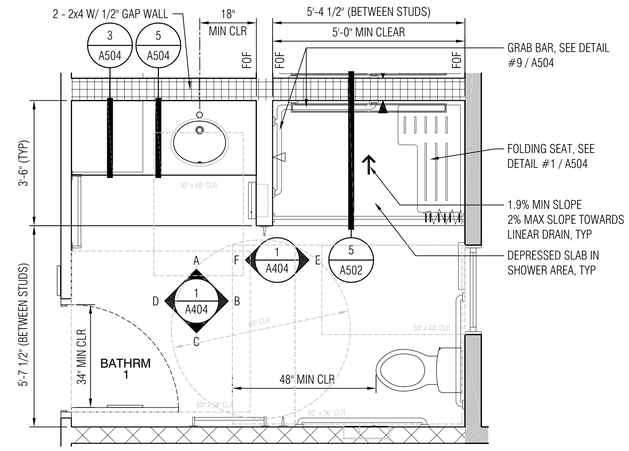
BEDROOM - CABINETS

1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS. SEE SHEET A504 FOR DETAILS AND ANCHORING.
2. CABINETS SHALL BE PAINTED SHERWIN WILLIAMS, 9163 TIN LIZZIE, OR EQUAL.
3. WALL BASE SHALL BE 7/16" X 3 1/4" PRIMED PINE WOOD BASE MOULDING PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS, OR EQUAL.

BEDROOM INTERIOR ELEVATIONS

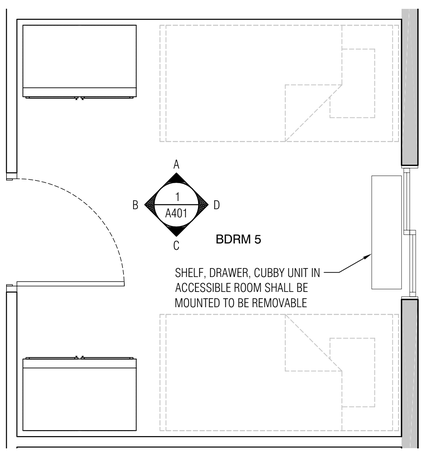
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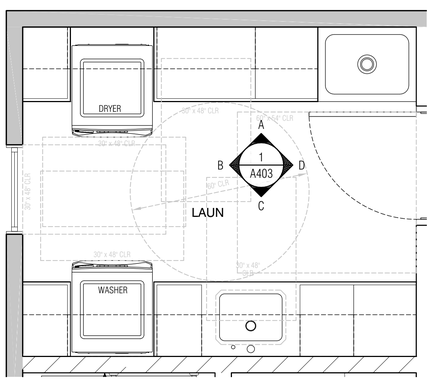
3 ENLARGED PLAN

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



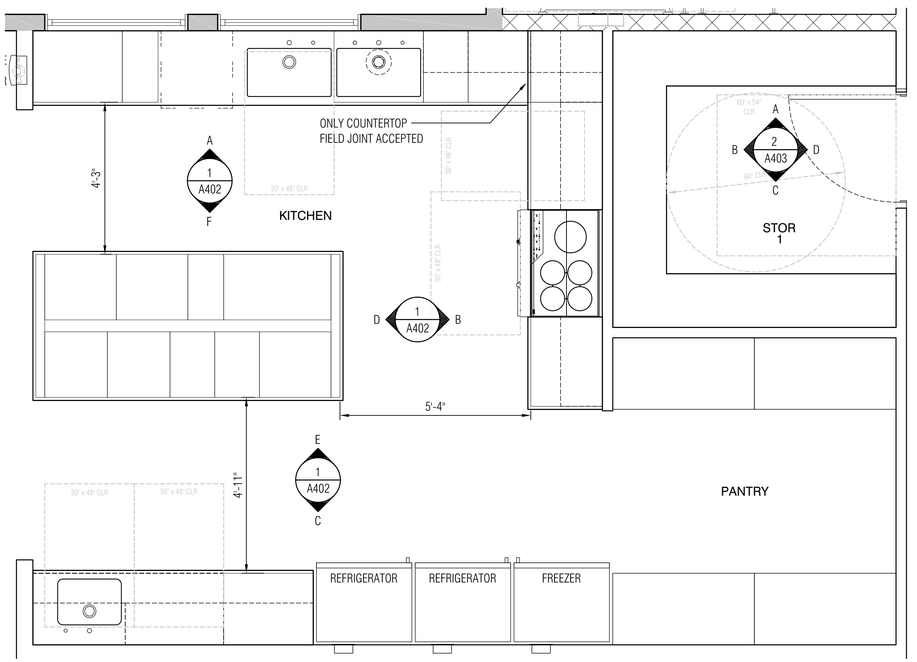
4 ENLARGED PLAN

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



2 ENLARGED PLAN

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



1 ENLARGED PLAN

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

GENERAL SHEET NOTES

1. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION.
2. COORDINATE WITH ALL POSSIBLE OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES, SMOKE DETECTORS, SPEAKERS AND MECHANICAL REGISTERS/GRILLS..
3. SIGNAGE / ROOM IDENTIFICATION, SEE SHEET A500.
4. DIMENSIONS INDICATED AS "MIN. CLR." ARE TO FACE OF FINISH.
5. SEE SHEET A602 FOR ROOM FINISH SCHEDULE.
6. ALL EXPOSED METAL SHALL BE PRIMED AND PAINTED.
7. VERIFY SIZES AND REQUIRED WORKING CLEARANCES OF ALL EQUIPMENT AND APPLIANCES PRIOR TO MILLWORK FABRICATION.
8. SEE SHEET A500 FOR ADDITIONAL ACCESSIBLE CLEARANCES.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

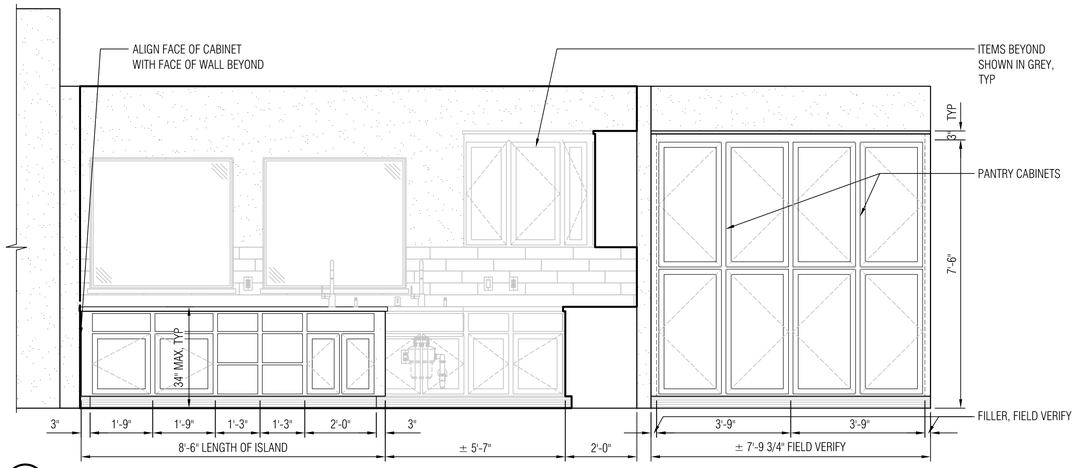
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

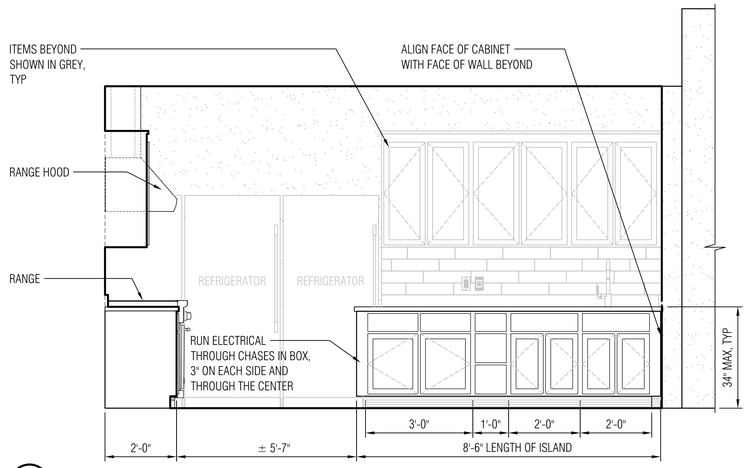
SHEET TITLE:
ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS

SHEET NUMBER
A401
V3

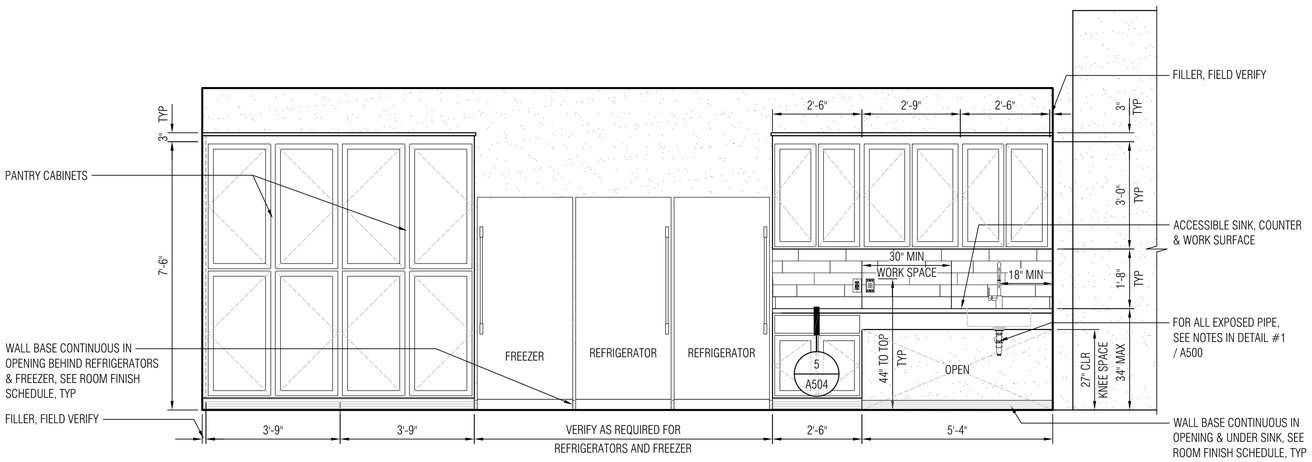
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PLOT DATE: Jul 27, 2023 - 7:44AM
VER 2020



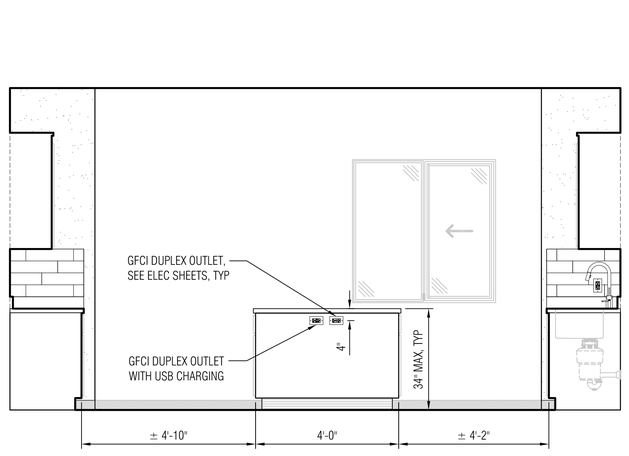
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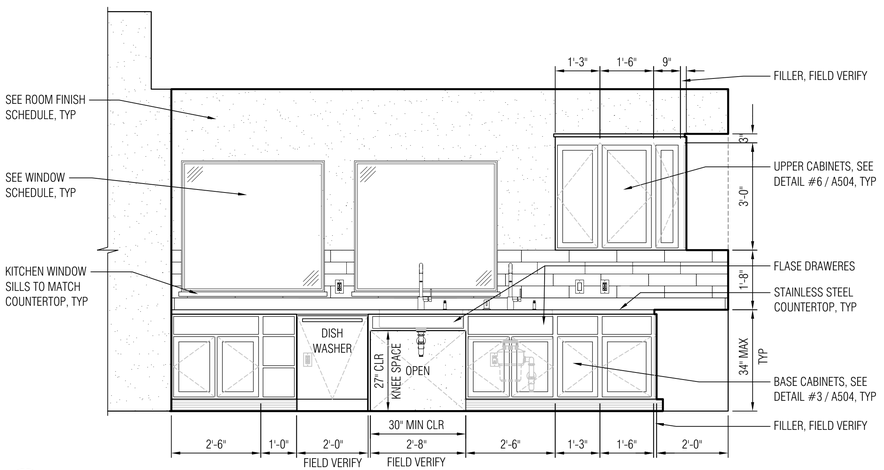
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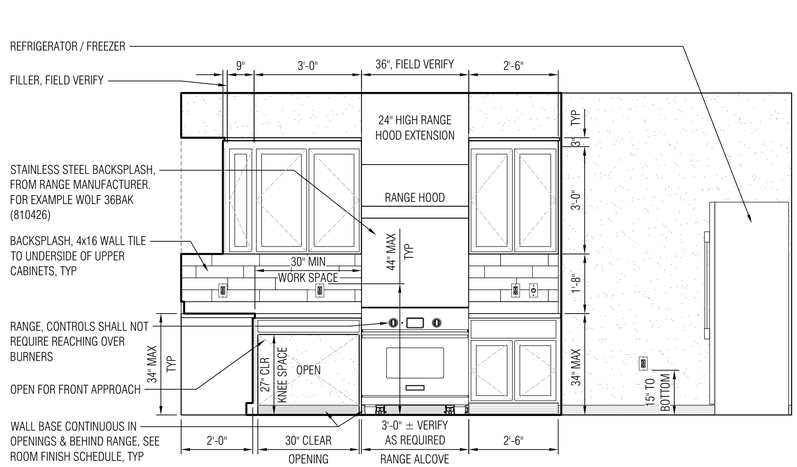
C



D



A



B

GENERAL SHEET NOTES

1. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION.
2. COORDINATE WITH ALL POSSIBLE OBSTRUCTION INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES AND SMOKE DETECTORS.
3. DIMENSIONS INDICATED AS "MIN. CLR." ARE TO FACE OF FINISH.
4. SEE SHEET A602 FOR ROOM FINISH SCHEDULE.
5. ALL EXPOSED METAL SHALL BE PRIMED AND PAINTED. EXCLUDING COUNTERTOPS.
6. VERIFY SIZES AND REQUIRED WORKING CLEARANCES OF ALL EQUIPMENT AND APPLIANCES PRIOR TO MILLWORK FABRICATION.
7. ALL CASEWORK SHELVING TO BE ADJUSTABLE UNLESS OTHERWISE NOTED.
8. ALIGN UPPER CABINETS WITH BASE CABINET AS SHOWN, UNLESS OTHERWISE NOTED.
9. SEE SHEET A504 FOR CABINETRY AND ANCHORING DETAILS.
10. SEE SHEET A500 FOR ADDITIONAL ACCESSIBLE CLEARANCES.

CABINETS, TILE & WALL BASE

1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS.
2. CABINETS SHALL BE PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE.
3. BACKSPLASH / WALL TILE SHLL BE ±52" HIGH OF ARIZONA TILE: PALOMA COTTON GLOSSY 4x16 WITH 1/8" WIDE TEC 550 POWER GROUT, #934 SLATE GREY. USE CORRESPONDING STOCK TRIM : (1/2" X 12" PENCIL BULLNOSE). OR EQUAL
4. WALL BASE SHALL BE 7/16" X 3 1/4" PRIMED PINE WOOD BASE MOULDING PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, OR EQUAL.

COUNTERTOPS

- KITCHEN COUNTERTOPS SHALL BE SEAMLESS 14 GAUGE STAINLESS STEEL, T316 GRADE WITH INTEGRATED SINKS AND SQUARE FRONT AND SIDE EDGES.
- COMPLETELY WRAPPED AND WELDED EDGES.
- ALL WELDS AND HEAT AFFECTED AREAS SHALL PASSIVATED WITH NITRIC ACID AND CLEANED
- SEE DETAILS #1, 2 & 3 / A505 FOR MORE INFORMATION ON COUNTERTOPS AND SINKS.
- FIELD VERIFY MEASUREMENTS. CREATE TEMPLATE TO BE PROVIDED TO CAL FIRE REPRESENTATIVE.

COMPLIANCE FOR STORAGE

CALCULATIONS OF FIXED STORAGE: 11,520 (UPPER) + 37,743 (BASE) = 48,458 SQ. IN.
STORAGE REQUIRED WITHIN REACHABLE RANGE: 48,458 x 50% = 24,229 SQ. IN.
CALCULATIONS OF STORAGE PROVIDED WITHIN REACHABLE RANGE: 24,794 SQ. IN.

STORAGE PROVIDED WITHIN REACH RANGE EXCEEDS AMOUNT REQUIRED. THIS DESIGN COMPLIES.

KITCHEN INTERIOR ELEVATIONS

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

1

DSA Approval

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SS ☐ FLS ☐ ACS ☑
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OSFM Approval

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C130 BARRACKS

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FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

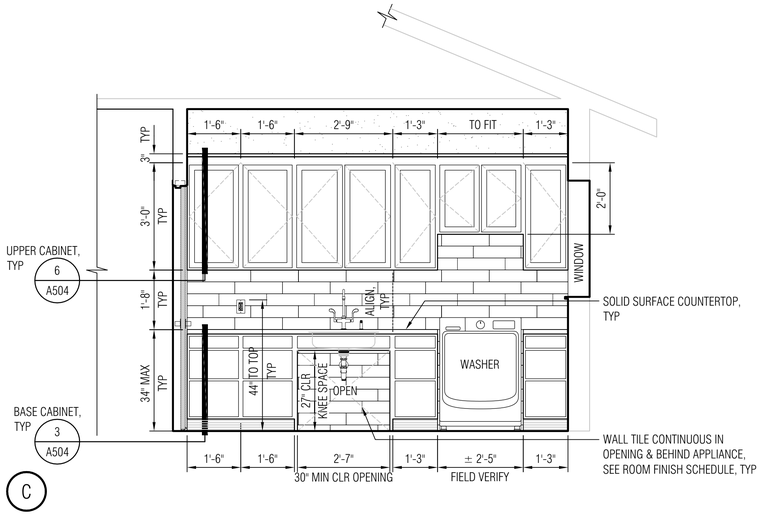
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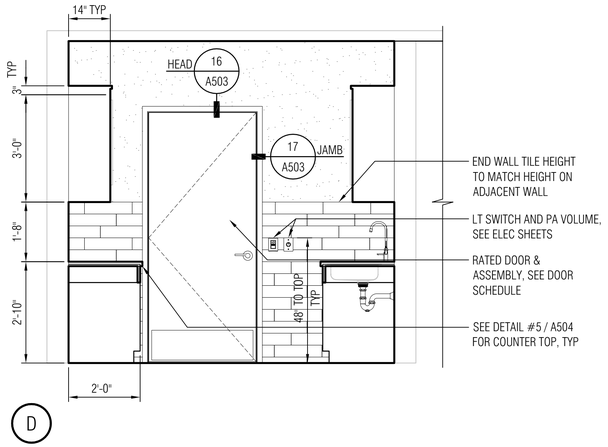
JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER
A402
V3

PROJECT PATH: C:\Users\mheintz\AppData\Local\Temp\AcPublish_13828\2421A402.dwg
PLOT DATE: May 28, 2023 - 9:38AM
VER: 2020





GENERAL SHEET NOTES

1. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION.
2. COORDINATE WITH ALL POSSIBLE OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES, SMOKE DETECTORS, SPEAKERS AND MECHANICAL REGISTERS/GRILLS.
3. DIMENSIONS INDICATED AS "MIN. CLR." ARE TO FACE OF FINISH.
4. SEE SHEET A602 FOR ROOM FINISH SCHEDULE.
5. ALL EXPOSED METAL SHALL BE PRIMED AND PAINTED.
6. VERIFY SIZES AND REQUIRED WORKING CLEARANCES OF ALL EQUIPMENT AND APPLIANCES PRIOR TO MILLWORK FABRICATION.
7. ALL CASEWORK SHELVING TO BE ADJUSTABLE UNLESS OTHERWISE NOTED.
8. ALIGN UPPER CABINETS WITH BASE CABINETS AS SHOWN, UNLESS OTHERWISE NOTED.
9. SEE SHEET A504 FOR CABINETRY AND ANCHORING DETAILS.
10. SEE SHEET A500 FOR ADDITIONAL ACCESSIBLE CLEARANCES.
11. WASHING MACHINE AND DRYER SHALL HAVE A 30" x 48" MINIMUM CLEAR FLOOR SPACE POSITIONED FOR PARALLEL APPROACH AND SHALL BE CENTERED ON THE APPLIANCES. OPERABLE PARTS, INCLUDING DOORS, LINT SCREENS AND DETERGENT AND BLEACH COMPARTMENTS SHALL COMPLY WITH CBC 11B-309. TOP LOADING MACHINES SHALL HAVE THE DOOR TO THE LAUNDRY COMPARTMENT LOCATED 36 INCHES MAXIMUM ABOVE THE FINISHED FLOOR. FRONT LOADING MACHINES SHALL HAVE BOTTOM OF OPENING TO THE LAUNDRY COMPARTMENT LOCATED 15 INCHES MINUMUM TO 36 INCHES MAXIMUM ABOVE FINISH FLOOR.

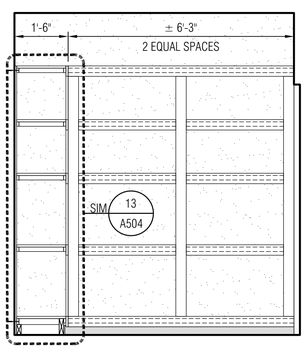
LAUNDRY - CABINETS, COUNTERTOP & TILE

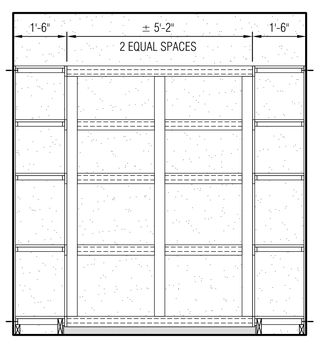
1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS.
2. CABINETS SHALL BE PAINTED SHERWIN WILLIAMS, 9163 TIN LIZZIE.
3. SOLID SURFACE COUNTERTOPS SHALL BE ARIZONA TILE DELLA TERRA QUARTZ, PILAR 2CM OR EQUAL, WITH 1 1/2" MITERED EDGING.
4. BACKSPLASH / WALL TILE SHALL BE OF ARIZONA TILE: PALOMA PUMICE GLOSSY 4x16 WITH 1/8" WIDE TEC 550 POWER GROUT, #909 STERLING. USE CORRESPONDING STOCK TRIM : (1/2" X 12" PENCIL BULLNOSE)
5. FLOOR TILE SHALL BE OF M S INTERNATIONAL INC., GRAPHITE 12"x24" GLAZED PORCELAIN TILE 3/16" WIDE TEC 550 POWER GROUT, #950 JET BLACK.

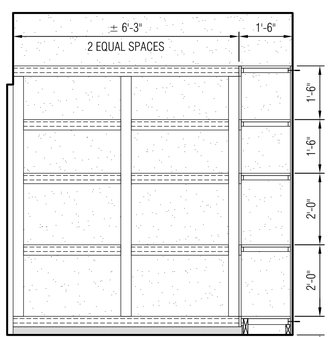
LAUNDRY INTERIOR ELEVATIONS

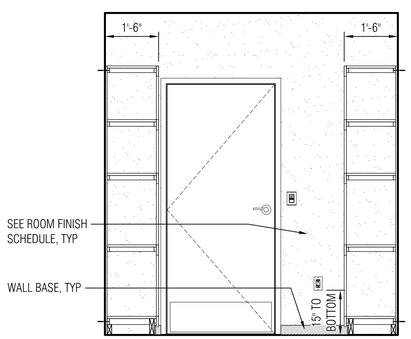
SCALE: 1/2" = 1'-0"

1









STORAGE 1 SHELVING

1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS. SEE SHEET A504 FOR DETAILS AND ANCHORING.
2. SHELVING SHALL BE PAINTED SHERWIN WILLIAMS, 9163 TIN LIZZIE, OR EQUAL.
3. WALL BASE SHALL BE 7/16" X 3 1/4" PRIMED PINE WOOD BASE MOULDING PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, OR EQUAL.

STORAGE 2 SHELVING SHALL BE CONSTRUCTED SIMILAR TO STORAGE 1 SHELVING, SEE SHEET A101 SHELVING DEPTHS OF 18" & 24"

STORAGE 1 INTERIOR ELEVATIONS

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

2

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

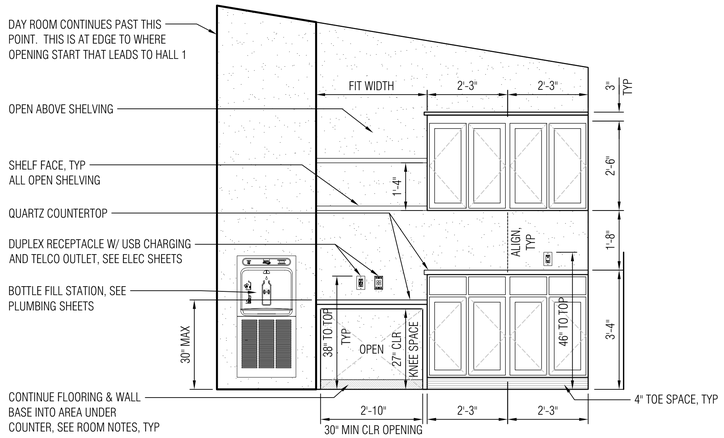
SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER
A403
V3

PROJECT PATH: I:\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A403.dwg
PLOT DATE: May 08, 2023 - 1:42PM
VER. 2020

DAY ROOM - CABINETS & COUNTERTOP

1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS. SEE SHEET A504 FOR DETAILS AND ANCHORING.
2. CABINETS SHALL BE PAINTED SHERWIN WILLIAMS, SW7662 EVENING SHADOW, OR EQUAL.
3. SOLID SURFACE COUNTERTOPS & BACKSPLASH SHALL BE ARIZONA TILE DELLA TERRA QUARTZ, STEEL-N 2CM OR EQUAL PATTERN CHARACTERISTICS WITH 1 1/2" MITERED EDGING.
4. WALL BASE SHALL BE 7/16" X 3 1/4" PRIMED PINE WOOD BASE MOULDING PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, OR EQUAL.



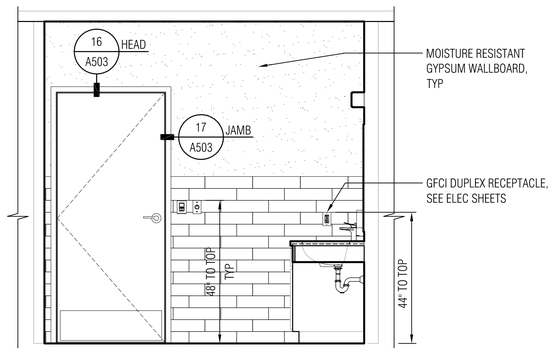
BOTTLE FILL STATION AND CABINETS IN DAY ROOM

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

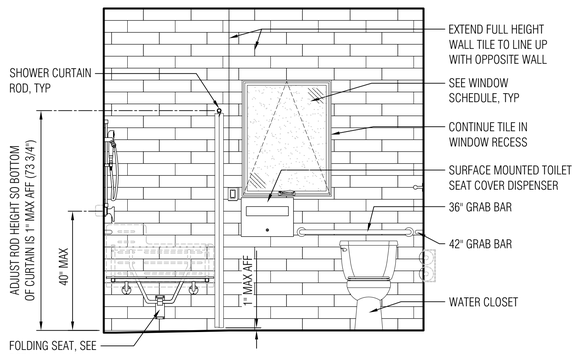
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GENERAL SHEET NOTES

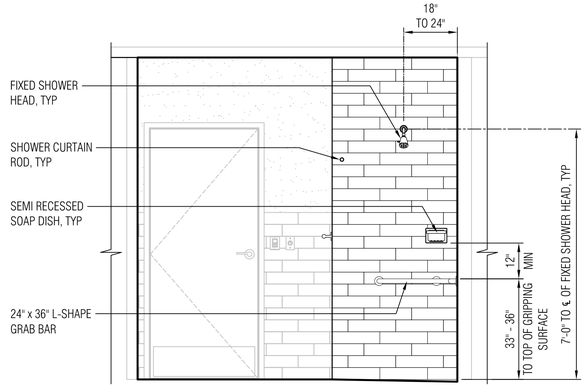
1. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION.
2. COORDINATE WITH ALL POSSIBLE OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES.
3. SEE SHEET A500 FOR TYPICAL ACCESSIBLE REQUIREMENTS
4. DIMENSIONS INDICATED AS "MIN. CLR." ARE TO FACE OF FINISH.
5. SEE SHEET A602 FOR ROOM FINISH SCHEDULE.
6. ALL EXPOSED METAL SHALL BE PRIMED AND PAINTED.
7. VERIFY SIZES AND REQUIRED WORKING CLEARANCES OF ALL EQUIPMENT AND APPLIANCES PRIOR TO MILLWORK FABRICATION.
8. ALL CASEWORK SHELVING TO BE ADJUSTABLE UNLESS OTHERWISE NOTED.
9. ALIGN UPPER CABINETS WITH BASE CABINETS AS SHOWN, UNLESS OTHERWISE NOTED.
10. SEE SHEET A504 FOR CABINETRY AND ANCHORING DETAILS.
11. SEE SHEET A500 FOR ADDITIONAL ACCESSIBLE CLEARANCES.
12. SEE DETAIL #9 / A504 FOR GRAB BAR ANCHORING.



D



E

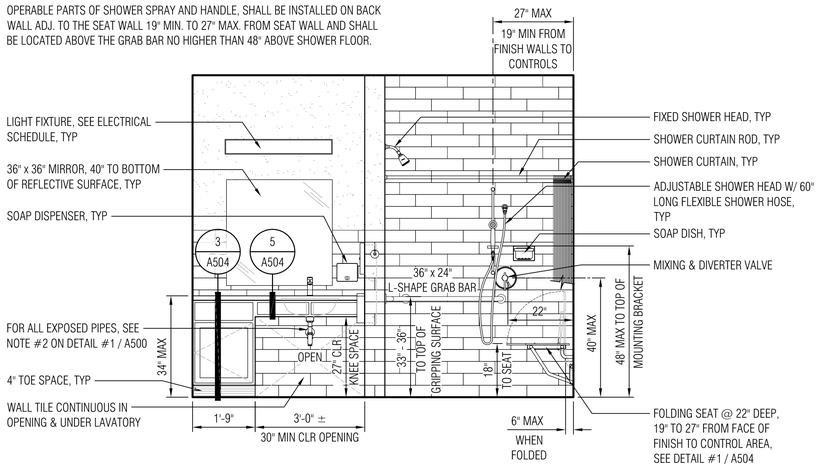


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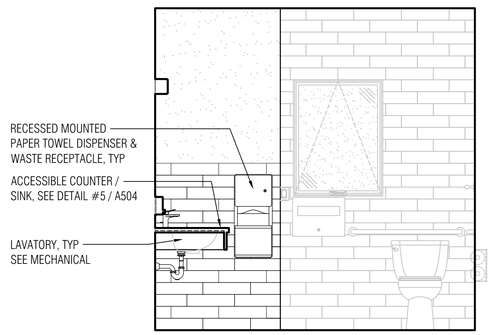
BATHROOM - CABINETS, COUNTERTOP & TILE

1. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS.
2. CABINETS SHALL BE PAINTED SHERWIN WILLIAMS, 9163 TIN LIZZIE.
3. SOLID SURFACE COUNTERTOPS SHALL BE ARIZONA TILE DELLA TERRA QUARTZ, PILAR 2CM OR EQUAL PATTERN CHARACTERISTICS WITH 1 1/2" MITERED EDGING.
4. BACKSPLASH / WALL TILE SHALL BE ±52" (U.N.O.) HIGH OF ARIZONA TILE: PALOMA PUMICE GLOSSY 4x16 WITH 1/8" WIDE TEC 550 POWER GROUT, #909 STERLING.
5. USE CORRESPONDING STOCK TRIM : (1/2" X 12" PENCIL BULLNOSE). OR EQUAL
6. FLOOR TILE SHALL BE OF M S INTERNATIONAL INC., GRAPHITE 12"x24" GLAZED PORCELAIN TILE 3/16" WIDE TEC 550 POWER GROUT, #950 JET BLACK.
7. SHOWER FLOOR TILES SHALL BE OF EMSER TILE: SOURCE UNGLAZED PORCELAIN MOSAIC PURE WHITE 3" HEX WITH TEC 550 POWER GROUT, #950 JET BLACK.

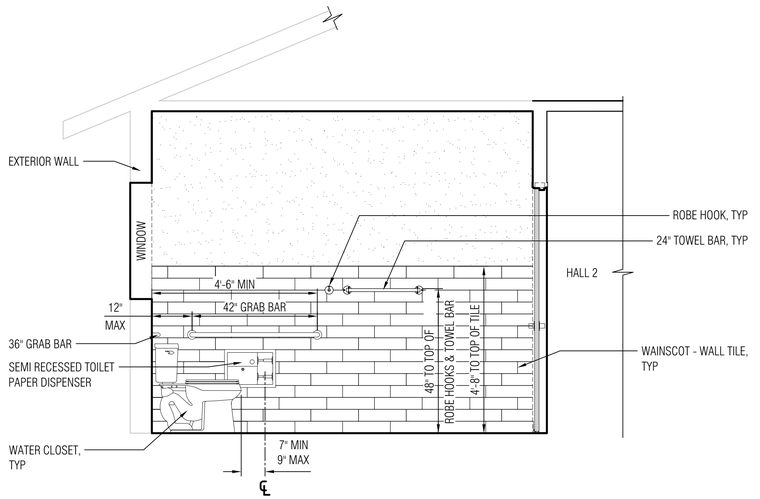
OPERABLE PARTS OF SHOWER SPRAY AND HANDLE, SHALL BE INSTALLED ON BACK WALL ADJ. TO THE SEAT WALL 19" MIN. TO 27" MAX. FROM SEAT WALL AND SHALL BE LOCATED ABOVE THE GRAB BAR NO HIGHER THAN 48" ABOVE SHOWER FLOOR.



A



B



C

BATHROOM INTERIOR ELEVATIONS

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

1

DSA Approval

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REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

REVISIONS

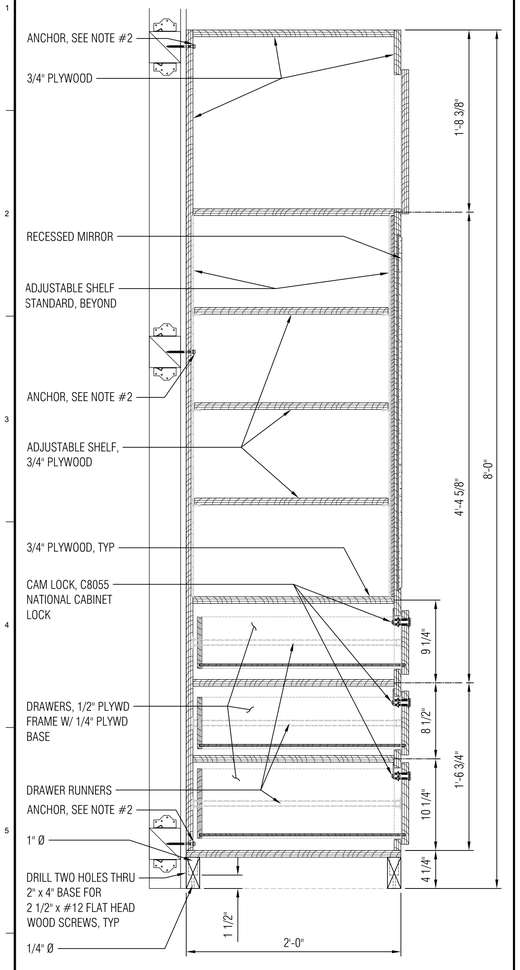
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

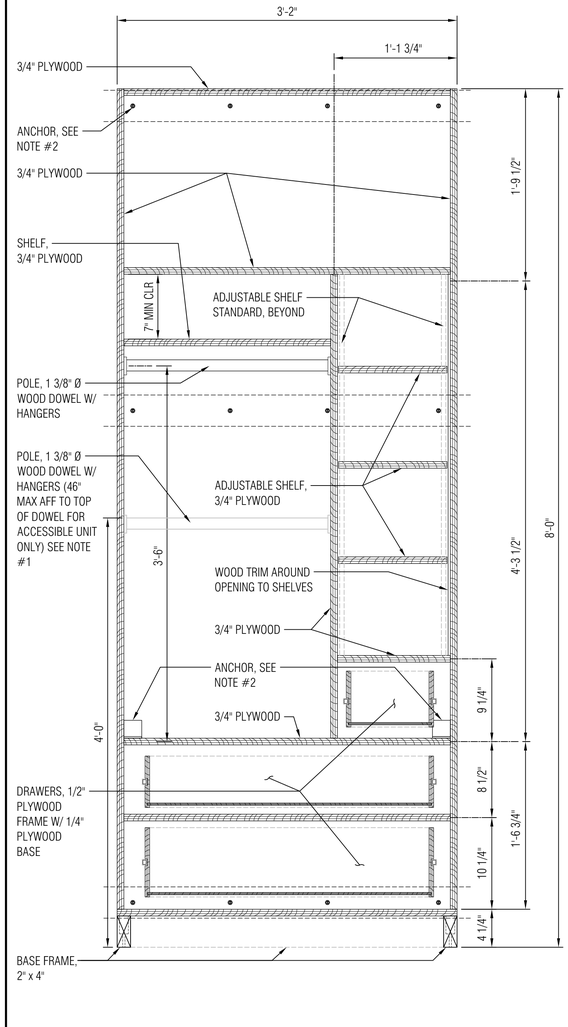
SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER
A404
V3

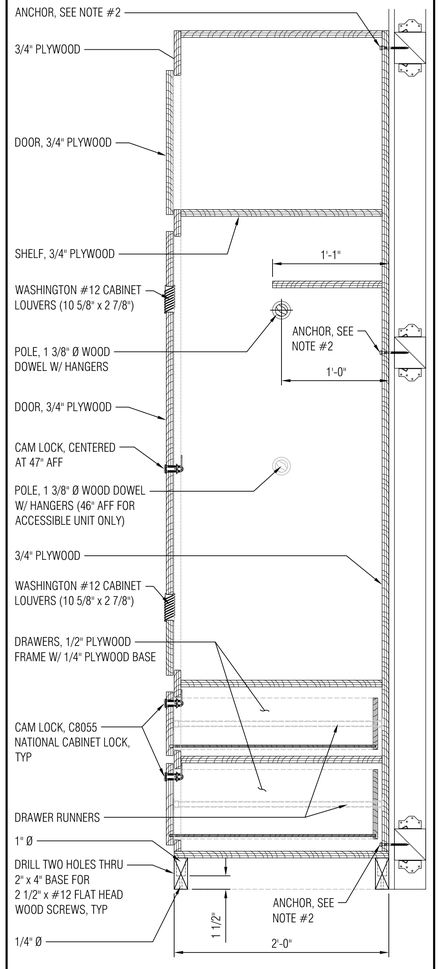
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PLOT DATE: Jun 19, 2023 - 7:10AM
VER: 2020



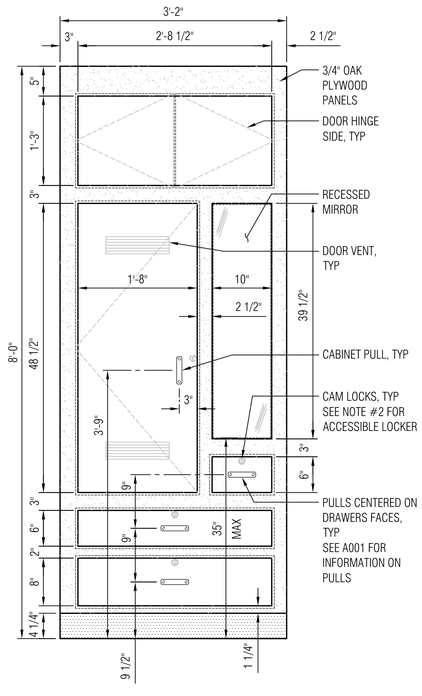
LOCKER - SIDE SECTION — SCALE: 1 1/2" = 1-0" — 4



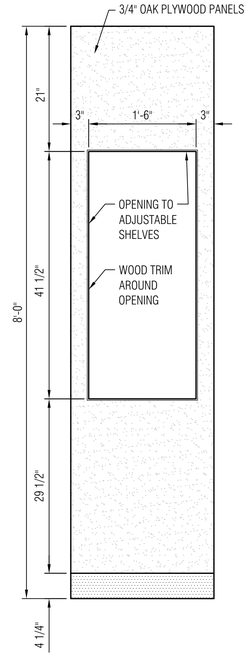
LOCKER - FRONT SECTION — SCALE: 1 1/2" = 1-0" — 3



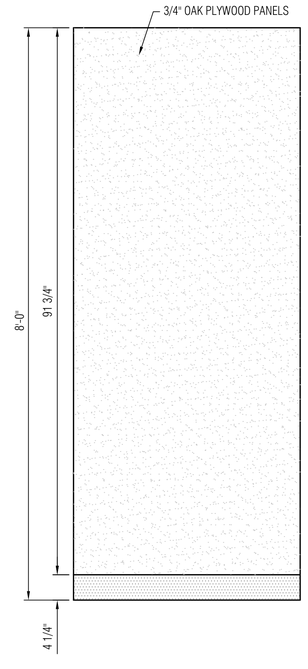
LOCKER - SIDE SECTION — SCALE: 1 1/2" = 1-0" — 2



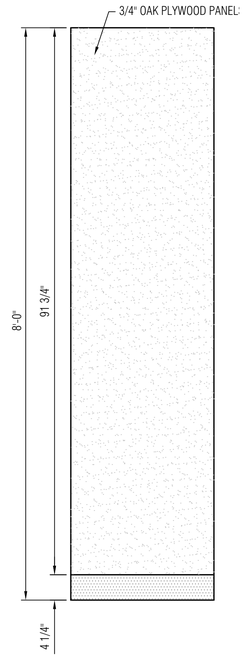
FRONT SIDE



RIGHT SIDE



BACK SIDE

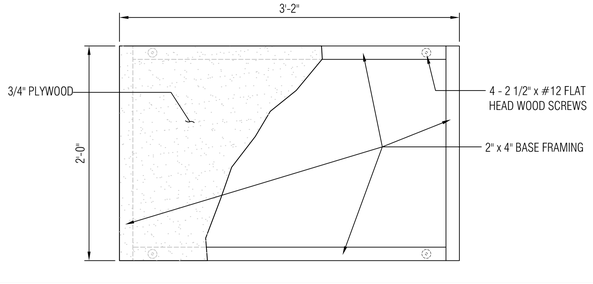


LEFT SIDE

PANEL CUT - DIMENSIONS — SCALE: 1" = 1'-0" — 1

GENERAL SHEET NOTES

1. ONE LOCKER UNIT IN THE BARRACKS BUILDING MUST HAVE CLOTHES HANGING POLE LOCATION 46" FROM THE FINISH FLOOR TO TOP OF DOWEL. POLE AT ACCESSIBLE HEIGHT SHALL BE MOUNTED TO BE REMOVABLE. THIS SAME LOCKER SHALL HAVE ALL CAM LOCKS CHANGED TO PADLOCKABLE CAM CABINET LOCK HASP.
2. 3 ROWS WITH EACH ROW HAVING 4 ANCHORS TO 4x4 BLOCKING, SEE DETAIL #14 / A504 FOR BLOCKING DETAIL. ONE ROW 5" FROM FINISHED FLOOR, ONE ROW 5'-0" FROM FINISHED FLOOR AND ONE ROW AT TOP OF LOCKERS. ANCHOR TO BLOCKING WITH SDS 1/4" x 3" SCREW, 2" FROM EDGES AND 12" OC MAX IN BETWEEN.
3. FABRICATOR OF THE LOCKERS SHALL COORDINATE WITH OTHERS FOR RECESSED MIRRORS IF THEY THEMSELVES ARE NOT PROVIDING THE MIRRORS.
4. FIELD VERIFY ALL DIMENSIONS.
5. COORDINATE WITH ALL POSSIBLE OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES AND SMOKE DETECTORS.
6. DIMENSIONS INDICATED AS "MIN. CLR." ARE TO FACE OF FINISH.
7. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
8. ALL CASEWORK SHELVING TO BE ADJUSTABLE UNLESS OTHERWISE NOTED.
9. SEE SHEET A500 FOR ADDITIONAL ACCESSIBLE CLEARANCES.
10. SEE SHEET A001 FOR CABINETRY & SHELVING CONSTRUCTION MATERIALS.
11. CABINETS SHALL BE PAINTED AS INDICATED ON BEDROOM INTERIOR ELEVATIONS



LOCKER - BASE PLAN — SCALE: 1 1/2" = 1-0" — 5

DSA Approval

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APP: 02-121081 INC:
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SS ☐ FLS ☐ ACS ☑
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1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
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REVISIONS

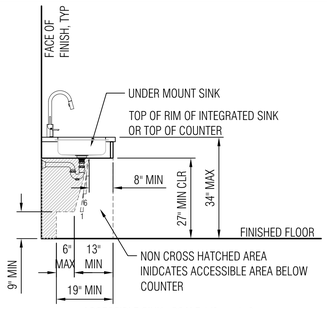
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DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: -

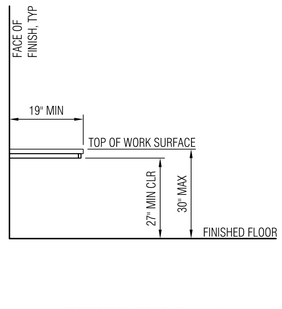
SHEET TITLE:
BEDROOM LOCKER PLAN AND DETAILS

SHEET NUMBER
A405
V3

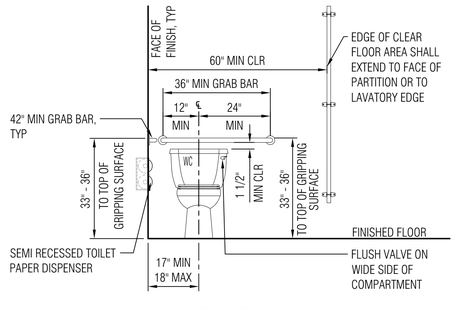
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VER. 2020



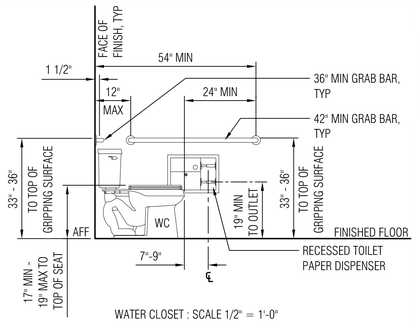
ACCESSIBLE SINK : SCALE 1/2" = 1'-0"



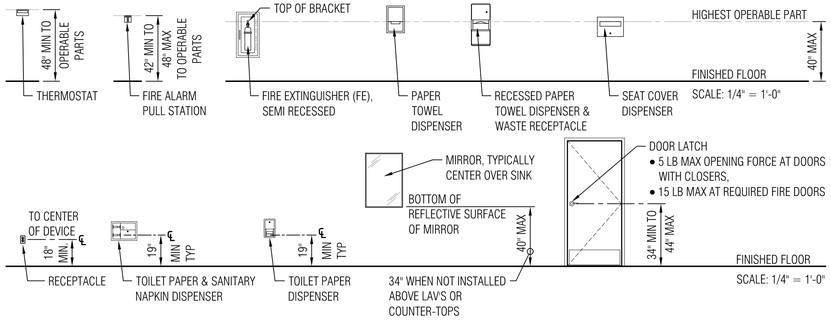
WORK STATION : SCALE 1/2" = 1'-0"



WATER CLOSET : SCALE 1/2" = 1'-0"



WATER CLOSET : SCALE 1/2" = 1'-0"

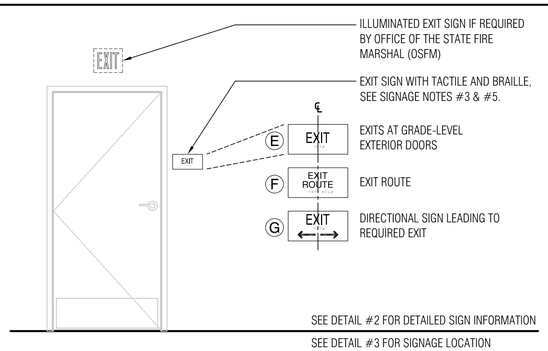


MOUNTING HEIGHTS & CLEARANCES NOTES

1. FAUCET CONTROLS & OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO MORE THAN 5 LBS. LEVER OPERATED, PUSH TYPE & ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE. SELF CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
2. WATER SUPPLY & DRAIN PIPES BELOW ACCESSIBLE SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS IN THIS AREA BELOW SINK.
3. BLOCKING IS REQUIRED FOR INSTALLATION OF GRAB BARS, SEE DETAIL #9 / A504.
4. ALL DISPENSERS SHALL BE INSTALLED @ +40" MAX. TO HIGHEST OPERABLE PART (UNO).
5. SEE ELECTRICAL SHEETS MOUNTING ELECTRICAL AND FIRE ALARM DEVICES.
6. CLEARANCE AROUND ACCESSIBLE WATER CLOSETS AND IN TOILET COMPARTMENTS SHALL BE 60 INCHES MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56 INCHES MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL PER CBC SECTION 11B-604.3.1.
7. HEIGHTS AND LOCATION OF ALL ACCESSIBLE FIXTURES SHALL BE MOUNTED ACCORDING TO CBC SECTION 11B-602 THROUGH 11B-612.

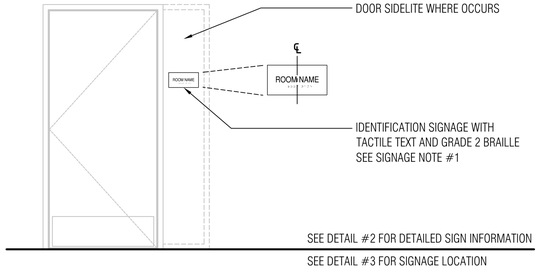
ACCESSIBILITY MOUNTING HEIGHTS & CLEARANCES

SCALE: AS NOTED | 1



REQUIRED EXIT DOOR SIGNAGE

SCALE: 1/2" = 1'-0" | 7



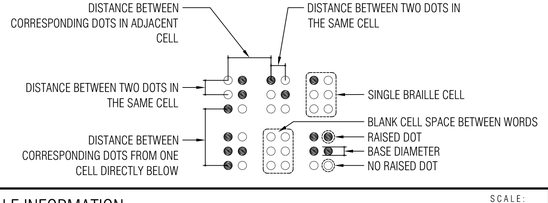
ROOM IDENTIFICATION SIGNAGE

SCALE: 1/2" = 1'-0" | 8

CBC TABLE 11B-703.3.1 BRAILLE DIMENSIONS

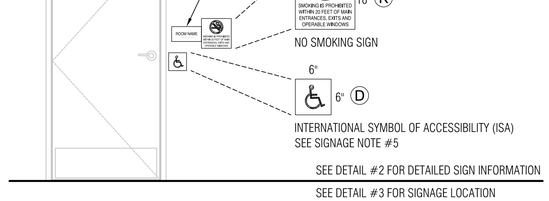
MEASURMENT RANGE	MINIMUM INCHES MAXIMUM INCHES
DOT BASE DIAMETER	0.059 (1.5 mm) TO 0.063 (1.6 mm)
DISTANCE BETWEEN TWO DOTS IN THE SAME CELL	0.100 (2.5 mm)
DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELL	0.300 (7.6 mm)
DOT HEIGHT	0.025 (0.6 mm) TO 0.037 (0.9 mm)
DISTANCE BETWEEN CORRESPONDING DOTS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

CBC FIGURE 11B-703.3.1 BRAILLE MEASUREMENT



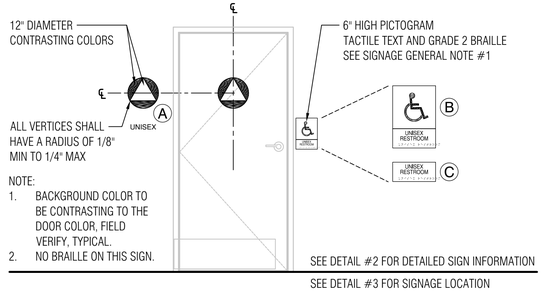
BRAILLE INFORMATION

SCALE: NOT TO SCALE | 9



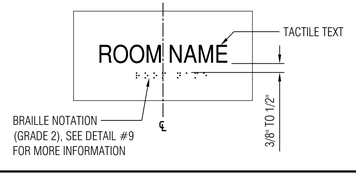
BUILDING ENTRANCE / ISA SIGNAGE

SCALE: 1/2" = 1'-0" | 4



RESTROOM SIGNAGE

SCALE: 1/2" = 1'-0" | 5



SIGNAGE

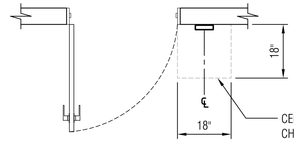
SCALE: 3" = 1'-0" | 6

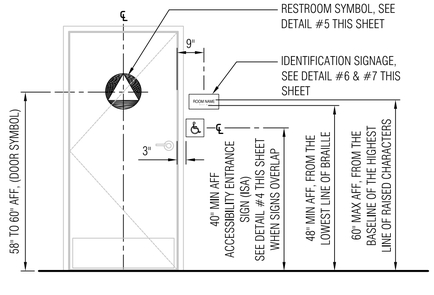
CBC 2022 SECTION 11B-703.4 INSTALLATION HEIGHT AND LOCATION:

WHERE PERMANENT IDENTIFICATION SIGNS ARE PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT.

WHERE PERMANENT IDENTIFICATIONS SIGNAGE IS PROVIDED FOR ROOMS AND SPACES THEY SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE ENTERS THE ROOM OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE EXITS THE ROOM OR SPACE.

SIGNS WITH RAISED CHARACTERS AND BRAILLE SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST LINE OF BRAILLE AND 60 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF THE RAISED CHARACTERS. MOUNTING LOCATION SHALL BE DETERMINED SO THAT A PERSON MAY APPROACH WITHIN 3 INCHES OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.



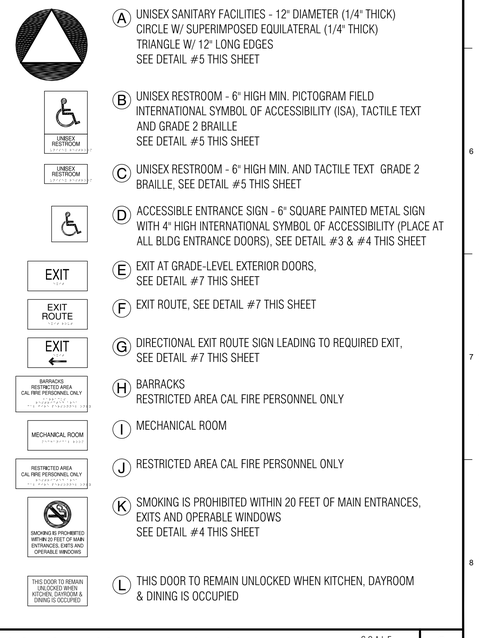


TYPICAL SIGN LOCATION

SCALE: 1/2" = 1'-0" | 3

SIGNAGE NOTES

1. ALL SIGNS TO HAVE TACTILE TEXT AND GRADE 2 BRAILLE SIZED PROPORTIONATE TO TEXT FIELD UNO. ALL UPPER CASE TEXT 5/8" TO 2" IN HEIGHT, RAISED 1/32" CONTRACTED GRADE 2 BRAILLE DIRECTLY BELOW SEE DETAIL 6 THIS SHEET.
2. SIGNS AND IDENTIFICATION SHALL COMPLY WITH CBC 2022 DIVISION 7 COMMUNICATION ELEMENTS AND FEATURES.
3. EXIT SIGNS SHALL COMPLY WITH CBC 2022 SECTION 1013.
4. SMALL TEXT BELOW TACTILE TEXT IS FOR GRAPHIC REPRESENTATION ONLY, VERIFY CORRECT GRADE BRAILLE NOTATION, TYPICAL AT ALL SIGNS. SEE DETAIL 6 THIS SHEET.
5. INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH CBC 2022 11B-703.7.2.1.
6. ALL SYMBOL EDGES SHALL BE EASED TO 1/16" OR CHAMFERED 1/8".
7. SUBMIT TYPICAL SIGN FOR APPROVAL.



SIGNAGE / ROOM IDENTIFICATION

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

DSA Approval

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REGISTERED PROFESSIONAL ENGINEER
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C 90716
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REVISIONS

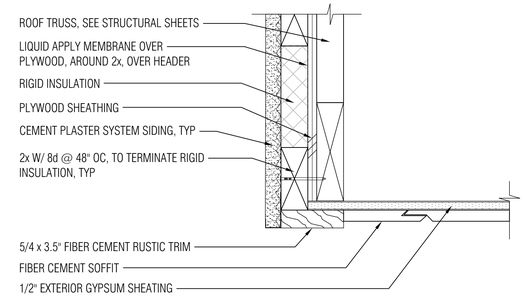
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DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

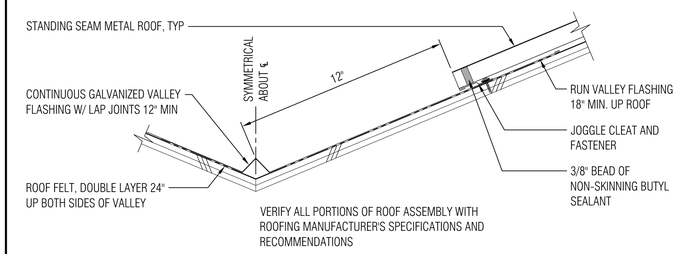
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ACCESSIBILITY MOUNTING HEIGHTS, CLEARANCES AND SIGNAGE

SHEET NUMBER
A500
V3

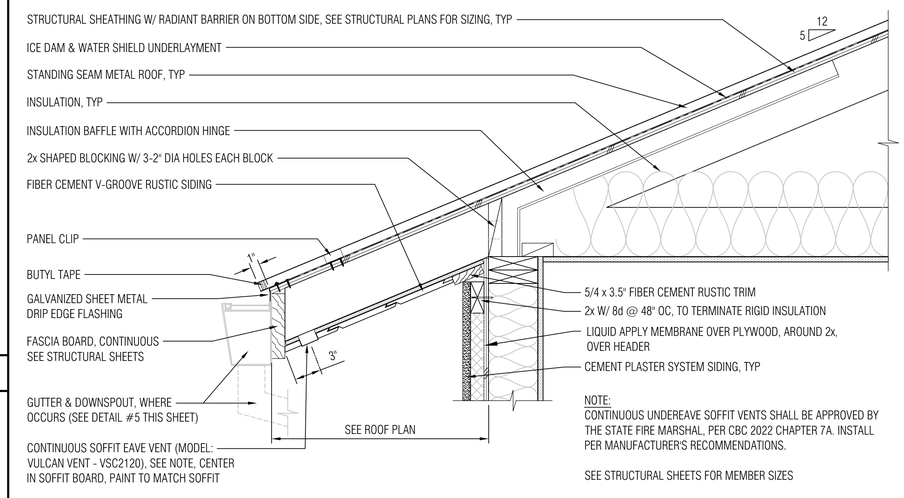
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VER. 2020



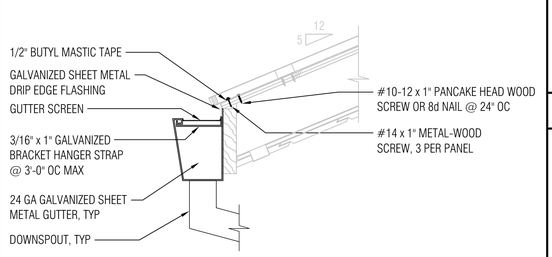
PORCH SOFFIT AT PORCH GABLE — SCALE: 3" = 1'-0" — 8



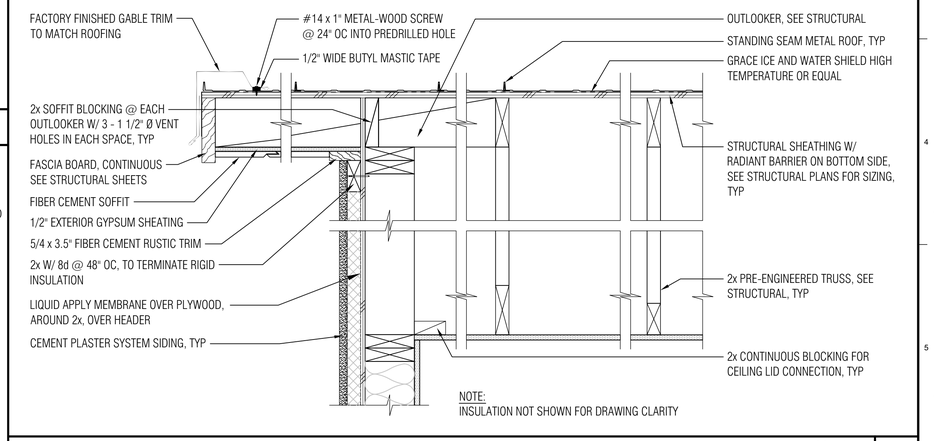
TYPICAL VALLEY SECTION — SCALE: 3" = 1'-0" — 4



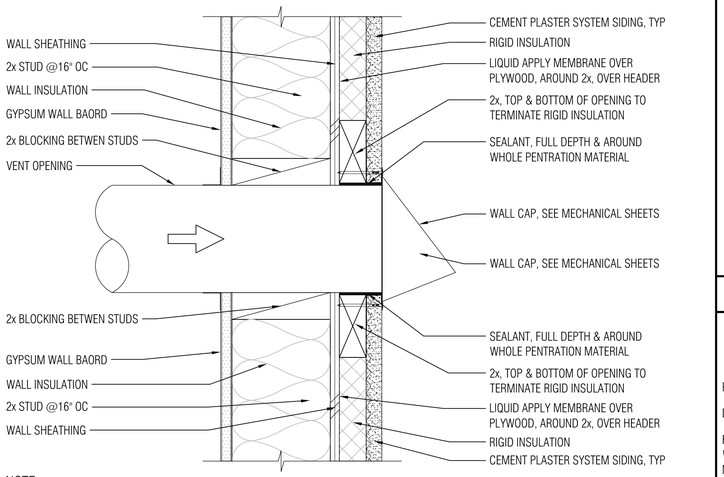
TYPICAL EAVE — SCALE: 1 1/2" = 1'-0" — 1



GUTTER & DOWNSPOUT @ EAVE — SCALE: 1 1/2" = 1'-0" — 5

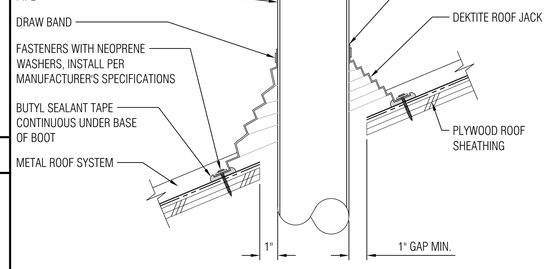


TYPICAL RAKE — SCALE: 1 1/2" = 1'-0" — 2



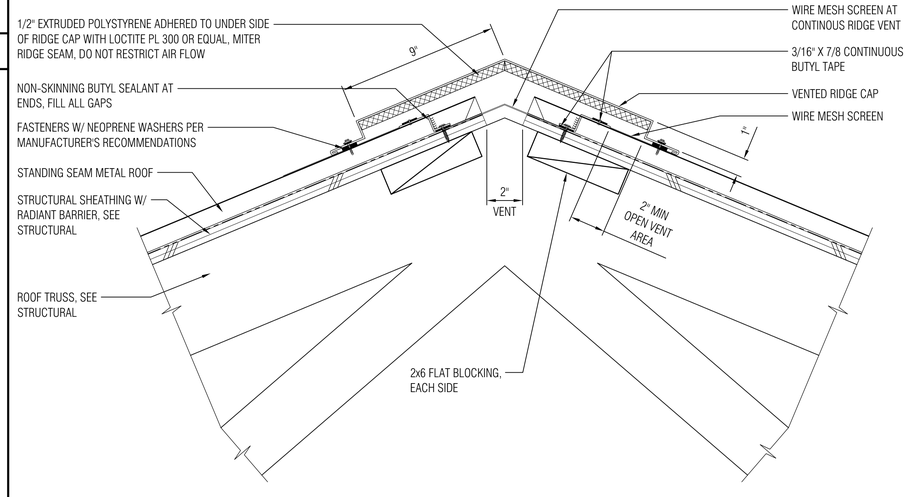
NOTE:
DETAIL CAN BE USED IN ANY TYPICAL SITUATION WHERE OPENING IS REQUIRED THROUGH THE EXTERIOR WALL FOR MECHANICAL, PLUMBING OR ELECTRICAL COMPONENT UNLESS OTHERWISE NOTED.

OPENING THROUGH EXTERIOR WALL — SCALE: 3" = 1'-0" — 9

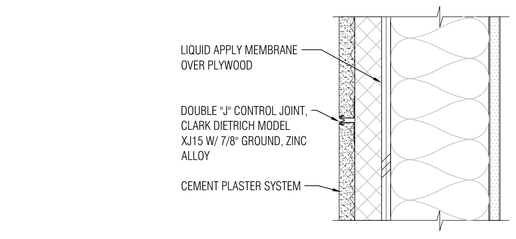


NOTE:
1. VERIFY ALL PORTIONS OF ASSEMBLY WITH ROOF MANUFACTURER
2. CENTER ALL PENETRATIONS BETWEEN STANDING SEAMS, NEVER CUT INTO OR FLASH OVER ROOF SEAMS.

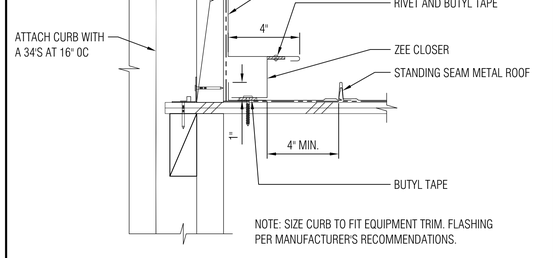
ROOF PENETRATION — SCALE: 3" = 1'-0" — 6



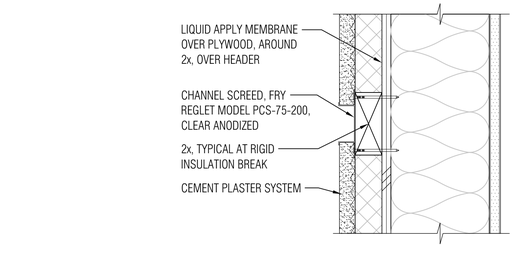
TYPICAL RIDGE — SCALE: 3" = 1'-0" — 3



CEMENT PLASTER CONTROL JOINT — SCALE: 3" = 1'-0" — 10



EQUIPMENT CURB AT ROOF — SCALE: 3" = 1'-0" — 7



CEMENT PLASTER CHANNEL SCREED — SCALE: 3" = 1'-0" — 11

DSA Approval

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C 90716
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REVISIONS

NO.	DATE	DESCRIPTION

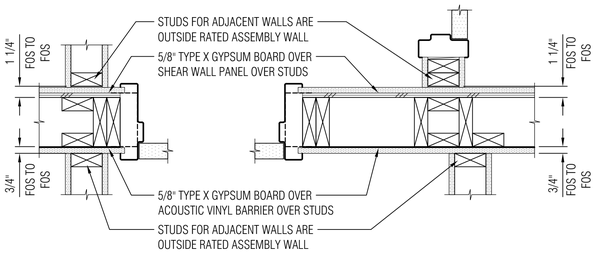
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DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

SHEET TITLE:
ARCHITECTURAL DETAILS

SHEET NUMBER
A501
V3

PROJECT PATH: I:\PROJECT\Major Cap Projects\421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A501.dwg
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VER 2020

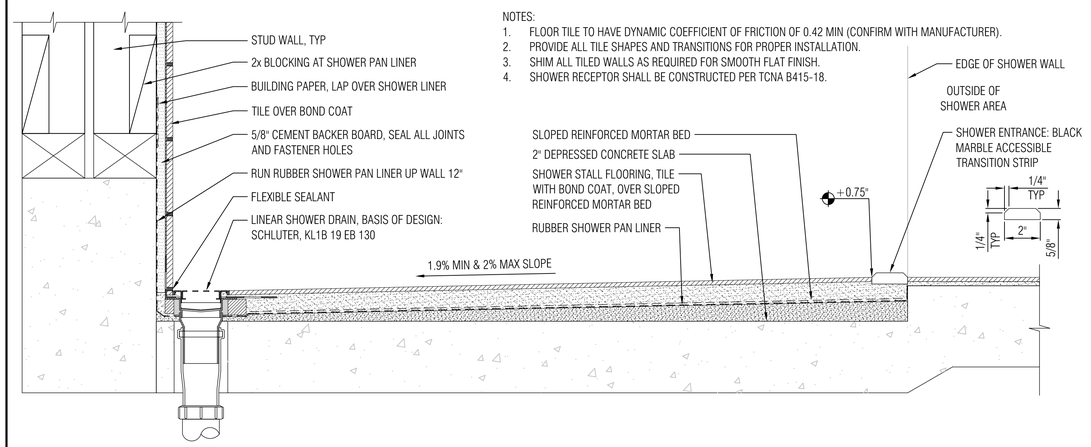
NOTE: WIDTH BETWEEN WALLS FOR HALL 2 AND HALL 3 ARE DIFFERENT, SEE SHEET A101 FOR DIMENSIONS



MINERAL FIBER INSULATION NOT SHOWN FOR DRAWING CLARITY

WALLS ADJACENT TO RATED ASSEMBLY WALL

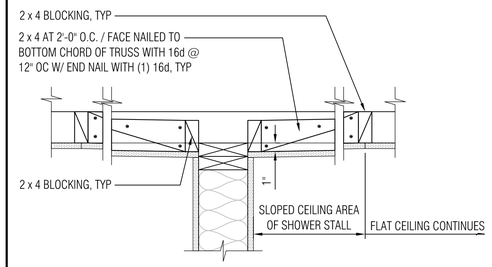
SCALE: 1 1/2" = 1'-0" | 11



NOTES:
1. FLOOR TILE TO HAVE DYNAMIC COEFFICIENT OF FRICTION OF 0.42 MIN (CONFIRM WITH MANUFACTURER).
2. PROVIDE ALL TILE SHAPES AND TRANSITIONS FOR PROPER INSTALLATION.
3. SHIM ALL TILED WALLS AS REQUIRED FOR SMOOTH FLAT FINISH.
4. SHOWER RECEPTOR SHALL BE CONSTRUCTED PER TCNA B415-18.

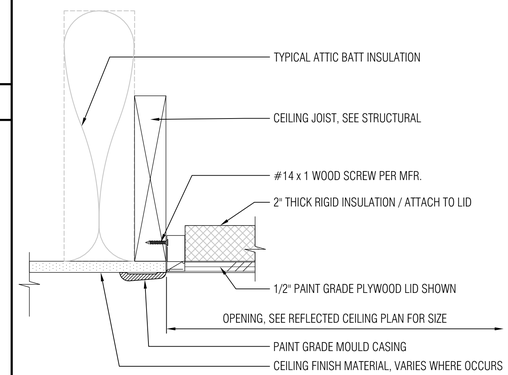
TILE SHOWER

SCALE: 3" = 1'-0" | 5



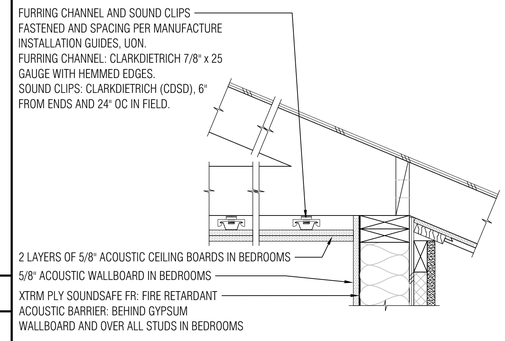
SLOPED CEILING AT SHOWERS

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



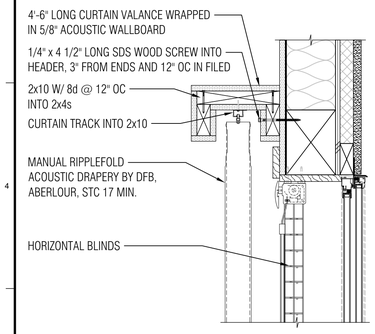
ATTIC ACCESS PANEL

SCALE: 3" = 1'-0" | 2



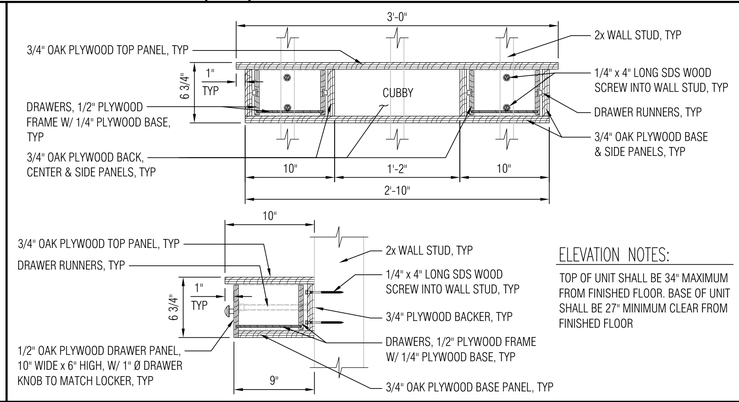
BEDROOM CEILING AND WALL - ACOUSTICS

SCALE: 1 1/2" = 1'-0" | 3



ACOUSTIC CURTAINS

SCALE: 1 1/2" = 1'-0" | 12

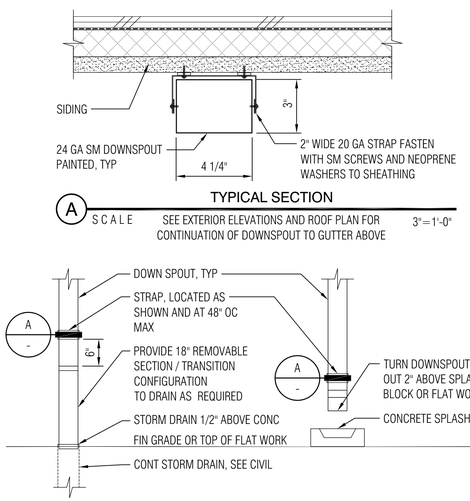


ELEVATION NOTES:

TOP OF UNIT SHALL BE 34" MAXIMUM FROM FINISHED FLOOR. BASE OF UNIT SHALL BE 27" MINIMUM CLEAR FROM FINISHED FLOOR

SHELF, DRAWERS & CUBBY UNIT

SCALE: 1 1/2" = 1'-0" | 8



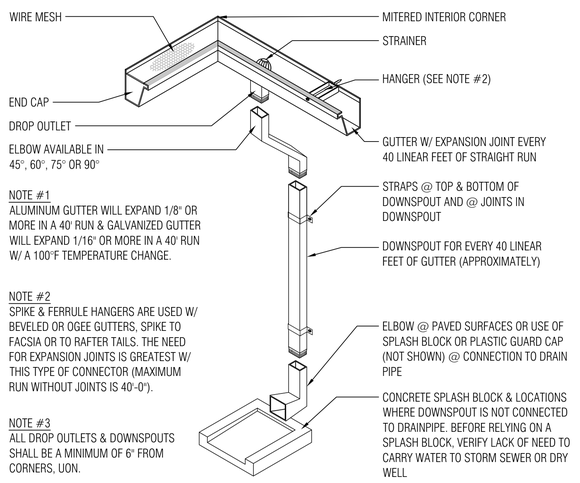
A SCALE TYPICAL SECTION — SEE EXTERIOR ELEVATIONS AND ROOF PLAN FOR CONTINUATION OF DOWNSPOUT TO GUTTER ABOVE — 3"=1'-0"

B DS/1 TYPE TERMINATION — SCALE 3/4"=1'-0" — (AT STORM DRAIN CONDITION)

C DS/2 TYPE TERMINATION — SCALE 3/4"=1'-0" — (AT SURFACE RUN OFF CONDITION)

GUTTER & DOWNSPOUT

SCALE: AS NOTED | 6



NOTE #1
ALUMINUM GUTTER WILL EXPAND 1/8" OR MORE IN A 40' RUN & GALVANIZED GUTTER WILL EXPAND 1/16" OR MORE IN A 40' RUN W/ A 100°F TEMPERATURE CHANGE.

NOTE #2
SPIKE & FERRULE HANGERS ARE USED W/ BEVELED OR OGEE GUTTERS, SPIKE TO FACSIA OR TO RAFTER TAILS. THE NEED FOR EXPANSION JOINTS IS GREATEST W/ THIS TYPE OF CONNECTOR (MAXIMUM RUN WITHOUT JOINTS IS 40'-0").

NOTE #3
ALL DROP OUTLETS & DOWNSPOUTS SHALL BE A MINIMUM OF 6" FROM CORNERS, UON.

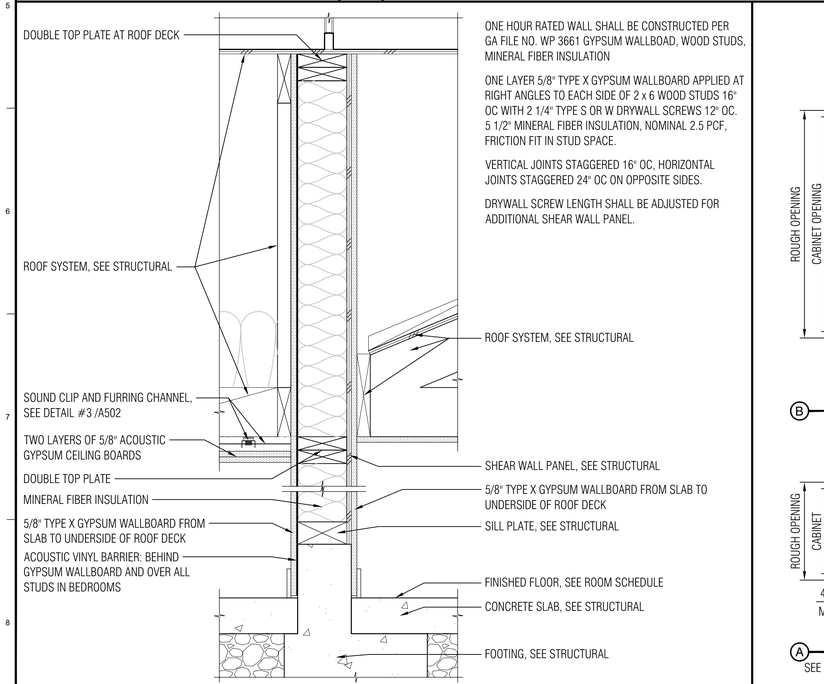
GUTTER & DOWNSPOUT

SCALE: 3/4" = 1'-0" | 7

TEXT AND SYMBOLS ON SIGN SHALL BE PRINTED WITH 3M OUTDOOR DIGITAL INKS DESIGNED SPECIFICALLY FOR OUTDOOR TRAFFIC AND PROPERTY SIGNS.

DESIGNATED SMOKING AREA SIGN

SCALE: 1 1/2" = 1'-0" | 4



ONE HOUR RATED WALL SHALL BE CONSTRUCTED PER GA FILE NO. WP 3661 GYPSUM WALLBOAD, WOOD STUDS, MINERAL FIBER INSULATION

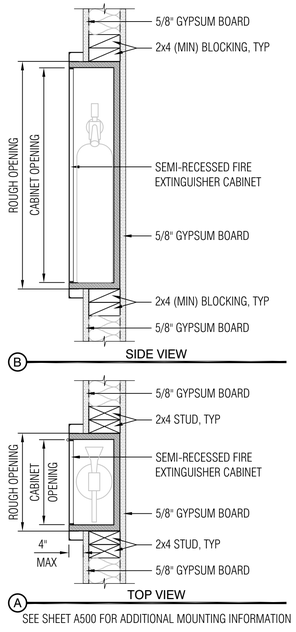
ONE LAYER 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO EACH SIDE OF 2 x 6 WOOD STUDS 16" OC WITH 2 1/4" TYPE S OR W DRYWALL SCREWS 12" OC. 5 1/2" MINERAL FIBER INSULATION, NOMINAL 2.5 PCF, FRICTION FIT IN STUD SPACE.

VERTICAL JOINTS STAGGERED 16" OC, HORIZONTAL JOINTS STAGGERED 24" OC ON OPPOSITE SIDES.

DRYWALL SCREW LENGTH SHALL BE ADJUSTED FOR ADDITIONAL SHEAR WALL PANEL.

ONE HOUR RATED WALL - FOOTING TO ROOF DECK

SCALE: 1 1/2" = 1'-0" | 10



SEE SHEET A500 FOR ADDITIONAL MOUNTING INFORMATION

SEMI-RECESSED FE CABINET

SCALE: 1 1/2" = 1'-0" | 9

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — R. E. ECCLESTON — C 90716 — CIVIL — STATE OF CALIFORNIA

REVISIONS

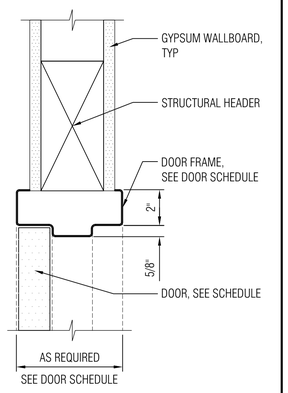
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

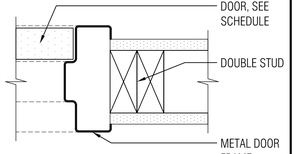
SHEET TITLE:
ARCHITECTURAL DETAILS

SHEET NUMBER
A502
V3

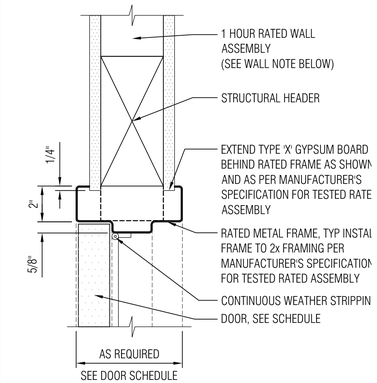
VER 2020
PROJECT PATH: I:\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A502.dwg
PLOT DATE: May 08, 2024 - 1:52PM



NON RATED DOOR HEAD — SCALE: 3" = 1'-0" — 20

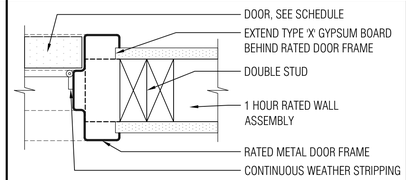


NON RATED DOOR JAMB — SCALE: 3" = 1'-0" — 21

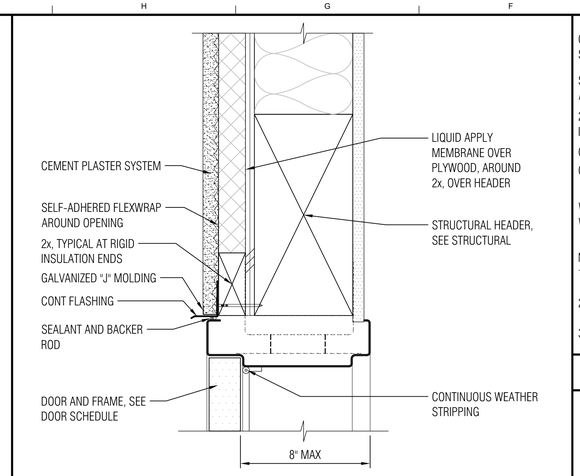


WALL NOTE: SEE SHEET A101 FOR WALL TYPES & REFERENCES TO CORRESPONDING DETAILS

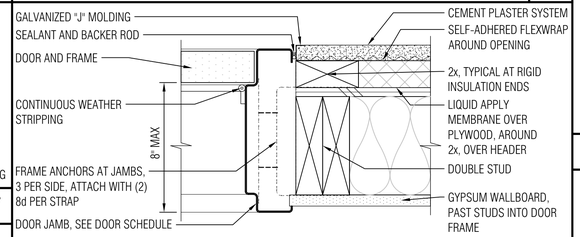
RATED STEEL DOOR HEAD — SCALE: 3" = 1'-0" — 16



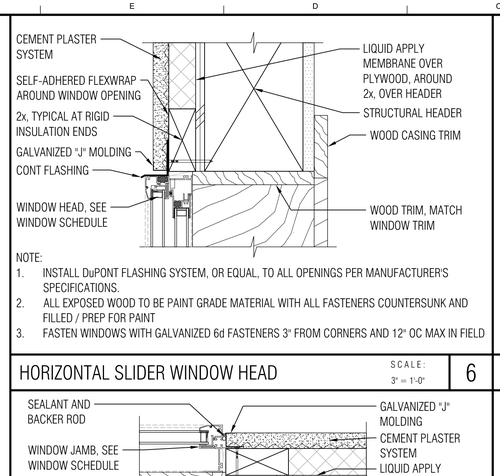
RATED STEEL DOOR JAMB — SCALE: 3" = 1'-0" — 17



EXTERIOR STEEL DOOR HEAD — SCALE: 3" = 1'-0" — 11

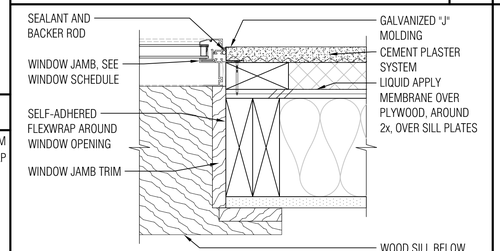


EXTERIOR STEEL DOOR JAMB — SCALE: 3" = 1'-0" — 12

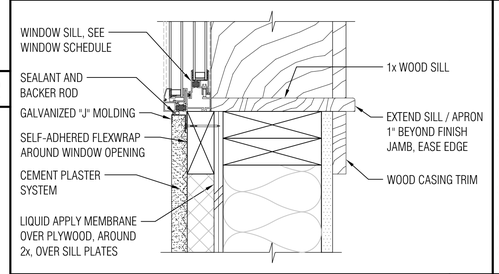


NOTE:
1. INSTALL DuPONT FLASHING SYSTEM, OR EQUAL, TO ALL OPENINGS PER MANUFACTURER'S SPECIFICATIONS.
2. ALL EXPOSED WOOD TO BE PAINT GRADE MATERIAL WITH ALL FASTENERS COUNTERSUNK AND FILLED / PREP FOR PAINT
3. FASTEN WINDOWS WITH GALVANIZED 6d FASTENERS 3" FROM CORNERS AND 12" OC MAX IN FIELD

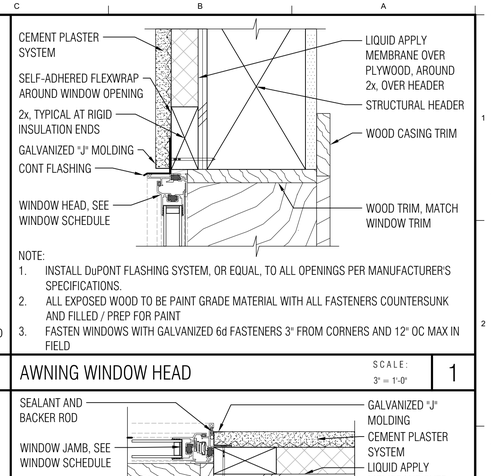
HORIZONTAL SLIDER WINDOW HEAD — SCALE: 3" = 1'-0" — 6



HORIZONTAL SLIDER WINDOW JAMB — SCALE: 3" = 1'-0" — 7

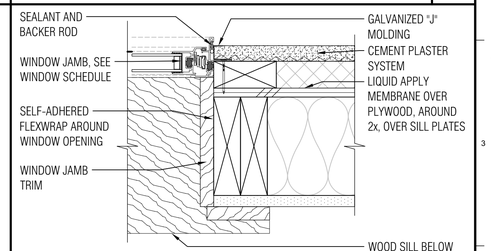


HORIZONTAL SLIDER WINDOW SILL — SCALE: 3" = 1'-0" — 8

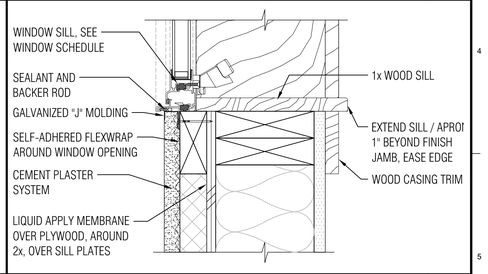


NOTE:
1. INSTALL DuPONT FLASHING SYSTEM, OR EQUAL, TO ALL OPENINGS PER MANUFACTURER'S SPECIFICATIONS.
2. ALL EXPOSED WOOD TO BE PAINT GRADE MATERIAL WITH ALL FASTENERS COUNTERSUNK AND FILLED / PREP FOR PAINT
3. FASTEN WINDOWS WITH GALVANIZED 6d FASTENERS 3" FROM CORNERS AND 12" OC MAX IN FIELD

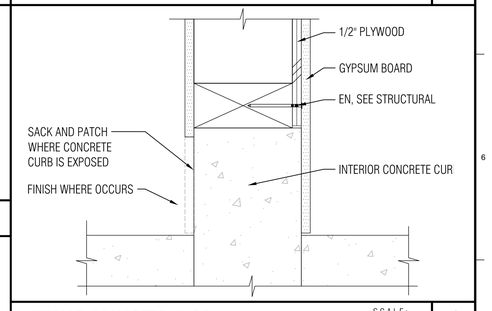
AWNING WINDOW HEAD — SCALE: 3" = 1'-0" — 1



AWNING WINDOW JAMB — SCALE: 3" = 1'-0" — 2



AWNING WINDOW SILL — SCALE: 3" = 1'-0" — 3



INTERIOR CONCRETE CURB — SCALE: 3" = 1'-0" — 4

TYPICAL EXTERIOR WALL AT FOOTING — SCALE: 3" = 1'-0" — 18

EXTERIOR DOOR THRESHOLD — SCALE: 3" = 1'-0" — 13

INTERIOR DOOR THRESHOLD — SCALE: 6" = 1'-0" — 14

NOT IN USE — SCALE: NOT TO SCALE — 9

LOUVER IN WALL — EXTERIOR LOUVERS SHALL COMPLY WITH OSFM REQUIREMENTS AND 2022 CBC CHAPTER 7A — SCALE: 3" = 1'-0" — 19

LOUVER IN ATTIC — EXTERIOR LOUVERS SHALL COMPLY WITH OSFM REQUIREMENTS AND 2022 CBC CHAPTER 7A — SCALE: 3" = 1'-0" — 15

SIDING TRIM DETAILS — SCALE: 3" = 1'-0" — 10

WOOD TRIM AT SIDING — SCALE: 3" = 1'-0" — 5

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .
SHEET TITLE:
ARCHITECTURAL DETAILS

SHEET NUMBER
A503
V3

PROJECT PATH: C:\Users\mheintz\appdata\local\temp\AcPublish_24568\24421A503.dwg
PLOT DATE: Jul 19, 2023 - 12:33PM
VER 2020

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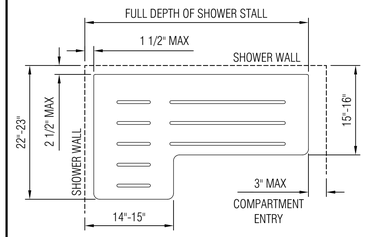
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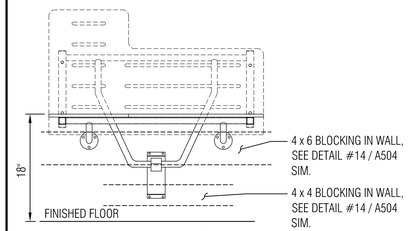
SCALE: NOT TO SCALE | 8

FOLDING SEAT

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

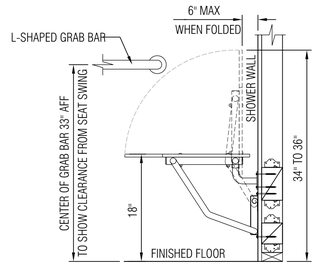


A PLAN VIEW

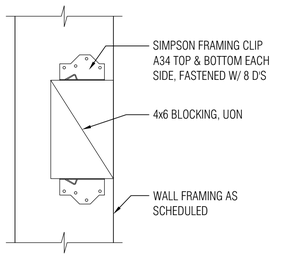


B FRONT VIEW

NOTE: THE STRUCTURAL STRENGTH OF SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES SHALL COMPLY WITH CBC 11B-610.4 (WITHSTAND MINIMUM OF 250 POUNDS LOAD). FASTENERS PER MFR.



C SIDE VIEW



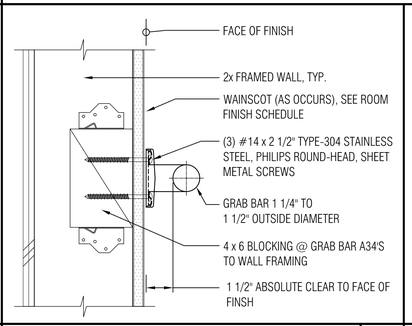
NOTE:
FOR VERTICAL PIPE AND MECHANICAL ITEMS, ARRANGE BLOCKING IN WALL AT 24", 72" AND 96" ABOVE FINISHED FLOOR

STANDARD BLOCKING

SCALE: 3" = 1'-0" | 14

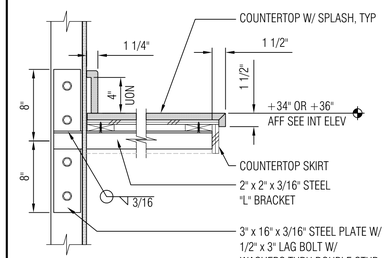
NOT IN USE

SCALE: N.T.S. | 12



GRAB BAR

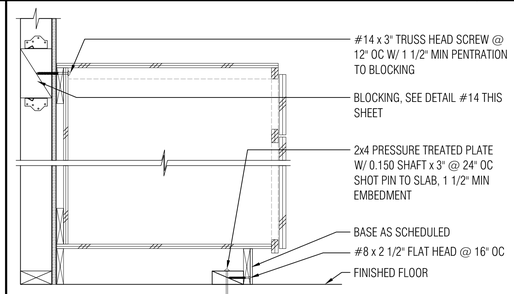
SCALE: 3" = 1'-0" | 9



NOTE:
LOCATE COUNTER SUPPORTS AT 48" OC MAX, WITHIN 2" OF FREE ENDS. COORDINATE CLEARANCES WITH SINKS AND ALL PLUMBING

WALL MOUNTED COUNTERTOP

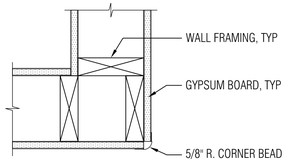
SCALE: 1 1/2" = 1'-0" | 5



NOTE: ANCHORING FOR ALL CABINETS, SHELVING AND LOCKERS SIM.

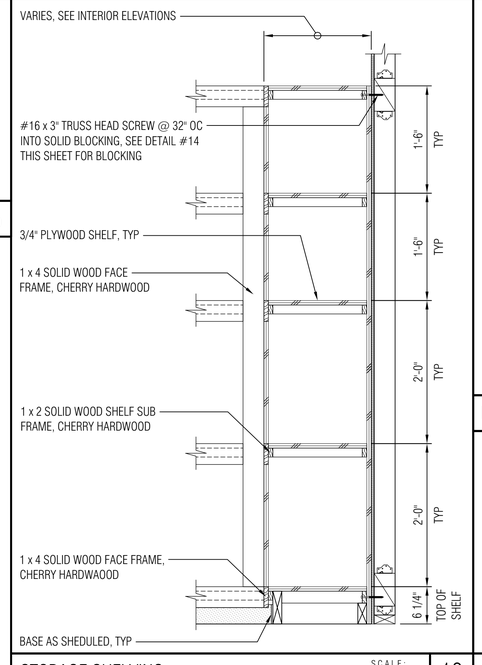
BASE CABINET ANCHORAGE

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



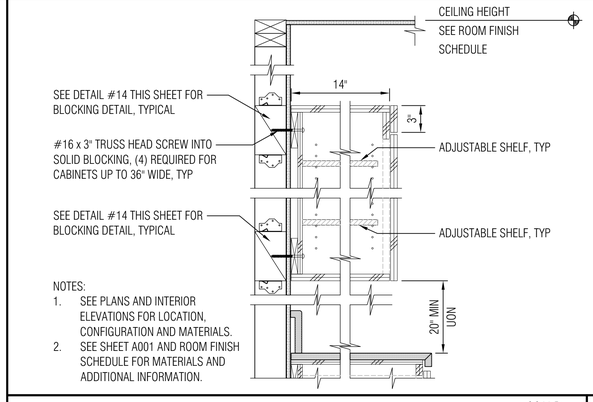
INTERIOR WALL CORNER

SCALE: 2" = 1'-0" | 15



STORAGE SHELVING

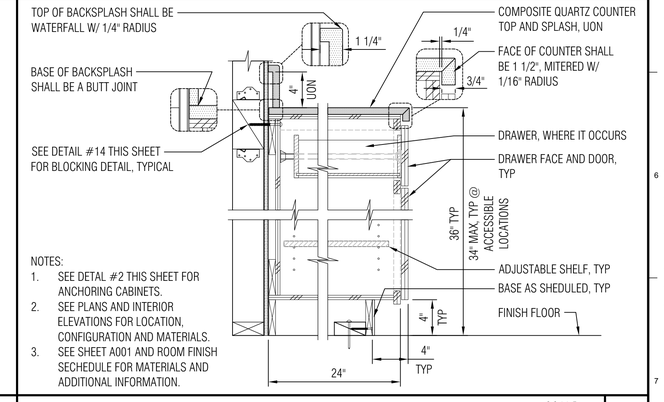
SCALE: 1" = 1'-0" | 13



NOTES:
1. SEE PLANS AND INTERIOR ELEVATIONS FOR LOCATION, CONFIGURATION AND MATERIALS.
2. SEE SHEET A001 AND ROOM FINISH SCHEDULE FOR MATERIALS AND ADDITIONAL INFORMATION.

UPPER CABINET

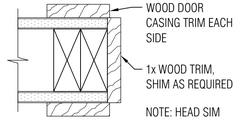
SCALE: 1 1/2" = 1'-0" | 6



NOTES:
1. SEE DETAL #2 THIS SHEET FOR ANCHORING CABINETS.
2. SEE PLANS AND INTERIOR ELEVATIONS FOR LOCATION, CONFIGURATION AND MATERIALS.
3. SEE SHEET A001 AND ROOM FINISH SECHEDULE FOR MATERIALS AND ADDITIONAL INFORMATION.

BASE CABINET

SCALE: 1 1/2" = 1'-0" | 3

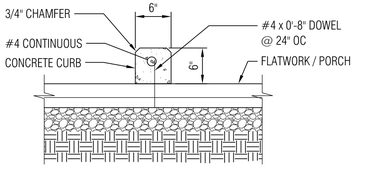


CASED OPENING JAMB

SCALE: 3" = 1'-0" | 10

NOT IN USE

SCALE: N.T.S. | 7



CONCRETE CURB

SCALE: 1" = 1'-0" | 4

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

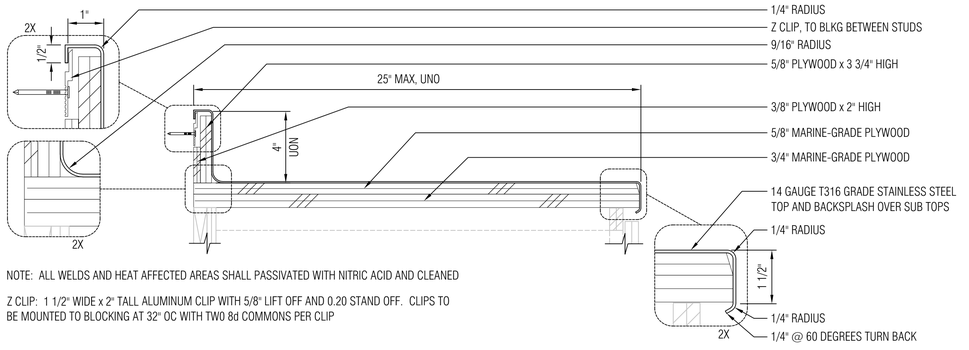
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

SHEET TITLE:
ARCHITECTURAL DETAILS

SHEET NUMBER
A504
V3

PROJECT PATH: I:\PROJECT\Major Crgt Projects\421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\D421A504.dwg
PLOT DATE: Jul 16, 2023 - 10:54AM
VER: 2020



NOTE: ALL WELDS AND HEAT AFFECTED AREAS SHALL PASSIVATED WITH NITRIC ACID AND CLEANED

Z CLIP: 1 1/2" WIDE x 2" TALL ALUMINUM CLIP WITH 5/8" LIFT OFF AND 0.20 STAND OFF. CLIPS TO BE MOUNTED TO BLOCKING AT 32" OC WITH TW0 8d COMMONS PER CLIP

STAINLESS STEEL COUNTERTOPS AND BACKSPLASH

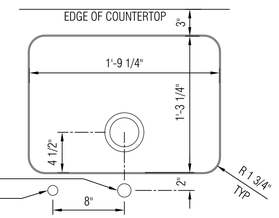
SCALE: 3" = 1'-0" | 1

SEE PLUMBING SCHEDULE FOR FAUCET AND DRAIN.

HOLE FOR DRAIN SHALL FABRICATED AND SIZED TO ACCOMMODATE THE INSTALLATION OF "JUST J-35-316 STAINLESS STEEL DRAIN WITH CRUMB CUP STRAINER"

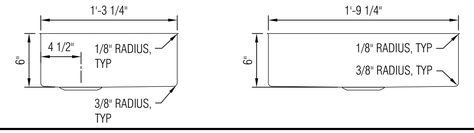
PROVIDE & INSTALL SOAP DISPENSER, MOEN S3947

PROVIDE & INSTALL SINK BOTTOM GRID, KRAUS BG2317



1 1/2" DIAMETER HOLE FOR FAUCET

1 1/8" DIAMETER HOLE FOR SOAP DISPENSER



KITCHEN INTEGRATED STAINLESS STEEL SINGLE SINK

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

HOLE IN 3/4" SUBTOP, SEE NOTE BELOW

1 1/8" DIAMETER HOLE FOR SOAP DISPENSER

1 1/2" DIAMETER HOLE FOR FAUCET

1 1/4" DIAMETER HOLE FOR AIR GAP

1 1/2" DIAMETER HOLE FOR FAUCET

1 1/8" DIAMETER HOLE FOR SOAP DISPENSER

SEE PLUMBING SCHEDULE FOR FAUCET AND DRAIN.

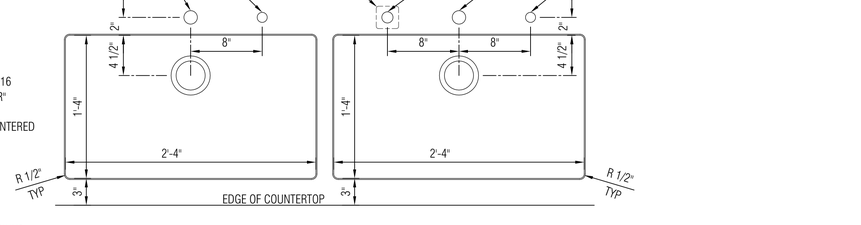
HOLE FOR DRAIN SHALL FABRICATED AND SIZED TO ACCOMMODATE THE INSTALLATION OF "JUST J-35-316 STAINLESS STEEL DRAIN WITH CRUMB CUP STRAINER"

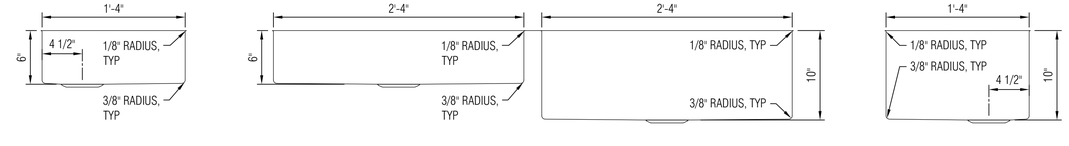
CUT HOLE IN 3/4" SUBTOP ONLY OF 2 1/2" x 2 1/2" CENTERED AT HOLE FOR AIR GAP

PROVIDE & INSTALL SOAP DISPENSER, MOEN S3947

PROVIDE & INSTALL AIR GAP, MOEN 105895CSL

PROVIDE & INSTALL SINK BOTTOM GRIDS FOR BOTH SINKS, KRAUS KBG-100-30





KITCHEN INTEGRATED STAINLESS STEEL DOUBLE SINK

SCALE: 1 1/2" = 1'-0" | 3

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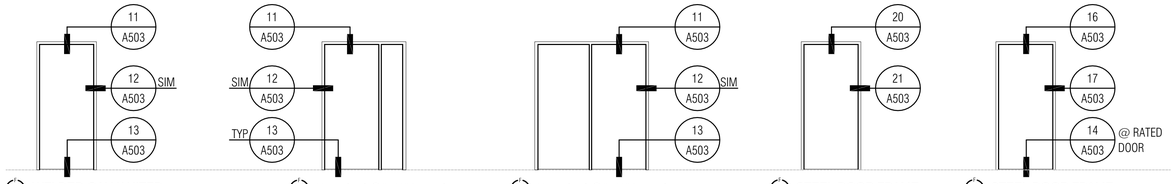
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SHEET TITLE:
ARCHITECTURAL DETAILS

SHEET NUMBER
A505
V3

PROJECT PATH: H:\PROJECTS\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\ARCHITECTURAL\2421A505.dwg
PLOT DATE: Jul 10, 2023 - 10:11AM
VER 2020



F1 WELDED GALVANIZED STEEL DOOR FRAME
EXTERIOR

F2 WELDED GALVANIZED STEEL DOOR AND SIDE LIGHT FRAME
EXTERIOR

F3 WELDED GALVANIZED STEEL DOOR AND SIDE LIGHT FRAME
EXTERIOR

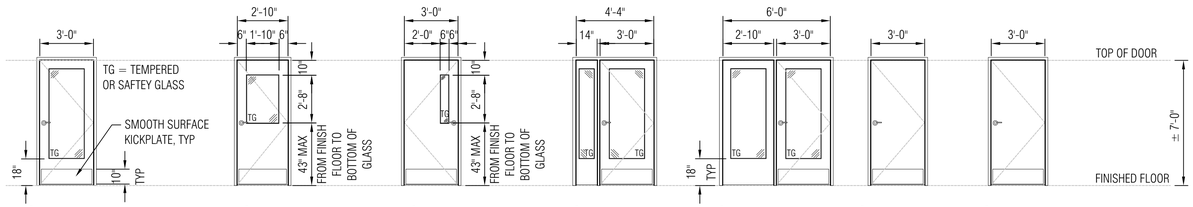
F4 STEEL DOOR FRAME

F5 STEEL DOOR FRAME

FRAME TYPES

SCALE 1/4" = 1'-0"

FRAMES SHALL BE 2" AT TOP AND SIDES (UNO), TYP



D1 FLUSH NON RATED W/ FULL GLASS

D2 FLUSH RATED W/ HALF GLASS

D3 FLUSH RATED W/ NARROW GLASS

D4 FULL GLASS W/ SIDE LITE

D5 FULL GLASS W/ SIDE LITE

D6 FLUSH NON RATED

D7 FLUSH RATED

DOOR TYPES

SCALE 1/4" = 1'-0"

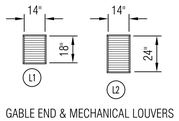
GENERAL DOOR NOTES

1. VERIFY LOCK FUNCTIONS, CYLINDERS AND KEYING WITH THE STATE REPRESENTATIVE.
2. PROVIDE ACCESSIBLE SIGNAGE AT BATHROOMS AND RESTROOMS, SEE SHEET A500. SEE SHEET A101 FOR OTHER DOOR SIGNAGE / LOCATIONS.
3. PROVIDE INSECT, FLAME AND EMBER INTRUSION PREVENTION SCREENING ON ALL DOOR LOUVERS UNLESS OTHERWISE NOTED.
4. WUI EXTERIOR DOOR ASSEMBLY : EXTERIOR GLAZED DOORS AND EXTERIOR GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATED GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE.
5. FIELD VERIFY ALL OPENINGS.
6. EXTERIOR DOORS AND FRAMES SHALL BE PAINTED TO MATCH EXTERIOR WINDOW COLOR.
7. INSTALL FRAME WITH FASTENERS EXPOSED TO INTERIOR.
8. TEMPERED WIRE GLASS TO COMPLY WITH ASTM E119 SECTION 716.2.
9. ALL RATED ASSEMBLIES SHALL BE PROVIDED WITH APPROVED GASKETING MATERIAL AND INSTALLED TO PROVIDE A SEAL WHERE THE DOOR MEETS THE STOP ON BOTH SIDES AND ACROSS THE TOP. DOOR AND FRAME SHALL BEAR AN APPROVED LABEL OR OTHER IDENTIFICATION SHOWING THE RATING THEREOF, FOLLOWED BY THE LETTER "S" PER CBC, NFPA 105 AND 252.
10. FIRE RATED DOOR FRAME SHALL BE INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS AND THE INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES PER CBC.
11. THE LEVER OF LEVER-ACTUATED LATCHES OR LOCKS MUST BE CURVED WITH A RETURN TO WITHIN 1/2 INCH OF THE DOOR TO PREVENT CATCHING ON CLOTHING OF PERSONS DURING EGRESS.
12. CBC 11B-309.4 OPERATION. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
13. CBC 11B-404.2.7 DOOR AND GATE HARDWARE. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH SECTION 11B-309.4. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
14. CBC 1010.2 DOOR OPERATIONS. EXCEPT AS SPECIFICALLY PERMITTED BY THIS SECTION, EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
15. CBC 11B-404.2.8.1 DOOR CLOSERS AND GATE CLOSERS. DOOR CLOSERS AND GATE CLOSRES SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
16. CBC 11B-404.2.8.2 SPRING HINGES. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.
17. CBC 11B-404.2.9 DOOR AND GATE OPENING FORCE. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE SHALL BE AS FOLLOWED:
    1. INTERIOR HINGED DOORS AND GATES: 5 POUNDS MAXIMUM.
    2. SLIDING OR FOLDING DOORS: 5 POUNDS MAXIMUM.
    3. REQUIRED FIRE DOORS: THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS.
    4. EXTERIOR HINGED DOORS: 5 POUNDS MAXIMUM.
18. WHERE PANIC HARDWARE IS INSTALLED, IT SHALL HAVE HARDWARE THAT IS LISTED IN ACCORDANCE WITH UL 305. THE ACTUATING PORTION OF THE RELEASING DEVICE SHALL EXTEND NOT LESS THAN ONE-HALF OF THE DOOR LEAF WIDTH. THE MAXIMUM UNLATCHING FORCE SHALL NOT EXCEED 15 POUNDS.
19. IN BUILDINGS IN OCCUPANCY GROUP A HAVING AN OCCUPANT LOAD OF 300 OR LESS, THE MAIN DOOR OR DOORS ARE PERMITTED TO BE EQUIPPED WITH KEY-OPERATED LOCKING DEVICES FROM THE EGRESS SIDE PROVIDED:
    1. THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED.
    2. A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: "*THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED*". THE SIGN SHALL BE IN LETTERS 1 INCH (25 MM) HIGH ON A CONTRASTING BACKGROUND.
    3. THE USE OF THE KEY-OPERATED LOCKING DEVICE IS REVOCABLE BY THE BUILDING OFFICIAL FOR DUE CAUSE.

DOOR SCHEDULE

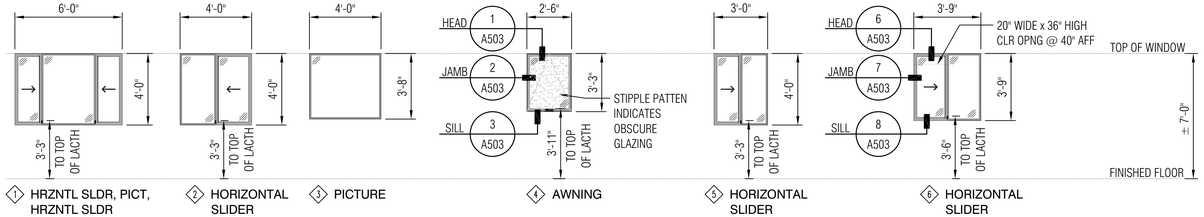
DOOR NUMBER	DOOR TYPE	DOOR								FRAME	HDWR.			REMARKS & ABBREV.
		OPENING												
		WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	SINGLE	PAIR	CORE INSULATION	FRAME TYPE	RATING	HARDWARE GROUP	CLOSURE	
1	D4	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F2	-	6	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS : PANIC HARDWARE
2	D6	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F4	-	1	-	1/2" UNDER CUT FOR THIS DOOR
3	D2	2'-10"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	2	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS
4	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
5	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
6	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
7	D7	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F1	-	5	CR	
8	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
9	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
10	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F5	20 MIN	4	CR	
11	D7	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F4	-	1	-	
12	D3	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F1	-	5	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS
13	D6	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F4	-	1	-	
14	D5	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F3	-	5	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS
15	D6	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F4	-	1	-	
16	D6	3'-0"	7'-0"	1 3/4"	SC	ST	●		-	F4	-	3	-	
17	D6	3'-0"	7'-0"	1 3/4"	SC	ST	●		-	F4	-	3	-	
18	D4	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F1	-	5	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS
19	D6	3'-0"	7'-0"	1 3/4"	SC	ST	●		-	F4	-	3	-	
20	D6	3'-0"	7'-0"	1 3/4"	SC	ST	●		-	F4	-	1	-	
21	D6	3'-0"	7'-0"	1 3/4"	SC	ST	-		-	F4	-	1	-	
22	D1	3'-0"	7'-0"	1 3/4"	GS	PC	●		IC	F1	-	6	CR	VISION PANELS - DUAL PANE 1/4" TEMPERED GLASS : PANIC HARDWARE

CR CLOSER
GS GALVANIZED STEEL
IC INSULATED CORE
SC SOLID CORE WOOD
PC POWDER COAT
PT PAINT
FF FACTORY FINISH
ST STAIN
HM HOLLOW METAL



GABLE END & MECHANICAL LOUVERS

ALL LOUVERS TO BE WUI APPROVED PAINTED TO MATCH SIDING



1 HRZNTL SLDR, PICT, HRZNTL SLDR

2 HORIZONTAL SLIDER

3 PICTURE

4 AWNING

5 HORIZONTAL SLIDER

6 HORIZONTAL SLIDER

WINDOW / LOUVER SCHEDULE

SCALE 1/4" = 1'-0"

WINDOWS HERE ARE SHOWN FROM INTERIOR SIDE TO SHOW LATCH HEIGHTS FOR OPERATIONS

GENERAL GLAZING AND WINDOW NOTES

1. COORDINATE WINDOW HEAD / REFERENCE POINT WITH DOOR HEAD AND WINDOW MANUFACTURER'S SPECIFICATIONS TO ESTABLISH EXACT HEADER HEIGHT AND ROUGH OPENINGS.
2. CBC 2022 CHAPTER 7A
   708A.2.1 EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLY REQUIREMENTS. EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS.
   A. BE CONSTRUCTED OF MULTI-PANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, OR
   B. BE CONSTRUCTED OF GLASS BLOCK UNITS, OR
   C. HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 257, OR
   D. BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2.
3. BLINDS SHALL BE PROVIDED FOR ALL EXTERIOR WINDOWS, EXCEPT FOR SIDE LIGHTS.
4. BATHROOM WINDOWS TO HAVE OBSCURE GLASS.
5. WINDOWS SHALL BE OF ANODIZED BRONZE.
6. WINDOWS SHALL HAVE OPERATIONS WHICH COMPLY WITH CBC 11B-309. OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO MORE THAN 5 LBS. CONTRACTOR SHALL MOVE ADJUSTABLE LATCH TO BOTTOM OF WINDOW DURING INSTALLATION.

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JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

SHEET TITLE:
DOOR AND WINDOW SCHEDULES

SHEET NUMBER
A601
V3

PROJECT PATH: K:\PROJECT\Major Cap Projects\Gr21 Fresno\C-130 AAB\DRAWINGS\ARCHITECT\PAL\A601.dwg
PLOT DATE: Jul 16, 2025 - 10:16AM
VER. 2020

ROOM FINISH SCHEDULE

ROOM NAME	FLOOR	BASE	WALL				CEILING			REMARKS
			NORTH	EAST	SOUTH	WEST	MATERIAL & PAINT	FIRE RATING	CEILING HEIGHT	
ENTRY	F-1	B-1	W-1	W-1	W-1	-	C-1	-	9'-0"	2, 3, 4, 6, 8, 9 & 10
DAY ROOM	F-1	B-1	W-1	W-1	W-1	-	C-1	-	VARIES	2, 3, 4, 6, 8, 9 & 10
DINING ROOM	F-1	B-1	W-1	-	W-1	W-1	C-1	-	VARIES	2, 3, 4, 6, 8, 9 & 10
KITCHEN / PANTRY	F-1	B-1	W-2	W-2	-	W-2	C-2	-	9'-0"	2, 3, 4, 6, 9 & 10
HALL1	F-1	B-1	-	W-1	-	W-1	C-1	-	9'-0"	2, 3, 4, 6, 8, 9 & 10
LIBRARY	F-1	B-1	W-1	W-5	W-1	W-1	C-1	-	9'-0"	2, 3, 4, 6, 9 & 10
HALL2	F-1	B-1	W-1	W-5	W-1	W-1	C-1	-	9'-0"	2, 3, 4, 6, 8, 9 & 10
HALL3	F-1	B-1	W-4	W-4	W-4	W-6	C-3	-	9'-0"	2, 3, 4, 6, 8, 9 & 10
BEDROOM 1	F-1	B-1	W-4	W-4	W-4	W-6	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
BEDROOM 2	F-1	B-1	W-4	W-4	W-4	W-4	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
BEDROOM 3	F-1	B-1	W-4	W-4	W-4	W-4	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
BEDROOM 4	F-1	B-1	W-4	W-4	W-4	W-4	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
BEDROOM 5	F-1	B-1	W-4	W-4	W-4	W-4	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
BEDROOM 6	F-1	B-1	W-4	W-4	W-4	W-6	C-3	-	9'-0"	2, 3, 4, 6, 9 & 10
ELECTRICAL / TELECOMM	F-1	B-1	W-1	W-5	W-1	W-1	C-1	-	9'-0"	2, 3 & 4
MECHANICAL	F-2	B-1	W-1	W-5	W-1	W-1	C-1	-	9'-0"	2, 3, 4, 6, 8, 9 & 10
STORAGE 2	F-1	B-1	W-1	W-1	W-1	W-1	C-1	-	9'-0"	2, 3 & 4
PHYSICAL TRAINING	F-2 / F-5	B-1	W-1	W-1	W-1	W-7	C-1	-	9'-0"	2, 3, 4, 6, 9 & 10
BATHROOM 1	F-3 / F-4	---	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	C-2	-	9'-0"	2, 3, 4, 6, 9 & 10
BATHROOM 2	F-3 / F-4	---	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	C-2	-	9'-0"	2, 3, 4, 6, 9 & 10
LAUNDRY	F-3	---	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	C-2	-	9'-0"	1, 2, 3, 4, 5, 6, 8, 9 & 10
BATHROOM 3	F-3 / F-4	---	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	W-3 / WA-1	C-2	-	9'-0"	2, 3, 4, 6, 9 & 10
STORAGE 1	F-1	B-1	W-1	W-1	W-1	W-7	C-1	-	9'-0"	2, 3 & 4

GENERAL FINISH NOTES

1. SEE INTERIOR ELEVATIONS FOR EXTENTS OF WAINSCOT OR WALL TILE.
2. PROVIDE LEVEL 5 SMOOTH GYPSUM BOARD FINISH IN WET AREAS (KITCHEN, BATHROOMS, AND LAUNDRY ROOM) WITH LIGHT ORANGE PEEL TEXTURE. ALL OTHER AREAS TO BE LEVEL 4 KNOCKDOWN TEXTURE. ALL GYPSUM BOARD TO RECEIVE PRIME COAT PRIOR TO TEXTURE FINISH.
3. ALL CEILING TO BE LEVEL 5 SMOOTH GYPSUM BOARD FINISH WITH LIGHT ORANGE PEEL TEXTURE.
4. PAINTING: LEVEL 5 PAINTING IN AREAS OF LIGHT ORANGE PEEL, LEVEL 4 PAINTING IN KNOCKDOWN AREAS.
5. PROVIDE CEILING BLOCKING @ 16" O.C. FOR MOISTURE RESISTANT GYPSUM BOARD AT CEILING.
6. SACK AND PATCH ALL EXPOSED CONCRETE CURBS.
7. CONTRACTOR TO SUBMIT ALL PRODUCTS THAT REQUIRE COLOR SELECTION ALONG WITH FULL MANUFACTURER'S COLOR PALETTE FOR STATE'S FINAL COLOR SELECTION.
8. PROVIDE TRANSITION STRIPS AT ALL DISSIMILAR FLOOR FINISHES.
9. EXTERIOR WINDOWS AND EXTERIOR FIXED DOORS SHALL RECEIVE BLINDS. HORIZONTAL BLINDS SHALL BE HUNTER DOUGLAS: EVERWOOD FAUX WOOD, COLOR: #984 EXTREME WHITE.
10. EXTERIOR WINDOWS AND GLAZED DOORS SHALL BE INSULATED GLASS WITH ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SFM 12-7A-2
11. WINDOW IN BATHROOM TO BE OBSCURE GLASS
12. EXTERIOR VENTS SHALL RESIST THE INTRUSION OF FLAME AND EMBERS INTO THE STRUCTURE WITH A CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/16" MIN. TO 1/8" MAX. OPENING.
13. SEE EXTERIOR AND / OR INTERIOR ELEVATIONS FOR MORE INFORMATION ON MATERIALS AND PAINT SELECTIONS.
14. FIELD VERIFY ALL DIMENSIONS.
15. PRODUCTS IDENTIFIED IN SELECTIONS ARE USED AS A BASIS OF DESIGN, OR EQUAL PRODUCT MAY BE SUBMITTED FOR CONSIDERATION DURING SUBMITTAL REVIEW STAGE.

FINISH LEGEND / COLOR SELECTION

FLOORING INFORMATION:

FLOOR - POLISHED & STAINED OR SEALED CONCRETE: L. M. SCOFIELD COMPANY

F-1 POLISHED AND SEALED CONCRETE: GRADE 2, CLASS 2, FORMULA ONE LITHIUM DENSIFIER MP, FORMULA ONE GUARD-W CONCRETE SEALER
F-2 SEALED CONCRETE: SELECTSEAL PLUS
NOTE: CONSTRUCTION JOINTS SHALL FINISHED WITH JOINT FILLER: METZGER/McGUIRE SPAL-PRO RS 65, STANDARD GRAY

FLOOR - TILE:

(MINIMUM DYNAMIC COEFFICIENT OF FRICTION = 0.42)

F-3 M S INTERNATIONAL INC.: GRAPHITE 12"x24" GLAZED PORCELAIN TILE WITH 3/16" WIDE TEC 550 POWER GROUT, #950 JET BLACK
F-4 (SHOWER FLOORS) EMSER TILE: SOURCE UNGLAZED PORCELAIN MOSAIC PURE WHITE 3" HEX WITH TEC 550 POWER GROUT, #950 JET BLACK

FLOOR - RUBBER: CONNOR SPORTS FLOORING

F-5 STYLE: CONTROL XT SIZE: 10MM THICK, 48" WIDE ROLL COLOR: DARK GRAY / CS 41

BASE INFORMATION:

WALL BASE - WOOD MOULDING

B-1 7/16" X 3 1/4" PRIMED PINE WOOD COLOR: SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS.

WALL INFORMATION:

WALL MATERIAL:

W-1 5/8" GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7004 SNOWBOUND, SEMIGLOSS.
W-2 5/8" MOISTURE RESISTANT GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7662 EVENING SHADOW, SEMIGLOSS.
W-3 5/8" MOISTURE RESISTANT GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7004 SNOWBOUND, SEMIGLOSS.
W-4 5/8" ACOUSTIC GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7004 SNOWBOUND, SEMIGLOSS.
W-5 5/8" TYPE "X" GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7004 SNOWBOUND, SEMIGLOSS.
W-6 5/8" TYPE "X" GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW87004 SNOWBOUND, SEMIGLOSS OVER 15/32" SPS
W-7 5/8" MOISTURE RESISTANT GYPSUM BOARD: PAINTED SHERWIN WILLIAMS, SW7004 SNOWBOUND, SEMIGLOSS OVER 15/32" SPS

WAINSCOT / WALL TILE:

WA-1 WALL TILE BY ARIZONA TILE: PALOMA PUMICE GLOSSY 4x16 WITH 1/8" TEC 550 POWER GROUT, #909 STERLING. USE CORRESPONDING STOCK TRIM : (1/2" X 12" PENCIL BULLNOSE).

DOOR & FRAMES INFORMATION:

FRAMES

INTERIOR DOOR FRAMES PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS (UNO).
EXTERIOR DOORS FRAMES PAINTED RAL 8019 GREY BROWN.

DOORS

INTERIOR WOOD DOORS TO BE CLEAR STAINED.
INTERIOR METAL DOORS PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS.
EXTERIOR DOORS PAINTED RAL 8019 GREY BROWN.

CEILING INFORMATION:

CEILING MATERIAL:

C-1 5/8" GYPSUM BOARD, PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS.
C-2 5/8" MOISTURE RESISTANT GYPSUM BOARD, PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS.
C-3 DOUBLE LAYER 5/8" ACOUSTIC GYPSUM BOARD, PAINTED SHERWIN WILLIAMS, SW7005 PURE WHITE, SEMIGLOSS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: M. HEINTZ
DRAWN BY: M. HEINTZ
REVIEWED BY: A. ECCLESTON
FILE DATE: .

SHEET TITLE:
ROOM FINISH SCHEDULE

SHEET NUMBER
A602
V3

PROJECT PATH: C:\Users\AEccleston\AppData\Local\Temp\AcPublish_13060\$\A602.dwg
PLOT DATE: Aug 02, 2023 - 1:58PM
VER 2020

TESTS/INSPECTIONS/OBSERVATIONS

1. STRUCTURAL TESTS AND SPECIAL INSPECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE CALIFORNIA BUILDING CODE, CHAPTER 17.
2. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AGENCY. JOBSITE OBSERVATIONS BY THE EOR DO NOT CONSTITUTE INSPECTIONS AND ARE NOT A SUBSTITUTE FOR INSPECTION.
3. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SEE THAT THESE TESTS AND INSPECTIONS ARE PERFORMED.

STRUCTURAL OBSERVATION

CONSTRUCTION STAGE	CONSTRUCTION TYPE	ELEMENTS/CONNECTIONS TO BE OBSERVED
FOUNDATION	BUILDING FOOTINGS	EXCAVATIONS, REINFORCEMENT AND CIP ANCHOR LOCATION
WALLS	WOOD SHEAR WALLS, LOAD BEARING WALLS	HOLD DOWN SIZES/LOCATIONS, WSP NAILING, COLUMN LOCATIONS
ROOF OR FLOOR DIAPHRAGM	WOOD DIAPHRAGM/ TRUSSES/JOISTS/PLYWOOD	DIAPHRAGM TO WALL CONNECTION, ANCHORAGE, NAILING

REQUIRED SPECIAL INSPECTIONS AND TESTS

SECTION/ TABLE	TEST OR SPECIAL INSPECTION	TYPE
1705.3-CONCRETE CONSTRUCTION	VERIFY USE OF REQUIRED DESIGN MIX	PERIODIC
1705.3-CONCRETE CONSTRUCTION	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	CONTINUOUS
1705.3-CONCRETE CONSTRUCTION	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC
1705.3-CONCRETE CONSTRUCTION	INSPECT ANCHORS CAST IN CONCRETE	PERIODIC
1705.3-CONCRETE CONSTRUCTION	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	PERIODIC, SEE ICC REPORT
1705.6-SOILS	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY	PERIODIC BY GEOTECH
1705.6-SOILS	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	PERIODIC BY GEOTECH
1705.6-SOILS	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIAL	PERIODIC BY GEOTECH
1705.6-SOILS	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS BY GEOTECH
1705.6-SOILS	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC BY GEOTECH
1705.13.2-SEISMIC RESISTANCE: STRUCTURAL WOOD	NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE SEISMIC FORCE-RESISTING SYSTEM INCLUDING WOOD SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLD-DOWNS WHEN FASTENER SPACING OF THE SHEATHING IS 4" OC OR LESS.	PERIODIC
1705.13.6-SEISMIC RESISTANCE: PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS	1. ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY AND STANDBY POWER SYSTEMS. 6. INSTALLATION OF MECHANICAL AND ELECTRICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING SYSTEMS AND THEIR STRUCTURAL SUPPORTS TO VERIFY ONE OF THE FOLLOWING: 6.1. MINIMUM CLEARANCES HAVE BEEN PROVIDED AS REQUIRED BY SECTION 13.2.3 ASCE/SEI 7.	PERIODIC

NAILING SCHEDULE

1. ALL STRUCTURAL NAILING SHALL BE COMMON WIRE, UNO.
2. FOR WOOD TO WOOD JOINTS, THE SPACING CENTER TO CENTER OF NAILS SHALL NOT BE LESS THAN THE REQUIRED NAIL PENETRATION. EDGE OR END DISTANCES SHALL NOT BE LESS THAN 1/2 THE REQUIRED NAIL PENETRATION. WHERE PRE-DRILLING IS REQUIRED TO AVOID SPLITTING OF THE WOOD, THE HOLE DIAMETER SHALL NOT EXCEED THREE-FOURTHS OF THE NAIL DIAMETER.
3. FOR NAILING NOT SHOWN ON PLANS, MINIMUM NAILING SHALL BE:

3.1.	ROOF		
3.1.1.	BLOCKING	TN	3-8d (EA END)
		OR EN	2-16d
3.1.2.	JOISTS		
3.1.2.1.	TO TOP PLATE	TN	3-8d (EA JOIST)
3.1.2.2.	NOT ATTACHED TO PARALLEL RAFTER, LAPS	FN	3-16d
3.1.3.	RAFTERS		
3.1.1.1.	TO COLLAR TIE	FN	3-10d
3.1.1.2.	TO TOP PLATE	TN	3-10d
3.1.1.3.	TO RIDGE VALLEY OR 2 IN RIDGE BEAM	EN	2-16d
		OR TN	3-10d
3.2.	WALL		
3.2.1.	STUD		
3.2.1.1.	TO STUDS	FN	16d AT 16" OC
3.2.1.2.	TO TOP OR BOTTOM PLATE	TN	4-8d
		OR EN	2-16d
3.2.2.	HEADER		
3.2.2.1.	BUILT UP HEADER (2" TO 2")	FN	16d AT 16" OC
3.2.2.2.	TO STUD	TN	4-8d
3.2.3.	TOP PLATE		
3.2.3.1.	TO TOP PLATE	FN	16d AT 16" OC
3.2.3.2.	TO TOP PLATE (AT END JOINTS)	FN	8-16d (EA SIDE 24" LAP)
3.2.3.3.	LAPS AT CORNERS AND INTERSECTIONS	FN	2-16d
3.2.4.	BOTTOM PLATE		
3.2.4.1.	TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING	FN	2-16d AT 16" OC
3.3.	FLOOR		
3.3.1.	JOISTS		
3.3.1.1.	TO SILL, TOP PLATE OR GIRDER	TN	3-8d
3.3.1.2.	BRIDGING OR BLOCKING	TN	2-8d (EA END)
3.3.2.	RIM JOIST, BAND JOIST OR BLOCKING		
3.3.2.1.	TO STILL, TOP PLATE OR OTHER FRAMING BELOW	TN	8d AT 6" OC
3.3.2.2.	TO FLOOR JOIST	EN	2-16d
3.4.	NON-STRUCTURAL WOOD SHEATHING:		
3.4.1.	EDGE NAILING	EN	8d AT 6" OC
3.4.2.	FIELD NAILING	FN	8d AT 12" OC

3.5. NAILING NOT NOTED OR ON THE PROJECT PLANS SHALL BE A MINIMUM OF 2 NAILS AT EACH CONTACT, 8d FOR 1x MEMBERS AND 16d FOR 2x MEMBERS.

STRUCTURAL HARDWARE CONNECTORS

1. ALL STRUCTURAL WOOD HARDWARE CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE OR EQUAL, UNO.
2. STRUCTURAL HARDWARE CONNECTORS INDICATED ON THE PLANS MEET THE STRUCTURAL REQUIREMENTS OF THIS PROJECT. NO SUBSTITUTIONS OF THE INDICATED CONNECTORS ARE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE EOR.

CONCRETE NOTES

1. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR STEEL REINFORCEMENT, UNO.

1.1.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:		3"
1.2.	CONCRETE EXPOSED TO EARTH AND WEATHER:	≥#6	2"
		<#6	1.5"
1.3.	SLABS OR WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:		3/4"
1.4.	ALL OTHER CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:		1.5"

2. SEE MECHANICAL AND ARCHITECTURAL PLANS FOR SIZE AND LOCATIONS OF PIPE, VENTS, DUCTS AND OTHER POSSIBLE PENETRATIONS. SEE ELECTRICAL PLAN FOR CONDUIT AND OUTLET BOXES IN FLOORS, WALLS, ETC.
3. SPLICES IN CONTINUOUS REINFORCEMENT SHALL BE PER FOUNDATION DETAILS.
4. MAXIMUM FREE FALL OF CONCRETE SHALL BE 4 FEET.
5. CONSOLIDATE CONCRETE PLACED IN FORMS BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING OR TAMPING.

FOUNDATION/SOIL NOTES

1. ALL FOUNDATION WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE CALIFORNIA BUILDING CODE AND THE PROJECT SPECIFIC GEOTECHNICAL REPORT.
   - 1.1. PROPOSED BUILDING PAD SHOULD BE OVER-EXCAVATED TO A DEPTH OF AT LEAST 2 FEET BELOW BOTTOM OF NEW FOOTINGS OR 3 FEET BELOW THE EXISTING GROUND SURFACE, WHICHEVER IS DEEPER.
   - 1.2. TO MITIGATE AGAINST DIFFERENTIAL SETTLEMENT ACROSS TRANSITION AREAS, FOUNDATIONS MAY EITHER BE DEEPENED THROUGH ENGINEERED FILL MATERIAL, OR THE CUT AREA MAY BE OVER-EXCAVATED AND REPLACED WITH A UNIFORM THICKNESS OF ENGINEERED FILL. THE OVEREXCAVATION SHOULD OCCUR LATERALLY AT LEAST FIVE FEET OUTSIDE THE PERIMETER OF POTENTIAL FOUNDATION LOCATIONS.
   - 1.3. PRIOR TO PLACEMENT OF FILL, THE SOIL SURFACE SHOULD BE SCARIFIED TO A DEPTH OF 12 INCHES, MOISTURE CONDITIONED TO WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT, AND RECOMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
2. BOTTOMS OF ALL FOUNDATIONS SHALL BE LEVEL. CHANGES IN BOTTOM OF FOUNDATION ELEVATION SHALL BE MADE ACCORDING TO STEPPED FOOTING DETAIL.

WOOD NOTES

1. SIZES OF SAWN LUMBER AS SHOWN ON THE PLANS ARE NOMINAL DIMENSIONS, UNO.
2. ALL LUMBER SHALL BE DOUGLAS FIR LARCH THROUGHOUT AND SHALL BE GRADED AS FOLLOWS, UNO:
   - 2.1. VERTICAL LUMBER AND HORIZONTAL LUMBER (INCLUDING RAFTERS) SHALL BE NO.2 OR BETTER.
   - 2.2. ALL LUMBER 6 INCHES THICK OR GREATER SHALL BE NO. 1 OR BETTER.
3. FOR ALL ENGINEERED WOOD PRODUCTS, SEE ICC-ESR-1387.
4. ALL WOOD IN CONTACT WITH EARTH, CONCRETE OR CONCRETE MASONRY FOUNDATIONS SHALL BE PRESSURE TREATED WOOD. CUT ENDS OF TREATED LUMBER SHALL BE BRUSH TREATED WITH 3 APPLICATIONS OF PRESERVATIVE TREATMENT AS INDICATED IN PROJECT SPECIFICATIONS.
5. PLYWOOD SHEATHING FOR FLOORS AND ROOFS SHALL BE PLACED FACE GRAIN PERPENDICULAR TO SUPPORTS. WHERE POSSIBLE, PLYWOOD SHALL BE PLACED IN FULL SHEETS AND STAGGERED ONE-HALF SHEET LENGTH. ANY PARTIAL PLYWOOD SHEET SHALL NOT BE LESS THAN 2 FEET IN LENGTH OR WIDTH UNLESS FULLY BLOCKED.
6. PROVIDE 2x BLOCKING TO SECURE FIXTURES SHOWN ON THE PROJECT PLANS.
7. WHEN THERE IS A HOLE OR NOTCH IN A STRUCTURAL ELEMENT, EOR APPROVAL IS REQUIRED UNLESS THE DETAILS ARE SHOWN ON PLANS.
8. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16 INCH.
9. HOLES FOR LAG SCREW SHALL BE FIRST BORED TO THE SAME DIAMETER AND DEPTH AS THE SHANK AND THE REMAINDER NO LARGER THAN THE ROOT OF THE THREAD.
10. 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 AT LEAST STANDARD CUT METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO POST INSTALLED FASTENERS.
    - 11.1. 1/2" Ø BOLT - USE 1.375" Ø x 0.109" (STANDARD) / 3" x 3" x 0.229" (BEARING)
    - 11.2. 5/8" Ø BOLT - USE 1.75" Ø x 0.134" (STANDARD) / 3" x 3" x 0.229" (BEARING)
    - 11.3. 3/4" Ø BOLT - USE 2" Ø x 0.148" (STANDARD) / 3" x 3" x 0.229" (BEARING)
    - 11.4. 7/8" Ø BOLT - USE 2.25" Ø x 0.165" (STANDARD) / 3" x 3" x 5/16" (BEARING)
    - 11.5. 1" Ø BOLT - USE 2.5" Ø x 0.165" (STANDARD) / 3.5" x 3.5" x 3/8" (BEARING)
12. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED ON INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
13. BLOCK STRUCTURAL SHEATHING JOINTS WITH 2x4 FLAT BLOCKING WHERE NOTED ON ROOF OR FLOOR FRAMING PLANS AND WITH BLOCKING SAME AS STUDS AT WALLS. USE PLYCLIPS AT MIDSPAN OF UNSUPPORTED PLYWOOD EDGES.
14. FASTENERS, INCLUDING NUTS/WASHERS, IN CONTACT WITH PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED STEEL OR STAINLESS STEEL.

STRUCTURAL DESIGN CRITERIA

CODE: THE 2022 CALIFORNIA BUILDING CODE

RISK CATEGORY: II

LOADS:	WALL DEAD LOAD:	16 PSF
	ROOF DEAD LOAD TRUSS TC:	7.3 PSF
	ROOF DEAD LOAD TRUSS BC:	7.2 PSF
	ROOF DEAD LOAD TOTAL:	14.5 PSF
	ROOF LIVE LOAD:	20 PSF
	STORAGE AREA ABOVE CEILING:	20 PSF
WIND*:	BASIC DESIGN WIND SPEED (V):	96 MPH
	NOMINAL DESIGN WIND SPEED (V_{asd}):	74 MPH
	EXPOSURE CATEGORY:	D (ALL DIRECTIONS)
	INTERNAL PRESSURE COEFFICIENT:	±0.55 PSF
SEISMIC*:	SEISMIC IMPORTANCE FACTOR (I_E):	1.0
	SITE MOD ACCELERATION PARAMETER, S_{MS}:	1.668g
	SITE MOD ACCELERATION PARAMETER, S_{M1}:	0.936g
	SITE CLASSIFICATION:	D
	DESIGN ACCELERATION PARAMETER, S_{DS}:	1.112g
	DESIGN ACCELERATION PARAMETER, S_{D1}:	0.624g
	SEISMIC DESIGN CATEGORY:	D
	BASIC SEISMIC FORCE RESISTING SYSTEM:	LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR
	DESIGN BASE SHEAR N-S:	12.5 KIPS
	DESIGN BASE SHEAR E-W:	11.6 KIPS
	SEISMIC RESPONSE COEFFICIENTS, C_S:	0.171
	OVER STRENGTH FACTOR, Ω_0	2.5
	DEFLECTION AMPLIFICATION FACTOR, C_d	4
	RESPONSE MODIFICATION COEFFICIENT, R:	6.5
	ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
	APPLICABLE HORIZONTAL IRREGULARITIES:	TYPE 2- REENTRANT CORNER
	APPLICABLE VERTICAL IRREGULARITIES:	N/A
	LOCATION OF BASE:	0
GEOTECH*:	ALLOWABLE SOIL BEARING PRESSURE:	1,500 PSF
MATERIAL STRENGTHS:	CONCRETE FOOTING (f'_c):	4,500 PSI @ 28 DAYS
	CONCRETE SLAB (f'_c):	3,500 PSI @ 28 DAYS
	REINFORCING STEEL (f_y):	60,000 PSI

* BUILDING DESIGNED FOR WORSE CASE LOADS FOR NUMEROUS LOCATIONS THROUGHOUT CALIFORNIA. SITE SPECIFIC LOADS MAY BE USED FOR COMPONENTS ENGINEERED BY CONTRACTOR WITH APPROVAL FROM THE EOR.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE EOR AND RESOLVED PRIOR TO THE START OF WORK.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DIMENSIONS AND ELEVATIONS MUST BE VERIFIED WITH ARCHITECTURAL DRAWINGS. NOTIFY EOR/ARCHITECT IF CONFLICTING. DO NOT SCALE PLANS OR DETAILS.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. GENERAL NOTES AND DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS.
4. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS.
5. ALL WORK SHALL CONFORM TO CURRENT STATE BUILDING CODES.
6. CONTRACTOR TO VERIFY OPERATING WEIGHTS AND LOCATIONS OF MECHANICAL/ELECTRICAL UNITS WITH MECHANICAL/ELECTRICAL CONTRACTOR AND DESIGNER. CONTRACTOR TO VERIFY SIZE AND WEIGHT PRIOR TO INSTALLATION OF SUPPORTING FRAMING TO ENSURE CORRECT PLACEMENT. CONTRACTOR TO NOTIFY EOR IF OPERATING WEIGHT OF EQUIPMENT EXCEEDS MAXIMUM WEIGHTS SHOWN ON PLANS.

SYMBOLS

- BLOCKING IN SECTION OR ELEVATION
- CONTINUOUS MEMBER IN SECTION
- XX/SXX DETAIL NUMBER/SHEET NUMBER
- // / ⊥ PARALLEL/PERPENDICULAR
- HIDDEN OR BEYOND
- 1 / S501 SECTION OR DETAIL NUMBER; TYP OCCURS IN MULTIPLE LOCATIONS; SHEET REFERENCE NUMBER

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
ALT	ALTERNATE
@	AT
BLK	BLOCK/BLOCKING
BLW	BELOW
BC	BOTTOM CHORD
BN	BOUNDARY NAILING
BOT	BOTTOM
BTWN	BETWEEN
BYND	BEYOND
CIP	CAST IN PLACE
CJ	CONTROL/CONSTRUCTION JOINT
℄	CENTER LINE
CLG	CEILING
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CMU	CONCRETE MASONRY UNIT
CS	COIL STRAP
DBL	DOUBLE
DET	DETAIL
DF	DOUGLAS FIR
DIA Ø	DIAMETER
DIR	DIRECTION
DIM	DIMENSION
DTP	DOUBLE TOP PLATE
(E)	EXISTING
EA	EACH
EN	END NAILING
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXT	EXTERIOR
FDN	FOUNDATION
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FLR	FLOOR
FN	FACE NAIL
FOC	FACE OF CONCRETE
FOF	FACE OF FASCIA
FOS	FACE OF STUD
FTG	FOOTING
GA	GAUGE
GLM	GLUE LAMINATED MEMBER
GYP	GYPSUM BOARD
HD	HOLDOWN
HDR	HEADER
HGR	HANGER
HORIZ	HORIZONTAL
HT	HEIGHT
INT	INTERIOR
LB #	POUND(S)
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OLKR	OUTLOOKER
℄	PLATE OR PROPERTY LINE
PB	POST BASE
PC	PLUMB CUT
PLF	POUNDS PER LINEAR FOOT
PLY	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
R	RADIUS
REBAR	STEEL REINFORCING BAR
REINF	REINFORCING
REQ	REQUIRED
REV	REVISION
RWD	REDWOOD
SC	SQUARE CUT
SIM	SIMILAR
SP	SILL PLATE
SPEC	SPECIFICATION(S)
SQ	SQUARE
SS	SELECT STRUCTURAL
STD	STANDARD
SW	SHEAR WALL
T&B	TOP AND BOTTOM
TC	TOP CHORD
TN	TOE NAIL
TP	TOP PLATE
TOC	TOP OF CURB
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VLY	VALLEY
W/	WITH
W/O	WITHOUT
WSP	WOOD STRUCTURAL PANEL

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. F. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

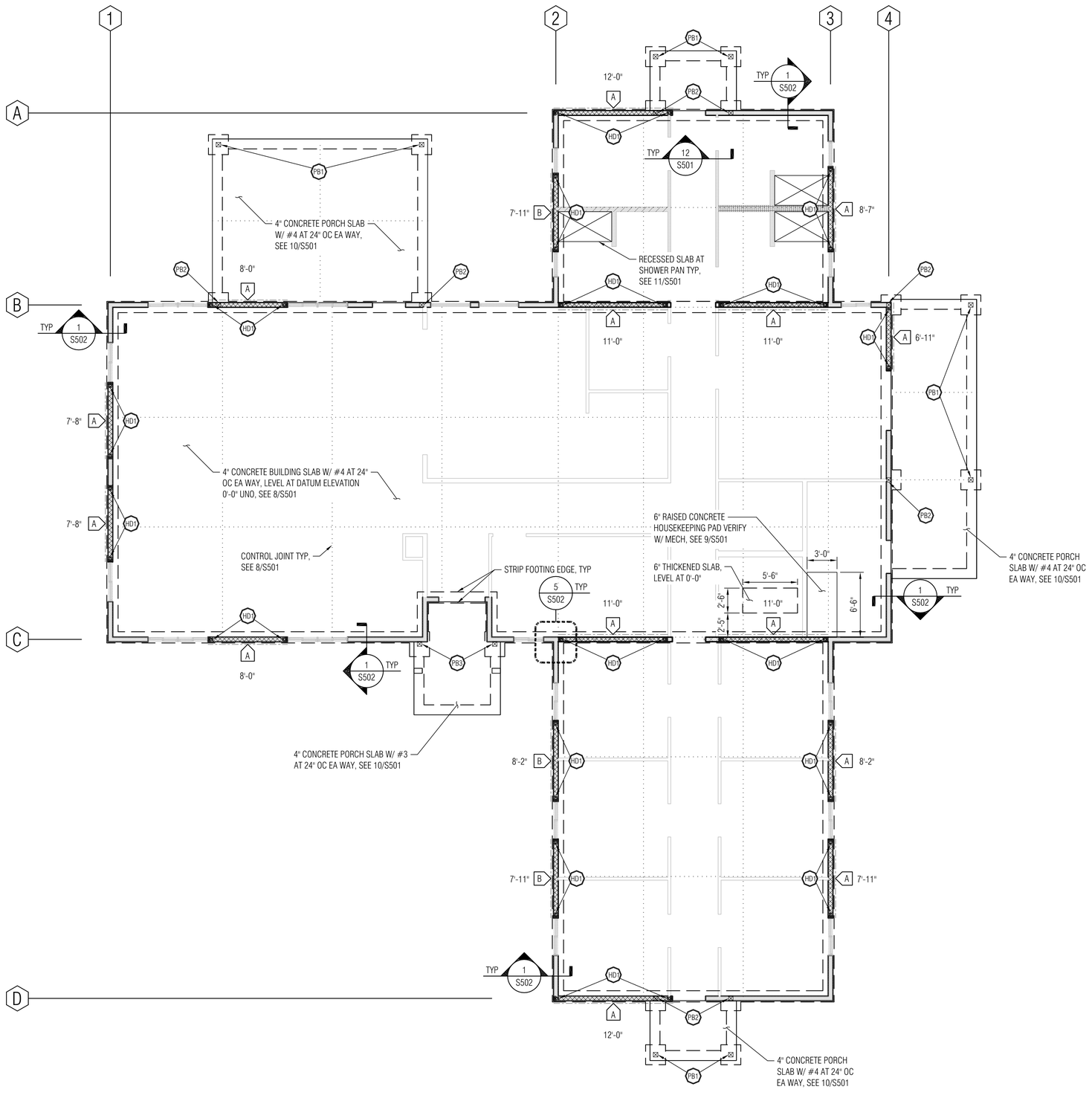
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

SHEET TITLE:
NOTES, ABBREVIATIONS, AND SYMBOLS

SHEET NUMBER
S001
V3

PROJECT PATH: C:\Users\AEcclest\AppData\Local\Temp\AcPublish_12060\[S001_S001.dwg]
PLOT DATE: Aug 02, 2023 - 1:27PM
VER 2020



FOUNDATION PLAN

SCALE: 3/16" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. FOR WALL DIMENSIONS AND LOCATIONS, SEE ARCHITECTURAL SHEETS.
2. FOR STANDARD FOUNDATION DETAILS, SEE S501.
3. FOR STANDARD FRAMING DETAILS, SEE S511.
4. FOR WALL AND CEILING MOUNTED EQUIPMENT, SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
5. FOR CONCRETE-ENCASED ELECTRODE (UFER) LOCATION AND RELATED DETAILS, SEE ELECTRICAL SHEETS.
5. EXTERIOR CONCRETE FLATWORK ADJACENT TO BUILDINGS SHALL BE A MIN OF 1/4" LOWER THAN FFE AND MAXIMUM OF 1/2", SEE CIVIL SHEETS FOR ELEVATIONS AND SLOPES OF FLATWORK
6. ALL EXTERIOR WALL SURFACES SHALL BE SHEATHED, UNO.
7. APPLY SOIL TERMITE TREATMENT ALONG AND WITHIN THE BUILDING PERIMETER.

DESIGN NOTES

1. FOR THE STRUCTURAL DESIGN CRITERIA, SEE S001.

HOLDOWN/POST BASE/FOOTING SCHEDULE

- HD1: SIMPSON HDU8 W/ (2)2x POST AND SIMPSON SB7/8x24, SEE 1/S502 FOR FOOTING
- PB1: SIMPSON CPT66Z W/ 6x6 RWD POST AND (2) SIMPSON PAB4-12s, SEE 4/S502 FOR FOOTING
- PB2: SIMPSON ABU66Z W/ 6x6 POST AND SIMPSON 5/8"Ø x 10" TITAN HD, SEE 2/S502 FOR FOOTING
- PB3: SIMPSON CPT66Z W/ 6x6 RWD POST AND (2) SIMPSON PAB4-12s, SEE 3/S502 FOR FOOTING

SILL PLATE ANCHORAGE NOTES

1. ANCHOR EXTERIOR/LOAD BEARING/SHEAR WALL SILL PLATES PER 3/S511 AND AS SPECIFIED BELOW.
   1.1. 5/8"Ø x 10" TITAN HD ANCHOR BOLTS WITH A MINIMUM OF 2 ANCHORS PER MEMBER.
2. ANCHOR INTERIOR NON-LOAD BEARING/NON-SHEAR WALLS SILL PLATES WITH AN ANCHOR AT 6" FROM EACH END AND A MINIMUM OF 2 ANCHORS PER MEMBER. AS SPECIFIED BELOW.
   2.1. ACCEPTABLE ANCHORAGE OPTIONS
      2.1.1. 0.157"Ø POWDER DRIVEN ANCHOR WITH 1" PENETRATION AT 48" OC.
      2.1.2. 1/4"Ø TITEN HD WITH 1 5/8" MINIMUM EMBEDMENT AT 48" OC.

WALL NOTES/SCHEDULE/LEGEND

- LOAD BEARING WALL W/ 2x STUDS AT 16" OC, AND 3x SILL PLATE
- NON-LOAD BEARING WALL W/ 2x STUDS AT 16" OC, AND 2x SILL PLATE, SEE 1/S511
- SHEAR WALL
- 6" CURB ABOVE FFE, BENEATH WALL
- WALL X "L": INSTALLATION SIDE FOR SHEAR WALL WSP; SHEAR WALL TYPE AND LENGTH

SHEAR WALL SCHEDULE

SHEAR WALLS SHALL BE BLOCKED AT ALL EDGES
WSP = WOOD STRUCTURAL PANEL: APA RATED SHEATHING, EXPOSURE 1, 32/16 SPAN RATING, UNO

WALL TYPE	WSP THICKNESS	FASTENER	FASTENER SPACING	PANEL EDGE COND
A	15/32"	10d COMMON (0.148 x 3)	6(EDGE): 12(FIELD)	2x STUD OR BLOCK
B	15/32"	10d COMMON (0.148 x 3)	4(EDGE): 12(FIELD)	2x STUD OR BLOCK

* FOR OPENINGS IN SHEAR WALLS SEE 9/S511.

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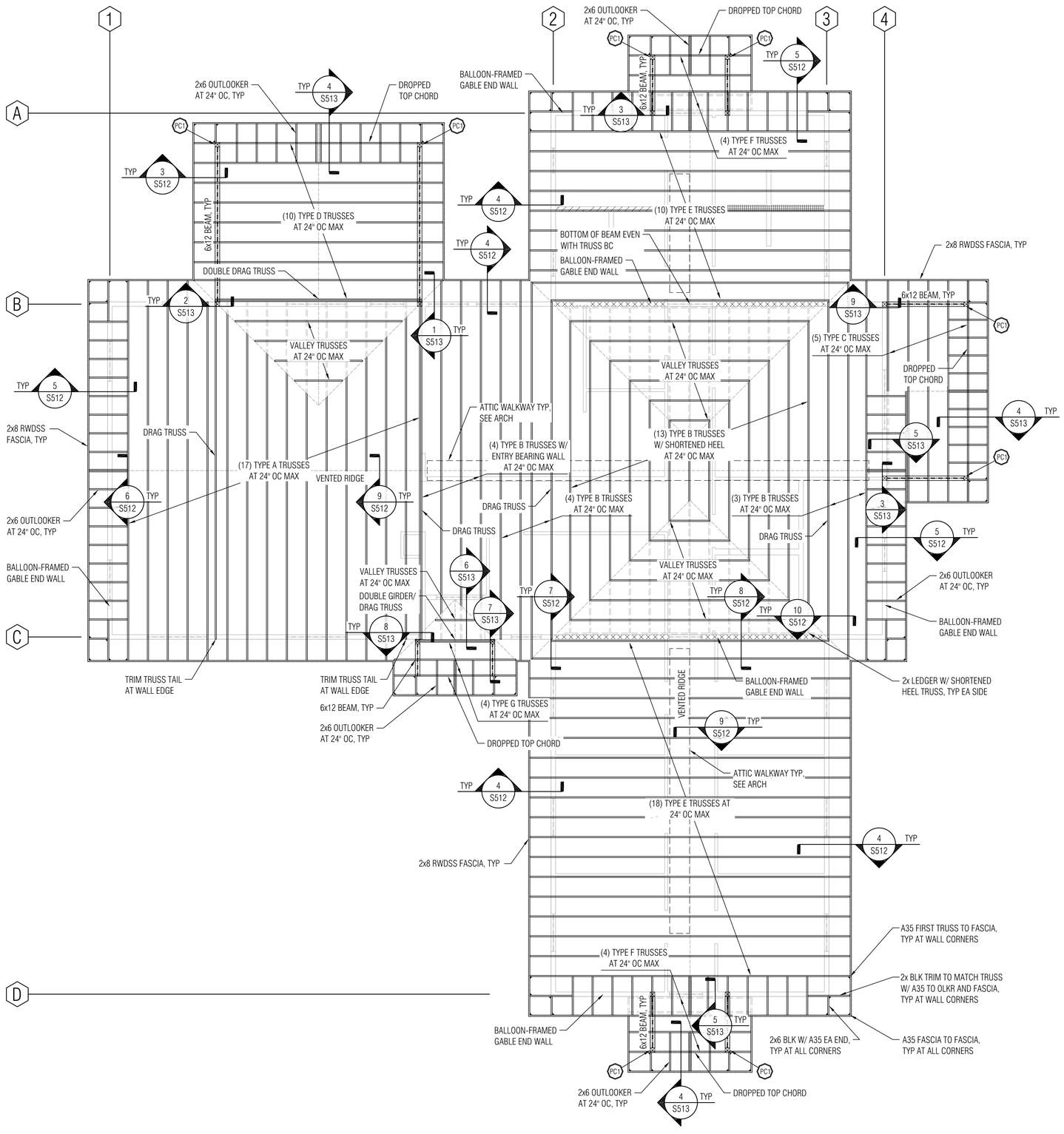
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

SHEET TITLE:
FOUNDATION PLAN

SHEET NUMBER
S101
V3

PROJECT PATH: C:\Users\AEccleston\AppData\Local\Temp\AcPublish_12\00\0423_S101_S111.dwg
PLOT DATE: Aug 02, 2023 - 1:38PM
VER 2020



FRAMING PLAN

SCALE: 3/16" = 1'-0"

GENERAL SHEET NOTES

1. FOR THE STRUCTURAL DESIGN CRITERIA, SEE S001.
2. FOR STANDARD FRAMING DETAILS, SEE S511.
3. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR WALL AND CEILING MOUNTED EQUIPMENT.
4. LOAD BEARING WALL OPENINGS SHALL HAVE 8x HEADERS, UNO.
5. NON-LOAD BEARING INTERIOR WALL OPENINGS SHALL HAVE DOUBLE 2x HEADERS, UNO.
6. ALL SUPPORTING POSTS ARE TO BE AT LEAST THE WIDTH OF THE BEAM BEING SUPPORTED.
7. FOR LOAD-BEARING WALL DOUBLE TOP PLATE SPLICE NAILING, SEE 11/S511.
8. FOR NON-LOAD-BEARING WALL CONNECTION, SEE 1/S511.
9. FOR CORNER STRAPS, SEE 10/S511.

ROOF DIAPHRAGM SHEATHING NOTES

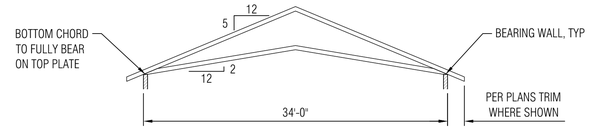
1. ALL ROOF SHEATHING SHALL BE STRUCTURAL PLYWOOD SHEATHING (SPS) AND SHALL BE APA RATED 15/32" THICK WITH 32/16 SPAN RATING, UNO.
2. ALL DIAPHRAGMS SHALL BE UNBLOCKED, UNO.
3. NAILING SCHEDULE, UNO:
   - 3.1. 8d AT 6" OC DIAPHRAGM BOUNDARIES AND AT SUPPORTED PANEL EDGES
   - 3.2. 8d AT 12" OC FIELD

POST CAP SCHEDULE

PC1 SIMPSON CBT4Z POST TO BEAM.

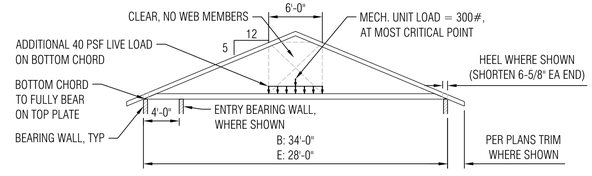
PRE-ENGINEERED ROOF TRUSS

1. SEE STRUCTURAL DESIGN CRITERIA ON SHEET S001 AND TRUSS SCHEMATIC DRAWINGS FOR STRUCTURAL LOADS.
   - 1.1. ADDITIONAL TOP CHORD: DEAD LOAD OF 9 #/FT FOR FIRE SPRINKLER PIPING.
   - 1.2. ADDITIONAL BOTTOM CHORD: LIVE LOAD OF 10 PSF WHERE WALKWAY DOES NOT OCCUR.
2. LUMBER SIZES:
   - 2.1. TOP CHORDS: 2x6 MIN
   - 2.2. OTHER MEMBERS: 2x4 MIN
3. LUMBER MOISTURE CONTENT SHALL BE 19% MAX AT TIME OF FABRICATION
4. OUT-OF-PLANE DEFLECTION OF GABLE END WEB MEMBERS SHALL BE L/120 MAX.
5. NOTCHES OR BORED HOLES ARE NOT ALLOWED IN TRUSS MEMBERS.
6. TRUSS CHORDS ARE SHOWN ON SCHEMATIC DRAWINGS. WEB MEMBERS SHALL BE LOCATED BY TRUSS MANUFACTURER PROVIDING ALL CLEARANCES REQUIRED BY MECHANICAL SHEETS FOR DUCT WORK, VENTS, AND LOUVERS.
7. PROVIDE PERMANENT LATERAL SUPPORT PER BUILDING COMPONENT SAFETY INFORMATION (BCSI) B3.



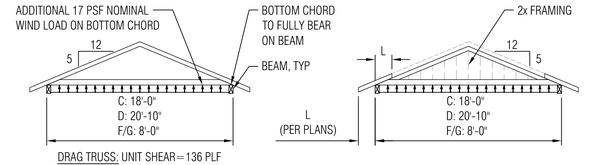
DRAG TRUSS: BOTTOM CHORD DRAG LOAD: 1018#

TRUSS TYPE A



DRAG TRUSS: UNIT SHEAR=109 PLF (0.6W)/136 PLF (0.7E) BOTTOM CHORD DRAG LOAD: 1260# (0.6W)/3,687# (0.7E)

TRUSS TYPE B/E



DRAG TRUSS: UNIT SHEAR=136 PLF
GIRDER TRUSS: PERP TRUSS SUPPORT FOR 6'-0" OPENING MIDDLE OF TRUSS

TRUSS TYPE C/D/F/G

DROPPED TOP CHORD

PLAN NORTH

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FRESNO COUNTY

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REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

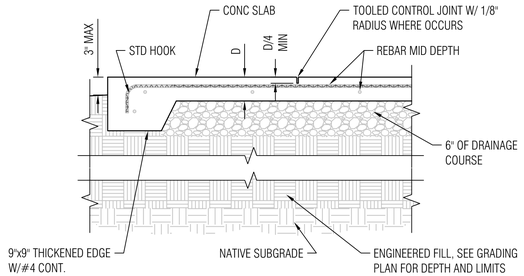
JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:
SHEET TITLE: FRAMING PLAN

SHEET NUMBER
S111
V3

PROJECT PATH: C:\Users\AEcclest\AppData\Local\Temp\AcPublish_12\06\2423_S101_S111.dwg
PLOT DATE: Aug 02, 2023 - 1:08PM
VER 2020

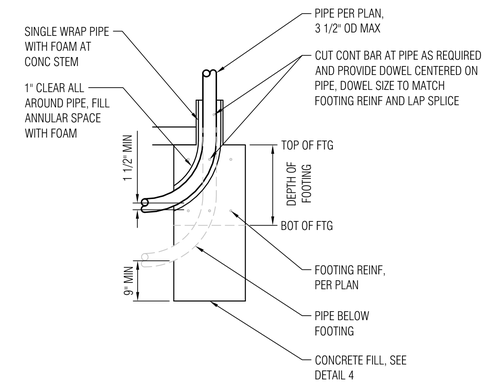
EXTERIOR SLAB SECTION/CONTROL JOINT

SCALE: 1" = 1'-0" | 10



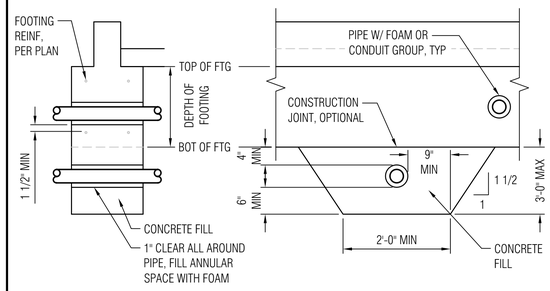
PIPE THROUGH CURB

SCALE: 3/4" = 1'-0" | 7



PIPE THROUGH/BELOW FOOTING

SCALE: 3/4" = 1'-0" | 4



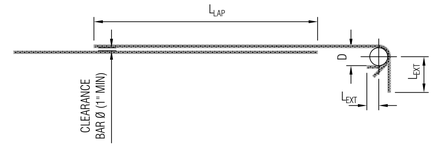
NOTES:
1. SLEEVE AT PIPE ONLY, CONDUIT MAY BE CAST DIRECTLY INTO CONCRETE. CONDUIT GROUP SHALL BE NO LARGER THEN 6"x6".
2. PIPE MUST BE ALIGNED PERPENDICULAR TO FOOTINGS.
3. SPACING BETWEEN ADJACENT PENETRATIONS SHALL BE 1x THE DIAMETER CENTER TO CENTER.
4. THERE SHALL BE NO PIPE PENETRATIONS WITHIN 2 FEET OF EACH SIDE OF HOLD DOWNS.
5. NO PIPES ALLOWED THROUGH SPREAD FOOTINGS.
6. WRAP PIPE IN 1" GLASS WOOL OR POLY-STYRENE TAPE OR PROVIDE SLEEVE.
7. WHERE GRAVITY DRAINAGE PIPE DOES NOT MEET ABOVE REQUIREMENTS, SEE DETAIL 5.

REBAR HOOKS AND LAP SPLICES

SCALE: NOT TO SCALE | 1

BAR SIZE	D MIN INSIDE BEND DIAMETER (IN)	L_{EXT} STRAIGHT EXTENSION LENGTH (IN)		L_{LAP} LAP SPLICE LENGTH (IN)
#3 - #8	6 x BAR Ø	90° HOOK	12 x BAR Ø (6" MIN)	48 x BAR Ø (#3 - #6)
		135° HOOK	6 x BAR Ø (4" MIN)	60 x BAR Ø (#7 - #8)
		180° HOOK	4 x BAR Ø (2.5" MIN)	

TABLE VALID FOR: f_y=60 KSI, f'_c=3 KSI MIN, NORMAL WEIGHT CONCRETE, UNCOATED REBAR



NOTES:
1. SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN 5'-0" APART.
2. POST-INSTALLED REBAR DOWELS SHALL BE INSTALLED WITH SIMPSON SET-3G ADHESIVE (PER ICC-ESR-4057) WITH 20 x BAR Ø EMBEDMENT OR PER PLANS.

RECESSED SLAB

SCALE: 1" = 1'-0" | 11

INTERIOR SLAB SECTION/CONTROL JOINT

SCALE: 1" = 1'-0" | 8

GRAVITY DRAINAGE PIPE THROUGH FOOTING

SCALE: 3/4" = 1'-0" | 5

PIPE PARALLEL TO FOOTING

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

NON-STRUCTURAL CURB

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

MECHANICAL HOUSEKEEPING PAD

SCALE: 1" = 1'-0" | 9

FOOTING/WALL REINFORCEMENT

SCALE: NOT TO SCALE | 6

PIPE PARALLEL TO FOOTING

SCALE: 3/4" = 1'-0" | 3

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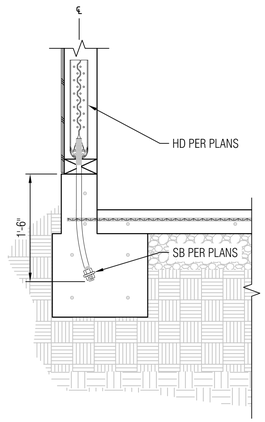
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
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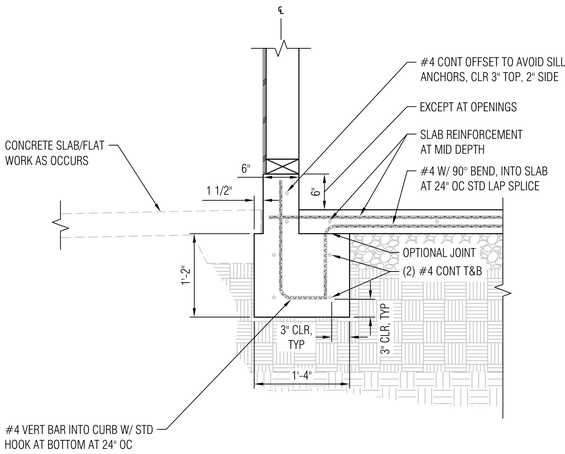
SHEET TITLE:
STANDARD FOUNDATION DETAILS

SHEET NUMBER
S501
V3

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PLOT DATE: Aug 6th 2024 - 1:38PM
VER 2020



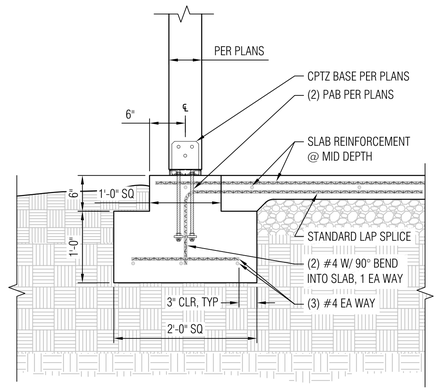
AT SW HOLD DOWNS



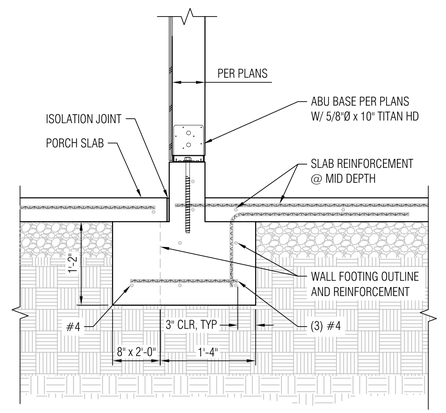
TYPICAL

PERIMETER FOOTING

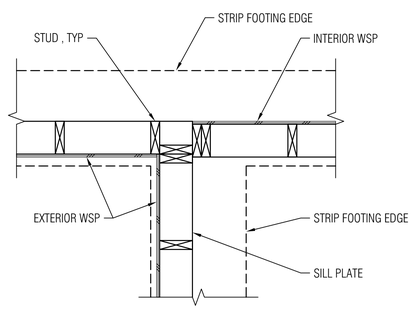
SCALE: 1" = 1'-0" | 1



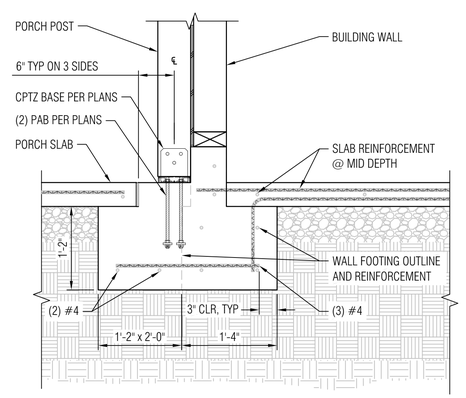
24 INCH SQUARE ISOLATED FOOTING — SCALE: 1" = 1'-0" | 4



PORCH POST FOOTING AT EXTERIOR WALL — SCALE: 1" = 1'-0" | 2



EXTERIOR TO INTERIOR WALL INTERSECTION — SCALE: 1" = 1'-0" | 5



OFFSET PORCH POST FOOTING AT EXTERIOR WALL — SCALE: 1" = 1'-0" | 3

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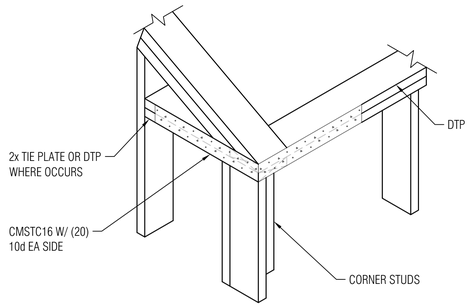
NO.	DATE	DESCRIPTION

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DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

SHEET TITLE:
FOUNDATION DETAILS

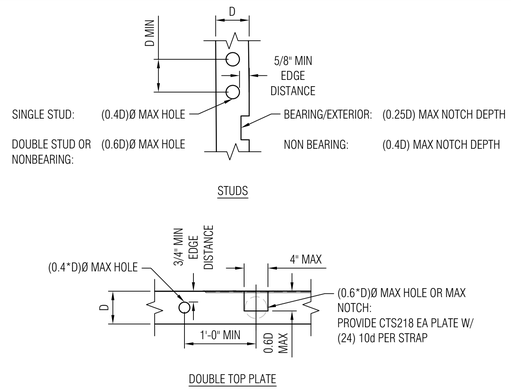
SHEET NUMBER
S502
V3

PROJECT PATH: C:\Users\AEccleston\AppData\Local\Temp\AcPublish_12068\2421_S502_S512_SS13.dwg
PLOT DATE: Aug 09, 2023 - 1:29PM
VER 2020



STRAP AT CORNERS OF TOP PLATE

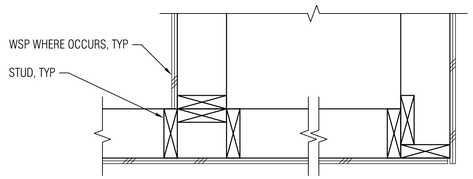
SCALE: NTS | 10



NOTES:
1. DO NOT LOCATE HOLES WITHIN 4'-0" EA SIDE OF TOP PLATE SPLICES.
2. DO NOT LOCATE HOLES WITHIN 12" OF END OF STUD.
3. ALTERATION OF OTHER STRUCTURAL MEMBERS IS NOT PERMITTED UNLESS OTHERWISE DETAILED.
4. PORTION OF STUD REMAINING AROUND HOLES SHALL BE SOUND WOOD WITHOUT EXCESSIVE STRENGTH REDUCING PROPERTIES SUCH AS KNOTS, BREAKS, SPLITS, EXCESSIVE SLOPE GRAIN, ETC.

NOTCHES AND BORED HOLES IN STRUCTURAL MEMBERS

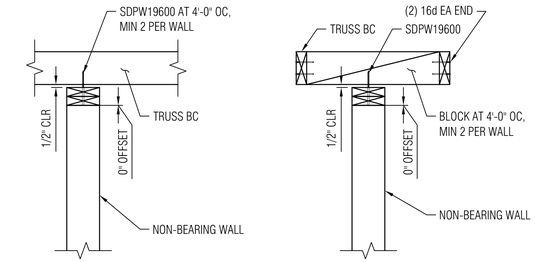
SCALE: 1" = 1'-0" | 7



NOTE: USE POSTS AT CORNERS AND INTERSECTIONS WHERE SHOWN ON FOUNDATION PLAN.

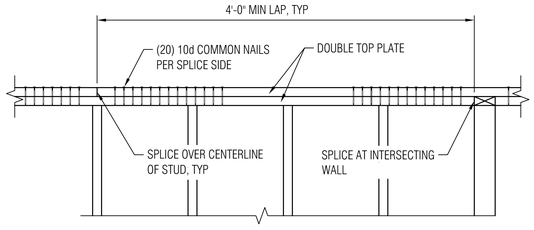
LOAD-BEARING WALL CORNER

SCALE: 1-1/2" = 1'-0" | 4



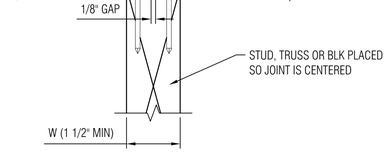
NON-LOAD-BEARING WALL FASTENING

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



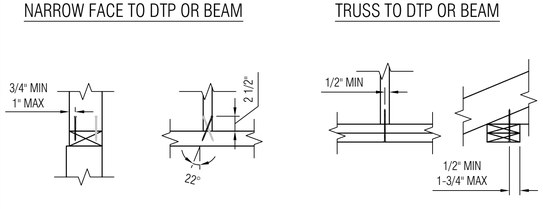
LOAD-BEARING DOUBLE TOP PLATE SPLICE

SCALE: 1" = 1'-0" | 11



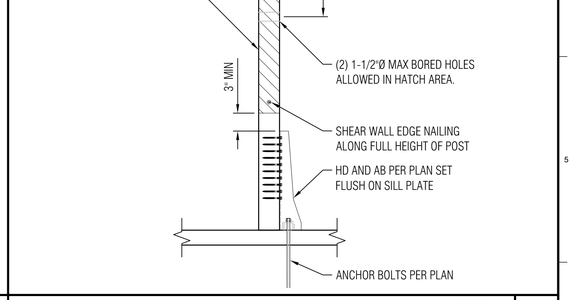
STRUCTURAL SHEATHING NAILING

SCALE: 6" = 1'-0" | 8



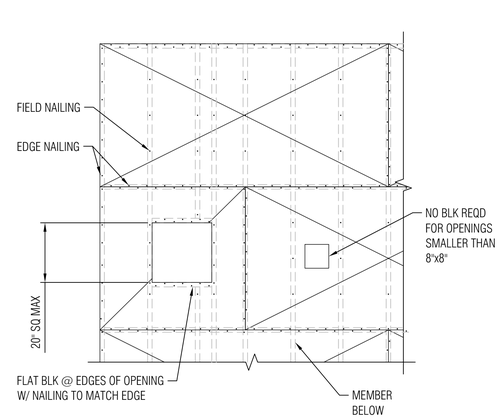
SDWC CONNECTIONS

SCALE: 1" = 1'-0" | 5



HOLDOWN POST

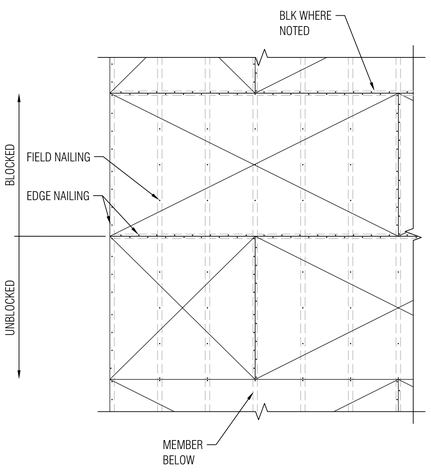
SCALE: 1" = 1'-0" | 2



NOTE: OPENING IN SHEAR WALL PANELS TO BE SPACED NOT CLOSER THAN 4'-0" OC HORIZ AND 8'-0" OC VERT

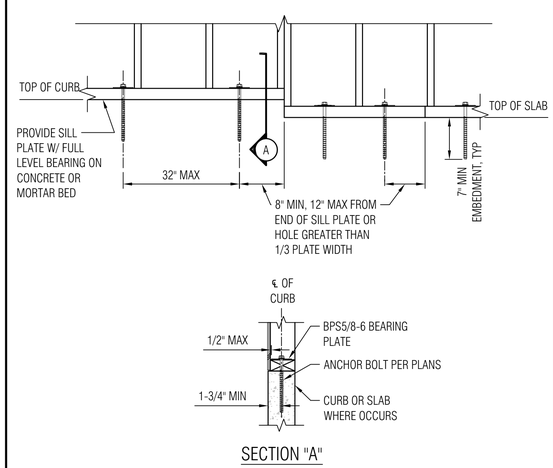
OPENING IN SHEAR PANELS

SCALE: 1/2" = 1'-0" | 9



STRUCTURAL SHEATHING LAYOUT

SCALE: 1/2" = 1'-0" | 6



LOAD-BEARING WALL SILL PLATE ANCHORAGE

SCALE: 3/4" = 1'-0" | 3

DSA Approval

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APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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OFFICE OF THE STATE FIRE MARSHAL
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

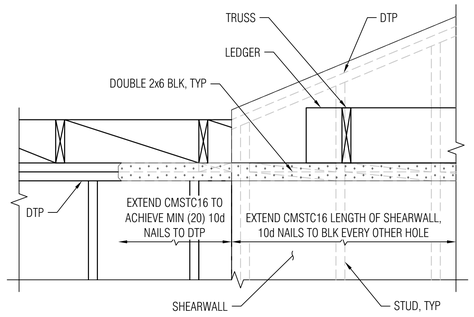
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

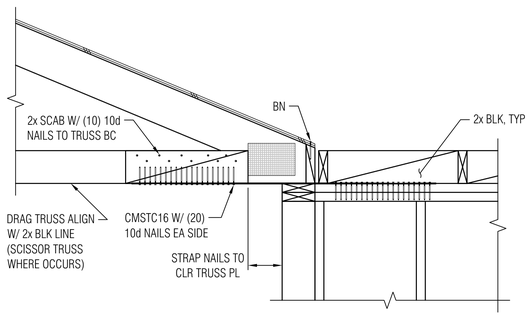
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SHEET NUMBER
S511
V3

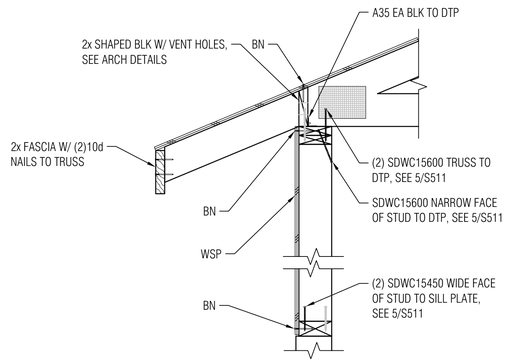
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VER 2020



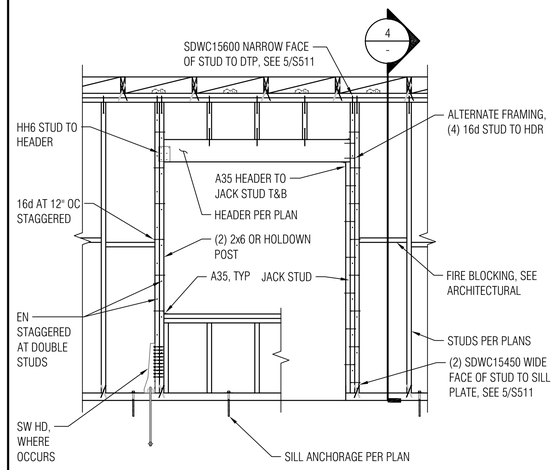
DOUBLE TOP PLATE TO BALLOON-FRAMED WALL — SCALE: 1" = 1'-0" — 10



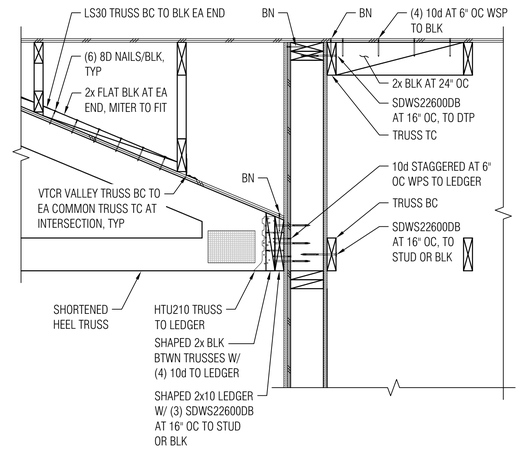
DRAG TRUSS — SCALE: 1" = 1'-0" — 7



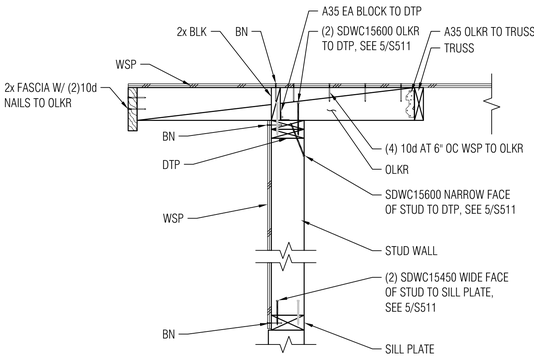
TYPICAL EAVE WALL — SCALE: 1" = 1'-0" — 4



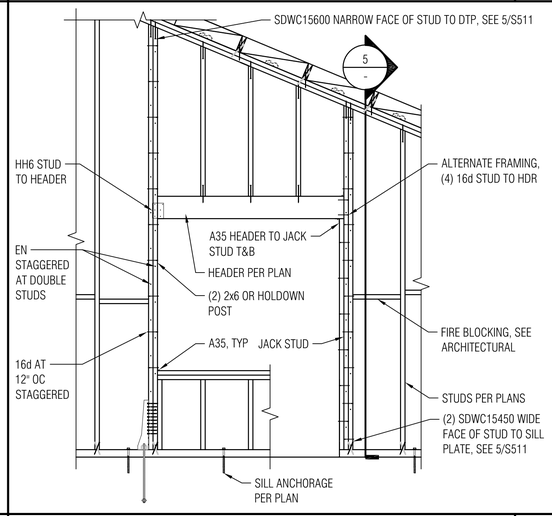
TYPICAL EAVE WALL — SCALE: 1/2" = 1'-0" — 1



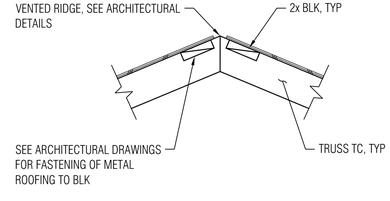
HEEL TRUSS CONNECTION AND TYPICAL VALLEY SET — SCALE: 1" = 1'-0" — 8



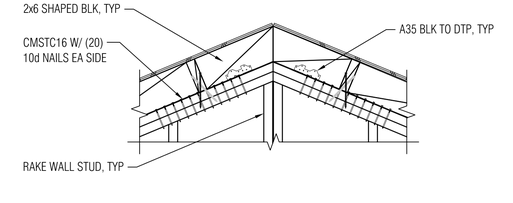
TYPICAL RAKE WALL — SCALE: 1" = 1'-0" — 5



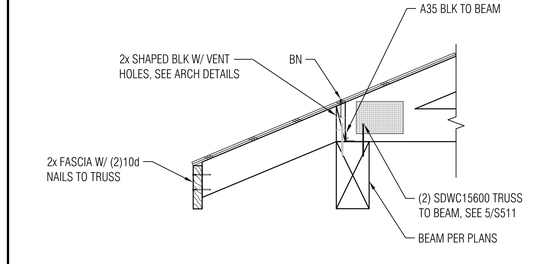
TYPICAL RAKE WALL — SCALE: 1/2" = 1'-0" — 2



TYPICAL VENTED RIDGE — SCALE: 1" = 1'-0" — 9



RIDGE OUTLOOKER — SCALE: 1" = 1'-0" — 6



TYPICAL EAVE TO BEAM CONNECTION — SCALE: 1" = 1'-0" — 3

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
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REGISTERED PROFESSIONAL ENGINEER
A. F. ECCLESTON
C 90716
CIVIL
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REVISIONS

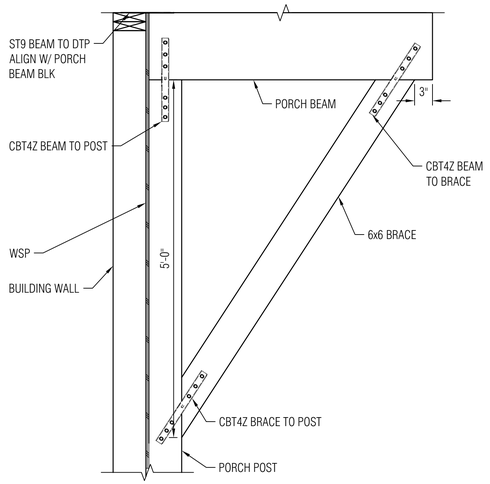
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

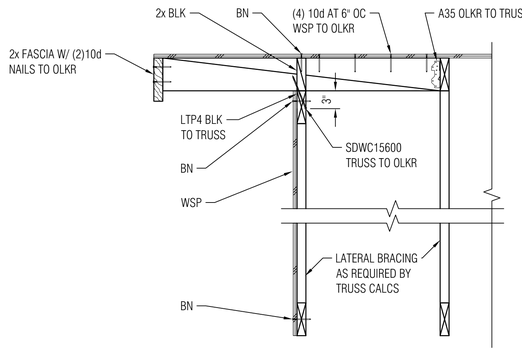
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SHEET NUMBER
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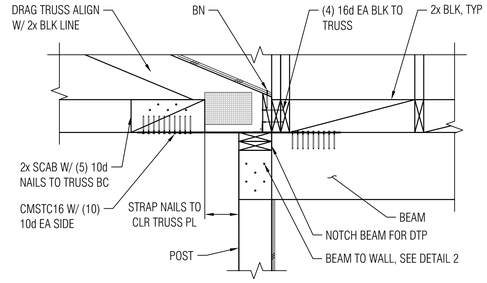
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PLOT DATE: Aug 02, 2023 - 1:29PM
VER 2020



ENTRY ANGLE-BRACED PORCH — SCALE: 1" = 1'-0" — 7



TYPICAL PORCH RAKE WALL — SCALE: 1" = 1'-0" — 4



PORCH CONNECTION TO DRAG TRUSS — SCALE: 1" = 1'-0" — 1

ENTRY DRAG TRUSS — SCALE: 1" = 1'-0" — 8

PORCH TO RAKE WALL — SCALE: 1" = 1'-0" — 5

BEAM PERPENDICULAR TO WALL — SCALE: 1" = 1'-0" — 2

BEAM AT CORNER — SCALE: 1" = 1'-0" — 9

ENTRY TRUSS — SCALE: 1" = 1'-0" — 6

BEAM PERPENDICULAR TO WALL — SCALE: 1" = 1'-0" — 3

DSA Approval

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AIR ATTACK BASE
C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
A. E. ECCLESTON
C 90716
CIVIL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: A. ECCLESTON
DRAWN BY: A. ECCLESTON
REVIEWED BY: K. LAM
FILE DATE:

SHEET TITLE:
FRAMING DETAILS

SHEET NUMBER
S513
V3

PROJECT PATH: C:\Users\AEcclest\AppData\Local\Temp\AcPublish_10\S513.dwg
PLOT DATE: Aug 02, 2023 - 1:30PM
VER 2020

GENERAL MECHANICAL (HVAC) NOTES

GENERAL REQUIREMENTS

1. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL BE EQUAL IN QUALITY, TYPE, CAPACITY, EFFICIENCY AND ACCESSORIES TO THE EQUIPMENT NOTED ON THE DRAWINGS. ADJUSTMENTS TO CONSTRUCTION AND ACCESSORIES ON SUBSTITUTED EQUIPMENT MAY BE REQUIRED TO ACHIEVE THIS EQUALITY, AND ALL SUCH ADJUSTMENTS SHALL BE PERFORMED TO ACHIEVE FULLY OPERATIONAL SYSTEMS. INSTALLER SHALL MAKE ANY CHANGES IN DUCTWORK, PIPING, FRAMING, ETC., AS REQUIRED TO ACCOMMODATE SUBSTITUTED EQUIPMENT.

2. INSTALL ALL EQUIPMENT AND MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES. APPLICABLE CODES SHALL INCLUDE, BUT NOT BE LIMITED TO THE 2022 EDITIONS OF THE CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE & CALIFORNIA BUILDING CODE, THE CALIFORNIA CODE OF REGULATIONS (CCR), CALIFORNIA FIRE REGULATIONS, AND CALIFORNIA ENERGY EFFICIENCY STANDARDS. WHERE HEAVIER GAGES OF MATERIAL, LARGER SIZES, THICKER INSULATION OR MORE STRINGENT REQUIREMENTS THAN THE CODES ARE REQUIRED BY THE CONSTRUCTION DOCUMENTS, SUCH INCREASED REQUIREMENTS SHALL APPLY. WHERE THERE MAY BE DISCREPANCIES OR DIFFERENCES BETWEEN THE CODE REQUIREMENTS AND THE CONSTRUCTION DOCUMENTS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

3. CONTROLS SHALL COMPLY WITH THE 2022 EDITION OF THE CALIFORNIA ENERGY CODE, SUBCHAPTER 3, SECTION 122. ALL CONTROL SYSTEM COMPONENTS AND CONTROL WIRING REQUIRED AND NECESSARY FOR A COMPLETE AND WORKABLE SYSTEM SHALL BE FURNISHED AND INSTALLED WHETHER OR NOT SHOWN ON THE CONSTRUCTION DOCUMENTS.

4. ALL AIR AND WATER SYSTEMS SHALL UNDERGO TESTING AND BALANCING BY QUALIFIED TESTING AND BALANCING PERSONNEL, USING SMACNA, TABB, AABC AND/OR NEBB PROCEDURES, AND THE PROJECT SPECIFICATIONS. FLOW QUANTITIES SHALL BE BALANCED TO NOT MORE THAN 10% ABOVE OR 0% BELOW THE QUANTITIES SHOWN ON THE DRAWINGS. SUBMIT A COMPLETE TEST AND BALANCE REPORT INDICATING, AS A MINIMUM, THE FLOW DELIVERY FOR EACH AIR OUTLET LOCATION, THE FINAL OPERATING DATA FOR THE SYSTEMS AND THE AIR CONDITIONING UNITS.

5. SUBMIT FOR APPROVAL, COMPLETE SUBMITTAL DATA ON SPECIFIED AND PROPOSED EQUIPMENT AND MATERIALS. SUBMITTALS SHALL INCLUDE EQUIPMENT SIZES, CAPACITY, MOTOR LOCATIONS, PERFORMANCE CURVES AND OTHER PERTINENT DATA. EACH SUBMITTAL SHALL INCLUDE IDENTIFICATION TAGS OR SYMBOLS TO MATCH THE CONSTRUCTION DOCUMENTS. PARTIAL SUBMITTALS OR SUBMITTALS WHICH ARE NOT MARKED WITH EQUIPMENT TAGS OR PERFORMANCE DATA WILL BE REJECTED. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL SUBMITTAL REQUIREMENTS.

6. PROVIDE PERMANENT ENGRAVED PLASTIC NAME PLATES FOR ALL EQUIPMENT INSTALLED, INDICATING THE PLAN DESIGNATION OF THE UNIT (GRVR-1, LV-1, IDU-1, ETC.) AND ALSO THE BUILDING AREA SERVED (BEDROOMS, CONFERENCE ROOM, ETC.). STAMPED METAL TAPES APPLIED WITH SELF-CONTAINED ADHESIVE WILL NOT BE ACCEPTABLE.

7. INSTALLER SHALL VERIFY ALL WORK CONDITIONS PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, EQUIPMENT, STRUCTURAL ELEMENTS, ELECTRICAL REQUIRMENTS, MATERIALS INDICATED AS EXISTING, AS WELL AS THE COORDINATED INSTALLATION OF ALL NEW WORK, MATERIALS, EQUIPMENT, ETC. COORDINATE THE LOCATIONS OF ALL EQUIPMENT WITH STRUCTURAL, AND ALL OTHER AFFECTED TRADES.

8. INSTALLER SHALL FIELD COORDINATE AND INSTALL PACKAGED HVAC EQUIPMENT TO MAINTAIN A MINIMUM OF 10'-0" CLEARANCE FROM OUTSIDE AIR INTAKE TO ALL EXHAUST OUTLETS, PLUMBING VENT-THRU-ROOFS (VTR'S), FLUE VENT DISCHARGES, TYPICAL.

9. MECHANICAL SYSTEMS DESIGN REFLECT EQUIPMENT SPECIFIED. WHEN EQUIPMENT SUBSTITUTIONS OCCUR AND DUCT CONNECTIONS, CONFIGURATIONS & SIZES, GAS INPUT AND ELECTRICAL SERVICE VARIES FROM THAT SPECIFIED, THEN IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO PREFORM ALL REQUIRED OR NECESSARY ADJUSTMENTS OR MODIFICATIONS WHEN THE SUBSTITUTED EQUIPMENT REFLECT OR REQUIRE REVISIONS OR CHANGES FROM THAT SHOWN ON THE CONSTRUCTION DOCUMENTS.

HVAC DUCTWORK

10. EXCEPT AS OTHERWISE ALLOWED OR PERMITTED, HVAC DUCTWORK SHALL BE CONSTRUCTED OF SMACNA GAGE (MINIMUM 26 GA THICKNESS) RIGID GALVANIZED STEEL MATERIAL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. PROVIDE FLAT SEAM CONSTRUCTION FOR ANY DUCTS EXPOSED IN OCCUPIED SPACE. DUCTWORK SHALL CLEAR OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS, ACCESSWAYS AND PASSAGEWAYS CLEAR, WHETHER OR NOT SHOWN ON THE DRAWINGS. ALL DUCT SIZES SHOWN REFER TO THE NET INSIDE DIMENSION OF THE DUCT.

11. CONSTRUCT, FABRICATE AND INSTALL ALL DUCTWORK IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARDS AND GUIDELINES, THE CALIFORNIA MECHANICAL CODE AND MANUFACTURER RECOMMENDATIONS. ALL DUCT JOINTS INCLUDING MECHANICAL FLANGED JOINTS SHALL BE SEALED WITH SILVER TAPE, OR ARABOL AND CANVAS. SEAL THE JOINTS OF ALL DUCTS EXPOSED TO THE WEATHER WITH ARABOL AND CANVAS.

12. ROUND DUCTWORK SHOWN ON THE DRAWINGS SHALL BE PREFABRICATED TYPE. NOTE: ALUMINUM FLEXIBLE DUCT IS NOT ACCEPTABLE IN LIEU OF ROUND RIGID DUCTWORK. IF RECTANGULAR DUCTWORK IS USED IN LIEU OF ROUND DUCT, THE RECTANGULAR DUCT AREA SHALL BE EQUIVALENT TO THE NET AREA OF THE ROUND DUCT. THE ASPECT RATIO OF THE RECTANGULAR DUCTWORK FROM THE LONG SIDE TO THE SHORT SIDE SHALL NOT EXCEED 2:1. TRANSITION DUCT SLOPE RATIO SHALL BE 1:5.

13. PROVIDE ALL BRANCH DUCTS WITH VOLUME DAMPERS WITH LOCKING QUADRANTS LOCATED AT LEAST FIVE FEET (5'-0") FROM THE GRILLE OR DIFFUSER SERVED.

14. WHERE APPLICABLE, ALL DUCTWORK RUNS CONNECTED TO A DIFFUSER BOX SHALL BE CONNECTED VIA A RIGID SHEETMETAL ELBOW.

DUCT INSULATION

15. PROVIDE ALL SUPPLY AND RETURN DUCTS WITH EXTERIOR INSULATION, FIBERGLASS MATERIAL DUCT WRAP, WITH FACTORY APPLIED FLAME RETARDANT FOIL REINFORCED KRAFT FACING. INSULATION SHALL HAVE MINIMUM R-8 VALUE. ALL INSTALLATIONS SHALL BE ACCORDING TO MANUFACTURER INSTRUCTIONS AND PROJECT SPECIFICATIONS. LAP ALL JOINTS 4" MINIMUM, AND SECURE WITH GALVANIZED STEEL WIRE.

ACOUSTICAL DUCT LINER

16. IN ADDITION TO THE EXTERIOR INSULATION, PROVIDE ALL MAIN DUCT PLENUMS, AND MAIN DUCT RUNS (AS INDICATED WITH "L" DESIGNATION AFTER THE DUCT SIZE) WITH INTERIOR ACOUSTICAL DUCT LINER. DUCT LINER SHALL BE 1-1/2" THICK. ALL INSTALLATION SHALL BE ACCORDING TO MANUFACTURER INSTRUCTIONS AND PROJECT SPECIFICATIONS. INSTALL WITH 100% COVERAGE ADHESIVE, AND FURTHER APPLY MECHANICAL PIN FASTENERS WHERE DUCT SIDE EXCEEDS 24". SEAL BUTT ENDS OF EXPOSED INSULATION IN THE DUCTS WITH MANUFACTURERS RECOMMENDED SEALANT OR ADHESIVE.

RIGID FIBER GLASS DUCTBOARD

17. WHERE APPLICABLE OR REQUIRED/NOTED/ALLOWED, PROVIDE RIGID FIBERGLASS DUCT BOARD WITH THICKNESS OF 1-1/2" MINIMUM. INSTALL ACCORDING TO MANUFACTURER INSTRUCTIONS.

FLEXIBLE DUCT

18. FLEXIBLE DUCT MAY BE USED AT BRANCH DUCT SECTIONS FOR CONNECTIONS BETWEEN RIGID SHEET METAL DUCTS PRIOR TO DIFFUSERS, GRILLES, ETC. FLEXIBLE DUCTS SHALL BE NO GREATER THAN 6 FEET IN LENGTH AND SHALL NOT BE ALLOWED IN ANY EXPOSED DUCT LOCATIONS. COMPLY WITH REQUIREMENTS OF THE PROJECT SPECIFICATIONS.

19. FLEXIBLE DUCT FOR SUPPLY & RETURN AIR APPLICATIONS SHALL BE INSULATED TYPE CPE LINER DUCT PERMANENTLY BONDED TO A COATED ALUMINUM CORRIGATED, PROVIDED WITH FIBERGLASS INSULATION EQUIVALENT TO AN R-8 VALUE, AND LOW PERMEABILITY FIBERGLASS REINFORCED METALLIZED OUTER FILM VAPOR BARRIER. UNINSULATED FLEXIBLE ALUMINUM DUCT SHALL BE ALLOWED FOR EXHAUST APPLICATIONS.

20. FLEXIBLE DUCT FOR TRANSFER AIR APPLICATIONS SHALL BE INSULATED TYPE CPE LINER DUCT PERMANENTLY BONDED TO A COATED SPRING STEEL WIRE HELIX, PROVIDED WITH FIBERGLASS INSULATION EQUIVALENT TO AN R-8 VALUE, AND LOW PERMEABILITY FIBERGLASS REINFORCED METALLIZED OUTER FILM VAPOR BARRIER. UNINSULATED FLEXIBLE ALUMINUM DUCT SHALL BE ALLOWED FOR EXHAUST APPLICATIONS (EXCEPT AT THE APPARATUS BAYS).

21. FLEXIBLE DUCT SHALL BE INSTALLED AS PER THE LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARDS AND GUIDELINES, AND MANUFACTURER RECOMMENDATIONS. THE FINISHED DUCT SYSTEM SHALL MEET THE REQUIREMENTS OF CMC, AND COMPLYING WITH THE REQUIREMENTS OF U.L. STANDARD FOR SAFETY U.L. 181 FOR CLASS 1 AIR DUCT. SECURE FLEXIBLE DUCTWORK WITH TWO MECHANICALLY APPLIED PLASTIC STRAPS OR ONE WORM DRIVE CLAMP. SUPPORT FLEXIBLE DUCTS WITH 2" WIDE HANGER STRAPS.

DUCT TAPES & ADHESIVES

22. APPROVED TAPES (PRESSURE-SENSITIVE AND HEAT SCALABLE) SHALL MEET THE REQUIREMENTS OF U.L. 181A, CLOSURE SYSTEMS FOR USE WITH RIGID AIR DUCTS AND AIR CONNECTORS. GLASS FABRIC AND MASTIC SHALL BE APPROVED BY THE SPECIFIC DUCT BOARD MANUFACTURER.

23. ALL FABRICATION, APPLICATION, AND INSTALLATION STEPS SHALL BE IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATION AND NAIMA STANDARDS, UNLESS CLEARLY STATED ON APPROVED WAIVERS.

DIFFUSERS, GRILLES & REGISTERS

24. ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE OF COMMERICAL QUALITY AND DESIGN AND GIVE THE AIR PATTERN AS SHOWN ON THE HVAC PLAN DRAWINGS. FOR MODULAR CORE CEILING DIFFUSERS, INSTALLER SHALL FIELD ADJUST AIR PATTERN AS REQUIRED AT EACH INDIVIDUAL DIFFUSER INSTALLATION LOCATION.

25. ALL DIFFUSER/REGISTER BOXES SHALL BE SUPPORTED ON ALL FOUR SIDES: WITH T-BARS IN A T-BAR CEILING SYSTEM, OR WITH 2 X 4 BLOCKING IN A TRUSS SUPPORTED CEILING SYSTEM.

DUCTWORK AND PIPING SUPPORTS

26. SUPPORTS FOR ALL PIPING AND DUCTWORK SHALL BE IN ACCORDANCE WITH CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE AND SMACNA "GUIDELINES FOR SEISMIC RESTRAINT OF MECHANICAL SYSTEMS". INSTALLER SHALL PROVIDE CALCULATIONS FOR ISOLATORS AND MOUNTING ACCEPTABLE TO THE REVIEWING AUTHORITY WHEN REQUIRED BY SAME.

FIRE DAMPERS

27. FIRE DAMPERS SHALL BE ACTIVATED BY A SMOKE SENSOR LOCATED BETWEEN HALLWAY 2 & 3 PER CBC 717.5. FIRE DAMPER DETAIL(S) SHOWN ON THE DRAWINGS ARE FOR REFERENCE ONLY. FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE STATE FIRE MARSHAL FOR VERIFICATION.

AUTOMATIC AIRFLOW SHUTOFFS

28. AUTOMATIC SHUTOFF SHALL BE PROVIDED FOR ALL AIR-MOVING SYSTEMS SUPPLYING AIR IN EXCESS OF 2,000 CFM (940 L/S) TO ENCLOSED SPACES WITHIN BUILDINGS. FURTHERMORE, AUTOMATIC SHUTOFF SHALL BE PROVIDED FOR ALL AIR-MOVING SYSTEMS REGARDLESS OF CAPACITY IF SO INDICATED ON THE DRAWINGS. AUTOMATIC SHUTOFF SHALL BE ACCOMPLISHED BY INTERRUPTING THE POWER SOURCE OF THE AIR-MOVING EQUIPMENT UPON DETECTION OF SMOKE IN THE MAIN SUPPLY-AIR DUCT SERVED BY SUCH EQUIPMENT. SMOKE DETECTORS SHALL BE LABELED BY AN APPROVED AGENCY AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL FOR AIR DUCT INSTALLATION. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S APPROVED INSTALLATION INSTRUCTIONS. SUCH DEVICES SHALL BE COMPATIBLE WITH THE OPERATING VELOCITIES, PRESSURES, TEMPERATURES AND HUMIDITIES OF THE SYSTEM. WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, THE SMOKE DETECTORS REQUIRED BY THIS SECTION SHALL BE SUPERVISED BY SUCH SYSTEMS AND INSTALLED IN ACCORDANCE WITH NFPA 72 AND THE CALIFORNIA BUILDING AND FIRE CODES. THE REQUIREMENTS FOR AUTOMATIC SHUTOFFS ARE SUBJECT TO EXCEPTIONS AS INDICATED IN SECTION 608.0 OF THE CALIFORNIA MECHANICAL CODE.

VENTILATION AIR

29. PER CBC 1202.1, BUILDINGS SHALL BE EITHER PROVIDED WITH NATURAL VENTILATION IN ACCORDANCE WITH CBC SECTION 1202.5, OR PROVIDED WITH MECHANICAL VENTILATION IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE, CHAPTER 4.

FLUE VENTS

30. VENTS SHALL EXTEND ABOVE THE ROOF SURFACE, THROUGH A FLASHING, AND TERMINATE IN A LISTED VENT CAP INSTALLED IN ACCORDANCE WITH ITS LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

MISCELLANEOUS GENERAL MECHANICAL NOTES

31. COORDINATE ALL WORK AMONG VARIOUS AFFECTED TRADES AS REQUIRED AND AS NECESSARY TO ENSURE THE INSTALLATION OF ALL WORK SHALL FIT IN THE AVAILABLE SPACE. MODIFY/EXTEND/ ADJUST WORK AS NECESSARY TO ENSURE THAT ALL REQUIRED INSTALLATIONS AND CONNECTIONS ARE PROPERLY COMPLETED.

32. ROUTE DUCTWORK INSIDE CEILING OR ATTIC SPACE TIGHT TO UNDERSIDE OF OVERHEAD ROOF FRAMING MEMBERS AS MUCH AS POSSIBLE. FIELD COORDINATE ALL DUCT ROUTING AND SIZES WITH ACTUAL CONDITIONS, STRUCTURAL MEMBERS, PIPING, OTHER DUCTS, SUPPORTS, LIGHT FIXTURES, ALL OTHER AFFECTED TRADES, ETC., AND ADJUST ROUTING AS REQUIRED, TYPICAL.

33. PROVIDE ALL RECTANGULAR DUCT ELBOWS WITH DOUBLE THICKNESS TURNING VANES.

34. FURNISH AND INSTALL MANUAL VOLUME DAMPERS IN ALL INDIVIDUAL BRANCH DUCTS, WHETHER OR NOT SHOWN ON THE DRAWINGS. BALANCE TO AIR VOLUME SHOWN, TYPICAL.

35. PROVIDE SUPPORTS AND BRACING AS APPLICABLE FOR ALL EQUIPMENT AND DUCTWORK AS REQUIRED BY SMACNA STANDARDS, AND APPLICABLE CODE REQUIREMENTS.

36. ROUTE AND INSTALL ALL MECHANICAL SYSTEMS AND DUCTS IN A MANNER THAT WILL NOT BLOCK OR OBSTRUCT PERSONNEL ACCESS AND USE OF THE CEILING ACCESS PANELS AND CATWALKS IN THE BUILDING CEILING/ATTIC AREA SPACES. COORDINATE LOCATION OF ALL ACCESS PANELS AND ATTIC WALKWAYS WITH ARCHITECTURAL AND STRUCTURAL.

37. DESCRIPTION OF WORK MAY INCLUDE BUT IS NOT LIMITED TO FURNISHING AND INSTALLING NEW SPLIT SYSTEM CONDENSER, FAN COIL, AND OTHER EQUIPMENT SHOWN ON PLANS INCLUDING THERMOSTATS, AND ASSOCIATED EQUIPMENT AND COMPONENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRANSITION, OFFSET, ETC. NECESSARY TO MAKE A COMPLETE AND FUNCTIONING SYSTEM CONSISTENT WITH DESIGN INTENT. COMMISSION AND PERFORM OPERATIONAL TEST PER MANUFACTURER'S INSTRUCTIONS.

38. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO REQUIREMENTS SET FORTH IN THE CURRENT CALIFORNIA TITLE 24 MECHANICAL, PLUMBING AND ENERGY CODES, APPLICABLE INDUSTRY STANDARDS AND THE MANUFACTURER'S INSTRUCTION. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES AND THE DESIGN SPECIFIED HEREIN. WHEN CONFLICT BETWEEN CODES AND STANDARDS ARISE, THE MOST STRINGENT SHALL APPLY.

39. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND NOTE-2. PROVIDE ALL FITTINGS. LINESETS, DRAINS, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.

40. FURNISH AND INSTALL CONDENSING UNIT ON MANUFACTURER'S PAD WHERE APPLICABLE AT LOCATION SHOWN ON DRAWINGS. PAD HEIGHT SHALL BE 3 INCHES MINIMUM. MAINTAIN THE MANUFACTURER'S CLEARANCES AROUND UNITS. DO NOT MOUNT UNIT TO EXTERIOR WALL.

41. MAINTENANCE LABELS SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT IN THE DIRECTION OF FLOW.

42. ALL EQUIPMENT, PIPING, AND DEVICES AND MATERIALS INSTALLED OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHERPROOF AND LEAK PROOF. PROTECT WATER LINES FROM FREEZING AND CONDENSATION. INSULATION SHALL BE COVERED WITH VAPOR BARRIER. PROTECT ALL DISSIMILAR METALS EXPOSED TO GALVANIC ACTION TO PREVENT CORROSION.

43. ALL EQUIPMENT AND COMPONENTS FURNISHED AND INSTALLED SHALL BE NEW AND LISTED WITH AN APPROVED TESTING AGENCY FOR THIS APPLICATION. UL LISTED. ETC.

44. FIELD COORDINATE ALL DUCT ROUTING AND SIZES WITH ACTUAL CONDITIONS, STRUCTURAL MEMBERS, PIPING, OTHER DUCTS, SUPPORTS, LIGHT FIXTURES, ALL OTHER AFFECTED TRADES, ETC., AND ADJUST ROUTING AS REQUIRED, TYPICAL.

45. THE CONTRACTOR SHALL BE FAMILIAR WITH THE MECHANICAL AND PLUMBING SYSTEMS LAYOUT AND DIAGRAMS BEFORE COMMENCING WORK. THE ENTIRE WORK SHALL BE COORDINATED, VISIT THE SITE, REFER TO CONSTRUCTION DRAWINGS, EQUIPMENT AND MACHINERY MANUFACTURER'S DATA SHEETS, CONNECTION DRAWINGS, AND PLUMBING EQUIPMENT LIST.

46. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRANSITION, OFFSET, ETC. NECESSARY TO MAKE A COMPLETE AND FUNCTIONING SYSTEM CONSISTENT WITH DESIGN INTENT. WHEREVER PIPE REDUCERS OR ENLARGERS ARE USED, THEY SHALL BE ECCENTRIC WITH FLAT SURFACE UPWARD TO AVOID AIR ENTRAPMENT.

47. ALL THERMOSTATS SHALL BE CALIFORNIA ENERGY COMMISSION APPROVED, ENCASED WITH APPROVED LOCKABLE COVERS LOCATED 4 FEET MAXIMUM ABOVE FINISHED FLOOR AT LOCATIONS SHOWN ON DRAWING. VENTILATION SHALL BE PROVIDED DURING OCCUPANCY.

48. FAN COILS AND FURNACES LOCATED IN CEILING OR ATTIC SPACES SHALL HAVE PRIMARY AND SECONDARY DRAINS, DEEP TRAPS AND PLUMBED TO PREVENT WATER DAMAGE TO CEILINGS.

49. SUSPEND DUCTS PER 2022 CBC RESTRAINT OF MECHANICAL SYSTEMS. ALL DUCTWORK SHALL BE CONCEALED AND INSTALLED TO MAINTAIN THE MANUFACTURER'S CLEARANCES AND T-24 MANDATORY MEASURES. PROVIDE VAPOR BARRIER WITH INSULATION.

50. ROUTE AND INSTALL ALL MECHANICAL SYSTEMS AND DUCTS IN A MANNER THAT WILL NOT BLOCK OR OBSTRUCT PERSONNEL ACCESS AND USE OF THE CEILING ACCESS PANELS AND CATWALKS IN THE BUILDING CEILING/ATTIC AREA SPACES. COORDINATE LOCATION OF ALL ACCESS PANELS AND CATWALKS WITH ARCHITECTURAL AND STRUCTURAL.

51. INSTALL FIRE PROTECTION PER STATE FIRE MARSHALL AND NFPA 13. PROVIDE ACCESS TO ALL FIRE/SMOKE DAMPERS.

52. ALL DUCT SMOKE DETECTORS AND FIRE DAMPERS SHALL BE STATE FIRE MARSHALL APPROVED AND INSTALLED STRICTLY PER THE MANUFACTURER'S INSTRUCTIONS. FURNISH AND INSTALL WHERE DUCT PENETRATE FIRE-RATED WALLS AND FLOORS. TYPICAL FOR ALL BUILDINGS. INSTALL ACCESS PANELS TO ALL DAMPERS.

53. FLASH AND SEAL ALL PENETRATIONS THROUGH ROOF AND MAKE WATERTIGHT. INSULATE TO PREVENT CONDENSATION. PIPE, VENT, AND DUCT ROOF PENETRATIONS SHALL BE COORDINATED WITH OTHER TRADES AND STATE REPRESENTATIVE TO ENSURE ROOFING WARRANTY AND SOLAR-READY ZONES ARE MAINTAINED.

54. COMPLETE ALL PIPING AND PLUMBING INSTALLATIONS AND JOINTS PER THE MANUFACTURER'S INSTRUCTIONS, 2022 CMC, AND CPC CODES, STANDARDS AND BEST INDUSTRY PRACTICES.

55. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND POINTS OF CONNECTIONS REQUIREMENTS OF PROPOSED UTILITIES BEFORE COMMENCING WORK.

56. ALL EQUIPMENT AND PIPING SHALL BE SUPPORTED AND SEISMICALLY RESTRAINED PER 2022 CBC FOR RESTRAINT OF MECHANICAL SYSTEMS.

57. THE CONTRACTOR SHALL ROUTE PIPING AND DUCTWORK TO AVOID INTERFERENCE WITH BUILDING STRUCTURE, ELECTRICAL CONDUITS, LIGHT FIXTURES AND ELEVATOR PIPING AND TO PROVIDE ACCESS TO MAINTENANCE. COORDINATE THE LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTIVE CEILING PLAN, AND ELECTRICAL LIGHTING LAYOUT.

58. DESCRIPTION OF WORK MAY INCLUDE BUT IS NOT LIMITED TO FURNISHING AND INSTALLING NEW HVAC, GAS FURNACES, FAN COILS, HEATERS, EXHAUST FANS, AIR COMPRESSORS SYSTEM, GAS HEAT/ELECTRIC PACKAGE, AND OTHER EQUIPMENT SHOWN ON PLANS INCLUDING DUCTS, GAS WATER HEATER, THERMOSTATS, AND ASSOCIATED EQUIPMENT AND COMPONENTS. PROVIDE AND INSTALL THERMOSTATS, DUCTWORK, AND PIPING AS SHOWN ON DRAWINGS. COMMISSION AND PERFORM OPERATIONAL TEST PER MANUFACTURER'S INSTRUCTIONS.

59. FURNISH AND INSTALL UNITS ON MANUFACTURER'S CURB WHERE APPLICABLE AT LOCATION SHOWN ON DRAWINGS. PACKAGE UNIT PLATFORM HEIGHT SHALL BE 12 INCHES MINIMUM. MAINTAIN THE MANUFACTURER'S CLEARANCES AROUND UNITS. ENSURE NO PLUMBING VENT IS WITHIN 10 FEET OF OUTSIDE AIR INTAKE.

60. ALL MOUNTING HEIGHT ELEVATIONS INDICATED FOR LOUVERS AND EQUIPMENT ARE DIMENSIONED TO BOTTOM OF LOUVER OR EQUIPMENT FINISH FLOOR. REFER TO ARCHITECTURAL FOR ADDITIONAL INFORMATION.

61. INSULATE ALL PIPES IN CEILINGS, ATTICS AND WALLS TO PREVENT CONDENSATION DAMAGE TO ADJACENT BUILDING COMPONENTS.

62. FURNISH AND INSTALL FIRE SUPPRESSION SYSTEMS FOR FIRE PROTECTION PER 2022 CFC CHAPTER 80: 2022 NFPA 13 AND 2022 NFPA 24.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

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1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
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REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL GENERAL NOTES

SHEET NUMBER
M001
V3

PROJECT PATH: ...Data\Tech Services\ASE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\2421M001.dwg
PLOT DATE: Jun 09, 2023 - 9:31 AM
VER: 2020

MEP EQUIPMENT ANCHORAGE

ALL MECHANICAL PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENT SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617.11.15 THROUGH 1617.11.18 AND ASCE 7 CHAPTER 13.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/120 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVEABLE 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 SUPPORTS 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 REFERENCED 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 THAT 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF 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 EQUIPMENTS HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS BRACING

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 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8 AND 2022 CBC, SECTIONS 1617.11.19 AND ASCE 7 CHAPTER 13.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREAPPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2022 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#) #_____.

PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES

1. WHETHER OR NOT SHOWN ON THE DRAWINGS, PROVIDE UL LISTED PENETRATION ASSEMBLIES FOR ALL PENETRATIONS THRU FIRE RATED AND SMOKE ASSEMBLIES. ALL FIRESTOPPING SYSTEMS PROPOSED FOR THE PROJECT SHALL BE SUBMITTED FOR REVIEW BY THE STATE FIRE MARSHAL AND THE STATE REPRESENTATIVE PRIOR TO INSTALLATION.
2. ALL FIRESTOPPING WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE (CBC) SECTION 714.
   - 2.1. FOR PENETRATIONS THRU FIRE RATED WALLS, COMPLY WITH PARAGRAPH 714.4 INCLUDING APPLICABLE SUB-PARAGRAPHS. THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALL SHALL COMPLY WITH PARAGRAPHS 714.4.1 INCLUDING APPLICABLE SUB-PARAGRAPHS. PENETRATIONS SHALL BE PROTECTED BY APPROVED FIRESTOP SYSTEMS PER THE PARAGRAPH 714.4.1.2.
   - 2.2. FOR MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL, COMPLY WITH THE PARAGRAPH 714.4.2 AND ALL APPLICABLE SUB-PARAGRAPHS.
   - 2.3. FOR THROUGH PENETRATIONS AND MEMBRANE PENETRATIONS THRU RATED HORIZONTAL ASSEMBLIES (FLOOR, FLOOR/CEILING, ROOF/CEILING, ETC.), COMPLY WITH PARAGRAPH 714.4 INCLUDING APPLICABLE SUB-PARAGRAPHS. PENETRATION OF HORIZONTAL FIRE BARRIERS SHALL BE DEMONSTRATED TO HAVE THE EQUIVALENT T AND F FIRE RATINGS AS THE HORIZONTAL ASSEMBLIES.
3. DUCTS AND AIR TRANSFER OPENINGS SHALL COMPLY WITH THE REQUIREMENTS OF CBC SECTION 717.
4. ALSO REFER TO FIRESTOPPING THRU PENETRATION DETAILS AND NOTES ON SHEET M511 FOR ADDITIONAL REQUIREMENTS.

MECHANICAL LEGEND

12x10L OR 12Ø	RIGID DUCTWORK
	FLEXIBLE AIR DUCTWORK
12x10	DUCT - DIMENSION SHOWN X WIDTH OR HEIGHT NOT SHOWN
12x10L	ACOUSTICALLY LINED DUCT
OR	TO BE DEMOLISHED/REMOVED
R	TO BE RELOCATED
BDD	BACK DRAFT DAMPER
BRD	BAROMETRIC RELIEF DAMPER
BPD	BY-PASS DAMPER
EXD	EXHAUST AIR DAMPER
FD	FIRE DAMPER
MVD	MANUAL VOLUME BALANCE DAMPER
RAD	RETURN AIR DAMPER
VAD	VENTILATION AIR DAMPER
ZD	ZONE DAMPER
MD	MOTORIZED DAMPER
	CEILING SUPPLY AIR DIFFUSER/REGISTER
RR	CEILING RETURN AIR GRILLE/REGISTER
FR	FLOOR RETURN AIR REGISTER
	EXHAUST AIR GRILLE/REGISTER
R	DUCT RISE
D	DUCT DROP
EA	EXHAUST AIR
OA	OUTSIDE AIR
SA	SUPPLY AIR
RA	RETURN AIR
VEX	POSITIVE-PRESSURE VEHICLE EXHAUST
XFER	TRANSFER AIR
	DUCT TRANSITION
SD	SMOKE DETECTOR
T1	THERMOSTAT, 48" AFF MAX TO TOP OF BOX
S1	SENSOR
	AIR FLOW DIRECTION
POC	POINT OF CONNECTION
AC / 1	EQUIPMENT IDENTIFIER, REFER TO SCHEDULES

AC	AIR CONDITIONER
AF	AIR FILTER
ABC	ABOVE CEILING
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PANEL
BRD	BAROMETRIC RELIEF DAMPER
BD	BYPASS DAMPER
CC	COOLING COILS
CD	CEILING DIFFUSER, CONDENSATE DRAIN
COND	CONDENSING UNIT
CD	CONDENSATE DRAIN
CFM	CUBIC FEET OF AIRFLOW PER MINUTE
CLG.	CEILING
CF	CEILING FAN
Ø	DIAMETER OR PHASE
DL	DOOR LOUVER
(E), EXISTING	EXISTING TO BE FIELD VERIFIED
EA	EXHAUST AIR
EF	EXHAUST FAN
ERV	ENERGY RECOVERY VENTILATOR
FD	FIRE DAMPER
FA, TA	FROM ABOVE, TO ABOVE
FB, TB	FROM BELOW, TO BELOW
FC	FLEXIBLE CONNECTION
FF	FINISHED FLOOR
FURN, FU	FURNACE UNIT
FSD	FIRE & SMOKE DAMPER
GRVR	GRAVITY VENTILATORS
HP	HEAT PUMP
HPWH	HEAT PUMP WATER HEATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWRP	HOT WATER RECIRCULATING PUMP
IDU	INDOOR UNIT
MD	MOTORIZED DAMPER
MVD	MANUAL VOLUME DAMPER
(N)	NEW
N.T.S.	NOT TO SCALE
O.B.D.	OPPOSED BLADE DAMPER
OH	OVERHEAD
ODU	OUTDOOR UNIT
OA/OSA	OUTSIDE AIR
/FT	PER FOOT
REF	REFRIGERANT
RA	RETURN AIR
RH	RANGE HOOD
RR	RETURN AIR REGISTER
SKN	SHEET KEYNOTE
SA	SUPPLY AIR
TYP.	TYPICAL
TG	TRANSFER GRILLE
UCD	UNDER CUT DOOR
VL	VENTILATION LOUVER
WD	WALL DIFFUSER
WV	WALL VENT
ZD	ZONE DAMPER

MECHANICAL LEGEND AND ABBREVIATIONS

SCALE: NOT TO SCALE

DSA Approval

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APP: 02-121081 INC:
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SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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REGISTERED PROFESSIONAL ENGINEER
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M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

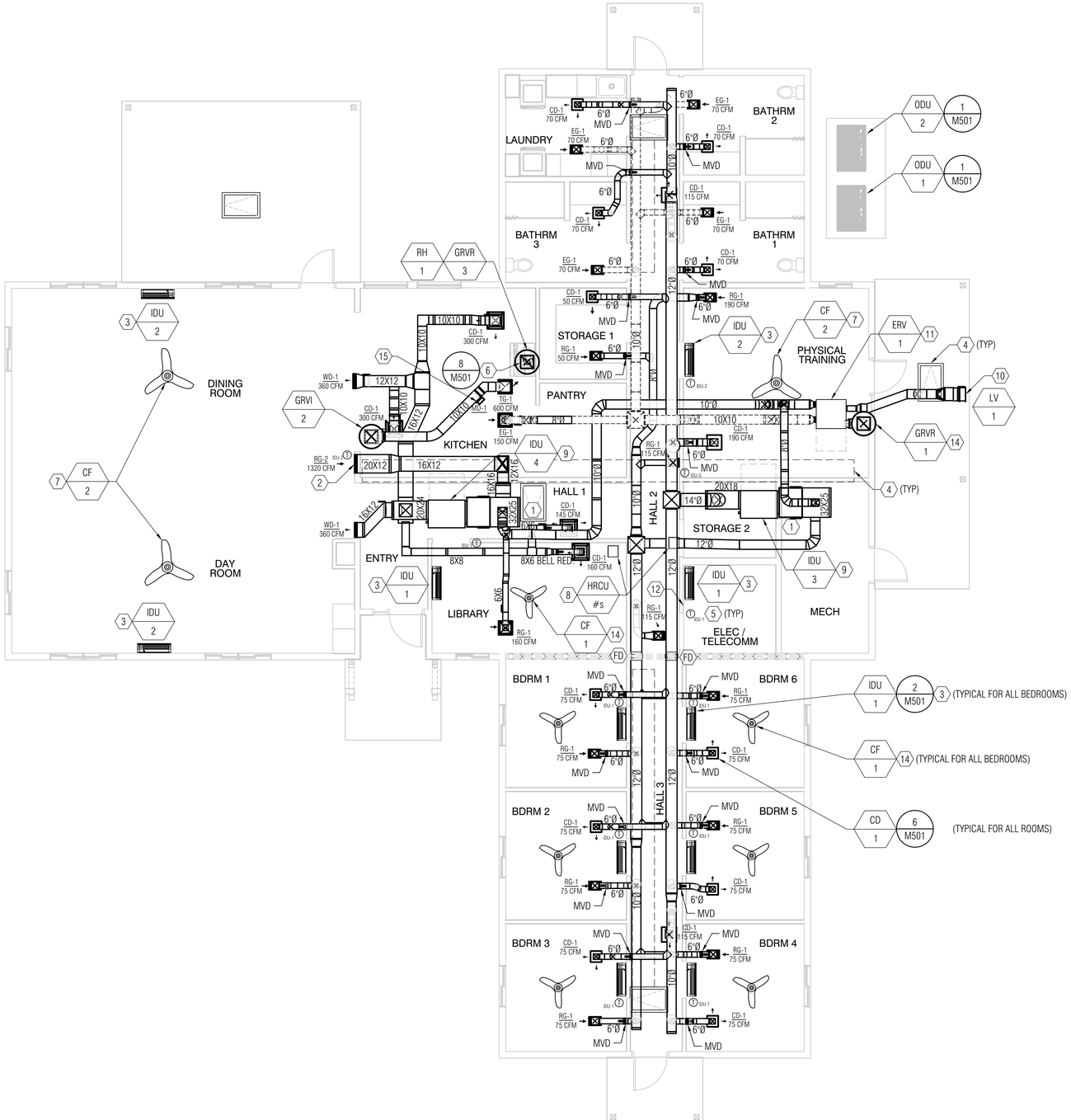
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
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SHEET TITLE:
MECHANICAL LEGEND AND ABBREVIATIONS

SHEET NUMBER
M002
V3

PROJECT PATH: F:\Data\Tech Services\A&E\PROJECT\Major Cap Projects\dc\1 Fresno Co 130 AAB\DRAWINGS\MECH\ACAD\M002.dwg
PLOT DATE: Jun 26, 2023 - 9:44AM



MECHANICAL PLAN - DUCTING

SCALE: 3/16" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. PROVIDE DUCT SMOKE DETECTORS FOR DUCTED INDOOR UNITS. EACH DUCT SMOKE DETECTOR SHALL BE MOUNTED ON MAIN SUPPLY AIR DUCT AND SHALL BE WIRED TO SHUTDOWN UNIT WITHIN 10 SECONDS UPON DETECTION OF SMOKE. WHERE APPLICABLE, DETECTOR SHALL ALSO SEND APPROPRIATE SIGNAL TO BUILDING FIRE ALARM SYSTEM.
2. DUCT PRESSURE CLASS: 2" W.G. STATIC
3. DUCT LEAKAGE COMPLIANCE CRITERIA: 6% OF NOMINAL AIR HANDLER AIRFLOW ACCORDING TO NONRESIDENTIAL APPENDIX NA7.5.3.
4. DUCT FITTINGS: HIGH EFFICIENCY FOR LOW FLOW RESISTANCE (233113).
5. DUCT LABELS AND FLOW ARROWS (210553)
6. ROUTE INDOOR UNITS' INSULATED CONDENSATE DRAIN PIPING TO NEAREST FLOOR RECEPTOR. MAINTAIN AT LEAST 1% SLOPE TO DRAIN. ATTACH INSECT SCREENS TO PIPE DISCHARGE ENDS.
7. EQUIPMENT LABELS: UNIT-# WITH CORRESPONDING IDU NUMBER. EXCEPTION: CEILING CASSETTE UNITS.

REFERENCE KEYNOTES

083113 ACCESS DOORS AND FRAMES
210529 HANGERS AND SUPPORTS ...
210548 VIBRATION AND SEISMIC CONTROLS ...
210553 IDENTIFICATION FOR PIPING, EQUIPMENT...
220719 PIPING INSULATION
230593 TESTING, ADJUSTING AND BALANCING
233113 METAL DUCTS
233300 AIR DUCT ACCESSORIES
233346 FLEXIBLE DUCTS
233713 DIFFUSERS, REGISTERS AND GRILLES
233723 HVAC GRAVITY VENTILATORS
238129 VARIABLE-REFRIGERANT-FLOW HVAC SYSTEMS

SHEET KEYNOTES

1. WALL DIFFUSER FRAME SIZE: 26" x 12" (210553)
2. RETURN GRILLE FILTER FRAME SIZE: 12" x 26" x 4". EQUIPMENT LABEL NEAR GRILLE: "AIR FILTER"
3. INDOOR (WALL MOUNT) UNIT ABOVE DOOR. REFER TO DETAIL 2/M501.
4. ATTIC WALKWAY, ATTIC ACCESS PANEL, AND/OR EQUIPMENT MAINTENANCE PLATFORM.
5. THERMOSTAT OR CONTROLLER ON WALL AT MAX. 48" TO TOP OF BOX ABOVE FLOOR AS SHOWN. WALL-MOUNT EQUIPMENT LABEL NEAR CONTROLLER. SPELL OUT "INDOOR UNIT - #" OR "CEILING FAN". EXCEPTION: WALL UNIT CONTROLLERS.
6. INSTALL RANGE HOOD (RH-1) PER DETAIL 8/M501, COORDINATE ALL WORK WITH ARCHITECTURAL/CASEWORK/CABINETRY TRADES. CONNECT EXHAUST DUCT FROM RANGE HOOD AND RISE UP TO CEILING/ATTIC SPACE. ROUTE INSIDE CEILING/ATTIC SPACE AS SHOWN, OFFSET AS REQUIRED, AND DISCHARGE UP THRU WITH GRAVITY ROOF VENT ASSEMBLY. PROVIDE APPROPRIATE CURB AND FLASHING AT ROOF PENETRATION AS REQUIRED FOR A FULLY WEATHERPROOF INSTALLATION. MOUNT AND SECURE VENTILATOR PER MANUFACTURER INSTRUCTIONS AND RECOMMENDATIONS. RANGE HOOD WEIGHT: 100 #.
7. CLEAR HEIGHT BELOW FAN: 9'. SEE E121.
8. HEAT RECOVERY CONTROL UNITS (HRCUs): PROPOSED LOCATIONS IN ATTIC. COORDINATE ACCESS PANEL WITH ARCHITECT AND MECHANICAL ENGINEER AFTER HEAT RECOVERY EQUIPMENT SUBMITTALS ARE APPROVED. LABEL ACCESS PANEL NEAR HRCU's WITH "HEAT RECOVERY CONTROL UNIT ACCESS". SUSPEND UNIT PER DETAIL 5/M501.
9. INDOOR UNIT, FILTER FRAME AND DUCTS SUSPENDED ACCORDING TO SECTION VIEW AND DETAIL 5/M501. INCLUDE CONDENSATE HIGH WATER LEVEL DETECTING DEVICE THAT WILL SHUT OFF THE INDOOR UNIT IN THE EVENT THE PRIMARY DRAIN IS BLOCKED. DISPLAY "CALL TECHNICIAN" OR SIMILAR ON THERMOSTAT.
10. ENERGY RECOVERY VENTILATOR (ERV) OUTSIDE AIR INTAKE. EXTERIOR WALL LOUVER WITH 2.5 SQUARE FEET MINIMUM FREE AREA. LOUVER PER DETAIL 3/M501 AND ARCHITECTURAL LOUVER SCHEDULE.
11. ENERGY RECOVERY VENTILATOR: PROVIDE DUCT SMOKE DETECTOR. DUCT SMOKE DETECTOR SHALL BE MOUNTED ON MAIN SUPPLY AIR DUCT AND SHALL BE WIRED TO SHUTDOWN UNIT WITHIN 10 SECONDS UPON DETECTION OF SMOKE. WHERE APPLICABLE, DETECTOR SHALL ALSO SEND APPROPRIATE SIGNAL TO BUILDING FIRE ALARM SYSTEM. EQUIPMENT LABEL: "ERV-1" ATTACH UNIT PER DETAIL 1/M502.
12. ERV CONTROLLER. EQUIPMENT LABEL "ENERGY RECOVERY VENTILATOR - CHANGE AIR FILTERS VIA ATTIC WALKWAY, ENTER FROM ATTIC ACCESS PANEL IN HALL 1". WALL-MOUNT LABEL NEAR THE CONTROLLER.
13. ERV EXHAUST THROUGH ROOF CAP. LABEL DUCTS "OUTSIDE AIR TO ERV" WITH FLOW ARROWS.
14. CLEAR HEIGHT BELOW FAN: 8'. SEE E121.
15. PROVIDE NORMALLY CLOSED MOTORIZED DAMPER (MD-1) AT DUCT CONNECTION TO TRANSFER GRILLE. MOTORIZED DAMPER SHALL BE INTERLOCKED TO OPEN WHENEVER THE RANGE HOOD (RH-1) EXHAUST FAN IS TURNED ON. SEE ELECTRICAL SHEETS FOR DETAILS ON THE INTERLOCK SCHEME FOR RH-1 AND MD-1.

FIRE-RATED ASSEMBLIES

1. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES (WHETHER OR NOT SHOWN). REFER TO SHEETS M001 AND M511.

   FIRE-RESISTANT RATED CONSTRUCTION. SEE ARCHITECTURAL.
2. THE CEILINGS OF THE FOLLOWING ROOMS ARE ALSO FIRE RATED: BEDROOM 1, BEDROOM 2, BEDROOM 3, BEDROOM 4, BEDROOM 5, BEDROOM 6 AND HALL 3.
3. UNLESS OTHERWISE NOT POSSIBLE, ROUTE ALL ABOVEGROUND PIPING AND DUCTWORK INSIDE THE ATTIC SPACE ABOVE THE RATED CEILINGS, AVOIDING PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES.
4. INSTALL HVAC REGISTERS AND GRILLES IN FIRE-RATED ASSEMBLIES WITH APPROPRIATE FIRE DAMPERS. SEE DETAIL 4/M501.

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

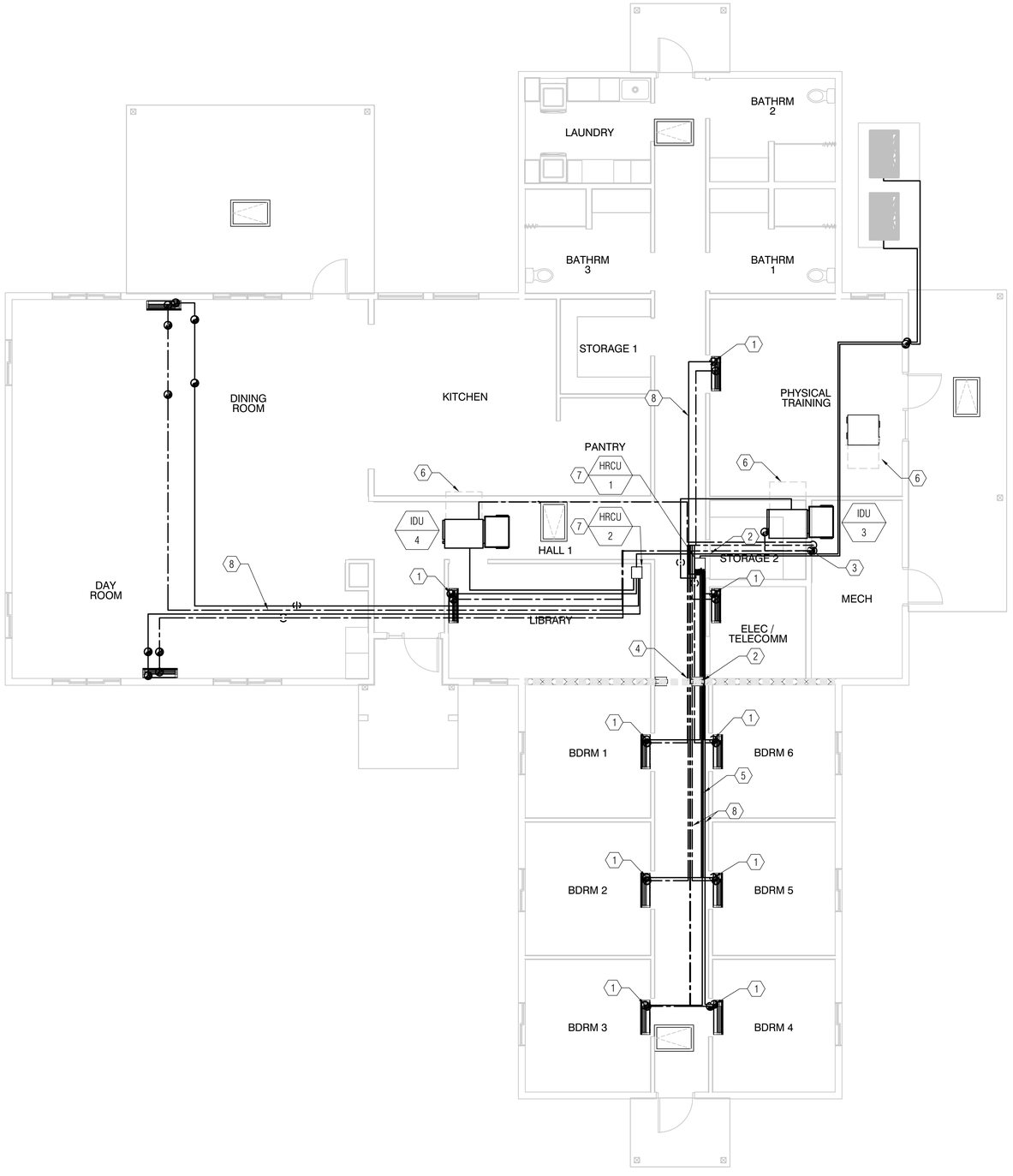
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL PLAN - DUCTING

SHEET NUMBER
M101
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_1\m101dv3 M101 _ M102 _ M501.dwg
PLOT DATE: Jul 24, 2023 - 3:56PM
VER 2020



MECHANICAL PLAN - PIPING

SCALE: 1/4" = 1'0"

FLAT NORTH

GENERAL SHEET NOTES

1. MAJORITY OF DUCTWORK TO BE RUN THRU ATTIC SPACE. CONTRACTOR TO COORDINATE LAYOUT WITH STRUCTURAL AND OTHER DISCIPLINES.
2. PROVIDE SMOKE DETECTORS IN DUCTED INDOOR UNITS. EACH DUCT SMOKE DETECTOR SHALL BE MOUNTED IN THE SUPPLY AIR DUCT AND SHALL BE INTERLOCKED TO TURN OFF UNIT WITHIN 10 SECONDS UPON DETECTION OF SMOKE. WHERE APPLICABLE DETECTOR SHALL ALSO SEND APPROPRIATE SIGNAL TO BUILDING FIRE ALARM SYSTEM.
3. DUCTS SHALL BE LOW PRESSURE CLASS: 2" W.G. STATIC
4. DUCT LEAKAGE COMPLIANCE CRITERIA: 6% OF NOMINAL AIR HANDLER AIRFLOW ACCORDING TO TITLE 24 PART 6, NON RESIDENTIAL APPENDIX NA7.5.3.
5. DUCT FITTINGS: HIGH EFFICIENCY FOR LOW FLOW RESISTANCE .
6. ROUTE INDOOR UNIT INSULATED CONDENSATE DRAIN PIPING TO NEAREST FLOOR RECEPTOR, DRAIN OR VENT PIPE OR OUT DOORS TO CONCRETE SPLASH BLOCK. MAINTAIN 2% SLOPE TO DRAIN.
7. LINE SETS: SIZES OF REFRIGERANT PIPING SHALL BE PER MANUFACTURERS RECOMMENDATIONS TO CONSIDER LENGTH OF PIPING. ROUTE REFRIGERANT PIPING FROM OUTDOOR UNITS TO HVAC ROOM PIPE CHASE AND TO SECOND FLOOR ATTIC UNITS.

⬡ SHEET KEYNOTES

1. REFER TO DETAIL 4/P504 FOR VERTICAL PIPE PENETRATION.
2. REFER TO DETAIL 2/P504 FOR HORIZONTAL PIPE PENETRATION THROUGH VERTICAL WALL SECTIONS.
3. REFER TO DETAIL 5/M501 FOR CONDENSATE DRAIN TO FLOOR RECEPTOR.
4. REFER DETAIL 2/P504 FOR PIPE FIRE-WALL PENETRATION.
5. REFER TO DETAILS 9/P501 AND 10/P501 FOR LINE SET SUPPORT.
6. EQUIPMENT MAINTENANCE CLEARANCE: PER MANUFACTURER'S RECOMMENDATIONS.
7. HEAT RECOVERY CONTROLLING UNITS (HRCUs): PROPOSED LOCATIONS IN ATTIC. COORDINATE ACCESS PANEL WITH ARCHITECT AND MECHANICAL ENGINEER AFTER HEAT RECOVERY EQUIPMENT HAS BEEN SELECTED AND SUBMITTALS APPROVED.
8. PIPES AND LINE SETS SHOWN HORIZONTAL, SIDE-BY-SIDE, FOR CLARITY. PIPES SHALL BE STACKED AND/OR ATTACHED TO BLOCKING AND CLEAR OF WORK FROM OTHER TRADES.

LEGEND

REFRIGERANT PIPING

CONDENSATE DRAIN PIPING

BRANCH SELECTOR SERVICE AREA

FIRE-RATED ASSEMBLIES

1. PROVIDE FIRE STOPPING FOR ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES (WHETHER OR NOT SHOWN). REFER TO SHEETS M001 AND M501.
2. UNLESS OTHERWISE NOT POSSIBLE, ROUTE ALL ABOVEGROUND PIPING AND DUCTWORK INSIDE THE ATTIC SPACE ABOVE THE RATED CEILINGS, AVOIDING PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES.
3. INSTALL HVAC REGISTERS AND GRILLES IN FIRE-RATED ASSEMBLIES WITH APPROPRIATE FIRE/SMOKE DAMPERS. SEE DETAIL 4/M501.

DSA Approval

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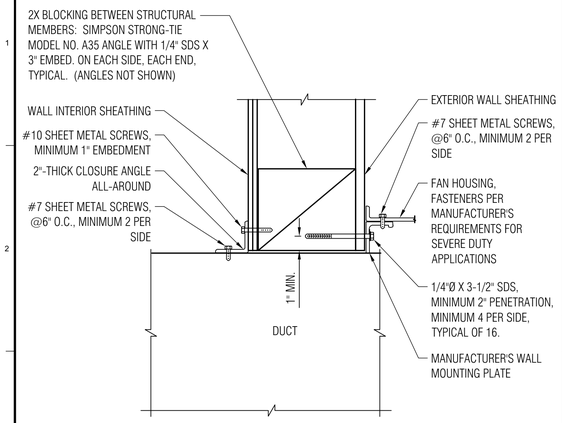
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DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

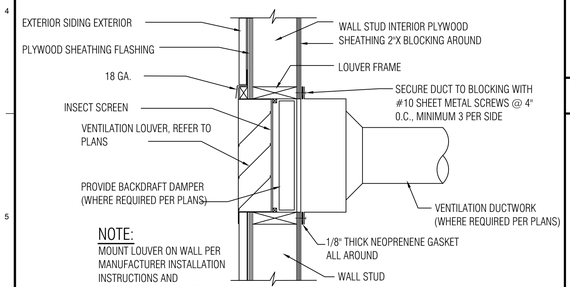
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MECHANICAL PLAN - PIPING

SHEET NUMBER
M102
V3

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VER 2020

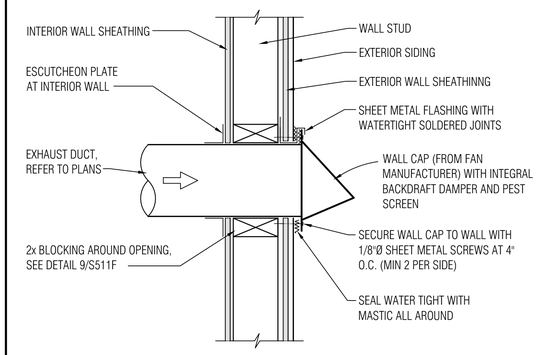


DUCT - WALL PENETRATION — SCALE: NOT TO SCALE — 13

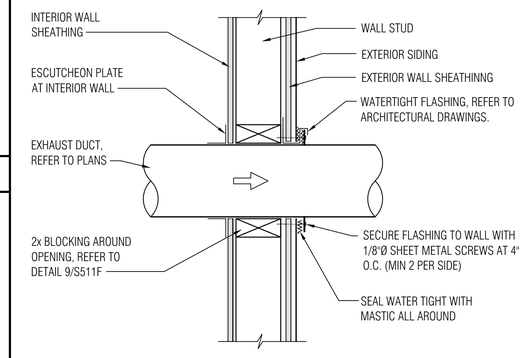


NOTE:
MOUNT LOUVER ON WALL PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. PROVIDE WALL OPENING WITH FLASHING AND WATERTIGHT SEALANT ALL AROUND.
REFER TO ARCHITECTURAL FOR ADDITIONAL INSTALLATION REQUIREMENTS.

HVAC LOUVER MOUNT — SCALE: NOT TO SCALE — 14

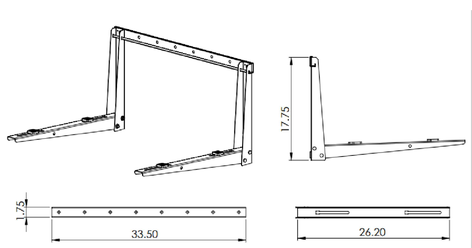


EXHAUST WALL CAP — SCALE: NOT TO SCALE — 9



DUCT THRU WALL PENETRATION — SCALE: NOT TO SCALE — 10

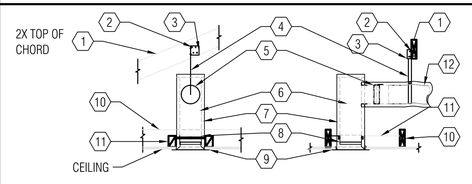
DETAIL NOT USED — SCALE: NOT TO SCALE — 11



NOTES: 14 GAUGE, STAINLESS STEEL, LOAD RATED SAFETY FACTOR: 3, RATED FOR 300# MAX. LOAD CAPACITY, 4 RUBBER VIBRATION ISOLATORS. BASIS OF DESIGN PRODUCT: RECTORSEAL WBB300 WALL BRACKET. SEE PLANS FOR ANCHORAGE.

HEAT PUMP WALL BRACKET — SCALE: NOT TO SCALE — 12

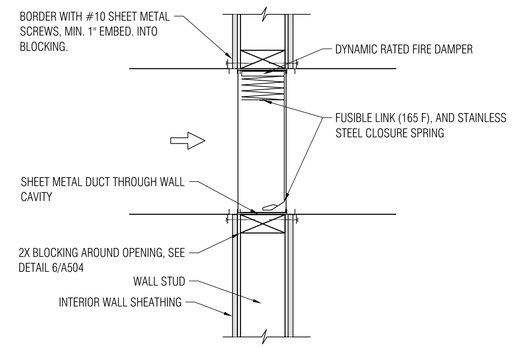
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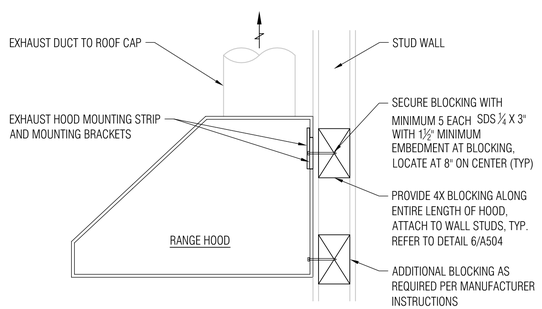
KEYNOTES

1. RAFTER
2. #10 1-INCH LONG SHEET METAL SCREWS, 4 EACH PER SIDE
3. ANGLE BRACKET SUPPORT, 1.38 X 2.75 X 0.06 GALVANIZED IRON OR GRADUALLY TWISTED STRAP
4. 1" WIDE, 22 GA DUCT STRAP, 48" ON CENTERS
5. METAL DUCT WITH BALANCING DAMPER
6. STANDARD GALVANIZED DISTRIBUTION PLENUM
7. EXTERIOR INSULATION
8. DIFFUSER/GRILL NECK FRAME
9. DIFFUSER/GRILL FRAME; REFER TO PLANS AND GRILLE SCHEDULE FOR DIFFUSER SIZE AND TYPE FOR CEILING SYSTEM. SCREWS PER MANUFACTURER'S REQUIREMENTS
10. CEILING JOIST
11. BLOCKING, SEE DETAIL 6/A504
12. FLEXIBLE DUCT, MAX. 6 FT.

HVAC GRILL MOUNT — SCALE: NOT TO SCALE — 6

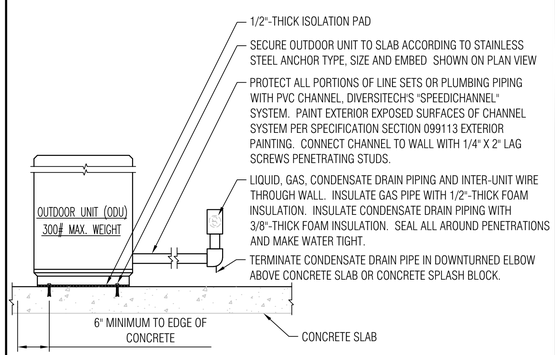


FIRE WALL PENETRATION — SCALE: NOT TO SCALE — 7

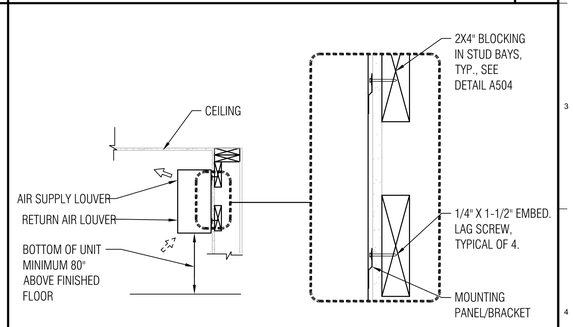


NOTE: MOUNT RANGE HOOD, MOUNTING STRIP AND MOUNTING BRACKET PER MANUFACTURER INSTRUCTIONS, USING MANUFACTURER FURNISHED MOUNTING HARDWARE, UNLESS OTHERWISE NOTED.

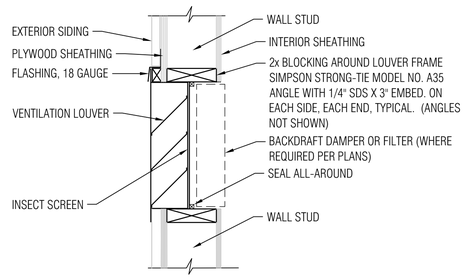
KITCHEN RANGE HOOD ATTACHMENT — SCALE: NOT TO SCALE — 8



OUTDOOR UNIT — SCALE: NOT TO SCALE — 1

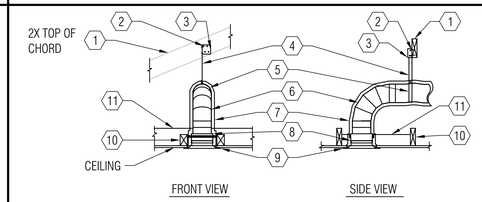


INDOOR UNIT ATTACHMENT (HIGH-ON-WALL) — SCALE: NOT TO SCALE — 2



NOTE:
1. INSTALL LOUVER IN WALL PER MANUFACTURER INSTALLATION INSTRUCTIONS. PROVIDE WALL OPENING WITH FLASHING AND WATERTIGHT SEALANT ALL AROUND.
2. REFER TO ARCHITECTURAL FOR ADDITIONAL REQUIREMENTS.

WALL LOUVER — SCALE: NOT TO SCALE — 3



KEYNOTES

1. RAFTER
2. #10 1-INCH LONG SHEET METAL SCREWS, 4 EACH PER SIDE
3. ANGLE BRACKET SUPPORT, 1.38 X 2.75 X 0.06 GALVANIZED IRON OR GRADUALLY TWISTED STRAP
4. 1" WIDE, 22 GA DUCT STRAP, 48" ON CENTERS
5. 1" WIDE, 22 GA DUCT STRAP
6. STANDARD GALVANIZED ELBOW
7. EXTERIOR INSULATION
8. SQUARE TO ROUND TRANSITION BOX, SIZE PER SCHEDULE
9. METAL FRAME. SCREWS PER MANUFACTURER'S REQUIREMENTS
10. CEILING JOIST
11. BLOCKING, SEE DETAIL 6/A504

CEILING AIR INLET/OUTLET — SCALE: NOT TO SCALE — 4

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C130 BARRACKS

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REGISTERED PROFESSIONAL ENGINEER
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M 27273
MECHANICAL
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REVISIONS

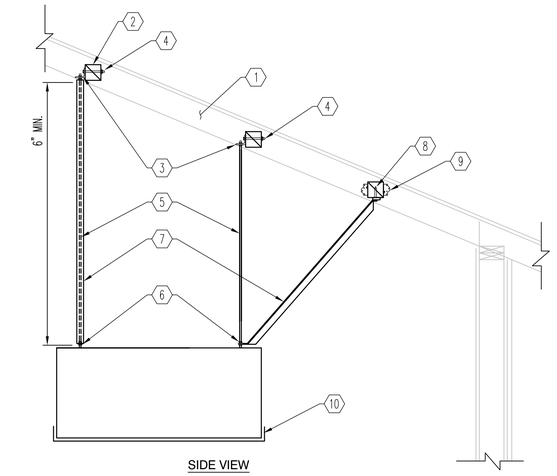
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

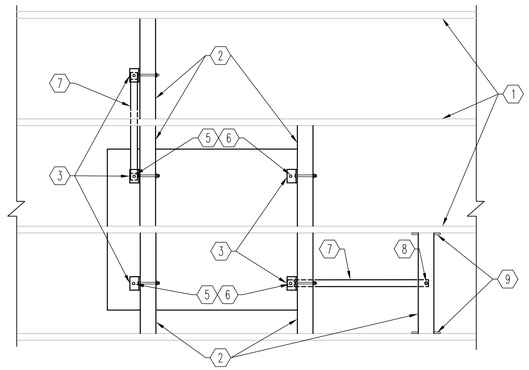
SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER
M501
V3

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PLOT DATE: Jul 25, 2025 - 10:44AM
VER 2020



SIDE VIEW



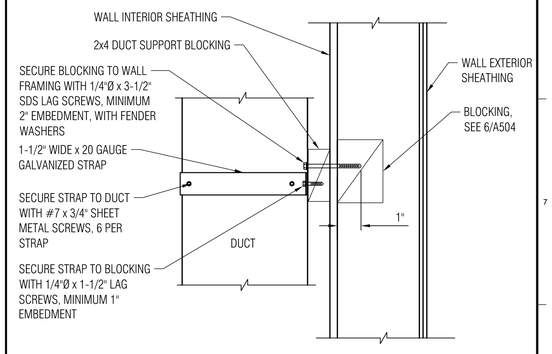
PLAN VIEW

DETAIL KEYNOTES

1. ROOF FRAMING
2. BLOCKING: SIMPSON STRONG-TIE MODEL NO. A34 ANGLE ON EACH SIDE, EACH END OF 4x4 BLOCKING, TYPICAL. (NOT ALL ANGLES SHOWN)
3. 2" x 2" x 3" LONG x 1/4"-THICK ANGLE SUPPORT BRACKET, TYPICAL. SECURE HANGER TO ANGLE WITH DOUBLE NUTS AND WASHERS, TYPICAL.
4. SECURE ANGLE TO ROOF FRAMING OR BLOCKING WITH 1/2"Ø THRU BOLTS AND WASHERS, TYPICAL.
5. 3/8"Ø GALVANIZED HANGER RODS, QUANTITY AS REQUIRED, MINIMUM 4 PER UNIT, SLENDERNESS RATIO (L/r) = 9.14
6. ATTACH HANGER ROD TO UNIT WITH VIBRATION ISOLATORS, LOCKING NUTS AND WASHERS VIA THREADED NUT RETAINERS, TYPICAL.
7. 1-1/2" x 1-1/2" x 1/4"-THICK ANGLE BRACING, ATTACH TO UNIT WITH DOUBLE NUTS AND WASHERS VIA HANGER ROD CONNECTION (TYP OF 2). SLENDERNESS RATIO (L/r) = 34.1 , TYPICAL.
8. SECURE DIAGONAL TRANSVERSE BRACING TO 4x4 BLOCKING WITH 1/2"Ø x 3-1/2" SDS, TYPICAL.
9. ATTACH 4x4 BLOCKING TO ROOF RAFTERS WITH A34 CLIPS AT EA END, TYPICAL.
10. DRAIN PAN ATTACH PER MANUFACTURERS REQUIREMENTS.

EQUIPMENT SUSPENDED FROM RAFTERS (ERV) - 350# MAX. EQUIPMENT WEIGHT

SCALE: NOT TO SCALE | 1



DUCT SUPPORT - STRAP AND BLOCKING

SCALE: NOT TO SCALE | 2

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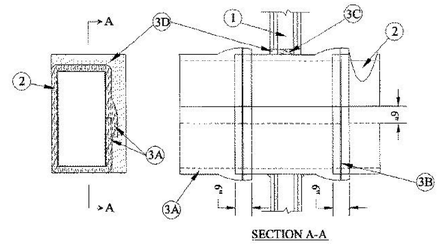
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REVIEWED BY: M. MADISON
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SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER
M502
V3

PROJECT PATH: F:\Data\Tech Services\A&E\PROJECT\Major Cap Projects\cip\421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\M502.dwg
PLOT DATE: Jun 28, 2023 - 3:44PM
VER: 2020
1"

FIRESTOP SYSTEM NO. XHEZ.W-L-7044, MARCH 1, 2017
F RATINGS 1 & 2 HR, T RATINGS 1 & 2 HR



SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS — WALL FRAMING SHALL CONSIST 3-1/2 IN. (89 MM) WIDE STEEL STUDS. STEEL STUDS TO BE SPACED MAX 24 IN. (610 MM) OC. WHEN THE MAX DIMENSION OF OPENING EXCEEDS THE WIDTH OF THE STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES . THE FRAMED OPENING SHALL BE 5 IN. (127 MM) WIDER AND HIGHER THAN THE DIMENSIONS OF THE STEEL DUCT.

   B. GYPSUM BOARD* — FOR 1 HR ASSEMBLY, ONE LAYER OF MIN 5/8 IN. (16 MM) THICK GYPSUM BOARD AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. FOR 2 HR ASSEMBLY, TWO LAYERS OF MIN 5/8 IN. (16 MM) THICK GYPSUM BOARD AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX AREA OF OPENING IS 7 FT2 (0.65 M2) WITH A MAX DIMENSION OF 35 IN. (889 MM). THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. THROUGH PENETRANTS — ONE STEEL DUCT TO BE INSTALLED WITHIN ANNULAR SPACE. DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES OF THROUGH PENETRANTS MAY BE USED:

   A. STEEL AIR DUCT — MIN 24 GAUGE (0.023 IN. OR 0.58 MM) GALV STEEL DUCT HAVING A MAX PERIMETER DIMENSION OF 108 IN. (2.74 M) AND A MAX INDIVIDUAL DIMENSION OF 30 IN. (762 MM).

   B. STEEL GREASE DUCT — MIN 16 GAUGE (0.059 IN. OR 1.5 MM) THICK CARBON STEEL DUCT HAVING A MAX PERIMETER DIMENSION OF 108 IN. (2.74 M) AND A MAX INDIVIDUAL DIMENSION OF 30 IN. (889 MM). GREASE DUCT ASSEMBLIES FOR USE ONLY IN 2 HR RATED WALLS.

3. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

   A. DUCT WRAP MATERIALS* — NOM 1-1/2 IN. (38 MM) THICK, 6 PCF (96 KG/M3), CERAMIC BLANKET TOTALLY ENCAPSULATED WITHIN FOIL-SCRIM FACERS. THE STEEL DUCT SHALL BE WRAPPED WITH ONE LAYER OF DUCT WRAP, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, MAINTAINING MIN 6 IN. (152 MM) TRANSVERSE AND LONGITUDINAL OVERLAPS. ALL CUT EDGES AND ENDS SHALL BE SEALED WITH 3 IN. (76 MM) WIDE PRESSURE SENSITIVE ALUMINUM FOIL TAPE. THE ANNULAR SPACE BETWEEN THE INSULATED DUCT AND THE PERIPHERY OF THE OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 2 IN. (51 MM). THERMAL CERAMICS INC — FIREMASTER FASTWRAP XL, PYROSCAT DUCT WRAP XL OR FIREMASTER FASTWRAP+.

   B. STEEL BANDING STRAPS — MIN 1/2 IN. (13 MM) WIDE BY 0.015 IN. (0.38 MM) THICK CARBON STEEL BANDING STRAPS USED IN CONJUNCTION WITH MIN 1 IN. (25 MM) LONG STAINLESS STEEL CRIMP CLIPS. BANDING STRAPS SPACED MAX 12 IN. (305 MM) OC AND 3 IN. (76 MM) FROM TRANSVERSE JOINTS OF DUCT WRAP.

   C. PACKING MATERIAL — MIN 3-1/2 IN. (89 MM) THICKNESS OF UNFACED SCRAP DUCT WRAP MATERIAL OR MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM BETWEEN THE WRAPPED DUCT AND THE PERIPHERY OF THE OPENING. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

   D. FILL, VOID OR CAVITY MATERIAL*— SEALANT — MIN 5/8 IN. (16 MM) AND 1-1/4 IN. (32 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL ASSEMBLY FOR 1 OR 2 HR RATED WALLS, RESPECTIVELY. AT THE POINT CONTACT LOCATION BETWEEN DUCT AND WALLBOARD, A MIN 1/2 IN. (13 MM) DIAM BEAD OF SEALANT SHALL BE APPLIED AT THE WALLBOARD/DUCT INTERFACE ON BOTH SURFACES OF WALL ASSEMBLY. TREMCO INC — FYRE-SIL SEALANT

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL CERTIFICATION MARK

WALL ASSEMBLY WITH STEEL DUCT — SCALE: NOT TO SCALE — 2

GENERAL FIRESTOPPING NOTES

1. THE FIRESTOPPING DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION. PREPARE COMPLETE SUBMITTAL DATA FOR APPROVAL, SHOWING PROPOSED FIRESTOPPING PRODUCTS AND SYSTEMS, INCLUDING INSTALLATION DETAILS WITH ASSOCIATED UL SYSTEM NUMBERS.

2. SUBMIT PROPOSED FIRESTOPPING SYSTEM DATA AND INSTALLATION DETAILS FOR REVIEW, FIRST TO THE STATE FIRE MARSHAL FOR REVIEW. AFTER SFM APPROVAL, SUBMIT TO THE PROJECT STATE REPRESENTATIVE FOR REVIEW. WORK SHALL NOT BE ALLOWED TO PROCEED UNTIL ALL REQUIRED APPROVALS ARE OBTAINED.

3. THE FIRESTOPPING DETAILS SHOWN ARE TYPICAL DETAILS. VERIFY FIELD CONDITIONS AND DIMENSIONS FOR COMPLIANCE WITH THE DETAILS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   - MINIMUM AND MAXIMUM WIDTH OF JOINTS.
   - TYPE AND THICKNESS OF FIRE RATED CONSTRUCTION. THE MINIMUM ASSEMBLY RATING OF THE FIRESTOP ASSEMBLY SHALL MEET OR EXCEED THE HIGHEST RATING OF THE ADJACENT CONSTRUCTION.

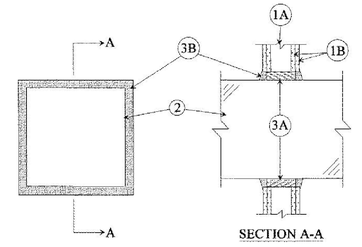
4. PREPARATION OF CONTRACTOR'S DRAWINGS SHALL FOLLOW THE INTERNATIONAL FIRESTOP COUNCIL (IFC) GUIDELINES FOR EVALUATING FIRESTOP SYSTEMS ENGINEERING JUDGMENTS.

5. REFERENCES TO BE USED SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   - 2012 UNDERWRITER'S LABORATORIES FIRE RESISTANCE DIRECTORY, VOLUME 2
   - NFPA 101 LIFE SAFETY CODE
   - ALL GOVERNING STATE BUILDING CODES.

6. FIRESTOP SYSTEM INSTALLATION SHALL MEET REQUIREMENTS OF ASTM E-814 (UL1479) TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.

7. UPON COMPLETION OF WORK, AFFIX LABELS AT ALL RATED THROUGH PENETRATIONS. LABELS SHALL PROMINENTLY DISPLAY THE FOLLOWING INFORMATION:
   - "ATTENTION: FIRE RATED ASSEMBLY"
   - UL SYSTEM #
   - PRODUCT(S) USED
   - HOURLY RATING (F-RATING)
   - INSTALLATION DATE

FIRESTOP SYSTEM NO. XHEZ.W-L-7006, FEBRUARY 05, 2014
F RATINGS - 1 HR & 2 HR, T RATING 1 HR



SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. IN 2 HR FIRE RATED ASSEMBLIES, STEEL STUDS TO BE MIN 2-1/2 IN (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. IN 1 HR FIRE-RATED ASSEMBLIES, STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. MAX AREA OF OPENING IS 196 SQ IN. (1265 CM2) WITH MAX DIMENSIONS OF 14 IN. (356 MM).

   B. GYPSUM BOARD* — 5/8 IN. (16 MM) THICK, 4 FT (1.2 M) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. THE HOURLY F AND FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. STEEL DUCT — NOM 12 BY 12 IN. (305 BY 305 MM) (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) STEEL DUCT TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOM 1 IN. (25 MM) ANNULAR SPACE IS REQUIRED WITHIN THE FIRESTOP SYSTEM. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

   A. PACKING MATERIAL — IN 2 HR FIRE RATED ASSEMBLIES, MIN 3-1/2 IN. (89 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. IN 1 HR FIRE RATED ASSEMBLIES, 3-7/8 IN. (98 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — IN 2 HR FIRE RATED ASSEMBLIES, MIN 3/4 IN. (19 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, ON BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 IN. (6 MM) THICK CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING A MIN 1/4 IN. (6 MM) BEYOND THE PERIPHERY OF THE OPENING. IN 1 HR FIRE RATED ASSEMBLIES, MIN 1/2 IN. (13 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS ON BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/2 IN. (13 MM) THICK CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING A MIN 1/4 IN. (6 MM) BEYOND THE PERIPHERY OF THE OPENING. RECTORSEAL — FLAMESAFE FS 1900, METACAULK 1000, METACAULK 350I, BIOSTOP 350I OR BIOSTOP 500+

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL CERTIFICATION MARK

WALL ASSEMBLY WITH STEEL DUCT — SCALE: NOT TO SCALE — 1

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

CAL FIRE
CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
SINCE 1885

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
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FRESNO COUNTY

CAL FIRE — TECHNICAL SERVICES • CONSTRUCTION MANAGEMENT • REAL ESTATE • SURVEYING • ARCHITECTURE & ENGINEERING

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: M. MADISON
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL FIRESTOPPING DETAILS

SHEET NUMBER
M511
V3

PROJECT PATH: I:\Data\Tech Services\A&E PROJECTS\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\2421M511.dwg
PLOT DATE: Jun 29, 2023 - 11:38AM
VER: 2020

CEILING FANS (SPECIFICATION SECTION 233400)

MARK NO.	AREA SERVED	NAMED PRODUCT (NOTE 1)	TYPE- UPFLOW, DOWNFLOW, SELECTABLE	NUMBER OF FAN BLADES	FAN DIAMETER	MAXIMUM FAN SPEED, RPM	FAN AIRFLOW AT MINIMUM AND MAXIMUM SPEEDS, CFM	MAXIMUM POWER, WATTS	MINIMUM CFM PER WATT AT MINIMUM AND MAXIMUM SPEEDS	FAN DISCHARGE SOUND POWER AT MAXIMUM SPEED, DB	VOLTS / PHASE / HERTZ	HANGING WEIGHT, POUNDS	REMARKS
CF 1	SEE SHEETS M101F AND M102F	BIG ASS FAN CO., MODEL HAIKU L	DOWNFLOW	3	44"	262	1,675 AND 4425	36	500 AND 250	35	115 / 1 / 60	11	ENERGY STAR, WHITE FINISH. WALL-MOUNTED WIRED CONTROLLER.
CF 2	SEE SHEET M102F	BIG ASS FAN CO., MODEL HAIKU	DOWNFLOW	3	60"	200	1,050 AND 8,000	30	525 AND 295	35	115 / 1 / 60	15	ENERGY STAR, CONTROLLED BY MOTION SENSOR, TEMPERATURE AND HUMIDITY. FINISHES: BLACK HARDWARE AND CARAMEL BAMBOO AIRFOIL. INSTALL REMOTE WITH LOSS-PREVENTION CHAIN TO WALL-BRACKET FOR EACH FAN.

NOTES:
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

REGISTERS AND GRILLES (SPECIFICATION SECTION 233713.23)

MARK NO.	TYPE	NOMINAL NECK SIZE	NOMINAL GRILLE SIZE, WIDTH X HEIGHT	CFM RANGE	INSTALLATION	ACCESSORIES	STYLE	NAMED PRODUCT (NOTE 1) (MANUFACTURER AND MODEL NO.)	REMARKS (NOTE 2)
CD-1	CEILING DIFFUSER	6 X 6	12 X 12	0 - 180	CEILING, SURFACE MOUNT	OPPOSED BLADE DAMPER	SQUARE WITH MODULAR 4-WAY ADJUSTABLE PATTERN	TITUS MCD	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
		8 X 8	14 X 14	180 - 260					
		12X12	14X14	261-350					
		14X14	16X16	351-480					
CD-2	DIFFUSER	6"	7"	0 - 100	CEILING, SURFACE MOUNT	-	ROUND, DOUBLE-DEFLECTION ALUMINUM LOUVERED CORE WITH INDIVIDUALLY ADJUSTABLE BLADES, 1" BLADE SPACING.	PRICE INDUSTRIES RSG	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE
EG-1	EXHAUST GRILLE	6 X 6	8 X 8	0 - 80 CFM	SURFACE MOUNT	-	EGGCRATE FACE, 1/2" X 1/2" X 1" ALUMINUM GRID	TITUS 50F	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
		8 X 8	10 X 10	81 - 150 CFM					
		12 X 12	14 X 14	151 - 350 CFM					
		14 X 14 (NOTE 2)	16 X 16	500 CFM MAX.					
EG-2	EXHAUST GRILLE	12 X 12	14 X 14	740 CFM MAX.	DUCT MOUNT	BALANCE DAMPER	EGGCRATE FACE, 1/2" X 1/2" X 1" ALUMINUM GRID	TITUS 50F	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
		18 X 18	20 X 20	1,200 CFM MAX.					
EG-3	EXHAUST GRILLE	6"	7"	0 - 100	CEILING, SURFACE MOUNT	-	ROUND, EGGCRATE FACE, 1/2" x 1/2"	PRICE INDUSTRIES RECG	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE
RG-1	RETURN AIR GRILLE, FILTERED	14 X 24	18 X 28	700 CFM MAX.	CEILING, SURFACE MOUNT	-	2" FILTER, HINGED WITH KNURLED KNOB FASTENER	TITUS 50FF	MERV 13 FILTER. COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
		20 X 30	24 X 34	1100 CFM MAX.					
		24 X 30	28 X 34	1500 CFM MAX.					
RG-2	RETURN AIR GRILLE	6 X 6	12 X 12	0 - 180	CEILING, SURFACE MOUNT	-	EGGCRATE FACE, 1/2" X 1/2" X 1" ALUMINUM GRID	TITUS 50F	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
		8 X 8	14 X 14	180 - 260					
SG-1	SUPPLY AIR	6 X 6	8 X 8	0 - 180	WALL, SURFACE MOUNT	OPPOSED BLADE DAMPER	RECTANGULAR WITH VERTICAL AND HORIZONTAL ADJUSTABLE BLADES	TITUS AEROBLADE GRILLES 112	COLOR: PAINT STEEL SURFACES TO MATCH COLOR OF SURROUNDING SURFACE. ADJUST: -30 DEGREES VERTICAL
		8 X 8	10 X 10	180 - 260					
		10 X 10	12 X 12	260 - 530					
SG-2	SUPPLY AIR	18 X 4	18 X 4	0 - 275	SPIRAL DUCT MOUNT	-	3/4" DOUBLE DEFLECTION ADJUSTABLE BLADES, AIR SCOOP BLADE	PRICE SDG	COLOR: PAINT STEEL SURFACES TO MATCH COLOR OF SURROUNDING SURFACE. ADJUST: -22 DEGREES BELOW HORIZONTAL
TG-1	TRANSFER GRILLE	12 X 16	12 X 16	-	WALL, SURFACE MOUNT PER DETAIL 7/M501		EGGCRATE FACE, 1/2" X 1/2" X 1" ALUMINUM GRID	TITUS 50F	COLOR: PAINT TO MATCH COLOR OF SURROUNDING SURFACE.
WD-1	WALL DIFFUSER	12 X 16	12 X 16	300-400	WALL SURFACE MOUNT	OPPOSED BLADE DAMPER	STEEL FACE AND FRAME, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION AND REINFORCED CORNERS	TITUS 301RL	COLOR: PAINT STEEL SURFACES TO MATCH COLOR OF SURROUNDING SURFACE. ADJUST: -35 DEGREES BELOW HORIZONTAL
WG-1	WALL RETURN GRILL	12 X 20	12 X 20	450 - 550	WALL SURFACE MOUNT		STEEL FACE AND FRAME, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION AND REINFORCED CORNERS	TITUS 350RL	COLOR: PAINT STEEL SURFACES TO MATCH COLOR OF SURROUNDING SURFACE. ADJUST: -35 DEGREES BELOW HORIZONTAL

NOTES:
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS. 2. MINIMUM SIZE WHEN COMBINED WITH FD, SEE DETAIL 4/M501

RANGE HOOD SCHEDULE (SPECIFICATION SECTION 113100)

MARK NO.	AREA SERVED	DESCRIPTION	AIRFLOW CAPACITY	ELECTRICAL SERVICE POWER SUPPLY	FEATURES/ACCESSORIES	OPERATION/CONTROLS	REMARKS (NOTE 1)
RH 1	KITCHEN	DOMESTIC KITCHEN RANGE HOOD, 36" WIDE, 24" DEPTH WALL MOUNTED. HEAVY DUTY STAINLESS STEEL CONSTRUCTION WITH HEMMED EDGES AND WELDED SEAMS. INTERNAL MOUNTED CENTRIFUGAL EXHAUST FAN WITH DIRECT DRIVE MOTOR	600 CFM	115V - 1PH - 60HZ 15.0 AMPS DEDICATED CIRCUIT	FURNISH COMPLETE WITH INTEGRAL BRIGHT LED LIGHTING, DISHWASHER-SAFE FILTERS, HEAT LAMPS INCLUDING BULBS, BACKDRAFT DAMPER, INTERCONNECTING DUCT, DUCT TRANSITION, DISCHARGE ROOF CAP. COORDINATE ALL MOUNTING WITH STRUCTURAL, ARCHITECTURAL AND CASEWORK/CABINETRY TRADES. ALL INSTALLATION SHALL BE PER HOOD MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. WEIGHT = 78 LBS	ALL CONTROLS AND SWITCHES (FOR FAN, LIGHTS, HEAT LAMP, ETC.) SHALL BE MOUNTED INTEGRAL TO HOOD, CONTROLS SHALL BE RECESSED MOUNTING, WITH INFINITE SPEED BLOWER CONTROL. PROVIDE INTERLOCK FOR OPERATION OF MAKE-UP DUCT MOTORIZED DAMPER.	"WOLF" MODEL: PW362418 HOOD WITH 600 CFM INTERNAL FAN, OR APPROVED EQUAL

NOTES:
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

MECHANICAL SCHEDULES

NOT TO SCALE

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER
M601
V3

PROJECT PATH: I:\Data\Tech Services\ASE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\2421M001.dwg
PLOT DATE: 27 SEP 2023 - 11:13AM
VER: 2020

HVAC GRAVITY VENTILATORS (SPECIFICATION SECTION 233723)

MARK NO.	AREA SERVED	NAMED PRODUCT (NOTE 1)	FUNCTION	AIRFLOW - CFM	MINIMUM THROAT DIAMETER, INCHES	MINIMUM THROAT AREA, SF	WEIGHT, POUNDS	ACCESSORIES
GRVR 1	ENERGY RECOVERY VENTILATOR (ERV-1)	GREENHECK, MODEL GRSI-12	EXHAUST	400 AT MAXIMUM 0.04 IN WC TOTAL PRESSURE DROP	12	0.82 SF WITH 500 MAX THROAT VELOCITY	10	DUCTED CONNECTION, INTEGRAL BIRDSCREEN
GRVI 2	BARRACKS KITCHEN MAKE-UP AIR	GREENHECK, MODEL GRSI-15	INTAKE	550 AT MAXIMUM 0.04 IN WC TOTAL PRESSURE DROP	15	1.12 SF WITH 500 MAX THROAT VELOCITY	13	DUCTED CONNECTION, INTEGRAL BIRDSCREEN
GRVR 3	BARRACKS KITCHEN- RANGE HOOD	GREENHECK, MODEL GRSR-15	EXHAUST	660 AT MAXIMUM 0.08 IN WC TOTAL PRESSURE DROP	15	1.12 SF WITH 500 MAX THROAT VELOCITY	13	DUCTED CONNECTION, INTEGRAL BIRDSCREEN
LV 1	ERV-1	GREENHECK, MODEL FDS-602	INTAKE	6000 AT MAXIMUM 0.08 IN WC TOTAL PRESSURE DROP	12 X 16	8.15 SF WITH 750 MAX THROAT VELOCITY	24	DUCTED CONNECTION, INTEGRAL BIRDSCREEN

NOTES:
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

HEAT WHEEL AIR-TO-AIR ENERGY RECOVERY UNIT (SPECIFICATION SECTION 237213)

MARK NO.			ERV 1
NAMED PRODUCT (NOTE 1)			DAIKIN, MODEL VAM300-GVJU WITH DOUBLE-WALLED CABINET AND NON-HINGED DOORS
TYPE- FIXED-PLATE, SENSIBLE OR TOTAL			WHEEL
EXHAUST AIR	AIRFLOW - CFM		300
	EXHAUST EXTERNAL STATIC PRESSURE (IN. WG.)		0.64
	AIR PRESSURE DROP - INCHES WG		0.45 MAXIMUM
	FAN MOTOR	HORSEPOWER	(0.09 KW *2), 0.12 * 2 BRAKE HP
SUPPLY AIR	AIRFLOW - CFM		300
	EXHAUST EXTERNAL STATIC PRESSURE (IN. WG.)		0.64
	AIR PRESSURE DROP - INCHES WG		0.45 MAXIMUM
	FAN MOTOR	HORSEPOWER	(0.09 KW *2), 0.12 * 2 BRAKE HP
COMBINED ELECTRICAL CHARACTERISTICS		VOLTS / PHASE / HERTZ / UNIT MCA	208-230 / 60 / 1 / 1.6
ASHRAE 90.1 ENTHALPY RECOVERY RATIO: SUMMER / WINTER			40/ 57
FILTERS	TYPE, DIRTY FILTER SENSORS		2" PLEATED MERV 13 FILTERS AND DIRTY FILTER SENSORS FOR EACH OUTDOOR AIR AND SUPPLY AIR
CONTROLS			POTENTIOMETER SPEED CONTROLLER, ON/OFF WITH OCCUPANCY SENSORS, REMOTE CONTROL PANEL WITH DIRTY FILTER LIGHT, HAND/OFF/AUTO SWITCH, ON/OFF LIGHT
ACCESSORIES			BYPASS DAMPERS FOR ECONOMIZER OPERATION MODE, METAL BACKDRAFT DAMPERS, SMOKE DETECTORS, UNIT DISCONNECT, 2 YEAR WARRANTY
WEIGHT - POUNDS			71
SPARE PARTS			ENERGY WHEEL BELT, SPARE BELTS, SPARE ENERGY WHEEL SEGMENTS, SPARE FILTER SET: 3 SUPPLY, 3 EXHAUST.
NOTES:			
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.			
2. ERV OPERATES ONLY WHEN INDOOR UNITS 3 & 4 ARE ON. WHEN IDUS ARE BEING USED . THE ERV CAN BE OPERATED IN CIRCULATION OR VENTILATION MODE.			

FIRE DAMPER (SPECIFICATION SECTION 233300)

MARK NO.	AREA SERVED	NAMED PRODUCT (NOTE 1)	FUNCTION	RATINGS	SIZE	CONSTRUCTION
FD 1	SLEEPING AREA - BEDROOMS	GREENHECK, MODEL DFD-150	DYNAMIC FIRE DAMPER WITH CURTAIN STYLE BLADES	U.L. 555 1,5 HOURS, 4000 FPM MAXIMUM VELOCITY (VERTICAL MOUNT), MAX. PRESSURE OF 4.0 in. WG, 165 f FUSIBLE LINK. {CALIFORNIA STATE FIRE MARSHALL (LISTING # 3225-0981:0102)}	MATCH DUCT PER DUCTING PLAN SHEET.	1. VERTICAL MOUNT, DUCTED FACTORY SLEEVE CONNECTION. 2. GALVANIZED FRAME/BLADE FINISH. 3. FACTORY SUPPLIED RETAINING ANGLES. 4. 165F FUSIBLE LINK CLOSURE DEVICE.

NOTES:
1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

MISCELLANEOUS EQUIPMENT SCHEDULE (SPECIFICATION SECTION 230923)

MARK NO.	NAME	DESCRIPTION	NAMED PRODUCT (NOTE 1) (MANUFACTURER AND MODEL NO.)
MD-1	MOTORIZED CONTROL DAMPER	MINIMUM 16 GA CHANNEL TYPE FRAME WITH REINFORCED CORNERS, MINIMUM 16 GA BLADES, ALL GALVANIZED STEEL CONSTRUCTION. TWO-POSITION BLADE ACTION. LOW LEAKAGE TYPE WITH BLADE AND JAMP SEALS. BLADE LINKAGE CONCEALED OUT OF AIR STREAM. PROVIDE 120V EXTERNAL ACTUATOR, TWO-POSITION SPRING RETURN FAIL CLOSED POSITION WITH NEMA 1 ENCLOSURE WITH AUXILIARY SWITCH.	"GREENHECK" VCD-18 WITH "BELIMO" FSLF-120US ACTUATOR, OR APPROVED EQUAL

NOTES:
1. PROVIDE A NAMED PRODUCT OR A COMPARABLE PRODUCT OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

MECHANICAL SCHEDULES

NOT TO SCALE

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER
M602
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_13168\24421M602.dwg
PLOT DATE: Jan 09, 2023 - 2:47PM

VARIABLE-REFRIGERANT-FLOW HVAC SYSTEMS (SPECIFICATION SECTION 238129)

MARK NO.				IDU 1	IDU 2	IDU 3	IDU 4		
INDOOR UNIT, MARK "IDU"	NAMED PRODUCT (NOTE 1) (MANUFACTURER AND MODEL NO.)			DAIKIN FXAQ07PVJU	DAIKIN FXAQ12PVJU	DAIKIN FXTQ30TAVJUD	DAIKIN FXTQ54TAVJUD		
	TYPE			HIGH WALL	HIGH WALL	CONCEALED FLOOR-MOUNTED DUCTED (MULTI-POSITION)	CONCEALED FLOOR-MOUNT DUCTED (MULTI-POSITION)		
	REFRIGERANT TYPE			R-410A	R-410A	R-410A	R-410A		
	COOLING CAPACITY	RATED - BTU/H (NOTE 2)		7,500	12,000	30,000	54,000		
		SENSIBLE COOLING CAPACITY - BTU/H (NOTE 2)		6,400	8,900	21,400	39,300		
		ENTERING - AIR TEMPERATURE	DRY BULB - DEG F	79	79	79	79		
			WET BULB - DEG F	64	64	64	64		
		LEAVING - AIR TEMPERATURE	DRY BULB - DEG F	54	54	54	54		
			WET BULB - DEG F	51	51	51	51		
	HEATING CAPACITY	RATED - BTU/H (NOTE 3)		8,500	13,500	34,000	60,000		
	ELECTRICAL	VOLTS / PHASE / HERTZ		208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60		
		FAN MOTOR	FLA	0.03	0.03	3.9	6.9		
		MCA		0.4	0.4	4.9	8.6		
		MOP		15	15	15	15		
	AIRFLOW	HIGH - CFM (WITH WET COILS DURING COOLING)		260	260	1000	1,800		
		LOW - CFM (WITH WET COILS WHILE COOLING)		160	180	700	1,260		
		EXTERNAL STATIC PRESSURE (HIGH / LOW) - INCHES OF WATER COLUMN		-	-	0.1/0.9	0.1/0.9		
		AIR-FILTER TYPE - (DISPOSABLE, WASHABLE, CHARGED MEDIA, OR HEPA)		WASHABLE	WASHABLE	NOTE 7	NOTE 7		
	ACCESSORIES (NOTE 1)			-	-	NOTE 10 &11	NOTE 10 & 11		
	MAXIMUM SOUND PRESSURE LEVEL -DBA			36	38	52	50		
	WEIGHT - LBS.			26	26	115	167		
AIR-COOLED OUTDOOR UNIT	NAMED PRODUCT (NOTE 1) (MANUFACTURER AND MODEL NO.)			(ODU-1) DAIKIN REYQ96XAYDA (AHRI CERTIFICATIED REFERENCE NUMBER: 203334947)			(ODU-2) DAIKIN REYQ72XAYDA (AHRI CERTIFICATIED REFERENCE NUMBER: 203334947)		
	TOTAL BTU/H (HEATING / COOLING)(NOTES 3 AND 2)			108,000 / 96,000			81,000 / 72,000		
	HEAT PUMP EFFICIENCY	EER (NOTE 2)		9.0 MINIMUM			9.0 MINIMUM		
		COEFFICIENT OF PERFORMANCE (NOTE 4)		2.0 MINIMUM			2.0 MINIMUM		
	ELECTRICAL CHARACTERISTICS	VOLTS / PHASE / HERTZ		460 / 3 / 60			460 / 3 / 60		
		FAN MOTOR	FLA	1.0*2			1.0*2		
		COMPRESSOR	FLA	10.5			9.4		
			MCA	21.1			18.9		
			MOP	25			25		
	MAXIMUM SOUND PRESSURE LEVEL - DBA			80			79		
	OPERATING WEIGHT - LBS.			727			727		
	ACCESSORIES			NOTE 8			NOTE 8		
THERMOSTAT	NAMED PRODUCT (NOTE 1) (MANUFACTURER AND MODEL NO.)			NOTE 6	NOTE 6	NOTE 6	NOTE 6	NOTE 6	NOTE 6

NOTES:

1. PROVIDE NAMED PRODUCT OR A COMPARABLE OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.
2. AHRI COOLING RATING CONDITIONS ARE 95 DEG F DRY-BULB OUTDOORS AND 80 DEG F DRY BULB, 67 DEG F WET-BULB INDOORS.
3. AHRI HEATING RATING CONDITIONS ARE 17 DEG F DRY-BULB OUTDOORS AND 70 DEG F DRY BULB, 60 DEG F WET-BULB INDOORS.
4. AHRI (AIR-CONDITIONING, HEATING & REFRIGERATION INSTITUTE) EFFICIENCY RATINGS AT 17 DEG. F
5. DECORATIVE PANEL COLOR: WHITE
6. WIRED REMOTE CONTROLLER: OCCUPANT CONTROLLED SMART THERMOSTAT (OCST) CERTIFIED WITH CALIFORNIA ENERGY COMMISSION. INSTALLED IN WALL PER PLANS.
7. DISPOSABLE, 2-INCH THICK, PLEATED, MERV-13 IN AIR-SEALED 4" FILTER FRAME WITH PRE-FILTERS. SIZED AS SHOWN ON PLANS. (SPECIFICATION SECTION 234100)
8. HVAC PIPE PENETRATION WALL SEAL (AIREX TITAN OUTLET)
9. THERMOSTAT CONTROLLER TO RUN SIMULTANEOUS WITH WEF-1 TO MAINTAIN NEGATIVE PRESSURE IN APPARATUS BAY. INTERLOCK TO SHUT-OFF WHENEVER APPARATUS BAY DOORS OPEN.
10. MULTI-POSITION AHU: NOT TO EXCEED 22".
11. DISCONNECT: EACH IDU SHALL HAVE A 15A, NON-FUSED DISCONNECT WHICH IS LOCKABLE, PER ARTICLE 110.25 OF CEC "LATEST EDITION". INSTALL DISCONNECT ADJACENT TO AND WITHIN SIGHT OF IDU.

HEAT RECOVERY CONTROL UNIT (BRANCH SELECTOR BOX) SCHEDULE, SPECIFICATION 238129

TAG	DESCRIPTION	# PORTS	INDOOR UNIT CONNECTIONS		OUTDOOR UNIT CONNECTIONS			CAPACITY, MBH	POWER	VOLTAGE/PH	MCA	MOP	WEIGHT, LBS	BASIS OF DESIGN		NOTES, COMMENTS
			LIQ: Ø, "	GAS: Ø , "	LIQ: Ø, "	GAS: Ø, "	HP/LP GAS: Ø "	MBH	WATTS	VAC/PH	AMPS	AMPS	LBS	MANUFACTURER	MODEL	
HRCU 1	MULTI-PORT BRANCH SELECTOR BOX FOR REFRIGERANT MIXING, INDIVIDUAL INDOOR UNIT CONTROL AND INCREASED EFFICIENCY	10	1/4 & 3/8	1/2 & 5/8	1/2	1-1/8	3/4	96	86	208-230/1/60	1.00	15	101	DAIKIN	BS10Q54TVJ	
HRCU 2	MULTI-PORT BRANCH SELECTOR BOX FOR REFRIGERANT MIXING FOR INDIVIDUAL INDOOR UNIT CONTROL AND INCREASED EFFICIENCY.	4	1/4 & 3/8	1/2 & 5/8	3/8	7/8	3/4	86	43	208-230/1/60	0.40	15	49	DAIKIN	BS4Q54TVJ	

DSA Approval

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APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER
M603
V3

PROJECT PATH: I:\Data\Tech Services\AAE PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\2421M603.dwg
PLOT DATE: Jul 24, 2025 - 3:46PM
VER. 2020

HVAC ZONES

	ZONE		
	1	2	
LOCATION	BEDROOM 1, BEDROOM 2, BEDROOM 3, BEDROOM 4, BEDROOM 5, BEDROOM 6, HALL 2, HALL 3, TELECOM/ELECT, STOR1, PHSC. TRNG., RESTROOMS 1-3, AND LAUNDRY.	DINING ROOM, DAY ROOM, KITCHEN, PANTRY, ENTRY, LIBRARY AND HALL 1	

HVAC SYSTEMS SET-POINTS

EQUIPMENT	ZONE	SETPOINT	VALUE	PARAMETER
THERMOSTATS	1 - 2	INSIDE AIR TEMPS. COOLING / HEATING	72 DEGREES F / 66 DEGREES F	OCCUPIED 24 HOURS PER DAY, 7 DAYS PER WEEK.
THERMOSTAT	1 - 2	OUTSIDE AIR TEMPS: COOLING / FAN ONLY / HEATING	81-110+ DEGREES F / 60 - 80 DEGREES / 30-59 DEGREES F	OCCUPIED 24 HOURS PER DAY, 7 DAYS PER WEEK.
FREEZESTAT	ODU-1 AND ODU-2	SET TO DEFROST AS INFREQUENTLY AS EQUIPMENT ALLOWS	-	-
ENERGY RECOVERY VENTILATOR (ERV) WITH BYPASS DAMPER		COOLING MODE - INDOOR TEMP. IS GREATER THAN OUTDOOR TEMP	BYPASS	OCCUPIED 24 HOURS PER DAY, 7 DAYS PER WEEK.
		COOLING MODE - OUTDOOR TEMP. IS GREATER THAN INDOOR TEMP.	ERV	
		HEATING MODE - INDOOR TEMP. IS GREATER THAN OUTDOOR TEMP.	ERV	
		HEATING MODE - OUTDOOR TEMP. IS GREATER THAN INDOOR TEMP.	BYPASS	

SEQUENCE OF OPERATIONS

EQUIPMENT	ZONE	OPERATION
ENERGY RECOVERY VENTILATOR (ERV-1)	1 - 2	ERV-1 IS CONTROLLED TWO IDU-3 &4. SENSORS: RUN FOR 8 HOURS AFTER OCCUPANCY IS DETECTED IN ANY OF THESE ZONES.
SMOKE DETECTOR	1 - 2	SYSTEM SHUT DOWN
IDU #'s 1 - 3	1 - 2	CONTROLLED BY INDIVIDUAL ROOM THERMOSTATS. RUN FOR 8-12 HOURS AFTER OCCUPANCY IS DETECTED IN ANY OF THESE ZONES.
IDU-1, IDU-4	1 - 2	CONTROLLED BY INDIVIDUAL ROOM THERMOSTATS.

MECHANICAL CONTROLS

NOT TO SCALE

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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C130 BARRACKS

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1131 S STREET, SACRAMENTO, CA 95811-2460

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RAYMOND T. GALLAGHER
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STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

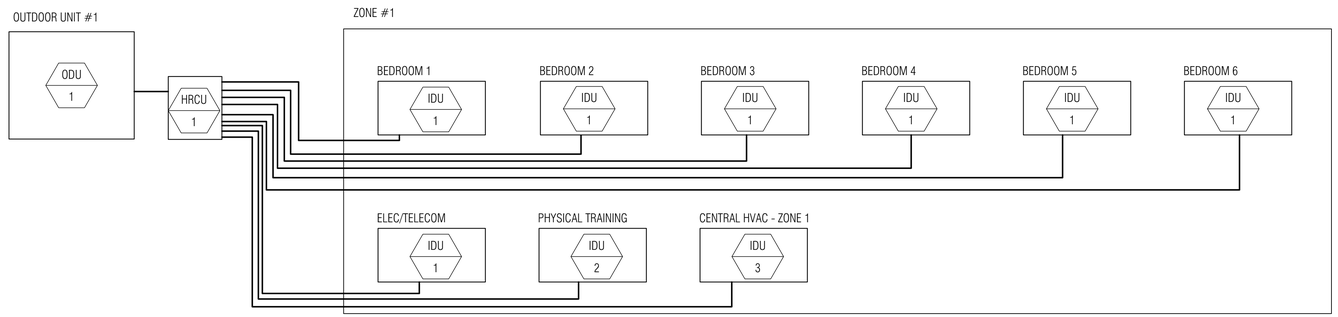
SHEET TITLE:
MECHANICAL CONTROLS

SHEET NUMBER
M611
V3

VER 2020

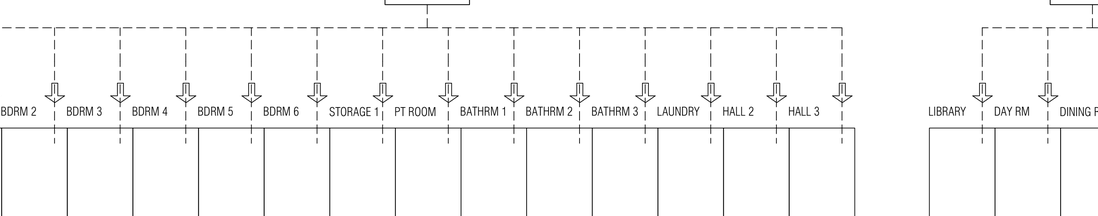
PROJECT PATH: C:\Users\MmadisonAppData\Local\Temp\AcPublish_16680\2421M611.dwg

PLOT DATE: Jul 27, 2023 - 2:05PM



REFRIGERANT SCHEMATIC - ZONE 1

SCALE: NOT TO SCALE



REFRIGERANT SCHEMATIC - ZONE 2

SCALE: NOT TO SCALE

VENTILATION SCHEMATIC

SCALE: NOT TO SCALE

GENERAL SHEET NOTES

1. PIPING SCHEMATICS SHOWN AS REFERENCE ONLY, NOT TO SCALE.
2. BRANCH SELECTOR BOXES SHALL BE INSTALLED LEVEL, PLUMB AND TRUE.
3. REFRIGERANT PIPING CALCULATION FACTORS
   - 3.1. MAXIMUM TOTAL LENGTH.
   - 3.2. MAXIMUM LONGEST ACTUAL LENGTH
   - 3.3. MAXIMUM LONGEST EQUIVALENT LENGTH
   - 3.4. MAXIMUM MAIN PIPE LENGTH (SIZE UP OF MAIN PIPE REQUIRED IF LONGER)
   - 3.5. MAXIMUM LENGTH FIRST BRANCH TO INDOOR UNIT(SIZE UP OF INTERMEDIATE PIPES REQUIRED IF LONGER)
   - 3.6. MAXIMUM LENGTH FIRST BRANCH TO INDOOR UNIT
   - 3.7. MAXIMUM LENGTH OF INDOOR UNITS TO NEAREST BRANCH
   - 3.8. MAXIMUM LENGTH DIFFERENCE BETWEEN LONGEST AND SHORTEST DISTANCE TO INDOOR UNITS
   - 3.9. MAXIMUM HEIGHT DIFFERENCE, OUTDOOR UNIT BELOW INDOOR UNITS
   - 3.10. MINIMUM CONNECTION RATIO, OUTDOOR UNIT BELOW INDOOR UNITS
   - 3.11. MAXIMUM HEIGHT DIFFERENCE, OUTDOOR UNIT ABOVE INDOOR UNITS
   - 3.12. MINIMUM CONNECTION RATIO, OUTDOOR UNIT ABOVE INDOOR UNITS
   - 3.13. MAXIMUM HEIGHT DIFFERENCE IN TECHNICAL COOLING, OUTDOOR UNIT BELOW INDOOR UNITS
   - 3.14. MAXIMUM HEIGHT DIFFERENCE IN TECHNICAL COOLING, OUTDOOR UNIT ABOVE INDOOR UNITS
   - 3.15. MAXIMUM HEIGHT DIFFERENCE BETWEEN INDOOR UNITS
   - 3.16. CONNECTION RATIO RANGE
   - 3.17. REFRIGERANT PIPE DIAMETERS
   - 3.18. MAXIMUM EQUIVALENT LENGTH FROM BP UNIT OR VRV INDOOR TO VRV REFNET (SIZE UP OF INTERMEDIATE PIPES REQUIRED IF LONGER)
   - 3.19. MAXIMUM EQUIVALENT LENGTH FROM BP UNIT OR VRV INDOOR TO VRV REFNET
   - 3.20. MAXIMUM ACTUAL LENGTH BETWEEN CM AND HM
   - 3.21. MAXIMUM HEIGHT DIFFERENCE BETWEEN CM AND HM .

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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C130 BARRACKS

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
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MECHANICAL
STATE OF CALIFORNIA

REVISIONS

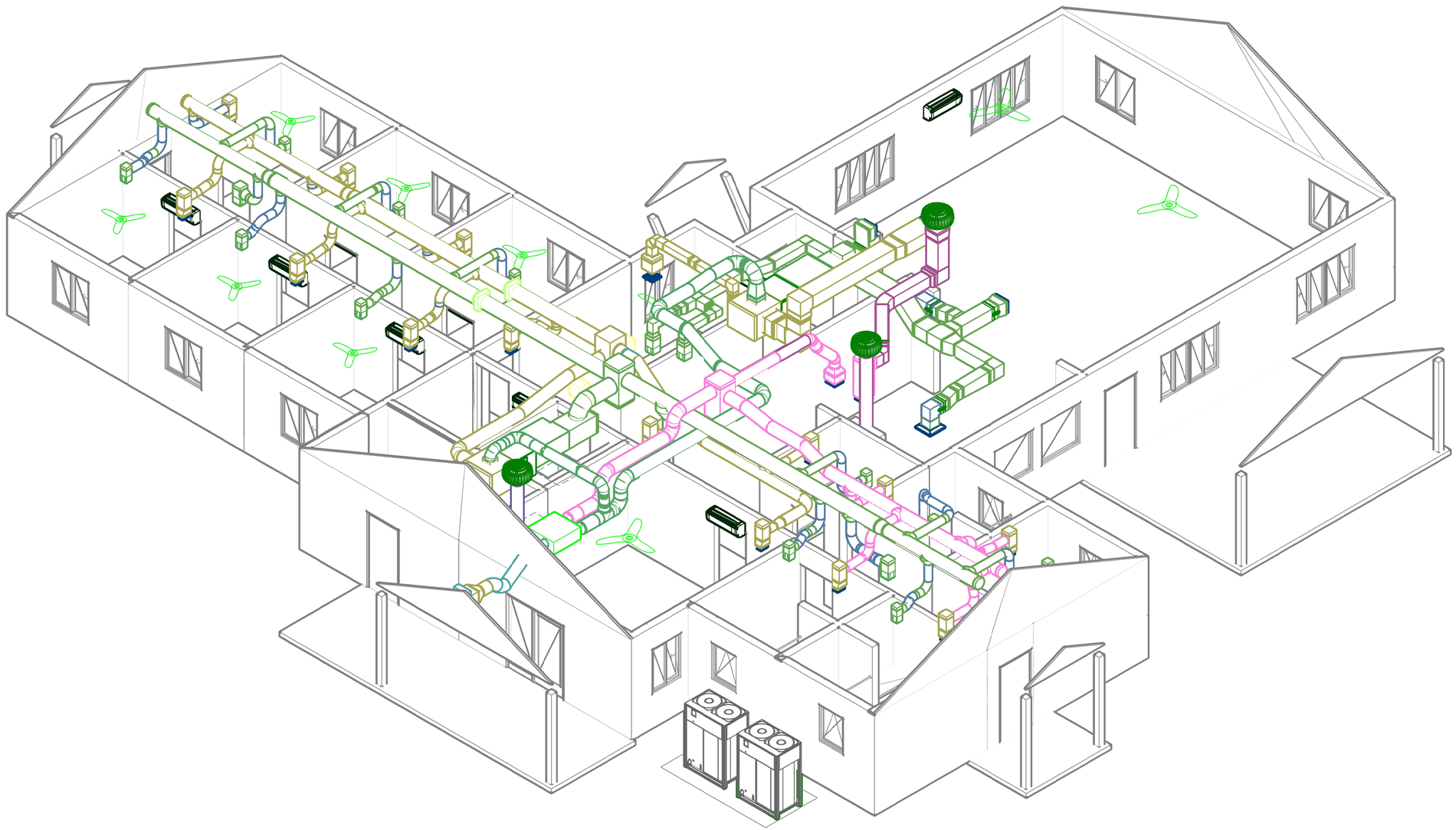
NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL SCHEMATIC - HVAC SYSTEM

SHEET NUMBER
M612
V3

PROJECT PATH: ...Data\Tech Services\ASE\PROJECT\Major Crap Projects\2421 Fresno C-130 AAB\DRAWINGS\MECHANICAL\2421_M612.dwg
PLOT DATE: ...ul 24, 2023 - 3:47PM
VER 2020



MECHANICAL SCHEMATIC - DUCTING (NORTHEAST ISOMETRIC VIEW)

SCALE: 1/4" = 1'0"

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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FRESNO, CALIFORNIA 93727
FRESNO COUNTY

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RAYMOND T. GALLAGHER
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MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
MECHANICAL ISOMETRIC VIEW - DUCTING

SHEET NUMBER
M901
V3

VER: 2020
PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_7208\D2421M101_M1102_M901.dwg
PLOT DATE: Jun 28, 2023 - 3:36PM

GENERAL PLUMBING NOTES

1. ALL PRODUCTS USED SHALL BE NEW AND SHALL BE EQUAL IN QUALITY, TYPE, CAPACITY AND ACCESSORIES TO THE PRODUCTS NOTED ON THE DRAWINGS AND/OR SPECIFICATIONS. ADJUSTMENTS TO CONSTRUCTION AND ACCESSORIES ON SUBSTITUTED EQUIPMENT MAY BE REQUIRED TO ACHIEVE THIS EQUALITY, AND SHALL BE INCLUDED AS PART OF THE ORIGINAL WORK. MAKE ANY CHANGES IN PIPING, FRAMING, ETC., AS REQUIRED TO ACCOMMODATE SUBSTITUTED EQUIPMENT.

2. INSTALL ALL EQUIPMENT AND MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES. APPLICABLE CODES SHALL INCLUDE, BUT NOT BE LIMITED TO THE CURRENT EDITIONS OF THE CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE AND CALIFORNIA BUILDING CODE; THE CALIFORNIA CODE OF REGULATIONS (CCR); CALIFORNIA FIRE REGULATIONS; AND CALIFORNIA TITLE 24 ENERGY EFFICIENCY STANDARDS. WHERE HEAVIER GAGES OF MATERIAL, LARGER SIZES OR MORE STRINGENT REQUIREMENTS THAN THE CODES ARE REQUIRED BY THE CONTRACT DOCUMENTS, SUCH INCREASED REQUIREMENTS SHALL APPLY.

3. ALL WORK SHALL ALSO BE IN COMPLIANCE WITH THE REQUIREMENTS OF APPLICABLE STATE AND LOCAL OFFICIALS, PUBLIC WORKS DEPARTMENT, FIRE MARSHAL AND/OR OTHER AUTHORITIES HAVING JURISDICTION.

4. CONTRACTOR SHALL VERIFY ALL WORK CONDITIONS, PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: PIPING SIZES, INVERT ELEVATIONS, POINTS OF CONNECTION, FIXTURES AND EQUIPMENT, STRUCTURAL ELEMENTS AND MATERIALS INDICATED AS EXISTING, AS WELL AS THE COORDINATED INSTALLATION OF ALL NEW WORK, MATERIALS, EQUIPMENT, ETC. VERIFY THE LOCATION AND REQUIRED PIPING CONNECTIONS OF ALL HVAC OR OTHER MECHANICAL EQUIPMENT. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO TRENCHING OR COMMENCING OTHER WORK.

5. ADA PLUMBING FIXTURES SHALL BE ADA COMPLIANT AND BE INSTALLED TO MEET THE ADA REQUIREMENTS.

6. AFTER INSTALLATION, CLEAN ALL FIXTURES, PIPING, EQUIPMENT, ETC. OF CONSTRUCTION DEBRIS. POLISH ALL CHROME AND STAINLESS STEEL..

DRAWINGS AND SPECIFICATIONS

7. IT IS THE INTENT OF THE PROJECT DRAWINGS AND SPECIFICATIONS TO COMPLEMENT EACH OTHER. SHOULD THERE BE ANY DISCREPANCY BETWEEN THE REQUIREMENTS LISTED OR DESCRIBED BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

8. THE STATE REPRESENTATIVE'S INTERPRETATION OF THESE DOCUMENTS, INCLUDING THE DESIGN INTENT OF THESE DOCUMENTS, SHALL BE FINAL.

9. IN CASE OF POSSIBLE OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, DETAILS AND/OR SPECIFICATIONS, SUCH ISSUES SHALL BE BROUGHT TO THE ATTENTION OF THE STATE REPRESENTATIVE FOR RESOLUTION BEFORE PROCEEDING THE WORK.

10. THE DRAWINGS AND SPECIFICATIONS ALSO INTEND TO REPRESENT FINISHED CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING.

11. NO DEVIATION FROM THE APPROVED DRAWINGS AND SPECIFICATIONS IS PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT THE AUTHORIZATION FROM ENGINEER.

MISCELLANEOUS

12. COORDINATE ALL WORK AMONG VARIOUS TRADES AS NECESSARY OR REQUIRED TO ENSURE THE INSTALLATION OF ALL WORK IN THE AVAILABLE SPACE. FIELD COORDINATE ALL PIPE ROUTING AND INVERTS WITH SITE CONDITIONS, STRUCTURAL MEMBERS, DUCTWORK, OTHER PIPING, SUPPORTS, LIGHT FIXTURES, OTHER AFFECTED TRADES, ETC., AND ADJUST ROUTING AS REQUIRED, TYPICAL. AS NECESSARY, MODIFY, EXTEND OR ADJUST THE WORK AS NEEDED TO ENSURE THAT ALL REQUIRED INSTALLATIONS AND CONNECTIONS ARE PROPERLY COMPLETED.

13. WHERE REQUIRED OR NECESSARY, OFFSET THE ROUTING OF THE PIPING, AND PIPING SERVICES TO FIXTURES AND EQUIPMENT SO AS TO AVOID CONFLICTS WITH WINDOWS, OTHER BUILDING COMPONENTS AND OTHER SIMILAR OBSTRUCTIONS.

14. ROUTE ALL CONNECTING DUCTWORK AND PIPING TO FIXTURES AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, RECOMMENDATIONS AND REQUIREMENTS, AND APPLICABLE REGULATIONS AND STANDARDS. FIELD COORDINATE ALL ROUTING AND SIZES WITH ACTUAL SITE CONDITIONS, STRUCTURAL MEMBERS, OTHER DUCTWORK AND PIPING, SUPPORTS, LIGHT FIXTURES, AND ALL OTHER AFFECTED TRADES. MODIFY/ADJUST/EXTEND ROUTING AS REQUIRED TO AVOID ALL CONFLICTS.

15. WORK NOT DETAILED, MARKED, OR SPECIFIED SHALL BE THE SAME AS SIMILAR WORK THAT IS DETAILED, MARKED OR SPECIFIED

16. DO NOT SCALE PLANS - USE DIMENSIONS SHOWN OR ASK STATE REPRESENTATIVE FOR CLARIFICATION.

17. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND NOTIFY THE STATE REPRESENTATIVE IF ANY DISCREPANCIES OCCUR BEFORE BEGINNING WORK.

18. FIRE SAFETY DURING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CHAPTER 33 OF THE CFC AS AMENDED.

19. FOR CONTINUATION OF ALL UTILITIES, REFER TO CIVIL DRAWINGS. COORDINATE INVERT ELEVATIONS WITH CIVIL TRADE.

20. ALL WASTE PIPING SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. VENT PIPING SHALL BE ROUTED ABOVE CEILING OR INSIDE ATTIC SPACE, TIGHT TO UNDERSIDE OF ROOF STRUCTURE, UNLESS OTHERWISE NOTED.

21. ALL COLD WATER AND HOT WATER PIPING SHALL BE ROUTED ABOVE CEILING OR INSIDE ATTIC SPACE, TIGHT TO UNDERSIDE OF ROOF STRUCTURE, UNLESS OTHERWISE NOTED.

22. ALL GAS PIPING SHALL BE ROUTED ABOVE CEILING TIGHT OR INSIDE ATTIC SPACE, TO UNDERSIDE OF ROOF STRUCTURE, UNLESS OTHERWISE NOTED.

23. ALL COMPRESSED AIR PIPING SHALL BE ROUTED ABOVE CEILING OR INSIDE ATTIC SPACE, TIGHT TO UNDERSIDE OF ROOF STRUCTURE, UNLESS OTHERWISE NOTED.

24. LOCATE VALVES FOR SERVICE ACCESSIBILITY. VALVES INSTALLED ABOVE CEILING SHALL BE WITHIN 18" OF CEILING.

25. AS NOTED ON THE DRAWINGS, IN THE APPARATUS BAY SPACES WHERE THERE IS A STORAGE LOFT ABOVE, CERTAIN DOMESTIC WATER (CW AND HW), AND VENT PIPING ARE TO BE ROUTED INSIDE THE CEILING SPACES UNDER THE STORAGE LOFT FLOOR, AND MAY NEED TO PENETRATE THROUGH THE FLOOR JOISTS. COORDINATE ALL ROUTING AND INSTALLATION WITH STRUCTURAL.

26. PLUMBING VENT PIPING PENETRATIONS THRU ROOF SHALL BE PROVIDED WITH APPROPRIATE PIPE BOOT AND/OR FLASHING COMPATIBLE WITH THE BUILDING ROOFING SYSTEM, AND BE SEALED WATERPROOF. FOR TYPICAL VENT THRU ROOF DETAIL, REFER TO ARCHITECTURAL DRAWINGS. COORDINATE ALL WORK WITH ARCHITECTURAL AND ROOFING TRADES. FOR VENT-THRU-ROOF'S SIZE 3" AND LARGER, PROVIDE 1/2" GALVANIZED WIRE MESH PEST SCREEN AT PIPE TERMINATION.

27. CONTRACTOR SHALL PROVIDE MINIMUM 7 WORKING DAYS NOTIFICATION OF UNDERGROUND SERVICE ALERT PRIOR TO ANY SITE EXCAVATION.

PIPING PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES

1. WHETHER OR NOT SHOWN ON THE DRAWINGS, PROVIDE APPROPRIATE FIRESTOPPING AT ALL PIPING PENETRATIONS THRU FIRE RATED WALL AND/OR FLOOR/CEILING/ROOF ASSEMBLIES. ALL FIRESTOPPING SYSTEMS PROPOSED FOR THE PROJECT SHALL BE SUBMITTED FOR REVIEW BY THE STATE FIRE MARSHAL AND THE STATE REPRESENTATIVE PRIOR TO INSTALLATION.

2. ALL FIRESTOPPING WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE (CBC) SECTION 714.

   2.1. FOR PENETRATIONS THRU FIRE RATED WALLS, COMPLY WITH PARAGRAPH 714.4 INCLUDING APPLICABLE SUB-PARAGRAPHS. THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALL SHALL COMPLY WITH PARAGRAPHS 714.4.1 INCLUDING APPLICABLE SUB-PARAGRAPHS. PENETRATIONS SHALL BE PROTECTED BY APPROVED FIRESTOP SYSTEMS PER THE PARAGRAPH 714.3.1.2.

   2.2. FOR MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL, COMPLY WITH THE PARAGRAPH 714.4.2 AND ALL APPLICABLE SUB-PARAGRAPHS.

   2.3. FOR THROUGH PENETRATIONS AND MEMBRANE PENETRATIONS THRU RATED HORIZONTAL ASSEMBLIES (FLOOR, FLOOR/CEILING, ROOF/CEILING, ETC.), COMPLY WITH PARAGRAPH 714.5 INCLUDING APPLICABLE SUB-PARAGRAPHS.

3. ALSO REFER TO FIRESTOPPING THRU PENETRATION DETAILS AND NOTES ON SHEET P504 FOR ADDITIONAL REQUIREMENTS.

ROOF PENETRATIONS

1. LOCATE ALL ROOF PENETRATIONS WITHIN 18" OF RIDGE VENT.

DSA Approval

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APP: 02-121081 INC:
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SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
GENERAL PLUMBING NOTES

SHEET NUMBER
P001
V3

PROJECT PATH: ...Data\Tech Services\ASE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P001.dwg
PLOT DATE: Jun 09, 2023 - 1:23PM
VER 2020

WATER AND WASTE SERVICE CALCULATIONS - FIRE STATION

FIXTURE TYPE	NO.	WASTE		COLD WATER		HOT WATER		TOTAL WATER
		FU	TOTAL	FU	TOTAL	FU	TOTAL	FU
CLOTHES WASHER	1	3	3	3	3	3	3	4
DISHWASHER	1	2	2	0	0	1.5	1.5	1.5
FLOOR SINK RECEPTOR (3" TRAP)	2	3	6	0	0	0	0	0
LAVATORY (SINGLE)	4	1	4	0.75	3	0.75	3	4
SINK, KITCHEN (1-1/2 INCH TRAP)	1	2	2	1.125	1.125	1.125	1.125	1.5
SINK, LAUNDRY	1	2	2	1.125	1.125	1.125	1.125	1.5
SINK, SERVICE OR MOP BASIN (2 INCH TRAP)	4	3	12	1.125	4.5	1.125	4.5	6
SHOWER	3	2	6	1.5	4.5	1.5	4.5	6
WATER CLOSET, 1.6 TANK	4	3	12	2.5	10	0	0	10
MISC. EQUIP. - ICEMAKER	3	0	0	1	3	0	0	3
OTHER / FUTURE	1	10	10	6	6	6	6	8
TOTAL FIXTURE UNITS			59		36.3		24.75	45.5
EQUIVALENT COLD WATER FLOW RATE (GPM):								32
ADDITIONAL DEMAND LOAD (GPM)								0
PRESSURE AVAILABLE AT MAIN (PSI):								43
MINIMUM REQUIRED FIXTURE PRESSURE (PSI):								30
ELEVATION RISE (FT):								6
METER LOSS (PSI):								3
BACKFLOW PREVENTER LOSS (PSI):								5
ADDITIONAL LOSSES (PSI):								0
EQUIVALENT PIPE LENGTH FROM METER TO MOST REMOTE FIXTURE (FT):								660
FRICTION LOSS PRESSURE AVAILABLE (PSI):								2.40
MAXIMUM ALLOWABLE FRICTION LOSS (PSI/100 FT):								0.36
WATER FLOW VELOCITY (FPS):								1.51
CALCULATED FRICTION HEAD LOSS (PSI/100 FT):								0.18
MINIMUM REQUIRED 'WATER' PIPE SIZE (INCHES):								3
MINIMUM REQUIRED 'WASTE' PIPE SIZE (INCHES):								4

*CALCULATIONS PER THE CPC

PLUMBING LEGEND

SYMBOL / ABBREVIATION	DESCRIPTION
A	AIR (PNEUMATIC) PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RECIRCULATION PIPING
G	GAS PIPING
	SANITARY WASTE PIPING
V	VENT LINE PIPING
HV	HORIZONTAL VENT PIPING
VR	VERTICAL VENT PIPING / VENT RISER
VTR	VENT THRU ROOF
	DRAIN LINE
CD	CONDENSATE DRAIN LINE
	PIPING TO BE DEMOLISHED
	PIPING TO BE RELOCATED
CVB	CURBED VALVE BOX
HB	HOSE BIBB
AR	AIR RELIEF VALVE
A AIRC	AIRHOSE COUPLER
	BALL VALVE
G	GAS COCK VALVE
	GATE VALVE
	CHECK VALVE
G S	SEISMIC VALVE
G R	GAS REGULATOR
WHA A	WATER HAMMER ARRESTER
COTF / FCO	CLEAN OUT TO FLOOR / FLOOR CLEAN OUT
COTG / GCO	CLEAN OUT TO GRADE / GRADE CLEAN OUT
COTW / WCO	CLEAN OUT THRU WALL / WALL CLEAN OUT
FS / FR	FLOOR SINK / FLOOR RECEPTOR
FD	FLOOR DRAIN
	PIPING SEISMIC BRACE, 2-WAY
	PIPING SEISMIC BRACE, 1-WAY

SYMBOL / ABBREVIATION	DESCRIPTION
(D)	DEMOLISH
(E)	EXISTING
(N)	NEW
(R)	TO BE RELOCATED
ACOMP	AIR COMPRESSOR
AFF	ABOVE FINISHED FLOOR
AG / BFP	AIR GAP / BACKFLOW PREVENTER
ABC	ABOVE CEILING
AIRC	COMPRESSED AIR COUPLER
ASV	ANGLE STOP VALVE
BS	BAR SINK
BV	BALL VALVE
CVB	CURBED VALVE BOX
CO	CLEANOUT
COTF / FCO	CLEANOUT TO FLOOR / FLOOR CLEAN OUT
COTG / GCO	CLEANOUT TO GROUND (or GRADE) / GROUND (or GRADE) CLEAN OUT
COTW / WCO	CLEANOUT TO WALL / WALL CLEAN OUT
CW	COLD WATER PIPING
DB	DISTRIBUTION BOX
ET	EXPANSION TANK
EWS	EYE/FACE WASH STATION
FAU	FAUCET
FCV	FLOW CONTROL VALVE
FREZ	FREEZER
FD	FLOOR DRAIN
FR	FLOOR RECEPTOR
GD	GARBAGE DISPOSAL
GR	GAS RANGE
GV	GATE VALVE or GAS VALVE
GI	GREASE INTERCEPTOR
HV	HORIZONTAL VENT
HB	HOSE BIBB
HW	HOT WATER PIPING
HWRP	HOT WATER RETURN PUMP / PIPING
IMB / IMO	ICE MAKER OUTLET BOX
IPS	IRON PIPE SIZE
KS	KITCHEN SINK
LAV	LAVATORY SINK
LS / LT	LAUNDRY SINK / LAUNDRY TRAY
MO	MICROWAVE OVEN
MS	MOP SERVICE SINK
OH	OVERHEAD
PH	POST HYDRANT
POC	POINT OF CONNECTION
PTR	PRESSURE-TEMPERATURE RELIEF
REF	REFRIGERATOR
REG	REGULATOR
S	SINK
SD	SHOWER DRAIN
SH	SHOWER SYSTEM / SHOWER VALVE
SS	SERVICE SINK
SV	SEISMIC VALVE
TBV	TEMPERED BLENDING VALVE
TP	TRAP PRIMER
VB	VALVE BOX
VD	VERTICAL DRAIN
VR	VENT RISER
VTR	VENT THRU ROOF
WOB	WALL OUTLET BOX
WC	WATER CLOSET
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER

DSA Approval

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APP: 02-121081 INC:
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DATE: 04/15/2024

OSFM Approval

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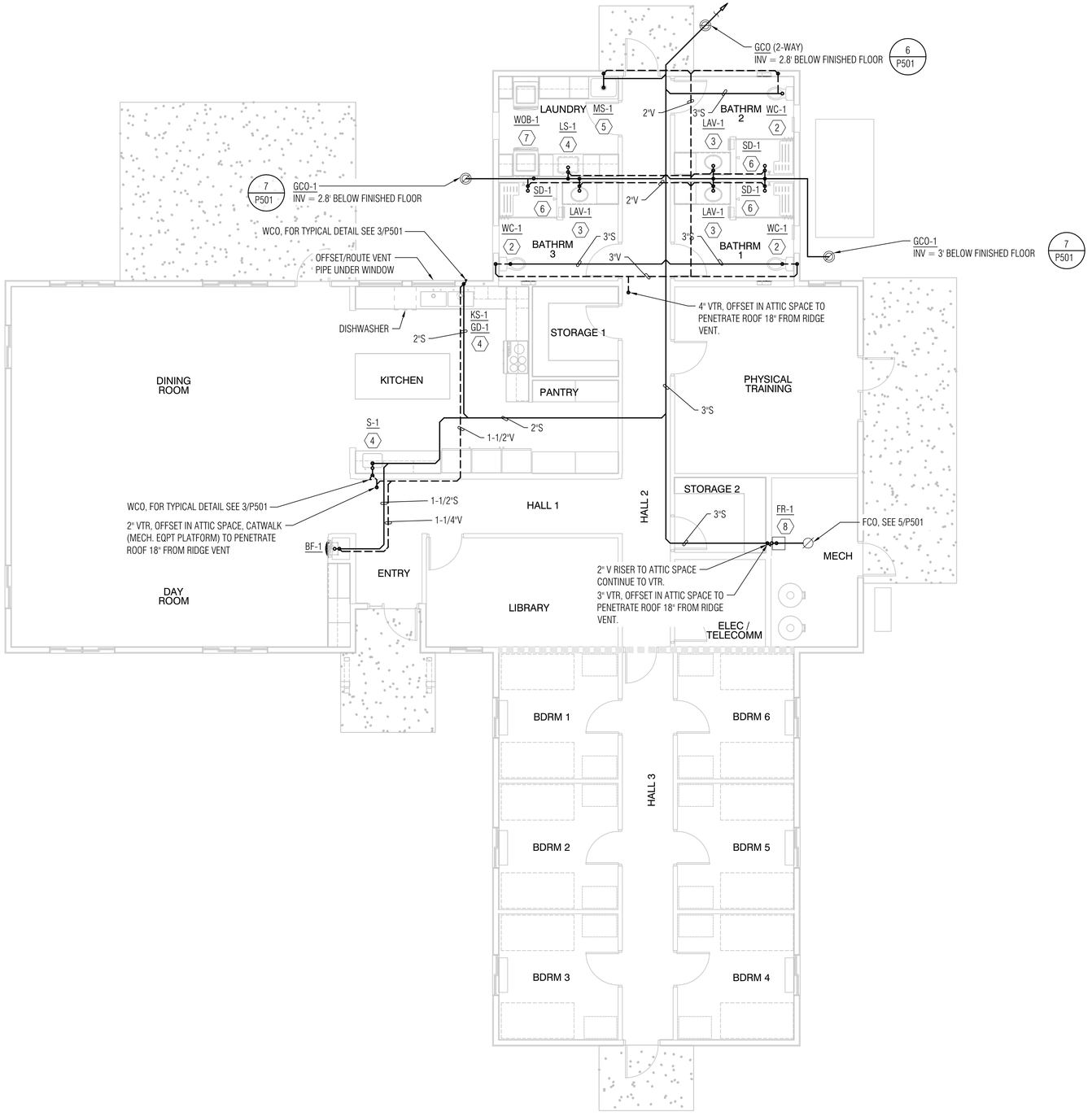
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING LEGEND AND CALCULATIONS

SHEET NUMBER
P002
V3

PROJECT PATH: F:\Data\Tech Services\AE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P002.dwg
PLOT DATE: Jun 29, 2023 - 1:25PM
VER 2020



PLUMBING PLAN - SANITARY SEWER

SCALE: 3/16" = 1'-0"

PLAN NORTH

REFERENCE KEYNOTES

221316 SANITARY WASTE AND VENT PIPING
221319 SANITARY WASTE PIPING SPECIALTIES
224200 COMMERCIAL PLUMBING FIXTURES

SHEET KEYNOTES

1. PIPE SLEEVES WHERE PIPES PASS THROUGH FOUNDATION PER FOUNDATION SHEET(S) DETAILS, TYPICAL.
2. WATER CLOSET: PROVIDE WASTE DROP, VENT BELOW SLAB TO WALL, AND COLD WATER PIPING IN FURRED WALL SPACE. VENT RISER IN WALL TO ABOVE FINISHED CEILING.
3. LAVATORY: PROVIDE WASTE DROP WITH CLEANOUT, VENT RISER AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
4. SINK: PROVIDE WASTE DROP WITH CLEANOUT, VENT RISER AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
5. FLOOR MOP SINK: PROVIDE WASTE DROP, VENT BELOW SLAB TO WALL AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE. PROVIDE VENT RISER IN WALL TO ABOVE FINISHED CEILING.
6. SHOWER STALL: PROVIDE WASTE DROP FOR SHOWER DRAIN, VENT BELOW SLAB TO WALL. PROVIDE VENT RISER IN WALL TO ABOVE FINISHED CEILING. PROVIDE COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
7. CLOTHES WASHER: PROVIDE WASTE DROP TO WASTE STANDPIPE, VENT RISER AND HOT WATER & COLD WATER PIPING IN FURRED WALL SPACE. CONNECT TO WALL BOX AT LOCATION SHOWN.
8. FLOOR RECEPTOR: PROVIDE WASTE DROP, VENT BELOW SLAB TO WALL AND COLD WATER PIPING FROM TRAP PRIMER. PROVIDE VENT RISER IN WALL TO ABOVE FINISHED CEILING.

DSA Approval

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SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

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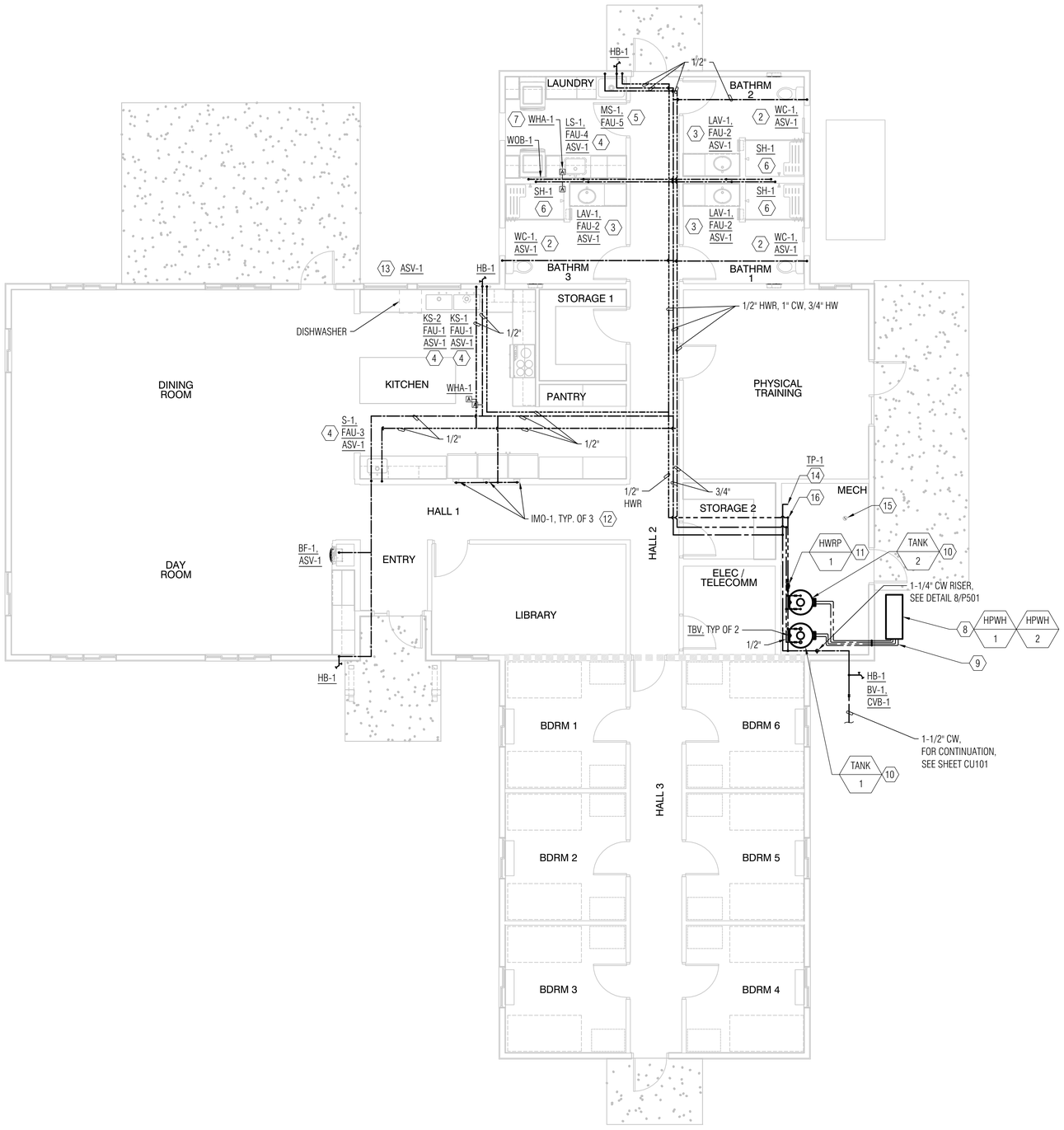
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING PLAN - SANITARY SEWER

SHEET NUMBER
P101
V3

PROJECT PATH: I:\Data\Tech Services\A&E\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P101_P102.dwg
PLOT DATE: Jul 27, 2023 - 9:54AM
VER: 2020



PLUMBING PLAN - DOMESTIC WATER PIPING

SCALE: 3/16" = 1'-0"

PLAN NORTH

REFERENCE KEYNOTES

099113 EXTERIOR PAINTING
220517 SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING
220518 ESCUTCHEONS FOR PLUMBING PIPING
220523.12 BALL VALVES FOR PLUMBING PIPING
220523.14 CHECK VALVES FOR PLUMBING PIPING
210529 HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT
210548 VIBRATION AND SEISMIC CONTROLS FOR PIPING AND EQUIPMENT
210553 IDENTIFICATION FOR PIPING AND EQUIPMENT
210719 PIPING INSULATION
221116 DOMESTIC WATER PIPING
221119 DOMESTIC WATER PIPING SPECIALTIES
221123 DOMESTIC WATER PUMPS
223300 ELECTRIC, DOMESTIC WATER HEATERS
224200 COMMERCIAL PLUMBING FIXTURES

⬡ SHEET KEYNOTES

1. PIPE SLEEVES WHERE PIPES PASS THROUGH FOUNDATION PER FOUNDATION SHEET(S) DETAILS, TYPICAL.
2. WATER CLOSET: PROVIDE WASTE DROP, VENT BELOW SLAB TO WALL, AND COLD WATER PIPING IN FURRED WALL SPACE. VENT RISER IN WALL TO ABOVE FINISHED CEILING.
3. LAVATORY: PROVIDE WASTE DROP WITH CLEANOUT, VENT RISER AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
4. SINK: PROVIDE WASTE DROP WITH CLEANOUT, VENT RISER AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
5. FLOOR MOP SINK: PROVIDE WASTE DROP, VENT BELOW SLAB TO WALL AND COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE. PROVIDE VENT RISER IN WALL TO ABOVE FINISHED CEILING.
6. SHOWER STALL: PROVIDE WASTE DROP FOR SHOWER DRAIN, VENT BELOW SLAB TO WALL. PROVIDE VENT RISER IN WALL TO ABOVE FINISHED CEILING. PROVIDE COLD WATER & HOT WATER PIPING IN FURRED WALL SPACE.
7. CLOTHES WASHER: PROVIDE WASTE DROP TO WASTE STANDPIPE, VENT RISER AND HOT WATER & COLD WATER PIPING IN FURRED WALL SPACE. CONNECT TO WALL BOX AT LOCATION SHOWN.
8. HEAT PUMP WATER HEATERS (HPWH) OUTDOOR UNITS, WEIGHT=110# EACH (223300):
   - 8.1. INSTALL ONE HPWH ON A CONCRETE PAD PER 1/M501. ANCHOR TO PAD WITH FOUR STAINLESS STEEL 3/8"Ø x 2-5/8" EMBED SIMPSON "WEDGE-ALL" EXPANSION ANCHORS OR EQUAL.
   - 8.2. WALL-MOUNT SECOND UNIT 18" ABOVE FIRST UNIT WITH STAINLESS STEEL STAND-OFF BRACKETS, REFER TO DETAIL 14/M501. PROVIDE 6" CLEARANCE BETWEEN HEAT PUMP AND WALL. PAINT EXTERIOR EXPOSED SURFACES OF CHANNEL SYSTEM PER SPECIFICATION SECTION 099113 EXTERIOR PAINTING. ANCHOR BRACKET TO WALL FRAMING STUDS WITH A TOTAL OF A MINIMUM SIX STAINLESS STEEL 3/16" x 6" LAG SCREWS. ATTACH EACH OF 4 HEAT PUMP FEET TO BRACKET ARMS WITH 1" STAINLESS STEEL BOLTS, WASHERS, NUTS AND RUBBER VIBRATION ISOLATION PADS.
   - 8.3. EQUIPMENT LABEL: "HPWH-1" AND "HPWH-2" (210553)
9. LINE SETS: SIZES OF COLD WATER SUPPLY AND HOT WATER RETURN PIPING SHALL BE PER MANUFACTURER RECOMMENDATIONS TO CONSIDER LENGTH OF PIPING. CONNECT ELECTRIC TRACE TAPE HEATING SYSTEM TO 24 HOURS CONTINUOUS POWER SUPPLY. WRAP PIPING WITH TAPE THEN COVER WITH INSULATION. ENERGIZE TAPE WITH PIPE TEMPERATURE SENSOR (NOT OUTSIDE AIR). INSULATE COLD AND HOT WATER PIPING, FITTINGS AND CONNECTIONS WITH 4"-THICK FOAM INSULATION AND JACKET. ROUTE PIPING FROM CONDENSING UNITS TO BUILDING EXTERIOR WALL STUD SPACE AND RISE UP TO CEILING/ATTIC SPACE. ENTER BUILDING WITH APPROVED LINE SET PROTECTION PER DETAIL 1/M501. ROUTE PIPING ABOVE THE CEILING, OFFSET AS REQUIRED, DROP DOWN INSIDE MECHANICAL ROOM AND CONNECT TO TANKS.
10. HEAT PUMP WATER HEATER TANK: SECURE TANK TO WALL FRAMING MEMBERS PER 1/P502. PROVIDE 3/4" COLD WATER AND HOT WATER RISERS ALONG WALL, AND CONNECT TO TANK. ROUTE 3/4" PRESSURE RELIEF VALVE PIPING AS SHOWN. ROUTE PRESSURE RELIEF PIPING TO DISCHARGE TO FLOOR RECEPTOR. TERMINATE WITH DOWNTURNED ELLS AT MINIMUM 1" AIR GAP ABOVE FIXTURE FLOOD RIM LEVEL. ALL INSTALLATION SHALL BE PER EQUIPMENT MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. SEE DETAILS ON SHEET P502.
11. HOT WATER RECIRCULATING PUMP-1 FOR TANK-2: ACTIVATE BY OCCUPANCY SENSORS. LOCATE ONE OCCUPANCY SENSOR IN THE KITCHEN, IN BETWEEN FAUCETS OF SINKS KS-1 & KS-2. LOCATE AN ADDITIONAL OCCUPANCY SENSOR IN THE LAUNDRY ROOM, NEAR FAUCET FAU-5. RETURN COLD WATER TO BOTTOM OF TANK-2. SHUT-OFF HWRP-1 AFTER KITCHEN IS UNOCCUPIED FOR 30 MINUTES. (221123)
12. REFRIGERATOR ICE MAKER: PROVIDE 3/4" COLD WATER PIPING IN FURRED WALL SPACE TO WALL BOX, CONNECT SUPPLY LINE FROM WALL BOX TO UNIT.
13. DISHWASHER: PROVIDE HOT WATER PIPING IN FURRED WALL SPACE. CONNECT DISCHARGE PIPING TO GARBAGE DISPOSER WITH AIR GAP DEVICE MOUNTED ON SINK DECK.
14. TRAP PRIMER: PROVIDE COLD WATER PIPING IN FURRED WALL SPACE. PROVIDE WALL ACCESS PANEL FOR UNIT MOUNTING. ROUTE PRIMER PIPING TO BELOW SLAB AND CONNECT TO FLOOR DRAIN OR FLOOR SINK. ALL INSTALLATION SHALL BE PER EQUIPMENT MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS.
15. PROPOSED FIRE RISER LOCATION. SEE SHEET F101.
16. WATER LINE RISERS, TYPICAL, PENETRATE CEILING AND ROUTED THROUGH ATTIC SPACE.

DSA Approval

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SS ☐ FLS ☐ ACS ☑
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REGISTERED PROFESSIONAL ENGINEER
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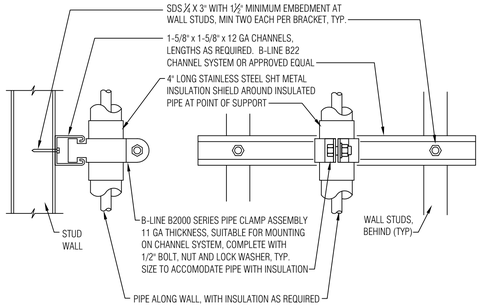
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING PLAN - DOMESTIC WATER PIPING

SHEET NUMBER
P102
V3

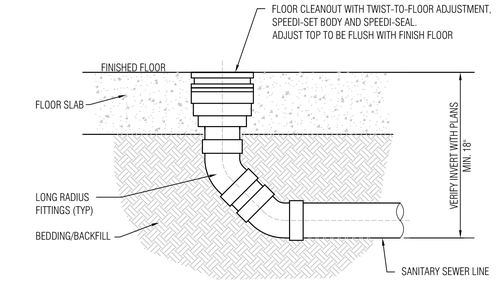
PROJECT PATH: I:\Data\Tech Services\A&E\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P102.DWG
PLOT DATE: Jul 27, 2023 - 9:56AM
VER: 2020



NOTES:
1. MULTIPLE PIPES MAY BE SUPPORTED ON ONE CHANNEL AS REQUIRED. ADJUST CHANNEL LENGTH TO SUIT AND ANCHOR AT EVERY STUD LOCATION.
2. LOCATE SUPPORTS AT MINIMUM 48 INCHES SPACING AND AT EVERY TURN.

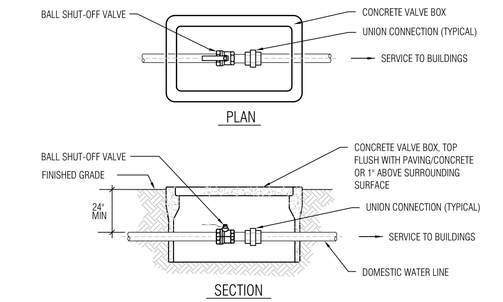
PIPE SUPPORT - VERTICAL

SCALE: NOT TO SCALE | 9



CLEANOUT TO FLOOR

SCALE: NOT TO SCALE | 5

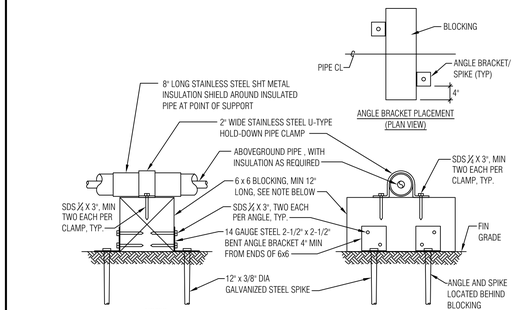


PLAN

SECTION

DOMESTIC WATER SERVICE VALVE BOX

SCALE: NOT TO SCALE | 1

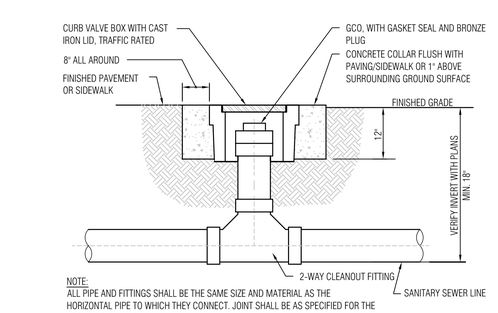


ANGLE BRACKET PLACEMENT (PLAN VIEW)

NOTES:
1. MULTIPLE PIPES MAY BE SUPPORTED ON ONE BLOCKING AS REQUIRED. ADJUST BLOCKING LENGTH TO SUIT.
2. BLOCKING SHALL BE GROUND-CONTACT (AWPA UC4A) PRESSURE TREATED LUMBER.
3. LOCATE SUPPORTS AT MINIMUM 48 INCHES SPACING AND AT EVERY TURN.

PIPE SUPPORT - HORIZONTAL

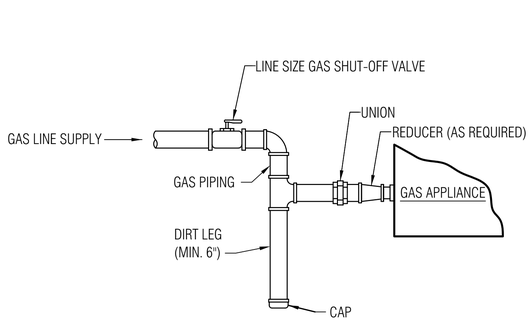
SCALE: NOT TO SCALE | 10



NOTE:
ALL PIPE AND FITTINGS SHALL BE THE SAME SIZE AND MATERIAL AS THE HORIZONTAL PIPE TO WHICH THEY CONNECT. JOINT SHALL BE AS SPECIFIED FOR THE TYPE OF PIPE USED.

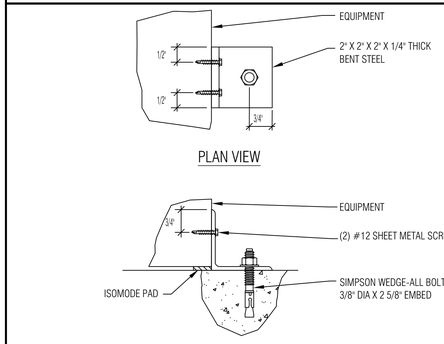
CLEANOUT TO GRADE (2-WAY)

SCALE: NOT TO SCALE | 6



TYPICAL GAS SUPPLY CONNECTION

SCALE: NOT TO SCALE | 2

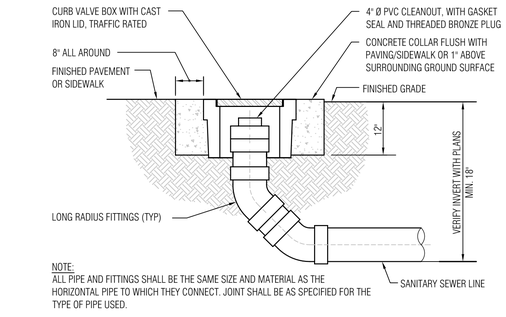


PLAN VIEW

SIDE VIEW

ADDITIONAL PIPE SUPPORT DETAILS

SCALE: NOT TO SCALE | 11



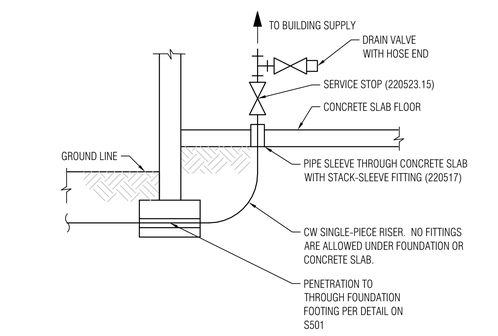
NOTE:
ALL PIPE AND FITTINGS SHALL BE THE SAME SIZE AND MATERIAL AS THE HORIZONTAL PIPE TO WHICH THEY CONNECT. JOINT SHALL BE AS SPECIFIED FOR THE TYPE OF PIPE USED.

CLEANOUT TO GRADE (1-WAY)

SCALE: NOT TO SCALE | 7

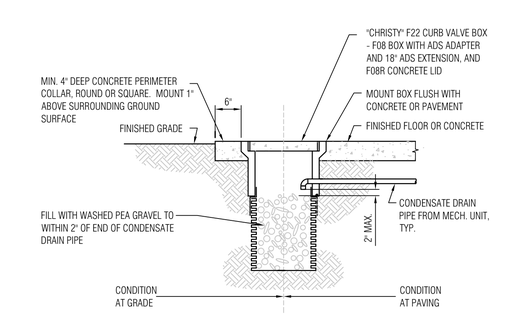
WALL CLEANOUT

SCALE: NOT TO SCALE | 3



BUILDING WATER SUPPLY ENTRANCE

SCALE: NOT TO SCALE | 8



DRYWELL

SCALE: NOT TO SCALE | 4

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

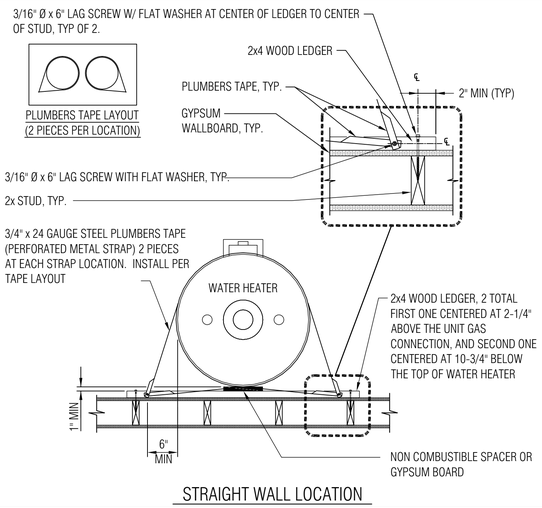
NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

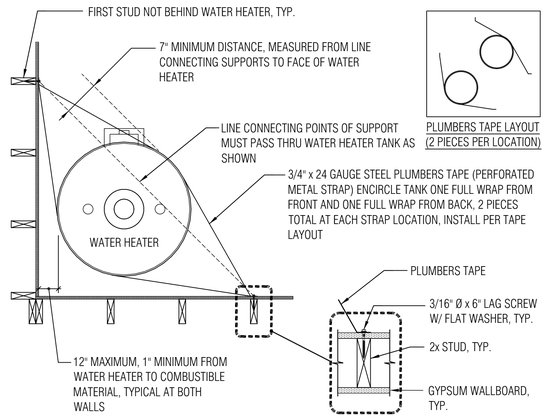
SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER
P501
V3

VER 2020
PROJECT PATH: Data\Tech Services\A&E\PROJECT Mgmt Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P501.dwg
PLOT DATE: Jul 10, 2023 - 10:15AM



STRAIGHT WALL LOCATION



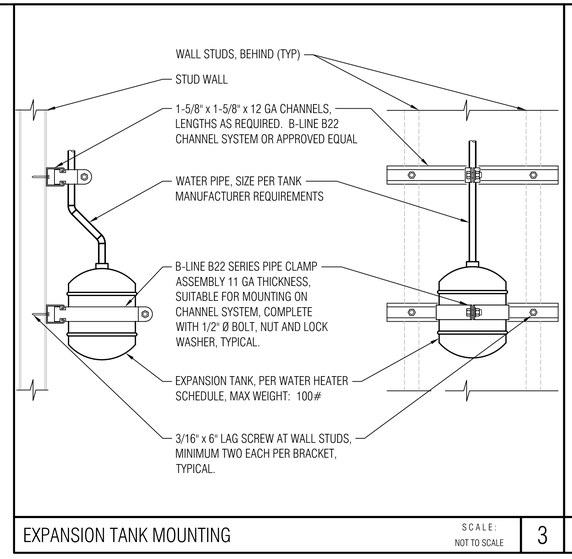
CORNER LOCATION

WATER HEATER SEISMIC RESTRAINT NOTES

1. WATER HEATERS SHALL BE BRACED FOR EARTHQUAKE LOADING PER THIS DETAIL.
2. THERE ARE TWO STRAPS REQUIRED FOR EACH LOCATION. ONE FULL WRAP FROM FRONT AND ONE FULL WRAP FROM BACK. LOCATIONS ARE 9" BELOW THE TOP OF WATER HEATER AND 12" ABOVE THE BOTTOM. LARGER TANKS REQUIRE ADDITIONAL STRAPS:
   - 2.1. 52 TO 75 GALLON CAPACITY: ONE ADDITIONAL SET OF STRAPS PLACED MID-DISTANCE BETWEEN THE TOP AND BOTTOM STRAP LOCATIONS.
   - 2.2. 76 TO 100 GALLON CAPACITY: TWO ADDITIONAL SET OF STRAPS SPACED EQUAL DISTANCE BETWEEN THE TOP AND BOTTOM STRAP LOCATIONS.
3. WHERE THE WATER HEATER IS INSTALLED ON A RAISED PLATFORM, ATTACH WATER HEATER TO PLATFORM, AND PLATFORM TO FLOOR.
4. DO NOT MOVE THE WATER HEATER CLOSER TO WALL OR COMBUSTIBLE MATERIALS WITHOUT VERIFYING MANUFACTURER'S SPECIFICATIONS OF MINIMUM REQUIRED CLEARANCE TO WALL AND COMBUSTIBLE MATERIALS.
5. PLUMBERS TAPE IS ALSO CALLED GALVANIZED STEEL HANGER STRAP.
6. ALTERNATE BRACING METHODS MAY ALSO BE ACCEPTABLE, AS RECOMMENDED BY WATER HEATER MANUFACTURER AND SUBJECT TO REVIEW AND ACCEPTANCE BY DSA STRUCTURAL SAFETY SECTION AND THE STATE REPRESENTATIVE.

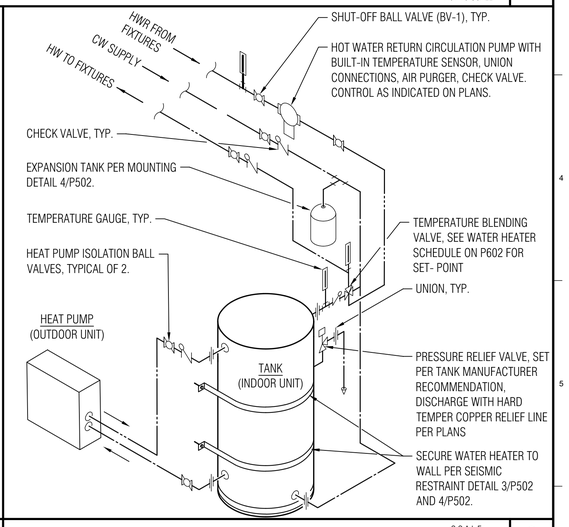
TANK SEISMIC RESTRAINT - MAXIMUM WEIGHT: 1200#

SCALE: NOT TO SCALE | 1



EXPANSION TANK MOUNTING

SCALE: NOT TO SCALE | 3



HEAT PUMP WATER HEATER

SCALE: NOT TO SCALE | 2

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
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OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
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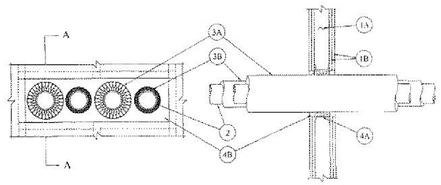
NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER
P502
V3

VER 2020
PROJECT PATH: I:\Data\Tech Services\ASE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P501.pmj
PLOT DATE: Jan 09, 2023 - 2:06PM



SECTION A-A

1. WALL ASSEMBLY -- THE 1 AND 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS -- WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. OC. ADDITIONAL FRAMING MEMBERS REQUIRED TO COMPLETELY FRAME OPENING.
THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

B. GYPSUM BOARD* -- THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED. FOR THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX SIZE OF OPENING IS 335 SQ. IN. WITH A MAX DIMENSION OF 33-1/2 IN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE HOURLY T RATING IS 3/4 HR AND 1-1/2 HR FOR 1 AND 2 HR RATED ASSEMBLIES, RESPECTIVELY.

2. THROUGH PENETRANTS -- MAX FOUR PIPES OR TUBINGS INSTALLED ECCENTRICALLY OR CONCENTRICALLY WITHIN OPENING. PIPES OR TUBINGS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
A. STEEL PIPE -- NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE.
B. IRON PIPE -- NOM 4 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON.
C. COPPER TUBING -- NOM 4 IN. DIAM (OR SMALLER) PIPE TYPE L (OR HEAVIER) COPPER TUBING.
D. COPPER PIPE -- NOM 4 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

3. PIPE COVERING -- THE FOLLOWING TYPES OF PIPE COVERINGS MAY BE USED.
A. PIPE COVERING* -- MAX 2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. THE ANNULAR SPACE BETWEEN THE INSULATED PENETRANTS AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN 1/2 IN. TO MAX 2 IN. THE ANNULAR SPACE BETWEEN INSULATED PENETRANTS SHALL BE MIN 1/2 IN. TO MAX 2 IN.
SEE PIPE AND EQUIPMENT COVERING -- MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

3. TUBE INSULATION-PLASTICS + -- NOM 3/4 IN. THICK ACRYLONITRILE BUTADIENE/POLYVINYL CHLORIDE (AB/PVC) FLEXIBLE FOAM FURNISHED IN THE FORM OF TUBING. THE ANNULAR SPACE BETWEEN THE INSULATED PENETRANTS AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN 1/2 IN. TO MAX 2 IN. THE ANNULAR SPACE BETWEEN INSULATED PENETRANTS SHALL BE 1/2 IN. TO MAX 2 IN.
SEE PLASTICS+ - (QMFZ2) CATEGORY IN THE PLASTICS RECOGNIZED COMPONENT DIRECTORY FOR NAMES OF MANUFACTURERS. ANY RECOGNIZED COMPONENT TUBE INSULATION MATERIAL MEETING THE ABOVE SPECIFICATIONS OF HAVING A UL 94 FLAMMABILITY CLASSIFICATION OF 94-5VA MAY BE USED.

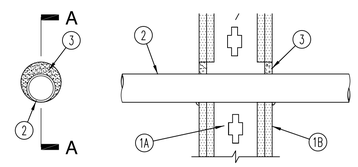
4. FIRESTOP SYSTEM -- THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
A. PACKING MATERIAL -- MIN 3-5/8 IN. OR 4-1/8 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FOR 1 AND 2 HR RATED ASSEMBLIES, RESPECTIVELY, FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
B. FILL, VOID OR CAVITY MATERIAL* -- SEALANT -- MIN 5/8 IN. OR 1 IN. THICKNESS OF FILL MATERIAL FOR 1 AND 2 HR RATED ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. JOHNS MANVILLE -- FIRETEMP™ CI

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL.

F RATINGS - 1 & 2 HR, T RATING - 1 & 2 HR (SEE ITEM 1)

SCALE: NOT TO SCALE

3



SECTION A-A

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300, U400 OR V400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 IN. BY 4 IN. (51 MM BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. WIDE (89 MM) SPACED MAX 24 IN. (610 MM) OC.
B. GYPSUM BOARD* - THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 3-1/2 IN. (89 MM).

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. THROUGH PENETRANTS - ONE NONMETALLIC PIPE OR CONDUIT INSTALLED ECCENTRICALLY OR CONCENTRICALLY WITHIN OPENING. ANNULAR SPACE BETWEEN PENETRANT AND PERIPHERY OF OPENING TO BE MIN 0 IN. (POINT CONTACT) TO MAX 1-1/8 IN. (0 MM TO MAX 29 MM). PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:

A. POLYVINYL CHLORIDE (PVC) PIPE - NOM 2 IN. (51 MM) DIAM (OR SMALLER) SCHEDULE 40 SOLID CORE OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM.
B. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE - NOM 2 IN. (51 MM) DIAM (OR SMALLER) SDR13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.
C. RIGID NONMETALLIC CONDUIT+ - NOM 2 IN. (51 MM) DIAM (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH ARTICLE 347 OF THE NATIONAL ELECTRICAL CODE (NFPA NO. 70).
D. ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE - NOM 1-1/2 IN. (38 MM) DIAM (OR SMALLER) SCHEDULE 40 SOLID CORE OR CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
E. ELECTRICAL NONMETALLIC TUBING (ENT)+ - NOM 1-1/4 IN (32 MM) DIAM (OR SMALLER) ENT INSTALLED IN ACCORDANCE WITH ARTICLE 331 OF THE NATIONAL ELECTRICAL CODE (NFPA NO. 70).

SEE ELECTRICAL NONMETALLIC TUBING (FKHU) CATEGORY IN THE ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS.

3. FILL,VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8 IN. (16 MM) THICKNESS OF CAULK APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
3M COMPANY - IC 15WB+, CP 25WB+ CAULK OR FB-3000 WT SEALANT
(NOTE: CP 25WB+ NOT SUITABLE FOR USE WITH CPVC PIPES.)

* BEARING THE UL CLASSIFICATION MARKING
+ BEARING THE UL LISTING MARK

F RATINGS - 1 & 2 HR (SEE ITEM 1), T RATING - 0 HR

SCALE: NOT TO SCALE

1

GENERAL FIRESTOPPING NOTES

1. THE FIRESTOPPING DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION. PREPARE COMPLETE SUBMITTAL DATA FOR APPROVAL, SHOWING PROPOSED FIRESTOPPING PRODUCTS AND SYSTEMS, INCLUDING INSTALLATION DETAILS WITH ASSOCIATED UL SYSTEM NUMBERS.

2. SUBMIT PROPOSED FIRESTOPPING SYSTEM DATA AND INSTALLATION DETAILS FOR REVIEW, FIRST TO THE STATE FIRE MARSHAL FOR REVIEW. AFTER SFM APPROVAL, SUBMIT TO THE PROJECT STATE REPRESENTATIVE FOR REVIEW. WORK SHALL NOT BE ALLOWED TO PROCEED UNTIL ALL REQUIRED APPROVALS ARE OBTAINED.

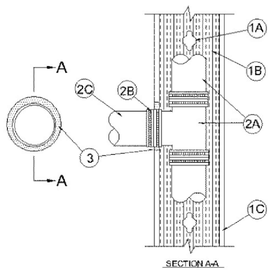
3. THE FIRESTOPPING DETAILS SHOWN ARE TYPICAL DETAILS. VERIFY FIELD CONDITIONS AND DIMENSIONS FOR COMPLIANCE WITH THE DETAILS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- MINIMUM AND MAXIMUM WIDTH OF JOINTS.
- TYPE AND THICKNESS OF FIRE RATED CONSTRUCTION. THE MINIMUM ASSEMBLY RATING OF THE FIRESTOP ASSEMBLY SHALL MEET OR EXCEED THE HIGHEST RATING OF THE ADJACENT CONSTRUCTION.

4. PREPARATION OF CONTRACTOR'S DRAWINGS SHALL FOLLOW THE INTERNATIONAL FIRESTOP COUNCIL (IFC) GUIDELINES FOR EVALUATING FIRESTOP SYSTEMS ENGINEERING JUDGMENTS.

5. REFERENCES TO BE USED SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
- 2012 UNDERWRITER'S LABORATORIES FIRE RESISTANCE DIRECTORY, VOLUME 2
- NFPA 101 LIFE SAFETY CODE
- ALL GOVERNING STATE BUILDING CODES.

6. FIRESTOP SYSTEM INSTALLATION SHALL MEET REQUIREMENTS OF ASTM E-814 (UL1479) TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.

7. UPON COMPLETION OF WORK, AFFIX LABELS AT ALL RATED THROUGH PENETRATIONS. LABELS SHALL PROMINENTLY DISPLAY THE FOLLOWING INFORMATION:
- "ATTENTION: FIRE RATED ASSEMBLY"
- UL SYSTEM #
- PRODUCT(S) USED
- HOURLY RATING (F-RATING)
- INSTALLATION DATE



SECTION A-A

1. WALL ASSEMBLY• -- THE FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
A. STUDS• -- WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. OC.WOOD JOISTS — NOMINAL 2 BY 10 IN. LUMBER JOISTS SPACED 16 IN. O.C. WITH NOMINAL 1 BY 3 IN. LUMBER BRIDGING AND WITH ENDS FIRESTOPPED.

B. INSULATION*• -- R13 (OR HIGHER) GLASS FIBER OR MINERAL FIBER BATT INSULATION FRICTION FITTED INTO STUD CAVITY.GYPSUM BOARD* — NOMINAL 4 FT WIDE BY 5/8 IN. THICK AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. FIRST LAYER OF WALLBOARD NAILED TO WOOD JOISTS. SECOND LAYER OF WALLBOARD (2 HR FIRE RATED ASSEMBLY ONLY) SCREW-ATTACHED TO FURRING CHANNELS. MAX DIAMETER OF OPENING IS 1 IN. LARGER THAN OUTSIDE DIAMETER OF PENETRANT.

C. GYPSUM BOARD*• -- ONE LAYER OF NOM 5/8 IN. THICK GYPSUM BOARD, AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 4-1/2 IN.

2. PIPING SYSTEM• -- TTHE PIPING SYSTEM FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS SHALL CONSIST OF THE FOLLOWING:
A. STEEL OR IRON PIPE• -- NOM 3 IN. DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE OR SCHEDULE 40 (OR HEAVIER) STEEL PIPE,INSTALLED WITHIN STUD CAVITY AND CONNECTED TO TEE. THE TEE PENETRATES WALL ON ONE SIDE AND IS INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE TEE AND THE EDGE OF THE OPENING SHALL BE MIN 3/8 IN. TO MAX 5/8 IN.SOLE PLATE — NOMINAL 2 BY 6 IN. OR PARALLEL 2 BY 4 IN. LUMBER PLATES, TIGHTLY BUTTED.

B. SHIELDED SLIP ON COUPLING• -- NOM 3 IN. DIAMETER (OR SMALLER) 32 GAUGE (OR HEAVIER) CORRUGATED STAINLESS STEEL SHIELDED RUBBER COUPLING. COUPLING TO BE SECURED TO TEE WITH STAINLESS STEEL HOSE CLAMP AT ANY POINT BEYOND THE SURFACE OF WALL,OR MAY EXTEND A MAX OF 1 IN. INTO OPENING. WHEN COUPLING EXTENDS INTO OPENING, THE ANNULAR SPACE BETWEEN THE COUPLING AND THE EDGE OF THE OPENING SHALL BE MIN 1/4 IN. TO MAX 1/2 IN.GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS SHALL BE AS SPECIFIED IN INDIVIDUAL WALL AND PARTITION DESIGN.

C. BRANCH PIPING• -- BRANCH PIPE IS SECURED TO SHIELDED SLIP ON COUPLING WITH STAINLESS STEEL HOSE CLAMP AND MAY CONSIST OF THE FOLLOWING:
1. POLYVINYL CHLORIDE (PVC) PIPE• -- NOM 3 IN. DIAMETER (OR SMALLER) SCHEDULE 40 SOLID CORE PVC PIPE.
2. STEEL OR IRON PIPE• -- NOM 3 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE OR SCHEDULE 40 (OR HEAVIER) STEEL PIPE.

3. FILL, VOID OR CAVITY MATERIAL* -- SEALANT• -- MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH SURFACE OF WALL.

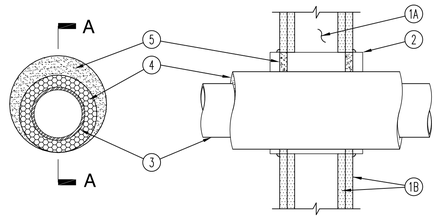
SHERWIN WILLIAMS CO -- WHITE LIGHTNING FLAME BUSTER INTUMESCENT SILICONE

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL.

F RATING - 1 HOUR, T RATING - 1 HOUR

SCALE: NOT TO SCALE

4



SECTION A-A

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300, U400 OR V400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 IN. BY 4 IN. (51 MM BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (89 MM) WIDE SPACED MAX 24 IN. (610 MM) OC.
B. GYPSUM BOARD* - THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 12-1/2 IN. (318 MM).

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. STEEL SLEEVE - (OPTIONAL) - CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.019 IN (0.49 MM) THICK (28 GAUGE) GALVANIZED SHEET STEEL AND HAVING A MIN 2 IN. (51 MM) LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL SLEEVE TO BE EQUAL TO THICKNESS OF WALL OR UP TO 2 IN. (51 MM) LONGER THAN THE THICKNESS OF WALL SUCH THAT, WHEN INSTALLED, THE ENDS OF THE SLEEVE WILL BE FLUSH WITH WALL SURFACE OR PROJECT UP TO 1 IN. (25 MM) BEYOND THE SURFACE OF THE WALL ON EACH SIDE OF THE WALL ASSEMBLY. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A DIAM SMALLER THAN THE MAX 12-1/2 IN. (318 MM) DIAM THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENING AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS

THE HOURLY T RATING IS 0 HR WHEN OPTIONAL SLEEVE IS USED.

3. THROUGH PENETRANTS - ONE METALLIC PIPE OR TUBING INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN OPENING. PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:

A. STEEL PIPE - NOM 8 IN. (203 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
B. IRON PIPE - NOM 8 IN. (203 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
C. COPPER TUBING - NOM 4 IN. (102 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
D. COPPER PIPE - NOM 4 IN. (102 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

4. PIPE COVERING* - NOM 1 IN., 1-1/2 IN. OR 2 IN. (25 MM, 38 MM OR 51 MM) THICK HOLLOW CYLINDRICAL HEAVY DENSITY GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SSL TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. ANNULAR SPACE BETWEEN PIPE COVERING AND PERIPHERY OF OPENING TO BE MIN 0 IN. (POINT CONTACT) TO MAX 1-7/8 IN. (0 MM TO MAX 48 MM). WHEN THE STEEL SLEEVE (ITEM 2) IS USED THE ANNULAR SPAECE BETWEEN THE PIPE COVERING AND THE PERIPHERY OF THE OPENING IS TO BE MIN 1/8 IN. (3 MM) TO MAX 1-3/4 IN. (44 MM).

SEE PIPE AND EQUIPMENT COVERING-MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

THE HOURLY T RATING IS 1-1/4 HR FOR PIPE COVERINGS OF NOM 1 IN. AND 1-1/2 IN. (25 MM AND 38 MM) THICK FOR 2 HR RATED ASSEMBLIES.
THE HOURLY T RATING IS 1-1/2 HR FOR PIPE COVERINGS OF NOM 2 IN. (51 MM) THICK FOR 2 HR RATED ASSEMBLIES.
THE HOURLY T RATING IS 1/2 HR FOR PIPE COVERINGS OF NOM 1 IN. AND 1-1/2 IN. (25 MM AND 38 MM) THICK FOR 1 HR RATED ASSEMBLIES.
THE HOURLY T RATING IS 3/4 HR FOR PIPE COVERINGS OF NOM 2 IN. (51 MM) THICK FOR 1 HR RATED ASSEMBLIES.

5. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8 IN. (16 MM) THICKNESS OF CAULK APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PIPE COVERING INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
3M COMPANY - CP 25WB+, IC 15WB+ CAULK OR FB-3000 WT SEALANT

* BEARING THE UL CLASSIFICATION MARKING

F RATINGS - 1 HR & 2 HR (SEE ITEM 1), T RATINGS 0, 1/2, 3/4, 1-1/4 & 1-1/2 HR (SEE ITEMS 2 & 4)

SCALE: NOT TO SCALE

2

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING FIRESTOPPING DETAILS

SHEET NUMBER
P504
V3

PROJECT PATH: D:\Job Tech Services\A&E\PROJECT Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P504.dwg
PLOT DATE: Jun 29, 2023 - 2:16PM
VER 2020

PLUMBING SCHEDULE

	MARK	NAME	DESCRIPTION	NAMED PRODUCT (MANUFACTURER AND MODEL NO.) (NOTE 1)	CONNECTIONS			
					WASTE	VENT	COLD WATER	HOT WATER
	BF-1	BOTTLE FILLER	IN-WALL BOTTLE FILLING STATION, FILTERED, NON-REFRIGERATED STAINLESS. ANTI-BACTERIAL,FILTERED, CUMULATIVE COUNTER (FILL COUNT), HANDS FREE, LAMINAR FLOW, REAL DRAIN, VISUAL FILTER MONITOR. ELECTRONIC BOTTLE FILLER SENSOR ACTIVATION. PRODUCT SHALL BE IN-WALL MOUNT (FRAME & PLATE), FOR INDOOR APPLICATIONS, SERVING 1 STATION. UNIT SHALL BE CERTIFIED TO UL 399 AND CSA C22.2 NO. 120. UNIT SHALL BE LEAD-FREE DESIGN WHICH IS CERTIFIED TO NSF/ANSI 61 &372.	"ELKAY" MODEL LZWSDK	1-1/4"	1-1/4"	1/2"	
	KS-1/ KS-2	KITCHEN SINK(S), STAINLESS STEEL COUNTERTOP	DOUBLE COMPARTMENT SINK(S) SHALL BE A PART OF, AND INTEGRAL WITH THE STAINLESS STEEL COUNTERTOP SYSTEM, AND SHALL COMPLY WITH THE REQUIREMENTS OF THE APPROPRIATE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. FURNISH WITH DISPOSER AS NOTED ON PLANS OR FURNISH WITH TYPE 316 STAINLESS STEEL DRAIN FITTING AS APPLICABLE.	"JUST" J-35-316 DRAIN FITTING	1-1/2"	1-1/4"	-	-
	LAV-1	LAVATORY SINK	WHITE VITREOUS CHINA, OVAL SINGLE BOWL UNDERCOUNTER MOUNT, 19-1/4" x 16-1/4" UNIT DIMENSIONS, 17" x 14" BY 5-1/2" DEEP BOWL, BUILT-IN OVERFLOW. BRASS METAL POLISH CHROME FINISH GRID DRAIN ASSEMBLY. FURNISH WITH INSULATION/PROTECTION ON WATER AND WASTE PIPING LOCATED UNDER COUNTER, AND UNDERCOUNTER MOUNTING KIT AND TEMPLATE. UNIT SHALL COMPLY WITH ADA & TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"AMERICAN STANDARD" OVALYN 0496.221 WITH 2411.015 GRID DRAIN	1-1/4"	1-1/4"	-	-
	LS-1	LAUNDRY SERVICE SINK	18 GAUGE TYPE 304 (18-8) STAINLESS STEEL SEAMLESS DIE-DRAWN CONSTRUCTION, HAND-BLENDED POLISHED FINISH WITH HIGHLIGHTED BOWL RIM, SINGLE BOWL UNDERCOUNTER MOUNT. 24" x 18" UNIT DIMENSIONS, 22" x 16" BY 10-1/2" DEEP BOWL, CENTER DRAIN OPENING. TYPE 316 STAINLESS STEEL DRAIN FITTING, SOUND AND CONDENSATE UNDERCOATING. FURNISH WITH UNDERCOUNTER MOUNTING KIT AND TEMPLATE.	"JUST" UNDERMOUNT GROUP USX-1824-A WITH "JUST" J-35-316 DRAIN FITTING	1-1/2"	1-1/4"	-	-
	MS-1	MOP SERVICE SINK	FLOOR MOUNTED SINGLE BOWL TYPE 304 ALL STAINLESS STEEL CONSTRUCTION, 16 GAUGE BOWL AND 18 GAUGE APRON THICKNESS. 33" x 25" x 16" UNIT DIMENSIONS, 28" x 20" x 12" DEEP BOWL, TILE EDGE ON REAR OF UNIT. ALL TIG WELDED CONSTRUCTION, SATIN FINISH. FURNISH COMPLETE WITH MOP SINK DRAIN ASSEMBLY.	"ADVANCE TABCO" 9-OP-48	2"	1-1/2"	-	-
	S-1	SINK, A.D.A. COMPLIANT	18 GAUGE TYPE 304 (18-8) STAINLESS STEEL SEAMLESS DIE-DRAWN CONSTRUCTION, HAND-BLENDED POLISHED FINISH WITH HIGHLIGHTED BOWL RIM, SINGLE BOWL UNDERCOUNTER MOUNT. 24" x 18" UNIT DIIMENSIONS, 22" x 16" BY 5-1/2" DEEP BOWL, REAR-CENTER DRAIN OPENING, TYPE 316 STAINLESS STEEL DRAIN FITTING, SOUND AND CONDENSATE UNDERCOATING. FURNISH WITH UNDERCOUNTER MOUNTING KIT AND TEMPLATE. FURNISH INSULATION/PROTECTION ON WATER AND WASTE PIPING LOCATED UNDER COUNTER. UNIT SHALL COMPLY WITH ADA & TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"JUST" UNDERMOUNT GROUP US-ADA-1824-A WITH "JUST" J-35-316 DRAIN FITTING	1-1/2"	1-1/4"	-	-
	WC-1	WATER CLOSET, A.D.A. COMPLIANT	VITREOUS CHINA, FLOOR MOUNTED, 16-1/2" HIGH ELONGATED BOWL, SIPHON ACTION FLUSH, CLOSE COUPLED TANK. ULTRA HIGH EFFICIENCY 1.1 GPF MAX, BOLT CAPS, POLYPROPYLENE OPEN-FRONT EXTRA HEAVY DUTY SEAT LESS COVER WITH 304 SERIES STAINLESS STEEL HINGE POSTS. CHROME TRIP LEVER LOCATED ON "OPEN" SIDE OF FIXTURE. ANTI-MICROBIAL FINISH ON BOTH FIXTURE AND SEAT. ALL COMPONENTS SHALL BE WHITE. UNIT SHALL COMPLY WITH ADA & TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"AMERICAN STANDARD" H2OPTIMUM SIPHONIC RIGHT HEIGHT 228AA.114 OR 228AA.115 WITH "AMERICAN STANDARD" 5905.110 SEAT	3"	2"	1/2"	-
FAUCETS & DRAINS	FAU-1	FAUCET, KITCHEN SINK, SINGLE HANDLE, ADA/CBC COMPLIANT, SINGLE HOLE, COUNTERTOP MOUNT	METAL CONSTRUCTION, "DURALAST" CONTROL CARTRIDGE, INTEGRAL BACKFLOW PREVENTION SYSTEM. SINGLE LEVER HANDLE MOUNTED ON RIGHT SIDE OF SPOUT BASE. 360 DEGREE ROTATING HIGH ARC 7-17/32" SPOUT MOUNTED MINIMUM 9-1/2" ABOVE COUNTERTOP DECK, PULL-DOWN SPRAY SPOUT WITH RETRACTABLE 68" BRAIDED HOSE AND SPRAY TO STREAM TOUCH CONTROL. SPOT RESISTANT STAINLESS STEEL FINISH. FLOW RESTRICTOR WITH 1.5 GPM MAXIMUM FLOW RATE. FURNISH WITH DECK PLATE OR ESCUTCHEON FOR SINGLE-HOLE MOUNTING ON STAINLESS STEEL COUNTERTOP. NOTE: FURNISH ONE FAUCET AT EACH SINK BOWL. UNIT SHALL COMPLY WITH ADA/CBC REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"MOEN" ALIGN 7565 SRS	-	-	1/2"	1/2"
	FAU-2	FAUCET, LAVATORY, SINGLE HANDLE, ADA/CBC COMPLIANT SINGLE HOLE, COUNTERTOP MOUNT	METAL CONSTRUCTION, CERAMIC CONTROL COMPONENTS, SINGLE SWIVEL STYLE LEVER HANDLE WITH RED & BLUE HOT/COLD INDICATORS. ROUND POST BODY WITH DECK PLATE OR ESCUTCHEON FOR SINGLE-HOLE MOUNTING ON COUNTERTOP. 4" SPOUT MOUNTED MINIMUM 3-3/4" ABOVE COUNTERTOP DECK. FLOW RESTRICTOR WITH 0.35 GPM MAXIMUM FLOW RATE, POLISHED CHROME FINISH. FURNISH WITH METAL GRID DRAIN ASSEMBLY. UNIT SHALL COMPLY WITH ADA/CBC REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"TOTO" OBERON-S TL363SDA03#CP	-	-	1/2"	1/2"
	FAU-3	FAUCET, SINK, SINGLE HANDLE, ADA/CBC COMPLIANT SINGLE HOLE, COUNTERTOP MOUNT	METAL CONSTRUCTION, "DURALAST" CONTROL CARTRIDGE, SINGLE LEVER HANDLE MOUNTED ON RIGHT SIDE OF SPOUT BASE. 360 DEGREE ROTATING HIGH ARC 8" SPOUT MOUNTED MINIMUM 9-5/8" ABOVE COUNTERTOP DECK, FIXED SPOUT. SPOT RESISTANT STAINLESS STEEL FINISH. FLOW RESTRICTOR WITH 1.5 GPM MAXIMUM FLOW RATE. FURNISH WITH DECK PLATE ESCUTCHEON FOR SINGLE-HOLE MOUNTING ON COUNTERTOP. UNIT SHALL COMPLY WITH ADA/CBC REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"MOEN" ALIGN 7365 SRS	-	-	1/2"	1/2"
	FAU-4	FAUCET, SINK, GOOSENECK SPOUT, ADA/CBC COMPLIANT SINGLE-HOLE COUNTERTOP MOUNT	METAL CONSTRUCTION, QUARTER TURN CERAMIC CONTROL COMPONENTS, 4-INCH VANDAL PROOF WRISTBLADE HANDLES. COUNTERTOP MOUNTED FAUCET SINGLE-HOLE FIXED CENTER-SET. 8" RIGID/SWING GOOSENECK SPOUT MOUNTED MINIMUM 9-1/4" ABOVE SINK DECK, CHROME STEEL FINISH. FLOW RESTRICTOR WITH 1.5 GPM MAXIMUM FLOW RATE WITH INTEGRAL AERATOR. 3/8" COMPRESSION FLEXIBLE STAINLESS STEEL SUPPLY HOSES. UNIT SHALL COMPLY WITH ADA/CBC REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"CHICAGO" MECHANICAL FAUCET 50-GN8AE35-317XKAB	-	-	1/2"	1/2"
	FAU-5	FAUCET, MOP SINK, WALL MOUNTED	CAST BRASS BODY, EXPOSED YOKE WALL MOUNT, 9-3/4" SPOUT WITH BUCKET HOOK, TOP BRACE AND THREADED HOSE END. 1/4-TURN CERAMIC DISC VALVE CARTRIDGES, VANDAL RESISTANT METAL LEVER HANDLES WITH HOT AND COLD INDICATORS. INTEGRAL SERVICE STOPS AND VACUUM BREAKER. OFFSET SHANKS WITH INTEGRAL CHECK VALVES. /2" FEMALE INLETS WITH WALL FLANGES, ADJUSTABLE ROUGH-IN 6' TO 10". POLISHED CHROME FINISH. FURNISH WITH 1/2" BLACK HEAVY DUTY UTILITY HOSE 36" LONG, WITH 3/4" FEMALE HOSE FITTING ON ONE END AND OPEN ON THE OTHER END, RATED AT 175# MAX WORKING PRESSURE, AND STAINLESS STEEL WALL MOUNT HOSE HANGER.	"AMERICAN STANDARD" UTILITY FAUCET 8354.112 WITH "ELKAY" LK402 UTILITY HOSE AND LK404 HOSE HANGER	-	-	1/2"	1/2"
	FR-1	FLOOR RECEPTOR, 3"	CAST IRON BODY, ACID RESISTING ENAMELED INTERIOR. 12-1/2" SQUARE TOP, 10" DEEP SUMP, FLANGE WITH SEEPAGE OPENINGS, ALUMINUM DOME STRAINER, NICKEL BRONZE RIM AND GRATE, FURNISH WITH SECURED HALF GRATE, TRAP PRIMER CONNECTION, CAULK OUTLET	"J.R. SMITH" SANI-CEPTOR 3160C-12	3"	2"	-	-
	IMO-1	ICE MAKER WALL OUTLET BOX	20 GAUGE G90 HOT DIPPED GALVANIZED STEEL CONSTRUCTION, WITH FACTORY INSTALLED WATER SHUT-OFF VALVE. 1/2" NPT INLET x 1/4" COMPRESSION OUTLET. FURNISH COMPLETE WITH VALVES, LOCKNUTS AND O-RINGS AS REQUIRED, COORDINATE MOUNTING LOCATION WITH ICE MAKER OR REFRIGERATOR BEING SERVED.	"IPS CORPORATION" GUY GRAY BIM 875	-	-	1/2"	1/2"
	SD-1	SHOWER DRAIN - LINEAR	CAST IRON BODY, 5" DIAMETER ROUND NICKEL BRONZE TOP. REVERSIBLE FLASHING COLLAR & ADJUSTABLE STRAINER HEAD, FLANGE WITH SEEPAGE OPENINGS. SPEEDI-SET SERVICE WEIGHT OUTLET.	"J.R. SMITH" 2005L-NB	2"	1-1/2"	-	-
	SH-1	SHOWER SYSTEM, A.D.A. COMPLIANT	SHOWER-HAND SHOWER SYSTEM WITH CYLINDER STYLE LEVER HANDLES. PRESSURE BALANCING MIXING VALVE WITH BRASS, BRONZE AND STAINLESS STEEL CONSTRUCTION, METAL ESCUTCHEON, SINGLE LEVER HANDLE, ADJUSTABLE STOP SCREW, INTEGRAL SERVICE STOPS, SEPARATE DUAL-OUTLET DIVERTER VALVE. THREE-MODE SHOWER HEAD WITH ARM AND FLANGE, WALL/HAND SHOWER WITH FLEXIBLE 5-FOOT METAL HOSE, IN-LINE VACUUM BREAKER WALL CONNECTOR AND FLANGE, AND CRADLE FOR HAND SHOWER MOUNTING, 30" SLIDE BAR FOR CRADLE MOUNTING, POLISHED CHROME FINISH. FLOW RESTRICTOR WITH 1.5 GPM MAXIMUM FLOW RATE. INSTALLATION SHALL INCLUDE GRAB BARS AND SEAT, AND ALL ASSOCIATED ACCESSORIES, CONNECTORS AND PIPING FOR A COMPLETE SYSTEM.. UNIT SHALL COMPLY WITH ADA & TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.	"SYMMONS" DIA 3505-H321-V-CYL-B-X-1.5-352SH-3	-	-	1/2"	1/2"
	WOB-1	WASHING MACHINE WALL OUTLET BOX	20 GAUGE G90 HOT DIPPED GALVANIZED STEEL CONSTRUCTION. 1/2" MIP/SWEAT INLETS x 1/2" HOSE OUTLETS FOR WASHING MACHINE, 2" MALE THREADED DRAIN CONNECTION WITH 24" HIGH STANDPIPE. FURNISH COMPLETE WITH VALVES, LOCKNUTS AND O-RINGS, COORDINATE MOUNTING LOCATION WITH WASHING MACHINE BEING SERVED. ALL INSTALLATION SHALL BE PER MANUFACTURER INSTRUCTIONS.	"IPS CORPORATION" GUY GRAY B200	2"	1-1/2"	1/2"	1/2"
	HB-1	HOSE BIB	HOSE VALVES INCLUDE A HEAVY ROUGH BRASS BODY, FURNISHED WITH A LOCKSHIELD BONNET AND REMOVABLE LOOSE KEY WHEEL HANDLE. VALVES CLOSE WITH THE WATER PRESSURE AND FEATURE A REPLACEABLE CARTRIDGE WHICH CONTAINS ALL WEARING PARTS INCLUDING THE SEAT. INLET IS 3/4" NPTI, OUTLET IS 3/4" NPSH. VACUUM BREAKERS ARE ATMOSPHERIC TYPE AND CONFORM TO THE REQUIREMENTS OF ASSE STANDARD 1011. HOSE VALVES MEETS THE LEAD FREE REQUIREMENTS WHERE THE WETTED SURFACE OF THIS PRODUCT CONTACTED BY WATER CONTAINS LESS THAN 0.25% LEAD. CHECK LOCAL CODE AUTHORITY FOR VACUUM BREAKER REQUIREMENTS	"ACORN" 8121-LF	-	-	3/4"	-

NOTES:
1. PROVIDE A NAMED PRODUCT OR A COMPARABLE PRODUCT OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING SCHEDULES

SHEET NUMBER
P601
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_13168\2421P601.dwg
PLOT DATE: Jan 09, 2023 - 2:20PM
VER 2020

PLUMBING SCHEDULE

MARK	NAME	DESCRIPTION	NAMED PRODUCT (MANUFACTURER AND MODEL NO.) (NOTE 1)
ASV-1	ANGLE STOP VALVE	1/4-TURN BALL STOP VALVE, MACHINED ONE-PIECE BRASS BODY, PRECISION-MACHINED BRASS BALL, CHROME PLATED FINISH. TWO HIGH PERFORMANCE O-RINGS, BLOW-OUT PROOF, PLATED, BRASS STEM. CHROME PLATED METAL HANDLE. 1/2" FIP THREADED INLET, COMPRESSION OUTLET SIZES AS REQUIRED AT EACH FIXTURE BEING SERVED. 40-180 DEG F TEMPERATURE RATING, 125 PSI MAX PRESSURE RATING. COMPLIANT WITH CALIFORNIA HEALTH AND SAFETY CODE 116875 REQUIREMENTS.	"BRASSCRAFT" KT COMPLIANT SERIES
BV-1	BALL SHUT-OFF VALVE	TWO-PIECE FULL PORT, BRONZE BODY WITH CHROME PLATED SOLID MACHINED BALL. MSS SP-110, ANSI/NSF 61 "LEAD FREE" COMPLIANT. FEMALE NPT CONNECTIONS. 600 PSI CWP MAX PRESSURE, 500 DEG F MAX TEMPERATURE. PREMIUM MULTI-FILL MTFE SEATS AND SEALS, ADJUSTABLE PACKING, BLOW-OUT PROOF STEM DESIGN. SIZE TO MATCH PIPE BEING SERVED.	"APOLLO" 77CLF SERIES
CVB-1	CURBED VALVE BOX	HIGH DENSITY REINFORCED CONCRETE BOX, 11-3/4" x 22-1/4" INSIDE DIMENSIONS, ETCHED POLYPROPYLENE FACE ANCHORED IN CONCRETE, 12" HIGH, NON-SETTLING SHOULDERS, ULTRA-VIOLET INHIBITOR, EXCEEDS ASTM-D1693 STANDARDS FOR STRESS CRACKING RESISTANCE. FURNISH WITH MATCHING CAST IRON LID.	"CHRISTY" B16 BOX WITH B16C LID
FCO	CLEANOUT TO FLOOR	CAST IRON BODY, ROUND ADJUSTABLE SCORIATED SECURED NICKEL BRONZE TOP, TWIST-TO-FLOOR ADJUSTMENT, FLASHING FLANGE & CLAMP, SPEEDI-SET OUTLET, GASKET SEAL WITH BRONZE PLUG. SIZE TO MATCH WASTE PIPE BEING SERVED.	"J.R. SMITH" 4032L
FCV-1	FLOW CONTROL VALVE	BRONZE BODY, VITON PACKING MATERIAL CARBON/GLASS FILLED PTFE SEATS. TIGHT SHUT-OFF, BALL DESIGN, BI-DIRECTIONAL, BLOW-OUT RESISTANT, WITH POSITION INDICATOR, MEMORY DEVICE, CHECKED METERING PORTS WITH DRIP CAPS, INTEGRAL DRAIN PORTS OPPOSITE METERING PORTS, 3/4" NPT SIZE. APPROVED FOR DOMESTIC WATER SERVICE.	"WATTS" CSM-61-M1-T
GCO	CLEANOUT TO GROUND/GRADE	CAST IRON BODY, GASKET SEAL WITH BRONZE PLUG, SPEEDI-SET OUTLET, SIZE TO MATCH WASTE PIPE BEING SERVED. MOUNTED WITH PRE-CAST CONCRETE CURBED VALVE BOX WITH CAST IRON LID.	"J.R. SMITH" 4292L CLEANOUT WITH "CHRISTY" G08 VALVE BOX WITH G05C LID
GD-1	GARBAGE DISPOSAL	CONTINUOUS FEED, WALL SWITCH ON-OFF CONTROL, 1.0 HP, 120 V / 1 PHASE / 60 HZ, 10.2 AMP (AVERAGE LOAD), AUTOMATIC GRINDER REVERSING, INTERMITTENT TIME RATING, 13" TALL, ANTI-VIBRATION MOUNTS AND FLEXIBLE CONNECTIONS, SOUND INSULATION, STAINLESS STEEL GRIND CHAMBER AND COMPONENTS, 40-OUNCE GRIND CHAMBER, MANUAL RESET MOTOR OVERLOAD PROTECTION, DISHWASHER DRAIN CONNECTION (NO NEED FOR AIR GAP ABOVE SINK). FURNISH WITH A POWER CORD. UL AND IAPMO LISTED, WARRANTY- 7-YEAR PARTS AND IN-HOME SERVICE. STAINLESS STEEL STOPPER, STAINLESS STEEL SINK FLANGE WITH QUICK-LOCK MOUNT.	INSINKERATOR "EVOLUTION EXCEL"
TBV-1	TEMPERED WATER BLENDING VALVE (NEAR WATER HEATER TANK)	INTERNAL CHECK STOPS, LEAD-FREE BRASS/BRONZE BODY. 0.5 GPM MINIMUM FLOW RATE. 150 PSIG MAX OPERATING PRESSURE. 70-145 DEG F OUTLET TEMPERATURE. INLET AND OUTLET SIZES ACCORDING TO PLANS. ASSE LISTED 1017, NSF/ANSI 61, CALIFORNIA HEALTH AND SAFETY CODE 116875. TEMPERATURE SET-POINT ACCORDING TO WATER HEATER SCHEDULE. PROTECT SET-POINT WITH CAP.	"HONEYWELL" AM-1-LF
TBV-2	TEMPERED WATER BLENDING VALVE (ANTI-SCALD POINT-OF-USE)	INTERNAL CHECK STOPS, LEAD-FREE BRASS/BRONZE BODY WITH NICKEL PLATING, POLYSUFONE PISTON, STAINLESS STEEL SPRINGS AND SCREEN. 0.35 GPM MINIMUM FLOW RATE, 8 PSIG MAXIMUM PRESSURE LOSS AT 5 GPM FLOW RATE. 145 PSIG MAX OPERATING PRESSURE, 195 DEG F MAX INLET TEMPERATURE. INLET AND OUTLET SIZES ACCORDING TO PLANS. ASSE LISTED 1070, NSF/ANSI 61, CALIFORNIA HEALTH AND SAFETY CODE 116875. ANTI-SCALD TEMPERATURE SET-POINT = 105 DEG F. PROTECT SET-POINT WITH CAP.	"ZURN" ZW1070XL
TP-1	TRAP PRIMER VALVE	MACHINED BRASS BODY, 60 MESH STAINLESS STEEL SCREEN, VACUUM BREAKER PORTS. UNIT SHALL CONTAIN NO SPRINGS, DIAPHRAGMS OR PLASTIC PARTS. 20-80 PSIG PRESSURE OPERATING RANGE, PRIMING VALVE AUTOMATICALLY ACTUATED BY MINIMUM 10 PSI PRESSURE FLUCTUATION. 1/2" MNPT INLET, 1/2" FNPT OUTLET. FURNISH COMPLETE WITH SERVICE SHUT-OFF VALVE AT INLET AND UNION CONNECTION AT DISCHARGE TO DRAIN TRAP. FURNISH WITH 12"x12" HINGED METAL ACCESS DOOR FOR CONCEALED UNIT	"PRECISION PLUMBING PRODUCTS" PRIME-RITE PR-500
WCO	CLEANOUT TO WALL	CAST IRON BODY CLEANOUT TEE, COUNTERSUNK BRONZE CLOSURE PLUG, SUITABLE FOR INSTALLATION ON WASTE/VENT VERTICAL PIPE RISER IN CONCEALED LOCATIONS, SIZE TO MATCH PIPE RISER. REMOVABLE ROUND STAINLESS STEEL ACCESS COVER MOUNTED ON SURFACE OF FINISH WALL DIRECTLY SECURED BY SCREW TO TAPPING PROVIDED IN CLEANOUT PLUG.	"J.R. SMITH" 4531S
WHA-1	WATER HAMMER ARRESTER	PDI STANDARD WH-201. ALL STAINLESS STEEL CONSTRUCTION, PNEUMATIC AND HYDRAULIC PRESSURE CONTROL. FACTORY CHARGED AND SEALED PRESSURIZED COMPRESSION CHAMBER, EXPANSION BELLOWS. PDI-A RATING, 3/4" THREADED CONNECTION.	"J.R. SMITH" HYDROTROL 5005

NOTES:
1. PROVIDE A NAMED PRODUCT OR A COMPARABLE PRODUCT OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

ELECTRIC, DOMESTIC WATER HEATER SCHEDULE (SPECIFICATION SECTION 223300)

MARK		NAMED PRODUCT (MANUFACTURER AND MODEL NO.) (NOTES 1 AND 2)	TYPE	CAPACITY - GALLONS	RECOVERY - GPH AT 90 DEG. F TEMPERATURE RISE	FLOW RATE (MINIMUM)	HEAT PUMP CAPACITY - BTU/H	HEAT PUMP REFRIGERANT TYPE	TEMPERATURE RISE - DEGREE F AT GPM	HOT-WATER TEMPERATURE SETTING - DEGREES F	TEMPERATURE BLENDING VALVE SETTING - DEGREES F	UNIFORM ENERGY FACTOR (MINIMUM)	BLOCK OUT TIMES (HEAT PUMP OFF) SETTING	POWER DEMAND - KW	ELECTRICAL CHARACTERISTICS			WEIGHT - LBS.	ACCESSORIES
															VOLTS / PHASE / HERTZ	MINIMUM CIRCUIT AMPACITY	BREAKER SIZE		
HPWH 1	TANK 1	SANCO2 GS4-45HPC-US OUTDOOR UNIT AND SAN-83SSAQA INDOOR STAINLESS STEEL STORAGE TANK	HEAT PUMP, STORAGE	83	20	-	15400	R744 (CO_2)	_	150	108	3.85	3 P.M. TO 9 P.M. (NOTE 3)	-	208-230/1/60	7	15	110# OUTDOOR UNIT	EXPANSION TANK (ET-1) (223300)
HPWH 2	TANK 2																		

NOTES:
1. PROVIDE A NAMED PRODUCT OR A COMPARABLE PRODUCT OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS. 2. MUST BE LISTED IN THE CURRENT CALIFORNIA ENERY COMMISSION'S APPLIANCE EFFICIENCY DATABASE. 3. ADJUST BLOCK OUT TIMES TO AVOID PG&E'S TIME-OF-USE "PEAK" HOURS. CHECK CURRENT TIME-OF-USE RATE PLAN.

DOMESTIC WATER PUMP SCHEDULE (SPECIFICATION SECTION 221123.21)

MARK	NAME	DESCRIPTION	NAMED PRODUCT (MANUFACTURER AND MODEL NO.) (NOTE 1)	ELECTRICAL CHARACTERISTICS		CONNECTION SIZES	
				VOLTS / PHASE / HERTZ	POWER (HP)	HOT WATER SUPPLY	HOT WATER RETURN
HWRP 1	DOMESTIC HOT WATER RE-CIRCULATION PUMP	ETL LISTED, MAINTENANCE FREE IN-LINE CIRCULATING PUMP SPECIFICALLY DESIGNED FOR POTABLE DOMESTIC WATER APPLICATIONS. 4 GPM NOMINAL CAPACITY, 150 PSI MAX WORKING PRESSURE AND 230 DEG F MAX WORKING TEMPERATURE. SEAL-LESS CONSTRUCTION, LEAD-FREE BRASS PUMP BODY, EPDM OR VITON O-RING, CERAMIC BEARING, NYLON/PPO IMPELLER. ALL OTHER WETTED PARTS SHALL BE TYPE 316 STAINLESS STEEL. UNIT SHALL USE PERMANENT MAGNET ELECTRONICALLY COMMUTATED MOTOR (ECM) TECHNOLOGY WITH SHAFT-LESS SPHERICAL MOTOR. SELF-REALIGNING BEARING AUTOMATICALLY COOLED BY SYSTEM FLUID. ROTOR MAGNETICALLY CENTERED ON THE BEARING. CONSTANT SPEED UNIT WITH INTEGRAL BUILT-IN ADJUSTABLE TEMPERATURE SENSOR, SET TO 105 DEG. UNIT SHALL INCLUDE BUILT-IN UNION CONNECTIONS, AIR PURGER AND CHECK VALVE. MOTOR SHALL HAVE AUTOMATIC OVERLOAD PROTECTION AND LOW IN-RUSH CURRENT. FURNISH PRE-WIRED WITH 6-FT ELECTRICAL PLUG. FURNISH WITH PROGRAMMABLE TIMER. TIMER SHALL BE MOUNTED ON MOTOR END CAP WITHOUT ANY ADDITIONAL WIRING REQUIRED. INCLUDE OCCUPANCY SENSOR FOR AUTOMATIC MOTION DETECTION START.	"TACO GENIE" 006-CT WITH MOTION SENSOR STARTER KIT 554-4	115/1/60	1 / 40	1/2" MALE NPT	1/2" MALE NPT

NOTES:
1. PROVIDE A NAMED PRODUCT OR A COMPARABLE PRODUCT OR EQUAL PRODUCT BY ONE OF THE MANUFACTURERS LISTED IN THE SPECIFICATIONS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

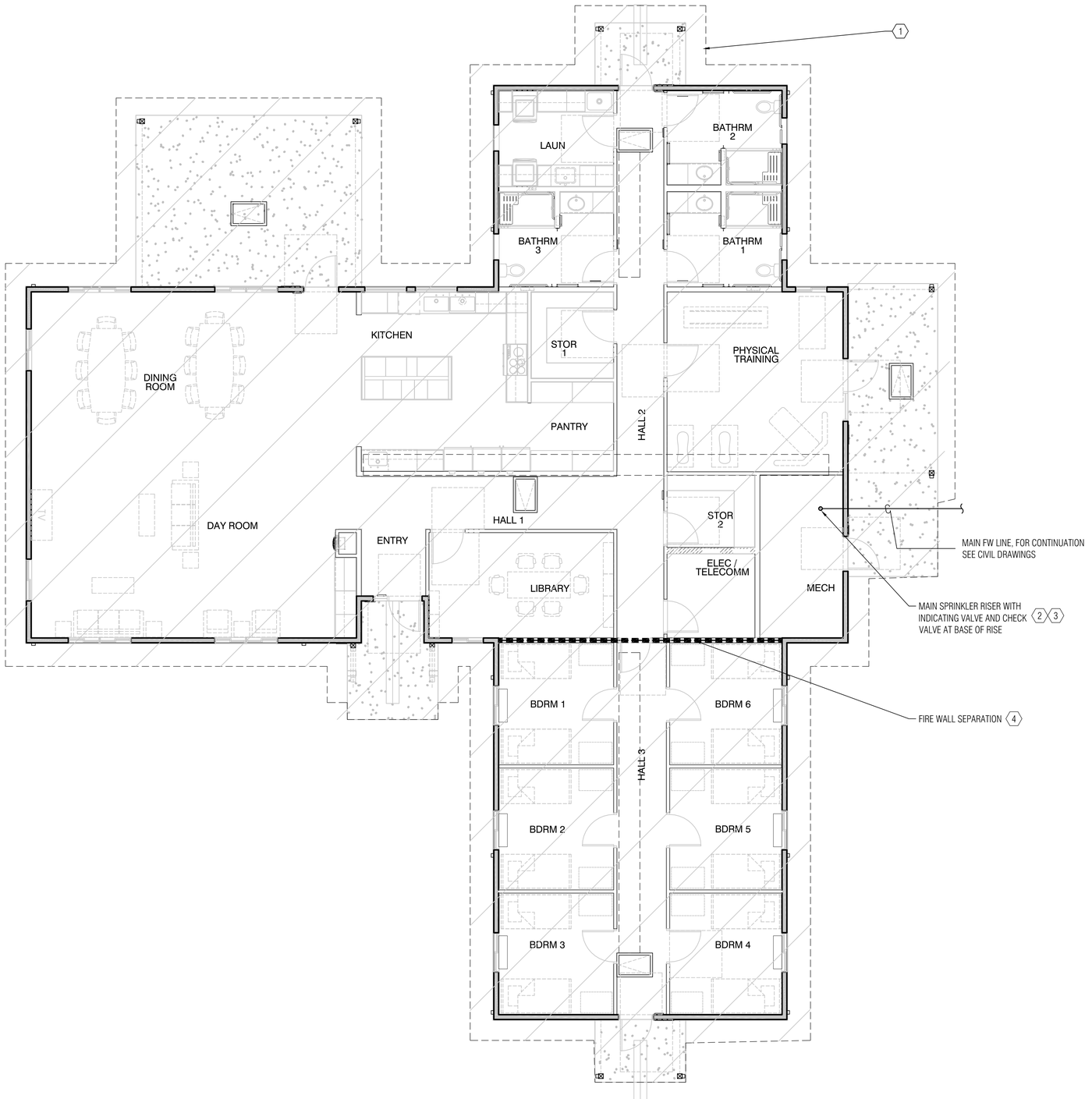
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER
P602
V3

PROJECT PATH: I:\Data\Tech Services\ASE\PROJECT\Major Cap Projects\2421 Fresno C-130 AAB\DRAWINGS\PLUMBING\2421P602.dwg
PLOT DATE: 4/15/2024 - 10:41 AM
VER 2020
1"



FIRE SPRINKLER PLAN

SCALE: 3/16" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. AUTOMATIC FIRE SPRINKLER SYSTEM DESIGNED TO COVER AREAS DENOTED BY HATCH MARKS (//////), ABOVE AND BELOW CEILING, INCLUDING OVERHANGS, PATIOS, PORCHES, AND ALL SPACES REQUIRED BY NFPA 13, THE STATE FIRE MARSHAL (SFM) AND PROJECT SPECIFICATIONS.
2. LICENSED PROFESSIONAL FIRE SPRINKLER ENGINEER OF THE FIRE PROTECTION SYSTEM SHALL COORDINATE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, PLUMBING PLAN AND MECHANICAL PLAN FOR ANY OBSTRUCTION ABOVE THE CEILING.
3. THE SPRINKLER SYSTEM DESIGN, INCLUDING SPRINKLER CONNECTIONS TO BUILDING SHALL BE IN COMPLIANCE WITH SEISMIC REQUIREMENTS. REFER TO STRUCTURAL SHEET S001 FOR DESIGN NOTES. SEE FIRE SPRINKLER NOTES AND DEFERRED SUBMITTAL NOTES ON THIS SHEET FOR MORE INFORMATION.
4. WITH THE EXCEPTION OF THE MAIN SPRINKLER RISER AREA, ALL OTHER PIPING INSTALLED IN THE BUILDING SHALL BE CONCEALED. ALL POSSIBLE PIPING ROUTING SHALL BE EVALUATED IN ORDER TO AVOID EXPOSING ANY PIPING. WHERE EXPOSED PIPING CAN NOT BE AVOIDED, CONTRACTOR SHALL NOTIFY STATE REPRESENTATIVE OF PROPOSED LOCATIONS WHERE PIPING SHALL BE EXPOSED PRIOR TO PRELIMINARY REVIEW. EXPOSED PIPING, IF NOT AVOIDABLE, SHALL BE KEPT TO A MINIMUM, AND MAY BE INSTALLED ONLY AS ALLOWED IN WRITING BY THE STATE REPRESENTATIVE.
5. SEE CIVIL SHEETS FOR LOCATION OF FIRE DEPARTMENT CONNECTION.

REFERENCE KEYNOTES

099113 EXTERIOR PAINTING
211100 FACILITY FIRE-SUPPRESSION WATER-SERVICE PIPING
211313 WET-PIPE SPRINKLER SYSTEMS

⬡ SHEET KEYNOTES

1. WET-PIPE FIRE SPRINKLER DESIGN AREA. SEE FIRE SPRINKLER NOTES AND DEFERRED SUBMITTAL NOTES ON THIS SHEET FOR MORE INFORMATION.
2. PROPOSED LOCATION OF FIRE RISER. SEE SHEET CU101 FOR FIRE WATER SUPPLY OUTSIDE THE BUILDING.
3. INSPECTORS TEST PORT AND AUXILIARY DRAIN LOCATION.
4. RATED FIRE WALL SEPARATION.

FIRE SPRINKLER NOTES

1. PROVIDE A HYDRAULICALLY DESIGNED SPRINKLER SYSTEM WITH A PERMANENTLY MARKED WEATHERPROOF METAL SIGN. SECURE WITH CORROSION-RESISTANT WIRE, CHAIN OR OTHER APPROVED MEANS. PLACE SUCH SIGNS AT THE ALARM VALVE, DRY PIPE VALVE, PREACTION VALVE, OR DELUGE VALVE SUPPLYING THE CORRESPONDING HYDRAULICALLY DESIGNED AREA. INCLUDE THE FOLLOWING INFORMATION ON THE SIGN:
   - 1.A. LOCATION OF THE DESIGN AREA OR AREAS.
   - 1.B. DISCHARGE DENSITIES OVER THE DESIGN AREA OR AREAS.
   - 1.C. REQUIRED FLOW AND RESIDUAL PRESSURE DEMAND AT THE BASE OF THE RISER.
   - 1.D. HOSE STREAM DEMAND INCLUDED IN ADDITION TO THE SPRINKLER DEMAND.
2. THE AUTOMATIC FIRE SPRINKLER SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13 AND STATE FIRE MARSHAL. SPRINKLERS SHALL BE QUICK-RESPONSE.
3. DO NOT BEGIN INSTALLATION OF THE AUTOMATIC SPRINKLER SYSTEM UNTIL THE COMPLETE PLANS AND SPECIFICATIONS (INCLUDING WATER SUPPLY INFORMATION AND TYPE OF SYSTEM, IF ANY) HAVE BEEN APPROVED BY STATE FIRE MARSHAL.
4. DO NOT BURY FIRE WATER MAIN UNTIL INSPECTED AND APPROVED BY STATE FIRE MARSHAL.
5. TEST THE SYSTEM IN THE PRESENCE OF STATE FIRE MARSHAL, LOCAL AUTHORITY HAVING JURISDICTION AND THE STATE REPRESENTATIVE AT VARIOUS STAGES OF CONSTRUCTION AND UPON COMPLETION.
6. PROVIDE FIRESTOPPING DESIGN AND DETAILS SHOWING THE REQUIRED CLEARANCES AND FLEXIBLE FIRE STOP SYSTEM/SEALANT WHERE SPRINKLER PIPING PENETRATES RATED WALLS AND WHERE OPENINGS ARE REQUIRED TO BE PROTECTED (2022 CBC, SECTION 714). SEE SHEET A101 FOR RATED WALL LOCATIONS AND LEGEND.
7. PROVIDE A CABINET WITH STOCK OF SPARE SPRINKLERS, SPECIAL SPRINKLER WRENCH AND LIST OF SPRINKLERS. LOCATE AND LABEL THE CABINET NEAR THE FIRE SPRINKLER RISER OR IN THE PUMP ROOM. PROVIDE NUMBER, TYPE OF SPRINKLERS AND LIST CONFORMING TO 2022 NFPA 13, SECTION 6.2.9.

DEFERRED SUBMITTAL NOTES

AUTOMATIC FIRE SPRINKLER SYSTEM AND FIRE ALARM ARE DEFFERED-APPROVAL ITEMS.

HIRE LICENSED PROFESSIONALS AS REQUIRED TO DESIGN AND CONSTRUCT THE SYSTEMS INCLUDING PROVIDING SERVICES FOR PREPARING DRAWINGS AS NECESSARY FOR APPROVAL FROM THE STATE FIRE MARSHAL OFFICE (SFM) HAVING JURISDICTION OVER THE PROJECT.

DO NOT INSTALL DEFERRED SUBMITTAL ITEMS UNTIL THE DESIGNATED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE SFM.

ALL COMPONENTS MUST BE LISTED PRODUCTS AND APPROVED BY SFM.

INCLUDE WITH THE SUBMITTAL:
1. COMPREHENSIVE ENGINEERING ANALYSIS BY CALIFORNIA LICENSED ENGINEERS USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED ON THESE DRAWINGS AND RELATED SPECIFICATION SECTIONS.
2. COMPLETE CALCULATIONS FOR HYDRAULIC, BATTERY, VOLTAGE DROP, SEISMIC BRACING AND SUPPORTS, ETC.
3. CUTSHEETS FOR MATERIALS AND PRODUCTS USED IN THE SYSTEM(S).
4. FIRESTOPPING LOCATIONS AND DETAILS FOR PENETRATIONS THROUGH FIRE-RATED WALLS, FLOOR AND CEILING ASSEMBLIES.
5. PROPOSED FIRE WATER PIPING, VALVES AND APPURTENCES.

SUBMIT FIRE SPRINKLER AND FIRE ALARM SYSTEMS **AS-BUILT INCLUDING ANY MECHANICAL, ELECTRICAL AND PLUMBING MODIFICATION TO ACCOMMODATE THE FIRE SPRINKLER AND FIRE ALARM SYSTEMS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
FIRE SPRINKLER PLAN

SHEET NUMBER
F101
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_1\r15\2421_F101.dwg
PLOT DATE: Jul 24, 2023 - 4:16PM
VER 2020

GENERAL SHEET NOTES

1. APPLICABLE REVISIONS OF REFERENCED CODES ARE SHOWN ON G001.
2. ALL EQUIPMENT SHOWN AS DARKER COLOR IS NEW UON.
3. VERIFY THE EXISTING LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO TRENCHING OR EXCAVATING. CALL UNDERGROUND SERVICE ALERT, (USA) AT 1-800-642-2444, 48 HOURS BEFORE WORK IS TO BEGIN.
4. VERIFY EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO A CAL FIRE TECHNICAL SERVICES REPRESENTATIVE PRIOR TO STARTING DEMOLITION AND/OR CONSTRUCTION.
5. ALL EXTERIOR CONDUIT ABOVE GRADE SHALL BE GALVANIZED RIGID STEEL (GRS). ALL CONDUITS ROUTED UNDERGROUND SHALL BE PVC SCHEDULE 40 UON. REFER TO JOINT UTILITIES TRENCH DETAIL AND UNDERGROUND CONDUIT SECTION DETAILS ON E501 FOR ALL REQUIREMENTS. WHERE MULTIPLE CONDUITS ARE SHARING THE SAME TRENCH, ELECTRICAL CONDUIT MUST BE PLACED ABOVE THE WATER AND/OR GAS PIPES. ALL CONDUITS SHALL BE SEALED WITH RTV DUCT SEAL AFTER WIRES AND PULL ROPE ARE INSTALLED.
6. REFER TO SINGLE LINE DIAGRAM ON E601 AND SITE CONDUIT AND CONDUCTOR SCHEDULE ON E603 FOR CONDUIT AND CONDUCTOR SIZES AND QUANTITIES.
7. PROVIDE AND INSTALL PULL BOXES, AKA HANDHOLES, SIZED PER ARTICLE 314.30 IN APPLICABLE VERSION OF CEC AND PER REQUIREMENTS OF SPECIFICATION SECTION 260543 UON. ALL ELECTRICAL SPLICES IN PULL BOXES SHALL BE MADE VIA MULTI-TAP CONNECTORS, PRE-FILLED WITH DE-OX®, RATED FOR DIRECT BURIAL.
8. TOP OF PULL BOXES SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OF ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE PULL BOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE, OR OTHER PROTECTIVE CONSTRUCTION. IN THESE AREAS THE BOX SHALL BE PLACED WITH ITS TOP 1" ABOVE SURROUNDING GRADE. WHERE PRACTICABLE, PULL BOXES SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO BACK OF CURB.

SHEET KEYNOTES

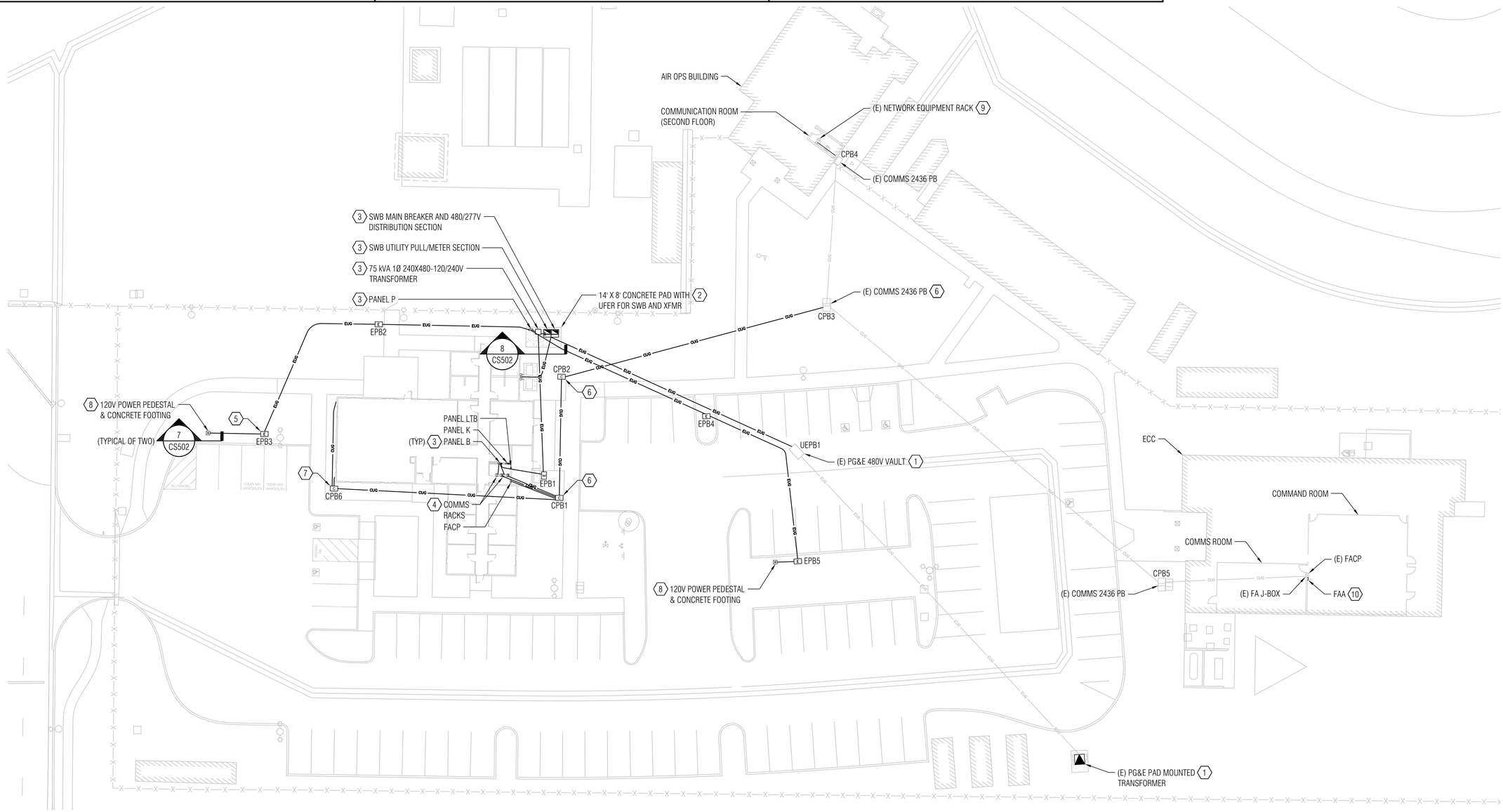
1. CONDUCTORS BY PACIFIC GAS AND ELECTRIC (PG&E). COORDINATE ELECTRICAL SERVICE REQUIREMENTS WITH UTILITY REPRESENTATIVE PRIOR TO ANY WORK. CONTRACTOR SHALL CONTACT PG&E INSPECTOR PRIOR TO START OF WORK TO VERIFY SEPARATION/OFFSETS BETWEEN ELECTRIC UTILITIES AND WET & GAS UTILITIES.
2. GROUNDING ELECTRODE SYSTEM FOR THE SERVICE SHALL BE A CONCRETE-ENCASED ELECTRODE (UFER) INSTALLED WITHIN THE CONCRETE PAD FOR THE SWITCHBOARD. SEE DETAIL 1 ON E501 AND E601 FOR DETAILS.
3. VERIFY EXACT CONDUIT STUB-UP LOCATION PRIOR TO ROUGH-IN. PANELS B, K, LIGHTING CONTROL PANEL LTB, AND FACP SHALL BE RECESS MOUNTED. PANEL P SHALL BE SURFACE MOUNTED. 75kVA TRANSFORMER SHALL BE ANCHORED TO CONCRETE PAD.
4. SEE DETAIL 6 ON E502 FOR THE NETWORK EQUIPMENT (COMMS) RACK BELOW GRADE CONDUIT DETAIL.
5. PULL BOX SHALL SUPPORT EV CAPABLE PARKING SPACES. SEE E603 FOR DETAILS ON CONDUITS SERVING BOX.
6. PULL BOXES CPB1 AND CPB2 SHALL BE POLYMER CONCRETE, SIZED 30"X48" WITH TWO-PIECE LIDS, OLDCASTLE POLYMER 3048 OR APPROVED EQUAL. BOXES AND LIDS SHALL HAVE ANSI/SCTE 77 TIER 15 STRUCTURAL LOAD RATING, MINIMUM. (E) 24"X36" PULL BOX CPB3 SHALL BE REPLACED WITH THE SAME 30"X48" BOX AND TWO-PIECE LID AS SPECIFIED FOR CPB1 AND CPB2.
7. CPB6 SHALL BE SAME TYPE/RATING AS CPB1 AND CPB2 BUT SIZED 11"X18"X12" WITH ONE-PIECE LID.

SHEET KEYNOTES

8. CONTRACTOR SHALL FURNISH AND INSTALL A 36"H TYPE 304 STAINLESS STEEL 120V POWER PEDESTAL IN A BLACK POWDER COATED FINISH, PEDOC 1P36-C-HT-B OR APPROVED EQUAL. PEDESTAL SHALL HAVE A SINGLE GANG OUTLET BOX AND LOCKABLE WHILE-IN-USE HINGED COVER THAT MEETS THE REQUIREMENTS OF ARTICLE 406.9(B) IN THE APPLICABLE VERSION OF THE CEC AND IS LISTED TO UL 1773 AS A WEATHERPROOF NEMA-3R ENCLOSURE. PEDESTAL SHALL HAVE INTEGRAL BASE AND BE ATTACHED TO AN 18" SQUARE BY 12" DEEP CONCRETE FOOTING WITH MANUFACTURER APPROVED ANCHORS. SEE DETAIL 7 ON CS502 FOR FOOTING REQUIREMENTS. A 3/4" PVC SCH40 CONDUIT SHALL STUB UP 2" INTO THE PEDESTAL IN THE MANUFACTURER APPROVED STUB-UP AREA. SEE E602 AND E603 FOR MORE DETAILS ON SOURCE POWER FOR PEDESTALS AND CONDUIT ROUTING.
9. FOC AND PA SYSTEM WIRE SHALL BE INSTALLED FROM RACK1 IN ELEC/TELECOMM ROOM OF THE BARRACKS TO THE AIR OPS BUILDING COMMUNICATION ROOM. SEE E111 FOR FOR COMPLETE DETAILS ON FOC AND PA SYSTEM WIRE AND E603 FOR DETAILS ON THEIR ROUTING. ONCE INSIDE ROOM FOC SHALL BE ROUTED UP WALL AND ACROSS (E) CABLE TRAY, UTILIZING THE PATH SHOWN, AND TERMINATE IN A (N) RACKMOUNT FDU IN (E) NETWORK EQUIPMENT RACK. ONCE PA SYSTEM WIRE EXITS CONDUIT INSIDE COMMUNICATION ROOM, IT SHALL BE COILED IN A 40' LOOP FOR FUTURE TERMINATION BY CAL FIRE.
10. A FIRE ALARM ANNUNCIATOR (FAA) FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN THE COMMAND ROOM IN THE ECC. BELOW GRADE RATED CABLE FOR FAA SHALL BE ROUTED THROUGH (N) AND (E) CONDUIT TO AN (E) FA J-BOX ON THE NORTH WALL OF THE COMMS ROOM IN THE ECC. SEE E603 AND E701 FOR MORE DETAILS.

UTILITIES CONTACT INFO:

PACIFIC GAS AND ELECTRIC
J.B. ROTH
559-246-0169
E-MAIL: JBRc@pge.com



ELECTRICAL SITE PLAN

20 10 0 20 40

1" = 20'-0"

N

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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FRESNO AIR ATTACK BASE

C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

TECHNICAL SERVICES

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
STEVEN P. THOMAS
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NUMBER
ES101
V3

PROJECT PATH: C:\Users\Egifford\AppData\Local\Temp\AcPublish_21180\2421ES101.dwg
PLOT DATE: Jun 26, 2024 - 9:10PM
VER 2020

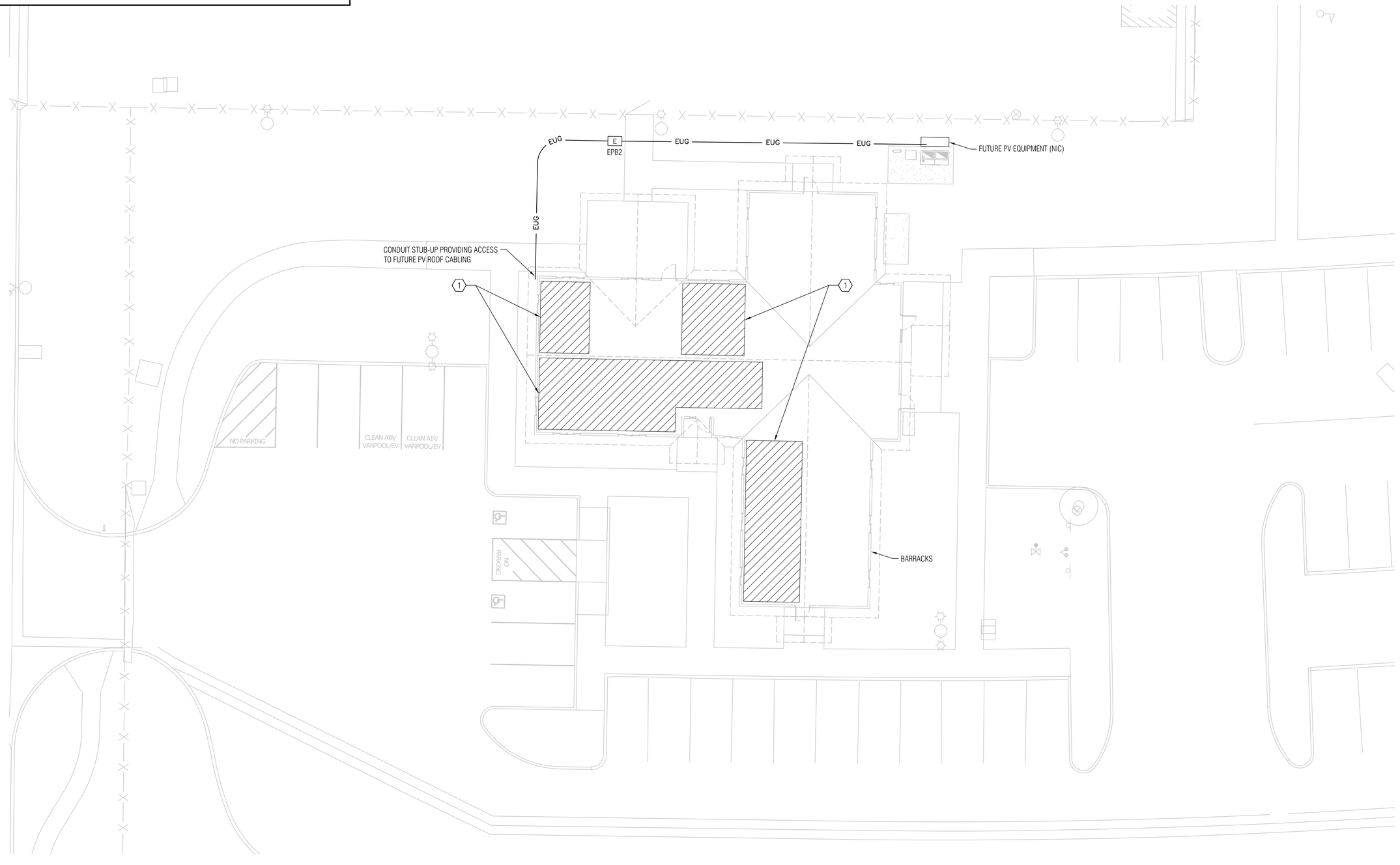
GENERAL SHEET NOTES

1. ALL WORK ON THIS SHEET IS PURELY PROVISIONAL TO MEET TITLE 24 SOLAR READY CODE REQUIREMENTS. NO SOLAR ARRAYS HAVE BEEN DESIGNED OR SPECIFIED FOR THIS PROJECT. IF A PV SYSTEM WERE TO BE ADDED, IT WOULD REQUIRE A SEPARATE DSA APPLICATION.

⬡ SHEET KEYNOTES

1. SOLAR ARRAY READY AREAS SHOW WHERE SOLAR PANELS AND OTHER EQUIPMENT COULD BE INSTALLED AT A FUTURE DATE. SIZE SHOWN DOES NOT NECESSARILY REFLECT THE ACTUAL SIZE OF THE SOLAR ARRAY IF A PHOTOVOLTAIC SYSTEM IS DESIGNED, FURNISHED, AND INSTALLED IN THE FUTURE.

SOLAR READY AREA



SOLAR READY AREA PLAN

10 5 0 10 20

1" = 10'-0"

N

DSA Approval

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12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
STEVEN P. THOMAS
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
SOLAR READY AREA PLAN

SHEET NUMBER
ES102
V3

VER 2020

PROJECT PATH: C:\Users\EgiffordApp\Data\Local\Temp\AcPublish_21\BE24D\ES102.dwg

PLOT DATE: Jun 26, 2023 - 9:04PM

LIGHTING

SYMBOL	DESCRIPTION
	FLANGED LED LUMINAIRE (SIZE/SHAPE VARIES) - RECESSED (FLUSH) MTD.
	WRAPAROUND LED LUMINAIRE - SURFACE MTD.
EM	SHADING OF ANY LUMINAIRE INDICATES CONNECTION TO BACKUP POWER SOURCE (EM INVERTER, UPS, ETC.) PER METHOD AND CIRCUITING INDICATED
	INDUSTRIAL STRIP LED LUMINAIRE - SURFACE MTD
	ACCENT LED LUMINAIRE - WALL MTD.
	LINEAR LED FLOOD LIGHT - WALL (SURFACE) MTD. AT ENDS OR VIA SINGLE CENTER MOUNT
	BEDSIDE LED LUMINAIRE - WALL MTD.
	LED DOWNLIGHT LIGHT - RECESSED MTD.
	LED DOWNLIGHT LIGHT, WET LOCATION - RECESSED MTD.
	LED WALL PACK LUMINAIRE - WALL MTD.
	LED MINI WALL PACK RUSTPROOF AND VANDAL RESISTANT LUMINAIRE - SURFACE/WALL MTD.
	LED AREA LIGHT LUMINAIRE - POLE MTD.
	LED FLOOD LUMINAIRE - PEDESTAL MTD.
	ILLUMINATED EXIT SIGN, SHADED QUADRANT INDICATES FACES/ DIRECTIONS, ARROWS AS SHOWN - WALL, CEILING MTD.
	COMBINATION EMERGENCY LIGHT-EXIT SIGN. SHADED QUADRANT INDICATES FACES/DIRECTIONS - WALL, CEILING MTD.
XX 3c	LUMINAIRE MARKING CONVENTION LEGEND: XX = LUMINAIRE TYPE. SEE LIGHTING FIXTURE SCHEDULE. 3c = CIRCUIT NUMBER VIA LOCAL SWITCH OR DIGITAL DEVICE (LOWERCASE LETTER) THAT CONTROLS LUMINAIRE.

SWITCHING CONTROLS

SYMBOL	DESCRIPTION
S^a	SINGLE POLE SWITCH (LETTER DENOTES SIMILARLY MARKED LUMINAIRE CONTROLLED TOGETHER), +48" AFF UON
S_3	THREE WAY SWITCH, +48" AFF UON
S_4	FOUR WAY SWITCH, +48" AFF UON
D	DIMMER SWITCH, +48" AFF UON
S_F	FAN SWITCH, +48" AFF UON
S_{GD}	GARBAGE DISPOSAL SWITCH
S_T	TIMER SWITCH, 30' MAX DELAY, +48" AFF UON
S_{TH}	THERMAL OVERLOAD SWITCH FOR FAN
S_{WP}	WEATHERPROOF SWITCH, +48" AFF UON
S_{PL}	SWITCH WITH PILOT LIGHT, +48" AFF UON
OS OS	OCCUPANCY SENSOR - WALL, CEILING MTD.
S	ATTIC SWITCH/OUTLET COMBINATION
T T	THERMOSTAT - WALL, CEILING. PROVIDED BY MECHANICAL, INSTALLED AND WIRED BY ELECTRICAL; +48" AFF UON
	EMERGENCY POWER OFF PUSH BUTTON (EPO), +48" AFF UON
	DIGITAL LIGHTING/POWER CONTROLS
DC 2a	DIGITAL LIGHTING ROOM CONTROLLER (LETTER DENOTES SIMILARLY MARKED LUMINAIRE CONTROLLED TOGETHER)
^{a}	DIGITAL SWITCH (LETTER DENOTES SIMILARLY MARKED LUMINAIRE CONTROLLED TOGETHER, TYPICAL FOR ALL DIGITAL DEVICES), WALL MOUNTED, +48" AFF UON
	DIGITAL DIMMER, WALL MOUNTED, +48" AFF UON
PS	DIGITAL PHOTOSENSOR, CEILING MOUNTED
OS OS	DIGITAL OCCUPANCY SENSOR, CORNER/WALL & CEILING MOUNT
OS	DIGITAL OCCUPANCY SENSOR, WALL MOUNT, +48" AFF UON
	0-10V DIMMER/OCCUPANCY SENSOR, WALL MOUNT, +48" AFF UON
DC 2b	DIGITAL PLUG LOAD CONTROLLER (LETTER DENOTES SIMILARLY MARKED RECEPTACLE CONTROLLED TOGETHER)
OS^b	DIGITAL CEILING MOUNTED OCCUPANCY SENSOR FOR RECEPTACLE (LETTER DENOTES SIMILARLY MARKED RECEPTACLE CONTROLLED TOGETHER)
	DIGITAL DEVICE MARKING CONVENTION LEGEND: 2a, 2b = CIRCUIT NUMBER VIA LOCAL DIGITAL DEVICE (LOWERCASE LETTER) THAT SERVES LUMINAIRE AND/OR PLUG LOAD CONTROLLED BY DEVICE WALL MTD SWITCH HEIGHT TO TOP OF BOX UON

DISTRIBUTION & EQUIPMENT

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT PANELBOARDS, SURFACE AND RECESS MOUNTED, DASHED LINES INDICATE REQUIRED CLEARANCE
	TRANSFORMER WITH REQUIRED CLEARANCES SHOWN
M	SERVICE AND/OR DISTRIBUTION EQUIPMENT WITH METER
	CONNECTION TO MOTOR PROVIDED BY ELECTRICAL
30A	DISCONNECT SWITCH, SIZE AS NOTED. WHEN NOT SHOWN, SIZE FOR CONNECTED MOTOR(S), PER ARTICLE 430 OF CEC.
F 30A	FUSED DISCONNECT SWITCH, FRAME SIZE AS NOTED. SIZE FUSE PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
C 30A	CIRCUIT BREAKER, SIZE AS NOTED. SIZE PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

DIAGRAMS

SYMBOL	DESCRIPTION
	SWITCH
	OVERLOADS
	NORMALLY CLOSED CONTACTOR OR RELAY CONTACTS
	NORMALLY OPEN CONTACTOR OR RELAY CONTACTS
	BUS BAR
C	CONTACTOR COIL
R	RELAY COIL
M M	UTILITY CO. APPROVED SOCKET WITH METER INSTALLED. SQUARE = REMOTE MOUNTED
	DELTA CONNECTION
	GROUNDED WYE CONNECTION
	CONNECTION TO GROUND
	TRANSFORMER WITH GROUNDED NEUTRAL
100AT 225AF 3P	CIRCUIT BREAKER, WITH TRIP POINT, FRAME AMPERE RATING, AND NUMBER OR POLES
70AF 100AS 3P	FUSED DISCONNECT, WITH FUSE SIZE, SWITCH AMPERE RATING, AND NUMBER OF POLES

FIRE ALARM SYSTEM

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
	FIRE SPRINKLER RISER
	FIRE SPRINKLER TAMPER
	FIRE SPRINKLER WATERFLOW
HP	FIRE SPRINKLER HIGH PRESSURE (DRY SYSTEMS ONLY)
LP	FIRE SPRINKLER LOW PRESSURE (DRY SYSTEMS ONLY)
	SMOKE DETECTOR WITH BASE (PHOTOELECTRIC)
CO	MULTI-CRITERIA DETECTOR (SMOKE,CO,LIGHT/FLAME,HEAT)
CO	MULTI-CRITERIA DETECTOR WITH LOW FREQ SOUNDER BASE
	DUCT SMOKE DETECTOR
	HEAT DETECTOR
FL	FLAME DETECTOR
	OUTDOOR FIRE SPRINKLER ALARM BELL
	OUTDOOR WATERFLOW HORN/STROBE
	HORN ONLY (WALL MOUNTED)
15	HORN/STROBE (WALL MOUNTED, CANDELA = 15)
15	HORN/STROBE (CEILING MOUNTED, CANDELA = 15)
15	STROBE ONLY (WALL MOUNTED, CANDELA = 15)
F	MANUAL FIRE ALARM PULL BOX
EOLR	END OF LINE RESISTOR
MM	MONITOR MODULE
RM	RELAY MODULE
CM	CONTROL MODULE

POWER DEVICES

SYMBOL	DESCRIPTION
	SIMPLEX, DUPLEX, QUAD RECEPTACLE - WALL
	SIMPLEX, DUPLEX, QUAD RECEPTACLE - CEILING
	ANY OF THE RECEPTACLES ABOVE MAY HAVE ONE OR MORE OF THE FOLLOWING DESCRIPTORS PLACED NEXT TO IT. IN THOSE CASES THEY SHALL BE FURNISHED / INSTALLED SUPPORTING THE FEATURES/FUNCTIONS LISTED BELOW.
GFI	WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
AFCI	WITH INTEGRAL ARC FAULT CIRCUIT INTERRUPTER
USB	W/ TYPE A-C USB CHARGING PORTS UON
WP	WEATHERPROOF WITH GFI AND "WHILE IN USE" COVER
DW	FOR DISHWASHER
	CONTROLLED BY OCCUPANCY SENSOR (OS). FOR DUPLEX RECEPTACLE, BOTH OUTLETS CONTROLLED BY OS UON.
L5-15R	SPECIAL PURPOSE RECEPTACLE - WALL MTD. NEMA CONFIGURATION AS NOTED.
	WALL MTD RECEPTACLE HEIGHT TO BOTTOM OF BOX UON: ALL WALL MTD RECEPTACLES SHALL BE AT +15" AFF UON. COUNTER HEIGHT RECEPTACLES, DESIGNATED WITH A "C" SHALL BE AT +6" ABOVE A 4" BACKSPLASH, TO TOP OF BOX, UON. CONFIRM HEIGHT ON ARCH INTERIOR ELEVATIONS.
SPD	SURGE PROTECTIVE DEVICE
	THREE BLADE CEILING FAN

SIGNAL DEVICES

SYMBOL	DESCRIPTION
	CONTROL PANELS, SURFACE AND RECESS MOUNTED, DASHED LINES INDICATE REQUIRED CLEARANCE
	VOICE/DATA (COMM) OUTLET WITH X # OF RJ45 CAT6 JACK MODULES TERMINATED AND INSTALLED PER STANDARD SHOWN ON PLANS - WALL, CEILING MTD. +15" AFF UON
	COMBINATION TELEPHONE/DATA OUTLET - WALL MTD. +15" AFF UON
S	SPEAKER - WALL, CEILING MTD. X PROVIDED FOR WIRE # LABEL AT SPEAKER, VOLUME CONTROL, & COMMS RACK.
S_V	SPEAKER VOLUME CONTROL- WALL MTD. +48" AFF UON
	COAXIAL OUTLET (FEMALE) - WALL, CEILING MTD. +15" AFF UON
	GARAGE DOOR OPENER - WALL MTD. +42" AFF UON
	TV BOX - WALL MTD. SEE ELECTRICAL DETAILS FOR INFO ON BOX, INCLUDING MOUNTING, WIRING, AND APPURTENANCES
	DOOR BELL/TRANSFORMER - WALL MTD. SEE PLANS FOR MOUNTING HEIGHT
	DOOR BELL PUSHBUTTON - WALL MTD. +48" AFG UON
	DOOR BELL STROBE BEACON - WALL MTD. SEE PLANS FOR MOUNTING HEIGHT
FRONT REAR	19"W TWO POST WELDED STEEL NETWORK EQUIPMENT RACK, DASHED LINES INDICATED REQUIRED CLEARANCE
	WALL MTD VOICE/DATA OUTLET HEIGHT TO BOTTOM OF BOX UON. WALL MTD VOLUME CONTROL, GARAGE DOOR OPENER, AND BUTTON(S) HEIGHT TO TOP OF BOX UON.

ELECTRICAL DEVICES REACH RANGES GUIDELINES

ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH APPLICABLE VERSION OF CBC SECTION 11B-308 EXCEPT THE LOW REACH (15" MIN) SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH (48" MAX) SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.

ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH APPLICABLE VERSION OF CBC SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.

FORWARD REACH: WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

OVERCURRENT DEVICES: SHALL BE READILY ACCESSIBLE AND SHALL BE INSTALLED SO THAT THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF THE SWITCH OR CIRCUIT BREAKER, WHEN IN ITS HIGHEST POSITION, IS NOT MORE THAN 6 FEET AND 7 INCHES ABOVE THE FLOOR OR WORKING PLATFORM.

WIRING

SYMBOL	DESCRIPTION
COH	SITE OVERHEAD COMMUNICATION LINE
CUG	SITE UNDERGROUND COMMUNICATION CONDUIT
	COMMUNICATION CONDUIT CONCEALED IN WALL OR CEILING
EOH	SITE OVERHEAD ELECTRICAL LINE
EUG	SITE UNDERGROUND ELECTRICAL CONDUIT
	ELECTRICAL CONDUIT CONCEALED IN WALL OR CEILING
	LIGHTING WIRING/WIREWAY CONCEALED IN WALL OR CEILING
POH	SITE OVERHEAD ELECTRIC UTILITY LINE
PUG	SITE PRIMARY UNDERGROUND ELECTRIC UTILITY CONDUIT
SUG	SITE SECONDARY UNDERGROUND ELECTRIC UTILITY CONDUIT
TOH	SITE OVERHEAD TELEPHONE UTILITY LINE
TUG	SITE UNDERGROUND TELEPHONE UTILITY CONDUIT
	EXISTING WIRING TO BE REMOVED
	EXPLOSION-PROOF SEAL
	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
E	ELECTRICAL PULL BOX, MIN. SIZE PER CEC., UON.
C	TELECOM PULL BOX, MIN. SIZE PER CEC., UON.
J J	JUNCTION BOXES, WALL, CEILING, AND FLUSH FLOOR MTD. 4" SQ. BY 2-1/8"D BOX MIN., LARGER IF REQUIRED
A-3,5	HOME RUN WIRING TO INDICATED DESTINATION, 3/4"C. MIN. UON. CONTRACTOR SHALL USE/DETERMINE CIRCUIT SIZES NOTED IN PLANS AND/OR FROM RESPECTIVE INFORMATION SHOWN IN THE PANEL SCHEDULES.
	HASHMARKS INDICATE QUANTITY OF #12 AWG CONDUCTORS, UON. NOTE: WIRING HASHMARKS FOR 20A BRANCH CIRCUITS ARE NOT ALWAYS SHOWN ON DRAWINGS. ⏚GROUND,	HOT, ' NEUTRAL

REFERENCE SYMBOLS

SYMBOL	DESCRIPTION
1	SHEET KEYNOTE REFERENCE
1 T4.1	REFER TO DETAIL NO. ON DRAWING INDICATED NOT ALL DETAIL REFERENCES ARE SHOWN. ALL DETAILS APPLY TO ALL APPLICABLE SITUATIONS, UON
CH 1	MECHANICAL EQUIPMENT IDENTIFICATION TAG

ABBREVIATIONS

A	AMPERE	IG	ISOLATED GROUND
AFCI	ARC FAULT CIRCUIT INTERRUPTER	JB	JUNCTION BOX
AFF	ABOVE FINISHED FLOOR	KO	KNOCKOUT
AFG	ABOVE FINISHED GRADE	KVA	KILO VOLT AMPERE
AIC	AMPERE INTERRUPTING CAPACITY	KW	KILOWATT
ATS	AUTOMATIC TRANSFER SWITCH	LC	LIGHTING CONTACTOR
BBS	BATTERY BACKUP SYSTEM	LED	LIGHT EMITTING DIODE
BC	BARE COPPER CONDUCTOR	LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
C	CONDUIT	LTG	LIGHTING
CATX	CATEGORY X ETHERNET CABLE	MAX	MAXIMUM
CB	CIRCUIT BREAKER	MCP	MOTOR CONTROL PANEL
CO	CONDUIT ONLY	MDP	MAIN DISTRIBUTION PANEL
COMM	COMMUNICATION	MIN	MINIMUM
CP	CONTROL PANEL	MTD	MOUNTED
CT	CURRENT TRANSFORMER	MTTB	MAIN TELECOMMUNICATION TERMINAL BOARD
CU	COPPER CONDUCTOR	NC	NORMALLY CLOSED
D	DRYER	NO	NORMALLY OPEN
DOS	DIGITAL OCCUPANCY SENSOR	OG	ORIGINAL GROUND
DPC	DIGITAL PLUG CONTROLLER (POWER)	OH	OVERHEAD
DRC	DIGITAL ROOM CONTROLLER (LIGHTING)	PA	PUBLIC ADDRESS SYSTEM
DDS	DIGITAL DIMMER SWITCH	PB	PULL BOX
DW	DISHWASHER	PBS	PHOTOCELL BYPASS SWITCH
E	EXISTING	PCP	PUMP CONTROL PANEL
EC	ELECTRICAL CONTRACTOR	PEC	PHOTOELECTRIC CONTROL
EGC	EQUIPMENT GROUNDING CONDUCTOR	PEU	PHOTOELECTRIC UNIT
EM	UNSWITCHED CIRCUIT (EM/EXIT LTG)	PH	PHASE
EMT	ELECTRIC METALLIC TUBING	PNL	ELECTRICAL PANEL
ENT	ELECTRIC NONMETALLIC TUBING	PUG	PRIMARY UNDERGROUND UTILITIES
ER	EXISTING RELOCATED	R	REMOVE (TO BE DEMOLISHED)
FAA	FIRE ALARM ANNUNCIATOR	REF	REFRIGERATOR
FACP	FIRE ALARM CONTROL PANEL	RL	TO BE RELOCATED
FD	FLOOD LIGHT	RTP	RADIO TERMINATION PANEL
FDU	FIBER DISTRIBUTION UNIT	SD	SMOKE DETECTOR
FG	FINISHED GRADE	SP	SERVICE POINT
FOC	FIBER OPTIC CABLE	SPD	SURGE PROTECTIVE DEVICE
FR	ONE-HOUR FIRE RATED ENCLOSURE	SUG	SECONDARY UNDERGROUND UTILITIES
FRZ	FREEZER	SWB	SWITCHBOARD
GD	GARBAGE DISPOSAL	TCX	TELEPHONE CABLE (X-PAIR)
GEC	GROUNDING ELECTRODE CONDUCTOR	TTB	TELECOMMUNICATION TERMINAL BOARD
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPTER	UG	UNDERGROUND
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GRS	GALVANIZED RIGID STEEL	V	VOLT
H	HOOD	W	WASHER
HD	HEAT DETECTOR	WH	WATER HEATER
HDPE	HIGH DENSITY POLY ETHYLENE	WP	WEATHERPROOF

GENERAL PROJECT NOTES

A. REFER TO DETAIL DRAWINGS FOR ADDITIONAL INFORMATION. ALL DETAILS APPLY FOR ALL APPLICABLE SITUATIONS WHETHER REFERENCED OR NOT, UON.

B. REFER TO ARCHITECTURAL FLOOR PLANS, INTERIOR ELEVATIONS, AND DETAIL DRAWINGS PRIOR TO ROUGH-IN FOR EXACT LOCATION OF RECEPTACLES, FLOOR BOXES, AND OUTLETS. NOTIFY STATE REPRESENTATIVE OF ANY CONFLICTS.

C. THESE DOCUMENTS REFLECT THE FINAL ANTICIPATED LAYOUT OF SYSTEMS AND APPURTENANCES FOR THIS PROJECT. IT IS NOT THE INTENT OF THESE DOCUMENTS TO INDICATE SPECIFIC SCOPE OF WORK REQUIRED ON A PHASE BY PHASE BASIS. THE FINAL DESIGN INDICATED DOES ALLOW FOR THE WORK TO BE INSTALLED IN A PHASED APPROACH. CONTRACTOR SHALL DETERMINE ADDITIONAL SCOPE OF WORK REQUIRED TO ACCOMMODATE ALL PHASING ASPECTS OF THE PROJECT AND INCLUDE THAT SCOPE IN THEIR BID.

D. THE CIRCUITING SHOWN IS DIAGRAMMATIC. THE DRAFTING METHOD WHICH MOST SIMPLY CONVEYS THE CIRCUITING INTENT IS EMPLOYED. WHERE DEVICES OR EQUIPMENT ARE SHOWN UNCONNECTED, CONNECT (IN A MANNER CONSISTENT WITH THE MATERIALS AND METHODS INDICATED IN THE PLANS AND SPECIFICATIONS) FROM THE WIRING EXTENSION POINT SHOWN TO EACH DEVICE USING 1) MC CABLE IN HARD AND ACCESSIBLE CEILING AREAS -OR- 2) CONDUIT & WIRE ONLY IN EXPOSED AREAS. EMT CONDUIT AND WIRE SHALL BE USED FROM A PANEL TO A J-BOX IN AN ACCESSIBLE PORTION OF THE CEILING. MC CABLE MAY BE USED ONLY FROM THE J-BOX TO THE DEVICE OR IN BETWEEN DEVICES. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF THESE JUNCTION BOXES AND WHICH RECEPTACLES OR DEVICES THEY FEED.

E. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ARCHITECTURAL DRAWINGS TO CONFIRM CEILING TYPES IN ALL ROOMS (ACCESSIBLE, EXPOSED, OR "HARD") AND TO EMPLOY APPROPRIATE WIRING METHODS FOR EACH TYPE. ENSURE ALL J-BOXES ARE ACCESSIBLE AFTER WORK BY ALL OTHER TRADES IS COMPLETED. DO NOT INSTALL J-BOXES ON "HARD" CEILINGS. ALL WIRING MUST BE ACCESSIBLE THROUGH DEVICE VIA "DAISY-CHAIN" METHOD OR VIA DEDICATED HOME-RUNS FROM PANEL TO EACH DEVICE. J-BOXES MAY BE LOCATED ABOVE ACCESS DOORS INSTALLED BY OTHER TRADES, PROVIDED THE J-BOX INSTALLATION DOES NOT INTERFERE WITH ACCESS THROUGH DOOR.

F. THE COMPLETED INSTALLATION SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF ALL APPLICABLE STATE, COUNTY AND CITY CODES, ORDINANCES, AND REGULATIONS INCLUDING NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES.

G. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

H. ALL ELECTRICAL COMPONENTS SHALL BE BRACED OR ANCHORED PER THE DETAILS ON THE APPROVED CONSTRUCTION DOCUMENTS. WHERE DETAILS ARE NOT SHOWN THE FIELD INSTALLATION SHALL MEET THE REQUIREMENTS OF THE APPLICABLE VERSION OF ASCE 7 AND BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

I. REFER TO MECHANICAL DRAWINGS FOR MOUNTING AND EQUIPMENT DETAILS. SINCE WALL MOUNTED CONTROLS FROM ELECTRICAL AND MECHANICAL PLANS ARE OFTEN CO-LOCATED, CONTRACTOR SHALL REVIEW BOTH PLANS PRIOR TO ROUGH-IN TO ENSURE EQUIPMENT IS PROPERLY LOCATED AND ADEQUATE SPACE IS PROVIDED. UON EQUIPMENT ADJACENT TO DOORWAYS SHALL BE PLACED AS FOLLOWS (CLOSEST TO DOOR FIRST): LIGHT CONTROL/SENSOR, PA VOLUME, THERMOSTAT/FAN CONTROL.

J. IN COMMON PARTY WALLS AND CEILINGS PROVIDE PUDDY PADS AROUND JUNCTION BOXES, RECEPTACLES, AND TELECOM OUTLETS. RECEPTACLES AND TELECOM OUTLETS SHALL BE INSTALLED SUCH THAT THERE IS A MINIMUM SPACING OF 24 INCHES, FROM BACK OF ONE OUTLET TO THE OTHER.

K. ALL NEW RACEWAYS AND CONDUCTORS SHALL BE INSTALLED CONCEALED WITHIN WALLS, INCLUDING FURRED SECTIONS WHERE APPLICABLE. CONDUITS SHALL BE INSTALLED AT A 90° ANGLE TO BUILDING LINES.

L. DEDICATED HOT(S) AND NEUTRAL SHALL BE RUN WITH EVERY BRANCH CIRCUIT. WHILE 240V CIRCUITS SHALL HAVE A DEDICATED EGC, ONLY ONE EGC IS REQUIRED PER CONDUIT FOR 120V CIRCUITS, I.E. WHEN MULTIPLE 120V CIRCUITS ARE RUN IN A SINGLE CONDUIT, ONLY ONE EGC IS REQUIRED. METAL CONDUIT MAY NOT BE USED AS AN EGC.

M. UP SIZE WIRE FOR VOLTAGE DROP, AS REQUIRED, BASED ON FINAL ROUTING OF WIRES. PROVIDE SPECIAL RECEPTACLES THAT MATCH CORD AND CAP PROVIDED WITH EQUIPMENT, UON. USE ADJACENT NEMA CONFIGURATION NUMBER, IF ONE IS SHOWN.

N. PER ARTICLE 110.26 IN THE APPLICABLE VERSION OF CEC, PROVIDE CODE REQUIRED WORKING AND DEDICATED EQUIPMENT SPACE FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR TO VERIFY ADEQUATE SPACING PRIOR TO ROUGH-IN AND INSTALLATION. NOTIFY STATE REPRESENTATIVE OF ANY CONFLICTS.

O. ALL EXTERIOR MOUNTED EQUIPMENT AND CONDUIT SHALL BE WEATHERPROOF WITH A MINIMUM RATING OF NEMA 3R.

P. A PULL ROPE SHALL BE INSTALLED IN ALL NEW RACEWAYS AND IN EXISTING RACEWAYS WHENEVER NEW CABLE IS PULLED AND/OR EXISTING CABLE IS REMOVED.

Q. DO NOT ROUTE CONDUIT ON ROOF. RUN ALL HORIZONTAL CONDUIT BELOW ROOF.

R. ROUTE ALL CONDUITS UP THROUGH EQUIPMENT CURBS. COORDINATE LOCATION TO AVOID CONFLICTS AND ALLOW FOR CODE CLEARANCES AND MAINTENANCE ACCESS.

S. LUMINAIRES WITH "EM" ADJACENT TO IT INDICATES A REQUIRED CONNECTION TO AN UNSWITCHED HOT CONDUCTOR UON.

T. EXTERIOR MOUNTED RECEPTACLES SHALL BE WEATHERPROOF, GFI PROTECTED, AND EMPLOY A WEATHERPROOF "WHILE IN USE" COVER PER APPLICABLE VERSION OF CEC.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
E 23257
STATE OF CALIFORNIA

REVISIONS

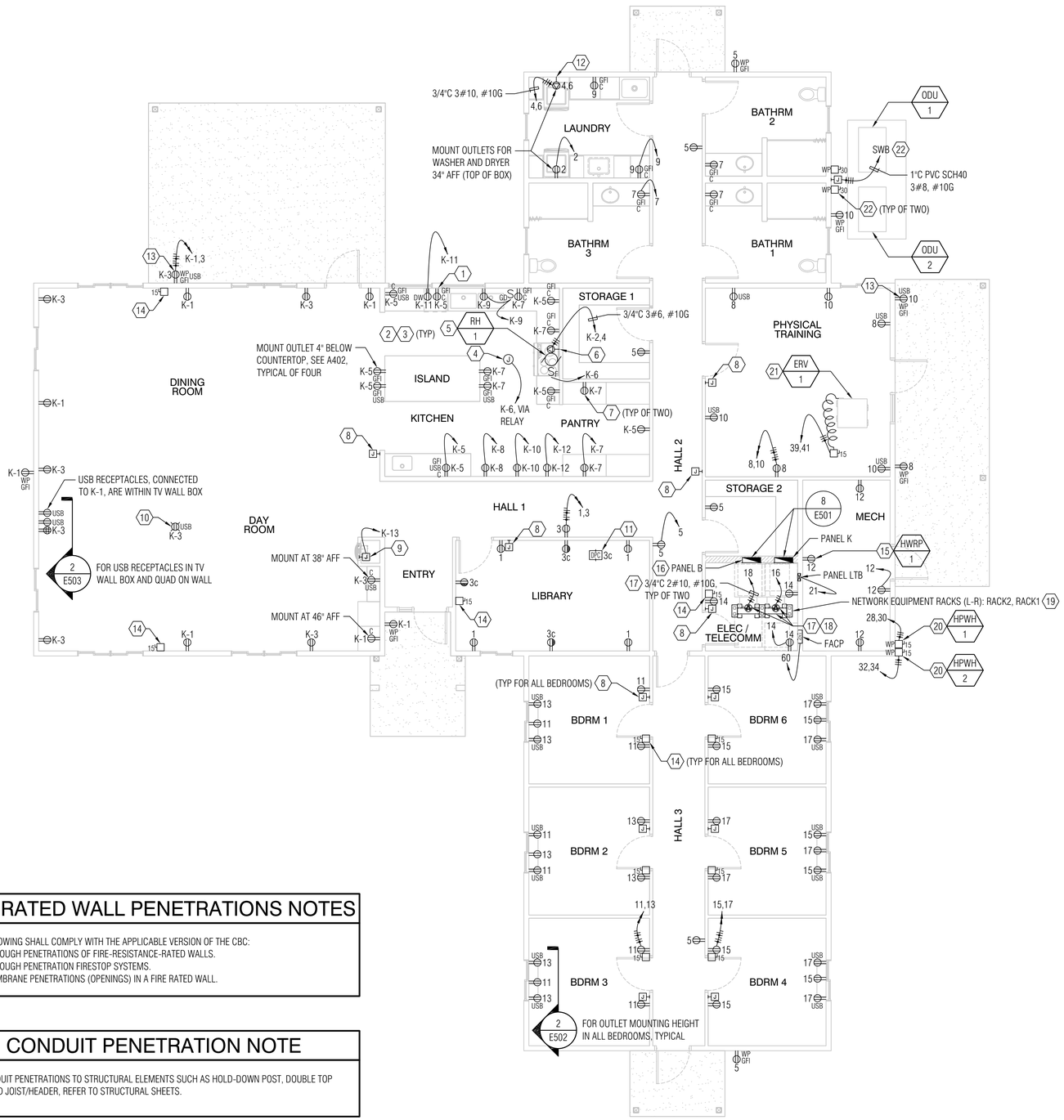
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ELECTRICAL LEGEND

SHEET NUMBER
E001
V3

PROJECT PATH: C:\Users\EgiffordJapdata\Local\temp\AcPublish_16500\24ED1.dwg
PLOT DATE: Sep 15, 2023 - 10:31 PM
VER 2020



FIRE RATED WALL PENETRATIONS NOTES

THE FOLLOWING SHALL COMPLY WITH THE APPLICABLE VERSION OF THE CBC:

- THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS.
- THROUGH PENETRATION FIRESTOP SYSTEMS.
- MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL.

CONDUIT PENETRATION NOTE

FOR CONDUIT PENETRATIONS TO STRUCTURAL ELEMENTS SUCH AS HOLD-DOWN POST, DOUBLE TOP PLATE AND JOIST/HEADER, REFER TO STRUCTURAL SHEETS.

POWER PLAN

SCALE: 3/16" = 1-0"

GENERAL SHEET NOTES

1. ALL CIRCUITS TO BE ROUTED TO PANEL B UON. REFER TO PANEL SCHEDULES ON E602 FOR ALL REQUIREMENTS.
2. REFER TO ARCHITECTURAL SHEETS TO IDENTIFY WALLS AND CEILINGS WITH FIRE RATINGS.
3. REFER TO MECHANICAL HVAC PLAN AND SCHEDULES FOR IDU & HRCU LOCATIONS AND DETAILS. IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER AND ARTICLE 430 IN THE APPLICABLE VERSION OF THE CEC CONTRACTOR SHALL PROVIDE A LOCAL DISCONNECT FOR EACH IDU. DISCONNECT SHALL BE A LEVITON MS302-DS OR APPROVED EQUAL, INSTALLED IN A SINGLE GANG BOX WITH A STAINLESS STEEL SINGLE GANG LOCKOUT WALL PLATE, LEVITON 84001-LOK OR APPROVED EQUAL. SEE POWER PLAN FOR LOCATION OF HIGH WALL IDU DISCONNECTS. DISCONNECTS FOR IDU-3 AND IDU-4 SHALL BE FACTORY INSTALLED BY THE MANUFACTURER. SEE M603 FOR ADDITIONAL DETAILS ON IDU'S AND E602 FOR DETAILS ON IDU CIRCUIT ASSIGNMENTS.

SHEET KEYNOTES

1. RECEPTACLE LOCATED ABOVE DISHWASHER, 44" AFF (TOP OF BOX), CENTERED BETWEEN WINDOWS. SEE ELEVATION A ON A402 FOR MORE DETAIL.
2. INSTALL FREEZER, REFRIGERATOR, GARBAGE DISPOSAL, DISHWASHER, AND RANGE RECEPTACLES AT HEIGHT SPECIFIED ON E001 FOR WALL MTD RECEPTACLES. INSTALL COUNTERTOP RECEPTACLES AND GARBAGE DISPOSAL SWITCH 44" AFF (TOP OF BOX), WHICH IS 10" ABOVE COUNTER. ISLAND RECEPTACLES SHALL BE INSTALLED WITHIN ENCLOSED SPACES AT ENDS OF ISLAND. SEE A402 FOR MORE DETAIL. 3/4" PVC CONDUIT SHALL BE ROUTED UG TO EACH SPACE IN ISLAND, I.E. NO WIRING IS ALLOWED THROUGH ISLAND INTERIOR.
3. SINGLE PHASE 120V 15A AND 20A BRANCH CIRCUITS FEEDING OUTLETS OR DEVICES IN THE BEDROOMS, LIBRARY, KITCHEN, DINING ROOM, DAY ROOM, HALLWAYS, STORAGE ROOM, AND LAUNDRY ROOM SHALL BE PROTECTED BY AFCI CIRCUIT BREAKERS.
4. NORMALLY CLOSED MOTORIZED DAMPER MD-1 SHALL BE OPENED WHEN RH-1 IS TURNED ON. SEE DETAIL 3 ON E501 FOR WIRING DIAGRAM AND INSTALLATION DETAILS OF ELECTRICAL EQUIPMENT PROVIDING THE INTERLOCKING OF RH-1 AND MD-1. COORDINATE ALL REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ANY WORK.
5. SWITCHES FOR THE EXHAUST FAN AND LIGHTS FOR RANGE HOOD RH-1, NOT SHOWN FOR CLARITY, ARE INTEGRATED INTO THE HOOD. SEE MECHANICAL SCHEDULE FOR MORE DETAILS ON RH-1.
6. PROVIDE A DEDICATED 240V POWER CIRCUIT TO THE RANGE. VERIFY THE RANGE'S ELECTRICAL REQUIREMENTS WITH SUPPLIER PRIOR TO ANY WORK.
7. RECEPTACLES IN PANTRY SHALL BE MOUNTED 40" AFF (TOP OF BOX).
8. PROVIDE AND INSTALL J-BOX AT 48" AFF (TOP OF BOX) AND 3/4"CO FROM BOX TO ACCESSIBLE SPACE ABOVE CEILING FOR THERMOSTAT. IN ELEC/TELECOMM ROOM, ONE STUD OVER FROM J-BOX FOR THERMOSTAT, INSTALL TWO (2) 4"x4" J-BOXES, ONE ON EITHER SIDE OF STUD. FIRST J-BOX SHALL SUPPORT SURFACE MOUNT INSTALLATION OF HVAC MASTER CONTROLLER. SECOND J-BOX SHALL SUPPORT SURFACE MOUNT INSTALLATION OF ERV CONTROLLER. INSTALL TWO (2) 3/4"CO FROM EACH 4"x4" J-BOX TO ACCESSIBLE SPACE ABOVE CEILING. COORDINATE ALL REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ANY WORK.
9. PROVIDE A DEDICATED HARD-WIRED 120V POWER CIRCUIT TO THE WATER BOTTLE FILLING STATION AND CHILLER. BREAKER FOR THIS CIRCUIT SHALL BE COMBINATION AFCI & GFCI. SEE E602 FOR MORE DETAILS. CONDUIT FOR CIRCUIT SHALL TERMINATE ON J-BOX ON BACK OF FILLING STATION. WIRING FOR BOTTLE FILLING STATION AND CHILLER SHALL BE MADE UP WITHIN J-BOX. WIRING FROM CHILLER MAY NEED TO BE EXTENDED TO J-BOX. VERIFY ELECTRICAL REQUIREMENTS WITH SUPPLIER PRIOR TO ANY WORK.
10. DUPLEX USB RECEPTACLE IN RACO 565 BOX OR EQUAL, INSTALLED WITHIN CEILING MOUNTED HUBBELL ENCLOSURE NSAV62M. SEE E111 FOR MORE DETAIL.
11. PROVIDE A DIGITAL PLUG LOAD CONTROLLER (DPC). REFER TO PLUG LOAD AND LIGHTING CONTROL EQUIPMENT SCHEDULE ON E604 FOR APPROVED CONTROLLERS. DPC SHALL BE MOUNTED TO A 4"x4" J-BOX WITH BLANK COVER VIA 1/2" KO. J-BOX SHALL BE INSTALLED ABOVE THE CEILING SPACE TO A TRUSS MEMBER ACCESSIBLE FROM THE CATWALK SO DPC CAN BE EASILY ACCESSED FOR INSTALLATION AND PROGRAMMING. DPC SHALL BE PROGRAMMED BY A MANUFACTURER'S REPRESENTATIVE. REFER TO THE PLUG LOAD AND LIGHTING CONTROL WIRING DIAGRAMS AND SEQUENCE OF OPERATIONS FOR PROGRAMMING DETAILS AND REQUIREMENTS.
12. PROVIDE A 250V RATED NEMA 14-30R RECEPTACLE FOR DRYER ON A DEDICATED 30A CIRCUIT WITH GFCI BREAKER. VERIFY ALL ELECTRICAL REQUIREMENTS PRIOR TO ANY WORK.
13. PROVIDE AND INSTALL 20A OUTDOOR RATED GFCI DUPLEX RECEPTACLE W/ DUAL USB TYPE A/C CHARGING PORTS, LEGRAND 2097TRWRUSBACW OR APPROVED EQUAL.
14. PROVIDE AND INSTALL DISCONNECT FOR HIGH WALL IDU WITHIN SINGLE GANG BOX INSTALLED ADJACENT TO IDU. DISCONNECT DETAILS DESCRIBED IN GENERAL SHEET NOTE 3. SEE DETAIL 2 ON M501 FOR MORE DETAIL. SEE E602 FOR IDU CIRCUIT ASSIGNMENTS.
15. 120V OUTLET DEDICATED FOR THE DOMESTIC HOT WATER RETURN CIRCULATION PUMP.
16. PROVIDE A GROUNDING ELECTRODE SYSTEM AS REQUIRED PER ARTICLE 250.52 OF THE APPLICABLE VERSION OF THE CEC.
17. PROVIDE A DEDICATED 120V CIRCUIT AND NEMA L5-30R TWIST LOCK RECEPTACLE FOR EACH NETWORK EQUIPMENT RACK. INSTALL RECEPTACLE IN DUPLEX ELECTRICAL OUTLET BOX, CPI 13698-001 OR APPROVED EQUAL. INSTALL BOX NEAR BOTTOM OF RACK AS SHOWN IN MANUFACTURER'S INSTALLATION INSTRUCTIONS, ON REAR SIDE OF RACK INSTEAD OF FRONT. EACH CIRCUIT SHALL BE ROUTED FROM PANEL B VIA 3/4"C EMT WHICH TRANSITIONS TO PVC SCH40 TO RUN BELOW GRADE AND STUB UP AT EACH RACK. PVC SHALL THEN TRANSITION TO FMC TO ROUTE TO OUTLET BOX. SEE DETAIL 4 ON E502 FOR MORE INFORMATION. SEE ES101 AND E603 FOR DETAILS ON CONDUIT AND CONDUCTOR ROUTING.
18. PROVIDE A RACK MOUNTED UPS, APC MODEL SMX3000LV OR APPROVED EQUAL, AND INSTALL IN BOTTOM SHELF OF RACK1.
19. TO PROVIDE GROUNDING FOR NETWORK EQUIPMENT RACKS, CONNECT AN INSULATED #6 AWG, CU, 19 STRAND GROUNDING CONDUCTOR TO THE GROUND BUS BAR IN PANEL B, RUN WITH TWIST LOCK RECEPTACLE CIRCUIT TO OUTLET BOX IN RACK1, THEN FROM OUTLET BOX TO RACK1 GROUND TERMINAL BLOCK. FOR MORE INFORMATION SEE E111, DETAILS 4 AND 6 ON E502, AND E603.
20. PROVIDE A DEDICATED SINGLE PHASE 240V POWER CIRCUIT AND NEMA-3R RATED DISCONNECT FOR EACH OF THE HEAT PUMP WATER HEATERS, HPWH-1 AND HPWH-2. DISCONNECTS DO NOT NEED TO BE FUSED UNLESS REQUIRED BY MANUFACTURER. INSTALL DISCONNECTS IN-LINE VERTICALLY. UPPER DISCONNECT SHALL BE INSTALLED 72" AFG (TO TOP). LOWER DISCONNECT SHALL BE INSTALLED 4" BELOW UPPER DISCONNECT. REFER TO MANUFACTURER'S SPECIFICATIONS FOR ALL ELECTRICAL REQUIREMENTS.
21. ERV-1 LOCATED IN ATTIC. REFER TO M101 FOR LOCATION. DISCONNECT SHALL BE LOCKABLE AND LOCATED WITHIN SIGHT OF ERV-1. INSTALL DISCONNECT ON TRUSS MEMBER ACCESSIBLE FROM CATWALK.
22. (1) 3P/50A BREAKER IN THE 480V DISTRIBUTION SECTION OF THE MAIN SWB SHALL PROVIDE POWER FOR BOTH ODU-1 AND ODU-2. SEE ES101, E601, AND E603 FOR MORE DETAILS. CIRCUIT SHALL BE 3#8, #10G INSTALLED IN 1"C PVC SCH40 WHICH TRANSITIONS TO 1"C GRS BEFORE GOING ABOVE GRADE. 1"C GRS SHALL TERMINATE INTO AN 8"W x 8"H x 4"D SCREW COVER TYPE NEMA 3R J-BOX, HOFFMAN A8R84 OR EQUAL. INSTALL J-BOX ON WALL AS SHOWN AT 42" AFG. WITHIN J-BOX 3#8, #10G SHALL BE SPLICED TO TWO CIRCUITS, 3#12, #12G FOR ODU-1 AND 3#12, #12G FOR ODU-2. SPLICES SHALL BE DONE USING INSULATED CONNECTORS PRE-FILLED WITH DE-OX®, ILSCO NIMBUS® TYPE PBT OR APPROVED EQUAL. 3/4"C LFMC SHALL BE INSTALLED FROM J-BOX TO EACH OF THE TWO WALL MOUNTED 30A DISCONNECTS (EACH WITH 25A FUSE), ONE ON EITHER SIDE OF J-BOX AS SHOWN, AT 42" AFG. CIRCUIT FROM EACH DISCONNECT SHALL BE INSTALLED IN 3/4"C GRS, TRANSITION BELOW GRADE, AND STUB UP AT THE REAR OF ODU-1 AND ODU-2 AT THE POINT DESIGNATED FOR ELECTRICAL CONNECTIONS BY THE MANUFACTURER.

USB 20A WALL AND CEILING MOUNTED DUPLEX RECEPTACLE W/ DUAL USB TYPE A/C CHARGING PORTS, LEVITON T5833-W, LEGRAND ARTRUSB206ACW4, OR APPROVED EQUAL.

GFI USB 20A GFCI DUPLEX RECEPTACLE W/ DUAL USB TYPE A/C CHARGING PORTS, LEVITON GUAC2-W OR APPROVED EQUAL.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

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SUSAN P. THOMAS
E 23257
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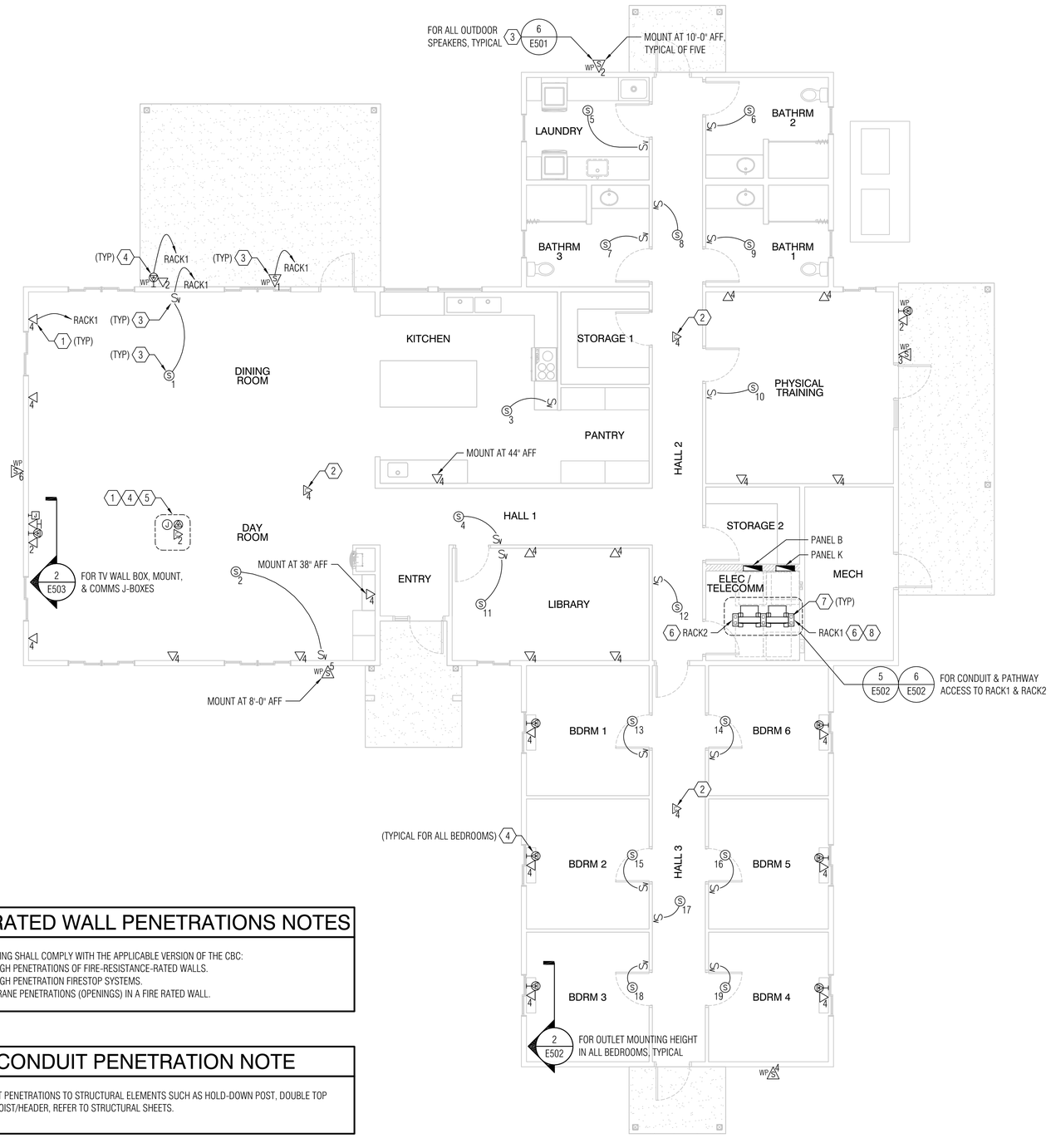
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
POWER PLAN

SHEET NUMBER
E101
V3

PROJECT PATH: C:\Users\Egifford\appdata\local\temp\AcPublish_16500\2421E101.dwg
PLOT DATE: Sep 15, 2023 - 11:06PM



FIRE RATED WALL PENETRATIONS NOTES

THE FOLLOWING SHALL COMPLY WITH THE APPLICABLE VERSION OF THE CBC:

- THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS.
- THROUGH PENETRATION FIRESTOP SYSTEMS.
- MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL.

CONDUIT PENETRATION NOTE

FOR CONDUIT PENETRATIONS TO STRUCTURAL ELEMENTS SUCH AS HOLD-DOWN POST, DOUBLE TOP PLATE AND JOIST/HEADER, REFER TO STRUCTURAL SHEETS.

VOICE/DATA/PA SYSTEM PLAN

SCALE: 3/16" = 1-0"

PLAN NORTH

GENERAL SHEET NOTES

1. VOICE/DATA AND PA SYSTEM WIRING, DEVICES, AND CONNECTION TO DEVICES WITHIN THE BUILDING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, UON.
2. REFER TO ARCHITECTURAL SHEETS TO IDENTIFY WALLS AND CEILINGS WITH FIRE RATINGS.
3. WIRING FOR ALL VOICE/DATA (COMM) OUTLETS, VOLUME CONTROLS, AND EXTERIOR SPEAKERS SHALL HOMERUN TO RACK1. CONSEQUENTLY, HOMERUN SYMBOLS (TO RACK1) HAVE NOT BEEN ADDED TO ALL OF THESE DEVICES, ONLY ONE TYPICAL FOR EACH DEVICE TYPE. PA SYSTEM WIRING HAS BEEN SHOWN BETWEEN VOLUME CONTROLS AND THEIR ASSOCIATED INTERIOR SPEAKER. ADDITIONAL DETAILS ON VOICE/DATA AND PA SYSTEM WIRING IS IN THE SHEET KEYNOTES.

SHEET KEYNOTES

1. INSTALL 1" ENT FROM EACH VOICE/DATA (COMM) OUTLET TO AN ACCESSIBLE LOCATION IN THE ATTIC. FOR EACH OUTLET PROVIDE A 4"x4" J-BOX, MIN 2-1/8"D, AND 4"x4" 1-DEVICE COVER WITH RAISED MUD RING MATCHED TO WALL DEPTH, RACO 782 OR APPROVED EQUAL. FOUR PORT OUTLETS SHALL HAVE FOUR (4) CAT6 CABLES WITH JACKETS COLORED RED, GREEN, BLUE, AND YELLOW PULLED TO EACH OUTLET UON. TWO PORT COMM OUTLETS SHALL HAVE ONLY BLUE AND YELLOW CAT6 CABLES UON. EACH CAT6 SHALL BE TERMINATED ON A COLOR MATCHING MODULAR CAT6 CONNECTOR UTILIZING TIA-568A WIRING SCHEME THEN SNAPPED INTO A SINGLE GANG 4-PORT WALLPLATE UON. APPLY ALPHANUMERIC LABELS TO WALLPLATES BASED ON THE FOLLOWING SCHEME: RED - A, GREEN - B, BLUE - C, YELLOW - D. ALL CAT6 CABLES SHALL BE PULLED BACK TO RACK1 WHERE THEY SHALL BE TERMINATED USING THE SAME MODULAR CAT6 CONNECTORS AND INSTALLED INTO 48-PORT PATCH PANELS ORGANIZED AND LABELED BY THE FOLLOWING COLOR/NETWORK DESIGNATION: RED - DIGITAL TELEPHONE, GREEN - ANALOG TELEPHONE, BLUE - DATA (CAL FIRE NETWORK), YELLOW - RADIO REMOTE/SPARE NETWORK. FROM END TO END, CAT6 CABLES AND HARDWARE SHALL MAINTAIN THE AFOREMENTIONED COLOR SCHEME. CONTRACTOR SHALL PROVIDE J-HOOKS AND ALL REQUIRED HARDWARE AND ACCESSORIES FOR A COMPLETE WORKING SYSTEM. REFER TO SPECIFICATION SECTION 271513 FOR CAT6 CABLE TESTING REQUIREMENTS.

2. VOICE/DATA OUTLET AT THIS LOCATION SHALL MEET ALL OF THE REQUIREMENTS IN SHEET KEYNOTE 1 WITH THE FOLLOWING CHANGES. 4"x4" J-BOX SHALL BE RECESSED INTO THE CEILING AND ATTACHED TO FRAME MEMBERS FOR SUPPORT. BOX COVER AND WALLPLATE ARE NOT NEEDED. EACH OF THE FOUR (4) CAT6 CABLES PULLED TO THIS BOX SHALL BE CUT TO PROVIDE 18" OF SLACK MINIMUM. EACH CABLE SHALL BE TERMINATED WITH AN RJ45 CAT6 PLUG LEVITON 47613-EZ6 OR APPROVED EQUAL, TESTED, THEN COILED UP FOR FUTURE USE BY CAL FIRE.

3. CONTRACTOR SHALL PROVIDE CEILING MOUNT SPEAKERS, PROVIDE AND INSTALL WALL MOUNT OUTDOOR SPEAKERS, VOLUME CONTROLS, BRACKETS AND BOXES, ENT, PA SYSTEM WIRING AND LABELING, AND ALL HARDWARE NECESSARY FOR A COMPLETE PA SYSTEM.

   VOLUME CONTROLS - FOR NON FIRE-RATED WALLS CONTRACTOR SHALL PROVIDE AND INSTALL A 2"x4" HOLE AND WALL BRACKET CADDY MP1S (SINGLE GANG) OR APPROVED EQUAL. FOR FIRE-RATED WALLS (SEE ARCHITECTURAL SHEETS), PROVIDE A 3" DEEP SINGLE GANG BOX AND MUD RING PROPERLY SIZED FOR THE WALL DEPTH AND INSTALL PENETRATION FIRESTOPPING PER PLANS AND SPECS. PROVIDE AND INSTALL VOLUME CONTROL ATLAS SOUND MODEL AT-10. INSTALL 3/4" ENT FROM EACH VOLUME CONTROL TO AN ACCESSIBLE AREA IN THE ATTIC SPACE VIA WHICH PA SYSTEM WIRING SHALL BE INSTALLED TO RACK1, WHERE IT SHALL BE COILED IN A 20' LOOP FOR FUTURE TERMINATION BY CAL FIRE.

   INTERIOR SPEAKERS - AT EACH CEILING MOUNT SPEAKER LOCATION CONTRACTOR SHALL PROVIDE AND INSTALL A SPEAKER ENCLOSURE ATLAS 96-8. FOR EACH LOCATION, CONTRACTOR SHALL PROVIDE A BOGEN SPEAKER S86T725PG8U. INSTALL 3/4" ENT BETWEEN EACH SPEAKER ENCLOSURE AND WALL MOUNTED VOLUME CONTROL. INTERIOR SPEAKERS SHALL ONLY BE FURNISHED BY THE CONTRACTOR BUT NOT INSTALLED. PA SYSTEM WIRING AT EACH INTERIOR SPEAKER ENCLOSURE SHALL BE COILED IN A 3' LOOP FOR FUTURE TERMINATION BY CAL FIRE.

   OUTDOOR SPEAKERS - CONTRACTOR SHALL PROVIDE AND INSTALL WEATHERPROOF HORN SPEAKER ATLAS SOUND MODEL AP-15T IN DESIGNATED POSITIONS ON THE EXTERIOR WALLS OF THE BUILDING AS SHOWN. MOUNTING HEIGHTS ON PLANS ARE FROM FINISHED GRADE TO CENTERLINE OF SPEAKER MOUNT. FOR OUTDOOR SPEAKER INSTALLATION INFORMATION SEE DETAIL 6 ON E501. OUTDOOR SPEAKERS DO NOT HAVE A VOLUME CONTROL. THEIR WIRING SHALL RUN DIRECTLY TO RACK1 AND BE COILED IN A 20' LOOP FOR FUTURE TERMINATION BY CAL FIRE.

   PA SYSTEM WIRING - FOR ALL WIRING BETWEEN VOLUME CONTROLS, INDOOR AND OUTDOOR SPEAKERS, AND RACK1 THE CONTRACTOR SHALL PROVIDE AN INSTALL ALPHA WIRE 2243C (18AWG, 3 PAIR, STRANDED, FOIL SHIELDED, TINNED COPPER). THE UNIQUE # ASSIGNED TO INDOOR AND OUTDOOR SPEAKERS ON THE PLAN HAS BEEN PROVIDED FOR PA SYSTEM WIRE LABELING. LABELS PROVIDED AT EACH SPEAKER, VOLUME CONTROL FOR INDOOR SPEAKERS, AND AT END OF WIRE AT RACK1 SHALL MATCH THIS #. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ONE (1) BELDEN 5304F1 (6C-18AWG, STRANDED, FOIL SHIELDED, TINNED COPPER, RATED FOR BELOW GRADE IN-DUCT) BETWEEN RACK1 AND THE AIR OPS BUILDING COMMUNICATION ROOM. ONCE WIRE HAS EXITED CONDUIT AND ENTERED THE ROOM IT SHALL BE COILED IN A 40' LOOP FOR FUTURE TERMINATION BY CAL FIRE. SEE ES101 AND E603 FOR MORE DETAILS. FOR ALL PA SYSTEM WIRING PAIR #1 WILL BE USED FOR CONNECTIONS WHILE PAIRS #2 AND #3 ARE DESIGNATED SPARES.

4. INSTALL RG-6 COAXIAL CABLE AT THIS COMM OUTLET AND PULL BACK TO RACK1 WITH CAT6. TERMINATE AND CONNECT RG-6 VIA A FEEDTHROUGH QUICKPORT F-CONNECTOR, LEVITON 41084-FWF OR APPROVED EQUAL. TO ACCOMMODATE F-CONNECTOR INSTALL A SINGLE GANG FOUR PORT WALLPLATE FOR OUTLETS WITH TWO (2) CAT6 AND A SINGLE GANG SIX PORT WALLPLATE FOR OUTLETS WITH FOUR (4) CAT6. INSTALL BLANKS IN UNUSED PORTS. FOR OUTDOOR LOCATIONS INSTALL SINGLE GANG WEATHERPROOF BOX WITH 1" THREADED OUTLETS, BELL 5387-0 OR APPROVED EQUAL, AND FOUR PORT WATER-RESISTANT FACEPLATE, PANDUIT CFPWR4CIG OR APPROVED EQUAL.

5. TO SUPPORT FUTURE PROJECTOR PROVIDE AND INSTALL CEILING MOUNTED HUBBELL ENCLOSURE NSAV62M AND NSAV6C COVER. SECURE ONE SIDE OF ENCLOSURE TO CEILING JOIST AND INSTALL BOX BRACE ACROSS JOISTS AND ATTACH TO ENCLOSURE FOR ADDITIONAL SUPPORT. ENCLOSURE SHALL CONTAIN TWO (2) RACO 565 SINGLE GANG BOXES. INSTALL USB DUPLEX RECEPTACLE IN FIRST; SEE E101 FOR DETAILS. INSTALL 3/4" ENT FROM SECOND BOX TO RACK1 AND INSTALL TWO (2) CAT6, ONE (1) RG-6, AND PULL ROPE WITHIN IT. ON SECOND RACO 565 BOX INSTALL WALL PLATE AND CONNECTORS FOR CAT6 AND RG-6 AS DESCRIBED IN SHEET KEYNOTE 4. INSTALL 1-1/2" ENT BETWEEN KO ON SIDE OF ENCLOSURE TO UPPER RACO 260 BOX ON SOUTH DAY ROOM WALL AND FROM UPPER BOX TO LOWER RACO 260 BOX. INSTALL HDMI 2.1 CABLE, RG-6, AND PULL ROPE FROM ENCLOSURE, THROUGH UPPER RACO 260 BOX, TO LOWER RACO 260 BOX ON SAME WALL. SEE DETAIL 2 ON E503 FOR BOX LOCATIONS AND DETAILS ON ENT, HDMI, AND RG-6 ROUTING. HDMI 2.1 CABLE SHALL BE FIBER OPTIC ULTRA HIGH SPEED 8K@60Hz (4K@120Hz), HDR, 48Gbps, eARC, MONOPRICE SLIMRUN AV OR APPROVED EQUAL. CABLE SHALL BE 15m LONG AND INSTALLED PROVIDING AN EQUAL AMOUNT OF SLACK AT EACH END.

6. CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) 19"W (EIA-310-D COMPLIANT) BY 7'H TWO POST WELDED STEEL NETWORK EQUIPMENT RACKS, CPI (CHATSWORTH PRODUCTS) 13853-X03 OR APPROVED EQUAL WITH VERTICAL CABLE MANAGEMENT, CPI 35571-X03 OR APPROVED EQUAL. SEE DETAIL 4 ON E502 FOR EQUIPMENT RACK DETAIL WHICH INCLUDES A LIST OF CAT6 PATCH CORDS TO BE FURNISHED BY THE CONTRACTOR. AN INSULATED #6 AWG, CU, 19 STRAND BONDING CONDUCTOR, CONNECTED TO THE GROUND TERMINAL BLOCK IN RACK1, SHALL BE ROUTED VIA 3/4"C AND CONNECTED TO THE GROUND BUS BAR IN PANEL B. BONDING CONDUCTOR OF SAME TYPE SHALL ALSO BE USED TO CONNECT GROUND TERMINAL BLOCKS OF RACK1 AND RACK2. PROVIDE AND INSTALL, AT REAR OF RACK1, A HORIZONTAL RACKMOUNT GROUND BUSBAR KIT, CPI TS1057246 OR APPROVED EQUAL, CONSISTING OF 1/4" THICK BY 2" HIGH COPPER BUSBAR, ISOLATION PADS/INSULATORS, AND MOUNTING HARDWARE. A SEPARATE INSULATED #6 AWG, CU, 19 STRAND GROUNDING CONDUCTOR, CONNECTED TO THE GROUND BUS BAR IN PANEL B, SHALL BE INSTALLED AND TERMINATED ON THE RACKMOUNT GROUND BUSBAR. PROVIDE SEISMIC-RATED 3/4" X 5-1/2" CONCRETE EXPANSION ANCHORS, HILTI KWIK BOLT TZ OR APPROVED EQUAL, WITH 3-3/4" MIN EMBEDMENT TO ANCHOR RACKS. SEE CPI OSHPD OPM-0249-13 FOR ANCHORAGE DETAILS.

7. CEILING PENETRATIONS FOR CAT6 CABLES SHALL BE ACCOMPLISHED VIA SMOKE AND ACOUSTICAL PATHWAYS, STI EZ PATH NEZ33CK2 OR APPROVED EQUAL. TWO PATHWAYS SHALL BE INSTALLED IN THE CEILING DIRECTLY ABOVE EACH OF THE THREE VERTICAL CABLE MANAGERS ATTACHED TO THE NETWORK EQUIPMENT RACKS, AS SHOWN IN DETAIL 4 ON E502.

8. PROVIDE AND INSTALL ONE (1) 12F 50u OM4 LOOSE TUBE GEL-FREE ALL-DIELECTRIC MULTIMODE FOC FROM RACK1 TO (E) NETWORK EQUIPMENT RACK IN AIR OPS BUILDING COMMUNICATION ROOM. FOC SHALL BE CORNING 012TU4-T4790D20, COMMSCOPE D-012-LN-5K-F12NS, OR APPROVED EQUAL. FOC SHALL BE INSTALLED WITHIN A 3/4" SMOOTHWALL HDPE INNERDUCT ALONG WITH A PULL ROPE. PROVIDE SERVICE LOOP (INNERDUCT AND FOC) WITHIN EACH PULL BOX AND CABLE TIE PVC MINI-TAG LABELS TO ALL LOOPS. SEE E603 FOR DETAILS ON FOC ROUTING. FOC INSTALLATION SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NEIS NECA/FOA 301. AT BOTH RACK1 AND (E) NETWORK EQUIPMENT RACK IN COMMUNICATION ROOM AT AIR OPS BUILDING CONTRACTOR SHALL FUSION SPLICE ALL 12F TO A PIGTAILED SPLICE CASSETTE WITH SIX (6) FEMALE LC DUPLEX CONNECTORS, CORNING CCH-CS12-E4-P00QE OR APPROVED EQUAL, AND INSTALL CASSETTE WITHIN A RACKMOUNT CLOSET CONNECTOR HOUSING, CORNING CCH-01U OR APPROVED EQUAL. ONCE FOC IS INSTALLED AND SPLICED CONTRACTOR SHALL PERFORM BI-DIRECTIONAL OPTICAL LOSS TESTING AT 850nm AND 1300nm VIA OPTICAL POWER TRANSMITTER AND METER TO DETERMINE SYSTEM LOSS. TEST REPORT WITH TRACE & TEST RESULTS, FIBER/STRAND INFO, TEST EQUIPMENT, TIME/DATE, ETC. SHALL BE FORMALLY SUBMITTED TO CAL FIRE.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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APPROVED FIRE AND PANIC ONLY
12/23/23
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REGISTERED PROFESSIONAL ENGINEER
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REVISIONS

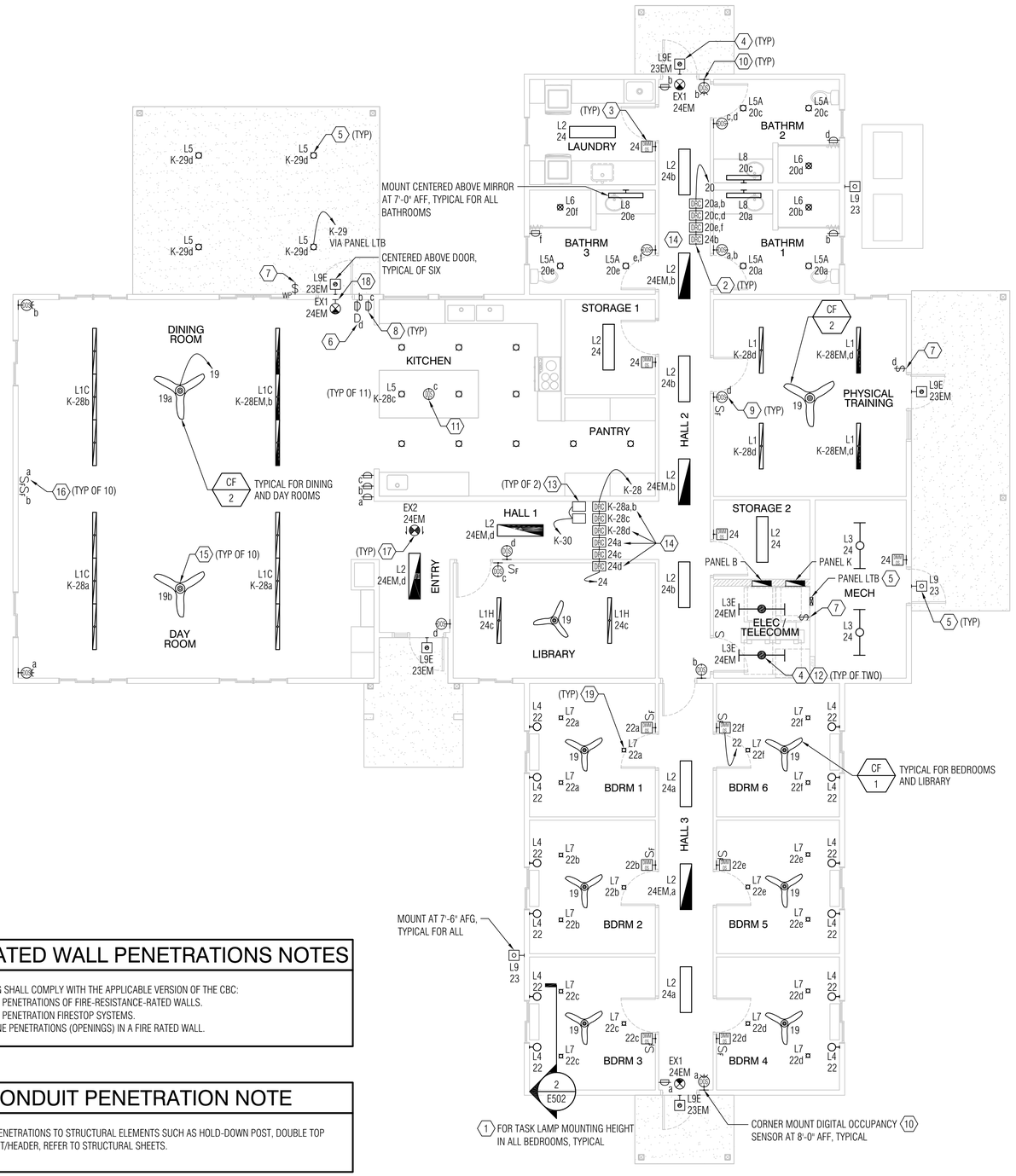
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JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
VOICE/DATA/PA SYSTEM PLAN

SHEET NUMBER
E111
V3

PROJECT PATH: C:\Users\Egifford\appdata\local\temp\AcPublish_40568\2421E111.dwg
PLOT DATE: Oct 13, 2023 - 2:20PM
VER 2020



FIRE RATED WALL PENETRATIONS NOTES

THE FOLLOWING SHALL COMPLY WITH THE APPLICABLE VERSION OF THE CBC:

- THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS.
- THROUGH PENETRATION FIRESTOP SYSTEMS.
- MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL.

CONDUIT PENETRATION NOTE

FOR CONDUIT PENETRATIONS TO STRUCTURAL ELEMENTS SUCH AS HOLD-DOWN POST, DOUBLE TOP PLATE AND JOIST/HEADER, REFER TO STRUCTURAL SHEETS.

LIGHTING SYSTEM PLAN

SCALE: 3/16" = 1-0"

PLAN NORTH

GENERAL SHEET NOTES

1. ALL CIRCUITS TO BE ROUTED TO PANEL B UON. REFER TO PANEL SCHEDULES ON E602 FOR ALL REQUIREMENTS.
2. REFER TO ARCHITECTURAL SHEETS TO IDENTIFY WALLS AND CEILINGS WITH FIRE RATINGS.
3. ATTIC LIGHTING NOT SHOWN ON THIS PLAN. REFER TO E131 FOR ATTIC LIGHTING PLAN AND DRC AREA LABELS.
4. REFER TO E503 FOR LIGHT FIXTURE MOUNTING DETAILS AND E604 FOR LIGHTING FIXTURE SCHEDULE AND PLUG LOAD & LIGHTING CONTROL EQUIPMENT SCHEDULE WHICH CONTAINS PART NUMBERS FOR APPROVED LEGRAND WATTSTOPPER AND ACUITY nLight CONTROL EQUIPMENT.

SHEET KEYNOTES

1. PROVIDE AND INSTALL ADJUSTABLE LED TASK LAMP (L4) WITH INTEGRATED DIMMER/SWITCH ON EACH SIDE OF THE WINDOW IN THE BEDROOMS. FIXTURE SHALL BE WALL MOUNTED ON SINGLE GANG OR OCTAGON JUNCTION BOX 46" AFF. SEE DETAIL 2 ON E502 AND LIGHTING FIXTURE SCHEDULE ON E604 FOR MORE DETAILS.
2. PROVIDE DIGITAL DIMMING ROOM CONTROLLER(S) (DRC) AKA POWER/RELAY PACK. REFER TO PLUG LOAD AND LIGHTING CONTROL EQUIPMENT SCHEDULE ON E604 FOR APPROVED CONTROLLERS. DRC SHALL BE MOUNTED TO A 4"x4" J-BOX WITH BLANK COVER VIA 1/2" KO. A MAXIMUM OF TWO (2) DRC MAY BE MOUNTED TO A J-BOX AND ONLY WHEN THEY CONTROL EQUIPMENT IN THE SAME SPACE. J-BOXES SHALL BE INSTALLED ABOVE THE CEILING SPACE TO A TRUSS MEMBER ACCESSIBLE FROM THE CATWALK SO DRC CAN BE EASILY ACCESSED FOR INSTALLATION AND PROGRAMMING. DRC SHALL BE PROGRAMMED BY A MANUFACTURER'S REPRESENTATIVE. REFER TO THE LIGHTING CONTROL WIRING DIAGRAMS AND SEQUENCE OF OPERATIONS FOR PROGRAMMING DETAILS AND REQUIREMENTS.
3. PROVIDE A COMBINATION 0-10V DIMMING WALL SWITCH AND DUAL TECHNOLOGY OCCUPANCY SENSOR. IN THE BEDROOMS ONLY, SET THE OCCUPANCY MODE TO VACANCY, I.E. MANUAL-ON, AUTO-OFF.
4. PROVIDE AN UN-SWITCHED CIRCUIT TO EXTERIOR EGRESS EMERGENCY LIGHTS AND FIXTURES IN ELEC/TELECOMM ROOM.
5. L5 FIXTURES AT DINING ROOM PATIO AND ALL EXTERIOR L9 AND L9E FIXTURES SHALL BE CONTROLLED BY LIGHTING CONTROL PANEL LTB. PROVIDE LIGHTING CONTROL PANEL LEGRAND LMCP8-115/277-8HDR WITH LENC8F ENCLOSURE, ACUITY CONTROLS nLight RELAY PANEL MODEL ARP-INTENC08-NLT-8FCR-MVOLT-HLK-FM-DTC, OR APPROVED EQUAL. REFER TO THE LIGHTING CONTROL RELAY SCHEDULE BELOW FOR MORE DETAILS REGARDING RELAY ASSIGNMENTS AND FIXTURE OPERATION.
6. PROVIDE A 0-10V DIMMING WALL SWITCH TO CONTROL EXTERIOR PATIO LIGHTS.
7. PROVIDE A DIGITAL WALL SWITCH AND CONNECT TO PANEL LTB TO PROVIDE LIGHTING OVERRIDE. INSTALL LABEL ON SWITCH IN ELEC/TELECOMM ROOM WHICH STATES "EXTERIOR LIGHTING OVERRIDE - 2 HOURS ON". SWITCH AT PATIO SHALL BE INSTALLED WITH WEATHERPROOF DECORA STYLE WALL PLATE WITH SELF-CLOSE COVER, LEGRAND CA26GV, LEVITON 4998-GY, OR APPROVED EQUAL. INSTALL LABEL ON COVER WHICH STATES "PATIO LIGHTING OVERRIDE - 2 HOURS ON". REFER TO SCHEDULES AND SEQUENCE OF OPERATIONS ON E604 FOR MORE DETAILS.
8. PROVIDE A DIGITAL DIMMING WALL SWITCH. REFER TO THE SCHEDULES ON E604 FOR MORE DETAILS.
9. PROVIDE A DIGITAL DUAL TECHNOLOGY WALL DIMMING SWITCH OCCUPANCY SENSOR. REFER TO THE SCHEDULES ON E604 FOR MORE DETAILS.
10. PROVIDE A DIGITAL DUAL TECHNOLOGY CORNER/WALL MOUNT OCCUPANCY SENSOR. REFER TO THE SCHEDULES ON E604 FOR MORE DETAILS.
11. PROVIDE A DIGITAL DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSOR. REFER TO THE SCHEDULES ON E604 FOR MORE DETAILS.
12. IN THE ELECTRICAL/TELECOM ROOM, CONTRACTOR SHALL CAP OFF LED FIXTURE DRIVER DIMMING LEADS TO ALLOW ON-OFF SWITCHING ONLY.
13. EMERGENCY LIGHTING INVERTERS EM1 AND EM2. SEE E604 FOR INVERTER DETAILS. INVERTERS SHALL BE MOUNTED PER MANUFACTURER'S SPECIFICATIONS ABOVE THE CEILING TO A TRUSS MEMBER ACCESSIBLE FROM THE CATWALK SO INVERTERS CAN BE EASILY ACCESSED FOR INSTALLATION, TESTING, AND MAINTENANCE. 0-10V DIMMING CIRCUITS FOR EM FIXTURES SHALL BE CONNECTED TO DRC SAME AS NON-EM FIXTURES. BYPASSING OF DIMMING CONTROL AND SWITCHING FROM NORMAL TO INVERTER POWER SHALL BE HANDLED BY A DRC AND EMERGENCY LIGHTING CONTROL UNIT (ELCU) OR AN EMERGENCY POWER RELAY PACK. SEE SHEET KEYNOTE 14, THE SCHEDULES ON E604, AND PLUG LOAD AND LIGHTING CONTROL WIRING DIAGRAMS ON E605 FOR MORE DETAILS. REFER TO MANUFACTURER'S SPECIFICATIONS FOR ALL ELECTRICAL REQUIREMENTS.
14. PROVIDE A UL 924 LISTED ELCU WITH DRC OR AN EMERGENCY POWER RELAY PACK TO SWITCH BETWEEN NORMAL AND EMERGENCY POWER FOR "EM" DESIGNATED FIXTURES, LISTED IN EM INVERTER SCHEDULE ON E604. ELCU OR POWER RELAY PACK SHALL BE MOUNTED TO A DEDICATED 4"x4" J-BOX ADJACENT TO THE J-BOX HOUSING THE DRC FOR EACH OF THE AFOREMENTIONED AREAS. SEE SHEET KEYNOTE 13 FOR DETAILS ON THE EMERGENCY POWER SOURCE. SEE PLUG LOAD AND LIGHTING CONTROL WIRING DIAGRAMS ON E605 FOR WIRING DETAILS.
15. PROVIDE A CEILING MOUNTED FAN. SEE MOUNTING DETAIL 7/E503 AND HIGH-VOLUME LOW-SPEED FAN SPECIFICATIONS ON M601 FOR MORE DETAILS.
16. CF-1 CEILING FANS SHALL INCLUDE WIRED WALL CONTROL HAIKU MODEL TM2825. CF-2 CEILING FANS SHALL INCLUDE HAIKU PROVIDED WIRELESS REMOTE WITH LOSS-PREVENTION CHAIN, WALL MTD 48" AFF. SEE HIGH-VOLUME LOW-SPEED FAN SPECIFICATIONS ON M601 FOR MORE DETAILS.
17. A SECOND 120 VAC CIRCUIT SHALL BE PROVIDED TO EX1 AND EX2 EXIT SIGNS VIA EMERGENCY LIGHTING INVERTER EM1, PROVIDING 90 MINUTES OF BACKUP POWER MINIMUM UPON LOSS OF NORMAL POWER. SEE E604 FOR MORE DETAILS.
18. EX1 FIXTURE AT THIS LOCATION SHALL BE WALL MOUNTED DIRECTLY ABOVE TOP OF DOOR HEADER, CENTERED ABOVE DOOR, VIA A RECESSED MOUNT.
19. DOWNLIGHTS BY BEDROOM DOORS ARE SHOWN CENTERED (VERTICALLY) IN THE ROOM. INSTALLATION LOCATION WILL LIKELY NEED TO SHIFT A FEW INCHES WEST TO ACCOMMODATE CEILING JOIST. CONTRACTOR SHALL INSTALL DOWNLIGHT ENCLOSURE AS CLOSE TO CENTER AS POSSIBLE.

EXTERIOR LUMINAIRE INSTALLATION NOTE

EXTERIOR LUMINAIRE MOUNTING HEIGHTS IN THE PLANS ARE INTENDED TO BE MEASURED FROM FINISHED FLOOR TO THE BOTTOM OF THE LUMINAIRE AND SHALL COMPLY WITH SECTION 11B-307.2 IN THE APPLICABLE VERSION OF THE CBC. INFORM ENGINEER OF ANY CONFLICTS ENCOUNTERED DURING INSTALLATION.

LIGHTING CONTROL PANEL LTB RELAY SCHEDULE

RELAY #	PANEL/BRANCH CIRCUIT #	TYPE OF LOAD
1	B-23	EXTERIOR LIGHTING
2	K-29	DINING ROOM EXTERIOR PATIO LIGHTING

FIXTURE OPERATION: VIA ITS ASTRONOMICAL CLOCK THE LIGHTING CONTROL PANEL SHALL TURN CONNECTED LIGHTING ON 30 MINUTES BEFORE DUSK AND SHUT OFF COMPLETELY AT MIDNIGHT EACH NIGHT. WHILE ON, UTILIZING THEIR INTEGRATED MOTION/AMBIENT SENSORS THE EXTERIOR LIGHTING WILL OPERATE IN A DIMMED STATE AT ~50% OF NORMAL OUTPUT. IF MOTION IS DETECTED BY A FIXTURE IT WILL GO TO FULL BRIGHTNESS WITH A THREE SECOND RAMP UP TIME. AFTER A PERIOD OF FIVE MINUTES WITH NO MOTION DETECTED THE FIXTURE WILL RETURN TO DIMMED STATE WITH A FIVE MINUTE RAMP DOWN TIME. REGARDLESS OF TIME OR AMBIENT LIGHT LEVELS, THE DIGITAL OVERRIDE SWITCH IN THE ELEC/TELECOMM ROOM SHALL TURN ON EXTERIOR LIGHTING AT FULL BRIGHTNESS FOR A PERIOD OF TWO HOURS, AFTER WHICH IT SHALL RETURN TO ITS PREVIOUSLY DEFINED OPERATION. ON/OFF CONTROL OF PATIO LIGHTING IS BY ASTRONOMICAL CLOCK ONLY. DIGITAL OVERRIDE SWITCH AT DINING ROOM PATIO SHALL TURN PATIO LIGHTING ON FOR A PERIOD OF TWO HOURS THEN BACK OFF. PANEL LTB'S CLOCK SETTINGS SHALL BE VERIFIED BY A CAL FIRE REPRESENTATIVE DURING PROGRAMMING.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

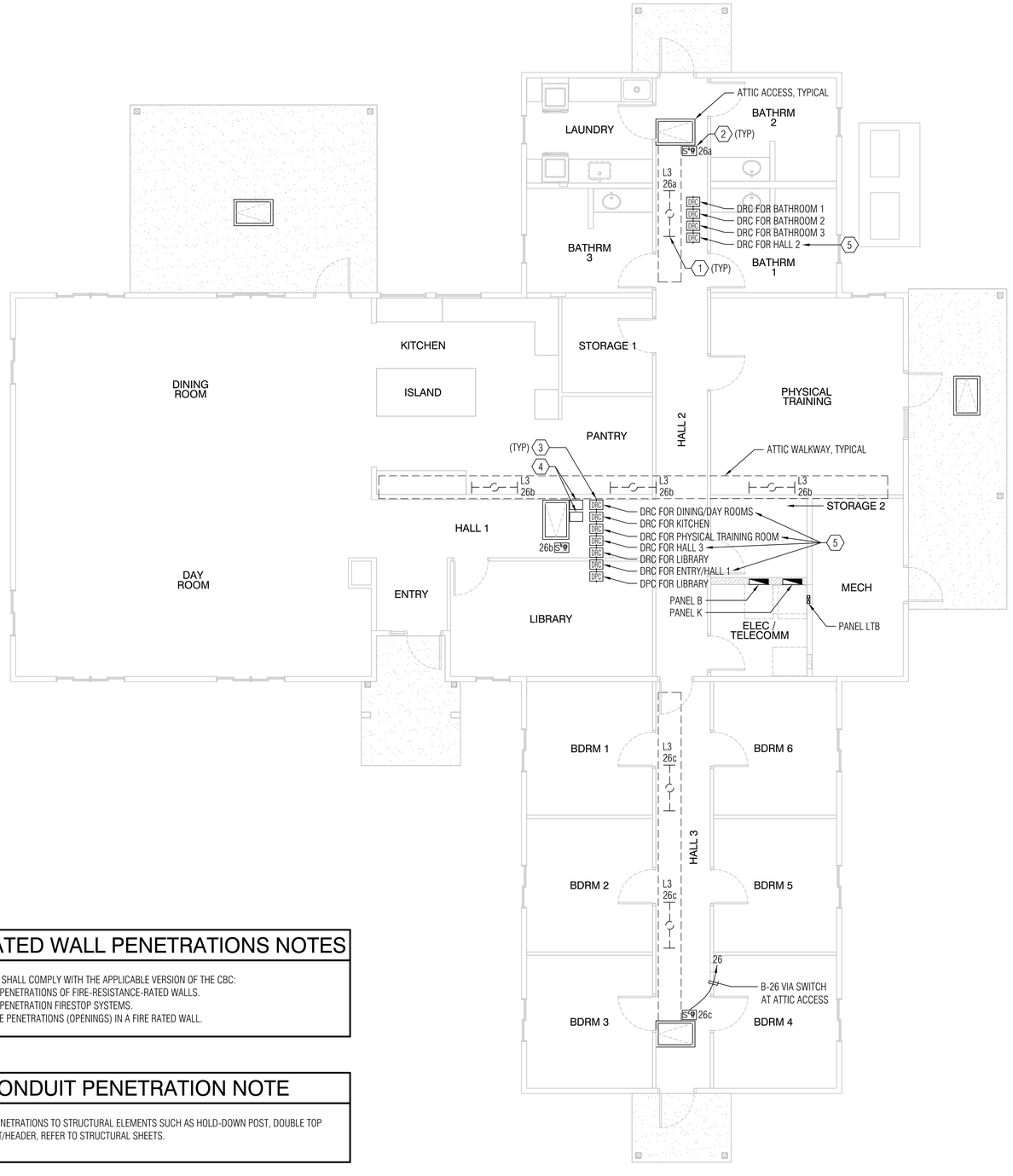
NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
LIGHTING SYSTEM PLAN

SHEET NUMBER
E121
V3

PROJECT PATH: C:\Users\EGifford\appdata\local\temp\AcPublish_16868\E121.dwg
PLOT DATE: Jan 16, 2023 - 7:04PM
VER 2020



FIRE RATED WALL PENETRATIONS NOTES

THE FOLLOWING SHALL COMPLY WITH THE APPLICABLE VERSION OF THE CBC:

- THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS.
- THROUGH PENETRATION FIRESTOP SYSTEMS.
- MEMBRANE PENETRATIONS (OPENINGS) IN A FIRE RATED WALL.

CONDUIT PENETRATION NOTE

FOR CONDUIT PENETRATIONS TO STRUCTURAL ELEMENTS SUCH AS HOLD-DOWN POST, DOUBLE TOP PLATE AND JOIST/HEADER, REFER TO STRUCTURAL SHEETS.

ATTIC LIGHTING SYSTEM PLAN

SCALE: 3/16" = 1-0"

PLAN NORTH

GENERAL SHEET NOTES

1. ALL CIRCUITS TO BE ROUTED TO PANEL B UON. REFER TO PANEL SCHEDULES ON E602 FOR ALL REQUIREMENTS.
2. REFER TO E503 FOR LIGHT FIXTURE MOUNTING DETAILS AND E604 FOR LIGHTING FIXTURE SCHEDULE.

SHEET KEYNOTES

1. INSTALL LED FIXTURES (L3) IN THE ATTIC SPACE CONTROLLED BY THE SWITCH LOCATED NEAR ATTIC ACCESS. SWITCH LETTERS DENOTE WHICH ATTIC AREA LIGHTING THEY CONTROL.
2. PROVIDE A CONVENIENCE OUTLET WITH SWITCH NEAR ATTIC ACCESS.
3. LOCATION OF DIGITAL LIGHTING AND PLUG LOAD ROOM CONTROLLERS ARE SHOWN FOR REFERENCE PURPOSES ONLY.
4. PROVIDE AND INSTALL EMERGENCY LIGHTING INVERTERS TO A TRUSS MEMBER ACCESSIBLE FROM THE CATWALK, ADJACENT TO DRC'S AT HALL 1 ATTIC ENTRY. SEE E121 AND E604 FOR EM INVERTER DETAILS AND REQUIREMENTS.
5. WHEN A WATTSTOPPER DIGITAL LIGHTING CONTROL SYSTEM IS SUBMITTED AND APPROVED, A WATTSTOPPER ELCU-200 (EMERGENCY LIGHTING CONTROL UNIT) SHALL BE PROVIDED AND INSTALLED ADJACENT TO THE DRC CONTROLLING LIGHTING IN THIS AREA. SEE E121 FOR MORE DETAILS.

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

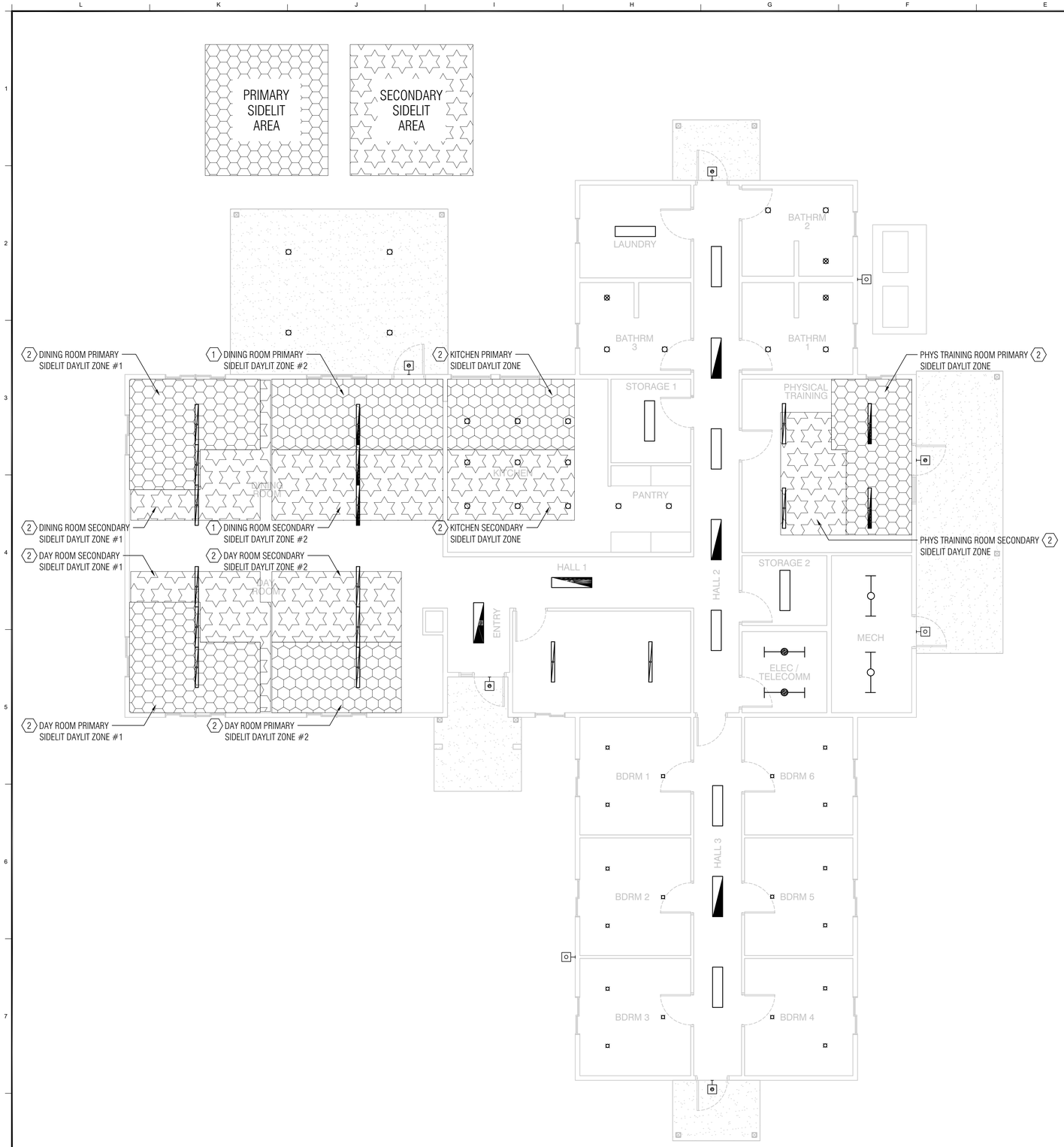
NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ATTIC LIGHTING SYSTEM PLAN

SHEET NUMBER
E131
V3

PROJECT PATH: C:\Users\EgiffordJapodata\local\temp\AcPublish_19708\2421E131.dwg
PLOT DATE: Sep 07, 2023 - 8:05PM
VER: 2020



PRIMARY & SECONDARY SIDELIT DAYLIT ZONES

SCALE: 3/16" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. ALL PRIMARY AND SECONDARY SIDELIT DAYLIT ZONES, AS DEFINED BY TITLE 24, HAVE BEEN SHOWN FOR ROOMS WITH A TOTAL FENESTRATION AREA > 24 SQFT.
2. SHEET KEYNOTES DOCUMENT THE APPLICABLE EXCEPTION(S) FOR THE AREA IN QUESTION, EXPLAINING WHY IT DOES NOT NEED THE AUTOMATIC DAYLIGHTING CONTROLS REQUIRED PER TITLE 24 SECTION 130.1(d).
3. THE UNIQUELY SHAPED PRIMARY AND SECONDARY SIDELIT DAYLIT ZONES IN THE DINING, DAY, AND PHYSICAL TRAINING ROOMS ARE DUE TO ADJACENT FENESTRATION CREATING OVERLAPPING PRIMARY AND SECONDARY SIDELIT DAYLIT ZONES.

⬡ SHEET KEYNOTES

1. THE OVERHANG ADJACENT TO THE VERTICAL GLAZING IN THIS AREA COVERS THE ENTIRE WIDTH OF THE VERTICAL GLAZING. NO VERTICAL GLAZING IS ABOVE THE OVERHANG, AND THE RATIO OF THE OVERHANG PROJECTION TO THE OVERHANG RISE IS GREATER THAN 1.5. THEREFORE, THE LIGHTING IN THIS AREA MEETS EXCEPTION 2 TO SECTION 130.1(d).

2. FOR THE FIXTURES IN THIS ROOM THE COMBINED TOTAL INSTALLED WATTAGE OF THE GENERAL LIGHTING IN THE PRIMARY SIDELIT ZONES IS LESS THAN 120 WATTS AND THE COMBINED TOTAL INSTALLED WATTAGE OF THE GENERAL LIGHTING IN THE SECONDARY SIDELIT ZONES IS LESS THAN 120 WATTS. THEREFORE, THE LIGHTING IN THIS AREA MEETS EXCEPTION 3 TO SECTION 130.1(d).

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
PRIMARY & SECONDARY SIDELIT DAYLIT ZONES

SHEET NUMBER
E141
V3

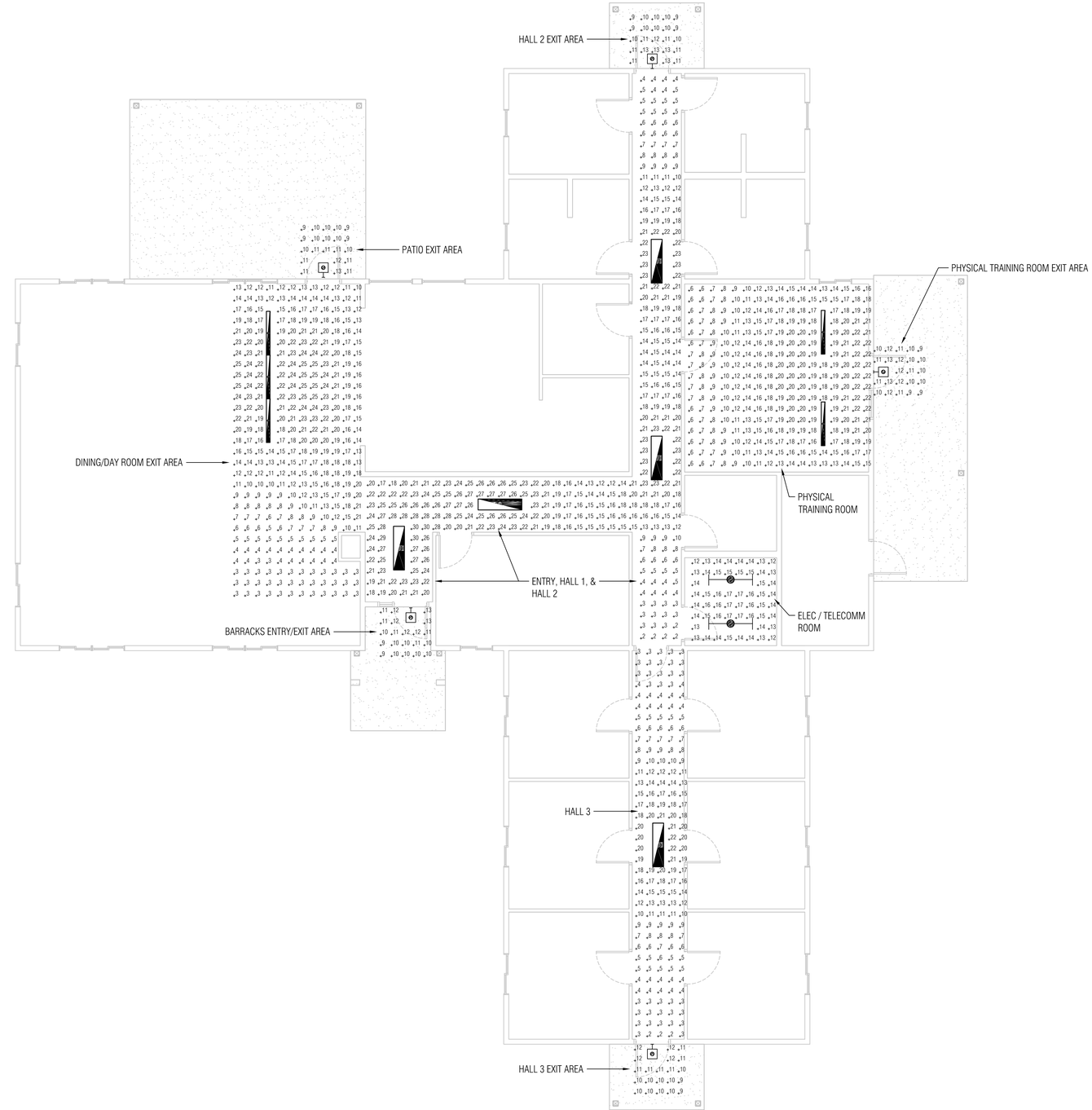
VER 2020

PROJECT PATH: C:\Users\EgiffordAppData\Local\Temp\AcPublish_21868\2421E141.dwg

PLOT DATE: Jun 26, 2003 - 9:28PM

EGRESS PHOTOMETRIC STATISTICS

ROOM/AREA DESCRIPTION	AVG (fc)	MAX (fc)	MIN (fc)	MAX/MIN (fc)
BARRACKS ENTRY/EXIT AREA	11	13	9	1.4:1
DAY/DINING ROOM EXIT AREA	14	25	3	8.3:1
ELEC/TELECOMM ROOM	15	17	12	1.4:1
ENTRY, HALL 1, & HALL 2	17	32	2	16.0:1
HALL 2 EXIT AREA	11	13	9	1.4:1
HALL 3	10	23	2	11.5:1
HALL 3 EXIT AREA	11	13	9	1.4:1
PATIO EXIT AREA	11	13	9	1.4:1
PHYSICAL TRAINING ROOM	15	22	6	3.7:1
PHYSICAL TRAINING ROOM EXIT AREA	11	13	9	1.4:1



EGRESS PHOTOMETRIC ANALYSIS

SCALE: 3/16" = 1-0"

PLAN NORTH

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

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12/23/23
23-1342
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
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FRESNO COUNTY

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REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

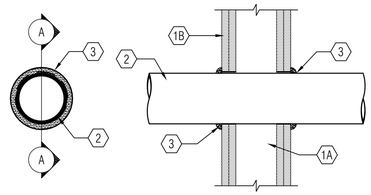
JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
EGRESS PHOTOMETRIC ANALYSIS

SHEET NUMBER
E151
V3

VER 2020
PROJECT PATH: C:\Users\Egifford\AppData\Local\Temp\AcPublish_15480\2421E151.dwg
PLOT DATE: Jun 16, 2023 - 10:03PM

UL SYSTEM NO. W-L-1344
F RATINGS - 1 AND 2 HR (SEE ITEM 1)
T RATING - 1/4 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/sq ft
L RATING AT 400 F - LESS THAN 1 CFM/sq ft



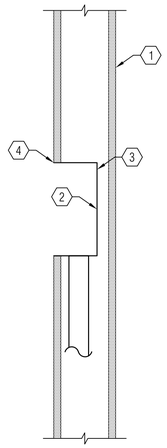
FRONT VIEW SECTION A-A VIEW

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2" BY 4" LUMBER SPACED MAX 16" O.C. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" O.C.
   B. GYPSUM BOARD - THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 5".

   THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN OF 0" TO MAX 1/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. CONDUIT - NOM 4" DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR RIGID STEEL CONDUIT.
3. FILL, VOID OR CAVITY MATERIALS - SEALANT OR PUTTY - MIN 1/2" DIAM BEAD OF SEALANT OR PUTTY APPLIED CONTINUOUSLY AROUND THE PENETRANT ON THE WALL SURFACES ON BOTH SIDES OF THE WALL.

SPECIFIED TECHNOLOGIES INC - SpecSeal Putty, SpecSeal Series SSS Sealant, SpecSeal LCI Sealant

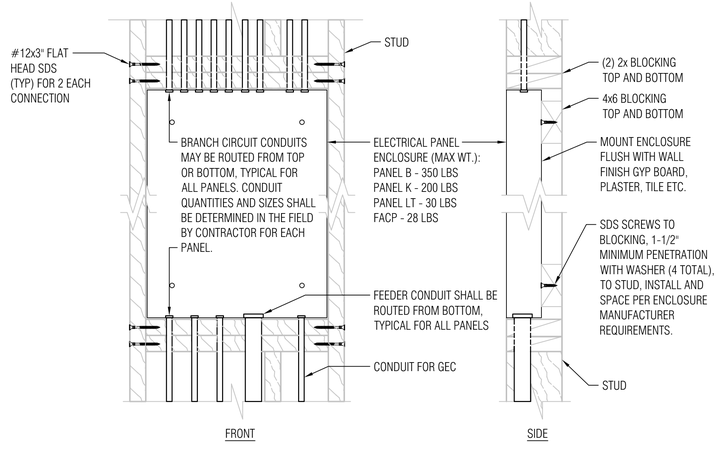
CONDUIT (1HR WALL) PENETRATION FIRESTOPPING DETAIL — SCALE: NOT TO SCALE — 9



NOTES:
1. WALL ASSEMBLY: 1 AND 2-HR FIRE RATED WALLS, CONSTRUCTED AS SPECIFIED ON ARCH PLANS.
2. FOR MEMBRANE PENETRATIONS IN MAX 2-HR RATED WALL BY STEEL ELECRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES IN AREA, PROVIDED THAT THE AGGREGATE AREA OF THE OPENINGS THROUGH THE MEMBRANE DOES NOT EXCEED 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA.
3. INTUMESCENT PUTTY PADS SHALL BE 3M MPP+, HILTI CP 617, OR APPROVED EQUAL, PROVIDING 2-HR MIN FIRE PROTECTION IN WALL OPENINGS. PUTTY PADS SHALL COMPLETELY COVER EXTERIOR SURFACE OF BOX WITHIN THE STUD CAVITY, INCLUDING NAILING TABS. ADDITIONAL PUTTY SHALL BE USED TO SEAL AROUND EACH CONDUIT AND/OR CABLE FITTING ON EXTERIOR OF BOX. SEE SPECIFICATION SECTION 078413 FOR ADDITIONAL DETAILS.
4. ANNULAR SPACE BETWEEN WALL MEMBRANE AND BOX SHALL NOT EXCEED 1/8".

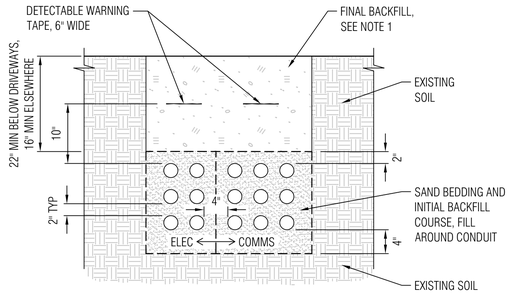
GENERAL NOTE:
THIS DETAIL APPLIES WHEN TWO 4"x4" OR SMALLER OUTLET BOXES ON OPPOSITE SIDES OF THE WALL ARE LOCATED WITHIN A SINGLE STUD/CAVITY OR WITHIN 24" MEASURED HORIZONTALLY. BACK TO BACK INSTALLS NOT PERMITTED. WHERE LARGER OPENINGS ARE REQUIRED THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION REQUIREMENTS OF THEIR LISTING FOR SUCH USE. ALL MEMBRANE PENETRATIONS IN FIRE RATED WALLS SHALL COMPLY WITH SECTION 714 OF THE APPLICABLE VERSION OF CBC.

ELECTRICAL BOX (FIRE RATED WALL) INSTALLATION DETAIL — SCALE: NOT TO SCALE — 7



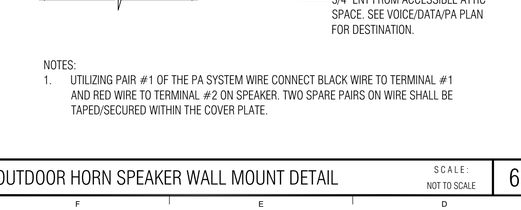
NOTES:
1. MAX WEIGHT FOR "ELECTRICAL PANEL ENCLOSURE" INCLUDES COMBINED WEIGHT OF ENCLOSURE, DOOR, PANEL INTERIOR, ALL OVERCURRENT PROTECTIVE DEVICES SHOWN ON PANEL SCHEDULE, METERING PROVISIONS, AND ALL SPECIFIED ACCESSORIES.

RECESS MOUNTED ELECTRICAL ENCLOSURE INSTALLATION DETAIL — SCALE: NOT TO SCALE — 8



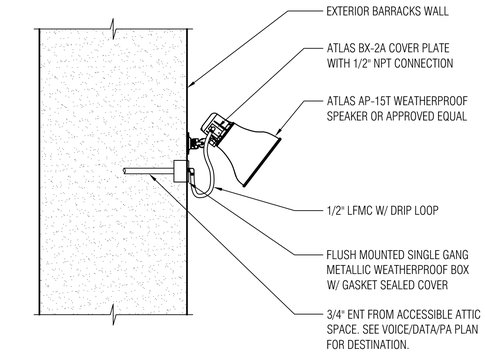
NOTES:
1. TOP OF TRENCH CONSTRUCTED PER APPLICABLE PAVEMENT, CONCRETE SLAB, OR LANDSCAPING REQUIREMENTS.
2. INSTALL DUCT SPACERS TO MAINTAIN 2" MINIMUM SPACING BETWEEN ELEC CONDUITS (EDGE-EDGE) AND 2" MINIMUM SPACING BETWEEN COMMS CONDUITS (EDGE-EDGE).
3. DETAIL IS A TYPICAL ARRANGEMENT WHERE CONDUITS ARE ASSUMED TO BE 2" PVC SCH40, THUS, ARE DRAWN WITH AN OUTSIDE DIAMETER OF 2-3/8". FOR ADDITIONAL AND/OR DIFFERENT SIZE CONDUITS, WIDTH OF TRENCH AND CONDUIT POSITIONS SHALL BE ADJUSTED TO MAINTAIN PRESCRIBED SPACING.

UG CONDUIT SECTION DETAIL - OTHER AREAS — SCALE: 1 1/2" = 1'-0" — 4



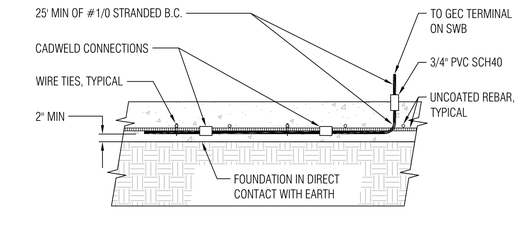
NOTES:
1. INSTALL DUCT SPACERS TO MAINTAIN 2" MINIMUM SPACING BETWEEN ELEC CONDUITS (EDGE-EDGE) AND 2" MINIMUM SPACING BETWEEN COMMS CONDUITS (EDGE-EDGE).
2. DETAIL IS A TYPICAL ARRANGEMENT WHERE CONDUITS ARE ASSUMED TO BE 2" PVC SCH40, THUS, ARE DRAWN WITH AN OUTSIDE DIAMETER OF 2-3/8". FOR ADDITIONAL AND/OR DIFFERENT SIZE CONDUITS, WIDTH OF TRENCH AND CONDUIT POSITIONS SHALL BE ADJUSTED TO MAINTAIN PRESCRIBED SPACING.

UG CONDUIT SECTION DETAIL - UNDER BLDG FOUNDATION — SCALE: 1 1/2" = 1'-0" — 5



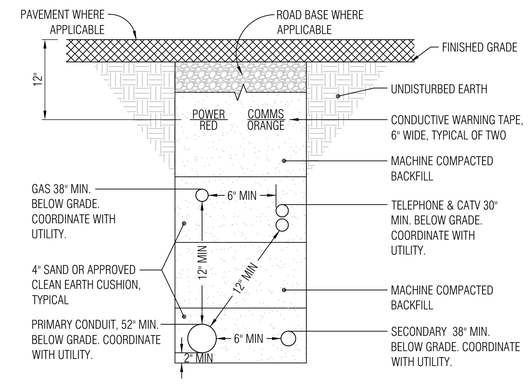
NOTES:
1. UTILIZING PAIR #1 OF THE PA SYSTEM WIRE CONNECT BLACK WIRE TO TERMINAL #1 AND RED WIRE TO TERMINAL #2 ON SPEAKER. TWO SPARE PAIRS ON WIRE SHALL BE TAPED/SECURED WITHIN THE COVER PLATE.

OUTDOOR HORN SPEAKER WALL MOUNT DETAIL — SCALE: NOT TO SCALE — 6

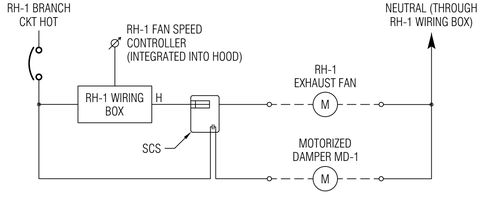


NOTES:
1. INSTALL 25' MINIMUM OF #1/0 STRANDED B.C. CONDUCTOR, 20' MINIMUM ENCASED WITHIN CONCRETE, MAINTAINING 2" MINIMUM SPACING FROM CONCRETE EDGES EXCEPT WHEN EXITING CONCRETE THROUGH SLEEVE.
2. SECURE B.C. CONDUCTOR TO REBAR EVERY 3' MINIMUM VIA STANDARD WIRE TIES AND VIA CADWELDS (TWO) AT THE 7' AND 14' POINTS ON CONDUCTOR. CADWELD CONNECTIONS SHALL BE UL LISTED AND RATED FOR DIRECT BURIAL IN CONCRETE.
3. INSTALL 3/4" PVC SCH40 SLEEVE EXITING CONCRETE WITHIN SWB SECTION CONTAINING GEC TERMINAL. EXTEND B.C. CONDUCTOR 5' MINIMUM PAST SLEEVE.

CONCRETE-ENCASED ELECTRODE "UFER" DETAIL — SCALE: NOT TO SCALE — 1



JOINT UTILITIES TRENCH DETAIL — SCALE: NOT TO SCALE — 2



NOTES:
1. PROVIDE SWITCHING CURRENT SENSOR (SCS), FUNCTIONAL DEVICES, INC. RIBXGHTA OR APPROVED EQUAL TO INTERLOCK OPERATION OF RH-1 EXHAUST FAN AND MOTORIZED DAMPER MD-1. INSTALL SCS IN NEMA 1 ENCLOSURE IN ATTIC, ACCESSIBLE FROM THE CATWALK ABOVE THE KITCHEN.
2. ROUTE HOT FOR RH-1 FAN THROUGH SPLIT-CORE CT LOOP OF SCS AND HOT FOR MD-1 THROUGH NO SPST CONTACT OF SCS.
3. PER MANUFACTURER'S INSTRUCTIONS, ADJUST TRIP POINT OF SCS SO THAT NO CONTACT CLOSES AT ALL RH-1 FAN SPEEDS. HOT FOR RH-1 FAN MAY BE WRAPPED THROUGH CT LOOP MORE THAN ONCE IF CURRENT AT LOW SPEED DOES NOT TRIP SCS.
4. INSTALL #14 CONDUCTORS FOR RH-1 AND MD-1 CIRCUITS.

RANGE HOOD EXHAUST FAN & DAMPER WIRING DIAGRAM — SCALE: NOT TO SCALE — 3

DSA Approval

IDENTIFICATION STAMP
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SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — E 23257 — ELECTRICAL — STATE OF CALIFORNIA

REVISIONS

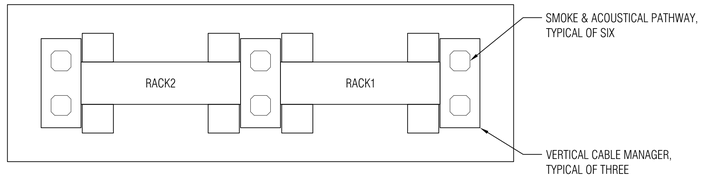
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NUMBER
E501
V3

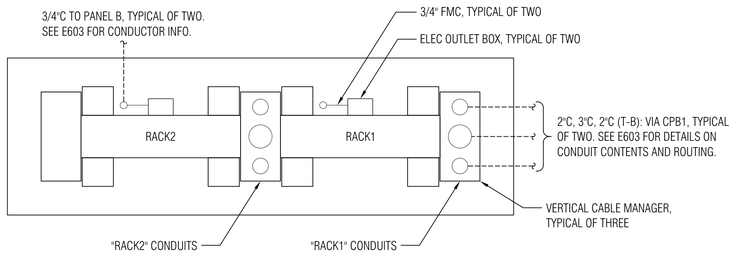
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PLOT DATE: Sep 06, 2023 - 2:31PM
VER 2020



NOTES:
1. INSTALL TWO (2) SMOKE & ACOUSTICAL PATHWAYS, STI NEZ33CK2 OR APPROVED EQUAL, IN THE CEILING DIRECTLY ABOVE EACH OF THE THREE (3) VERTICAL CABLE MANAGERS. INSTALL SLOTTED CHANNEL TO FRAME MEMBERS IN THE AREA ABOVE THE CEILING TO PROVIDE SUPPORT FOR THE PATHWAYS.
2. REFER TO PATHWAY MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

NETWORK EQUIPMENT RACK ABOVE CEILING PATHWAY DETAIL

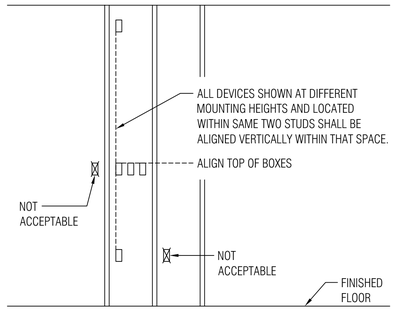
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NOTES:
1. CONDUITS FROM CPB1 SHALL BE PVC SCH40 WHICH TRANSITION TO GRS UTILIZING FACTORY GRS 90° ELBOWS, 24" MINIMUM RADIUS, BEFORE ENTERING FOUNDATION. EACH GRS SHALL STUB UP APPROXIMATELY 2-3" AFF DIRECTLY BELOW VERTICAL CABLE MANAGERS, AS SHOWN, AND BE FITTED WITH A INSULATED GROUNDING BUSHING.
2. 3/4"C FROM EACH RACK TO PANEL B SHALL BE PVC SCH40 WHICH TRANSITIONS TO EMT ABOVE GRADE BEFORE TERMINATING AT PANEL B. AFG AT EACH RACK, CONDUIT SHALL TRANSITION FROM PVC SCH40 TO FMC.

NETWORK EQUIPMENT RACK BELOW GRADE CONDUIT DETAIL

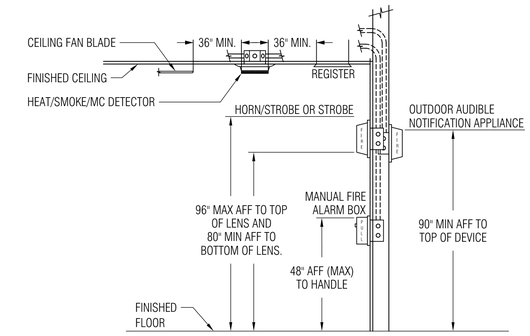
SCALE: NOT TO SCALE | 6



NOTES:
1. DEVICES INDICATED ABOVE DOORS SHALL BE CENTERED VERTICALLY BETWEEN TOP OF DOOR TRIM AND CEILING LINE AND HORIZONTALLY ACROSS DOOR OPENING, UON.
2. INFORM STATE REPRESENTATIVE OF ANY MOUNTING CONFLICTS.

DEVICE MOUNTING ELEVATION/ALIGNMENT DETAIL

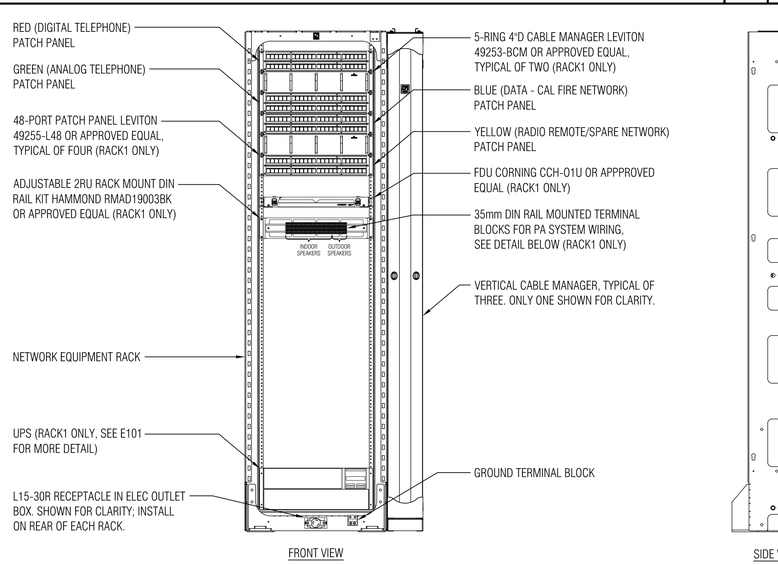
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NOTES:
1. INSTALLATION REQUIREMENTS FOR FIRE ALARM DEVICES SHOWN ABOVE ARE BASED ON CHAPTERS 17, 18, AND 29 IN THE APPLICABLE VERSION OF NFPA 72.
2. CONTRACTOR SHALL REFER TO OSFM STAMPED/APPROVED SET OF FIRE ALARM PLANS FOR OFFICIAL FIRE ALARM DEVICE INSTALLATION AND WIRING DETAILS.

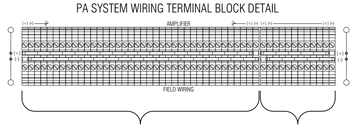
FIRE ALARM DEVICE MOUNTING DETAIL

SCALE: NOT TO SCALE | 1



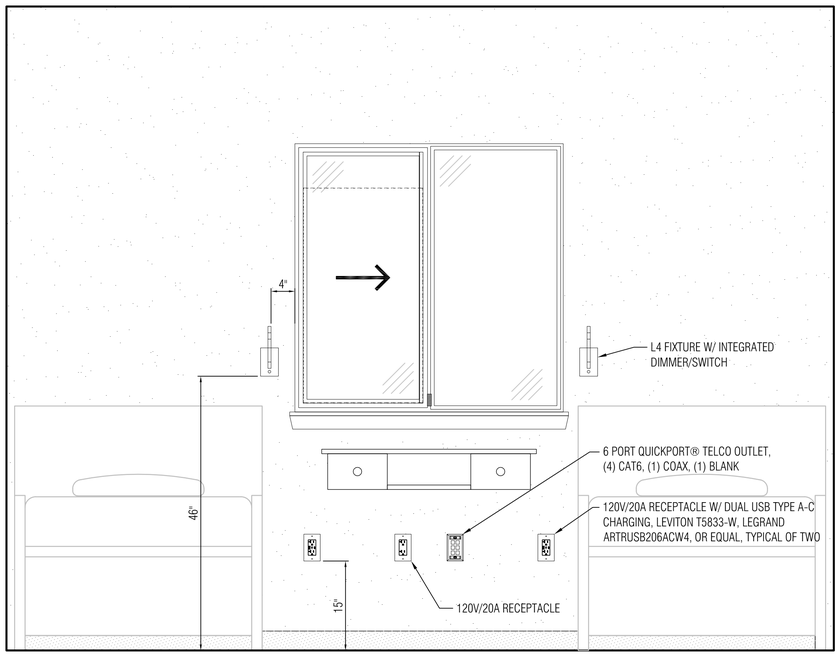
NOTES:
1. CONTRACTOR SHALL FURNISH CAT6 & FOC PATCH CORDS IN THE FOLLOWING LENGTHS, QTY'S, AND COLORS TO CAL FIRE:
   - 1 m: 30 PIECES IN EACH OF THE (4) COLORS LISTED ABOVE; 120 PIECES TOTAL
   - 1.5 m: 30 PIECES IN EACH OF THE (4) COLORS LISTED ABOVE; 120 PIECES TOTAL
   - 2 m: 30 PIECES IN EACH OF THE (4) COLORS LISTED ABOVE; 120 PIECES TOTAL
   - 3 m: 30 PIECES IN EACH OF THE (4) COLORS LISTED ABOVE; 120 PIECES TOTAL
   - 3 m: 2 PIECES OF 2F OM4 50u LC DUPLEX TO LC DUPLEX FIBER PATCH CORDS, CORNING 040402R5816003M OR EQUAL
2. FURNISH AND INSTALL 50 DIN RAIL MOUNTED TERMINAL BLOCKS, PARTITION PLATE BETWEEN INDOOR AND OUTDOOR SPEAKER SECTIONS, END STOPS, MARKING CARDS, AND PLUG-IN BRIDGES. IF AVAILABLE, STAGGERED BRIDGES SHALL BE USED TO SUPPORT +/- SPEAKER BUSSING, AS SHOWN, OTHERWISE STANDARD BRIDGES SHALL BE MODIFIED TO SUPPORT CONNECTION SCHEME. SEE SPECIFICATION SECTION 260519 FOR TERMINAL BLOCK AND ACCESSORY REQUIREMENTS.

PA SYSTEM WIRING TERMINAL BLOCK DETAIL



NETWORK EQUIPMENT RACK DETAIL

SCALE: NOT TO SCALE | 4



NOTES:
1. INSTALL ADJUSTABLE LED TASK LIGHTS (L4) ON BOTH SIDES OF WINDOW SUCH THAT EDGE OF J-BOX IS MOUNTED 4" FROM OUTSIDE EDGE OF WINDOW FRAME AND 46" AFF. SEE E604 FOR J-BOX SIZE/TYPE.
2. INSTALL RECEPTACLES WITH USB CHARGING PORTS, STANDARD RECEPTACLE, AND SIX PORT QUICKPORT® TELCO OUTLET 15" AFF (TO BOTTOM OF BOX), BELOW SHELF. SEE ARCH PLANS FOR DETAILS ON SHELF CONSTRUCTION.

BEDROOM WALL ELEVATION

SCALE: NOT TO SCALE | 2

DSA Approval

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REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
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OSFM Approval

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C130 BARRACKS

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REGISTERED PROFESSIONAL ENGINEER
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REVISIONS

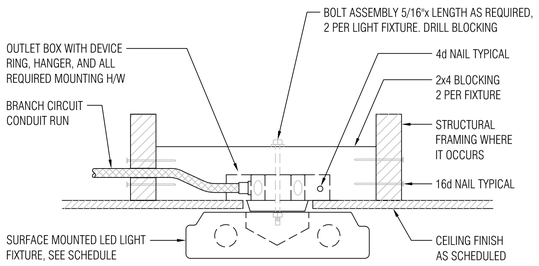
NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NUMBER
E502
V3

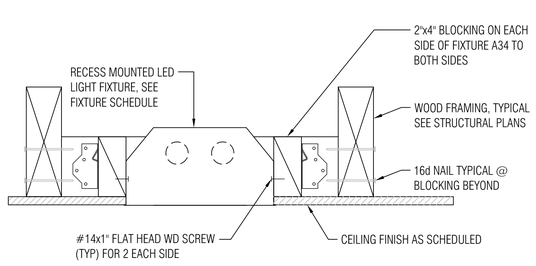
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PLOT DATE: Aug 28, 2023 - 9:36PM
VER 2020



SURFACE MOUNTED DOWNLIGHT FIXTURE MTG DETAIL

SCALE: NOT TO SCALE

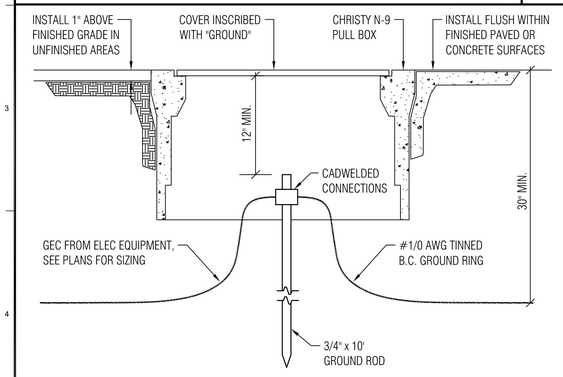
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RECESSED MOUNTED LIGHTING FIXTURE MOUNTING DETAIL

SCALE: NOT TO SCALE

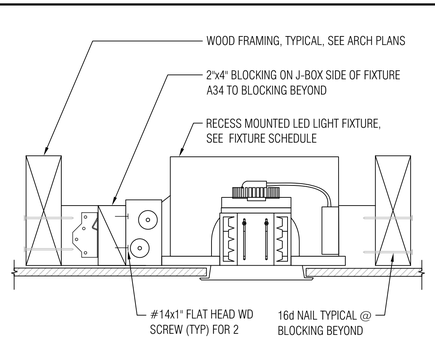
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GROUND ROD AND PULL BOX DETAIL

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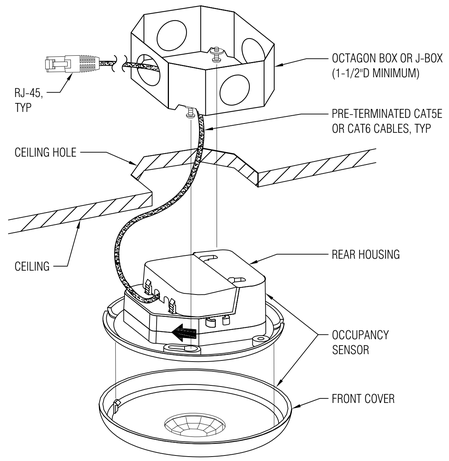
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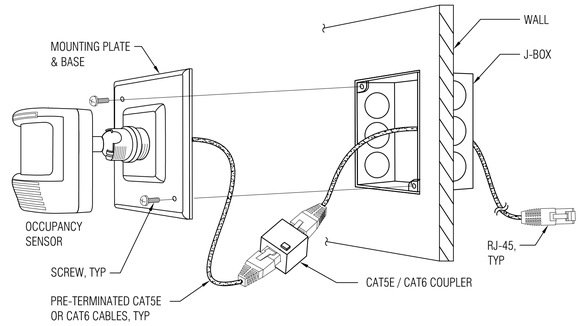
RECESSED DOWNLIGHT FIXTURE MOUNTING DETAIL

SCALE: NOT TO SCALE

4



CEILING MOUNT



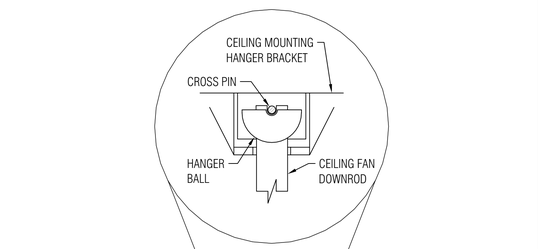
CORNER/WALL MOUNT

NOTES:
1. SENSORS SHOWN ABOVE ARE FOR INSTALLATION DETAIL ONLY AND DO NOT REPRESENT A SPECIFIC MODEL. SEE E604 FOR AN APPROVED LIST OF SENSOR MANUFACTURER AND MODELS.
2. REFER TO E121 FOR SPECIFIC MOUNTING LOCATIONS AND HEIGHTS (FOR CORNER/WALL MOUNT) AND E604 FOR SENSOR COVERAGE AREA.
3. REFER TO INSTALLATION INSTRUCTIONS FROM SUBMITTED AND APPROVED MANUFACTURER TO CONFIRM WHAT TYPE/SIZE OF J- BOX IS REQUIRED. NOTE: EVEN IF THE MANUFACTURER ALLOWS FOR DIRECT CEILING/WALL MOUNTING A J-BOX MUST BE INSTALLED.
4. REFER TO SPECIFICATION SECTION 260943 FOR NETWORK WIRING REQUIREMENTS. THIS INCLUDES BULK AND PRE-TERMINATED CAT5E AND CAT6 WIRING, COUPLERS, SPLITTERS, AND ALL OTHER NETWORK WIRING ACCESSORIES.

CEILING AND CORNER/WALL MOUNT DIGITAL OCCUPANCY SENSOR TYPICAL MOUNTING DETAILS

SCALE: NOT TO SCALE

1

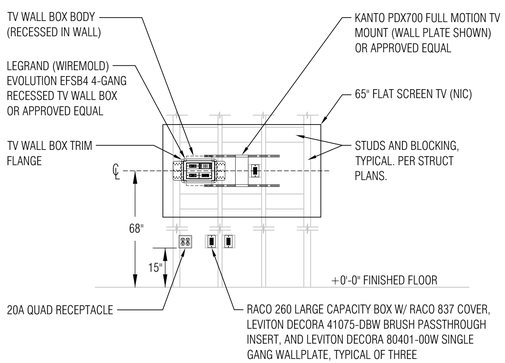


NOTES:
1. IF REQUIRED DUE TO STUD SPACING, CEILING FAN SHALL BE SUPPORTED VIA AN ADJUSTABLE (10 1/2" - 18 1/2") GALVANIZED BRACKET, THOMAS AND BETTS, CADDY OR EQUAL.
2. SEE ARCH PLANS FOR DIFFERENT CEILING TYPES INCLUDING DETAILS SUCH AS QTY OF GYP LAYERS, AREAS WITH RESILIENT CHANNEL, ETC., TO ENSURE PROPER BOX PLACEMENT AND DEPTH.

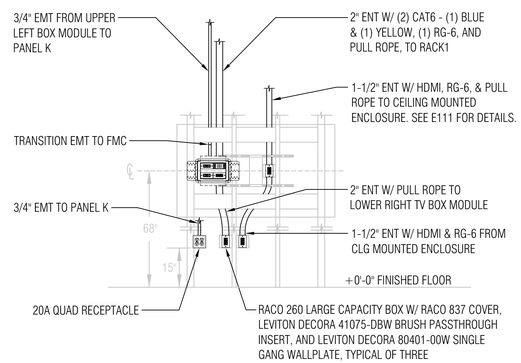
CEILING FAN MOUNTING DETAIL

SCALE: NOT TO SCALE

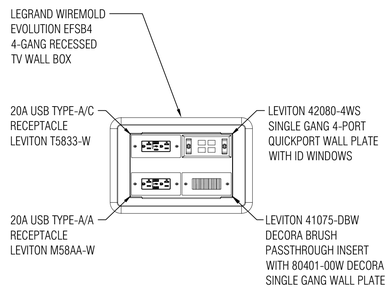
7



TV WALL BOX, TV MOUNT, AND COMMS J-BOXES



TV WALL BOX AND COMMS J-BOXES CONDUIT AND WIRING



TV WALL BOX DEVICE LAYOUT

NOTES:
1. STUDS SHOWN ABOVE ARE 16" (OC). STUD AND BLOCKING SIZES AND LOCATIONS SHOWN ARE APPROXIMATE. REFER TO STRUCTURAL PLANS. TV WALL BOX AND MOUNT INSTALLATION LOCATION SHALL BE COORDINATED WITH AND APPROVED BY STATE REPRESENTATIVE PRIOR TO INSTALLATION. TV WALL BOX SHALL BE INSTALLED PER "NEW WORK INSTALLATION" METHOD IN MANUFACTURER'S INSTALLATION MANUAL.
2. 2" ENT WITH TWO (2) CAT6 - (1) BLUE AND (1) YELLOW, (1) RG-6, AND PULL ROPE SHALL RUN FROM UPPER RIGHT BOX MODULE BACK TO RACK1 IN THE ELEC/TELECOMM ROOM; CAT6 TO CORRESPONDING PATCH PANELS IN RACK1 AND RG-6 COILED FOR FUTURE USE. 2" ENT SHALL TERMINATE ABOVE ELEC/TELECOMM ROOM CEILING AND TWO (2) CAT6 & PULL ROPE SHALL UTILIZE PATHWAY TO PASS THROUGH CEILING TO RACK1. SEE DETAIL 5 ON E502 FOR PATHWAY LAYOUT. TIE PULL ROPE OFF TO RACK1. CABLES AND PULL ROPE SHALL BE LABELED "FROM TV WALL BOX" AND PER THE NETWORK LABELING SCHEME DEFINED ON E111. SEE DETAIL 4 ON E502 FOR NETWORK EQUIPMENT RACK DETAIL.
3. IN ADDITION TO AFOREMENTIONED TWO (2) CAT6, RG-6 SHALL CONNECT TO THE SAME 4-PORT QUICKPORT WALL PLATE IN TV WALL BOX VIA A FEEDTHROUGH F-CONNECTOR, LEVITON 41084-FWF OR APPROVED EQUAL. INSTALL BLANK IN FOURTH PORT.
4. SEE BARRACKS POWER PLAN (E101) AND PANEL SCHEDULES (E602) FOR RECEPTACLE CIRCUIT INFORMATION.
5. BOX HAS A BUILT-IN TUNNEL ON EACH SIDE ALLOWING WIRING TO PASS FROM UPPER TO LOWER MODULES.
6. SUBSTITUTIONS FOR EQUIPMENT LISTED IN THIS DETAIL MUST BE SUBMITTED FOR APPROVAL.

RECESSED TV WALL BOX, TV MOUNT, COMMS J-BOXES, CONDUIT, WIRING, AND DEVICE LAYOUT DETAILS

SCALE: NOT TO SCALE

2

DSA Approval

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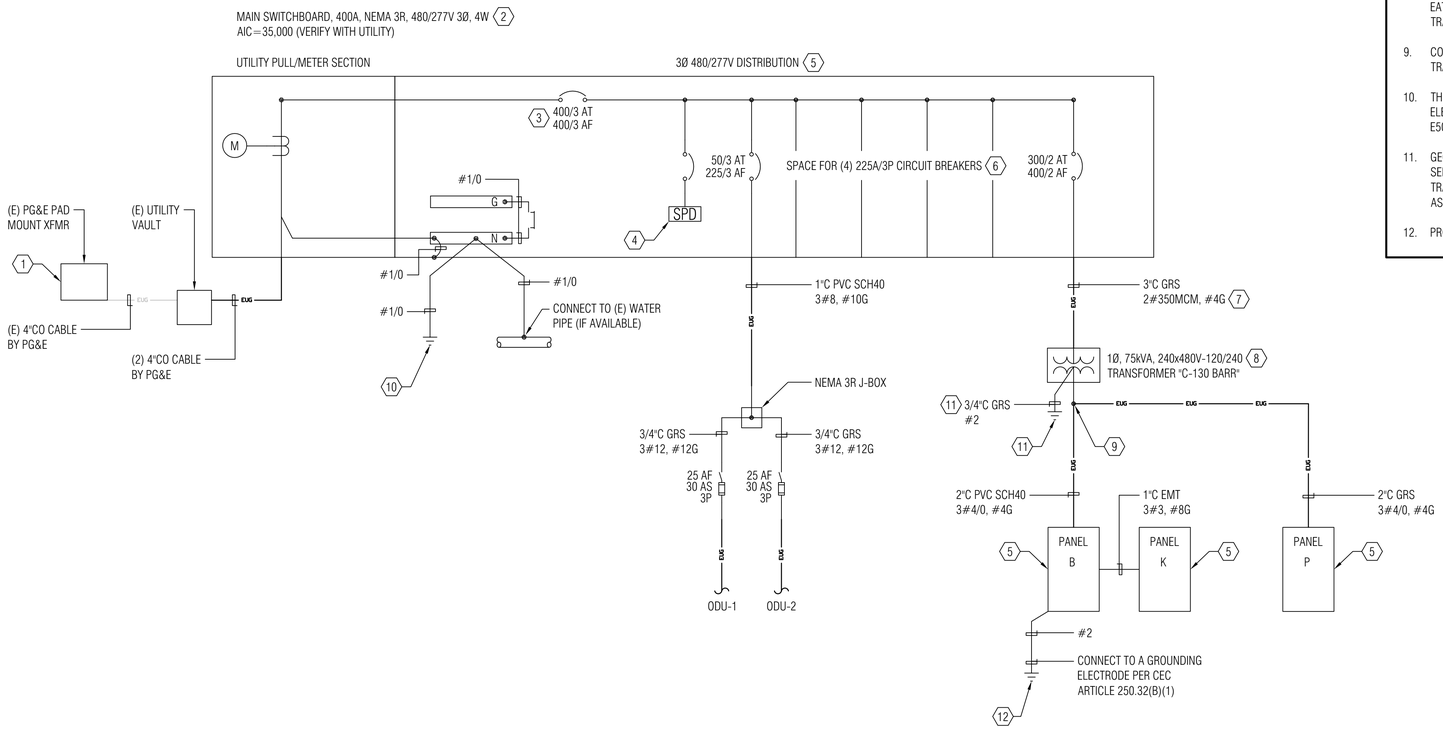
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ELECTRICAL DETAILS

SHEET NUMBER
E503
V3

PROJECT PATH: C:\Users\Egifford\AppData\Local\Temp\AcPublish_21\BIM360 Models\E503.dwg
PLOT DATE: Jun 26, 2023 - 9:53PM
VER 2020

SAFETY ELECTRICAL EQUIPMENT LABELING

- SAFETY SIGNS, SAFETY SYMBOLS, OR ACCIDENT PREVENTION TAGS SHALL BE USED WHERE NECESSARY TO WARN EMPLOYEES ABOUT ELECTRICAL HAZARDS WHICH MAY ENDANGER THEM, AS REQUIRED BY OSHA 1910.145, AS PER OSHA 1910.335(b)(1).
- ALL ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, SWITCHGEAR, PANELBOARDS, INDUSTRIAL CONTROL PANEL, METER SOCKET ENCLOSURES AND MOTOR CONTROL CENTERS THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD OR FACTORY MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL MEET THE REQUIREMENTS PER THE APPLICABLE REVISION OF THE CEC.



SINGLE LINE DIAGRAM

NOT TO SCALE

GENERAL SHEET NOTES

1. VERIFY EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO STATE REPRESENTATIVE PRIOR TO STARTING DEMOLITION AND/OR CONSTRUCTION.
2. OVERCURRENT PROTECTIVE DEVICE (OCPD) AND CONDUCTOR SIZES FOR HVAC ODU'S ARE BASED ON DAIKIN EQUIPMENT SPECIFIED ON MECHANICAL SHEETS. SHOULD HVAC EQUIPMENT FROM A DIFFERENT MANUFACTURER BE SUBMITTED AND APPROVED, CONTRACTOR SHALL UPDATE OCPD AND CONDUCTOR SIZES AS REQUIRED BY MANUFACTURER.

⬡ SHEET KEYNOTES

1. PACIFIC GAS & ELECTRIC (PG&E) TO PROVIDE NEW CONDUCTORS CONNECTED TO (E) PAD MOUNTED TRANSFORMER.
2. MAIN SWITCHBOARD, CONSISTING OF UTILITY PULL/METER AND MAIN BREAKER & 480/277V DISTRIBUTION SECTIONS, INCLUDING SURGE PROTECTIVE DEVICE (SPD).
3. MAIN CIRCUIT BREAKER SHALL BE 100% RATED WITH ELECTRONIC TRIP MODULE.
4. PROVIDE SPD EATON MODEL SPD250480Y3C OR APPROVED EQUAL. SPD AND ITS BREAKER SHALL BE INTEGRATED INTO 480/277V DISTRIBUTION SECTION. EXTERNAL OR SIDE MOUNTED MODELS WILL NOT BE ACCEPTED. CONNECTION AND WIRING REQUIREMENTS PER MANUFACTURER SPECIFICATIONS.
5. 480/277V DISTRIBUTION SECTION OF SWITCHBOARD AND PANEL B SHALL COMPLY WITH TITLE 24 PART 6 SECTION 130.5(b); SUPPORT INSTALLATION OF PROVISIONS FOR FUTURE METERING / BRANCH CIRCUIT MONITORING. PANELS B, K, AND P SHALL BE EATON TYPE PRL1X OR APPROVED EQUAL. SEE SPECIFICATION SECTION 262413 FOR MORE DETAILS. SEE E602 FOR PANEL DETAILS AND CIRCUIT ASSIGNMENTS.
6. CIRCUIT BREAKERS IN THE 480/277V DISTRIBUTION SECTION SHALL HAVE THE SAME AIC RATING AS THE MAIN BREAKER.
7. 3"C GRS, UTILIZING FACTORY 90° ELBOWS, SHALL SWEEP UNDERGROUND FROM 480/277V DISTRIBUTION SECTION AND STUB UP UNDER TRANSFORMER. VERIFY STUB-UP AREA WITH TRANSFORMER MANUFACTURER PRIOR TO ROUGH-IN.
8. PROVIDE AND INSTALL DOE 2016 EFFICIENCY RATED VENTILATED DRY-TYPE SINGLE PHASE DISTRIBUTION TRANSFORMER, EATON T20P11S7516 OR APPROVED EQUAL, WITH NEMA-3R WEATHERSHIELD, EATON WS44A OR APPROVED EQUAL. TRANSFORMER SHALL BE 75kVA, 240X480-120/240V, 150°C MINIMUM TEMPERATURE RISE, WITH ALUMINUM COILS.
9. CONDUCTORS FEEDING PANELS B AND P SHALL TERMINATE DIRECTLY ON THE SECONDARY TERMINALS OF THE TRANSFORMER. SEE SPECIFICATION SECTION 260519 FOR DETAILS ON TRANSFORMER TERMINAL CONNECTIONS.
10. THE GROUNDING ELECTRODE SYSTEM FOR THE SERVICE (SWITCHBOARD) SHALL BE A CONCRETE-ENCASED GROUNDING ELECTRODE (UFER), AS DEFINED IN ARTICLE 250.52(A)(3)(2) OF THE APPLICABLE VERSION OF THE CEC AND DETAIL 1 ON E501. UFER SHALL BE INSTALLED WITHIN THE CONCRETE PAD FOR THE SWITCHBOARD. SEE CS502 FOR PAD DETAILS.
11. GEC FOR 75kVA TRANSFORMER, SIZED AS SHOWN, SHALL CONNECT TO GROUNDING ELECTRODE SYSTEM USED FOR SERVICE. INSTALL TRANSFORMER GEC IN 3/4" GRS, STUB UP INTO SECTION OF SWB WITH GEC TERMINAL, AND CONNECT TRANSFORMER GEC TO THE #1/0 STR B.C. CONDUCTOR EXTENDING OUT OF CONCRETE PAD USING A CONNECTOR LISTED AS GROUNDING AND BONDING EQUIPMENT, PER UL 467. SEE DETAIL 1 ON E501 FOR DETAILS ON UFER.
12. PROVIDE A GROUNDING ELECTRODE SYSTEM PER ARTICLES 250.50 THRU 250.53 IN APPLICABLE VERSION OF CEC.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
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FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
SINGLE LINE DIAGRAM

SHEET NUMBER
E601
V3

VER 2020
PROJECT PATH: C:\Users\Egifford\appdata\local\temp\AcPublish_20612\E601.dwg
PLOT DATE: Jul 23, 2023 - 4:22PM

GENERAL SHEET NOTES

1. BREAKER IN PANEL B FOR THE FACP SHALL BE MARKED RED, LABELED "FIRE ALARM", AND BE LOCKED IN THE OPEN POSITION BY PROVIDING AND INSTALLING A FIRE ALARM CIRCUIT LOCKOUT KIT ACER BOX ELOCK-FA OR APPROVED EQUAL.

PANEL B

VOLTAGE = 120/240V, 1PH, 3W | MAIN CB = 225A | AIC = 10kA | ENCLOSURE TYPE : NEMA 1

FEED ENTRY : BOTTOM | POLES = 60 | BUS = 225A | MOUNTING : RECESS

POLE #	C.B. AMP/P	LOAD	KVA PHASE A	A	B	KVA PHASE B	LOAD	C.B. AMP/P	POLE #
1	20/1	(*) LIBRARY RECEPTACLES	0.7	1.2		0.5	(**) WASHING MACHINE	20/1	2
3	20/1	(*) LIBRARY/HALL 1 RECEPTACLES	0.7		3.2	2.5	(#) DRYER	30/2	4
5	20/1	(*) STORAGE, HALL 2/3, & EXT REC	1.3	3.8		2.5			6
7	20/1	(*) BATHROOM RECEPTACLES	0.5		1.3	0.7	(*) PHYS TRN & EXT RECEPTACLES	20/1	8
9	20/1	(*) LAUNDRY RECEPTACLES	0.5	2.3		0.9	(*) PHYS TRN & EXT RECEPTACLES	20/1	10
11	20/1	(*) BEDROOM RECEPTACLES	1.4		2.0	0.7	MECH ROOM RECEPTACLES	20/1	12
13	20/1	(*) BEDROOM RECEPTACLES	1.3	2.0		0.5	ELEC/TELECOMM RM RECPTACLES	20/1	14
15	20/1	(*) BEDROOM RECEPTACLES	1.4		4.1	2.9	RACK1 UPS	30/1	16
17	20/1	(*) BEDROOM RECEPTACLES	1.3	0.2			RACK2 UPS (FUTURE)	30/1	18
19	20/1	(*) CEILING FANS	0.2		0.3	0.2	BATHROOM LIGHTING	20/1	20
21	20/1	PANEL LTB	0.1	0.9		0.4	BEDROOM LIGHTING	20/1	22
23	20/1	EXTERIOR LIGHTING	0.2		1.0	0.8	MISC INTERIOR LIGHTING	20/1	24
25	20/1	FIRE SMOKE DAMPERS	0.1	0.8		0.7	ATTIC LIGHTS	20/1	26
27	15/2	HRCU-1, HRCU-2	0.1		0.8	0.7	HPWH-1	15/2	28
29			0.1	0.8		0.7			30
31	15/2	IDU-3	0.7		1.3	0.7	HPWH-2	15/2	32
33			0.7	1.3		0.7			34
35	15/2	IDU-4	1.1		1.5	0.4	IDU-1 (ALL)	15/2	36
37			1.1	1.5		0.4			38
39	15/2	ERV-1	0.2		0.4	0.2	IDU-2 (ALL)	15/2	40
41			0.2	0.4		0.2			42
43	20/1	SPARE					SPARE	20/1	44
45	20/1	SPARE					SPARE	20/1	46
47	20/1	SPARE					SPARE	20/1	48
49	20/1	SPARE					SPARE	20/1	50
51	20/1	SPACE					SPACE	20/1	52
53	20/1	SPACE					SPACE	20/1	54
55	20/1	SPACE					SPACE	20/1	56
57	100/2	PANEL K	8.1	8.1			SPACE	20/1	58
59			8.1		8.2	0.1	FACP	20/1	60
CONNECTED KVA PER PHASE			23.4			24.1	NOTES:		

LOAD SUMMARY (KVA)	CONN.	FACTOR	DEMAND
RECEPTACLES (FIRST 10 KVA)	10.0	100%	10.0
RECEPTACLES (OVER 10 KVA)	10.2	50%	5.1
NON-CONTINUOUS LOADS	8.0	100%	8.0
CONTINUOUS LOADS	2.9	125%	3.6
LARGEST MOTOR	0.8	25%	0.2
TOTAL	31.1		26.9
TOTAL DEMAND LOAD AMPS			112.1

1. (*) = PROVIDE AFCI CIRCUIT BREAKER
2. (**) = PROVIDE AFCI & GFCI COMBO CIRCUIT BREAKER
3. (#) = PROVIDE GFCI CIRCUIT BREAKER

LO = LUGS ONLY; CB = CIRCUIT BREAKER

PANEL K

VOLTAGE = 120/240V, 1PH, 3W | MAIN LO | AIC = 10kA | ENCLOSURE TYPE : NEMA 1

FEED ENTRY : BOTTOM | POLES = 30 | BUS = 100A | MOUNTING : RECESS

POLE #	C.B. AMP/P	LOAD	KVA PHASE A	A	B	KVA PHASE B	LOAD	C.B. AMP/P	POLE #
1	20/1	(*) DAY ROOM/DINING REC	1.6	5.6		4.0	(*) RANGE	50/2	2
3	20/1	(*) DAY ROOM/DINING REC	1.8		5.8	4.0			4
5	20/1	(*) KITCHEN RECEPTACLES	1.3	1.8		0.5	RANGE HOOD FAN	20/1	6
7	20/1	(*) KITCHEN RECEPTACLES	1.3		1.8	0.6	(*) REFRIGERATOR	20/1	8
9	20/1	(*) GARBAGE DISPOSAL	1.2	1.8		0.6	(*) REFRIGERATOR	20/1	10
11	20/1	(**) DISHWASHER	0.9		1.4	0.6	(*) FREEZER	20/1	12
13	20/1	(**) H2O BOTTLE FILLING STATION	0.6	0.6			SPARE	20/1	14
15	20/1	SPARE					SPARE	20/1	16
17		SPACE					SPACE		18
19		SPACE					SPACE		20
21		SPACE					SPACE		22
23		SPACE					SPACE		24
25		SPACE					SPACE		26
27		SPACE				0.5	KITCHEN, DAY/DINING, PHY TRN LTS	20/1	28
29	20/1	PATIO LIGHTS	0.1	0.7		0.6	EM INVERTER (LIGHTING)	20/1	30
CONNECTED KVA PER PHASE				10.4		9.6	NOTES:		

LOAD SUMMARY (KVA)	CONN.	FACTOR	DEMAND
RECEPTACLES (FIRST 10 KVA)	10.0	100%	10.0
RECEPTACLES (OVER 10 KVA)	8.3	50%	4.2
NON-CONTINUOUS LOADS	0.5	100%	0.5
CONTINUOUS LOADS	1.2	125%	1.5
LARGEST MOTOR	0.5	25%	0.1
TOTAL	20.0		16.3
TOTAL DEMAND LOAD AMPS			67.8

1. (*) = PROVIDE AFCI CIRCUIT BREAKER
2. (**) = PROVIDE AFCI & GFCI COMBO CIRCUIT BREAKER

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PANEL P

VOLTAGE = 120/240V, 1PH, 3W | MAIN LO | AIC = 10kA | ENCLOSURE TYPE : NEMA 3R

FEED ENTRY : BOTTOM | POLES = 18 | BUS = 225A | MOUNTING : SURFACE

POLE #	C.B. AMP/P	LOAD	KVA PHASE A	A	B	KVA PHASE B	LOAD	C.B. AMP/P	POLE #
1	20/1	SOUTH POWER PEDESTAL	0.2	0.4		0.2	NORTH POWER PEDESTAL	20/1	2
3	40/2	FUTURE EV CHARGER #1	3.6		7.2	3.6	FUTURE EV CHARGER #3	40/2	4
5			3.6	7.2		3.6			6
7	40/2	FUTURE EV CHARGER #2	3.6		7.2	3.6	FUTURE EV CHARGER #4	40/2	8
9			3.6	7.2		3.6			10
11		SPACE					SPACE		12
13		SPACE					SPACE		14
15		SPACE					SPACE		16
17	20/1	SPARE					SPARE	20/1	18
CONNECTED KVA PER PHASE				14.8		14.4	NOTES:		

LOAD SUMMARY (KVA)	CONN.	FACTOR	DEMAND
RECEPTACLES (FIRST 10 KVA)	0.4	100%	0.4
RECEPTACLES (OVER 10 KVA)		50%	
NON-CONTINUOUS LOADS		100%	
CONTINUOUS LOADS	28.8	125%	36.0
LARGEST MOTOR		25%	
TOTAL	29.2		36.4
TOTAL DEMAND LOAD AMPS			151.5

LO = LUGS ONLY; CB = CIRCUIT BREAKER

DSA Approval

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C130 BARRACKS

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FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
PANEL SCHEDULES

SHEET NUMBER
E602
V3

PROJECT PATH: C:\Users\EgiffordJappdata\local\temp\AcPublish_13\7\08\2421E602.dwg
PLOT DATE: Sep 07, 2023 - 3:30PM
VER 2020

GENERAL SHEET NOTES

1. ALL BELOW GRADE CONDUIT SHALL BE PVC SCHEDULE 40 UON. PRIOR TO TRANSITIONING ABOVE GRADE THROUGH FOUNDATION, FOOTING, OR EQUIPMENT PAD, GALVANIZED RIGID STEEL (GRS) ELBOWS SHALL BE USED TO TRANSITION FROM PVC TO GRS UON. OUTDOORS, ALL EXPOSED ABOVE GRADE CONDUIT SHALL BE GRS UON. INDOORS, ONCE GRS IS ABOVE GRADE IT MAY BE TRANSITIONED TO EMT UON.
2. "SPARE" CONDUIT MAY BE LISTED AS C OR CO, BOTH OF WHICH IMPLY AN EMPTY CONDUIT WITH PULL ROPE.
3. INSTALL FOC WITHIN CONTINUOUS RUN OF HDPE INNERDUCT FROM START TO END OF RUN, THROUGH ALL CONDUITS.

SITE CONDUIT AND CONDUCTOR SCHEDULE

TRENCH RUN	CONDUIT	CONDUCTORS	LOAD SERVED	NOTES:
ELECTRICAL				
PAD MOUNT UTILITY XFMR TO (E) VAULT	(E) 4"C PVC	BY PG&E	UTILITY TRANSFORMER	VERIFY ELECTRICAL REQUIREMENTS W/ SUPPLIER BEFORE ROUGH-IN
(E) VAULT TO PULL/METER SECTION OF SWB	(2) 4"CO PVC	BY PG&E	METER/MAIN CB IN SWB	VERIFY ELECTRICAL REQUIREMENTS W/ SUPPLIER BEFORE ROUGH-IN
480V DISTRIBUTION SECTION OF SWB TO XFMR	3"C, 3/4" GRS	2#350MCM,#4G,#2 B.C.	SINGLE PHASE 75kVA XFMR	FROM SWB, BELOW GRADE, STUB-UP INTO XFMR CASE. FEEDER (3") AND GEC (3/4") FOR XFMR.
SINGLE PHASE 75kVA XFMR TO EPB1	(2) 2"C PVC	3#4/0,#4G	PANEL B, SPARE	
EPB1 TO PANEL B	(2) 2"C, 1.5"CO PVC	3#4/0,#4G	PANEL B, SPARE	
480V DISTRIBUTION SECTION OF SWB TO J-BOX FOR ODU'S	1"C PVC	3#8,#10G	ODU-1,2	FROM SWB, BELOW GRADE, TRANSITION TO 1"C GRS, THEN STUB UP INTO WALL MOUNT NEMA 3R J-BOX
SINGLE PHASE 75kVA XFMR TO PANEL P	2"C GRS	3#4/0,#4G	PANEL P	FROM XFMR, BELOW GRADE, STUB-UP INTO PANEL P
FUTURE SOLAR EQUIPMENT TO EPB2	(2) 2"CO PVC		FUTURE PV SOLAR	STUB-UP CONDUITS 6" AFG BEHIND SWB PAD AND CAP
PANEL P TO EPB2	(3) 1.5"C PVC	2#10,#10G	POWER PEDESTAL, FUTURE EV CHARGER(S), SPARE	GRS FROM PANEL, TRANSITION TO PVC BELOW GRADE
EPB2 TO EPB3	(3) 1.5"C PVC	2#10,#10G	POWER PEDESTAL, FUTURE EV CHARGER(S), SPARE	EPB3 SHALL SUPPORT EV CAPABLE PARKING SPACES
EPB2 TO STUB-UPS AT BUILDING	(2) 2"CO PVC		FUTURE PV SOLAR	STUB-UP CONDUITS 3" AFG AND CAP, OFFSET APPROX 2" FROM EDGE OF PERIMETER FOOTING
EPB3 TO 120V POWER PEDESTAL	3/4"C PVC	2#10,#10G	POWER PEDESTAL	STUB UP APPROX 2" ABOVE TOP OF PEDESTAL BASE
PANEL P TO EPB4	(3) 1.5"C PVC	2#10,#10G	POWER PEDESTAL, FUTURE EV CHARGER(S), SPARE	GRS FROM PANEL, TRANSITION TO PVC BELOW GRADE
EPB4 TO EPB5	(3) 1.5"C PVC	2#10,#10G	POWER PEDESTAL, FUTURE EV CHARGER(S), SPARE	EPB5 SHALL SUPPORT EV CAPABLE PARKING SPACES
EPB5 TO 120V POWER PEDESTAL	3/4"C PVC	2#10,#10G	POWER PEDESTAL	STUB UP APPROX 2" ABOVE TOP OF PEDESTAL BASE
PANEL B TO RACK1	3/4"C PVC	2#10,#10G,#6G	RACK1 RECEPTACLE, RACK BONDING CONDUCTOR	SEE E101 & E111 FOR MORE DETAIL ON GROUNDING/BONDING OF EQUIPMENT RACKS, INCLUDING CONDUCTOR DETAILS
PANEL B TO RACK2	3/4"C PVC	2#10,#10G	RACK2 RECEPTACLE	
TELECOM & FIRE ALARM				
NETWORK EQUIPMENT RACK1 TO CPB1	(2) 2"CO, 3"C PVC	MM FOC, SPEAKER CABLE	SPARE, CAL FIRE NETWORK & RADIO/PA SYSTEM	3"C: INSTALL MM FOC WITHIN 3/4" SMOOTHWALL HDPE INNERDUCT AND BELDEN 5304F1 SPEAKER CABLE
NETWORK EQUIPMENT RACK2 TO CPB1	(2) 2"CO, 3"CO PVC		SPARE	
FACP TO CPB1	1"C PVC	FAA CABLE	FIRE ALARM ANNUNCIATOR (FAA)	TO FAA IN ECC COMMAND ROOM; SEE ES101 FOR MORE DETAILS
CPB1 TO CPB2	(4) 2"CO, 3"CO, 3"C, 1"C PVC	MM FOC, SPEAKER CABLE, FAA CABLE	SPARE, CAL FIRE NETWORK & RADIO/PA SYSTEM, FAA	3"C: MM FOC AND SPEAKER CABLE
CPB2 TO (E) CPB3	(4) 2"CO, 3"CO, 3"C, 1"C PVC	MM FOC, SPEAKER CABLE, FAA CABLE	SPARE, CAL FIRE NETWORK & RADIO/PA SYSTEM, FAA	3"C: MM FOC AND SPEAKER CABLE
(E) CPB3 TO (E) CPB4	(E) 2"C PVC	MM FOC, SPEAKER CABLE	CAL FIRE NETWORK & RADIO/PA SYSTEM	USE (E) PULL ROPE IN (E) 2"C TO INSTALL MM FOC AND SPEAKER CABLE
(E) CPB4 TO COMMUNICATION ROOM	(E) 3"C PVC	MM FOC, SPEAKER CABLE	CAL FIRE NETWORK & RADIO/PA SYSTEM	USE (E) PULL ROPE IN (E) 3"C TO INSTALL MM FOC & SPKR CABLE. SEE E111 FOR FOC & SPKR CABLE DESTINATION.
(E) CPB3 TO (E) CPB5	(E) 3"C PVC	FAA CABLE	FAA	USE (E) PULL ROPE IN (E) 3"C TO INSTALL FAA CABLE
(E) CPB5 TO (E) FA J-BOX	(E) 3/4"C PVC	FAA CABLE	FAA	INSTALL FAA CABLE IN (E) 3/4"C CARRYING (E) FA CABLES TO (E) J-BOX ON NORTH WALL OF ECC COMMS ROOM
CPB1 TO CPB6	(2) 1.5"CO		SPARE (FOR FUTURE SATELLITE TV)	
CPB6 TO STUB-UPS	(2) 1"CO		SPARE (FOR FUTURE SATELLITE TV)	STUB-UP CONDUIT 3" AFG AND CAP, OFFSET APPROX 2" FROM EDGE OF PERIMETER FOOTING

DSA Approval

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DATE: 04/15/2024

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REGISTERED PROFESSIONAL ENGINEER
E 23257
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STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
ELEC, TELECOM, & FIRE ALARM SITE CONDUIT & CONDUCTOR SCHEDULE

SHEET NUMBER
E603
V3

PROJECT PATH: C:\Users\EgiffordappdataIocallamp\AcPublish_8304\421 E603.dwg
PLOT DATE: Jul 22, 2023 - 9:55PM

PLUG LOAD AND LIGHTING CONTROL MATRIX

ROOM NAME	PLUG CKT# & LETTER/TAG	LIGHTING CKT# & LETTER/TAG	FIXTURE TYPE(S)	DIGITAL LIGHTING DEVICE QUANTITIES AND LETTER/TAG ASSOCIATION									NON-DIGITAL LTG DEVICE QTY'S			NOTES
				SWITCH	LETTER / TAG	DIMMER / SWITCH	LETTER / TAG	SWITCH / DOS	LETTER / TAG	DOS	DOS TYPE	LETTER / TAG	SWITCH / OS	DIMMER	SWITCH	
BATHROOM 1	N/A	20a	L5A,L8	N/A	N/A	N/A	N/A	1	a,b	N/A	N/A	N/A	N/A	N/A	N/A	1
BATHROOM 1	N/A	20b	L6	N/A	N/A	1	b			N/A	N/A	N/A	N/A	N/A	N/A	1
BATHROOM 2	N/A	20c	L5A,L8	N/A	N/A	N/A	N/A	1	c,d	N/A	N/A	N/A	N/A	N/A	N/A	1
BATHROOM 2	N/A	20d	L6	N/A	N/A	1	d			N/A	N/A	N/A	N/A	N/A	N/A	1
BATHROOM 3	N/A	20e	L5A,L8	N/A	N/A	N/A	N/A	1	e,f	N/A	N/A	N/A	N/A	N/A	N/A	1
BATHROOM 3	N/A	20f	L6	N/A	N/A	1	f			N/A	N/A	N/A	N/A	N/A	N/A	1
PHYSICAL TRAINING	N/A	K-28d	L1	1	d	N/A	N/A	1	d	N/A	N/A	N/A	N/A	N/A	N/A	2,3
MECHANICAL ROOM	N/A	24	L3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
STORAGE 1	N/A	24	L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
STORAGE 2	N/A	24	L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 1	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 1	N/A	22a	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 2	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 2	N/A	22b	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 3	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 3	N/A	22c	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 4	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 4	N/A	22d	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 5	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 5	N/A	22e	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
BEDROOM 6	N/A	22	L4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,4
BEDROOM 6	N/A	22f	L7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
LAUNDRY	N/A	24	L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1
LIBRARY	3c	24c	L1H	N/A	N/A	N/A	N/A	1	c	N/A	N/A	N/A	N/A	N/A	N/A	1
ELEC/TELECOMM ROOM	N/A	24	L3E	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	1,5
ENTRY & HALL 1	N/A	24d	L2	N/A	N/A	N/A	N/A	2	d	N/A	N/A	N/A	N/A	N/A	N/A	1,3
HALL 2	N/A	24b	L2	N/A	N/A	1	b	1	b	1	CORNER	b	N/A	N/A	N/A	1,3
HALL 3	N/A	24a	L2	N/A	N/A	1	a	N/A	a	1	CORNER	a	N/A	N/A	N/A	1,3
KITCHEN & PANTRY	N/A	K-28c	L5	N/A	N/A	2	c	N/A	N/A	1	CEILING	c	N/A	N/A	N/A	2
DINING ROOM	N/A	K-28b	L1C	N/A	N/A	2	b	N/A	N/A	1	CORNER	b	N/A	N/A	N/A	2,3
DAY ROOM	N/A	K-28a	L1C	N/A	N/A	1	a	N/A	N/A	1	CORNER	a	N/A	N/A	N/A	2
DINING ROOM EXT PATIO	N/A	K-29d	L5	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	2,5

NOTES:

1) LIGHTING BRANCH CIRCUIT FROM PANEL B.

2) LIGHTING BRANCH CIRCUIT FROM PANEL K.

3) THE CEILING MOUNTED "EM" FIXTURE(S) IN THIS ROOM/AREA ARE PROVIDED BATTERY BACKED UP POWER FOR EMERGENCY EGRESS VIA AN EM INVERTER. SEE EM INVERTER SCHEDULE ON THIS SHEET FOR INVERTER DETAILS, LIGHTING PLAN FOR INVERTER INSTALLATION DETAILS, AND WIRING DIAGRAMS FOR DETAILS ON THE EM POWER SCHEME AND DIMMING CONTROL FOR THESE FIXTURES.

4) SPECIFIED L4 FIXTURE HAS AN INTEGRATED DIMMER/SWITCH.

5) DIGITAL SWITCH CONNECTED TO PANEL LTB TO PROVIDE TWO (HOUR) OVERRIDE FOR EXTERIOR AND PATIO LIGHTING. SEE LIGHTING PLAN AND SEQUENCE OF OPERATIONS ON THIS SHEET FOR MORE DETAILS.

LIGHTING FIXTURE SCHEDULE

TYPE	OPTION #1 MANUFACTURER / MODEL #	OPTION #2 MANUFACTURER / MODEL #	WATTS CCT(K)/CRI	MOUNTING	DESCRIPTION
L1	PRUDENTIAL LTG BPRO4-REC-FLSH-LED35-90-MO-4'-TMW-BTW-LP-SC-UN V-X3-DM01	PINNACLE ARCHITECTURAL LTG EV4D-BW-935HO-4'-FLF-U-FSD-1-0-W	22/27W 3500/90	RECESS	4'W x 4'L RECESSED LINEAR/SLOT LED FIXTURE W/ FLUSH LENS, 0-10V DIMMING, AND BATWING DISTRIBUTION. FOR IC RATED CONSTRUCTION. SEE E121, E604, AND E605 FOR DETAILS ON HOW EM BACKUP POWER WILL BE PROVIDED TO "EM" DESIGNATED L1 FIXTURES.
L1C	PRUDENTIAL LTG BPRO4-REC-FLSH-LED35-90-MO-R12'-TMW-BTW-LP-SC-UNV-X3-DM01	PINNACLE ARCHITECTURAL LTG EV4D-BW-935HO-12'-FL-U-FSD-1-0-W	67/80W 3500/90	RECESS	SAME AS L1 BUT IN A 12'L CONTINUOUS ROW. SHOP DRAWINGS REQUIRED W/ SUBMITTAL FOR APPROVAL/ORDERING. SEE E121, E604, AND E605 FOR DETAILS ON HOW EM BACKUP POWER WILL BE PROVIDED TO "EM" DESIGNATED L1C FIXTURES.
L1H	PRUDENTIAL LTG BPRO4-REC-FLSH-LED35-90-HO-4'-TMW-BTW-LP-SC-UN V-X3-DM01	PINNACLE ARCHITECTURAL LTG EV4D-BW-9351250-4'-FLF-U-FSD-1-0-W	42/44W 3500/90	RECESS	SAME AS L1 BUT WITH HIGHER LUMENS OUTPUT
L2	LITHONIA CPANL-1X4-AL01-SWW7-M4 (PROVIDE WITH DCMK 14)	WILLIAMS ASM-4-L46/935-S-S-A-DIM-UNV	41/34W 3500/90	SURFACE	ARCHITECTURAL SLIM / FLAT PANEL LED FIXTURE W/ ALUMINUM FRAME AND 0-10V DIMMING. CSA CERTIFIED. SEE E121 FOR DETAILS ON HOW EM BACKUP POWER WILL BE PROVIDED TO "EM" DESIGNATED L2 FIXTURES.
L3	LITHONIA ZL1N-L48-5000LM-FST-MVOLT-35K-90CRI-WH (PROVIDE WITH WIRE GUARD WGZ48)	WILLIAMS 76-4-L53/935-WG-7611-DIM-UNV	34W 3500/90	SURFACE	LED STANDARD STRIP FIXTURE W/ 0-10V DIMMING. HOUSING DIE-FORMED COLD ROLLED STEEL. CSA CERTIFIED. PROVIDE W/ WIREGUARD.
L3E	LITHONIA ZL1N-L48-5000LM-FST-MVOLT-35K-90CRI-E10WLCP-WH (PROVIDE WITH WIRE GUARD WGZ48)	WILLIAMS 76-4-L53/935-EM/BSL310LP-WG-7611-DIM-UNV	34W 3500/90	SURFACE	SAME AS L3 BUT W/ CONSTANT 10 WATT CA TITLE 20 MAEDbS CERTIFIED EM BATTERY/DRIVER INTEGRATED INTO FIXTURE
L4	MODERN FORMS BEAM (BL-20922-BK) (MOUNT TO SINGLE GANG BOX)	MODERN FORMS REFLEX (BL-21924-BK) (MOUNT TO OCTAGON J-BOX)	8W 3000/90	WALL	CONTEMPORARY WALL MOUNTED ADJUSTABLE LED TASK LAMP W/ ALUMINUM CONSTRUCTION, BLACK FINISH, AND INTEGRATED DIMMER SWITCH. LED SHALL HAVE 50,000 HOURS MIN RATED LIFE.
L5	JUNO IC22LED-G4-14LM-35K-90CRI-MVOLT ZT1 (OPEN TRIM W/ TAPERED WHITE BAFFLE 24 WWH)	COOPER LIGHTING (HALO COMMERCIAL) HC615D010-HM60525935-61WDWB (MOUNTING FRAME-LED MODULE-TRIM)	16/14W *3500/90	RECESS	6" LED RECESSED DOWNLIGHT FOR IC RATED CONSTRUCTION W/ 0-10V DIMMING AND WIDE FLOOD OPTIC. LISTED FOR DAMP LOCATIONS. *DINING ROOM PATIO FIXTURES SHALL BE 4000K INSTEAD OF 3500K.
L5A	JUNO IC22LED-G4-06LM-35K-90CRI-MVOLT ZT10	COOPER LIGHTING (HALO COMMERCIAL) HC605D010-HM60525935-61WDWB	8/6W 3500/90	RECESS	SAME AS L8 BUT WITH REDUCED OUTPUT AND JUNO HAS 10% (0-10V) DIMMING INSTEAD OF 1% (0-10V) DIMMING
L6	JUNO IC22LED-G4-06LM-35K-90CRI-MVOLT ZT10 (*LENSED TRIM 2330 WWH)	COOPER LIGHTING (HALO COMMERCIAL) HC615D010-HM60525935-61WDWB	8/6W 3500/90	RECESS	COMPARABLE TO L8A BUT LISTED FOR WET LOCATIONS. *JUNO FURNISHED WITH WHITE BAFFLE REGRESS FROSTED DOME LENS W/ WHITE TRIM RING.
L7	VANTAGE LIGHTING A4V0CLED1-1330K-C400-WHT-FL-WHT-NCFIC-HCR-ZDM	COOPER LIGHTING (HALO COMMERCIAL) HC415D010-HM40525930-41WDWB	14W 3000/90	RECESS	4" LED RECESSED DOWNLIGHT FOR IC RATED CONSTRUCTION W/ 1% (0-10V) DIMMING, EXTRA WIDE BEAM (>75°), AND WHITE REFLECTOR OR BAFFLE
L8	LITHONIA FMVCSLS-36IN-MVOLT-35K-90CRI-BN	CURRENT LIGHTING (LITECONTROL) 67L-W-D-3-3-SQ-C4-35K9-D100-D01-1C-UNV	27/26W 3500/90	WALL	36" WIDE INDOOR DECORATIVE LED W/ 0-10V DIMMING. MINIMUM OUTPUT OF 2500 LUMENS. LISTED FOR DAMP LOCATIONS.
L9	LITHONIA WDGE2 LED-P3SW-40K-80CRI-VW-MVOLT-SRM-DDBXD-PIR1FC3V	LEOTEK ES1-24H-MV-NW-W-DB-350-PC-MSL2	23/29W 4000 80/70	WALL	EXTERIOR LED WALL SCONCE W/ DIE CAST ALUMINUM HOUSING. LISTED FOR WET LOCATIONS W/ MIN IP RATING OF 65. SHALL HAVE INTEGRATED MOTION/AMBIENT (PHOTOCELL) SENSOR. CSA CERTIFIED.
L9E	LITHONIA WDGE2 LED-P2SW-40K-80CRI-VF-MVOLT-SRM-DDBXD-E10WH-PIR1FC3VD	LEOTEK ES1-24H-MV-NW-FT-DB-350-PC-MSL2-EM2	15/30W 4000 80/70	WALL	SAME AS L9 BUT W/ FORWARD THROW DISTRIBUTION AND CA TITLE 20 MAEDbS CERTIFIED EM BATTERY/DRIVER INTEGRATED INTO FIXTURE
EX1	LITHONIA EDGR-1-G-X2 (*WM)	WILLIAMS EXIT/EL/RECESSED-SF-G-CP-AN-AC-DC-D (*WM)	4W N/A	CEILING / *WALL	RECESSED LED EDGE-LIT EXIT SIGN. BRUSHED ALUMINUM HOUSING. SINGLE FACE CLEAR ACRYLIC PANEL W/ GREEN LETTERING. DUAL AC CIRCUIT. UL 924 LISTED. *PROVIDE WM OPTION FOR DINING ROOM PATIO DOOR SIGN.
EX2	LITHONIA EDGR-2-GMR-X2	WILLIAMS EXIT/EL/RECESSED-DF-G-MP-AN-AC-DC-D	4W N/A	CEILING	SAME AS EX1 BUT DOUBLE FACE ON MIRROR PANEL. CEILING MOUNT ONLY.

NOTES: 1) ALL FIXTURES ARE LED AND 120 VAC UON. 2) POWER CONSUMPTION #'S HAVE BEEN ROUNDED UP. SEE MANUFACTURER FOR EXACT FIGURES.

CENTRALIZED LIGHTING EMERGENCY INVERTER SCHEDULE

ID	OPTION #1 MANUFACTURER / MODEL #	OPTION #2 MANUFACTURER / MODEL #	OUTPUT POWER	CONNECTED FIXTURES	DESCRIPTION
EM1	IOTA IIS 250 HE DR	BEGHELLI VESTA MINI VST-220W/250VA-UNV-48VDC	250/220W	L1 - PHYSICAL TRAINING ROOM, L1C - DINING ROOM, EX1 & EX2 - VARIOUS	CA TITLE 20 COMPLIANT AND UL 924 LISTED EM LIGHTING INVERTERS WITH SINUSOIDAL BASED OUTPUT AND SUFFICIENT BATTERY POWER TO OPERATE DESIGNATED FIXTURES AT FULL OUTPUT FOR 90 MINUTES UPON LOSS OF NORMAL POWER. SEE E121 FOR MOUNTING LOCATION/DETAILS AND E121 & E605 FOR DETAILS ON DIMMING CONTROL.
EM2	IOTA IIS 250 HE DR	BEGHELLI VESTA MINI VST-220W/250VA-UNV-48VDC	250/220W	L2 - ENTRY, HALL 1, HALL 2, & HALL 3	

NOTE: INVERTER INPUT AND OUTPUT VOLTAGE SHALL BE 120 VAC UON

PLUG LOAD AND LIGHTING CONTROL EQUIPMENT SCHEDULE

DEVICE DESCRIPTION	LEGRAND WATTSTOPPER P/N	RATING	ACUITY nLight P/N	RATING	DESCRIPTION/NOTES
DIMMING ROOM CONTROLLER (1-RELAY)	LMRC-111	120V/10A	nPP16 D EFP	120V/16A	1/2" KO MOUNTED, 0-10V DIMMING
DIMMING ROOM CONTROLLER (2-RELAY)	LMRC-112	120V/10A	(2) nPP16 D EFP	120V/16A	1/2" KO MOUNTED, 0-10V DIMMING. SEE NOTE 1.
EMERGENCY LIGHTING CONTROLLER / RELAY PACK	ELCU-200	120V/16A	nPP16 D ER EFP	120V/16A	1/2" KO MOUNTED. SEE NOTE 2.
PLUG LOAD CONTROLLER	LMPL-101	120V/20A	nPP20 PL	120V/20A	1/2" KO MOUNTED
DUAL TECHNOLOGY CORNER/WALL MOUNTED DOS	LMDX-100	N/A	nWV PDT 16	N/A	OPTIONAL BRACKET REQ'D TO CEILING MOUNT nLight DOS. SEE NOTE 3.
DUAL TECHNOLOGY CEILING MOUNTED DOS	LMDC-100	N/A	nCM PDT 10 RJB	N/A	SEE NOTE 3
DUAL TECHNOLOGY WALL DIMMER/SWITCH DOS	LMDW-102	N/A	nWSX PDT LV DX	N/A	SEE NOTE 4
DIGITAL DIMMER WALL SWITCH	LMDM-101	N/A	nPODMA DX	N/A	SEE NOTE 5
DIGITAL WALL SWITCH	LMSW-101	N/A	nPODMA	N/A	SEE NOTE 6
NON-DLC 2-BUTTON DUAL TECH WALL DIMMER/SWITCH OS	DW-311	1kW, 0-10V	*WSXA PDT D	0.8kW, 0-10V	DUAL TECH DIMMER/SWITCH OS W/ 0-10V DIMMING. *BY SENSORSWITCH.
NON-DLC DIMMER/SWITCH	RH4FBL3PW	1.2kW, 0-10V	*sPODMRA D	0.8kW, 0-10V	0-10V DIMMING. *BY SENSORSWITCH.

NOTES:

1) nLight DOES NOT HAVE A MULTI-ROOM CONTROLLER. THE nPP16 D EFP IS A SINGLE RELAY DIMMING CONTROLLER. ONE SHALL BE FURNISHED FOR EACH LIGHTING LOAD RELAY REQUIRED.

2) ELCU-200 MUST BE USED IN CONJUNCTION WITH LMRC-111/112. nPP16 E ER EFP IS A SINGLE RELAY DIMMING ROOM CONTROLLER THAT PERFORMS NORMAL/EM POWER SWITCHING AND DIMMING BYPASS.

3) WATTSTOPPER DUAL TECHNOLOGY SENSORS EMPLOY PIR AND ULTRASONIC DETECTION. nLight DUAL TECHNOLOGY SENSORS EMPLOY PIR AND MICROPHONIC™ DETECTION.

4) TWO BUTTON LMDW-102 SHALL BE PROGRAMMED TO PROVIDE ON/OFF AND DIMMING. nWSX PDT LV DX HAS SEPARATE BUTTONS FOR ON/OFF AND DIMMING CONTROL.

5) LMDM-101 ONLY AVAILABLE IN SINGLE BUTTON MODEL, WITH ON/OFF AND DIMMING CONTROL. nPODMA AVAILABLE AS SWITCH AND DIMMER/SWITCH (DX VERSION) CAPABLE OF CONTROLLING 1, 2, OR 4 "CHANNELS".

6) LMSW-101 IS A SINGLE BUTTON SWITCH, ALTHOUGH, IT IS ALSO AVAILABLE IN 2, 3, 4, AND 8 BUTTON MODELS. SEE NOTE 5 REGARDING nPODMA SWITCH CAPABILITIES.

7) A COLOR IDENTIFIER IS NOT INCLUDED IN THE ABOVE P/N'S. SEE SPECIFICATION SECTION 262726 - WIRING DEVICES FOR DEVICE AND WALL PLATE FINISHES WHICH VARY BY LOCATION.

DIGITAL PLUG LOAD AND LIGHTING CONTROL MATRIX

THIS SCHEDULE IS A REFERENCE FOR THE LIGHTING CONTROLS MANUFACTURER REPRESENTATIVE AND ELECTRICAL CONTRACTOR INSTALLER TO FACILITATE THE PROGRAMMING OF THE DIGITAL LIGHTING MANAGEMENT CONTROLLERS AND ALL ASSOCIATED DIGITAL LIGHTING MANAGEMENT DEVICES AND THEIR CONNECTIONS. REFER TO THE LIGHTING CONTROL WIRING DIAGRAMS FOR ADDITIONAL WIRING AND CONNECTION DETAILS.

DIGITAL PLUG LOAD AND LIGHTING CONTROL SYSTEM REQUIREMENTS AND SEQUENCE OF OPERATIONS

1. THE DIGITAL PLUG LOAD AND LIGHTING CONTROL SYSTEM SHALL BE AN INTELLIGENT DIGITAL LIGHTING MANAGEMENT DISTRIBUTED CONTROL SYSTEM.
2. ALL DIGITAL PLUG LOAD AND LIGHTING CONTROLLERS / RELAY PACKS SHALL BE INSTALLED IN THE ABOVE CEILING SPACE IN AN ACCESSIBLE AREA.
3. UNLESS OTHERWISE NOTED, IN EVERY ROOM WITH A DIGITAL LIGHTING CONTROL SYSTEM DEVICE OR A COMBINATION DIMMER SWITCH AND OCCUPANCY SENSOR, THE LIGHTING SHALL AUTOMATICALLY TURN ON TO 75% INTENSITY WHEN OCCUPANCY IS DETECTED. THE OCCUPANT MAY MANUALLY INCREASE OR DECREASE THE LIGHTING INTENSITY VIA SWITCHES WITH DIMMING CAPABILITY. THE LIGHTING SHALL AUTOMATICALLY TURN OFF, USING A 5 SECOND FADE RATE, 20 MINUTES AFTER THE ROOM BECOMES VACANT.
4. IF A WATTSTOPPER SYSTEM IS INSTALLED THE LMDW-102 IN THE BATHROOMS, PHYSICAL TRAINING ROOM, LIBRARY, HALL 1 & ENTRY, AND HALL 2 SHALL BE PROGRAMMED TO PROVIDE DIMMING BY HOLDING THE DEVICE BUTTONS TO INCREASE/DECREASE THE LIGHTING OUTPUT.
5. IN BATHROOMS 1 THRU 3 THE OCCUPANCY SENSOR AUTOMATIC "ON" FUNCTION SHALL TURN ON THE LIGHTS IN THE BATHROOM AREA ONLY. THE OCCUPANCY SENSOR AUTOMATIC "OFF" FUNCTION SHALL TURN OFF THE LIGHTS IN THE BATHROOM AREA AND SHOWER (IF THEY HAVE BEEN TURNED ON PREVIOUSLY VIA THE DIGITAL DIMMER SWITCH). THE DIGITAL DIMMER SWITCH CONTROLS THE LIGHTS IN THE SHOWER ONLY.
6. IN THE LIBRARY SELECTED POWER OUTLETS (SEE POWER PLAN) ARE CONTROLLED VIA THE DIGITAL WALL MOUNT OCCUPANCY SENSOR AND THE PLUG LOAD ROOM CONTROLLER / RELAY PACK.
7. EXTERIOR AND PATIO LIGHTS SHALL BE OPERATED BY A LIGHTING CONTROL PANEL WHICH TURNS LIGHTING ON 30 MINUTES BEFORE DUSK AND SHUTS IT OFF AT MIDNIGHT. SEPARATE DIGITAL OVERRIDE SWITCHES FOR BOTH EXTERIOR AND PATIO LIGHTING SHALL TURN FIXTURES ON FOR A PERIOD OF TWO HOURS, AFTER WHICH THEY SHALL RETURN TO NORMAL OPERATION. SEE LIGHTING CONTROL PANEL RELAY SCHEDULE ON LIGHTING PLAN FOR ADDITIONAL DETAILS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

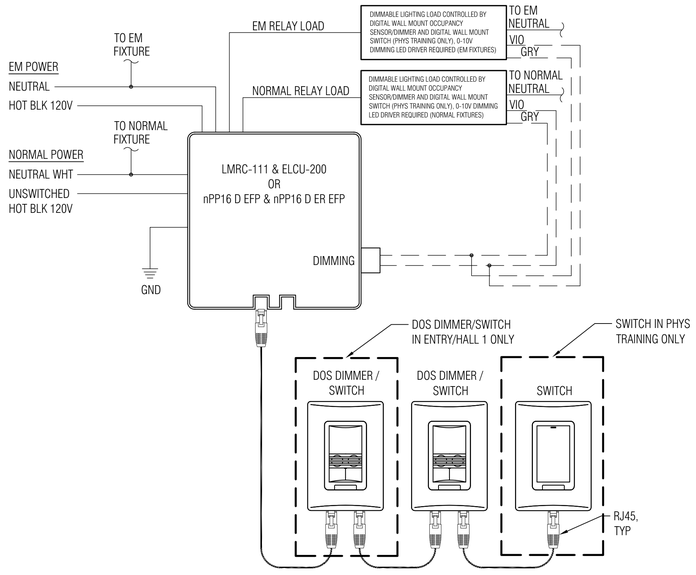
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DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

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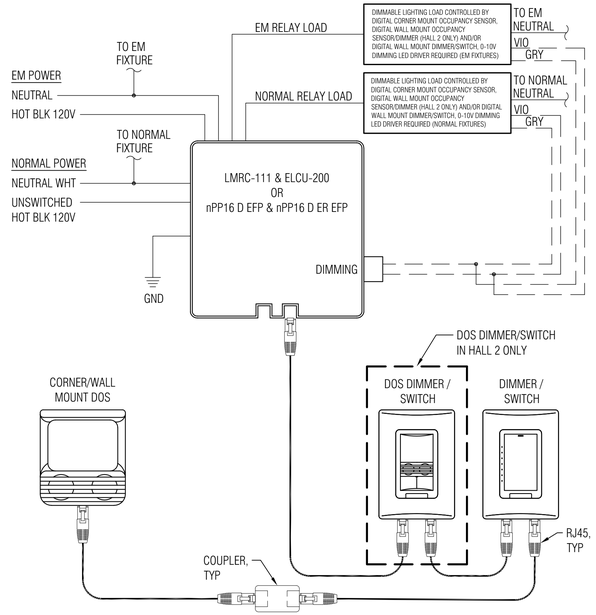
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E604
V3

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VER 2020



NOTES:
1. BACKUP POWER FOR EM FIXTURES IN THIS AREA SOURCED FROM EM INVERTER. SEE E121 FOR MORE DETAILS.
2. NORMAL POWER HOT & NEUTRAL CONNECTED TO LMRC-111 & ELCU-200 OR nPP16 D EFP & nPP16 D ER EFP.
3. WATTSTOPPER OPTION: DIMMING CIRCUIT FROM LMRC-111 SHALL BE SPLICED TO NORMAL AND EM FIXTURES. nLight OPTION: DIMMING CIRCUIT FROM nPP16 D EFP SHALL GO TO NORMAL FIXTURES AND DIMMING CIRCUIT FROM nPP16 D ER EFP SHALL GO TO EM FIXTURES.
4. nPP16 D ER EFP DOES NOT PROVIDE CLASS 2 POWER TO ITS RJ-45 PORTS, THUS, CAT5e FROM SWITCHES AND nPP16 D ER EFP SHALL CONNECT TO nPP16 D EFP.
5. EM POWER CIRCUITS FROM INVERTER & FIXTURE TO ELCU OR EM RELAY PACK SHALL BE IN DEDICATED CONDUIT(S).
6. REFER TO MANUFACTURER'S INSTALL INSTRUCTIONS TO VERIFY WIRING COLOR AND SIZING.

ENTRY/HALL 1 & PHYSICAL TRAINING LIGHTING CONTROL WIRING DIAGRAM — SCALE: NOT TO SCALE — 4

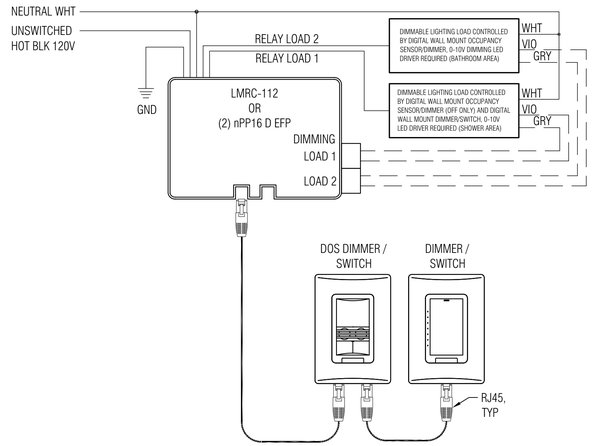


NOTES:
1. BACKUP POWER FOR EM FIXTURES IN THIS AREA SOURCED FROM EM INVERTER. SEE E121 FOR MORE DETAILS.
2. NORMAL POWER HOT & NEUTRAL CONNECTED TO LMRC-111 & ELCU-200 OR nPP16 D EFP & nPP16 D ER EFP.
3. WATTSTOPPER OPTION: DIMMING CIRCUIT FROM LMRC-111 SHALL BE SPLICED TO NORMAL AND EM FIXTURES. nLight OPTION: DIMMING CIRCUIT FROM nPP16 D EFP SHALL GO TO NORMAL FIXTURES AND DIMMING CIRCUIT FROM nPP16 D ER EFP SHALL GO TO EM FIXTURES.
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5. EM POWER CIRCUITS FROM INVERTER & FIXTURE TO ELCU OR EM RELAY PACK SHALL BE IN DEDICATED CONDUIT(S).
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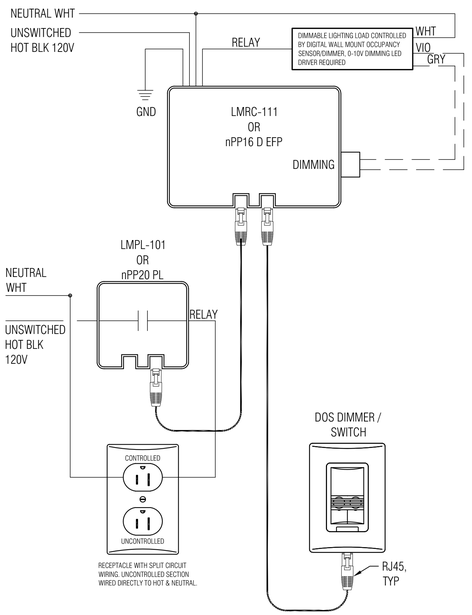
HALL 2 & HALL 3 LIGHTING CONTROL WIRING DIAGRAM — SCALE: NOT TO SCALE — 3

GENERAL SHEET NOTES

1. EQUIPMENT SHOWN DOES NOT REPRESENT ACTUAL WATTSTOPPER OR nLight PRODUCTS. INTENT OF DIAGRAM IS TO SHOW TYPICAL CIRCUIT CONNECTIONS FOR LIGHTING LOADS AND CONTROLS IN EACH AREA, IRRESPECTIVE OF LIGHTING CONTROL MANUFACTURER.
2. ALL DIMMING IS 0-10V WITH CLASS 2 WIRING. VERIFY WIRE / TERMINAL DESIGNATIONS WITH MANUFACTURER.
3. SEE E604 FOR PLUG LOAD AND LIGHTING CONTROL MATRIX AND EQUIPMENT SCHEDULE.
4. ALTHOUGH DRC / RELAY PACKS MAY BE SHOWN WITH ONLY ONE NETWORK CONNECTION ALL DLCS DEVICES MUST BE NETWORKED.
5. SEE SPECIFICATION SECTION 260943 FOR DETAILS AND REQUIREMENTS FOR NETWORK WIRING, COUPLERS, SPLITTERS, ETC.

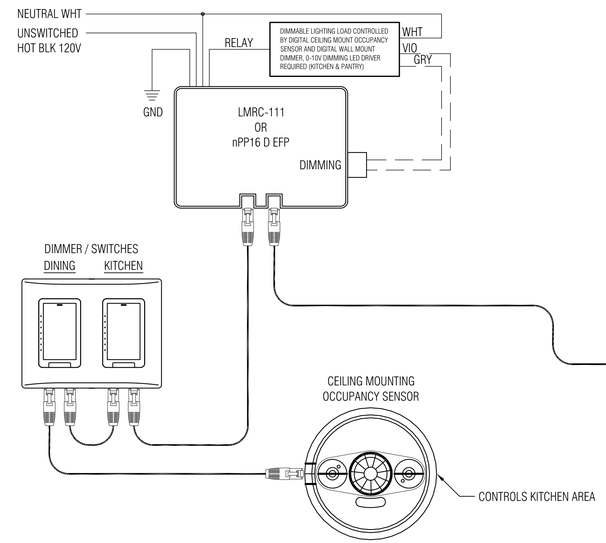


BATHROOMS LIGHTING CONTROL WIRING DIAGRAM — SCALE: NOT TO SCALE — 1

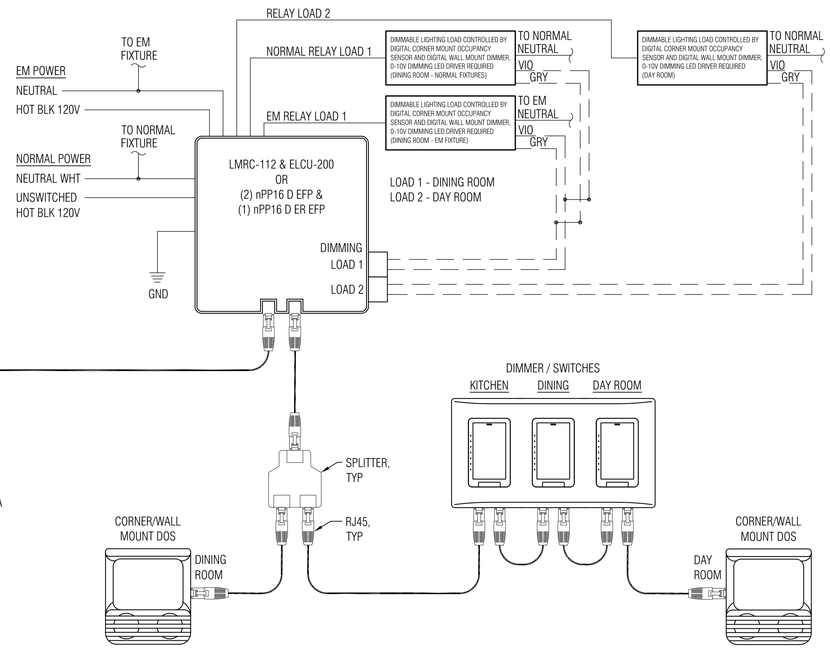


LIBRARY PLUG LOAD AND LIGHTING CONTROL WIRING DIAGRAM — SCALE: NOT TO SCALE — 5

KITCHEN & PANTRY



DINING & DAY ROOM



NOTES:
1. BACKUP POWER FOR EM FIXTURE IN DINING ROOM SOURCED FROM EM INVERTER. SEE E121 FOR MORE DETAILS.
2. NORMAL POWER HOT & NEUTRAL CONNECTED TO LMRC-112 & ELCU-200 OR (2) nPP16 D EFP & (1) nPP16 D ER EFP.
3. WATTSTOPPER OPTION: DIMMING CIRCUIT FOR LOAD 1 FROM LMRC-112 SHALL BE SPLICED TO NORMAL AND EM FIXTURES IN DINING ROOM. nLight OPTION: DIMMING CIRCUIT FROM (1) nPP16 D EFP SHALL GO TO NORMAL FIXTURE IN DINING ROOM AND DIMMING CIRCUIT FROM nPP16 D ER EFP SHALL GO TO EM FIXTURE IN DINING ROOM.
4. nPP16 D ER EFP DOES NOT PROVIDE CLASS 2 POWER TO ITS RJ-45 PORTS, THUS, CAT5e FROM DLC DEVICES, INCLUDING nPP16 D ER EFP, SHALL CONNECT TO THE TWO nPP16 D EFP.
5. EM POWER CIRCUITS FROM INVERTER & FIXTURE TO ELCU OR EM RELAY PACK SHALL BE IN DEDICATED CONDUIT(S).
6. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS TO VERIFY WIRING COLOR AND SIZING.

KITCHEN & PANTRY, DINING, AND DAY ROOM LIGHTING CONTROL WIRING DIAGRAMS — SCALE: NOT TO SCALE — 2

DSA Approval

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DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — E 23257 — ELECTRICAL — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
-		

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
PLUG LOAD AND LIGHTING CONTROL WIRING DIAGRAMS

SHEET NUMBER
E605
V3

PROJECT PATH: C:\Users\gifford\appdata\local\temp\AcPublish_6884\24D7E6D0.dwg
PLOT DATE: Jul 23, 2025 - 5:01PM
VER 2020



FIRE ALARM PLAN

SCALE: 3/16" = 1-0"

PLAN NORTH

GENERAL SHEET NOTES

1. THIS FIRE ALARM PLAN IS FOR REFERENCE ONLY.
2. REGARDLESS OF THE OCCUPANCY OF THE BARRACKS OR THE REQUIREMENT FOR AN AUTOMATIC WET-PIPE SPRINKLER, THE CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL AN ADDRESSABLE FIRE ALARM SYSTEM WHICH INCORPORATES THE FUNCTIONALITY OUTLINED IN THIS PLAN.
3. A SEPARATE PLAN CHECK SUBMITTAL AND FIRE PERMIT IS REQUIRED FOR THE FIRE ALARM SYSTEM.
4. THE COMPLETE FIRE ALARM PLANS AND CALCULATIONS, INCLUDING SEQUENCE OF OPERATIONS MATRIX, DEVICE LIST WITH ADDRESSING, RISER DIAGRAM, BATTERY AND VOLTAGE DROP CALCULATIONS, WIRE CHART, DEVICE AND SYMBOL LEGEND, INSTALLATION AND WIRING DETAILS, PRODUCT SUBMITTAL WITH CALIFORNIA STATE FIRE MARSHALL (CSFM) LISTINGS, ETC. SHALL BE PROVIDED BY FIRE ALARM CONTRACTOR AND SUBMITTED TO THE OFFICE OF THE STATE FIRE MARSHALL (OSFM) FOR PLAN CHECK APPROVAL AND PERMIT PRIOR TO INSTALLATION. A COMPLETE COPY OF THIS SUBMITTAL SHALL BE PROVIDED TO CAL FIRE FOR APPROVAL. UPON APPROVAL, CAL FIRE WILL DELIVER THE COMPLETE SUBMITTAL TO THE OSFM.
5. FIRE ALARM SYSTEM SHALL CONFORM TO THE APPLICABLE VERSION OF THE CEC, CFC, AND NFPA 72.
6. CENTRAL STATION MONITORING WILL NOT BE PROVIDED FOR THE BARRACKS FACP. PER ARTICLE 26.4 IN THE 2022 REVISION OF NFPA 72, THE BARRACKS FIRE ALARM SYSTEM DESIGN AND THE FRESNO AAB FACILITIES MEET ALL THE REQUIREMENTS OF A PROPRIETARY SUPERVISING STATION ALARM SYSTEM. CONSEQUENTLY, THE MONITORING OF THE BARRACKS FIRE ALARM SYSTEM WILL BE PERFORMED BY THE STAFF OF THE EMERGENCY COMMAND CENTER (ECC). THE ECC IS STAFFED WITH TRAINED, COMPETENT PERSONNEL FROM CAL FIRE AND USFS AND HAS TWO PEOPLE MINIMUM ON SITE 24 HOURS A DAY, 365 DAYS A YEAR WHO WILL SERVE AS FIRST RESPONDERS. THE FIRE ALARM SYSTEM FOR THE ECC AND AIR OPS BUILDING IS CURRENTLY MONITORED BY THE ECC STAFF.
7. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES, SHALL BE APPROVED BY THE OSFM.
8. ALL DEVICES, APPLIANCES, AND EQUIPMENT IN THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CSFM.
9. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BEGIN UNTIL COMPLETE PLANS AND SPECIFICATIONS, INCLUDING CSFM LISTING NUMBERS FOR ALL SYSTEM COMPONENTS, HAVE BEEN APPROVED BY THE OSFM.
10. 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 DEPUTY STATE FIRE MARSHALL (DSFM).
11. FIRE ALARM SYSTEM SHALL BE TESTED BY QUALIFIED AND EXPERIENCED PERSONNEL, FACTORY TRAINED AND CERTIFIED; DOCUMENTATION REQUIRED.
12. A MINIMUM OF 72 HOURS NOTICE SHALL BE REQUIRED PRIOR TO ANY TESTING AND/OR INSPECTION.
13. BEFORE REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE DSFM WHICH CONFIRMS THE SYSTEM HAS BEEN INSTALLED AND TESTED IN ACCORDANCE WITH THE APPLICABLE VERSION OF NFPA 72.
14. ALL CONDUITS, RACEWAYS, TERMINAL & JUNCTION BOXES, AND CABINETS SHALL BE PAINTED OR COATED RED FROM THE MANUFACTURER.
15. AN AVERAGE AMBIENT SOUND LEVEL GREATER THEN 105 dBA SHALL REQUIRE VISIBLE NOTIFICATION APPLIANCES.
16. AUDIBLE/ VISUAL DEVICES SHALL BE SYNCHRONIZED, HAVE A HORN CAPABLE OF 3 PULSE TEMPORAL CODE SIGNALING HORN, AND BE ADA COMPLIANT.

SHEET KEYNOTES

1. PROVIDE A DEDICATED 120 VAC POWER CIRCUIT TO THE FACP. CIRCUIT BREAKER FEEDING FACP SHALL BE MARKED RED, LABELED "FIRE ALARM", AND BE LOCKED IN THE OPEN POSITION. SEE E602 FOR CIRCUIT DETAILS.
2. FIRE ALARM CONDUIT STUB-UP LOCATIONS TO BE FIELD VERIFIED PRIOR TO ANY WORK.
3. SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND THE APPLICABLE REQUIREMENTS OF NFPA 72.
4. IN ALL BEDROOMS PROVIDE A MULTI-CRITERIA FIRE DETECTOR WHICH HAS SEPARATE ELEMENTS FOR MONITORING CO, SMOKE (PHOTOELECTRIC), LIGHT/FLAME, AND HEAT, SILENT KNIGHT SK-FIRE-CO-W OR APPROVED EQUAL. DETECTOR SHALL BE MOUNTED IN A LOW FREQUENCY (520 HZ) SOUNDER BASE WHICH MEETS OR EXCEEDS THE REQUIREMENTS OF UL 268 AND UL 464 AS WELL AS THE REQUIREMENTS OF NFPA 72 2022 ARTICLE 17.9.3. DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND AND THE REQUIREMENTS OF APPLICABLE ARTICLES IN NFPA 72. ACTUATION OF ANY BEDROOM DETECTOR SHALL GENERATE A BUILDING WIDE ALARM, I.E. NOTIFICATION SHALL NOT BE RESTRICTED TO THE BEDROOM.
5. PROVIDE A SLIM PROFILE MULTI-CRITERIA FIRE DETECTOR WHICH HAS SEPARATE ELEMENTS FOR MONITORING CO, SMOKE (PHOTOELECTRIC), LIGHT/FLAME, AND HEAT, SILENT KNIGHT SK-FIRE-CO-W OR APPROVED EQUAL. DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND AND THE REQUIREMENTS OF NFPA 72 2022 ARTICLE 17.9.3.
6. THE DINING/DAY ROOMS HAVE A SLOPED CEILING WITH A RISE GREATER THAN 1' IN 8'. TO COMPLY WITH ARTICLE 29.11.3.2 OF NFPA 72 2022 THE MULTI-CRITERIA DETECTOR IN THE DAY ROOM SHALL BE LOCATED WITHIN 36" OF THE HIGH SIDE OF THE CEILING BUT NOT CLOSER THAN 4" FROM THE ADJOINING WALL SURFACE.
7. HEAT DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND THE APPLICABLE REQUIREMENTS OF NFPA 72.
8. CONTRACTOR SHALL PROVIDE THE FOLLOWING TO COMPLY WITH ARTICLE 907.5.2.3.3 OF THE APPLICABLE VERSION OF THE CFC. IN THE BEDROOMS INSTALL A JUNCTION BOX IN THE WALL 90" AFF CAPABLE OF HOUSING A FUTURE ADA STROBE. BOX SHALL BE RECESSED AND INCLUDE A BLANK COVER, COLOR MATCHED TO WALL FINISH. WIRING FOR A SPARE NOTIFICATION CIRCUIT SHALL BE RAN FROM FACP THROUGH ALL SIX (6) JUNCTION BOXES. NO OTHER INFRASTRUCTURE SHOULD BE REQUIRED TO INSTALL STROBES AND ACTIVATE NOTIFICATION CIRCUIT IN THE FUTURE.
9. ALL FIRE SPRINKLER CONTROL VALVES SHALL BE MONITORED BY THE FIRE ALARM SYSTEM TO INDICATE A "SUPERVISORY SIGNAL" UPON TAMPER. PROVIDE MONITOR MODULES (MM) AND INSTALLATION HARDWARE.
10. PROVIDE A REMOTE FIRE ALARM ANNUNCIATOR (FAA) AT THE MAIN ENTRY OF THE BARRACKS AS SHOWN AND IN THE COMMAND ROOM OF THE ECC. SEE ES101 FOR LOCATION OF FAA IN ECC AND E603 FOR DETAILS ON ROUTING OF CABLE TO FAA IN ECC. SEE SPECIFICATION SECTION 283111 FOR THE REQUIREMENTS OF THE ANNUNCIATOR AND ITS SEMI-FLUSH MOUNT ENCLOSURE.
11. PROVIDE RELAY MODULE (RM) TO PERFORM SHUTDOWN OF IDU-4 (SEE MECH SHEETS). CONNECT NO CONTACT OF RM TO "FORCED OFF" CONTACT IN IDU-4.

NOTICE: THIS SHEET IS NOT FOR CONSTRUCTION

THE INFORMATION SHOWN ON THIS SHEET IS NOT FOR CONSTRUCTION AND SHALL BE USED ONLY AS A GUIDE AND REFERENCE. THE SCOPE OF WORK FOR THIS PROJECT REQUIRES THE CONTRACTOR TO PERFORM A COMPLETE DETAILED DESIGN OF THE FIRE ALARM SYSTEM TO BE INSTALLED. THE DESIGN SHALL INCLUDE, BUT IS NOT LIMITED TO, COMPLETE WORKING CONSTRUCTION DRAWINGS REQUIRED FOR THE INSTALLATION OF THE SYSTEM. THE CONTRACTOR'S DESIGN PLANS AND DOCUMENTS SHALL BE SUBMITTED TO THE OSFM FOR REVIEW AND APPROVAL. FOR ADDITIONAL REQUIREMENTS, REFER TO THE DRAWING SHEET NOTES AND THE PROJECT SPECIFICATIONS.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
E 23257
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE: -

SHEET TITLE:
DEFERRED FIRE ALARM PLAN

SHEET NUMBER
E701
V3

PROJECT PATH: C:\Users\Egifford\appdata\local\temp\AcPublish_6884\24STE701.dwg
PLOT DATE: Jul 23, 2025 - 5:45PM
VER 2020

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 4 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

F. DESIGN REVIEW KICKOFF MEETING

15	HVAC System Goals	Highest Energy Efficiency and Reliability Possible with all-electric air to air systems
16	Indoor Lighting System Gcals	Highest Energy Efficiency and long service life with all LED light fixtures
17	Outdoor Lighting System Goals	Highest Energy Efficiency and long service life with all LED light fixtures
18	Water Heating System Goals	Highest Energy Efficiency and Reliability Possible with all-electric air to water heating
19	Equipment and System Specifications	VRF heat pump systems with individual cassettes/thermostats in dorm rooms, ERV with continuous outside air to all zone except when unoccupied/standby mode
20	Operations and Maintenance	Fire Station does not have on-site maintenance staff. Primary operations and maintenance to be performed by constantly rotating fire fighters.

G. OWNER'S PROJECT REQUIREMENTS (OPR)

This section does not apply to this project.

H. BASIS OF DESIGN (BOD)

This section does not apply to this project.

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST

This table is only completed if a design review document is not attached to permit application to demonstrate compliance with §120.8(b) and §120.8(e). For buildings with >= 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table C.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table F. during the Design Review Kickoff.

		YES	NO
01	Attaching Completed Design Review Documentation?	●	○

J. COMMISSIONING PLAN

This section does not apply to this project.

K. FUNCTIONAL PERFORMANCE TESTING

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 5 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

L. DOCUMENTATION AND TRAINING

This section does not apply to this project.

M. COMMISSIONING REPORT

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

There are no Certificates of installation applicable to commissioning requirements.

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Although there are no "CXR" Certificates of Acceptance required to document commissioning requirements, Certificates of Acceptance may be used to supplement functional performance testing required by §120.8(g).

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 6 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Marcel Madison	Documentation Author Signature:
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2023-07-24
Address: P.O. Box 944246	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento California 94244-2460	Phone: (916) 445-4357

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: Anthony Eccleston	Responsible Designer Signature:
Company: CA Dept. of Forestry and Fire Protection	Date Signed: 2023-07-24
Address: P.O. Box 944246	License: C90716
City/State/Zip: Sacramento California 94244-2460	Phone: (279) 599-7415

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 1 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

This document is used to demonstrate compliance with mandatory commissioning requirements in §120.8 for nonresidential buildings and hotel/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.

A. GENERAL INFORMATION

01	Project Location (city)	Fresno	04	Building Size (ft²)	3762
02	Occupancy Type	Mixed Use	05	Nonresidential Conditioned Floor Area (ft²)	< 10,000 ft²
03	Project Type	Newly constructed	06	HVAC System Type	Unitary or packaged equipment each serving one zone

B. PROJECT SCOPE

Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per §120.8. Table B is not editable by the user.

Commissioning Requirements per §120.8

01	Table F: Design Review Kickoff	§120.8(d)1 and §120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	§120.8(b)	This requirement does not apply.
03	Table H: Basis of Design (BOD)	§120.8(c)	This requirement does not apply.
04	Table I: Design Review	§120.8(d) and §120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with >= 10,000 ft² of nonresidential conditioned floor area the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	§120.8(f)	This requirement does not apply.
06	Table K: Functional Performance Testing	§120.8(g)	This requirement does not apply.
07	Table L: Documentation and Training	§120.8(h)	This requirement does not apply.
08	Table M: Commissioning Report	§120.8(i)	This requirement does not apply.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 2 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per §120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
Design Kickoff Review	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report	Compliance Results
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	
Yes			Yes					COMPLIES
10	Design Reviewer(s) for the project include:			Anthony Eccleston				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

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-CXR-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 3 of 6)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

F. DESIGN REVIEW KICKOFF MEETING

This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per §120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details

01	Date of Design Review Kickoff Meeting		0001-01-01	
02	Meeting Attendees: (one person may play multiple roles)			
☒	Owner/Facility Manager:	Anthony Eccleston	☒ Design Reviewer(s)	Anthony Eccleston
☒	Project Manager:	Jonathan Pike	☒ Design Architect/ Engineer(s):	Matthew Heintz
☐	Contractor:		☐ Certified Acceptance Test Tech(s):	
☐	Commissioning Provider:		☐ Energy/ T24 Part 6 Consultant:	

Design Reviewer Qualifications per Title 24 Part 1 Section 10-103(a)1

		Do the Design Reviewer(s) meet these qualifications?	
	The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code.	Yes	No
03	In addition, for buildings with >= 10,000 ft² but < 50,000², the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	●	○
04	The design reviewer(s) for this project will be:	Anthony Eccleston	

Preliminary Construction Schedule

		Start Date	Completion Date
05	Schematic Design	0001-01-01	0001-01-01
06	Design Development	0001-01-01	0001-01-01
07	Construction Documents	0001-01-01	0001-01-01
08	Construction	0001-01-01	0001-01-01
09	Building Turnover	0001-01-01	0001-01-01

Project Goals Related to Energy Efficiency

10	Operational Costs	$28,000 annually
11	Desired Building Lifespan	50 years
12	Equipment Lifecycle	20 years
13	Project Energy Efficiency Goals	CAL Green Tier 1
14	Envelope Goals	CAL Green Tier 1

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: 2023-07-24 09:57:36

DSA Approval

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REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

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FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE: -

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
COMMISSIONING

SHEET NUMBER
R001
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_11724\2421R001.dwg
PLOT DATE: Jul 26, 2024 - 8:54AM
VER: 2020

Project Name:	Barracks - C-130	NRCC-PRF-01-E	Page 7 of 26
Project Address:	2311 N Clovis Ave Fresno 93727	Calculation Date/Time:	09:47, Mon, Jul 24, 2023
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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)**
Window94	North	2.0	4.8	2.0	2.0
Window101	North	2.0	4.8	2.0	2.0
Glass Door121	North	2.0	8	2.0	2.0
Window123	West	2.0	5	2.0	2.0
Glass Door130	North	2.0	7.1	2.0	2.0
Window139	West	2.0	4.7	2.0	2.0
Window140	West	2.0	4.7	2.0	2.0
Glass Door148	East	2.0	7.1	2.0	2.0
Window154	West	2.0	5	2.0	2.0
Window155	West	2.0	5	2.0	2.0
Glass Door156	West	2.0	8	2.0	2.0
Window160	South	2.0	5	2.0	2.0
Window170	East	2.0	5	2.0	2.0
Window173	South	2.0	5	2.0	2.0
Window177	East	2.0	5	2.0	2.0
Window178	East	2.0	5	2.0	2.0

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]**
Sleeping Quarters	VRF	1	108	NA	COP	4.82	96	EER	17.20	NA	N

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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]	669 ft²	101 ft²	15.0%
East-Facing[2]	632 ft²	111 ft²	17.6%
South-Facing[3]	813 ft²	91 ft²	11.1%
West-Facing[4]	688 ft²	131 ft²	19.1%
Total	**2,802 ft²**	**434 ft²**	**15.5%**
Roof	4,948 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]**
R-21 Wall w ext insulatio27	ExteriorWall	2942	Wood	21	8	U-Factor	0.041	Stucco - 7/8 in. Extruded Polystyrene - XPS - 1 1/2 in. R7.50 Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N
Slab On Grade30	UndergroundFloor	4481	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	N

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A. GENERAL INFORMATION

1	Project Location (city)	Fresno	8	Standards Version	Compliance2019
2	CA Zip Code	93727	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	13	10	Weather File	FRESNO_723890_CZ2010.epw
4	Total Conditioned Floor Area in Scope	3,762 ft²	11	Building Orientation (deg)	(E) 90 deg
5	Total Unconditioned Floor Area	719 ft²	12	Permitted Scope of Work	NewComplete
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Hotel-Motel
7	Total # of dwelling units	7	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*

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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]**
Day Areas	VRF	1	81	NA	COP	4.35	72	EER	17.40	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]**
2-Common & Bathroom Rooms-VRF	1	0	1094	BrakeHorsePower	0.401	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
3-Z1 - Bedroom1-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
4-Z1 - Bedroom 2-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
5-Z1 - Bedroom 3-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
6-Z1 - Bedroom 4-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
7-Z1 - Bedroom 5-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
8-Z1 - Bedroom 6-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
9-Z1 - Elect/Telco Room-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
10-Z1 - PT Room-VRF	1	43	280	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N

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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]**
R-38 Roof Attic32	Roof	4536	Wood	38	NA	U-Factor	0.034	Metal Deck - 1/16 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-38 Gypsum Board - 5/8 in.	N
R-38 Roof Attic (Bedrooms59	Roof	1398	Wood	38	NA	U-Factor	0.032	Metal Deck - 1/16 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-38 Gypsum Board - 5/8 in. Gypsum Board - 5/8 in.	N
R-21 Wall w/1 EPS113	InteriorWall	295	Wood	21	4	U-Factor	0.049	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Expanded Polystyrene - EPS - 1 in. R4.2 Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N
R-21 Wall w ext insulatio271	InteriorWall	434	Wood	21	8	U-Factor	0.040	Stucco - 7/8 in. Extruded Polystyrene - XPS - 1 1/2 in. R7.50 Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N

[1] Status: N - New, A – Altered, E – Existing

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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	15.21	19.87	-4.66
Space Cooling	149.59	62.73	86.86
Indoor Fans	136.80	48.65	88.15
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	33.31	39.66	-6.35
Indoor Lighting	14.15	13.19	0.96
ENERGY STANDARDS COMPLIANCE TOTAL	**349.06**	**184.10**	**164.96 (47.3%)**

[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	127.48	127.48	--
Process	257.33	257.33	--
Other Ltg	29.52	29.52	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**763.39**	**598.43**	**165.0 (21.6%)**

[1] Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

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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]**
13-Z2 - Day Areas-VRF	1	0	1624	BrakeHorsePower	0.401	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
14-Z2 - Dining Room-VRF	1	0	290	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
16-Z2 - Library-VRF	1	0	260	BrakeHorsePower	0.046	bhp	ConstantVolume		NA	NA	NA	NA	NA	N
17-Z2 - Day Room-VRF	1	0	290	BrakeHorsePower	0.046	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]**
Common & Bathroom Rooms3	1-Common & Bathroom Rooms	1	200	0.229	0.999	4.73	N
Z1 - Bedroom160	2-Z1 - Bedroom1	1	21	0.023	0.952	4.50	N
Z1 - Bedroom 267	3-Z1 - Bedroom 2	1	21	0.023	0.952	4.50	N
Z1 - Bedroom 374	4-Z1 - Bedroom 3	1	20	0.024	1.049	4.96	N
Z1 - Bedroom 482	5-Z1 - Bedroom 4	1	20	0.024	1.049	4.96	N
Z1 - Bedroom 590	6-Z1 - Bedroom 5	1	20	0.024	1.049	4.96	N
Z1 - Bedroom 697	7-Z1 - Bedroom 6	1	20	0.024	1.049	4.96	N
Z1 - Elect/Telco Room104	8-Z1 - Elect/Telco Room	1	5	0.024	4.198	19.85	N
Z1 - PT Room114	9-Z1 - PT Room	1	5	0.024	4.198	19.85	N
Z2 - Day Areas133	12-Z2 - Day Areas	2	23	0.024	0.913	4.32	N
Z2 - Library164	15-Z2 - Library	1	20	0.024	1.049	4.96	N
Z2 - Day Room171	16-Z2 - Day Room	1	20	0.024	1.049	4.96	N

[1] Status: N - New, A – Altered, E – Existing

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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 ft²**	**Overall U-factor**	**Overall SHGC**	**Overall VT**	**Status[2]**
Milgard A250-Awning (Bathroom)	VerticalFenestration OperableWindow N/A	NFRC Rated	Manufactured	33	0.36	0.21	0.45	N
CDF Glazed Door	VerticalFenestration OperableWindow N/A	NFRC Rated	Manufactured	156	0.28	0.27	0.63	N
Milgard A250-Horizontal Slider	VerticalFenestration OperableWindow N/A	NFRC Rated	Manufactured	237	0.34	0.23	0.52	N
Milgard A250 Picture (Kitchen Sink)	VerticalFenestration OperableWindow N/A	NFRC Rated	Manufactured	29	0.31	0.25	0.57	N

[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)**
Window28	North	2.0	4.3	2.0	2.0
Window34	North	2.0	4.3	2.0	2.0
Window39	South	2.0	4.3	2.0	2.0
Window43	South	2.0	4.3	2.0	2.0
Glass Door48	West	4.0	8	4.0	4.0
Glass Door56	East	4.0	8	4.0	4.0
Window64	South	2.0	4.8	2.0	2.0
Window71	South	2.0	4.8	2.0	2.0
Window78	South	2.0	4.8	2.0	2.0
Window86	North	2.0	4.8	2.0	2.0

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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	--	3.0	-3.0	27.8	--	27.8
Space Cooling	16.7	6.5	10.2	--	--	--
Indoor Fans	17.1	6.2	10.9	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	3.8	5.4	-1.6	11.4	--	11.4
Indoor Lighting	1.9	1.8	0.1	--	--	-->
Compliance Total	**39.5**	**22.9**	**16.6**	**39.2**	**0.0**	**39.2**
Receptacle	17.2	17.2	0.0	--	--	--
Process	35.5	35.5	0.0	--	--	--
Other Ltg	4.0	4.0	0.0	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**96.2**	**79.6**	**16.6**	**39.2**	**0.0**	**39.2**

D. EXCEPTIONAL CONDITIONS

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.

The user model includes space(s) that are designed to be served by mechanical cooling systems, but the cooling systems were not included in the simulation model. A cooling system has been modeled for both the proposed and standard cases.

The user model includes space(s) without sufficient cooling equipment. Cooling equipment has been added to the model to meet cooling loads.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

Barracks building for c-130 crews

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE:

SHEET TITLE:
ENERGY CODE CERTIFICATES OF COMPLIANCE PERFORMANCE

SHEET NUMBER
R011
V3

PLOT DATE: Jul 26, 2023 - 9:56AM
PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_11724\2421R011.dwg
VER: 2020

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

1	2	Installed Watts (Conditioned) 3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
L-35	L1H 4'x4' LED Recessed Linear (high output)	42	According to §130.0(c)	2	84
L-4	L5A LED Recessed Downlight	8	According to §130.0(c)	2	16
L-5	L6 LED Wet Location Recessed Downlight	8	According to §130.0(c)	1	8
L-6	L8 3' LED Vanity Light	27	According to §130.0(c)	1	26
L-7	L5A LED Recessed Downlight	8	According to §130.0(c)	2	16
L-8	L6 LED Wet Location Recessed Downlight	8	According to §130.0(c)	1	8
L-9	L8 3' LED Vanity Light	27	According to §130.0(c)	1	26

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-1	16.6	2	17	0

I2. MULTI-FAMILY WATER HEATING SYSTEM DETAIL

1	2	3	4	5	6	7	8	9
System Name	Configuration	Type	Qty In System	Multi-Family Distribution Type	Dwelling Unit Distribution Type	Water Heater Name	Solar Heating System	Compact Distribution
MF0-SANCO2 GS4-45HPC & SAN-831	"Domestic Hot Water (DHW)"	Unitary	1	NA	Standard	SANCO2 GS4-45HPC & SAN-831 2	NA	not compact

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5	6
Occupancy Type [1]	Conditioned Floor Area [2] (ft^2)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance	
				Area Category Footnotes (Watts)	Tailored Method (Watts)
Hotel/Motel Guest Room	1,683		0	0	0
Electrical, Mechanical, Telephone Rooms	68	68	0	0	0
Exercise/Fitness Center and Gymnasium Areas	290	90	0	0	0
All other	1,720	644	0	0	0
Building Totals:	**3,761**	**802**	**0**	**0**	**0**

[1] *See Table 140.6-C*
[2] *See NRCC-LTI-01-E for unconditioned spaces*
[3] *Lighting information for existing spaces modeled is not included in the table*

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	2	3	4
System Name	Equipment Type	Window Interlocks per §140.4(n)	Other Special Features and Controls
Sleeping Quarters	VRF	NA	Heat Recovery
Day Areas	VRF	No	Heat Recovery
Daikin Plant2 - 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	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)	
8-Z1 - Elect/Telco Room	General - Unoccupied	0.00	0	5	68	NA
9-Z1 - PT Room	Sports/Entertainment - Health club/aerobics room	2.90	43	5	290	NA
12-Z2 - Day Areas	General - Unoccupied	4.02	0	46	519	NA
13-Z2 - Dining Room	General - Unoccupied	6.00	0	0	488	NA
15-Z2 - Library	General - Unoccupied	0.89	0	20	178	NA
16-Z2 - Day Room	General - Unoccupied	2.67	0	20	535	NA

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-2	8.3	1	8	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-3	26.6	1	27	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-4	16.6	2	17	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-5	8.3	1	8	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-6	26.6	1	27	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-7	16.6	2	17	0

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

1	2	Installed Watts (Conditioned) 3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
L-1	L5A LED Recessed Downlight	8	According to §130.0(c)	2	16
L-10	L2 LED Flat Panel	41	According to §130.0(c)	1	41
L-11	L2 LED Flat Panel	41	According to §130.0(c)	3	123
L-12	L2E LED Flat Panel with EM	41	According to §130.0(c)	2	82
L-13	EX1/EX2 LED Edge-Lit Exit Sign	4	According to §130.0(c)	1	3
L-14	L2 LED Flat Panel	41	According to §130.0(c)	1	41
L-15	L2 LED Flat Panel	41	According to §130.0(c)	1	41
L-16	L2 LED Flat Panel	41	According to §130.0(c)	2	82
L-17	L2E LED Flat Panel with EM	41	According to §130.0(c)	1	41
L-18	EX1/EX2 LED Edge-Lit Exit Sign	4	According to §130.0(c)	1	3
L-19	L4 LED Task Lamp	8	According to §130.0(c)	2	16
L-2	L6 LED Wet Location Recessed Downlight	8	According to §130.0(c)	1	8
L-20	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-21	L4 LED Task Lamp	8	According to §130.0(c)	2	16

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

1	2	3	4	5	6	7	8
Zone Name	Mechanical Ventilation						DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
1-Common & Bathroom Rooms	Lodging - Barracks sleeping areas	1	0	139	200	924	NA
2-Z1 - Bedroom1	Lodging - Barracks sleeping areas	1	0	19	21	128	NA
3-Z1 - Bedroom 2	Lodging - Barracks sleeping areas	1	0	19	21	128	NA
4-Z1 - Bedroom 3	Lodging - Barracks sleeping areas	1	0	19	20	128	NA
5-Z1 - Bedroom 4	Lodging - Barracks sleeping areas	1	0	19	20	125	NA
6-Z1 - Bedroom 5	Lodging - Barracks sleeping areas	1	0	19	20	125	NA
7-Z1 - Bedroom 6	Lodging - Barracks sleeping areas	1	0	19	20	125	NA

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-Common & Bathroom Rooms-VRF	1-Common & Bathroom Rooms	VRF	1	34.00	30.00	1094	NA	NA	0.401	bhp	☒	☐
3-Z1 - Bedroom1-VRF	2-Z1 - Bedroom1	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
4-Z1 - Bedroom 2-VRF	3-Z1 - Bedroom 2	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
5-Z1 - Bedroom 3-VRF	4-Z1 - Bedroom 3	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
6-Z1 - Bedroom 4-VRF	5-Z1 - Bedroom 4	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
7-Z1 - Bedroom 5-VRF	6-Z1 - Bedroom 5	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
8-Z1 - Bedroom 6-VRF	7-Z1 - Bedroom 6	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
9-Z1 - Elect/Telco Room-VRF	8-Z1 - Elect/Telco Room	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
10-Z1 - PT Room-VRF	9-Z1 - PT Room	VRF	1	11.00	10.00	280	NA	NA	0.046	bhp	☐	☐

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-8	8.3	1	8	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-9	26.6	1	27	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-10	41.0	1	41	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-11	123.0	3	123	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-12	82.0	2	82	0
S-1-Common & Bathroom Rooms	Hotel/Motel Guest Room	NA	0.00 0.00 0.00 0.00 0.00	L-13	3.8	1	4	0

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

1	2	Installed Watts (Conditioned) 3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
L-22	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-23	L4 LED Task Lamp	8	According to §130.0(c)	2	16
L-24	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-25	L4 LED Task Lamp	8	According to §130.0(c)	2	16
L-26	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-27	L4 LED Task Lamp	8	According to §130.0(c)	2	16
L-28	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-29	L4 LED Task Lamp	8	According to §130.0(c)	2	16
L-3	L8 3' LED Vanity Light	27	According to §130.0(c)	1	26
L-30	L7 LED Recessed Downlight (bedrooms)	14	According to §130.0(c)	3	42
L-31	L3E LED Strip with EM	34	According to §130.0(c)	2	68
L-32	L1 4"x4' LED Recessed Linear	22	According to §130.0(c)	4	89
L-33	L1C 4"x12' LED Recessed Linear	67	According to §130.0(c)	2	134
L-34	EX1/EX2 LED Edge-Lit Exit Sign	4	According to §130.0(c)	1	3

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
13-Z2 - Day Areas-VRF	12-Z2 - Day Areas	VRF	1	60.00	54.00	1624	NA	NA	0.401	bhp	☒	☐
14-Z2 - Dining Room-VRF	13-Z2 - Dining Room	VRF	1	14.00	12.00	290	NA	NA	0.046	bhp	☐	☐
16-Z2 - Library-VRF	15-Z2 - Library	VRF	1	9.00	8.00	260	NA	NA	0.046	bhp	☒	☐
17-Z2 - Day Room-VRF	16-Z2 - Day Room	VRF	1	14.00	12.00	290	NA	NA	0.046	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
SANCO2 GS4-45HPC & SAN-831	Electricity	NA	2	83.00	4.5	kW	3.75	UEF	NA	NA	80	Heat-Pump Split	Outdoor
SANCO2 GS4-45HPC & SAN-831 2	Heat Pump	NA	7	0.00	NA	NA	NEEA Rated	NA	NA	NA	NA	NA	Conditioned

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO
AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
PERFORMANCE

SHEET NUMBER
R012
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\Acl\Publish_11724\24231911.dwg
PLOT DATE: Jul 26, 2023 - 8:57AM
VER 2020

Project Name:	Barracks - C-130	NRCC-PRF-01-E	Page 25 of 26
Project Address:	2311 N Clovis Ave Fresno 93727	Calculation Date/Time:	09:47, Mon, Jul 24, 2023
Input File Name:	2421_Fresno_C-130 AAB_energy_model_v_07-2023.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
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
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-11-A Automatic Demand Shed Controls
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

Project Name:	Barracks - C-130	NRCC-PRF-01-E	Page 26 of 26
Project Address:	2311 N Clovis Ave Fresno 93727	Calculation Date/Time:	09:47, Mon, Jul 24, 2023
Input File Name:	2421_Fresno_C-130 AAB_energy_model_v_07-2023.cibd19x		

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Marcel Madison	Signature:
Company: CA Dept of Forestry & Fire Protection	
Address: P.O. Box 944246	Signature Date: 2023-07-24
City/State/Zip: Sacramento California 94244-2460	CEA/ HERS Certification Identification (if applicable):
Phone: (916) 445-4357	

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: Anthony Eccleston	Signature:	
Company: CA Dept. of Forestry and Fire Protection		
Address: P.O. Box 944246	Date Signed: 7/24/2023	
City/State/Zip: Sacramento California 94244-2460		
Phone: (279) 599-7415	Title: Senior Civil Engineer	License #: C90716
Responsible Lighting Designer Name: Eric Gifford	Signature:	
Company: CA Dept. of Forestry and Fire Protection		
Address: P.O. Box 944246	Date Signed: 2023-07-24	
City/State/Zip: Sacramento California 94244-2460		
Phone: (916) 324-1009	Title: Associate Electrical Engineer	License #:
Responsible Mechanical Designer Name: Marcel Madison	Signature:	
Company: CA Dept. of Forestry and Fire Protection		
Address: P.O. Box 944246	Date Signed: 2023-07-24	
City/State/Zip: Sacramento California 94244-2460		
Phone: 916-445-4357	Title: Associate Mechanical Engineer	License #:

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-12092021-6844 Report Generated at: 2023-07-24 09:50:28

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
RAYMOND T. GALLAGHER
M 27273
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
PERFORMANCE

SHEET NUMBER
R013
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_11724\2421R011.dwg
PLOT DATE: Jul 25, 2023 - 8:16AM
VER: 2020

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 7 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Eric Gifford	Documentation Author Signature:
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2023-07-24
Address: P.O. Box 944246	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento CA 94244-2460	Phone: (916) 324-1009

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: Eric Gifford	Responsible Designer Signature:
Company: CA Dept. of Forestry and Fire Protection	Date Signed: 2023-07-24
Address: P.O. Box 944246	License:
City/State/Zip: Sacramento California 94244-2460	Phone: (916) 324-1009

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 4 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. 13
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2 — Plan Sheet Showing Daylit Zones:

Physical Training	Less than 120W of general lighting and <10,000SqFt
Dining Room	Less than 120W of general lighting and <10,000SqFt
Day Room	Less than 120W of general lighting and <10,000SqFt
Kitchen	Less than 120W of general lighting and <10,000SqFt

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
Z1 - PT Room Patio	Exercise/Fitness Center GymnasiumArea	0.5	240.3	120.2	No	No
Z1 - Mechanical Room	Electrical Mechancial Telephone Room	0.4	124	49.6	No	No
Z1 - Dining Room Patio	Exercise/Fitness Center GymnasiumArea	0.5	354	177	No	No
		TOTALS:	718.3	346.8	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.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 5 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

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.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 6 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

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	Field Inspector Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector Pass	Field Inspector Fail
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐	

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 1 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

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)	Fresno	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	13	05	Total Unconditioned Floor Area (ft²)	718
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Gymnasium ● Hotel/Motel ● : See Table I

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	Area Category Method	0	Area Category Method	718
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	0		718	

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) 01 Complete Building §140.6(c)1	02 Area Category §140.6(c)2	03 Area Category Additional §140.6(c)2G (+)	04 Tailored §140.6(c)3 (+)	=	05 Total Allowed (Watts)	≥	Adjusted Lighting Power per §140.6(a) (Watts) 06 Total Designed (Watts)	07 Adjustments PAF Lighting Control Credits §140.6(a)2 (-)	=	08 Total Adjusted (Watts) *Includes Adjustments	Compliance Results 09
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)			**05 must be >= 08 §140.6**
Conditioned					=		≥			=		
Unconditioned		346.8	0		=	347	≥	68	0	=	68	COMPLIES

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 2 of 7)**
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C. COMPLIANCE RESULTS

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 Name or Item Tag	02 Complete Luminaire Description	03 Modular (Track) Fixture	04 Small Aperture & Color Change[1]	05 Watts per luminaire[2]	06 How is Wattage determined	07 Total Number of Luminaires	08 Excluded per §140.6(a)3	09 Design Watts	10 Field Inspector Pass	10 Field Inspector Fail
L3 LED Strip	No	No	34	Mfr. Spec	2	No	68	☐	☐	
							Total Designed Watts: UNCONDITIONED SPACES	68		

[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.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 3 of 7)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	7/24/2023

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 Mandatory Demand Response §110.12(c)	02 Shut-off controls §130.1(c)	03 Field Inspector Pass	03 Field Inspector Fail
Not Required <= 10,000 SF	Whole Building Other	☐	☐

Area Level Controls

04 Area Description	05 Complete Building or Area Category Primary Function Area	06 Area Controls §130.1(a)	07 Multi-Level Controls §130.1(b)	08 Shut-Off Controls §130.1(c)	09 Primary/Sky lit Daylighting §130.1(d)	10 Secondary Daylighting §140.6(d)	11 Interlocked Systems §140.6(a)1	12 Field Inspector Pass	12 Field Inspector Fail
Physical Training	Exercise/Fitness Center GymnasiumArea	Manual ON/OFF	Dimmer	Occupancy Sensor	Exempt*	Exempt*	No	☐	☐
Dining Room	Bar/Lounge and Fine Dining Area	Manual ON/OFF	Dimmer	Occupancy Sensor	Exempt*	Exempt*	No	☐	☐
Day Room	Lounge Breakroom or Waiting Area	Manual ON/OFF	Dimmer	Occupancy Sensor	Exempt*	Exempt*	No	☐	☐
Kitchen	Kitchen/ Food Preparation Area	Manual ON/OFF	Dimmer	Occupancy Sensor	Exempt*	Exempt*	No	☐	☐

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY

12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: E. GIFFORD
DRAWN BY: E. GIFFORD
REVIEWED BY: S. THOMAS
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
INDOOR LIGHTING

SHEET NUMBER
R021

V3

PROJECT PATH: C:\Users\Egifford\appdata\local\temp\AcPublish_6884\24216\R021.dwg
PLOT DATE: Jul 24, 2023 - 01:35PM
VER 2020

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 7 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This table includes areas using the wattage allowance per specific area from Table 140.7-B . More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

01	02	03	04	05	06	07	08	09	10
		CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				
Area Description	Specific Area Type per Table 140.7-B	Specific Area (ft^2)[1]	Allowed Density (W/ft^2)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Additional Allowance (Watts)
Outdoor Canopy	NonSalesCanopy	354	0.14	48.5	15.6	4	62.4		48.5
							Total Design Watts for this Area:	62.4	
								Total Allowance (Watts) All Areas:	48.5

[1] *FOOTNOTES: See Table 140.7-B for rules for calculating the specific areas (ft^2 for these additional lighting allowances.*
[2] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.*

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

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	Field Inspector Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐
NRCI-LTO-02-E- Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 8 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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 must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector Pass	Field Inspector Fail
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	☐	☐	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 9 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Eric Gifford	Documentation Author Signature: Eric Gifford
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2023-06-22
Address: P.O. Box 944246	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento CA 94244-2460	Phone: (916) 324-1009

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: Eric Gifford	Responsible Designer Signature: Eric Gifford
Company: CA Dept. of Forestry and Fire Protection, HQ Technical Services	Date Signed: 2023-06-22
Address: P.O. Box 944246	License:
City/State/Zip: Sacramento California 94244-2460	Phone: (916) 324-1009

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 4 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector Pass	Field Inspector Fail
Building Entrances	Astronomical Timer	Yes	Yes	☐	☐
Building Entrances	Photocontrol	Yes	Yes	☐	☐
Pedestrian Walkways	Astronomical Timer	Yes	Yes	☐	☐
Pedestrian Walkways	Photocontrol	Yes	Yes	☐	☐

** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c)

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 5 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

I. LIGHTING POWER ALLOWANCE (per §140.7)

This table includes areas using allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B . Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

	01			
	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
☒ General Hardscape Allowance Table I (below)	☒ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☒ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 0, 1 & 4)	
Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 2 & 3)	

02	03	04	05	06	07	08	9	10
		Area Wattage Allowance (AWA)			Area Wattage Allowance (AWA)			
Area Description	Surface Type	Illuminated Area (ft^2)	Allowed Density (W/ft^2)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)
Pedestrian walkway	Concrete	600	0.025	15	0	0.4	0	15
							Initial Wattage Allowance for Entire Site (Watts):	250
							Total General Hardscape Allowance (Watts):	265

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 6 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

J. LIGHTING ALLOWANCE: PER APPLICATION

This table includes areas using the wattage allowance per application from Table 140.7-B .

01	02	03	04	05	06	07	08	09	10
		CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				
Area Description	Application per Table 140.7-B[1]	# of Locations	Allowance per Location[2]	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Additional Allowance (Watts)
Main Building Entrance	Building Entrance/Exit	1	15	15	15	1	15		15
							Total Design Watts for this Area:	15	
Barracks Entrance	Building Entrance/Exit	4	15	60	15	4	60		60
							Total Design Watts for this Area:	60	
							Total Allowance (Watts) All Areas:		75

[1] *FOOTNOTES: Primary entrance applications are only available for senior care facilities, healthcare facilities, police stations, hospitals, fire stations, and emergency vehicle facilities.*
[2] *The Allowance per Location for ATMs is 100W for the first ATM and 35W for each additional per Table 140.7-B .*
[3] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.*

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.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 1 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

A. GENERAL INFORMATION

01	Project Location (city)	Fresno	04	Total Illuminated Hardscape Area (ft^2)	600
02	Climate Zone	13			
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%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[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
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 2 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

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)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
265	+	75	+	---	+	---	+	48.5	OR	---	=	388.5	≥	206.4	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:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:**	**(Page 3 of 9)**
Project Address:	2311 N Clovis Ave	**Date Prepared:**	6/22/2023

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	
											Field Inspector
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]	Pass	Fail
	L5 LED Recessed Downlight	☐ Linear	15.6	Mfr. Spec	4	New	☐	62.4	NA: < 6200 lumens	☐	☐
	L9 LED Exterior Wall Sconce	☐ Linear	23	Mfr. Spec	3	New	☐	69	NA: < 6200 lumens	☐	☐
	L9E LED Exterior Wall Sconce (egress) with EM	☐ Linear	15	Mfr. Spec	5	New	☐	75	NA: < 6200 lumens	☐	☐
							Total Design Watts:	206.4			

** 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.

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — ROGER P. THOMAS — E 23257 — ELECTRICAL — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: S. THOMAS
DRAWN BY: S. THOMAS
REVIEWED BY: E. GIFFORD
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
OUTDOOR LIGHTING

SHEET NUMBER
R031
V3

PROJECT PATH: C:\Users\EgiffordAppData\Local\Temp\AcPublish_23\R031.dwg
PLOT DATE: Jun 22, 2023 - 4:36PM
VER: 2020

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	CALFIRE C-130 Barracks	**Report Page:** (Page 4 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 11/14/2022

I.CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(d). Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

01	02	03	04	05	06	
Room name or Description	Location/ Type of Controlled Receptacles	Shut-Off Controls	Permanent Durable Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
					Pass	Fail
Main Switchboard	Split-wired receptacle	Occupancy Sensor	☒	E101	☐	☐

** NOTES: If "Other*" is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

J. 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/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
●	○	NRCI-ELC-01-E - Must be submitted for all buildings	☐	☐

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to electrical power distribution 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 20190401 | Report Generated: 2022-11-14 09:55:29

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	CALFIRE C-130 Barracks	**Report Page:** (Page 5 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 11/14/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Eric Gifford	Documentation Author Signature:
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2022-11-14
Address: 1131 S St	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento CA 95814	Phone: (916) 324-1009

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: Eric Gifford	Responsible Designer Signature:
Company: CA Dept. of Forestry and Fire Protection, HQ Technical Services	Date Signed: 2022-11-14
Address: P.O. Box 944246	License:
City/State/Zip: Sacramento California 94244-2460	Phone: (916) 324-1009

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20190401 | Report Generated: 2022-11-14 09:55:29

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	CALFIRE C-130 Barracks	**Report Page:** (Page 1 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 11/14/2022

This document is used to demonstrate compliance with mandatory requirements in §130.5, for electrical systems in newly constructed nonresidential, high-rise residential and hotel/motel occupancies. Additions and alterations to electrical service systems in these occupancies will also use this document to demonstrate compliance per §141.0(a) or §141.0(b)2F for alterations..

A. GENERAL INFORMATION

01	Project Location (city)	Fresno		02	Occupancy Types Within Project:				
☐	Office	☐	Retail	☐	Warehouse	☒	Hotel/Motel	☐	School	☐	Support Areas
☐	Parking Garage	☐	High-Rise Residential	☐	Relocatable	☐	Healthcare Facilities	☒	Other (write in)	See Table I	

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05
Electrical Service Designation/Description	Scope of Work[1]	Rating (kVA)	Utility Provided Metering System Exception to §130.5(a) [2]	System subject to CA Elec Code Article 517 Exception to §130.5(a)and (b)
Main Switchboard	New electrical service equipment and meter	60	☐	☐
06 Demand Response Controls	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections §120.2, §130.1 and §130.3 and compliance documents NRCC-MCH, NRCC-LTI and NRCC-LTS will indicate when demand response controls are required.			

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c), no other requirements from 130.5 are required.*
[2] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

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.

01		02		03		04	05
Service Electrical Metering §130.5(a) (See Table F)	AND	Separation for Monitoring §130.5(b) (See Table G)	AND	Voltage Drop §130.5(c) (See Table H)	AND	Controlled Receptacles §130.5(d) (See Table I)	
Yes	AND	Yes	AND	Yes	AND	Yes	COMPLIES

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20190401 | Report Generated: 2022-11-14 09:55:29

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	CALFIRE C-130 Barracks	**Report Page:** (Page 2 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 11/14/2022

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.

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with §130.5(a)

01	02	03				04	05	
Electrical Service Designation/Description	Rating (kVA)	Required Metering Capabilities per Table 130.5-A				Location of Requirements in Construction Documents	Field Inspector	
		Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period		Pass	Fail
Main Switchboard	60	☐	☒	☒	☐	E601,E602	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20190401 | Report Generated: 2022-11-14 09:55:29

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	CALFIRE C-130 Barracks	**Report Page:** (Page 3 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 11/14/2022

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(b). Any load types that are not included in the service do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B [1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
Main Switchboard					
Industrial/Commercial Load Centers greater than or equal to 25kVA	All loads in aggregate	Other*	E601, E602	☐	☐
** NOTES: If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*					
IndustrialCommercialLoadCentersGTE25kVA					

[1] *FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.*
[2] *Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.*
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with §130.5(c). For alterations, only the altered circuits must demonstrate compliance per §141.0(b)2Piii

01	02			03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method			Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
						Pass	Fail
Main Switchboard	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	Contractor Responsible	☐	☐
** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*							

[1] *FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20190401 | Report Generated: 2022-11-14 09:55:29

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — CIVIL — E 23257 — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: S. THOMAS
DRAWN BY: S. THOMAS
REVIEWED BY: E. GIFFORD
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
ELEC PWR DISTRIBUTION

SHEET NUMBER
R041
V3

PROJECT PATH: C:\Users\EgiffordAppData\Local\temp\AcPublish_6884\24D1R041.dwg
PLOT DATE: Jul 25, 2023 - 3:23PM
VER: 2020

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 7 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8.

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a).
02	☐	☐	☒	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bii, or §150.2 for additions or alterations.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per §150.1(c)8.
06	☐	☐	☒	For replacement single heat pump water heaters serving individual dwelling units in climate zone 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii.

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-PLB-01-E - Must be submitted for all buildings	☐	☐
NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water distribution systems to be recognized for compliance.	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 8 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 9 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Marcel Madison	Documentation Author Signature:
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2023-07-24
Address: P.O. Box 944246	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento California 94244-2460	Phone: (916) 445-4357

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: Marcel Madison	Responsible Designer Signature:
Company: CA Dept. of Forestry and Fire Protection	Date Signed: 2023-07-24
Address: P.O. Box 944246	License:
City/State/Zip: Sacramento California 94244-2460	Phone: 916-445-4357

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 4 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

F. DOMESTIC HOT WATER EQUIPMENT

	Yes	No	Not Applicable	Requirement
17	☐	☐	☒	For gas or propane water heaters serving individual dwelling units, the follow components are included in the design per §150.0(n)1 : (New Construction only) • Dedicated 125V, 20 amp electrical receptacle that is connected to the panel with a 120/240V 3 conductor, 10 AWG copper branch circuit within 3ft from the water heater that's accessible and with both ends of the unused conductor labeled with the word "spare" and be electrically isolated. A single pole circuit breaker space in the panel adjacent to the circuit breaker for the branch circuit is provided labeled with the word "future 240V use"; and • Category III or IV vent, or Type B vent with straight pipe between the outside termination and where the water heater is installed; and • Condensate drain that is no more than 2in higher than the base of the water heater and drains without pump assistance; and [• Gas supply line with a capacity of at least 200,000 BTUH

[1]*FOOTNOTE: Dwelling Units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-12. Label required per §110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per §110.3(c)6

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 5 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1

Distribution in Individual Dwelling Units

	Yes	No	Not Applicable	Requirement
08	○	○	●	The dwelling unit is designed to have fenestration products with a weighted average U-factor <=0.24 plus one of the following options per §150.1(c)8Aii : (New Construction Only) • Compact hot water distribution system field verified by a HERS Rater per Reference Appendix RA4.4.16 • A drain water heat recovery system that is field verified by a HERS rater per Reference Appendix RA3.6.9 ☐ Compact hot water distribution system ☐ A drain water heat recovery system
09	●	○	○	One of the following options is included in the design per §150.1(c)8Aiv : (New Construction only) • Compact hot water distribution system field verified by HERS rater per Reference Appendix RA4.4.6 and a drain water heat recovery system that is field verified by a HERS rater per Reference Appendix RA3.6.9 • A photovoltaic system capacity of 0.3kWdc (for climate zones 2-15) or 1.1kWcd (for climate zones 1 & 16) larger than the requirement specified in §150.1(c)14. ☐ Compact hot water distribution system and a drain water heat recovery system ☒ A photovoltaic system
10	○	○	●	One of the following options is included in the design per §150.1(c)8Av : (New Construction only) • Compact hot water distribution system per Reference Appendix RA4.4.6 for projects in climates zones 1 and 16. • A photovoltaic system capacity of 0.3kWdc (form climate zones 1 and 16) larger than the requirement specified in §150.1(c)14. ☐ Compact hot water distribution system ☐ A photovoltaic system

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 6 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

Mandatory Pipe Insulation All Occupancies

11	☒	For systems serving dwelling units, pipe insulation for the following applications is specified to have a minimum wall thickness of 1 in or a minimum R-value of 7.7 per §150.0(j)2A : • The first 5ft of cold water pipes form storage tank • All hot water piping with nominal diameter of 3/4 in - 1 in • All hot water piping with nominal diameter < 3/4 in associated with DHW recirculation systems • Piping with nominal diameter < 3/4 from heating source to storage tank or between tanks • Piping with nominal diameter < 3/4 buried below grade • All hot water pipes with nominal diameter < 3/4 from heating source to kitchen fixtures
12	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3 : • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
13	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)		
			< 1	1 to < 1.5	1.5 to < 4
			Minimum Insulation Required		
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 1 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0, and §150.1(c)8, and with requirements §150.2 for additions.

A. GENERAL INFORMATION

01	Project Location (city)	Fresno	02	Climate Zone	13
03	Occupancy Types Within Project (select all that apply):				
☒ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel			
☐ State Building	☐ Healthcare Facility	☐ Other (Write In)			

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(a), or §141.0(b)2N for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time in newly constructed building)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☒ New system (DHW system being installed for the first time in newly constructed building)	Individual Dwelling Units System(s)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1]*FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*

[2] *Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.*

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 2 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	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 is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	Report Page:	(Page 3 of 9)
Project Address:	2311 N Clovis Ave	Date Prepared:	7/24/2023

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems

01	02	03	04	05	06
Name or Item Tag	Equipment Type	Volume (gal)	Max GPM/ First Hour Rating (FHR)	Rated Uniform Energy Factor (UEF)	Minimum Required Uniform Energy Factor (UEF)[1]

[1]*FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment in Individual Dwelling Units[1]

Equipment Type (select all that apply):

16	☐	Gas/propane instantaneous water heater with input rating <= 200,000 BTUH and no storage tank. Note: Can not comply using the prescriptive path with a storage tank per §150.1(c)8Ai (New Construction Only)
	☐	Gas/propane storage type water heater with input rating <= 75,000 BTUH (New Construction only) ☐ Rated volume <= 55 gal ☐ Rated volume > 55 gal
	☒	A single heat pump water heater with storage tank located in the garage or conditioned space. (New Construction Only) ☐ Water heater meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher.
	☐	A single heat pump water heater with storage tank located in the garage or conditioned space and be placed on an incompressible, rigid insulated surface with minimum R-10. (Alterations in climate zones 1-15 Only) ☐ Water heater meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher.
	☐	No gas connection to existing water heater location for replacement water heater. Consumer electric water heater must meet Title 20 Appliance Efficiency requirements (see Equipment Schedule above) per §150.2(b)1H. (Alterations only)

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER — RAYMOND T. GALLAGHER — M 27273 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
.		

JOB NUMBER: 2421
DESIGNED BY: R. GALLAGHER
DRAWN BY: R. GALLAGHER
REVIEWED BY: M. MADISON
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
PLUMBING

SHEET NUMBER
R051
V3

PROJECT PATH: C:\Users\Mmadison\AppData\Local\Temp\AcPublish_17724\24DR051.png
PLOT DATE: Jul 26, 2024 - 9:04AM
VER: 2020

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:** (Page 4 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 7/24/2023

Interconnection Pathways

Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).

FOOTNOTE: This field is used to document how the percentage of annual solar access was determined per §110.10(b)1B. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

G. PERMANENTLY INSTALLED SOLAR PHOTOVOLTAIC (PV) SYSTEM

This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS

This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE

This section does not apply to this project.

J. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

There are no NRCI forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to solar ready 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: 2023-07-24 14:50:56

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:** (Page 5 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 7/24/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Eric Gifford	
Company: CA Dept of Forestry & Fire Protection	Signature Date: 2023-07-24
Address: P.O. Box 944246	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento CA 94244-2460	Phone: (916) 324-1009

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:	Responsible Designer Signature:
Anthony Eccleston	
Company: CA Dept. of Forestry and Fire Protection	Date Signed: 2023-07-24
Address: P.O. Box 944246	License: C90716
City/State/Zip: Sacramento California 94244-2460	Phone: (279) 599-7415

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: 2023-07-24 14:50:56

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:** (Page 1 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 7/24/2023

This document is used to demonstrate compliance with mandatory requirements in §110.10 for newly constructed buildings which are either high-rise multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three sotires or fewer. It is also used to demonstrate compliance with additions to these building types which add more than 2,000 ft² of roof area. Alterations or additions of less than 2,000 ft² are not required to comply with §110.10.

A. GENERAL INFORMATION

01	Project Location (city)	Fresno	04	Building Type	Hotel/Motel 10 stories or fewer
02	Climate Zone	13	05	Construction Type	New Construction
03	☐ Roof is designed for vehicle traffic, parking or for heliport				
03a	Plan sheet showing roof design for vehicle traffic, parking or heliport exception:				

B. PROJECT SCOPE

The compliance path the project is using to comply per §110.10(b)1B is indicated below.

My project consists of (check one):

1		
☒	Provide Solar Ready Area no exceptions	The project has allocated a solar zone on the roof plan per requirements in §110.10(b), as documented in Table F.
☐	Exception to Solar Ready Area: Installed Solar Photovoltaic System	The project includes a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area as documented in Table G.
	Exception to Solar Ready Area: Installed Solar Water Heating System	The project is a hotel/motel or high-rise multifamily occupancy and includes a permanently installed domestic solar water-heating system complying with §150.1(c)8Biii and Reference Residential Appendix RA4, as documented in Table H.
	Exception to Solar Ready Area: Smart Thermostat and Alternative Energy Efficiency Measure	The project is a high-rise multifamily occupancy where all thermostats in each dwelling unit comply with §110.12(a) AND at least one additional measure listed in Exception 4 to §110.10(b)1B is installed, as documented in Table I.

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: 2023-07-24 14:50:56

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:** (Page 2 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 7/24/2023

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 "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below.

Allocated Solar Zone			Installed PV System			Installed SWH System			Smart Tstat and Alternative EE Measure			
01		02		03	04		05	06		07	08	09
Required Minimum Area (ft²)	<=	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	<= Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<= Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Table G)			(See Table H)			(See Table I)		COMPLIES
890	<=	1419	OR		<=	OR		<=	OR			COMPLIES
				Location within the construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/plumbing to the electrical service/ water heating system per §110.10(c).								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 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: 2023-07-24 14:50:56

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name:	FRESNO AIR ATTACK BASE - C130 FRESNO	**Report Page:** (Page 3 of 5)
Project Address:	2311 N Clovis Ave	**Date Prepared:** 7/24/2023

F. ALLOCATED SOLAR ZONE

This table is completed if the project is designating a solar zone to comply with §110.10(b)1B. New construction consider the total roof area; Additions consider newly added roof area. This table demonstrates that the project has designated the minimum area required for the Allocated Solar Zone, and also that the requirements for Solar Zone Subareas have been met. Each subarea must be shown on a roof plan or documented in construction documents. The solar zones must also comply with fire code requirements, including, but not limited to, setback and pathway requirements. Requirements for interconnection pathways must also be included in construction documents, and the location is specified in this table.

Required Minimum Solar Zone

01	02	03	04	05	06			07	08
					Potential Solar Zone Areas: Roof areas with >= 70% Solar Access				
Minimum Solar Zone Area Calculation Method	Total New or Added Roof Area (ft²)	Total New or Added Roof Area Covered with Skylights (ft²)	Minimum Solar Zone Based on Total or Added Roof Area (0.15 x (Roof-Skylt)) (ft²)	Method/ Tools Used to Determine Annual Solar Access for Potential Zones[1]	Low-Sloped Area (<= 2:12 pitch) (ft²)	Steep-Sloped Area (> 2:12 pitch) Oriented 90 ° - 300 ° (ft²)	Total Potential Solar Zone Area (ft²)	Minimum Solar Zone Based on Potential Zone (0.5 x (Total Potential Zone)) (ft²)	Required Minimum Solar Zone Area (ft²)
Total New or Added Roof Area	5933.43	0	890.0145						890.0145

Designated Solar Zone Subareas

09	10	11	12	13	14	15	16	17	18	19
Subarea Name or Tag	Building Plan Reference	Roof or Overhang Slope (Low <= 2:12 pitch) (Steep > 2:12 pitch)	Is Steep-Sloped Roof or Overhang between 90 and 300 degrees?	Subarea Complies with Title 24, Part 9	Solar Zone Subarea Free of Obstructions per §110.10(b)3A	Subarea is Required Distance from Potential Obstructions per §110.10(b)3B	Is the Smallest Dimension 5 feet or greater?	Min. Area Required per Subarea (ft²)	Designated Area (ft²)	Subarea Complies?
SRA1	ES102	SteepSlope	No	Yes	Yes	Yes	Yes	80	162	COMPLIES
SRA2	ES102	SteepSlope	No	Yes	Yes	Yes	Yes	80	206	COMPLIES
SRA3	ES102	SteepSlope	No	Yes	Yes	Yes	Yes	80	636	COMPLIES
SRA4	ES102	SteepSlope	No	Yes	Yes	Yes	Yes	80	415	COMPLIES
								Total Designated Solar Zone Area (ft²):	1419	

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: 2023-07-24 14:50:56

DSA Approval

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121081 INC: A
REVIEWED FOR
SS ☐ FLS ☐ ACS ☑
DATE: 04/15/2024

OSFM Approval

OFFICE OF THE STATE FIRE MARSHAL
APPROVED FIRE AND PANIC ONLY
12/23/23
23-1342

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

FRESNO AIR ATTACK BASE
C130 BARRACKS

2311 N CLOVIS AVENUE
FRESNO, CALIFORNIA 93727
FRESNO COUNTY

1131 S STREET, SACRAMENTO, CA 95811-2460

REGISTERED PROFESSIONAL ENGINEER
E 23257
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION
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JOB NUMBER: 2421
DESIGNED BY: S. THOMAS
DRAWN BY: S. THOMAS
REVIEWED BY: E. GIFFORD
FILE DATE:

SHEET TITLE:
ENERGY CODE
CERTIFICATES OF COMPLIANCE
SOLAR READY AREAS

SHEET NUMBER
R061
V3

PROJECT PATH: C:\Users\EgiffordJapdata\local\temp\AcPublish_6984\2421R061.dwg
PLOT DATE: 7/25/2023 - 3:16PM
VER 2020