PROJECT ADDRESS:
2475 VAN WINKLE LANE
SAN JOSE, CA 95116

PROJECT DESCRIPTION:
NEW PORTABLE CLASSROOM ADDITION

CODE ANALYSIS
SEE SHEET A1.1 FOR COMPLETE CODE ANALYSIS

PROJECT SUMMARY

DIVISION OF THE STATE ARCHITECT (DSA)
DSA OAKLAND REGIONAL OFFICE
1515 CLAY ST #1201
OAKLAND, CA 94612
P: 510.622.3101

LOCAL FIRE AUTHORITY
SAN JOSE FIRE PROTECTION DISTRICT
200 EAST SANTA CLARA STREET
SAN JOSE, CA 95113
P: 408.535.3500

GOVERNING AGENCIES

THIS PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

FEDERAL:
AMERICANS WITH DISABILITIES ACT (ADA)

ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)

STATE OF CALIFORNIA PARTIAL LIST OF APPLICABLE CODES AS OF JAN 1, 2020

2022 BUILDING STANDARDS ADMINISTRATIVE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) PART 1, TITLE 24 C.C.R.

2022 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2
(2021 INTERNATIONAL BUILDING CODE WITH THE INTERNATIONAL CODE COUNCIL WITH CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
(2021 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA)

2022 CALIFORNIA MECHANICAL CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4
(2021 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)

2022 CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5
(2021 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF THE PLUMBING AND MECHANICAL OFFICIALS, IAPMO)

2022 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6

2022 CALIFORNIA FIRE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9
(2021 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN CODE)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 11

2022 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12

PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

PARTIAL LIST OF APPLICABLE STANDARDS:

2022 BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

NFPA 13	AUTOMATIC SPRINKLER SYSTEM	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2016 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2016 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2018 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2016 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTION SIGNAL SYSTEMS	1999 EDITION

APPLICABLE CODES

SVA ARCHITECTS IS THE DESIGNATED ARCHITECT OF RECORD AS REQUIRED BY THE STATE OF CALIFORNIA. THE ARCHITECT OF RECORD SHALL REVIEW SUBMITTALS AND COORDINATE SUBMITTALS AND DEFERRED SUBMITTALS THROUGH THE DIVISION OF THE STATE ARCHITECT. DEFERRED SUBMITTALS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

DSA SHALL BE NOTIFIED IN WRITING BY THE OWNER IF THE ARCHITECT OF RECORD IS CHANGED OR IS UNABLE TO CONTINUE TO PERFORM THE DUTIES. THE OWNER SHALL DESIGNATE A SUBSTITUTE ARCHITECT OR ENGINEER OF RECORD WHO SHALL PERFORM ALL OF THE DUTIES REQUIRED OF THE ORIGINAL ARCHITECT OF RECORD.

REVIEW AND COMMENT ON SUBMITTALS AND DEFERRED SUBMITTALS SHALL NOT RELIEVE THE AUTHOR OF THE DOCUMENTS OR THE CONTRACTOR FROM COMPLIANCE WITH ALL APPLICABLE CODES AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THE REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING HIS WORK WITH THAT OF OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

ARCHITECT OF RECORD

STATEMENT OF GENERAL CONFORMANCE
THE DRAWINGS OR SHEETS LISTED IN THE INDEX ON THIS SHEET HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAD BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME
2. COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THE PROJECT.

THIS STATEMENT OF GENERAL CONFORMANCE "SHALL" NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES AND RESPONSIBILITIES UNDER SECTION 17302 AND 81138 OF THE EDUCATION CODE AND SECTION 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1 (TITLE 24, PART 1 SECTION 4-317) (B))

GENERAL CONFORMANCE STATEMENT

OWNER
ALUM ROCK SCHOOL DISTRICT
2930 GAY AVENUE
SAN JOSE, CA 95127
CONTACT:
P: 408.928.6800

ARCHITECT
SVA ARCHITECTS
6 HUTTON CENTRE DRIVE, SUITE 1150
SANTA ANA,CA 92707
CONTACT: CHRIS BRADLEY
P: 510.267.3180

CIVIL
HOBACH-LEWIN
260 SHERIDAN AVE. SUITE 150
PALO ALTO, CA 94306
CONTACT: BILL HENN
P: 650-617-5930

ELECTRICAL
TK1SC
11870 PIERCE STREET, SUITE 160
RIVERSIDE, CA 92505
CONTACT: BILL VOLER
P: 951.299.4160

CONSTRUCTION MANAGER
CUMMING GROUP
201 MOFFETT BLVD.,
MOUNTAIN VIEW, CA 94043
CONTACT: DEBORAH SLIVKOFF
P: 650-324-5324

PROJECT DIRECTORY

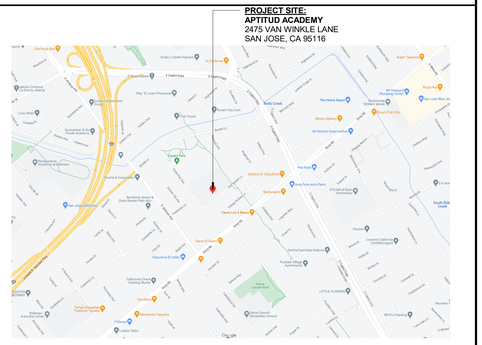
1. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA), AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
3. A PROJECT INSPECTOR AND TESTING LAB MUST BE EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY ALL OF THE FOLLOWING: A/E OF RECORD, STRUCTURAL ENGINEER (WHERE APPLICABLE) AND DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR: CLASS 1.
4. CCD MUST BE SIGNED AS REQUIRED BY DSA IR A-6.
5. A COPY OF CCR TITLE 24, PARTS 1 THROUGH 5 MUST BE KEPT ON SITE DURING CONSTRUCTION.T
6. IF ANY CONDITION IS DISCOVERED WHICH, IF LEFT UNCORRECTED, WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, THE CONDITION MUST BE CORRECTED IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS. A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

GENERAL NOTES

THE FOLLOWING ITEMS ARE DESIGN-BUILD SYSTEMS AND WILL BE A DEFERRED SUBMITTAL BY THE CONTRACTOR AT A LATER DATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGINEERING AND CALCULATIONS FOR APPLICABLE ITEMS. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A CIVIL OR STRUCTURAL ENGINEER WHO SHALL BE RESPONSIBLE FOR THE DESIGN. THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS TO THE ARCHITECT OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE DIVISION OF THE STATE ARCHITECT WITH NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

1. NONE

DEFERRED APPROVALS



VICINITY MAP

I CERTIFY THAT ALL DRAWINGS OR SHEETS LISTED IN THE INDEX ON THIS SHEET (CIVIL & ELECTRICAL) ARE IN GENERAL CONFORMANCE AND HAVE BEEN COORDINATED.

LICENSED ARCHITECT
ROBERT M. SIMONDS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

ALUM ROCK UNIFIED SCHOOL DISTRICT

APTITUD ACADEMY

NEW PORTABLE CLASSROOM ADDITION

GENERAL

GEN-1	PROJECT INFORMATION & SHEET INDEX	GENERAL
GEN-3	GENERAL NOTES	GENERAL
GEN-4	GENERAL ACCESSIBILITY	GENERAL

Grand total: 3

CIVIL

C1.0	COVER SHEET	CIVIL
C1.1	NOTES	CIVIL
C2.0	DEMOLITION PLAN	CIVIL
C3.0	GRADING AND DRAINAGE PLAN	CIVIL
C5.0	EROSION CONTROL PLAN	CIVIL
C6.0	DETAILS	CIVIL

Grand total: 6

ARCHITECTURAL

A1.0	SITE PLAN	ARCHITECTURAL
A1.1	ENLARGED SITE PLAN	ARCHITECTURAL
A11.1	FLOOR PLAN	ARCHITECTURAL
A11.2	DETAILS	ARCHITECTURAL

Grand total: 4

ELECTRICAL

E0.1	SYMBOLS LIST	ELECTRICAL
E1.0	ELECTRICAL SITE PLAN	ELECTRICAL
E1.1	ENLARGED ELECTRICAL SITE PLAN	ELECTRICAL
E11.2	DETAILS	ELECTRICAL
E11.3	DETAILS	ELECTRICAL
FA0.1	FIRE ALARM INFORMATION	ELECTRICAL
FA0.2	FIRE ALARM DETAILS	ELECTRICAL
FA0.3	FIRE ALARM RISER DIAGRAM	ELECTRICAL
FA1.1	FIRE ALARM PLAN	ELECTRICAL
T1.0	TECHNOLOGY SITE PLAN	ELECTRICAL
T11.1	LV BLOCK DIAGRAMS	ELECTRICAL
T11.2	LV DETAILS	ELECTRICAL
T11.3	LV DETAILS	ELECTRICAL

Grand total: 13

PC 02-117941 (PORTABLE)

TS	TITLE SHEET	
D1	DSA 103	
N1.0	GENERAL NOTES	
N2.0	GENERAL NOTES AND SPECS	
N3.0	TYP. SCHEDULES	
N4.0	ACCESSIBILITY STANDARDS AND DETAILS	
N5.0	FLOOR PLAN CONFIRGURATIONS	
EN.1	ENERGY CALCULATIONS	
EN.2	ENERGY CALCULATIONS	
EN.3	ENERGY CALCULATIONS	
EN.4	ENERGY CALCULATIONS	
EN.5	ENERGY CALCULATIONS	
EN.6	ENERGY CALCULATIONS	
EN.7	ENERGY CALCULATIONS	
EN.8	ENERGY CALCULATIONS	
EN.9	ENERGY CALCULATIONS	
A1.0	TYP. FLOOR PLAN	
A2.0	TYP. ROOF PLAN	
A2.2	TYP. ROOF DETAILS	
A4.0	INT ELEVATIONS	
A5.0	TYP. EXTERIOR ELEVATIONS	
A5.1	TYP. ARCHITECTURAL DETAILS	
A7.1	MISC. ARCHITECTURAL DETAILS	
S0.0	STEEL MEMBER PROPERTIES	
S1.1	CONCRETE FOUNDATION PLAN	
S1.4	CONCRETE FOUNDATION DETAILS	
S1.5	CONCRETE FOUNDATION DETAILS	
S1.6A	STANDARD FOUYNDATION ANCHORAGE DETAILS	
S1.7	CONCRETE FOUNDATION	
S2.1	WOOD FOUNDATIUON PLAN	
S2.4	WOOD FOUNDATION DETAILS	
S3.0	FLOOR FRAMING PLAN AND DETAILS	
S4.0	ROOF FRAMING PLAN AND DETAILS	
S4.2	ROOF FRAMING AND DETAILS	
S5.0	MOMINENT FRAME ELEVATIONS AND DETAILS	
S5.1	MOMENT FRAME CONNECTION DETAILS	
S6.0	TYP. LONGITUDINAL AND TRANSVERSE FRAME SECTIONS	
S8.0	WALL FRAMING ELEVATIONS AND SCHEDULES	
S8.1	WALL FRAMING DETAILS	
S10.0	TYP. RAMP PLANS AND NOTES	
S10.1	RAMP DETAILS	
M1.0	REFLECTIVE CEILING PLAN	
M1.4	MECHANICAL AND CEILING DETAILS	
M1.5	MECHANICAL AND CEILING DETAILS	
M1.7	CEILING AND MECHANICAL NOTES AND SCHEDULES	
E1.0	ELECTRICAL PLAN	
E1.2	ELECTRICAL NOTES AND DETAILS	

SHEET INDEX

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY
RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT
ROBERT M. SIMONDS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

PROJECT NO: Project Number
DATE ISSUED: Issue Date
SCALE:

GEN-1

PROJECT INFORMATION & SHEET INDEX

SVA ARCHITECTS
6 HUTTON CENTRE DR, SUITE 1150 SANTA ANA, CA 92707
T 949.809.3380 WWW.SVA-ARCHITECTS.COM

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1. SITE DEVELOPMENT

A. GRADE AND DEVELOP SITE SUCH THAT ALL PRIMARY BUILDING ENTRANCES ARE ACCESSIBLE TO THE PHYSICALLY DISABLED FROM THE PUBLIC WAY AND DISABLED PARKING PROVIDED.

B. ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, FACILITIES AND SPACES ON THE SAME SITE. WHERE MORE THAN ONE ROUTE IS PROVIDED, ALL ROUTES SHALL BE ACCESSIBLE

C. IF AN ACCESSIBLE ROUTE HAS A CHANGE IN LEVEL GREATER THAN 1/2", THEN A CURB RAMP, RAMP, ELEVATOR, OR PLATFORM LIFT SHALL BE PROVIDED.

D. ALL WALKS, HALLS, CORRIDORS, AISLES, AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 48 INCHES AND A CLEAR HEIGHT OF 80 INCHES.

2. WALKS AND SIDEWALKS

A. WALKS AND SIDEWALKS SUBJECT TO THESE REGULATIONS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2", AND SHALL BE A MINIMUM OF 48 INCHES IN WIDTH.

B. ALL SIDEWALKS SHALL BE STABLE, FIRM AND SLIP RESISTANT.

C. SURFACE CROSS SLOPES SHALL NOT EXCEED 1:48 (CBC 11B-403.3).

D. WALKS, SIDEWALKS AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN THE GRATING SHALL BE LIMITED TO 1/2" IN THE DIRECTION OF TRAFFIC FLOW.

E. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2", WHEN CHANGES DO OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 EXCEPT THAT LEVELS NOT EXCEEDING 1/4" MAY BE VERTICAL.

F. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY THEY SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS OR RAMPS AS REQUIRED.

G. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" SQUARE AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" WIDE BY 44"DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. SUCH WALKS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK.

H. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 5%, IT MUST COMPLY WITH THE PROVISIONS FOR PEDESTRIAN RAMPS (PER CBC 11B-405).

I. ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE LEVEL AREAS AT LEAST 5 FEET IN LENGTH AT INTERVALS NOT EXCEEDING 400 FEET.

3. ENTRANCES AND DOORWAYS

A. PRIMARY ENTRANCES TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO THE DISABLED.

B. ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST ONE "ISA" SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS AS REQUIRED VISIBLE FROM APPROACHING PEDESTRIAN WAYS.

C. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND ARE IN THE PATH OF TRAVEL, SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.

D. HAND ACTIVATED DOOR HARDWARE SHALL BE CENTERED BETWEEN 34" AND 44" ABOVE THE FLOOR (CBC 11B-404.2.7).

E. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE A MINIMUM 60" SQUARE IN THE DIRECTION OF THE DOOR SWING AND A MINIMUM 44" SQUARE OPPOSITE THE DIRECTION OF DOOR SWING (48" IF THE DOOR HAS BOTH LATCH AND CLOSER). THE SQUARES SHALL BE MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. SEE NOTE I BELOW FOR STRIKE SIDE REQUIREMENTS.

F. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS AND THE PRIMARY ENTRANCE TO THE DWELLING UNIT.

G THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED NO GREATER THAN 1:2.

H. THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT SLIDING AND POCKET DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

I. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS FOR EXTERIOR DOORS AND 5 LBS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. THE AUTHORITY HAVING JURISDICTION MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS TO ACHIEVE POSITIVE LATCHING, BUT NOT TO EXCEED 15 LBS MAX.

J. EXIT DOORS MUST OPEN FROM THE INSIDE WITHOUT A KEY, OR ANY SPECIAL KNOWLEDGE OR EFFORT. EXIT DOORS FROM BUILDINGS OR ROOMS SERVING 10 OR FEWER OCCUPANTS MAY HAVE A NIGHT LATCH, DEADBOLT OR SECURITY CHAIN, AS LONG AS THE DOORS CAN STILL BE OPENED FROM THE INSIDE WITHOUT A KEY, SPECIAL KNOWLEDGE OR EFFORT. IN ADDITION, THESE DEVICES ARE NOT MOUNTED MORE THAN 48" ABOVE THE FLOOR. MANUALLY OPERATED EDGE BOLTS, SURFACE MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED. WHEN EXIT DOORS ARE USED IN PAIRS AND AUTOMATIC FLUSH BOLTS ARE USED, THE DOOR LEAF WITH THE FLUSH BOLT MUST HAVE NO DOORKNOB OR SURFACE MOUNTED HARDWARE. THE UNLATCHING OF ANY LEAF MUST NOT REQUIRE MORE THAN ONE OPERATION.

K. EVERY REQUIRED EXIT MUST BE LARGE ENOUGH TO PERMIT A DOOR AT LEAST 3'-0" WIDE BY 6'-8" HIGH. EXIT DOORS SHALL OPEN AT LEAST 90 DEGREES AND PROVIDE A CLEAR WIDTH OF AT LEAST 32".

L. THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE NO HIGHER THAN 1/2". SUCH THRESHOLDS SHALL BE BEVELED NO GREATER THAN 1:2.

M. THE FLOOR LANDING IMMEDIATELY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 1/8" PER FOOT IN THE DIRECTION AWAY FROM THE PRIMARY ENTRANCE FOR DRAINAGE.

N. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IN A VESTIBULE, SERVING OTHER THAN A REQUIRED EXIT STAIRWAY, MUST HAVE AT LEAST 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO THE VESTIBULE WHEN THE DOOR IS OPEN 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN SERIES MUST SWING IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS.

4. STAIRWAYS

A. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. STAIRWAYS SHALL HAVE INTERMEDIATE HANDRAILS WHERE REQUIRED SUCH THAT ALL PORTIONS OF THE STAIRWAY WIDTH REQUIRED FOR EGRESS CAPACITY ARE WITHIN 30 INCHES OF A HANDRAIL. INTERMEDIATE HANDRAILS SHALL BE SPACED AT EQUAL INTERVALS WITHIN THE WIDTH OF THE STAIRWAY AND BE CONTINUOUS FOR THE ENTIRE LENGTH.

B. HANDRAILS MUST BE 34 TO 38 INCHES ABOVE THE NOSING OF THE TREADS AND MUST EXTEND IN THE DIRECTION OF THE STAIR RUN FOR AT LEAST 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING.

C. ENDS SHALL BE RETURNED OR SHALL TERMINATE IN A NEWEL POST OR SAFETY TERMINAL.

D. HANDRAILS PROJECTING FROM A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2-INCH BETWEEN THE WALL AND THE HANDRAIL.

E. THE HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1/4-INCHES NOR MORE THAN 1 1/2-INCHES IN CROSS-SECTIONAL DIMENSION OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE AND SHALL HAVE A SMOOTH SURFACE WITH NO SHARP OR ABRASIVE CORNERS AND ALL EDGES MUST HAVE A MINIMUM 1/8" RADIUS.

F. THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR THE FULL WIDTH OF THE TREAD AT LEAST 2-INCHES WIDE PLACED PARALLEL TOAND NOT MORE THAN 1-INCH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR.

G. WHERE STAIRWAYS OCCUR OUTSIDE A BUILDING, THE UPPER APPROACH AND ALL TREADS SHALL BE MARKED BY A STRIP OF CURLY CONTRASTING COLOR AT LEAST 2-INCHES WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1-INCH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIP SHALL BE ACCEPTABLE.

H. ALL TREAD SURFACES SHALL BE SLIP RESISTANT.

I. TREADS SHALL HAVE A SMOOTH, ROUNDED OR CHAMFERED EXPOSED EDGES, AND NO ABRUPT EDGES AT THE NOSING (LOWER FRONT EDGE).

J. NOSING SHALL NOT PROJECT MORE THAN 1-1/4 INCH PAST THE FACE OF THE RISER BELOW.

K. STAIR RISERS SHALL BE SOLID PER CBC 11B-504.

5. SANITARY FACILITIES

A. WHEELCHAIR ACCESSIBLE WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WHEN LOCATED AT THE END AND 34-INCHES WHEN LOCATED AT THE SIDE WITH THE DOOR POSITION AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.

B. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44-INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.

C. WHERE URINALS ARE PROVIDED AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 14-INCHES FROM THE WALL AND AT A MAXIMUM OF 17-INCHES ABOVE THE FLOOR SHALL BE PROVIDED.

D. URINAL FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.

E. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED.

F. FAUCET CONTROLS AND 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 GREATER THAN 5 POUNDS PER FOOT. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

G. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM GLASS EDGE NOT MORE THAN 40-INCHES ABOVE THE FLOOR.

H. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40-INCHES FROM THE FLOOR.

I. TOILET TISSUE DISPENSERS SHALL BE LOCATED ON THE WALL OR PARTITION WITHIN 7" TO 9" TO CENTERLINE FROM THE FRONT EDGE OF THE TOILET SEAT, MOUTED BELOW THE GRAB BAR, AT A MINIMUM HEIGHT OF 19 INCHES, AND 36 INCHES MAXIMUM TO THE FAR EDGE FROM THE REAR WALL. DISPENSERS SHALL PERMIT CONTINUOUS FLOW AND NOT CONTROL DELIVERY (CBC 11B-604.7).

J. GRAB BARS, TUB AND SHOWER SEATS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LB. PER CBC 1607A.8.2.

K. GRAB BARS:
1. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF A GRAB BAR SHALL BE 1-1/4" TO 1-1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
2. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2".
3. A GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS.
4. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
5. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

6. SWITCHES CONTROLS AND ELECTRICAL OUTLETS

A. RECEPTACLE OUTLETS SHALL BE 15" MIN ABOVE THE FINISHED FLOOR TO THE BOTTOM OF THE BOX PER CBC 11B-308.1.2.

B. SWITCHES SHALL BE 48" MAX. ABOVE THE FINISHED FLOOR TO THE TOP OF THE BOX (11B-308.1.1).

C. IF REACH IS OVER AN OBSTRUCTION (FOR EXAMPLE, A BASE CABINET) BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. THE OBSTRUCTION MAY NOT EXTEND MORE THAN 25" FROM THE WALL BENEATH THE CONTROL.

D. THE CENTER OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE OR SIDEWALK.

E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE A MEANS OF WARNINGTHE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

ACCESSIBILITY NOTES

1. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF SVA ARCHITECTS, AND ARE NOT TO BE USED, IN WHOLE OR IN PART FOR ANOTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF SVA ARCHITECTS.

2. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, SVA ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS SVA ARCHITECTS INC. RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

3. EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B OR THE APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF THIS CONTRACT.

4. FIRE SAFETY DURING CONSTRUCTION AND THE DURATION OF THIS CONTRACT:

A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH 2016 CALIFORNIA FIRE CODE TITLE 24, PART 9, CHAPTER 33.

B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410.

C. WATER SUPPLY: WATER MAINS AND HYDRANTS SHALL BE OPERATIONAL IN ACCORDANCE WITH SECTION 1412.

D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.

E. ALTERATIONS OF BUILDINGS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF SECTIONS 1405, 1411, 1413, AND 1415.

G. FIRE WATCH: MAINTAIN FIRE WATCH WHEN REQUIRED BY THE BUILDING OFFICIAL AND WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE OR AS ALLOWED BY THE BUILDING OFFICIAL.

5. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO EQUAL RATING. FIRE STOP SYSTEMS AS LISTED BY UNDERWRITERS LABORATORIES SHALL BE INSTALLED PER FIRE RESISTANCE DIRECTORY. FIRE STOP SYSTEMS SHALL BE AS SPECIFIED.

6. STATEMENT (TITLE 24, PART 6): NONRESIDENTIAL ENERGY STANDARDS COMPLIANCE: THE DESIGN INDICATED HEREIN COMPLIES WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION STANDARDS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THE PROPOSED BUILDING(S) WILL BE IN COMPLIANCE WITH THE ENERGY CONSERVATION STANDARDS PROVIDED IT (THEY) IS (ARE) BUILT ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS AND PROVIDED ANY FUTURE IMPROVEMENTS ARE COMPLETED ACCORDING TO THE REQUIREMENTS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED TO INCLUDE ALL SIGNIFICANT ENERGY CONSERVATION FEATURES REQUIRED FOR COMPLIANCE WITH THE STANDARDS. BUILDING AREAS THAT ARE UNCONDITIONED AND/OR NOT SUBJECT TO THE STANDARDS ARE INDICATED ON THE PLANS.

ENVELOPE MANDATORY MEASURES:

A. INSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.

B. ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF [TITLE 24, PART 2, CALIFORNIA BUILDING CODE, SECTIONS 719 AND 2603.]

C. ALL EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL AND OBSERVABLE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED.

D. SITE CONSTRUCTED DOORS, AND WINDOWS SHALL BE CAULKED BETWEEN THE UNIT AND THE BUILDING, AND SHALL BE WEATHERSTRIPPED (EXCEPT FOR UNFRAMED GLASS DOORS AND FIRE DOORS).

E. MANUFACTURED DOORS AND WINDOWS INSTALLED SHALL HAVE AIR INFILTRATION RATES CERTIFIED BY THE MANUFACTURER IN ACCORDANCE WITH TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS, SECTION 116(a)1.

F. MANUFACTURED FENESTRATION PRODUCTS IN THE ENVELOPE OF THE BUILDING, INCLUDING, BUT NOT LIMITED TO, WINDOWS, SLIDING GLASS DOORS, FRENCH DOORS, SKYLIGHTS, CURTAIN WALLS, AND GARDEN WINDOWS MUST BE LABELED FOR U-VALUE IN ACCORDANCE WITH THE (NFRC) NATIONAL FENESTRATION RATING COUNCIL'S INTERIM U-VALUE RATING PROCEDURE.

G. DEMISING WALL INSULATION SHALL BE INSTALLED IN ALL OPAQUE PORTIONS OF FRAMED WALLS (EXCEPT DOORS).

7. INSPECTOR OF RECORD REQUIREMENTS: A. ONE OR MORE INSPECTORS EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS WILL BE ASSIGNED TO THE WORK. THE INSPECTORS DUTIES ARE SPECIFICALLY DEFINED IN SECTION 4-342 OF SAID TITLE 24, PART 1 AND IN ADDITION SHALL BE AS STIPULATED IN INTERPRETATION OF REGULATION DOCUMENT IR A-8. B. INSPECTOR SHALL BE CERTIFIED AS A CLASS [2] INSPECTOR THROUGH THE DIVISION OF THE STATE ARCHITECT INSPECTOR EXAMINATION PROGRAM. INSPECTOR SHALL ALSO BE SPECIFICALLY APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR THIS PROJECT AT LEAST 10 DAYS PRIOR TO THE START OF ANY WORK FOR THIS PROJECT.

8. ALL WORK SHOWN ON THESE DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

9. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CCD APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

10. GRADING PLANS, DRAINAGE IMPRPOVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIROMENTAL HEALTH CONCIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

11. DRINKING WATER SHALL COMPLY WITH ALL LOCAL HEALTH DEPARTMENT REQUIREMENTS.

12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE CODES. ALL ENGINEERING SHALL COMFORM WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION INCLUDING ACCESSIBILITY STANDARDS AND ADA REQUIREMENTS.

13. DO NOT SCALE THE DRAWINGS. THE DRAWINGS ARE NOT NECESSARILY TO SCALE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO BIDDING AND START OF CONSTRUCTION. IF DISCREPANCIES ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE COMMENCING WORK.

14. ALL DIMENSIONS ARE TO FACE OF CONCRETE, FACE OF MASONRY UNITS, CENTERLINE OF COLUMNS AND BEAMS, OR FACE OF STUDS, UNLESS OTHERWIS NOTED. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE SLAB OR TOP OF INTERIOR PAVING UNLESS NOTED OTHERWISE .CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES UNLESS NOTED OTHERWISE.

15. THE CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE PROCEEDING WITH INSTALLATION OF CIVIL, STRUCTURAL MECHANICAL, PLUMBING, AND ELECTRICAL WORK. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE ARCHITECT'S AND THE CONSULTING ENGINEER'S DRAWINGS AND SPECIFICATIONS THAT WOULD CAUSE A CONFLICT, IT SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT.

16. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING ABBREVIATIONS OR THEIR EXACT MEANING, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

17. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES UNLES SPECIFICALLY INDICATED OTHERWISE.

18. ALL RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND/OR NEW WORK SHALL BE DISPOSED OF OFF-SITE AND SHALL NOT BE ALLOWED TO ACCUMULATE.

19. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 30 00 OF SPECIFICATIONS AND AS REQUIRED BY INDIVIDUAL SPECIFICATION SECTIONS.

20. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL. REQUEST FOR SUBSTITUTION SHALL BE IN ACCORDANCE WITH SECTION 01 60 00 OF SPECIFICATIONS.

21. ALL METAL FRAMING MEMBERS SHALL BE SO ARRANGED AND SPACED AS TO PERMIT INSTALLATION OF PIPE CONDUITS AND DUCT-WORK WITH A MINIMUM OF CUTTING. SHAFT WALLS SHALL BE PROVIDED WITH NECESSARY FRAMES, BRACING, AND SEALANT AROUND THE OPENING.

22. OFFSET STUDS WHERE REQUIRED SO THAT FINISH WALL SURFACE WILL BE FLUSH.

24. DOORS IN RATED WALLS SHALL CONSIST OF SELF-CLOSING, SELF-LATCHING ASSEMBLIES WITH SMOKE AND DRAFT SEALS AT HEAD AND JAMBS. DOOR ASSEMBLY RATINGS SHALL BE AS INDICATED ON DOOR AND ACTIVATED BY SMOKE DETECTORS.

25. INSTALL METAL CORNER BEADS AT ALL EXPOSED GYPSUM BOARD EDGES INSTALL CASING BEADS WHEREVER GYPSUM BOARD, PLASTER, ETC. ABUTS DISSIMILAR FINISH MATERIAL AND PROVIDE SEALANT AS REQUIRED.

26. GYPSUM BOARD SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE AT ALL COLUMNS AND EXTERIOR PERIMETER WALLS UNLESS OTHERWISE NOTED. WELD FURRING CHANNELS TO STEEL COLUMN PRIOR TO FIRE PROOFING WHEN REQUIRED.

27. CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, STAIR RAILINGS, TOILET ROOM ACCESSORIES AND PARTITIONS, AND OF ALL WALL MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL, OR MISCELLANEOUS EQUIPMENT.

28. ALL GLAZING SHALL COMPLY WITH THE CONSUMER PRODUCT SAFETY COMMISSION REQUIREMENTS (C.P.S.C.), CFC, AND CBC.

29. CONTACT BETWEEN DISSIMILAR METAL SHALL BE PROTECTED.

30. ALL DOOR SIZES SHOWN ON DOOR SCHEDULE ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHALL BE TAKEN OFF DOOR. ALL DOORS AND FRAME SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS, AND HARDWARE.

31. ROOFING SYSTEM SHALL BEAR U.L. LISTING AS A CLASS "A" SYSTEM. ALL MANUFACTURED MATERIALS USED SHALL BEAR THE APPROPRIATE U.L. LABEL.

32. ALL WOOD TRIM, SPACER, FILLER, ETC., THROUGHOUT JOB SHOULD BE FIRE TREATED.

33. INSPECTION AND TESTING LABORATORY MUST BE IN THE EMPLOY OF THE OWNER, NOT THE CONTRACTOR.

34. MINIMUM HEADROOM CLEARANCE AT STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM A PLANE PARALLEL AND TANGENT TO THE TREAD NOSING TO THE SOFFIT ABOVE AT ALL POINTS.

35. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEGE. LOCKING DEVICES SHALL BE OF AN APPROVED TYPE.

36. EXIT SIGNS SHALL HAVE 6" MINIMUM HEIGHT LETTERS AND SHALL CONFORM TO SECTION 1013 OF THE CALIFORNIA BUILDING CODE.

37. FURNISH AND INSTALL ACCESS DOORS, FIRE DAMPERS, ETC. IN CEILING AND WALL CONSTRUCTION LOCATED AS REQUIRED BY INSTALLATION OF MECHANICAL PLUMBING, AND ELECTRICAL WORK AND AS APPROVED BY THE ARCHITECT. PROVIDE RATED ASSEMBLIES IN RATED WALLS AND CEILINGS AND SHALL BE APPROVED BY BUILDING INSPECTOR PRIOR TO INSTALLATION.

38. FURNISH AND INSTALL EMERGENCY LIGHTING AS SPECIFIED AND INDICATED BUT IN NO CASE SHALL THE LIGHT VALUE BE LESS THAN ONE FOOT CANDLE AT FLOOR LEVEL IN ALL EXIT CORRIDORS AND STAIR SHAFTS (CBC SECTION 1008).

39. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5' OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DECEND UNLESS A PERMIT IS OBTAINED FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING OR GRADING PERMIT.

40. THE CONSTRUCTION OR DEMOLITION OF ANY BUILDING, STRUCTURE, SCAFFOLDING OR FALSEWORK MORE THAN 3 STORIES OR 36' IN HEIGHT REQUIRES A PERMIT FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

41. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 18" OF THE ADJACENT FLOOR SHALL BE GLASS APPROVED FOR IMPACT HAZARD.

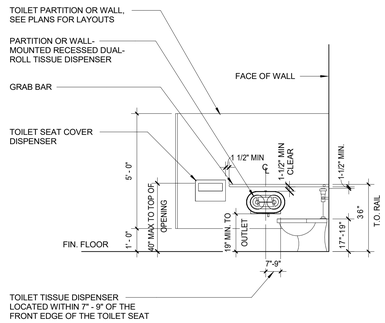
42. ALL LIGHT GAUGE METAL STUDS AND BRACING SHALL COMPLY WITH 2016 CALIFORNIA BUILDING CODE.

43. INSTALLATION OF SHORING, UNDERPINNING, AND/OR SLOT CUTTING EXCAVATIONS SHALL BE PERFORMED UNDER THE CONTINUOUS INSPECTION AND APPROVAL OF THE GEOTECHNICAL ENGINEER.

44. ALL CONSTRUCTION SHALL PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY.

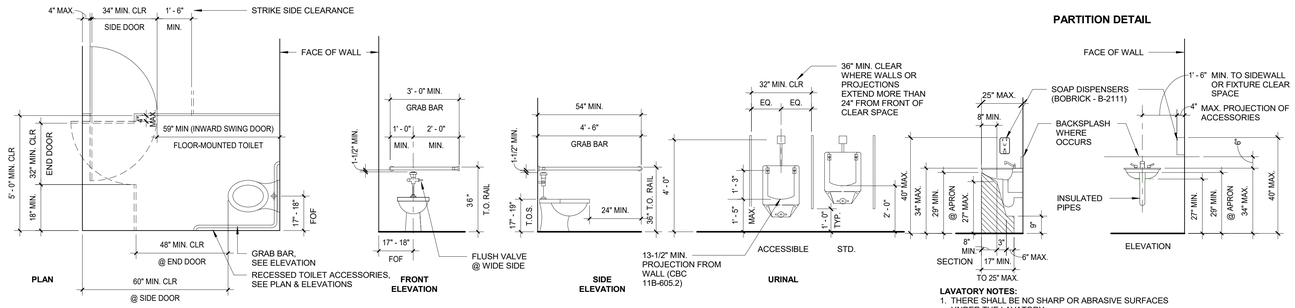
45. DIMENSIONS AND CONDITIONS AT THE JOB SITE SHALL BE VERIFIED BY ALL CONTRACTORS. IT IS THE RESPON

SUGGESTED DIMENSIONS				
DIMENSIONS	**ADULT AGE 12+**	**ELEMENTARY AGE 9-12**	**ELEMENTARY AGE 5-8**	**KINDERGARTEN AGE 3-4**
TOILET CENTERING FROM WALL	17-18	15-18	12-15	12
TOILET SEAT HEIGHT	17-19	15-17	12-15	11-12
GRAB BAR HEIGHT (TOP OF BAR)	33-36	25-27	20-25	18-20
TOILET PAPER DISPENSER HEIGHT	19 MIN.	17-19	14-17	14
TOILET PAPER IN FRONT OF TOILET	7-9 (CL)	7-9 (CL)	7-9 (CL)	7-9(CL)
DISPENSER OR MIRROR BOTTOM OF REFLECTING SURFACE HEIGHT	40 MAX	40 MAX	40 MAX	40 MAX
LAVATORY/ SINK TOP HEIGHT	34 MAX	31 MAX	31 MAX	31 MAX
LAVATORY/ SINK KNEE CLEARANCE	27 MIN	24 MIN	PARALLEL APPROACH PERMITTED	
URINAL LIP HEIGHT	17 MAX	17 MAX	17 MAX	17 MAX
URINAL FLUSH HANDLE HEIGHT	44 MAX	44 MAX	44 MAX	44 MAX
DRINKING FOUNTAIN BUBBLER HEIGHT	36 MAX	36 MAX	30 MAX	30 MAX
DRINKING FOUNTAIN KNEE CLEARANCE	27 MAX	27 MAX	PARALLEL APPROACH PERMITTED	
RAMP/ STAIR HANDRAIL HEIGHT	34-38	34-38	34-38	34-38



ACCESSIBLE TOILET COMPARTMENT ACCESSORIES INDIVIDUAL ITEMS

NOTE: SEE PLANS FOR RESTROOMS ACCESSIBILITY SCOPE



LAVATORY NOTES:
1. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER THE LAVATORY.
2. ALL HOT WATER & DRAIN PIPES ACCESSIBLE UNDER LAVATORIES MUST BE INSULATED OR OTHERWISE COVERED.

STAFF TOILET ROOM PLUMBING FIXTURE HEIGHTS/DIMENSIONS

NOTE: ALL DIMENSIONS SHOWN ABOVE ARE FOR ADULT USE, REFER TO TABLE 1115B-1 (TO THE LEFT) FOR SUGGESTED DIMENSIONS FOR CHILDREN'S USE. (FOR AGE GROUPS:3-4 & 5-8)

TOILET ROOM ACCESSORY & PLUMBING FIXTURE HEIGHT | 3/8" = 1'-0" | **2**

1. SWITCHES, CONTROLS AND ELECTRICAL OUTLETS: (REFER TO DETAIL 7/GEN-4)

A. ELECTRICAL AND COMMUNICATION SYSTEMS OUTLETS SHALL BE MOUNTED NOT LESS THAN 15 INCHES ABOVE THE FLOOR OR WORKING PLATFORMTO BOTTOM OF BOX.

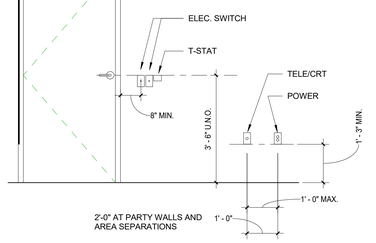
B. THE HIGHEST OPERABLE PART OF ALL CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE WITHIN 15 INCHES TO NO MORE THAN 4 FEET ABOVE THE FLOOR OR WORKING PLATFORM AT BOTH FORWARD AND PARALLEL APPROACH.

C. IF REACH IS OVER AN OBSTRUCTION (FOR EXAMPLE, A BASE CABINET) BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH. FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 46". THE OBSTURCTION MAY NOT EXTEND MORE THAN 24" FROM THE WALL BENEATH THE CONTROL.

D. FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE, OR SIDEWALK.

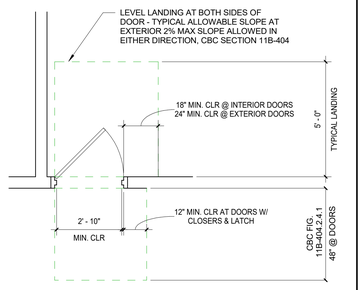
E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

COMMON ELEC. ACCESSIBILITY NOTES | 1 : 1 | **11**



ELEVATION

SWITCHES, CONTROLS & OUTLETS 1/2" = 1'-0" | **7**



DOOR LANDING | 3/8" = 1'-0" | **4**

1. ADDITIONAL COMPLIANCE REQUIREMENTS:

A. AT LEAST 5%, AND A MINIMUM WIDTH OF 36", OF EACH TABLE/COUNTER WORK SURFACE AND/OR TRANSACTION STATION IN EMPLOYEE WORK AREAS, SHALL HAVE A SURFACE BETWEEN 28" AND 34" ABOVE THE FLOOR(CBC 11B-203.9).

B. WARNING SYSTEMS SHALL COMPLY WITH NFPA 72 AND 72G (AS AMENDED BY CHAPTER 35) AND SHALL PROVIDE VISUAL ALARMS (I.E. STROBES) IN RESTROOMS, CORRIDORS, MULTI-PURPOSES ROOMS, LOBBIES, MEETING ROOMS, AND ANY OTHER COMMON USE ROOMS (CBC 11B-702.1).

C. COUNTERTOPS AND WORK SURFACES SHALL BE ACCESSIBLE (HEIGHT BETWEEN 28" AND 34" AFF) W/ ACCESSIBLE CLEAR SPACE BELOW PER CBC 11B-902.1.

2. ACCESSIBLE TOILET COMPARTMENTS:

A. SEE TOILET ROOM FLOOR PLAN FOR ACCESSIBLE TOILET STALL LOCATION.

B.VERIFY TOILET ACCESSORIES & TYPE OF PARTITION IN SPECS.

C. PROVIDE BACKING IN WALL & TOILET PARTITION FOR GRAB BAR ANCHORAGE.

D. COMPARTMENT DOOR TO PROVIDE MINIMUM 18" STRIKE-SIDE CLEARANCE (CBC 11B-604.8.1.2).

E. INSIDE AND OUTSIDE OF THE COMPARTMENT DOOR IS EQUIPPED WITH A LOOP OR U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH. THE LATCH IS A FLIP-OVER STYLE, SLIDING, OR OTHER HARDWARE NOT REQUIRING GRASPING OR TWISTING (CBC 11B-309.4).

F. OPENING HARDWARE IS MOUNTED BETWEEN 34" AND 44" ABOVE FINISH FLOOR (CBC 11B-404.2.7).

G. TOILET PAPER DISPENSER SHALL PERMIT CONTINUOUS PAPER FLOW AND SHALL NOT CONTROL DELIVERY (CBC 11B-604.7).

H. ACCESSIBLE COMPARTMENT DOOR EQUIPPED WITH AN AUTOMATIC CLOSING DEVICES (3 SECONDS MIN. SWEEP TIME FROM OPEN POSITION OF 70 DEGREES TO A POINT 3" FROM THE LATCH).

I. SEE ACCESSIBILITY NOTES FOR ADDITIONAL REQUIREMENTS.

J. FLUSH CONTROL SHALL BE ON WIDE SIDE OF TOILET COMPARTMENT AT ALL ACCESSIBLE STALLS, TYP.

K. WHERE ONLY ONE TYPE OF TOILET FIXTURE OR ACCESSORY IS USED, IT SHALL BE POSITIONED FOR ACCESSIBILITY.

3. DRINKING FOUNTAINS: (REFER TO DETAIL)

A. ON ANY FLOOR WHERE DRINKING FOUNTAINS ARE PROVIDED, THERE SHALL BE A DRINKING FOUNTAIN THAT IS ACCESSIBLE TO INDIVIDUALS WHO USE WHEELCHAIRS AND ONE ACCESSIBLE TO THOSE WHO HAVE DIFFICULTY BENDING OR STOOPING ("HI-LO" FOUNTAIN) PER CBC 11B-211.2) WHERE MORE THAN ONE IS PROVIDED ON A FLOOR, 50% SHALL COMPLY WITH THESE REQUIREMENTS.(CBC 11B-211.3)

B. THE DRINKING FOUNTAIN SHALL BE A MINIMUM OF 18 INCHES AND A MAXIMUM OF 19 INCHES IN DEPTH AND THERE SHALL BE A CLEAR AND UNOBSTRUCTED KNEE SPACE UNDER THE DRINKING FOUNTAIN NOT LESS THAN 27 INCHES IN HEIGHT, 30 INCHES IN WIDTH, AND 8 INCHES IN DEPTH, THE DEPTH MEASUREMENT BEING TAKEN FROM THE FRONT EDGE OF THE FOUNTAIN. ADDITIONALLY THERE SHALL BE TOE CLEARANCE OF 9 INCHES IN HEIGHT ABOVE THE FLOOR, AND 17 INCHES IN DEPTH FROM THE FRONT EDGE OF THE FOUNTAIN. A SIDE APPROACH DRINKING FOUNTAIN IS NOT ACCEPTABLE.

C. THE BUBBLER SHALL BE ACTIVATED BY A CONTROL WHICH IS EASILY OPERATED BY A PERSONS WITH DISABILITIES SUCH AS A HAND-OPERATED LEVER TYPE LOCATED WITHIN 6" INCHES OF THE FRONT OF THE DRINKING FOUNTAIN, ETC. THE BUBBLER OUTLET ORIFICE SHALL BE LOCATED WITHIN 5" INCHES OF THE FRONT OF THE DRINKING FOUNTAIN AND SHALL BE WITHIN 36 INCHES OF THE FLOOR. THE WATER STREAM FROM THE BUBBLER SHALL BE SUBSTANTIALLY PARALLEL TO THE FRONT EDGE OF THE DRINKING FOUNTAIN. THE SPOUT SHALL PROVIDE A FLOW OF WATER THAT IS AT LEAST 4 INCHES HIGH SO AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NO GREATER THAN 5 LB.

D. WATER FLOW. THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES (102 MM) HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES (127 MM) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES (76 MM) OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES (76 MM) AND 5 INCHES (127 MM) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.

COMMON AREA ACCESSIBILITY NOTES 1 : 1 | **1**

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT ROBERT M. SIMONDS No. C-18301 JAN. 31, 2025 STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
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PROJECT NO: Project Number

DATE ISSUED: Issue Date

SCALE: As indicated

SHEET NUMBER: GEN-4

SHEET TITLE:

GENERAL ACCESSIBILITY

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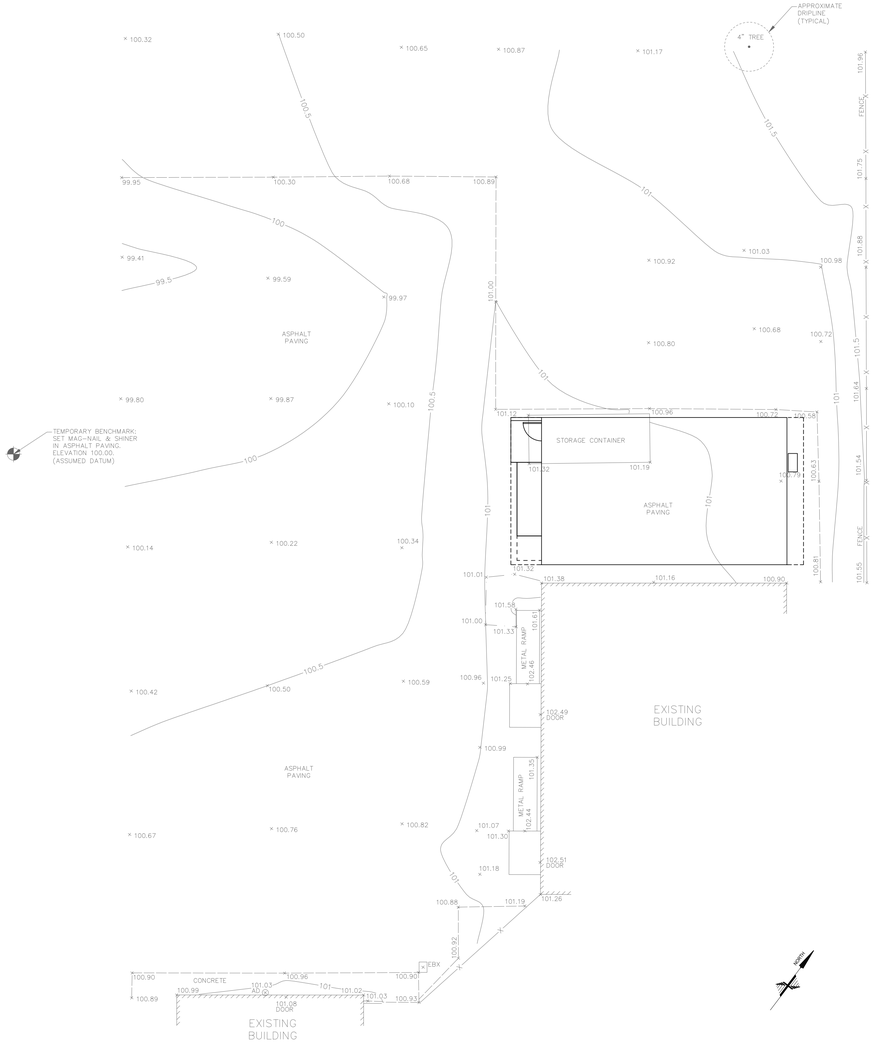
IMPROVEMENT PLANS

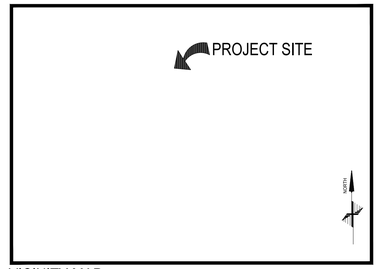
FOR

APTITUD ACADEMY

2475 VAN WINKLE LN

SAN JOSE, CA 95116





VICINITY MAP

LEGEND

BOUNDARY LINES

- CENTER LINE
- EASEMENT LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE

MISCELLANEOUS LINES

- SIDEWALK
- LIP OF GUTTER
- FENCE-WIRE
- BIORETENTION AREA

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
ATT	AT&T
BC	BACK OF CURB
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BOL	BOLLARD
BOW	BACK OF WALK
BW	BOTTOM OF WALL
BW/FS	BOTTOM OF WALL/FINISHED SURFACE
C	CONCRETE
CATV	CABLE TV
CB	CATCH BASIN
CONC	CONCRETE
COTG	CLEANOUT TO GRADE
DI	DRAIN INLET
DS	DOWN SPOUT
E	ELECTRIC OR EAST
EW	EACH WAY
EX.	EXISTING
(E)	EXISTING
ELEC	ELECTRIC
ESMT	EASEMENT
G	GAS
GB	GRADE BREAK
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOWLINE
FM	FORCE MAIN
FNC	FENCE
FS	FINISHED SURFACE
GRN	GROUND
HP	HIGH POINT
INV	INVERT
JP	JOINT POLE
LF	LINEAR FEET
LIP	LIP OF GUTTER
LT	LIGHT
M	MAPS
N	NORTH
NE	NORTHEAST
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OH	OVERHEAD
OR	OF RECORD
PERF	PERFORATED PIPE
PGE	PACIFIC GAS & ELECTRIC
POC	POINT OF CONNECTION
PV	PAVEMENT
RC	RELATIVE COMPACTION
RW	RECYCLED WATER
RIM	RIM OF UTILITY OBJECT
S	SOUTH
SD	STORMDRAIN
SE	SOUTHEAST
SJWC	SAN JOSE WATER COMPANY
SS	SANITARY SEWER
SL	STREET LIGHT
SW	SOUTHWEST
T	TREE
TC	TOP OF CURB
TW	TOP OF WALL
TW/FS	TOP OF WALL/FINISHED SURFACE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
USA	UNDERGROUND SERVICE ALERT
VG	VALLEY GUTTER
W	WATER/WEST/WITH
WM	WATER METER
WTR	WATER
WV	WATER VALVE

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C3.0	GRADING AND DRAINAGE PLAN
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C6.1	DETAILS

GENERAL CIVIL NOTES

GENERAL:

1. ALL PERMITS WILL BE SECURED BY THE OWNER AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM THEIR FAILURE TO DO SO.
3. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR SAFETY.
4. THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR THE POLICE, FIRE AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.
5. LENGTHS OF SANITARY SEWERS AND STORM DRAINS SPECIFIED ARE HORIZONTAL DISTANCES AS MEASURED FROM CENTERS OF STRUCTURES ROUNDED TO THE NEAREST FOOT.
6. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL PERFORM AT THEIR EXPENSE A FIELD OBSERVATION LOCATING ALL EXISTING UTILITIES INCLUDING ELEVATIONS AND NOTIFY THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTING LOCATIONS OF UTILITIES SHOWN ON THESE PLANS. ANY ADDITIONAL COST INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF THE EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
7. CONTRACTOR TO VERIFY ALL EXISTING INVERT ELEVATIONS FOR STORM DRAIN AND SANITARY SEWER CONSTRUCTION PRIOR TO ANY WORK. ALL WORK FOR STORM DRAIN AND SANITARY SEWER INSTALLATION SHALL BEGIN AT THE DOWNSTREAM CONNECTION POINT. THIS WILL ALLOW FOR ANY NECESSARY ADJUSTMENTS TO BE MADE PRIOR TO THE INSTALLATION OF THE ENTIRE LINE. IF THE CONTRACTOR FAILS TO BEGIN AT THE DOWNSTREAM CONNECTION POINT AND WORKS UPSTREAM, HE SHALL PROCEED AT HIS OWN RISK AND BE RESPONSIBLE FOR ANY ADJUSTMENTS NECESSARY.
8. CONTRACTOR SHALL UNCOVER AND EXPOSE ALL EXISTING UTILITY AND SEWER LINES WHERE THEY ARE CROSSED ABOVE OR BELOW BY THE NEW FACILITY BEING CONSTRUCTED IN ORDER TO VERIFY THE GRADE AND TO ASSURE THAT THERE IS SUFFICIENT CLEARANCE. PIPES SHALL NOT BE STRUNG NOR TRENCHING COMMENCED UNTIL ALL CROSSINGS HAVE BEEN VERIFIED FOR CLEARANCE. IF THE CONTRACTOR FAILS TO FOLLOW THIS PROCEDURE HE WILL BE SOLELY RESPONSIBLE FOR ANY EXTRA WORK OR MATERIAL REQUIRED IF MODIFICATIONS TO THE DESIGN ARE NECESSARY.
9. ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S SOLE EXPENSE.
10. CONTRACTOR TO TAKE NECESSARY PRECAUTIONARY MEASURES TO PREVENT SOIL EROSION AND SEDIMENTATION. EXISTING AND PROPOSED DRAINAGE STRUCTURES TO BE TEMPORARILY COVERED WITH FILTER FABRIC OR EQUAL UNTIL SURROUNDING PAVEMENT IS INSTALLED.
11. ANY RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE OWNER AND CONDUCTED IN ACCORDANCE WITH ANY AND ALL REQUIREMENTS OF THE OWNER, INCLUDING FEES, BONDS. PERMITS AND WORKING CONDITIONS, ETC. THE OWNER SHALL PAY THE FEES, BONDS, AND FILE THE APPROPRIATE PERMITS FOR ALL SUCH RELOCATION WORK. ALL ON- SITE UTILITY WORK IS THE RESPONSIBILITY OF THE CONTRACTOR (MATERIALS AND INSTALLATION).
12. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING. TRENCHING OR OTHER EXCAVATION, EARTHWORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY (SCA) AND/OR THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY.
13. THESE PLANS DO NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIALS OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURES. DAMAGES, OR LIABILITIES, OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIALS, OR EQUIPMENT. NOTIFY OWNER WHEN DISCOVERING ASBESTOS MATERIALS. REFER TO SPECIFICATION 'HAZARDOUS MATERIALS PROCEDURES AND CONTROL' AND 'HAZARDOUS MATERIALS ABATEMENT AND CONTROL.'
14. THE CONTRACTOR SHALL MEET AND FOLLOW ALL (NPDES) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
15. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
16. CONTRACTOR SHALL ARRANGE, INSTALL, AND PAY FOR ANY TEMPORARY UTILITIES, INCLUDING BUT NOT LIMITED TO TELEPHONE, ELECTRIC, SEWER, WATER, ETC.. THE CONTRACTOR IS TO COORDINATE ANY SUCH UTILITY NEEDS WITH THE OWNER.
17. ALL SITE AREAS SHALL BE GRADED AT 1% MINIMUM FOR DRAINAGE UNLESS OTHERWISE NOTED OR ALONG FLOWLINES OF CONCRETE LINED GUTTERS AND VALLEY GUTTERS.
18. ESTIMATED EARTHWORK QUANTITIES SHOWN ARE APPROXIMATE ONLY AND SHOWN FOR THE PURPOSES OF ESTIMATING GRADING PERMIT FEES, HOHBACH-LEWIN ASSUMES NO LIABILITY FOR THE ACCURACY OF THESE QUANTITIES.
19. WHERE EXISTING STRUCTURES ARE TO REMAIN IN CONSTRUCTION ZONE AREA, CONTRACTOR SHALL ADJUST RIMS OF THESE STRUCTURES, I.E. CATCH BASINS, VALVE BOXES, CLEAN OUTS, UTILITY BOXES, ETC. TO NEW FINISH GRADE.
20. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FOR NORTHERN CALIFORNIA AT LEAST 48 HOURS (2 WORKING DAY) PRIOR TO COMMENCEMENT OF CONSTRUCTION. (800) 227-2600.
21. THE ORGANIC MATERIAL COVERING THE SITE SHALL BE STRIPPED AND STOCKPILED. THE STRIPPINGS SHALL BE USED TO BACKFILL ALL LANDSCAPE PLANTERS AND ROUGH GRADE MOUND AREAS, AS SHOWN ON LANDSCAPE DRAWINGS, TO WITHIN 1" OF GRADES SHOWN. EXCESS STRIPPINGS AND EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
22. ADJUSTMENTS TO PAD ELEVATIONS OR PARKING LOT GRADES TO ACHIEVE EARTHWORK BALANCE SHALL BE MADE ONLY WITH APPROVAL OF THE ENGINEER.
23. COMPACTION TO BE DETERMINED USING ASTM D1557-LATEST EDITION.
24. STORM DRAIN PIPES DESIGNATED AS SD FROM 4" TO 24" IN DIAMETER SHALL BE SDR-35 PVC. (GREEN-TITE PIPE BY MANVILLE OR APPROVED EQUAL), CLASS HDPE SMOOTH INTERIOR PIPE PER ASTM D3212 HANCOR SURE-LOK WT PIPE OR APPROVED EQUAL WITH CLASS 1 BACKFILL OR DUCTILE IRON PIPE DIP, IF SPECIFIED ON PLANS. NO MATERIAL SUBSTITUTE SHALL BE ALLOWED FOR DUCTILE IRON PIPE. ANY PIPES LARGER THAN 24" IN DIAMETER SHALL BE CLASS III REINFORCED CONCRETE PIPE RCP. PVC PIPE EXCEEDING 24" DIAMETER SHALL ONLY BE USED WHEN APPROVED BY MANUFACTURER IN THIS JURISDICTION.
25. PROPOSED SPOT GRADES (ELEVATIONS) SHOWN HEREON ARE FINISHED PAVEMENT GRADES, NOT TOP OF CURB GRADES, UNLESS NOTED OTHERWISE.
26. THE CONTRACTOR SHALL VERIFY THE CONTENTS AND THICKNESS OF THE BUILDING SLAB SECTION (IE: CONCRETE, SAND, ROCK) WITH THE STRUCTURAL PLANS AND THE ELEVATIONS SHOWN HEREON PRIOR TO COMMENCEMENT OF GRADING.
27. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE O.S.H.A. REGULATIONS.
28. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
29. WHERE OFF-SITE DRIVEWAY APPROACHES ARE TO BE CONSTRUCTED THE ON-SITE DRIVEWAY SHALL NOT BE CONSTRUCTED UNTIL THE OFF-SITE IMPROVEMENTS ARE INSTALLED. THE ON-SITE DRIVEWAY SHALL CONFORM TO THE COMPLETED OFF-SITE DRIVEWAY.

GRADING NOTES:

1. UNDERGROUND UTILITY LOCATIONS SHOWN HEREON WERE TAKEN FROM RECORD DATA. NO GUARANTEE IS MADE OR IMPLIED AS TO THE ACCURACY OF SUCH RECORD DATA. NO EXCAVATIONS WERE MADE TO CONFIRM LOCATIONS. CONTRACTORS ARE CAUTIONED TO CONTACT U.S.A. UNDERGROUND AND TO EXERCISE EXTREME CARE IN VERIFYING ALL LOCATIONS PRIOR TO COMMENCING EXCAVATIONS OR OTHER WORK WHICH MAY AFFECT THESE UTILITIES.
2. IRRIGATION LATERALS, PARKING LOT LIGHTING WIRING AND SIGNAL WIRING NOT SHOWN. VERIFY LOCATION BEFORE COMMENCING TRENCHING. REPLACE OR REPAIR IMMEDIATELY WHERE BROKEN TO PROVIDE UNINTERRUPTED SERVICE.
3. ALL FINISH GRADES SHOWN ARE FINISH GRADE ELEVATIONS UNLESS NOTED OTHERWISE.

UTILITY NOTES:

1. THIS SURVEY IS NOT INTENDED TO REPRESENT THE EXACT LOCATIONS, SIZES OR EXTENT OF THE UTILITIES WITHIN THE AREA ENCOMPASSED BY THIS SURVEY. THEREFORE, IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO VERIFY THE LOCATION, SIZE AND EXTENT OF ANY EXISTING UTILITIES PRIOR TO DESIGN OR CONSTRUCTION. CONTRACTORS ARE CAUTIONED TO CONTACT U.S.A. UNDERGROUND AND TO EXERCISE EXTREME CARE IN VERIFYING ALL LOCATIONS PRIOR TO COMMENCING EXCAVATIONS OR OTHER WORK WHICH MAY AFFECT THESE UTILITIES.
2. IRRIGATION LATERALS, PARKING LOT LIGHTING WIRING AND SIGNAL WIRING NOT SHOWN. VERIFY LOCATION BEFORE COMMENCING TRENCHING. REPLACE OR REPAIR IMMEDIATELY WHERE BROKEN TO PROVIDE UNINTERRUPTED SERVICE.
3. UTILITY ABANDONMENT/REMOVAL: DISCONNECT AND CAP PIPES AND SERVICES TO REMAIN. REMOVE ALL PORTIONS OF ALL UTILITIES WITHIN NEW BUILDING FOOTPRINT AND DISPOSE OF OFF-SITE. OTHERWISE ABANDON IN PLACE UNLESS NOTED OTHERWISE.
4. NOTIFY THE ENGINEER IMMEDIATELY OF ANY UTILITIES ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS. PRESERVE AND REPAIR ANY UTILITIES THAT ARE DAMAGED AND THAT ARE TO REMAIN.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS OF NEW UTILITIES WITH EACH OTHER, AND WITH EXISTING UTILITIES. VERIFY EXISTING PIPE LOCATION AND INVERT PRIOR TO INSTALLING NEW UTILITIES. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR DEVIATIONS.
6. PRIOR TO CONNECTING TO EXISTING UTILITIES FIELD VERIFY LOCATION 6. & INVERT OR DEPTH PRIOR TO INSTALLING NEW PIPE OR EQUIPMENT.
7. EACH BUILDING WATER SERVICE CONNECTION SHALL BE WITH VALVE AND VALVE BOX SET AT GRADE.
8. ALL BUILDING SEWER LATERALS SHALL BE WITH CLEANOUT TO GRADE.
9. ALL CATCH BASINS WITHIN VEHICULAR AREAS SHALL BE TRAFFIC RATED FOR H20 VEHICULAR LOADS. FOR CATCH BASINS IN WALKWAY AREAS, INCLUDING EXISTING CATCH BASINS, USE HEEL PROOF AND ADA GRATE.

ADA COMPLIANCE:

1. ALL NEW WORK SHALL CONFORM TO TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE AND THE AMERICANS WITH DISABILITIES ACT 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, AND ANY LOCAL OR STATE AMENDMENTS THEREOF.
2. ALL NEW CURB RAMPS SHALL NOT EXCEED A SLOPE OF 1:12 (8.33%).
3. ALL NEW ENTRANCE WALKS TO THE BUILDINGS SHALL NOT EXCEED A SLOPE OF 1:20 (5%) LONGITUDINALLY UNLESS RAILINGS ARE PROVIDED IN WHICH CASE THE SLOPE SHALL NOT EXCEED 1:12 (8.33%). SEE ARCHITECTURAL PLANS FOR RAILING REQUIREMENTS.
4. LANDINGS SHALL BE PROVIDED AT PRIMARY ENTRANCES TO BUILDINGS WITH A 2% MAXIMUM SLOPE THE LANDINGS SHALL HAVE A MINIMUM WIDTH OF 60" AND A MINIMUM DEPTH OF 60" WHEN THE DOOR OPENS INTO THE BUILDING, AND 42" PLUS THE WIDTH OF THE DOOR WHEN THE DOOR OPENS ONTO THE LANDING.
5. RAMPS ARE DEFINED AS ANY WALKWAY BETWEEN SLOPES OF 1:20 (5%) AND 1:12 (8.33%), AND SHALL HAVE A MINIMUM WIDTH OF 48" AND A MAXIMUM CROSS-SLOPE OF 2%. RAMPS EXCEEDING 30" VERTICAL DROP SHALL HAVE INTERMEDIATE (2% MAXIMUM SLOPE) LANDINGS HAVING A MINIMUM LENGTH IN THE DIRECTION OF TRAVEL OF 60". BOTTOM LANDINGS AND LANDINGS AT CHANGES IN RAMP DIRECTION SHALL HAVE A MINIMUM LENGTH OF 72".
6. MAXIMUM CROSS-SLOPE ON ANY SIDEWALK OR RAMP SHALL BE 2%. MAXIMUM SLOPE IN ANY DIRECTION WITHIN PARKING STALLS DESIGNATED AS ACCESSIBLE PARKING STALL SHALL BE 2%.

GEOTECHNICAL CRITERIA:

1. ALL WORK INCLUDING GRADING, TRENCHING, COMPACTION, AND SUBBASES SHALL FOLLOW THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.
2. ALL ENGINEERED FILL SHALL HAVE A MINIMUM RELATIVE COMPACTION PER PROJECT GEOTECHNICAL REPORT.

CALL BEFORE YOU DIG 811 811 811

CAUTION:

1. THE LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES), CONTRACTOR SHALL VERIFY LOCATION AND DEPTH PRIOR TO ANY EXCAVATION OR IMPROVEMENT.
2. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION-PHONE (800) 642-2444. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY WORK ON THIS SITE.
3. THESE DRAWINGS DO NOT ADDRESS CONTRACTOR MEANS, METHODS OR PROCESSES THAT MAY BE ASSOCIATED WITH ANY TOXIC SOILS IF FOUND ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL CITY AND COUNTY STANDARDS AND APPROPRIATE REGULATIONS IF TOXIC SOILS ARE ENCOUNTERED. CONTRACTOR MUST NOTIFY THE OWNER'S PROJECT MANAGER IMMEDIATELY IF ANY SOILS ARE EVEN SUSPECTED OF BEING CONTAMINATED.

GENERAL SITE NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING ON THIS WORK AND CONSIDER THE EXISTING CONDITIONS AND SITE CONSTRAINTS IN THE BID. CONTRACTOR SHALL BE IN THE POSSESSION OF AND FAMILIAR WITH ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS AND SPECIFICATIONS PRIOR TO SUBMITTING OF A BID.
2. ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS & SPECIFICATIONS.
3. PRIOR TO BEGINNING WORK, AND AFTER INITIAL HORIZONTAL CONTROL STAKING, CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05' TO OWNER'S PROJECT MANAGER.
4. DAMAGE TO ANY EXISTING SITE IMPROVEMENTS, UTILITIES AND/OR SERVICES TO REMAIN SHALL BE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR AND/OR REPLACE IN KIND.
5. CONTRACTOR SHALL REPLACE ALL STRUCTURES AND GRATE LIDS FOR VAULTS, CATCH BASINS, ETC.., WITH VEHICULAR-RATED STRUCTURES IN ALL TRAFFIC ACCESSIBLE AREAS.
6. CONTRACTOR SHALL MAINTAIN THE EXISTING SITE IN A SAFE AND USABLE MANNER SUCH THAT EMERGENCY VEHICLE ACCESS IS AVAILABLE AT ALL TIMES. CONTRACTOR TO SUPPLY, INSTALL AND MAINTAIN ALL NECESSARY FENCING, GATES, SIGNAGE, TEMPORARY WALKWAYS, AND PROVISIONS FOR ENSURING THE PROJECT'S SECURITY AND SAFE PASSAGEWAY AROUND IT BY CAMPUS STAFF, STUDENTS AND VISITORS AT ALL TIMES.
7. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY & REQUIRED PERMITS FOR THIS WORK.
8. NOTIFICATION PRIOR TO THE START OF THE WORK MUST BE GIVEN TO THE UNDERGROUND SERVICE ALERT (USA).
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING APPROVAL FROM DISTRICT PERSONNEL AND PROJECT ARCHITECT FOR THE LOCATION OF ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAY DOWN AREAS.
10. CONSTRUCTION HOURS TO BE VERIFIED AND APPROVED BY DISTRICT AND LOCAL AGENCIES.
11. CONTRACTOR MUST HAVE OWNER'S REPRESENTATIVE OR ENGINEER/ARCHITECT FIELD REVIEW AND APPROVE FORMWORK PRIOR TO PLACING SITE CONCRETE FOR CURBS, RAMPS, STAIRS, WALKS, DRIVEWAYS AND RELATED FLATWORK.
12. IF ARCHEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER ON-SITE EXCAVATION, ALL WORK ON THE SITE SHALL BE STOPPED AND THE CITY IMMEDIATELY NOTIFIED. THE COUNTY CORONER & THE NATIVE AMERICAN HERITAGE COMMISSION SHALL ALSO BE NOTIFIED AND PROCEDURES FOLLOWED AS REQUIRED IN APPENDIX "K" OF THE CALIFORNIA ENVIRONMENTAL ACT.
13. CONTRACTOR TO COORDINATE WITH SCHOOL PERSONNEL AND ENSURE HIS/HER WORK DOES NOT IMPACT SCHOOL OPERATION AND TRAFFIC CIRCULATION OF BUSSES, EMERGENCY VEHICLES, STAFF AND STUDENT VEHICLES.

SITE MAINTENANCE:

1. CONTRACTOR SHALL: GATHER ALL CONSTRUCTION DEBRIS ON A REGULAR BASIS AND PLACE IT IN A DUMPSTER OR OTHER CONTAINER WHICH IS EMPTIED OR REMOVED ON A REGULAR BASIS. WHEN APPROPRIATE, USE TARPS ON THE GROUND TO COLLECT FALLEN DEBRIS OR SPLATTERS THAT COULD CONTRIBUTE TO STORM WATER RUNOFF POLLUTION.
2. REMOVE ALL DIRT, GRAVEL, RUBBISH, REFUSE, AND GREEN WASTE FROM STREET PAVEMENT AND STORM DRAINS ADJOINING THE SITE. LIMIT CONSTRUCTION ACCESS ROUTES ONTO THE SITE AND PLACE GRAVEL PADS AT THESE LOCATIONS. DO NOT DRIVE VEHICLES AND EQUIPMENT OFF THE PAVED OR GRAVELED AREAS DURING WET WEATHER.
3. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS. SCRAPE CAKED-ON MUD AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEPT MANUALLY.
4. IF THE STREETS, SIDEWALKS AND/OR PARKING LOT ARE PRESSURE WASHED, DEBRIS MUST BE TRAPPED AND COLLECTED TO PREVENT ENTRY INTO THE STORM DRAIN SYSTEM. NO CLEANING AGENT MAY BE DISCHARGED INTO THE STORM DRAIN. IF ANY CLEANING AGENT OR DEGREASER IS USED, WASH WATER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER, SUBJECT TO THE APPROVAL OF THE OWNER'S PROJECT MANAGER, OR OTHERWISE DISPOSED OF THROUGH APPROVED DISPOSAL METHODS.
5. CREATE A CONTAINED AND COVERED AREA ON THE SITE FOR THE STORAGE OF BAGS, CEMENT, PAINTS, OILS, FERTILIZERS, PESTICIDES, OR OTHER MATERIALS USED ON THE SITE THAT HAVE THE POTENTIAL OF BEING DISCHARGED INTO THE STORM DRAIN SYSTEM THROUGH EITHER BEING WIND-BLOWN OR IN THE EVENT OF A MATERIAL SPILL.
6. NEVER CLEAN MACHINERY, EQUIPMENT OR TOOLS INTO A STREET, GUTTER OR STORM DRAIN.
7. ENSURE THAT CEMENT TRUCKS, PAINTERS, OR STUCCO/PLASTER FINISHING CONTRACTORS DO NOT DISCHARGE WASH WATER FROM EQUIPMENT, TOOLS OR RINSE CONTAINERS INTO GUTTERS OR DRAINS.
8. PREVENT DUST FROM LEAVING THE SITE AND ACCUMULATING ON ADJACENT AREAS AS REQUIRED IN THE DUST CONTROL NOTES ON THIS SHEET.
9. PREVENT SEDIMENT LADEN STORM RUN-OFF FROM LEAVING THE SITE OR ENTERING STORM DRAIN OR SANITARY SEWER SYSTEMS AS REQUIRED IN THE EROSION AND SEDIMENTATION CONTROL NOTES ON THIS SHEET.
10. MAINTAIN EXISTING TREES AND PLANTS THAT ARE TO REMAIN AS REQUIRED BY THE TREE AND PLANT PROTECTION NOTES ON THIS SHEET.

DUST CONTROL:

1. WATER TRUCKS SHALL BE PRESENT AND IN USE AT THE CONSTRUCTION SITE. ALL PORTIONS OF THE SITE SUBJECT TO BLOWING DUST SHALL BE WATERED AS OFTEN AS DEEMED NECESSARY BY THE APPROPRIATE GOVERNMENTAL AGENCY IN ORDER TO ENSURE PROPER CONTROL OF BLOWING DUST FOR THE DURATION OF THE PROJECT.
2. WATERING ASSOCIATED WITH ON-SITE CONSTRUCTION ACTIVITY SHALL TAKE PLACE BETWEEN THE ESTABLISHED CONSTRUCTION HOURS AND SHALL INCLUDE AT LEAST ONE LATE-AFTERNOON WATERING TO MINIMIZE THE EFFECTS OF BLOWING DUST.
3. ALL PUBLIC STREETS AND MEDIANS SOILED OR LITTERED DUE TO THIS CONSTRUCTION ACTIVITY SHALL BE CLEANED AND SWEPT ON A DAILY BASIS DURING THE WORK WEEK, OR AS OFTEN AS DEEMED NECESSARY BY THE OWNER'S ENGINEER/INSPECTOR, TO THE SATISFACTION OF THE CITY'S DEPARTMENT OF PUBLIC WORKS.
4. WATERING ON PUBLIC STREETS OR POWER WASHING SEDIMENTATION ON STREETS SHALL NOT OCCUR, UNLESS CONTRACTOR COLLECTS AND FILTERS THE WASH WATER PRIOR TO ITS ENTERING THE CITY'S STORM DRAIN SYSTEM.
5. ON-SITE PAVED ACCESS ROADS, PARKING AREAS, AND STAGING AREAS SHALL BE SWEPT DAILY WITH A WATER SWEEPER.
6. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED WITH TARPAULINS OR OTHER EFFECTIVE COVERS.
7. THE SPEED OF ALL VEHICLES DRIVING ON UNPAVED ROADS OR PORTIONS OF THE SITE SHALL BE LIMITED TO 10 MPH.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES ARE INTENDED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CITY, COUNTY STORM DRAIN SYSTEM, SANITARY SEWER SYSTEM OR FROM LEAVING THE SITE. THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE FIELD TO MAKE SURE THAT THIS CONCEPT IS CARRIED OUT.
2. EROSION CONTROL FACILITIES AND MEASURES ARE TO BE INSTALLED AND OPERABLE BY OCTOBER 1st AND SHALL CONTINUE IN EFFECT UNTIL DISTURBED AREAS ARE STABILIZED OR UNTIL INSTALLATION OF THE PERMANENT SITE IMPROVEMENTS.
3. CONTRACTOR SHALL ASSUME THE CONCEPTS ON THE EROSION CONTROL PLAN, C5.1, ARE SCHEMATIC MINIMUM REQUIREMENTS, THE FULL EXTENT OF WHICH ARE TO BE DETERMINED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE EXACT DESIGN AND EXTENT OF THE EROSION CONTROL SYSTEM SO THAT IT WORKS WITH THE CONTRACTOR'S INTENDED USE AND MANAGEMENT OF THE CONSTRUCTION SITE, AND IS APPROVAL BY THE APPROPRIATE GOVERNMENTAL AGENCIES.
4. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED, AS REQUIRED, AT THE CONCLUSION OF EACH WORKING DAY DURING THE RAINY SEASON. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES AND MAKE NECESSARY REPAIRS PRIOR TO ANTICIPATED STORMS AND AT REASONABLE INTERVALS DURING STORMS OF EXTENDED DURATION. REPAIRS TO DAMAGED FACILITIES SHALL BE MADE IMMEDIATELY UPON DISCOVERY.
5. AS SOON AS PRACTICAL FOLLOWING EACH STORM, THE CONTRACTOR SHALL REMOVE ANY ACCUMULATION OF SILT OR DEBRIS FROM THE EROSION CONTROL SEDIMENT BASINS AND SHALL CLEAR THE OUTLET PIPES OF ANY BLOCKAGE.
6. PROVISION SHALL BE MADE TO ASSURE THAT BORROW AREAS AND STOCK PILED SOILS ARE PROTECTED FROM EROSION WITH EROSION CONTROL MEASURES SATISFACTORY TO THE APPROPRIATE GOVERNMENTAL AGENCIES.
7. ALL STOCKPILE MATERIALS SHALL BE COVERED AND PROTECTED FROM THE ELEMENTS WITH A NON-PERMEABLE PLASTIC MEMBRANE SO AS TO PREVENT SOIL EROSION FROM OCCURRING. THIS COVER SHALL BE SECURED WITH ANCHORS OR WEIGHTS OF SUFFICIENT SIZE AND FREQUENCY TO PREVENT DISRUPTION OR REMOVAL BY WIND OR RAIN. ANCHORAGE AT THE BASE OF THE SLOPE SHALL BE AS INDICATED BY DETAIL ON THIS SHEET. ALL MEMBRANE AND COVERINGS SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR OR HIS REPRESENTATIVE ON A FREQUENT AND REGULAR BASIS. SPECIFICALLY BEFORE AND AFTER ANY INCLEMENT WEATHER, WITH ANY NECESSARY REPAIRS BEING IMMEDIATELY PERFORMED. COVERINGS SHALL REMAIN IN PLACE UNTIL THE STOCKPILE(S) IS READY TO BE REMOVED FROM THE SITE, AT WHICH TIME THEY MAY BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
8. EARTHEN BERMS, STRAW-FIBER FILLED TUBES AND/OR GEOTEXTILE FABRIC BARRIER (SILT FENCING) SHALL BE CONSTRUCTED AS SHOWN TO PREVENT OFF-FLOW OF SEDIMENT-LADEN RUNOFF, OR THE EROSION OF BANKS OR ROADWAYS. ALL SUCH TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY THE CONTRACTOR AS SOON AS CONSTRUCTION IS COMPLETED AND VEGETATION IS ESTABLISHED. HAY BALES SHALL NOT BE USED.
9. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS, SWEPT ON A REGULAR BASIS, TO THE SATISFACTION OF THE ON-SITE INSPECTORS.
10. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS OR AS REQUIRED BY THE CITY. SCRAPE CAKED-ON MUD AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEPT MANUALLY.
11. PERSON RESPONSIBLE FOR EROSION CONTROL IMPLEMENTATION, TO BE DETERMINED.
12. WHEEL WASHERS SHALL BE INSTALLED AND USED TO CLEAN ALL TRUCKS AND EQUIPMENT LEAVING THE CONSTRUCTION SITE. IF WHEEL WASHERS CANNOT BE INSTALLED, TIRES OR TRACKS OF ALL TRUCKS AND EQUIPMENT SHALL BE WASHED OFF BEFORE LEAVING THE CONSTRUCTION SITE.

TREE/PLANT PROTECTION NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION ON SITE, CONTRACTOR SHALL IDENTIFY, CONFIRM WITH OWNER AND PROTECT EXISTING TREES AND PLANTS DESIGNATED AS TO REMAIN.
2. PROVIDE 6 FOOT TALL TREE PROTECTION FENCE WITH DISTINCTIVE MARKING VISIBLE TO CONSTRUCION EQUIPMENT, ENCLOSING DRIP LINES OF TREES DESIGNATED TO REMAIN.
3. WORK REQUIRED WITHIN FENCE LINE SHALL BE HELD TO A MINIMUM, AVOID UNNECESSARY MOVEMENT OF HEAVY EQUIPMENT WITHIN FENCED AREA AND DO NOT PARK ANY VEHICLES UNDER DRIP LINE OF TREES. DO NOT STORE EQUIPMENT OR MATERIALS WITHIN FENCE LINE.
4. PRIOR TO REMOVING ROOTS AND BRANCHES LARGER THAN 2" IN DIAMETER OF TREES OR PLANTS THAT ARE TO REMAIN, CONSULT WITH THE OWNER'S PROJECT MANAGER.
5. ANY GRADE CHANGES GREATER THAN 6" WITHIN THE DRIPLINE OF EXISTING TREES SHALL NOT BE MADE WITHOUT FIRST CONSULTING THE LANDSCAPE ARCHITECT / CIVIL ENGINEER.
6. PROTECT EXISTING TREES TO REMAIN FROM SPILLED CHEMICALS, FUEL OIL, MOTOR OIL, GASOLINE AND ALL OTHER CHEMICALLY INJURIOUS MATERIAL; AS WELL AS FROM PUDDLING OR CONTINUOUSLY RUNNING WATER. SHOULD A SPILL OCCUR, STOP WORK IN THAT AREA AND CONTACT THE CITY'S ENGINEER / INSPECTOR IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE TO MITIGATE DAMAGE FROM SPILLED MATERIAL AS WELL AS MATERIAL CLEAN UP.
7. PROVIDE TEMPORARY IRRIGATION TO ALL TREES AND PLANTS THAT ARE IN OR ADJACENT TO CONSTRUCTION AREAS WHERE EXISTING IRRIGATION SYSTEMS MAY BE AFFECTED BY THE CONSTRUCTION. ALSO PROVIDE TEMPORARY IRRIGATION TO RELOCATED TREES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ONGOING MAINTENANCE OF ALL TREES DESIGNATED TO REMAIN AND FOR MAINTENANCE OF RELOCATED TREES STOCKPILED DURING CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REPLACE TREES THAT DIE DUE TO LACK OF MAINTENANCE.
9. CONSULT WITH LANDSCAPE ARCHITECT SHOULD SPECIAL CIRCUMSTANCES ARISE OR QUESTIONS ARISE REGARDING THESE PROCEDURES.

DEMOLITION NOTES :

1. DEMOLITION AND CONSTRUCTION WORK MAY BE PERFORMED OVER THE TOP OF AND AROUND TELEPHONE AND POWER SERVICES. CONTRACTOR SHALL WORK BY HAND IN ALL AREAS WHERE THESE SERVICES MIGHT BE HARMED BY LARGER LESS PRECISE EQUIPMENT.
2. THE CONTRACTOR SHALL LOCATE AND CLEARLY MARK (AND THEN PRESERVE THESE MARKERS) FOR THE DURATION OF CONSTRUCTION OF ALL TELEPHONE, DATA, STREET LIGHT, SIGNAL LIGHT AND POWER FACILITIES THAT ARE IN OR NEAR THE AREA OF CONSTRUCTION.
3. CONTRACTOR'S BID IS TO INCLUDE ALL VISIBLE SURFACE AND ALL SUBSURFACE FEATURES IDENTIFIED TO BE REMOVED OR ABANDONED IN THESE DOCUMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY ACKNOWLEDGE THE EXTENT OF THE DEMOLITION WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS NECESSARY FOR ENCROACHMENT, GRADING, DEMOLITION, AND DISPOSAL OF SAID MATERIALS AS REQUIRED BY PRIVATE, LOCAL AND STATE JURISDICTIONS. THE CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH THE DEMOLITION WORK.
6. CONTRACTOR SHALL PAY DISPOSAL FEES.
7. BACKFILL ALL DEPRESSIONS AND TRENCHES FROM DEMOLITION OF FOUNDATIONS & UTILITIES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
8. WITHIN LIMITS OF WORK, REMOVE CURBS, GUTTERS, LANDSCAPING, SIGNAGE, TREES, SHRUBS, ASPHALT, UNDERGROUND PIPES, ETC. AS INDICATED ON THE DRAWINGS.
9. REMOVAL OF LANDSCAPING SHALL INCLUDE ROOTS AND ORGANIC MATERIALS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
10. PRIOR TO BEGINNING DEMOLITION WORK ACTIVITIES, CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL PLAN & DETAILS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING ALL DEMOLITION MATERIALS, OR STORING SELECTED ITEMS BY OWNER'S REPRESENTATIVE AT DESIGNATED LOCATIONS.
12. ABANDONED UTILITIES WITHIN 6 FEET OF THE PROPOSED BUILDING FOOTPRINT SHOULD BE REMOVED IN THEIR ENTIRETY. UTILITIES OUTSIDE THE BUILDING AREA SHOULD BE REMOVED OR ABANDONED IN-PLACE BY LOCATING AND PLUGGING ALL LATERALS AND ENDS OF PIPES WITH CONCRETE, AND THEN FILLING THE ENTIRE PIPE WITH GROUT. REMOVAL OF ANY UTILITIES WILL REQUIRE THAT ALL TRENCHES BE BACKFILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.

SITE FENCING NOTES :

1. CONTRACTOR SHALL PROVIDE A CONSTRUCTION FENCE AROUND THE ENTIRE AREA OF DEMOLITION AND CONSTRUCTION, INCLUDING ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAYDOWN AREAS.
2. FENCE LOCATION MAY BE ADJUSTED FROM TIME TO TIME AS CONSTRUCTION PROCEEDS TO EXCLUDE SOME AREAS WHERE CONSTRUCTION WORK IS NOT BEING DONE AND THE AREA IS NOT OBJECTIONABLE IN VISUAL APPEARANCE, AT THE DISCRETION AND APPROVAL OF THE DISTRICT STAFF. CONSTRUCTION FENCE SHALL BE A MINIMUM OF A 6' HIGH GALVANIZED CHAIN LINK.
3. CONSTRUCTION FENCE ADDRESSED IN THESE NOTES IS TO MEET MINIMUM SEPARATION REQUIREMENTS FROM CONSTRUCTION SITE AND THE CAMPUS. CONTRACTOR IS REQUIRED TO INSTALL ANY ADDITIONAL FENCING, BARRICADES OR OTHER SAFETY DEVICES NEEDED TO KEEP THE SITE SECURE & SAFE AT ALL TIMES.
4. ALL FENCING SHALL BE INSTALLED AT ONLY LOCATIONS DESIGNATED AND APPROVED BY DISTRICT PERSONNEL, WITH PARTICULAR CARE GIVEN SUCH THAT THE FENCING DOES NOT CREATE A TRAFFIC HAZARD OR NUISANCE, OR RESTRICT CAMPUS CIRCULATION & FIRE EXITING.

GRADING & EARTHWORK NOTES:

1. ALL PAVED AREAS ARE TO SLOPE A MINIMUM OF 1%. ACCESSIBLE STALLS AND LOADING ZONES ARE TO SLOPE AT A MAXIMUM OF 2% IN ANY DIRECTION AND ACCESSIBLE PATHWAYS ARE TO SLOPE AT A MAXIMUM OF 8.33%, WITH A MAXIMUM CROSS-SLOPE OF 2%. ANY AREAS ON THE SITE NOT CONFORMING TO THESE BASIC RULES DUE TO EXISTING CONDITIONS OR DISCREPANCIES IN THE DOCUMENTS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH FORMWORK FOR CURBS AND/OR FLATWORK.
2. CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES BASED ON THE TOPOGRAPHIC SURVEY, THE SOILS INVESTIGATION AND THE PROPOSED SURFACE GRADES AND BASE THE BID ACCORDINGLY. ANY DIFFERENCES BETWEEN THE STATE IN WHICH THE PROJECT SITE IS DELIVERED TO THE CONTRACTOR AND THESE DOCUMENTS SHOULD BE NOTED TO THE CIVIL ENGINEER.
3. ALL FILL SHALL BE COMPACTED PER THE CONSTRUCTION SPECIFICATIONS AND THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE OWNER'S TESTING AGENCY TO TAKE THE APPROPRIATE TESTS TO VERIFY COMPACTION VALUES.
4. IMPORT SOILS MUST MEET THE REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS.
5. COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION (WATER AND CONTROL WIRING) AND STREET LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASEROCK OR CONCRETE SURFACING. SEE LANDSCAPE AND SITE ELECTRICAL DRAWINGS.
6. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF ARCHITECT & ENGINEER.
7. SPOT ELEVATIONS ARE TO FINISHED SURFACE.
8. TOP OF CONCRETE CURBS ARE 0.50' ABOVE TOP OF PAVING ELEVATIONS, U.N.O.
9. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05'.
10. SUBGRADES SHALL BE PROOF ROLLED, OR AS INSTRUCTED PER THE CONSTRUCTION SPECIFICATIONS.
11. CONTRACTOR TO GRADE LANDSCAPED (NON PAVED) AREAS TO A FINISH GRADE OF 8" BELOW PROPOSED FINISH GRADE SHOWN ON THE GRADING PLANS. DISTRICT WILL INSTALL TOP 8 INCHES OF TOPSOIL AND PERFORM FINISH GRADING. CONTRACTOR TO GRADE PLANTER & LANDSCAPED AREAS (NON-PAVED AREAS ADJACENT TO BUILDINGS) TO FINISH GRADE 24" BELOW FINISH FLOOR OF BUILDING. DISTRICT TO INSTALL FINAL FILL MATERIAL, AND INSTALL IRRIGATION SYSTEMS.
12. AFTER STAKING FOR HORIZONTAL CONTROL CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05' TO ARCH/ENGR.
13. ALL EXISTING UTILITY STRUCTURES WITHIN THE AREA OF WORK SHALL HAVE THE LIDS, GRATES, COVERS, ETC. ADJUSTED TO BE FLUSH WITH FINISHED GRADES. CONTRACTOR SHALL IDENTIFY ALL SUCH ITEMS BY USE OF THESE PLANS AND THOROUGH FIELD INVESTIGATION.
14. GEOTECHNICAL CONSULTANT TO BE NOTIFIED OF DELIVERY OF ALL IMPORTED SOILS TO SITE FOR HIS/HER INSPECTION AND APPROVAL PRIOR TO PLACING BY CONTRACTOR.

EARTHWORK QUANTITY NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITIES OF ALL FORMS OF EARTHWORK ON THIS PROJECT AND BASING THE BID ON THOSE QUANTITIES WITH FULL KNOWLEDGE THAT ADDITIONAL PROCESSES - INCLUDING ENGINEERING - AND QUANTITIES ARE ALSO TO BE INCLUDED IN THE BID PER THE FOLLOWING NOTES.
2. THE CONTRACTOR SHALL MAKE AN INITIAL DETERMINATION OF THE QUANTITIES, BASED ON A DETAILED SITE VISIT, THE TOPOGRAPHIC SURVEY, THE GEOTECHNICAL REPORT, THE FINISH GRADES SHOWN ON THESE DRAWINGS, THE SIZE AND EXTENT OF FOOTINGS, THE PREPARATION AND MATERIALS USED FOR BUILDING SLABS, PAVEMENT SECTIONS, AND THE SIZE AND DEPTH OF UTILITY TRENCHES, INCLUDING THE UTILITY CONTRACTORS ANTICIPATED RE-USE OF EXISTING MATERIAL FOR BACKFILL IF ANY.
3. THE CONTRACTOR SHALL MEET THE GRADES SHOWN ON THE DRAWINGS, ADJUSTING THE AMOUNT OF IMPORT OR EXPORT AS REQUIRED TO DO SO. NO ASSUMPTIONS SHOULD BE MADE ABOUT THE SITE BALANCING. NO ADJUSTMENTS TO THE GRADES SHALL BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ARCH/ENGR IN WRITING AFTER THE IMPACT OF ANY GRADE CHANGES (IMPACT TO RAMPS, STAIRS, WORK BY OTHERS, ETC.) HAS BEEN THOROUGHLY REVIEWED BY THE ARCH/ENGR. WHEN PREPARING THE EARTHWORK BIDS, DO NOT ASSUME ANY CHANGES TO THE FINISHED GRADES SHOWN ON THESE DRAWINGS WILL BE PERMITTED.
4. THE EARTHWORK SPECIFICATIONS AND GEOTECHNICAL REPORT HAVE SPECIFIC REQUIREMENTS FOR BRINGING FILL MATERIAL ONTO THE SITE (IMPORT) SINCE THE EXISTING SOILS ARE NOT SUITABLE FOR FILL MATERIAL IN CERTAIN AREAS. THE EARTHWORK SPECIFICATIONS AND GEOTECHNICAL REPORT MAY IDENTIFY ALTERNATIVES THAT ALLOW TREATMENT OF EXISTING SOILS TO MINIMIZE IMPORT, HOWEVER MEETING THE GRADES SHOWN ON THESE DRAWINGS MUST ALSO BE CONSIDERED WHEN DETERMINING THE METHOD.
5. AFTER THE BID IS AWARDED THE CONTRACTOR SHALL SUBMIT A DETAILED EARTHWORK HANDLING PLAN THAT SHOWS THE INTENT AND LOCATIONS OF EARTH MOVEMENT AND QUANTITIES OF CUT, FILL, IMPORT AND EXPORT AS THE PROJECT WAS BID. PROPOSING ALTERNATIVE PLANS THAT MAY IDENTIFY GRADE ADJUSTMENTS TO MINIMIZE THE DISTANCE SOIL IS MOVED OR TO MINIMIZE IMPORT OR EXPORT WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PREPARING AN EARTHWORK PLAN AS BID.

CONDUITS:

1. CONDUITS FOR POWER, SITE LIGHTING, LOW VOLTAGE SYSTEMS, TELEPHONE, SECURITY, DATA, CABLE TV, CLOSED CIRCUIT TV, FIRE ALARM SYSTEMS, ETC SHALL BE INSTALLED PER THE ELECTRICAL SITE PLANS & DETAILS.
2. ALL CONDUITS SHALL INCLUDE PULL STRINGS.
3. ALL CONDUITS STUBBED TO A SPECIFIC LOCATION FOR FUTURE USE OR USE BY A SEPARATE CONTRACTOR SHALL BE CLEARLY MARKED IN THE FIELD AND DOCUMENTED IN THE CONTRACTOR'S RECORD DOCUMENTS AS TO BOTH DEPTH AND LOCATION.

Plot Date: May 12, 2023, 3:58 PM

OWNER: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

PROJECT NAME: APTITUD COMMUNITY ACADEMY

CLIENT ADDRESS: 2475 VAN WINKLE LN SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER DANIEL G. LEWIN NO. C38406 CIVIL STATE OF CALIFORNIA

REVISIONS:

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PROJECT NO:

DATE ISSUED:

DRAWN BY: BKB, VAB

SCALE: AS SHOWN

SHEET NUMBER: C1.1

NOTES

HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
260 Sheridan Avenue, Suite 150
Palo Alto, CA 94306
(650) 617-5930, Fax (650) 617-5932

HOHBACH-LEWIN #1701331

DEMOLITION LEGEND

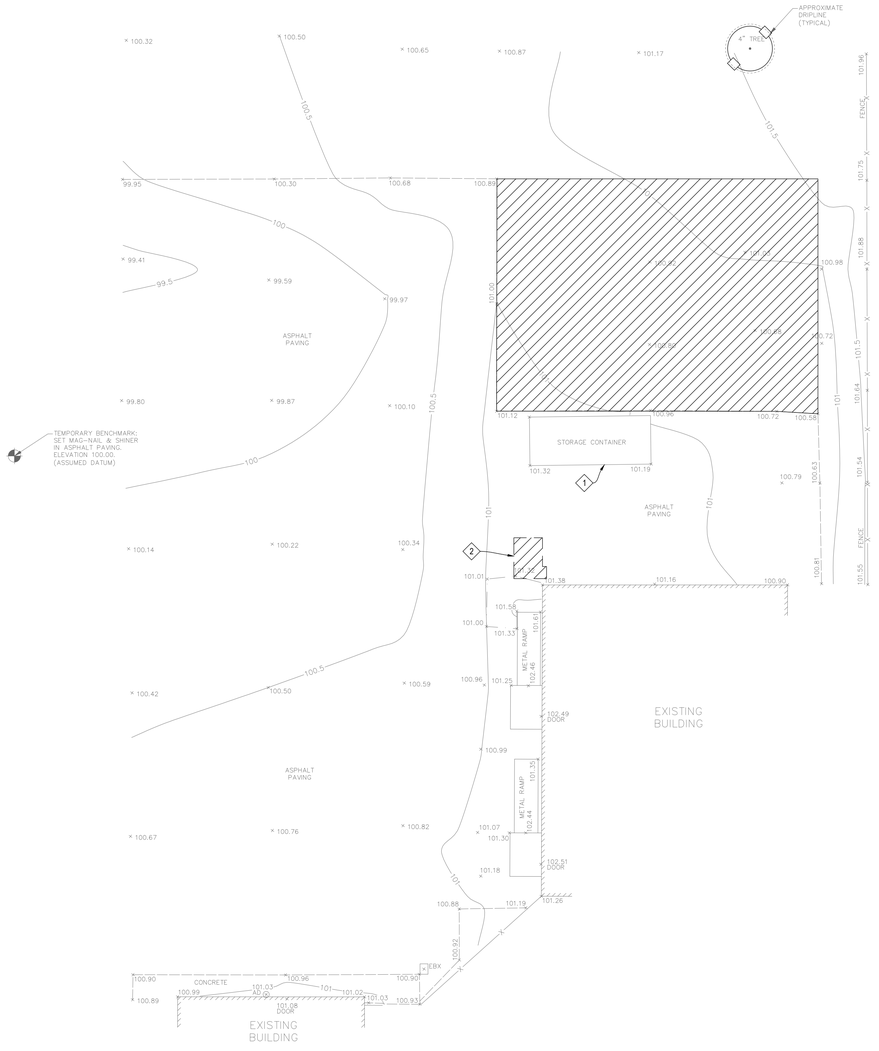
- TREE TO BE REMOVED. SEE LANDSCAPE PLANS.
- DEMOLITION AREA - ALL SITE FEATURES WITHIN THIS AREA ARE TO BE REMOVED, UNLESS NOTED TO REMAIN.
- EXISTING BUILDING STRUCTURE TO BE DEMOLISHED
- TREE PROTECTION TREES TO REMAIN

DEMOLITION KEYNOTES

1. STORAGE CONTAINER TO BE RELOCATED, SEE C3.0 AND ARCHITECTURAL PLANS FOR NEW LOCATION
2. SCARIFY AC PAVEMENT IN AREA OF NEW AC RAMP LANDING

DEMOLITION NOTES

1. SEE ELECTRICAL PLANS FOR REMOVAL OR RELOCATION OF ALL ELEC/COMM CONDUITS, BOXES, LINE ETC.
2. SEE UTILITY PLAN FOR ALL NEW TIE-IN LOCATIONS AND ANY INSTANCES OF STORM, SANITARY SEWER, OR WATER BEING RELOCATED. ANY EXISTING UTILITIES NOT BEING USED ARE TO BE REMOVED.
3. ALL EXISTING SERVICES AND UTILITIES THAT ARE WITHIN THE LIMITS OF DEMOLITION AND ARE TO REMAIN OPERATIONAL SHALL BE RELOCATED AS NECESSARY.
4. ALL TREES THAT ARE TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF PROPOSED UTILITIES, AND INFORM ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH WORK.
6. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INVERTS AND LOCATIONS PRIOR TO BEGINNING ANY WORK ON THIS SITE.



NORTH

0 5' 10' 15' 20'

SCALE: 1" = 10'

CALL BEFORE YOU DIG USA 800-227-2600

OWNER: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

PROJECT NAME: APTITUD COMMUNITY ACADEMY

CLIENT ADDRESS: 2475 VAN WINKLE LN SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER DANIEL G. LEWIN NO. C38406 CIVIL STATE OF CALIFORNIA

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PROJECT NO:

DATE ISSUED:

DRAWN BY: BKB, VAB

SCALE: AS SHOWN

SHEET NUMBER: C2.0

DEMOLITION PLAN

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(650) 617-5930, Fax (650) 617-5932

Plot Date: May 12, 2023 - 3:58 PM

HOHBACH-LEWIN #17013.31

GRADING LEGEND

XX.XX — GRADE ELEVATION

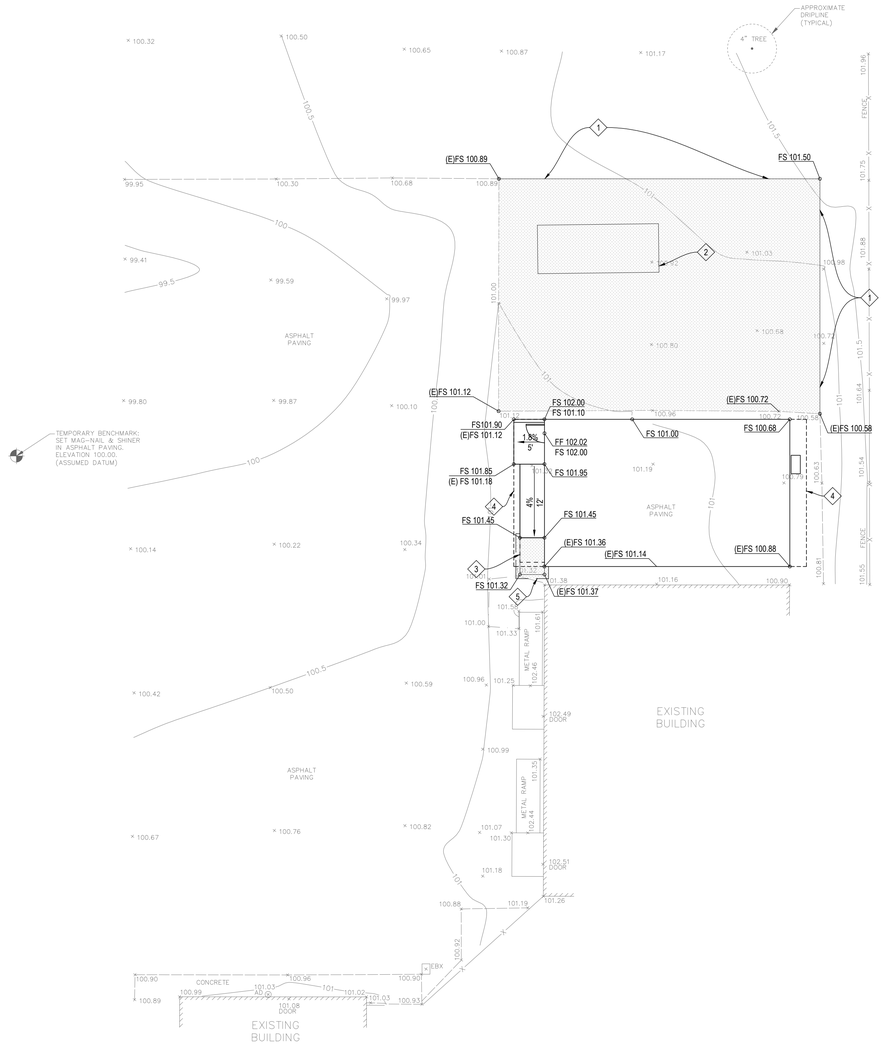
X% — SLOPE AND DIRECTION

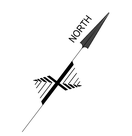
GRADING KEYNOTES

1. INSTALL REDWOOD HEADER, SEE DETAIL 1/C6.0
2. RELOCATED STORAGE CONTAINER, SEE ARCH PLANS
3. AC RAMP LANDING, SEE DETAIL 3/C6.0
4. ROOF OVERHANG
5. AC CONFORM TO EXISTING

PAVEMENT LEGEND

AC PAVEMENT — 3" AC PAVEMENT OVER 10" CLASS 2 BASEROCK COMPACTED TO 95% R.C. OVER 90% R.C. COMPACTED NATIVE SOILS





0 5' 10' 15' 20'

SCALE: 1" = 10'

CALL BEFORE YOU DIG USA 800-227-2600

OWNER: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

PROJECT NAME: APTITUD COMMUNITY ACADEMY

CLIENT ADDRESS: 2475 VAN WINKLE LN SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER — DANIEL G. LEWIN — NO. C38406 — CIVIL — STATE OF CALIFORNIA

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PROJECT NO:

DATE ISSUED:

DRAWN BY: BKB, VAB

SCALE: AS SHOWN

SHEET NUMBER: C3.0

GRADING AND DRAINAGE PLAN

HOHBACH-LEWIN, INC.

STRUCTURAL & CIVIL ENGINEERS

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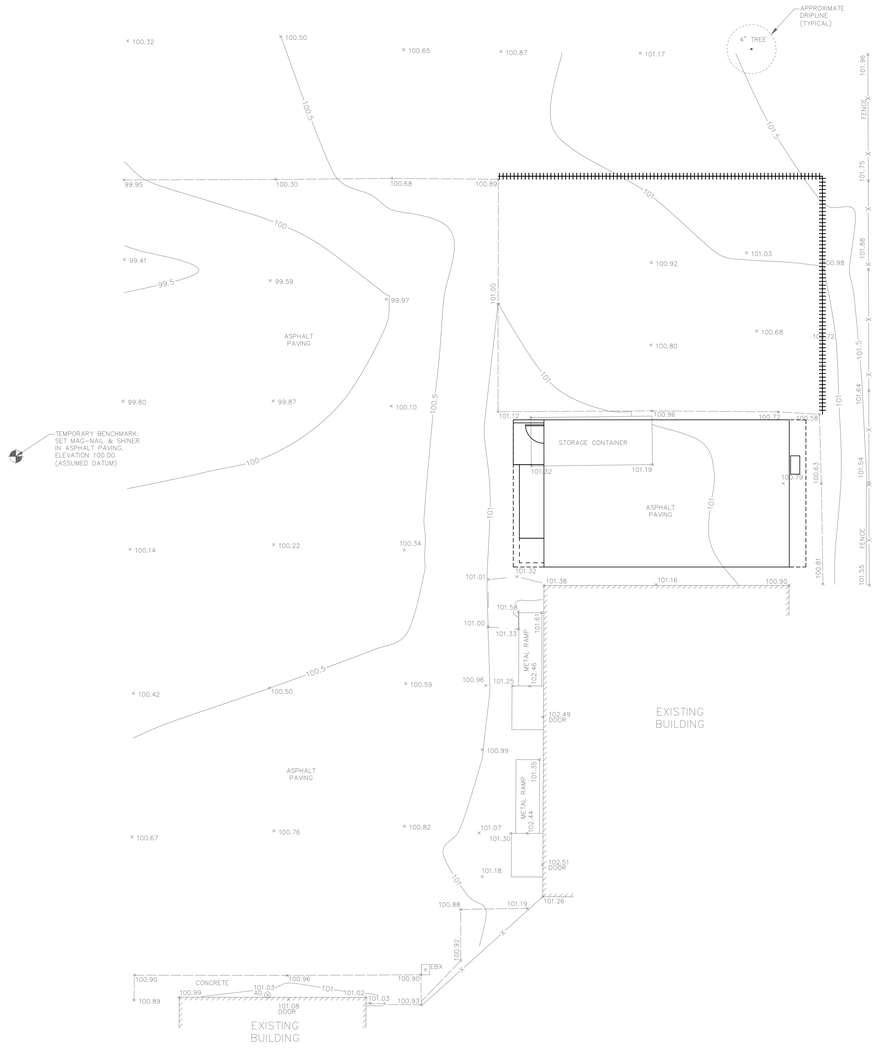
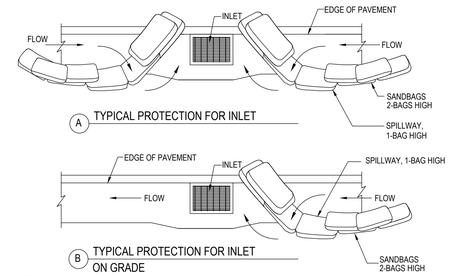
Plot Date: May 12, 2023 - 3:58 PM

HOHBACH-LEWIN #170133





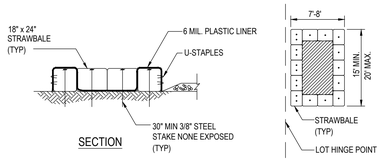
A TYPICAL PROTECTION FOR INLET

B TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. INTENDED FOR SHORT-TERM USE.
2. USE TO INHIBIT NON-STORM WATER FLOW.
3. ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
4. BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
5. NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

4 CATCH BASIN PROTECTION ALONG GUTTERS

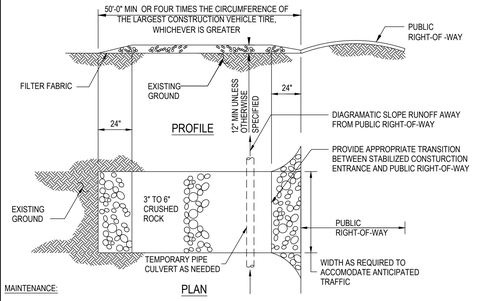


SECTION

NOTES:

1. WHEN WASHING ON-SITE, USE DESIGNATED, BERMED WASH AREAS TO PREVENT WASHWATER CONTACT WITH STORM WATER, CREEKS, RIVERS, AND OTHER WATER BODIES. THE WASH AREA CAN BE SLOPED FOR WASH WATER COLLECTION AND SUBSEQUENT INFILTRATION INTO THE GROUND.
2. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE.
3. WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED OF PROPERLY.

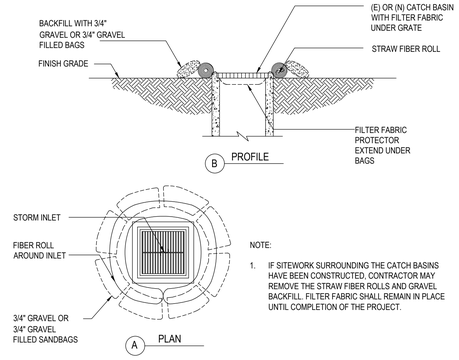
1 CONCRETE WASH AREA



MAINTENANCE:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AND REPAIR OR CLEAN OUT OF TRAPPED SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.
3. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. THIS SHALL BE DONE AT AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

5 STABILIZED CONTRUCTION ENTRANCE



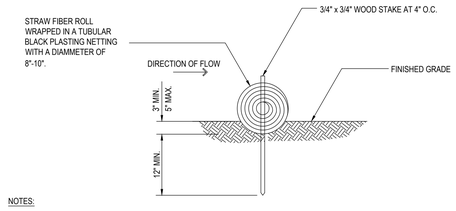
NOTE:

1. IF SITEWORK SURROUNDING THE CATCH BASINS HAVE BEEN CONSTRUCTED, CONTRACTOR MAY REMOVE THE STRAW FIBER ROLLS AND GRAVEL BACKFILL. FILTER FABRIC SHALL REMAIN IN PLACE UNTIL COMPLETION OF THE PROJECT.

2 CATCH BASIN PROTECTION (TYP.)

LEGEND

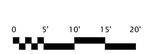
- CONCRETE WASHOUT, SEE DETAIL 1/-
- CATCH BASIN PROTECTION, SEE DETAIL 2/-
- FIBER ROLL, SEE DETAIL 3/-
- CATCH BASIN PROTECTION ALONG GUTTERS SEE DETAIL 4/-
- STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL 5/-



NOTES:

1. FIBER ROLL COMPOSED OF BIO-DEGRADEABLE FIBERS STUFFED INTO A PHOTO-DEGRADABLE OPEN WEAVE NETTING.
2. FIBER ROLL EROSION BARRIER TRAPS SEDIMENT AND REDUCES SHEET AND HILL SIDE EROSIONS BY REDUCING SLOPE GRADIENT. IT INCREASING INFILTRATION RATES AND BY PRODUCING A FAVORABLE ENVIRONMENT FOR PLANT ESTABLISHMENT.
3. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE FIBER ROLL IN A TRENCH 3"-5" DEEP, DUG ON CONTOUR , RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

3 FIBER ROLL



SCALE: 1" = 10'

CALL BEFORE YOU DIG USA 800-227-2600

OWNER: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

PROJECT NAME: APTITUD COMMUNITY ACADEMY

CLIENT ADDRESS: 2475 VAN WINKLE LN SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER DANIEL G. LEWIN NO. C38406 CIVIL STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
1		
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4		
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7		
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9		
10		
11		
12		

PROJECT NO:

DATE ISSUED:

DRAWN BY: BKB, VAB

SCALE: AS SHOWN

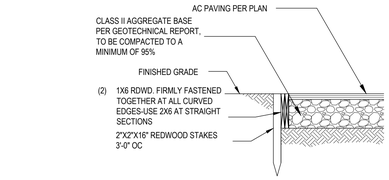
SHEET NUMBER: C5.0

EROSION CONTROL PLAN

HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
260 Sheridan Avenue, Suite 150
Palo Alto, CA 94306
(650) 617-5930, Fax (650) 617-5932

HOHBACH-LEWIN #17013.31

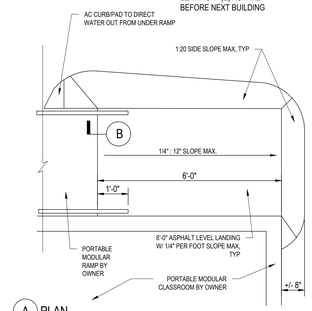
Plot Date: May 12, 2023 - 3:58 PM



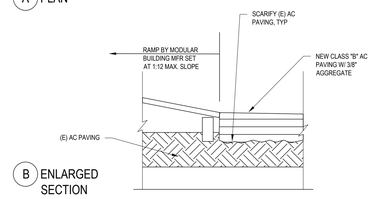
NOTE:
1. HEADER SHALL BE STRAIGHT WITHOUT KINKS OR BENDS
2. PROTECT REDWOOD HEADER AT ALL TIMES. REPLACE DAMAGED HEADER AND ASPHALT. REPAIR AT CONTRACTOR'S EXPENSE.

13 | 9 | 5 | 1 REDWOOD HEADER

NOTE: IF LANDINGS ARE ON HIGH SIDE, FEATHER +/- 8", LEAVING 1" (E) ASPHALT BEFORE NEXT BUILDING



A PLAN



B ENLARGED SECTION

NOTE: ALL MODIFICATIONS TO (E) ASPHALT AND NEW ASPHALT BY CONTRACTOR

SPECIFICATION NOTES:

1. ASPHALT CONCRETE: CONFORM TO REQUIERMENTS OF CALTRANS STANDARD SPECIFICAITONS SECTION 39 FOR TYPE A ASPHALT WITH ½ INCH MAXIMUM MEDIUM AGGREGATE SIZE USING AR 4000 ASPHALT OF BINDER.
2. SEAL COAT: A PREMIXED ASPHALT EMULSION BLENDED WITH SELECT FILLERS AND FIBERS.

14 | 10 | 6

15 | 11 | 7 | 3 AC RAMP LANDING

16 | 12 | 8 | 4

OWNER: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

PROJECT NAME: APTITUD COMMUNITY ACADEMY

CLIENT ADDRESS: 2475 VAN WINKLE LN SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER DANIEL G. LEWIN NO. C38406 CIVIL STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
1		
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12		

PROJECT NO:

DATE ISSUED:

DRAWN BY: BKB, VAB

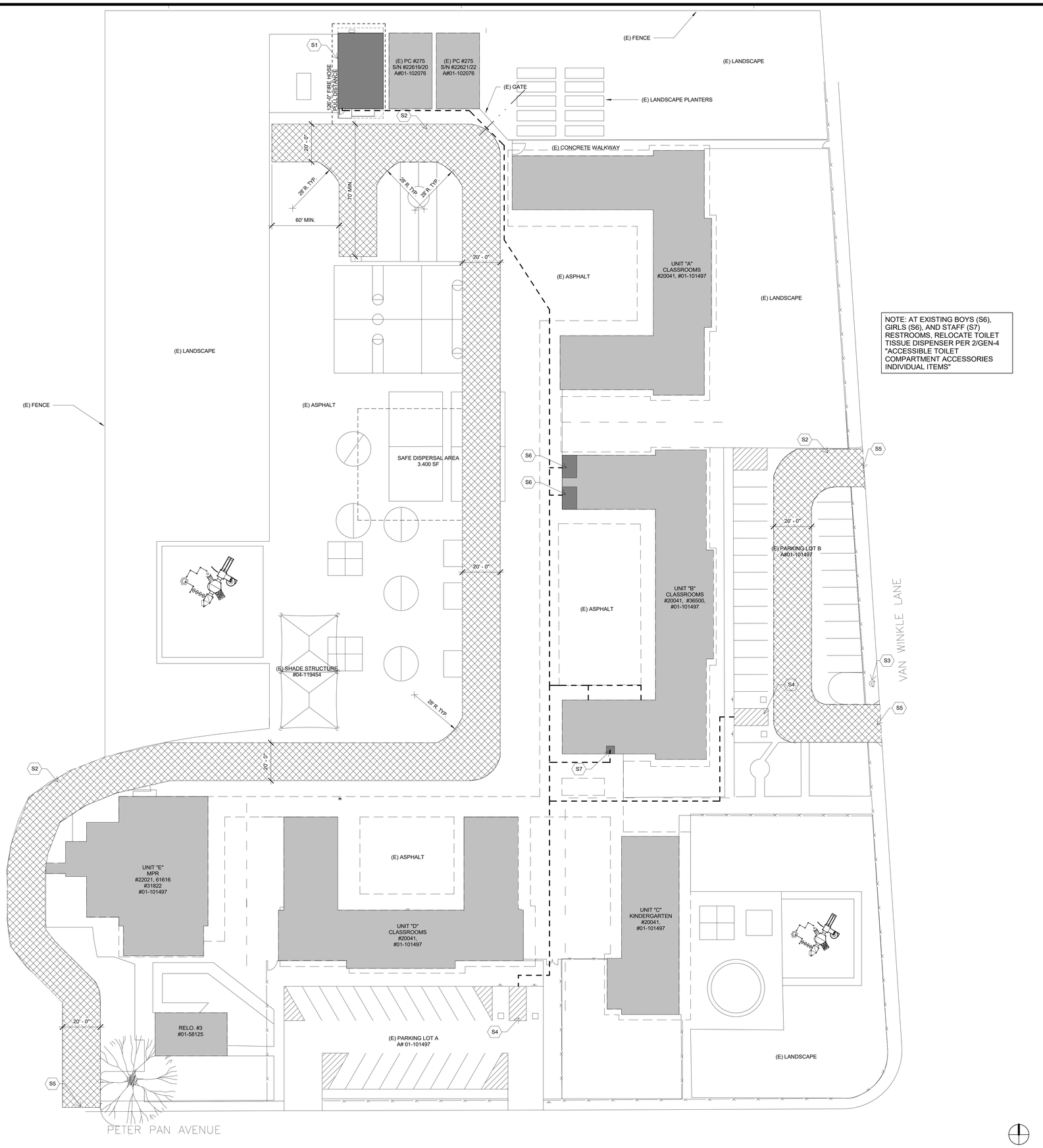
SCALE: AS SHOWN

SHEET NUMBER: **C6.0**

DETAILS

HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
260 Sheridan Avenue, Suite 150
Palo Alto, CA 94306
(650) 617-5930, Fax (650) 617-5932

Plot Date: May 12, 2023 - 3:58 PM
HOHBACH-LEWIN #1703.31



NOTE: AT EXISTING BOYS (S6), GIRLS (S6), AND STAFF (S7) RESTROOMS, RELOCATE TOILET TISSUE DISPENSER PER 2/GEN-4 "ACCESSIBLE TOILET COMPARTMENT ACCESSORIES INDIVIDUAL ITEMS"

SITE IMPROVEMENT PLAN | 3/64" = 1'-0" | 1

CONSTRUCTION: TYPE V-B NON SPRINKLERED
BASIC ALLOWABLE AREA: 9,500 SQ. FT.
ACTUAL AREA: 3 X 960 SQ. FT. = 2,880 SQ. FT.
OK

CODE ANALYSIS

- S1 (N) 24'X40' PC PER A# 02-117941
- S2 (E) FIRE LANE
- S3 (E) FIRE HYDRANT TO REMAIN
- S4 (E) ADA PARKING PER A# 01-101497
- S5 (E) 20' VEHICLE GATE AND HARDWARE TO REMAIN
- S6 (E) ACCESSIBLE BOYS & GIRLS RESTROOMS PER A#01-119799
- S7 (E) ACCESSIBLE STAFF RESTROOMS PER A#01-119799

SITE PLAN KEYNOTES

PARKING A COUNT SUMMARY

TOTAL PARKING SPACES: 22
REQUIRED ADA SPACES: 1

PROVIDED ADA SPACES: 2
REGULAR ADA: 1
ADA VAN: 1

PARKING B COUNT SUMMARY

TOTAL PARKING SPACES: 26
REQUIRED ADA SPACES: 2

PROVIDED ADA SPACES: 2
REGULAR ADA: 1
ADA VAN: 1

PARKING SUMMARY - A# 01-101497

PATH OF TRAVEL
PATH OF TRAVEL (P.O.T) AS INDICATED MEETS THE FOLLOWING REQUIREMENTS:
1. IS A BARRIER-FREE ACCESSIBLE ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT A SLOPE NOT STEEPER THAN 1:2 EXCEPT THAT LEVEL CHANGES ARE 1/4" MAX VERTICAL & IS AT LEAST 48" WIDE.
2. SURFACE SHALL BE STABLE, FIRM AND SLIP RESISTANT.
3. CROSS-SLOPE SHALL NOT BE STEEPER THAN 1:48 AND RUNNING SLOPE SHALL NOT BE STEEPER THAN 1:20 UNLESS OTHERWISE INDICATED (SEC 11B-403.3)
4. P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (SECTION 11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4"
PROJECTION FROM WALL SURFACE BETWEEN 27" AND 80" ABOVE FINISH FLOOR
OR GROUND (SECTION 11B-307.2)
5. PROVIDE FLUSH TRANSITIONS AT ANY ADJOINING JOINTS BETWEEN DIFFERENT WALK SURFACES IN P.O.T.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IN COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS.** AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) 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 POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED UPON THE VALUATION THRESHOLD OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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

PROPERTY LINE

LIMITS OF WORK FOR THIS PROJECT

ACCESSIBLE RESTROOMS - A# 01-101497

FIRE LANE

PORTABLE CLASSROOM PER A# 02-117941

SITE PLAN LEGEND - DSA

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT
ROBERT M. SIMONDS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE

PROJECT NO: Project Number
DATE ISSUED: Issue Date
SCALE: As indicated

A1.0

SITE PLAN

SVA ARCHITECTS
2335 BROADWAY #301 OAKLAND, CA 94612
T 510.267.3180 WWW.SVA-ARCHITECTS.COM

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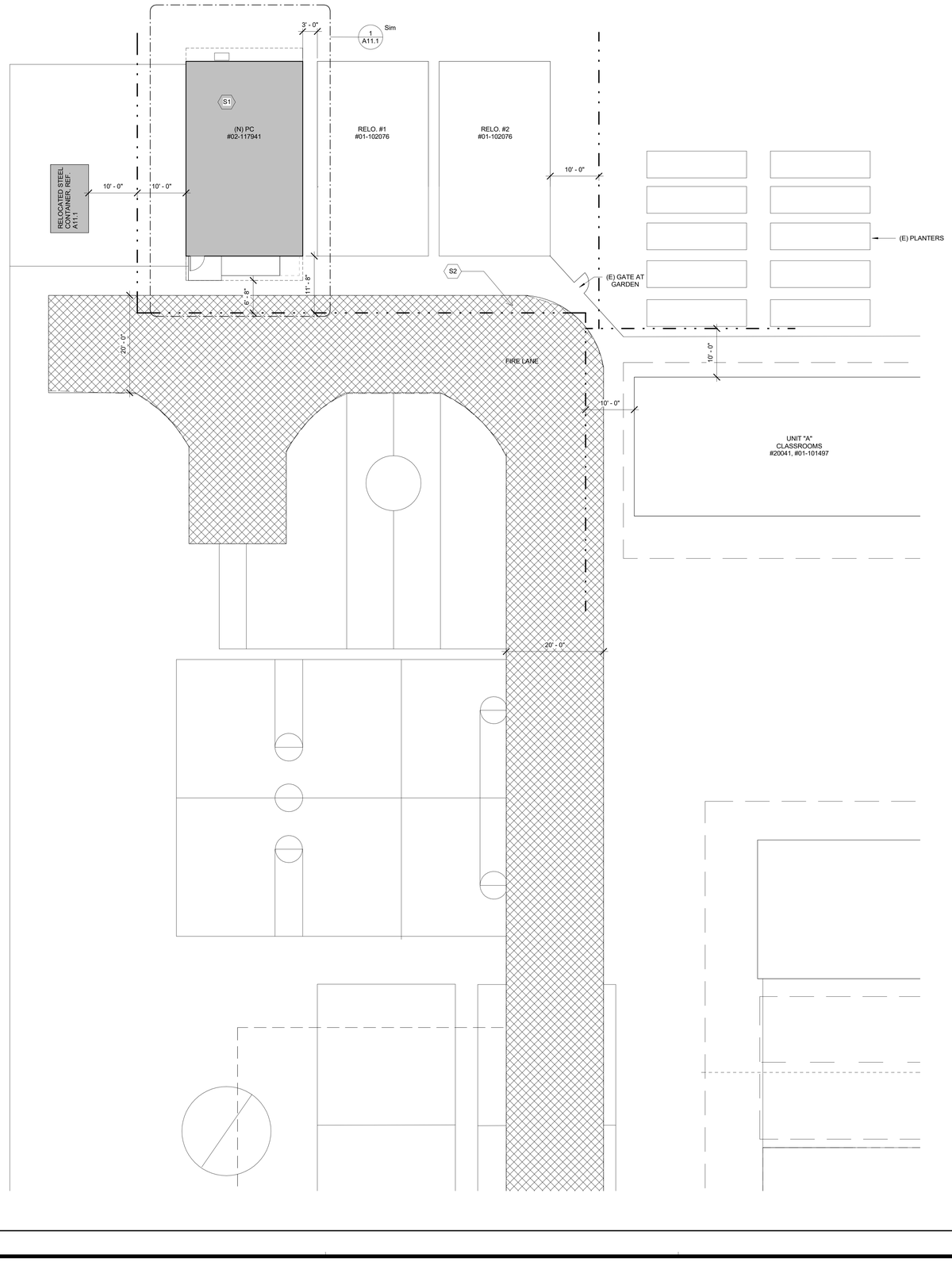

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 anc 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PL 09-01: Fire Flow for Buildings*.

PROJECT INFORMATION	
School District/Owner:	ALUM ROCK SCHOOL DISTRICT
Project Name/School:	APTITUD ACADEMY - NEW PORTABLE CLASSROOM
Project Address:	2475 VAN WINKLE LANE. SAN JOSE, CA 95116

FIRE & LIFE SAFETY INFORMATION				
1.	Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)*	Yes ☐		No ☑
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☐		No ☑
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? *(If yes, indicate FHSZ classification below.)*	Yes ☐		No ☑
	Refer to the following website for FHSZ locations: http://egis.fire.ca.gov/FHSZ/	Moderate ☐	High ☐	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐

DSA 810

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.			✔	
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.				
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.			✔	
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.				
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.			✔	
6a.	**Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.				
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.				✔
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.				

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: _____ Title: _____

Signature: _____ Date: _____

LOCAL FIRE AUTHORITY (LFA) INFORMATION	
LFA Agency Name:	
LFA Review Official:	
Title:	Work Phone:
Work Email:	

LFA Reviewer's Signature: _____ Date: _____

PATH OF TRAVEL
PATH OF TRAVEL (P.O.T) AS INDICATED MEETS THE FOLLOWING REQUIREMENTS:
1. IS A BARRIER-FREE ACCESSIBLE ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT A SLOPE NOT STEEPER THAN 1:2 EXCEPT THAT LEVEL CHANGES ARE 1/4" MAX VERTICAL & IS AT LEAST 48" WIDE
2. SURFACE SHALL BE STABLE, FIRM AND SLIP RESISTANT.
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PROJECTION FROM WALL SURFACE BETWEEN 27" AND 80" ABOVE FINISH FLOOR
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DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IN COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS.** AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) 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 POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED UPON THE VALUATION THRESHOLD OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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PROPERTY LINE

LIMITS OF WORK FOR THIS PROJECT

ACCESSIBLE RESTROOMS - A# 01-101497

FIRE LANE

PORTABLE CLASSROOM PER A# 02-117941

ENLARGED SITE IMPROVEMENT PLAN | 1" = 10'-0" | **1**

SITE PLAN LEGEND - DSA

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT
ROBERT M. SIMMONS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
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PROJECT NO: Project Number
DATE ISSUED: Issue Date
SCALE: As indicated

A1.1

ENLARGED SITE PLAN

SVA ARCHITECTS
2335 BROADWAY #301 OAKLAND, CA 94612
T.510.267.3180 WWW.SVA-ARCHITECTS.COM

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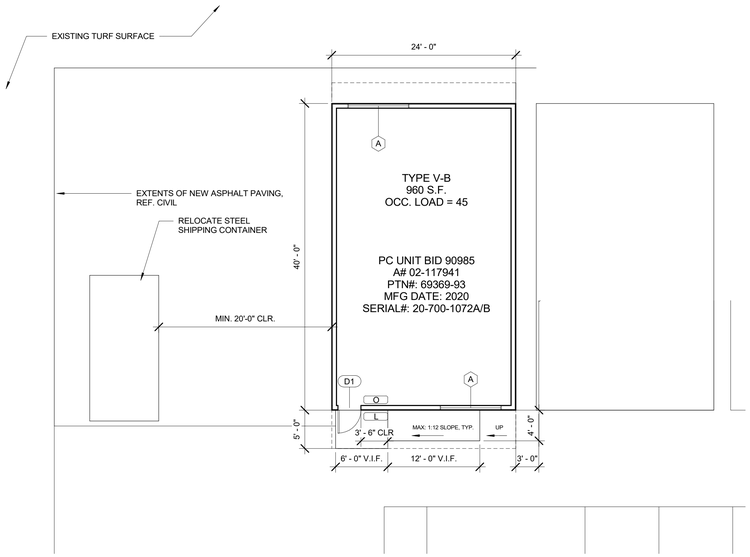

FLOOR PLAN | 1/8" = 1'-0" | 1

?	DESCRIPTION

KEYNOTES

NO.	DESCRIPTION	SHT.
L	TACTILE ROOM IDENTIFICATION SIGN	4/A11.2
O	TACTILE EXIT SIGN	5/A11.2

SIGNAGE LEGEND

30"X48" CLR. — 30"X48" MIN. ACCESSIBLE WHEELCHAIR CLEAR FLOOR SPACE

60" MIN. CLR. — 60" MIN. ACCESSIBLE WHEELCHAIR CLEAR TURNING SPACE

EXISTING CONCRETE WALL

EXISTING METAL STUD WALL

NEW CONCRETE WALL PER SHEET A61.1

NEW METAL STUD WALL PER SHEET A61.1

1-HR RATED FIRE PARTITION

1-HR RATED FIRE BARRIER

2-HR RATED FIRE BARRIER

1 — WALL TYPE ANNOTATIONS, SEE SHEET A61.1 FOR DETAILS

101 — NUMBER INDICATES DOOR PER SCHEDULE, REFER TO SHEET A52.1

1 — NUMBER INDICATED WINDOW PER SCHEDULE, REFER TO SHEET A53.1

F.E. 10lb — FIRE EXTINGUISHER CABINET PER DET. XX/XX

FLOOR PLAN GENERAL NOTES:

1. ALL DIMENSIONS ARE TO CENTERLINE OF THE GRID LINES AND/OR TO THE FACE OF STUDS, U.N.O.

2. UNLESS NOTED OTHERWISE, ALL WALLS ARE FULL HEIGHT.

3. REFER TO SHEET GEN-4 FOR TYPICAL ACCESSIBILTY REQUIREMENTS AND DIMENSIONS.

4. REFER TO ENLARGED PLANS FOR DIMENSIONS AND CALLOUTS NOT SHOWN HERE.

FLOOR PLAN LEGEND

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY
RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT
ROBERT M. SIMONDS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE

PROJECT NO: Project Number
DATE ISSUED: Issue Date
SCALE: As indicated

A11.1

FLOOR PLAN

SVA ARCHITECTS
6 HUTTON CENTRE DR, SUITE 1150 SANTA ANA, CA 92707
T 949.809.3380 WWW.SVA-ARCHITECTS.COM

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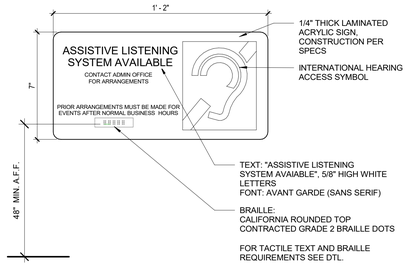
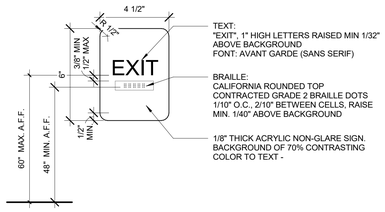


NOTE: SEE 1/A10.1 FOR MOUNTING REQUIREMENT.

ASSISTIVE LISTENING SIGN | 3" = 1'-0" | **1**



NOTE: PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERES. PROVIDE ADHESIVE MOUNTING SYSTEM WHEN ATTACHED TO GLAZING.

TACTILE EXIT SIGN | 3" = 1'-0" | **5**

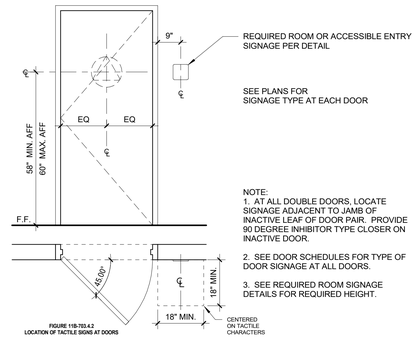


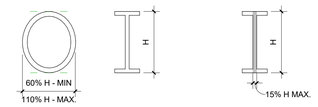
FIGURE 11B-703.4.2
LOCATION OF TACTILE SIGNS AT DOORS

NOTE:
1. AT ALL DOUBLE DOORS, LOCATE SIGNAGE ADJACENT TO JAMB OF INACTIVE LEAF OF DOOR PAIR. PROVIDE 90 DEGREE INHIBITOR TYPE CLOSER ON INACTIVE DOOR.

2. SEE DOOR SCHEDULES FOR TYPE OF DOOR SIGNAGE AT ALL DOORS.

3. SEE REQUIRED ROOM SIGNAGE DETAILS FOR REQUIRED HEIGHT.

SIGNAGE MOUNTING | 1/2" = 1'-0" | **2**

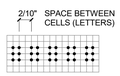


CHARACTER PROPORTIONS

RAISED CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".

STROKE PROPORTION

STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15% MAXIMUM OF THE HEIGHT OF THE CHARACTER.

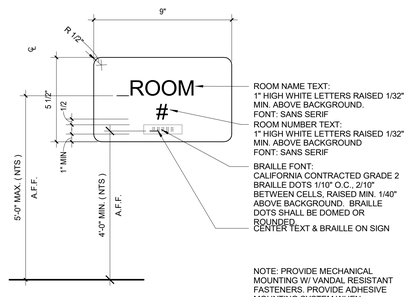


CALIFORNIA CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE IS REQUIRED. INDIVIDUAL BRAILLE DOTS SHALL EACH BE DISTINCT AND SEPARATE. EACH DOT SHALL BE ROUNDED OR DOMED IN LIEU OF SQUARE SIDED AND FLAT TOPPED. *PER CBC TABLE 11B-703.3.1, DOT BASE DIAMETER SHALL BE 0.059" TO 0.063", DISTANCE BETWEEN TWO DOTS IN THE SAME CELL SHALL BE 0.100", DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS SHALL BE 0.300", DOT HEIGHT SHAL BE 0.025" TO 0.037", AND DISTANCE BETWEEN CORRESPONDING DOTS FROM ONCE CELL DIRECTLY BELOW SHALL BE 0.395" TO 0.400"*

WIDTH TO HEIGHT PROPORTION TEMPLATE

BRAILLE SPACING TEMPLATE PER CALIFORNIA BUILDING CODE (CBC) AND CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 2.

TACTILE SIGNAGE TEMPLATES | 12" = 1'-0" | **3**



NOTE: PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. PROVIDE ADHESIVE MOUNTING SYSTEM WHEN ATTACHED TO GLAZING.

ROOM IDENTIFICATION SIGN | 3" = 1'-0" | **4**

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 Van Winkle Lane, San Jose, CA 95116

LICENSED ARCHITECT
ROBERT M. SIMONDS
No. C-18301
JAN. 31, 2025
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

PROJECT NO: Project Number

DATE ISSUED: Issue Date

SCALE: As indicated

A11.2

DETAILS

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ABBREVIATIONS

4S/DP	4" SQUARE BY 2-1/8" DEEP BOX	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NO	NORMALLY OPENED
ADA	AMERICAN WITH DISABILITIES ACT	GFP	GROUND FAULT PROTECTION	NF	NON-FUSED
A.F.F.	ABOVE FINISH FLOOR	GE or GEC	GROUNDING ELECTRODE CONDUCTOR	NIC	NOT IN CONTRACT
A.F.G.	ABOVE FINISH GRADE	HACR	HEATING AIR CONDITIONING	N.T.S.	NOT TO SCALE
AWG	AMERICAN WIRE GAUGE		REFRIGERATION	NL	NIGHT LIGHT
AMP, A	AMPERE	HOA	HAND-OFF-AUTO	NO. or #	NUMBER
A.I.C. or AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
A.F.C. or AFC	AVAILABLE FAULT CURRENT	H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH	%Z	PERCENT IMPEDANCE
AF/AT	AMP FRAME, AMP TRIP	HID	HIGH INTENSITY DISCHARGE	PH. or ø	PHASE
AHJ	AUTHORITY HAVING JURISDICTION	HP	HORSEPOWER	PC	PHOTOCELL
AS/AF	AMP SWITCH, AMP FUSE	HPS	HIGH PRESSURE SODIUM	P.C.	PLUMBING CONTRACTOR
ATS	AUTOMATIC TRANSFER SWITCH	IN. or "	INCHES	P	POLE
AVG	AVERAGE	I/G	ISOLATED GROUND	PVC	POLY VINYL CHLORIDE
BJ	BONDING JUMPER	IBC	INTERNATIONAL BUILDING CODE	PDU	POWER DISTRIBUTION UNIT
BDF	BUILDING DISTRIBUTION FRAME	I.D.C.S.	INTEGRATED DIMMING CONTROL PANEL	PRIMARY	OVER 600 VOLTS
BR	BRANCH	IDF	INTERMEDIATE DISTRIBUTION FRAME	PROVIDE	FURNISH, INSTALL AND CONNECT
BLDG	BUILDING	JBOX	JUNCTION BOX	PT	POTENTIAL TRANSFORMER
CBC	CALIFORNIA BUILDING CODE	K	DEGREE KELVIN	PA	PUBLIC ADDRESS
CEC	CALIFORNIA ELECTRICAL CODE	KCMIL	THOUSAND CIRCULAR MILS	(R)	DENOTES RELOCATED DEVICE
CIRC., CKT.	CIRCUIT	KVA	KILOVOLT AMPERES		LOCATION.
CB	CIRCUIT BREAKER	KW	KILOWATT	REC, RECEPT	RECEPTACLE
CSFD	COMBINATION SMOKE FIRE DAMPER	KWH	KILOWATT HOUR	REF	REFRIGERATOR
C	CONDUIT	LCL	LONG CONTINUOUS LOAD	RGS	RIGID GALVANIZED STEEL
C.O.	CONDUIT ONLY, COMPLETE WITH PULLSTRING	LF, L.F.	LINEAR FEET	RMS	ROOT MEAN SQUARE
		LTG, LTS	LIGHTING	SCC	SHORT CIRCUIT CURRENT
CONN	CONNECTED	LPS	LOW PRESSURE SODIUM	SCCR	SHORT CIRCUIT CURRENT RATING
CPT	CONTROL POWER TRANSFORMER	MAX.	MAXIMUM	SCS	STRUCTURED CABLING SYSTEM
CLCB	CURRENT LIMITING CIRCUIT BREAKER	MBJ	MAIN BONDING JUMPER	SFD	SMOKE FIRE DAMPER
CLF	CURRENT LIMITING FUSE	MDF	MAIN DISTRIBUTION FRAME	SECONDARY	600 VOLTS AND LESS
CT	CURRENT TRANSFORMER	MOCP	MAXIMUM OVERCURRENT PROTECTION	SMACNA	SHEET METAL AND AIR COND. CONTRACTOR'S NAT'L ASSOC.
(D)	EXISTING DEVICE TO BE DEMOLISHED	MCB	MAIN CIRCUIT BREAKER		
DAS	DISTRIBUTED ANTENNA SYSTEM	MLO	MAIN LUGS ONLY	SQ.	SQUARE
DIA	DIAMETER	M.C.	MECHANICAL CONTRACTOR	SSBJ	SUPPLY SIDE BONDING JUMPER
DISC	DISCONNECT	M	METER	SBJ	SYSTEM BONDING JUMPER
DIST	DISTRIBUTION	M/M	METER MAIN	TC	TIMECLOCK
D.P.C.S.	DIMMING PANEL CONTROL STATION	MV	MERCURY VAPOR	TEL/DATA	TELEPHONE AND DATA
E.C.	ELECTRICAL CONTRACTOR	MH	METAL HALIDE	TV	TELEVISION
EMS	ENERGY MANAGEMENT CONTROL SYSTEM	MIN.	MINIMUM	T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION
EMT	ELECTRICAL METALLIC TUBING	MCA	MINIMUM CIRCUIT AMPS		
ENT	ELECTRICAL NON-METALLIC TUBING	MCC	MOTOR CONTROL CENTER	TYP	TYPICAL
EWC	ELECTRIC WATER COOLER	MCM	THOUSAND CIRCULAR MILS	U.G.P.S.	UNDERGROUND PULL SECTION
E.P.O.	EMERGENCY POWER OFF	MCP	MOTOR CIRCUIT PROTECTOR	U.O.N.	UNLESS OTHERWISE NOTED
E-O-L	END-OF-LINE CIRCUIT TERMINATOR	MFR.	MANUFACTURER	U.P.S. or UPS	UNINTERRUPTABLE POWER SYSTEM
EF	EXHAUST FAN	MTD	MOUNTED	VAV	VARIABLE AIR VOLUME
EGC or EG or E/G	EQUIPMENT GROUND (GREEN)	MW	MICROWAVE	V	VOLTS
(E)	EXISTING DEVICE TO REMAIN	NATS	NON AUTOMATIC DISCONNECT	VA	VOLT AMPERES
EP	EXPLOSION PROOF	NEC	NATIONAL ELECTRICAL CODE	VD	VOLTAGE DROP
(ER)	EXISTING DEVICE TO BE RELOCATED	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	WP	WEATHERPROOF
FT or '	FEET			W	WIRE
FA or F.A.	FIRE ALARM	NC	NORMALLY CLOSED	XFMR	TRANSFORMER
FLA	FULL LOAD AMPS				
GRD	GROUND				

FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

SIGNAL SYSTEM SYMBOLS

- B — WALL MOUNTED CLOCK. FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED CLOCK. "D" INDICATES DIGITAL CLOCK, "NO LETTER" INDICATES ANALOG CLOCK. REFER TO SPECIFICATIONS.
- C — CONCEALED CLOCK CONDUIT RUN 1/2" CONDUIT, OR AS NOTED, WITH CONDUCTORS PER SPECIFICATIONS.
- TV — TV OUTLET, WALL MOUNTED. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE BUSHING.
- TV — TV OUTLET FLUSH CEILING MOUNTED.
- TV — CONCEALED TELEVISION CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.
- M — MICROPHONE OUTLET, WALL MOUNTED. PROVIDE 3/4" C.O. (WITH PULL ROPE) UP TO 6" ABOVE ACCESSIBLE CEILING SPACE. PROVIDE BUSHING AT EACH END.
- M — MICROPHONE OUTLET, FLUSH CEILING MOUNTED.
- M — CONCEALED MICROPHONE CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.
- SE V — SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- S V — SURFACE MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- V — FLUSH WALL MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- S V — CEILING FLUSH MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- AS V — ABOVE CEILING MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- V — VOLUME CONTROL, WALL MOUNTED.
- S — CONCEALED SPEAKER CONDUIT RUN 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.

ANNOTATIONS

- A — PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.
- AC / 2 — MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.
- 3 / E-1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
- 2 — PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
- 2 — REVISION REFERENCE.
- Y / Δ — WYE CONFIGURATION — DELTA CONFIGURATION — GROUND

TELEPHONE/DATA SYMBOLS

- TELEPHONE OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
  "W" = WALL MOUNTED PHONE
  "P" = PUBLIC (PAY) PHONE. VERIFY ALL REQUIREMENTS WITH THE TELEPHONE UTILITY COMPANY. PROVIDE 1" C.O. (MIN) TO THE MAIN TELEPHONE BACKBOARD. MOUNTING HEIGHT AS REQUIRED.
- DATA OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- TELEPHONE OUTLET BOX, FLUSH MOUNTED IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DATA OUTLET BOX FLUSH MOUNTED IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET BOX FLUSH MOUNTED IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- TELEPHONE OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX MOUNTED IN ACCESSIBLE CEILING SPACE OR IN FLOOR BOX PER PLAN FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET, WALL MOUNTED AT +18-INCHES A.F.F. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. PROVIDE THE FOLLOWING:
  - IN A NON-RATED INSULATED WALL, OR NON-RATED UNINSULATED WALL, PROVIDE A 2-GANG MUD RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B-LINE OR RAYCO) WITH (2) 1-1/2"C.O. WITH PULL STRING TO ACCESSIBLE CEILING. PROVIDE 1-1/2" BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
  - IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1-1/4" C.O. AND (1) 4S/DP BOX WITH (1) 1-1/4" C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT (EQUAL BY B-LINE OR RAYCO). UTILIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
- T1 — CONCEALED TELEPHONE/DATA CONDUIT RUN, 1-INCH CONDUIT ONLY (MIN). SEE TABLE FOR CONDUIT SIZE VARIATIONS.
  T2 = 1-1/4" C.O. T3 = 1-1/2" C.O. T4 = 2" C.O.
- FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

PROJECT SPECIFIC SYMBOLS

REQUIRED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE REQUIRED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS AND SHOULD BE INCLUDED AS PART OF THE BASE BID. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

ALLOWED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE ALLOWED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

DEDUCTIVE/ADDITIVE ALTERNATE PRICING

IN ADDITION TO ANY DEDUCTIVE OR ADDITIVE LINE ITEM PRICING CALLED FOR ON THE DRAWING OR IN THE SPECIFICATIONS, CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM DEDUCTIVE/ADDITIVE ALTERNATE PRICING FOR EACH OF THE FOLLOWING ITEM(S):

NONE

LIGHTING SYMBOLS

SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION.

- 1a — LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "1") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "a") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES).
- 2 — INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

LIGHTING CONTROL SYMBOLS

SEE THE DISTRIBUTED LIGHTING CONTROL (DLCS) SPECIFICATIONS AND SEQUENCE OF OPERATIONS (SOO) FOR MORE INFORMATION.

- LOW VOLTAGE WIRING INTERCONNECTING DLCS COMPONENTS AS REQUIRED. SEE DLCS SPECIFICATIONS FOR MORE INFORMATION.
- K — WALL MOUNTED DIMMER. SEE SINGE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS.
- K$_y$ — WALL MOUNTED STAND ALONE OCCUPANCY SENSOR.
- K$_y^H$ — WALL MOUNTED SYSTEM-BASED OCCUPANCY SENSOR.
- X$_y^{H,AV,DM,P}$ — 1-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
- X$_y^{H,AV,DM,P}$ — 2-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
- K$_y^{K,V}$ — LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL ON/OFF SWITCHING, DIMMING, AND OVERRIDE CONTROL OF LIGHTING.
- D$_{y+}$ — AUTOMATIC SWITCHING/STEP-DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCS SOO FOR TARGET ILLUMINATION VALUE.
- D$_{y+}$ — AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCS SOO FOR TARGET ILLUMINATION VALUE.

LIGHTING CONTROL SYMBOL SUPERSCRIPT & SUBSCRIPT KEY:

1. "y" INDICATES THAT SWITCH LEG "y" TO BE CONFIGURED PER THE SOO. ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/DRIVER/FIXTURE TYPE.
2. ADJACENT UPPER CASE LETTER(S) INDICATE THE FOLLOWING:
   AV INDICATES CONNECTION TO A/V CONTROL SYSTEM.
   DM INDICATES DUAL MODE CONTROL AT CORRIDORS, STAIRWELLS AND WAREHOUSE AISLEWAYS
   H INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY-CONTACT CLOSURE.
   K INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER.
   P INDICATES CONNECTION TO MOVEABLE PARTITION INTERFACE, SENSOR AND STATUS INDICATOR.
   V INDICATES VANDAL RESISTANT SWITCH.
3. ADJACENT LOWER CASE LETTER(S) INDICATE SWITCH LEG(S) CONTROLLED EXCEPT WHERE "DM" INDICATES DUAL MODE CONTROL SWITCH.
4. ADJACENT "+, ++ AND "" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR WHERE "+" INDICATES PRIMARY SIDELIT DAYLIT ZONE, "++" INDICATES SECONDARY SIDELIT DAYLIT ZONE, AND "*" INDICATES SKYLIT DAYLIT ZONE.

MISCELLANEOUS SYSTEM SYMBOLS

- ICP — INVERTER CONTROL PANEL - SEE INVERTER SPECIFICATIONS.
- IAP — INVERTER ANNUNCIATOR PANEL - SEE INVERTER SPECIFICATIONS.
- GAP — GENERATOR ANNUNCIATOR PANEL - SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- IDCS — INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL - WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- DPCS — DIMMING PANEL CONTROL STATION (DPCS) PANEL - WALL MOUNTED. SEE DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HL — LIGHTING CONTROL SYSTEM LOCAL SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HO — LIGHTING CONTROL SYSTEM OVERRIDE SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HM — LIGHTING CONTROL SYSTEM MASTER SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HR — IDCS/DPCS SYSTEM REMOTE STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HP — IDCS/DPCS SYSTEM PARTITION STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.

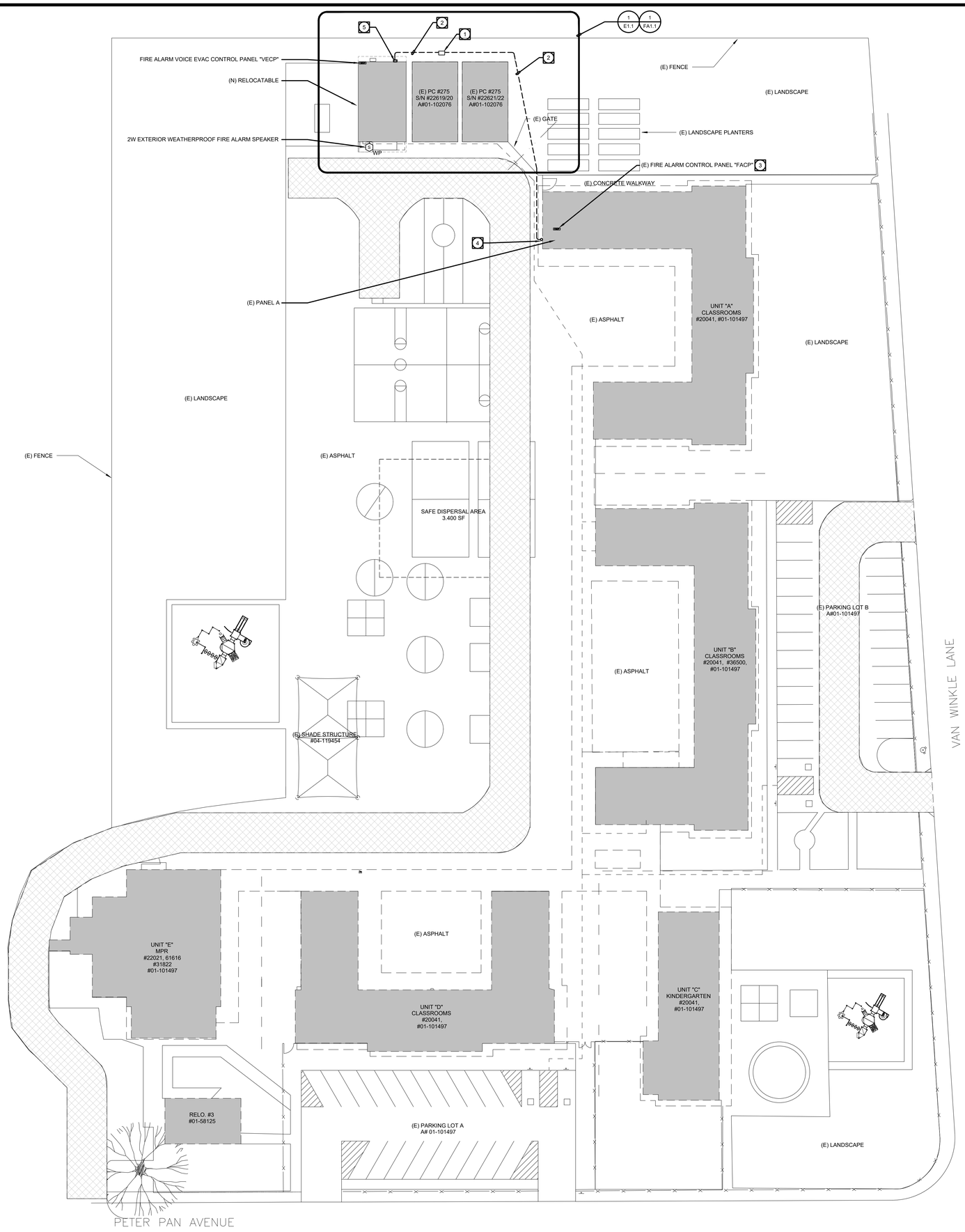
BRANCH CIRCUIT SYMBOLS

- A-1,3,5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.
- A-1&3&5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS.
- A-1+3+5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK " " INDICATES AN ISOLATED GROUND CONDUCTOR.
- CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.
- SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- TANDEM WIRING CONNECTION.
- CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS
- CONDUIT CONTINUATION.
- FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

POWER SYMBOLS

ALL RECEPTACLE OUTLETS SHOWN WITH A DIAGONAL SLASH SHALL BE CONTROLLED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. WHERE DOUBLE DUPLEX RECEPTACLE OUTLETS ARE INDICATED AS CONTROLLED, ONLY A SINGLE DUPLEX RECEPTACLE OUTLET (NON-IG, NON-GCFI TYPE) SHALL BE CONTROLLED. WITHIN ANY CONTROLLED DUPLEX RECEPTACLE OUTLET, ONLY ONE RECEPTACLE SHALL BE CONTROLLED. NOTE THAT FOR FLOOR BOXES OR POKE-THRU DEVICES, THE ASSOCIATED CONTROL RELAY MAY NEED TO BE LOCATED WITHIN THE ELECTRICAL ROOM WHERE THE CONTROLLED CIRCUIT ORIGINATES.

- X$_a$ — OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY. WHERE LETTER DESIGNATION "a" REPRESENTS OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROL ZONE. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION.
- DUPLEX RECEPTACLE, WALL MOUNTED.
- DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED.
- DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DOUBLE DUPLEX, WALL MOUNTED, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED.
- DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED.
- COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTACLES, WALL MOUNTED.
- SIMPLEX RECEPTACLE, WALL MOUNTED.
- SPECIAL RECEPTACLE, WALL MOUNTED. REFER TO PLAN NOTES.
- DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
- COMBINATION DOUBLE DUPLEX FLUSH IN CEILING: TWO ISOLATED GROUND RECEPTACLES - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
- SIMPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- SPECIAL RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DUPLEX, GFCI RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DOUBLE DUPLEX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND DUPLEX RECEPTACLES, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- SIMPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- SPECIAL RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. REFER TO PLAN NOTES.
- WP-B — WET LOCATION-LISTED (RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
- WP-D — DAMP LOCATION-LISTED (NOT-RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
- DUPLEX RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.)
- QUAD RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.)
- J — JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F. OR AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C. OR CEC, WHERE ADOPTED.
- J — JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C. OR CEC, WHERE ADOPTED.
- J — JUNCTION BOX, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED.
- JUNCTION BOX, 4S MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED. MOUNTED IN ACCESSIBLE CEILING SPACE PER PLAN FOR FLEXIBLE CONNECTION TO PRE-WIRED FURNITURE SYSTEM. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALL OUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS.
- JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F., 4S/DP MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED, FOR FLEXIBLE CONNECTION TO PREWIRED FURNITURE SYSTEM. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALLOUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS.
- SURFACE MOUNTED MULTI-OUTLET ASSEMBLY. REFER TO GENERAL PRODUCT SPECIFICATIONS. PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION.
- T — THERMOSTAT OUTLET BOX, PROVIDE 1/2" C.O. TO RESPECTIVE MECHANICAL UNIT.
- EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL, PLUMBING OR KITCHEN DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED.
- FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- DISTRIBUTION SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM.
- T — TRANSFORMER, REFER TO SINGLE LINE DIAGRAM.
- F — FUSED DISCONNECT SWITCH. HP RATED, OR COMBINATION MOTOR STARTER/DISCONNECT SWITCH WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT AND STARTER SIZES.
- NON-FUSED DISCONNECT SWITCH, HP RATED AND WEATHERPROOF AS REQUIR



PLAN NOTES:

1. PROVIDE 11"x17"xDEPTH AS REQUIRED FLUSH-IN-GRADE CONCRETE PULLBOX WITH TRAFFIC-RATED COVER, ENGRAVED "FIRE ALARM".
2. PROVIDE 2"C. WITH FIRE ALARM CONDUCTORS AS SPECIFIED.
3. MODIFY EXISTING FIRE ALARM/VOICE EVACUATION CONTROL PANEL AS REQUIRED TO SERVE THE NEW CONSTRUCTION. PROVIDE ADDITIONAL HARDWARE, CONNECTIONS, PROGRAMMING, ETC . AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION IN FIELD.
4. ROUTE CONDUIT FROM BELOW GRADE EXPOSED ON BUILDING EXTERIOR TO AN ELEVATION ABOVE THE ACCESSIBLE CEILING SPACE. PROVIDE A WEATHERPROOF "LB" FITTING AND SEALED PENETRATION THROUGH THE BUILDING EXTERIOR AS REQUIRED TO PERFORM WORK INDICATED. PAINT CONDUIT TO MATCH THE SURROUNDING SURFACE.
5. PROVIDE 8"x8"x6"D WEATHERPROOF JUNCTION BOX.

SITE PLAN GENERAL NOTES:

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
2. CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
4. MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N.
5. ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
6. ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
7. ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
8. SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

OWNER: ALUM ROCK SCHOOL DISTRICT

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CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWATZ
No. E15610
Exp. 08-31-2024
STATE OF CALIFORNIA

REVISIONS:

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PROJECT NO: 2022-40191

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SCALE: AS NOTED

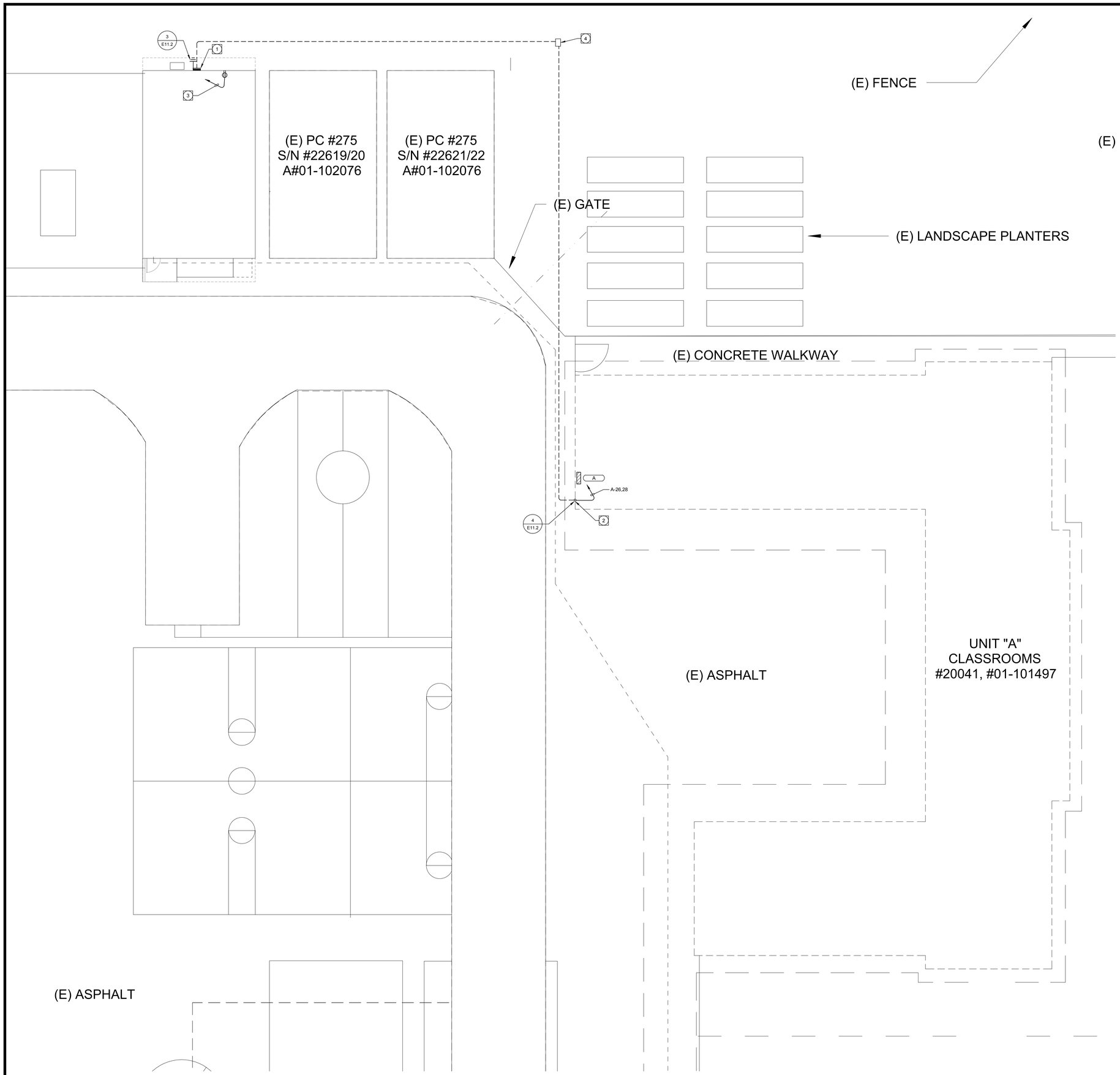
E1.0

ELECTRICAL SITE PLAN

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 www.tk1sc.com

Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000

ELECTRICAL SITE PLAN | 3/64" = 1'-0" | 1



PLAN NOTES:

1. CONNECT AS REQUIRED TO PREFABRICATED ELECTRICAL PANEL PROVIDED BY MODULAR BUILDING MANUFACTURER. VERIFY EXACTION LOCATION IN FIELD.
2. 20" WIDE X 20" TALL X 6" DEEP PULL BOX WITH TAMPER PROOF COVER MOUNTED VERTICALLY ON BUILDING WALL. RUN CONDUIT UP INTO BOX AND OUT NEAR TOP OF BOX THROUGH WALL ABOVE CEILING LEVEL TO SWITCHBOARD "A".
3. PROVIDE 3/4"C. -2#12, #12G. AND CONNECT TO SPARE 20A-1P BREAKER WITHIN RELOCATABLE PANELBOARD FOR POWER TO IDF. MOUNT RECEPTACLE AT SAME HEIGHT AS IDF CABINET. REFER TO TECHNOLOGY DRAWINGS FOR EXACT LOCATION AND ADDITIONAL INFORMATION.
4. PROVIDE 20" X 20" PULL BOX WITH TRAFFIC RATED COVER LABELED "ELECTRICAL".

POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
   a. ALL BRANCH CIRCUITS SHALL BE EMT.
   b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.
   c. VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN RECEPTACLES ARE 50A OR LESS, 150V TO GROUND OR LESS AND ARE LOCATED WITHIN 6-FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE, LOCKER ROOM AREA, GARAGE AND BATHROOM SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
9. PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
12. PROVIDE REDUNDANT GROUND PATH IN ALL BRANCH CIRCUITS SERVING PATIENT CARE AREAS CONSISTING OF A SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR PER NEC, OR CEC WHERE ADOPTED, ART 517.13.

OWNER: ALUM ROCK SCHOOL DISTRICT

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REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWATZ
No. E15610
STATE OF CALIFORNIA

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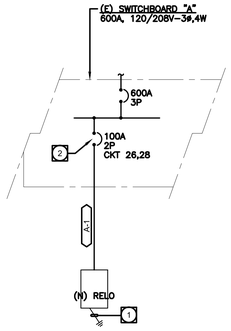
PROJECT NO: 2022-40191
DATE ISSUED: 2023.01.17
SCALE: AS NOTED

E1.1

ENLARGED ELECTRICAL SITE PLAN

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 www.tk1sc.com
Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000

ENLARGED ELECTRICAL SITE PLAN 1/8" = 1'-0" **1**



GENERAL SINGLE LINE DIAGRAM NOTES:

1. ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER-HAMMER, RSE-SIERRA, G.E., SIEMENS, OR Z-POWER AND DISTRIBUTION.
2. ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
3. ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT-SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY U.L. IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED AND SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC-WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING WHICH SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:

   CAUTION - SERIES COMBINATION SYSTEM RATED AT ??,???
   AMPERES. USE ONLY IDENTIFIED REPLACEMENT COMPONENTS
   IN THIS SYSTEM.

   WHERE ??,??? REPRESENTS AVAILABLE FAULT CURRENT. SEE SPECIFICATIONS FOR PLACARD REQUIREMENTS.
5. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
6. ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED-RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION (1000A/sq.in. FOR CU, 750A/sq.in. FOR AL). NO HEAT RISE RATED BUSSING ALLOWED. NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH BUSSING RATED FOR 100% OPERATION - SEE SPECIFICATION FOR CIRCUIT BREAKER REQUIREMENTS. ALL NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED-RATED. BACKFEED RATINGS SHALL COMPLY WITH NEC, OR CEC WHERE ADOPTED, 710.15 (E) AND 705.12(B)(4). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
7. PROVIDE CIRCUIT BREAKER ARC ENERGY REDUCTION MAINTENANCE SWITCHING PER NEC, OR CEC WHERE ADOPTED, 240.87(B)(3) FOR ANY CIRCUIT BREAKER, 1200A FRAME AND LARGER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:
   a. TIN-PLATED ALUMINUM BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.
   b. LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.
   c. PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC-WHERE ADOPTED) SECTIONS 225.37, 230.2(E), 690.56, 692.56, 700.7, 701.7, 702.7, AND 705.10 AND IFC (OR CFC - WHERE ADOPTED) SECTION 608.2.6.1. DENOTING THE PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY, STATIONARY BATTERY STORAGE SYSTEMS, OR STAND-BY POWER SOURCES AS APPLICABLE.
9. CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS, PANEL BOARDS, AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE, PRIOR TO FABRICATION.
11. ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4"= 1'-0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
13. WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OR WHERE A NEW GROUND FAULT PROTECTIVE DEVICE IS BEING INSTALLED, A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER NEC (OR CEC-WHERE ADOPTED) 230.95(C). THE GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION. VERIFICATION OF DEVICE SETTINGS PER THE POWER SYSTEMS STUDY SPECIFICATION SHALL BE PERFORMED BY THE SAME INDEPENDENT TESTING AGENCY. THE GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER OF RECORD. DURING THE CONSTRUCTION PHASE OF THE PROJECT, ALL NEW GROUND FAULT RELAYS SHALL BE SET AT THE LOWEST AVAILABLE TIME DELAY AND PICK-UP SETTINGS.
14. SEE POWER SYSTEMS STUDY SPECIFICATION FOR ADDITIONAL REQUIREMENTS. ALL REQUIRED POWER SYSTEMS STUDIES MUST BE COMPLETED AND SUBMITTED WITH ELECTRICAL POWER DISTRIBUTION EQUIPMENT SUBMITTAL. FAILURE TO DO SO WILL PREVENT THE ENGINEER FROM EFFECTIVELY EVALUATING THE SUBMITTAL AND SHALL RESULT IN REJECTION OF THE ELECTRICAL POWER DISTRIBUTION EQUIPMENT SUBMITTAL AS INCOMPLETE.

SPECIFIC SINGLE LINE NOTES:

1. SEE RELOCATABLE BUILDING GROUNDING DETAIL ON SHEET E5.1, DETAIL 3.
2. PROVIDE NEW 100A/2P BREAKER ON CIRCUITS 26 AND 28. MATCH EXISTING AIC RATING.

FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD (A)	DISTANCE (FT)	V.D. (%)	AVAIL.FAULT CURRENT (A)	NOTES
A-1	1-1/2"C. 3#1 + 1#8GND	60	200'	1.85	-	- -

GENERAL FEEDER SCHEDULE NOTES:

1. ALL FEEDERS SHOWN, UNLESS SPECIFICALLY NOTED OTHERWISE, ARE PRESUMED TO BE ROUTED IN METAL RACEWAYS. IF P.V.C. CONDUITS ARE UTILIZED, THE CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND PER NEC, OR CEC WHERE ADOPTED, TABLE 250.122 OR, WHERE REQUIRED, PROVIDE A MAIN BONDING JUMPER PER TABLE 250.66 AND INCREASE THE CONDUIT SIZE ACCORDINGLY.
2. LOADS INDICATED WITH " ( ) " REPRESENT WORST CASE LOAD IN AMPS.
3. DISTANCE SHOWN IS FOR DESIGN PURPOSES ONLY. IT IS NOT A MATERIAL TAKEOFF.
4. VOLTAGE DROP VALUE INDICATED IS AT THE END OF THE FEEDER.
5. AVAILABLE FAULT CURRENT VALUE AT THE END OF THE FEEDER INDICATED. CALCULATIONS ARE BASED UPON INITIAL VALUES RECEIVED FROM THE SERVING UTILITY AND THE LENGTH AND IMPEDANCE OF THE FEEDER. THE SHORT CIRCUIT CURRENT RATING, EQUIPMENT BUS BRACING, AND/OR AMP INTERRUPTING CURRENT OF EQUIPMENT CONNECTED ON THE LOAD SIDE OF THE FEEDER SHALL BE GREATER THAN THE AVAILABLE FAULT CURRENT.

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E11.2

DETAILS

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Electrical Lead: Chris Ta
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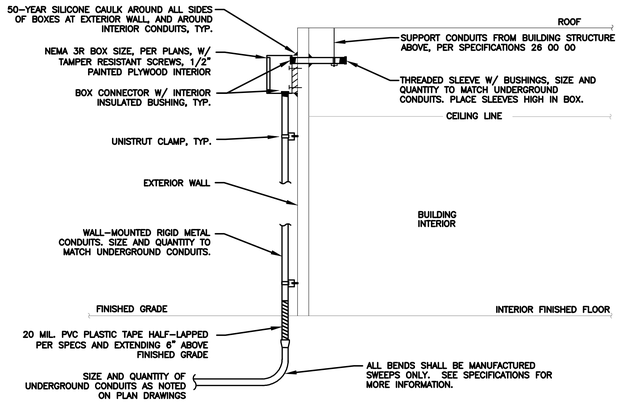
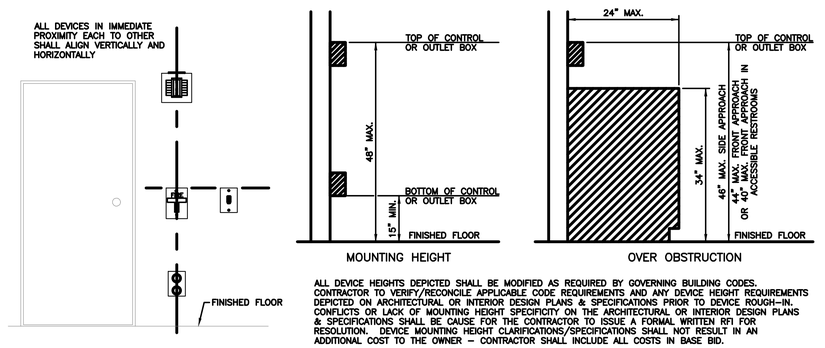


NOTES:

1. ALL BOXES/PLYWOOD TO BE SECURED TO BUILDING STRUCTURE USING MIN. ⅜" X 2" WALL ANCHORS/LAG BOLTS.
2. 50-YEAR SILICONE CAULK AROUND ALL PENETRATIONS, BOXES AND ALL THREADS AS REQUIRED.
3. SEAL ALL UNDERGROUND CONDUITS PER COMMUNICATION PATHWAY NOTES, GENERAL PROJECT NOTES, AND PROJECT SPECIFICATIONS.
4. SEE SPECIFICATIONS FOR MORE INFORMATION.

TYPICAL EXTERIOR JUNCTION BOX DETAIL (4)

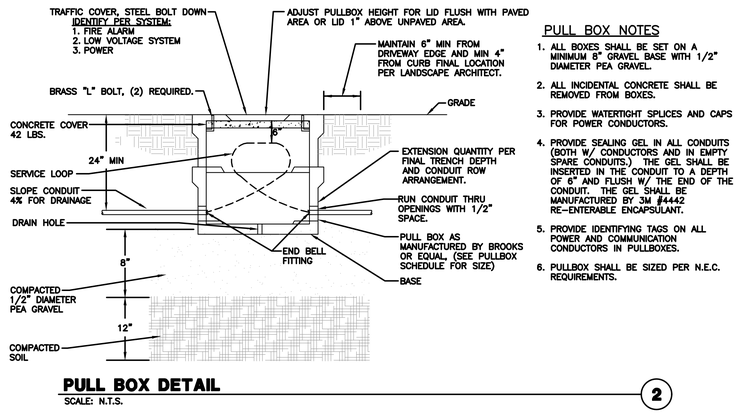
SCALE: N.T.S.



ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER – CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

DEVICE ALIGNMENT & MOUNTING HEIGHT DETAILS (1)

SCALE: N.T.S.

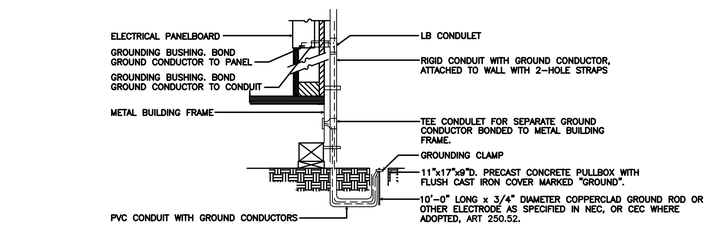


PULL BOX NOTES

1. ALL BOXES SHALL BE SET ON A MINIMUM 8" GRAVEL BASE WITH 1/2" DIAMETER PEA GRAVEL.
2. ALL INCIDENTAL CONCRETE SHALL BE REMOVED FROM BOXES.
3. PROVIDE WATERTIGHT SPLICES AND CAPS FOR POWER CONDUCTORS.
4. PROVIDE SEALING GEL IN ALL CONDUITS (BOTH W/ CONDUCTORS AND IN EMPTY SPARE CONDUITS.) THE GEL SHALL BE INSERTED IN THE CONDUIT TO A DEPTH OF 6" AND FLUSH W/ THE END OF THE CONDUIT. THE GEL SHALL BE MANUFACTURED BY 3M #4442 RE-ENTERABLE ENCAPSULANT.
5. PROVIDE IDENTIFYING TAGS ON ALL POWER AND COMMUNICATION CONDUCTORS IN PULLBOXES.
6. PULLBOX SHALL BE SIZED PER N.E.C. REQUIREMENTS.

PULL BOX DETAIL (2)

SCALE: N.T.S.



NOTES:

1. METAL MODULAR BUILDINGS: WHEN METAL BUILDINGS ARE MADE OF COMPONENTS, EACH BUILDING COMPONENT, INCLUDING STEEL RAMPS, MUST BE ELECTRICALLY BONDED TOGETHER IN A MANNER ACCEPTABLE TO DSA/SSS. PAINT ON THE SURFACE WILL INHIBIT PASSAGE OF ELECTRICAL CURRENT; THEREFORE, BOLTED CONNECTIONS OF COMPONENT PARTS ARE NOT AN ACCEPTABLE ELECTRICAL BOND.
2. WOOD MODULAR BUILDINGS: IN WOOD FRAME MODULAR BUILDINGS, THE ELECTRICAL SYSTEM MUST BE GROUNDED AS REQUIRED IN TITLE 24, C.E.C.
3. GROUNDING: THE ELECTRICAL CIRCUITS ARE USUALLY PROPERLY GROUNDED, HOWEVER, IT IS ALSO NECESSARY TO INDEPENDENTLY GROUND THE STEEL FRAMES. THIS IS PARTICULARLY IMPORTANT WHEN THE BUILDING IS SUPPORTED ON A FOUNDATION MADE OF WOOD.
4. INSPECTOR OF RECORD (I.O.R.) SHALL WITNESS GROUND TEST AND SUBMIT A COPY OF THE REPORT TO THE ARCHITECT. ALL BUILDING COMPONENTS MUST BE ELECTRICALLY BONDED TOGETHER AND MUST BE INDEPENDENTLY GROUNDED. ALL GROUNDING SYSTEMS ARE TO BE TESTED WITH A MEGGER UNIT OR IN AN OTHERWISE ACCEPTABLE MANNER. REFER TO C.E.C. SECTIONS 250-52 AND NEC. 250-53 FOR SPECIFIC GROUNDING REQUIREMENTS.
5. SIZE OF CONDUCTORS SHALL COMPLY WITH NEC. TABLE 250-95.
6. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL AND TO METAL BUILDING FRAME (NEC. 250-52). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL CONDUCTOR GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10 FEET INTO THE SOIL IF AVAILABLE (N.E.C. 250-52 AND NEC. 250-53).
7. ALL MODULES OF METAL FRAME BUILDINGS AND RAMPS SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING).
8. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN, SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS. (NEC. 250-53).
9. SEE SPECIFICATIONS FOR TESTING OF GROUNDING REQUIRED.
10. ALL ELECTRICAL WORK TO MEET THE REQUIREMENTS OF THE STATE ELECTRICAL CODES. PART 3 OF TITLE 24, CAC, WHICH REQUIRES PROPER GROUNDING OF ALL ELECTRICAL CIRCUITS, EQUIPMENT, ETC. FOR PUBLIC SCHOOL BUILDING(S), REGARDLESS OF THE TYPE OF CONSTRUCTION.

RELOCATABLE BUILDING GROUNDING DETAIL (3)

SCALE: N.T.S.

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY
RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWARTZ
No. E15610
STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE
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PROJECT NO: 2022-40191

DATE ISSUED: 2023.01.17

SCALE: AS NOTED

E 11.3

DETAILS

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 www.tk1sc.com
Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000

FIRE ALARM NOTES

1. WALL MOUNTED, AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM ABOVE THE FINISHED FLOOR, AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE. (NFPA 72, SECTION 18.4.8.1). ALL WALL MOUNTED VISUAL APPLIANCES AND COMBINATION AUDIBLE/VISUAL APPLIANCES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM ABOVE FINISHED FLOOR AS MEASURED TO THE LENS. (NFPA 72, SECTION 18.5.5.1)
2. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
3. ALL FIRE ALARM WIRING SHALL BE FLP (FIRE POWER LIMITED) OR FPLP (FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
4. PER THE CEC, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC AND SHALL HAVE THEIR COVERS PAINTED RED WHERE APPLICABLE.
5. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM ELECTRICAL ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
6. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM INTERFACE SHALL BE BY MECHANICAL CONTRACTOR, AND SHALL BE COORDINATED WITH FIRE ALARM SYSTEM.
7. ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS EXPOSED TO THE WEATHER SHALL BE C.S.F.M. LISTED FOR OUTDOOR INSTALLATION, AND WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.
8. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES AND ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
9. SMOKE DETECTOR TESTING SHALL BE PERFORMED TO ENSURE THAT EACH DETECTOR IS WITHIN ITS LISTED AND MARKED SENSITIVITY RANGE USING THE METHODS RECOMMENDED PER CFC, SECTION 907.8.4 AND NFPA 72, SECTION 14.4.4.3.4.
10. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
    A. INITIATING DEVICE CIRCUITS (IDC): CLASS B
    B. SIGNALING LINE CIRCUITS (SLC): CLASS B
    C. NOTIFICATION APPLIANCE CIRCUITS (NAC): CLASS B
11. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.
12. POINT AND COMMON ANNUNCIATION AND T-TAPPING ARE PROHIBITED. (T-TAPPING IS ALLOWABLE ON SLC LOOPS).
13. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING, WHEN APPLICABLE.
14. CONTRACTOR TO FIELD VERIFY AND PROVIDE DECIBEL METER FOR TESTING OF AMBIENT NOISE LEVELS AUDIBLE DEVICES TO BE AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75 DBA AT 10 FEET OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL BUT NOT MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE. SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS. (CFC, SECTION 907.5.2.1.1) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS. PROVIDE UPDATED PLANS AND CALCULATIONS THROUGH THE "CHANGE ORDER" PROCESS WHEN INSTALLING ADDITIONAL DEVICES.
15. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15-CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, APPROVED SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON THE DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. ALL CONDUITS SHALL BE 3/4" MINIMUM. CONTRACTOR TO VERIFY CONDUIT FILL PRIOR TO INSTALLATION.
17. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.
18. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
19. SYSTEM SHALL BE FURNISHED AND INSTALLED BY AN AUTHORIZED DISTRIBUTOR.
20. FIRE ALARM SYSTEM INSTALLATION COMPANY SHALL BE UL LISTED (UUJS).
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER'S SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
22. SMOKE DETECTOR SHALL NOT BE ANY CLOSER THAN 1 FOOT FROM FIRE SPRINKLERS OR 3 FEET FROM ANY SUPPLY DIFFUSER. IN THE AREA OF CONSTRUCTION OR WHERE POSSIBLE DAMAGE/CONTAMINATION COULD OCCUR ON NEWLY INSTALLED FIRE ALARM DEVICES, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER. DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO FINAL CLEAN-UP BY ALL TRADES SHALL BE CLEANED OR REPLACED IN ACCORDANCE WITH CFC, SECTION 907. CLEANING OR REPLACEMENT OF DEVICES THAT WERE MOUNTED AT THE REQUEST OF THE CONTRACTOR WILL NOT BE PERFORMED WITHOUT WRITTEN AUTHORIZATION THAT ASSUMES FINANCIAL RESPONSIBILITY FOR COSTS INCURRED. TESTING OF DETECTORS SHALL BE PERFORMED PER NFPA 72, SECTION 14.4.5.3 AND CFC, SECTION 907.8.4.
23. PER CBC, SECTION 11B-309 ACTIVATION OF INITIATING DEVICE SHALL NOT REQUIRE MORE THAN 5 LBS. (22.2N) OF FORCE OR REQUIRE TIGHT GRASPING PINCHING, OR TWISTING OF WRIST.
24. THE SYSTEM SHALL CONFORM TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
25. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72, SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC.
26. A DEDICATED 120V BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT, THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION AND BE LABELED AS FOLLOWS:
    A. "FIRE ALARM" FOR FIRE ALARM SYSTEMS
    B. "EMERGENCY COMMUNICATIONS" FOR EMERGENCY COMMUNICATION SYSTEMS, OR
    C. "FIRE ALARM/ECS" FOR COMBINATION FIRE ALARM AND COMMUNICATIONS SYSTEMS.
27. WHERE A DETECTOR IS INSTALLED ABOVE THE CEILING, THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED. FOR DUCT SMOKE DETECTORS A REMOTE TEST STATION SHALL BE PROVIDED. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC.
28. THE "END OF LINE RESISTANCE" OF EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE I.O.R. AND SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGE.
29. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE LISTED FOR WET LOCATIONS, IN ACCORDANCE WITH CEC, SECTIONS 110.11, 300.5(B), 300.6, 300.9, 310.10, AND 760.3(D).
30. FIRE ALARM SYSTEM IS A FULLY AUTOMATIC SYSTEM. CONTRACTOR TO UTILIZE AREA COVERAGE SMOKE DETECTORS AND ADDRESSABLE CONTROL RELAYS FOR THE SHUTDOWN AND/OR CLOSURE OF HVAC UNITS AND COMBINATION SMOKE/FIRE DAMPERS. CONTROL RELAYS TO BE LOCATED WITHIN 3FT OF THE CONTROLLED CIRCUIT OR APPLIANCE PER NFPA 72, SECTION 21.2.4.
31. PROVIDE (VIA CHANGE ORDER PROCESS) APPROPRIATE MANUFACTURER PRODUCT DATA SHEETS AND APPLICABLE CSFM LISTINGS FOR ALL SUBSTITUTED MANUFACTURER'S MATERIAL, EQUIPMENT OR APPLIANCES, TO DSA PRIOR TO START OF INSTALLATION.
32. CONTRACTOR SHALL PROVIDE FIRE WATCH FOR ALL OCCUPIED AREAS OF WORK WHERE THE REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR THE DURATION OF THE SYSTEM OUTAGE. FIRE WATCH AND SYSTEM/EQUIPMENT SHALL BE PER CFC, SECTION 901.7.
33. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72. THE OPERATION OF ANY AUTOMATIC FIRE DETECTOR, SPRINKLER WATERFLOW DEVICE OR MANUAL FIRE ALARM BOX SHALL AUTOMATICALLY SOUND AN ALERT TONE FOLLOWED BY VOICE INSTRUCTIONS GIVING APPROVED INFORMATION AND DIRECTIONS FOR IN GENERAL OR STAGED EVACUATION IN ACCORDANCE WITH THE FIRE SAFETY EVACUATION PLANS REQUIRED BY CFC, SECTION 404 PER CBC/CFC, SECTION 907.5.2.2
34. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL HAVE THE CAPABILITY TO BROADCAST LIVE VOICE MESSAGES BY PAGING ZONES ON A SELECTIVE AND ALL-CALL BASIS PER CBC/CFC, SECTION 907.5.2.2.2.
35. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE PROVIDED WITH AN APPROVED EMERGENCY POWER SOURCE PER CBC/CFC, SECTION 907.5.2.2.5.
36. UPON DETECTION OF CARBON MONOXIDE THE FIRE ALARM SYSTEM SHALL PRODUCE A FOUR-PULSE TEMPORAL PATTERN SIGNAL WITHIN THE BUILDING AND COMPLY WITH NFPA 720, SECTION 5.8.6.5.
37. ALL MEMBRANE AND THROUGH-PENETRATIONS OF RATED ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED FIRE STOP SYSTEM AS IDENTIFIED IN CBC, CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
38. CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.

SEQUENCE OF OPERATIONS

ACTION	DEVICE: 120 VOLT POWER FAILURE	SYSTEM TROUBLE, WIRING BREAK, SYSTEM GROUND FAULT, OPEN IN BATTERY, CIRCUIT SHORT	MANUAL PULL STATION	AREA SMOKE DETECTOR	HEAT DETECTOR
SOUND CONTROL PANEL TROUBLE BUZZER	YES	YES	NO	NO	NO
SOUND CONTROL PANEL SUPERVISORY BUZZER	NO	NO	NO	NO	NO
SOUND CONTROL PANEL ALARM BUZZER	NO	NO	YES	YES	YES
ACTIVATE RELAY FOR CENTRAL STATION MONITORING	YES	YES	YES	YES	YES
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (ALARM)	NO	NO	YES	YES	YES
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (TROUBLE)	YES	YES	NO	NO	NO
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (ALARM)	NO	NO	YES	YES	YES
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (TROUBLE)	YES	YES	NO	NO	NO
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES
NOTIFY FIRE DEPARTMENT VIA MONITORING STATION –	NO	NO	YES	YES	YES
SOUND AN ALERT TONE FOLLOWED BY VOICE INSTRUCTION	NO	NO	YES	YES	YES

FIRE ALARM SYSTEM TESTING NOTES:

1. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
2. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
3. DISTRICT SHALL PROVIDE A CERTIFIED IMPARTIAL FIRE ALARM INSPECTOR. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
4. 100% OF THE SYSTEM IN CONTRACT WILL BE TESTED AND INSPECTED WITH THE CONTRACTOR OR CONTRACTOR'S SUB AND DISTRICT'S ETS STAFF MEMBER PRESENT. INSPECTION WILL INCLUDE, BUT NOT BE LIMITED TO, REMOVING STROBES/HORNS TO CHECK FOR "T-TAPS", REMOVING J-BOX COVERS TO CHECK WIRE GAGE AND SPLICES.
5. FOLLOW ALL REQUIREMENTS AND INSTRUCTIONS PROVIDED BY MANUFACTURER UPON INSTALLATION OF MANUFACTURER'S PRODUCTS AND DEVICES.
6. PRIOR TO REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE FIRE CODE OFFICIAL THAT THE SUBJECT FIRE PROTECTION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH APPROVED PLANS AND HAS BEEN TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE APPROPRIATE INSTALLATION STANDARD. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT. ANY DEVIATIONS FROM THE DESIGN STANDARDS SHALL BE NOTED AND COPIES OF THE APPROVALS FOR SUCH DEVIATIONS SHALL BE ATTACHED TO THE WRITTEN STATEMENT. (CFC, SECTION 901.2.1)
7. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/I.O.R. CONTRACTOR SHALL SUPPLY NECESSARY TESTING EQUIPMENT, INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE NOISE LEVELS OF AUDIBLE DEVICES. PROVIDE TEST RESULTS PER NFPA 72 TO ARCHITECT, D.S.A., I.O.R. AND TO LOCAL FIRE AUTHORITY, PER CFC, SECTION 907.8.2.
8. INSPECTION, TESTING AND MAINTENANCE SHALL BE IN COMPLIANCE WITH NFPA 72, CHAPTER 14, REACCEPTANCE TESTING SHALL BE IN COMPLIANCE WITH NFPA 72, SECTION 14.4.2.
9. THE LOCAL FIRE AUTHORITY SHALL BE NOTIFIED FOR TESTING. THE FIRE AUTHORITY SHALL BE PRESENT AND SHALL BEAR WITNESS FOR TESTING PROCEDURES. DOCUMENTATION FOR WHETHER THE FIRE AUTHORITY WAS PRESENT AND WITNESSED TESTING SHALL BE DOCUMENTED AS PART OF TESTING PROCEDURES DOCUMENTATION.
10. PRIOR TO COMPLETION OF FIRE ALARM SYSTEM THE TWO WAY COMMUNICATION SYSTEM SHALL BE TESTED AND CERTIFIED VIA NFPA 72 EMERGENCY COMMUNICATION SYSTEM SUPPLEMENTARY RECORD OF INSPECTION AND TESTING FORM.
11. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED RECORD OF COMPLETION PER NFPA 72, FIGURE 7.8.2(A) THROUGH (I) AS APPLICABLE. A COMPLETE RECORD OF THE TESTS AND OPERATIONS OF EACH SYSTEM SHALL BE KEPT UNTIL THE NEXT TEST AND FOR ONE YEAR AFTER PER NFPA 72, SECTION 7.7.1.
12. FIRE ALARM SYSTEM DOCUMENTS SHALL BE HOUSED IN THE DOCUMENT CABINET. THE DOCUMENT CABINET SHALL BE INSTALLED AT THE SYSTEM CONTROL UNIT OR AT ANOTHER APPROVED LOCATION AT THE PROTECTED PREMISES AS REQUIRED BY NFPA 72, SECTION 7.7.2.
13. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CFC, SECTION 907.6.6. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A FIRE ALARM SYSTEM MONITORING CONTRACT.
14. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72 SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC. REFER TO NFPA 72 ANNEX D, D.1 THROUGH D.6 FOR DETERMINING THE FUNDAMENTALS OF TEST PROTOCOL AND METHOD OF MEASURING INTELLIGIBILITY.

FIRE ALARM SYMBOLS LIST

SYMBOL	DESCRIPTION	MODEL	MANUFACTURER	BACKBOX	MOUNTING HEIGHT	C.S.F.M. NUMBER
FACP	(E) FIRE ALARM CONTROL PANEL A#01-101497	EXISTING	GAMEWELL-FCI	EXISTING	EXISTING	EXISTING
VECP	VOICE EVACUATION CONTROL PANEL	FIREVAC IV	GAMEWELL-FCI	PROVIDED	5'-6" A.F.F. TO TOP	6911-1703:0112
AMP	VOICE EVACUATION AUDIO AMPLIFIER	AA SERIES	GAMEWELL-FCI	PROVIDED	5'-6" A.F.F. TO TOP	7165-1703:0125
RM	VOICE EVACUATION REMOTE MICROPHONE	FMV-RM	GAMEWELL-FCI	PROVIDED	5'-6" A.F.F. TO TOP	6911-1703:0112
COMM	CENTRAL STATION COMMUNICATOR	DACT-E3	GAMEWELL-FCI	PROVIDED	VERIFY IN FIELD	7165-1703:0125
FATC	FIRE ALARM TERMINAL CABINET	N/A	BY ELECTRICIAN	18"SQ. x 6"D U.N.O. (RED)	VERIFY IN FIELD	N/A
MS	MANUAL PULL STATION (ADDRESS./DOUBLE ACTION)	MS-7AF	GAMEWELL-FCI	4S DEEP BOX W/ SINGLE GANG RING	48" A.F.F. TO TOP OF ACTIVATING LEVER	7150-1703:0119
SD	AREA SMOKE DETECTOR (ADDRESSABLE/PHOTO.)	ASD-PL2F B300-6 (BASE)	GAMEWELL-FCI	4S DEEP BOX W/ 3-0 RING	CEILING	7272-1703:0121 7300-1653:0109
HD	AREA HEAT DETECTOR (ADDRESS./FIXED 190°F)	ATD-HL2F B300-6 (BASE)	GAMEWELL-FCI	4S DEEP BOX W/ 3-0 RING	ABOVE ACCESSIBLE CEILING, U.O.N.	7270-1703:0115 7300-1653:0109
S WP	FIRE ALARM SPEAKER (WEATHERPROOF/WALL)	SPRK (RED)	SYSTEM SENSOR	WP BACKBOX PROVIDED	90" A.F.F. TO TOP	7320-1653:0201
SF cd	FIRE ALARM SPEAKER/STROBE (CEILING)	SPSCWL (WHITE)	SYSTEM SENSOR	4S DEEP BOX W/ 4S EXTENSION	CEILING	7320-1653:0505
SYNC	AUDIBLE/VISUAL SYNC MODULE	MDL3	SYSTEM SENSOR	5S DEEP BOX W/ 5S EXTENSION	VERIFY IN FIELD	7300-1653:0202
J	FIRE ALARM JUNCTION BOX	N/A	BY ELECTRICIAN	4S BOX, U.N.O.	VERIFY IN FIELD	N/A

GENERAL FIRE ALARM SYMBOL LIST NOTES:

1. CONFIRM NOTIFICATION DEVICE COLOR (WHITE OR RED) WITH ARCHITECT PRIOR TO ANY ORDER OR INSTALLATION. COLOR TO BE INDICATED IN SHOP DRAWING SUBMITTAL.
2. NOTIFICATION DEVICES SHALL HAVE NO "FIRE" MARKINGS.
3. NUMBER ADJACENT TO VISUAL DEVICES INDICATES MINIMUM CANDELLA RATING OF STROBE DEVICE.

GENERAL FIRE ALARM ABBREVIATIONS:

A.F.F.	ABOVE FINISHED FLOOR	N/A	NOT APPLICABLE
E.O.L.	END OF LINE RESISTOR	U.N.O.	UNLESS NOTED OTHERWISE
(E)	EXISTING DEVICE	VL	VERIFY LOCATION IN FIELD
F.B.O.	FURNISHED BY OTHERS	WP	WEATHERPROOF DEVICE
TSP	TWISTED SHIELDED PAIR	cd	INDICATED CANDELA RATING OF STROBE DEVICE

WIRING LEGEND

WIRE DESIGNATION	WIRE IN CONDUIT	WIRE IN CONDUIT UNDERGROUND/WET LOC.	UNDERGROUND/WET WIRE DESIGNATION
INITIATING CIRCUITS Z	2 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	INITIATING CIRCUITS ZU
POWER CKT. P	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	POWER CKT. PU
NETWORK CONTROL C	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	NETWORK CONTROL CU
ANNUNCIATOR D	4 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	4 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	ANNUNCIATOR DU
AUDIBLE LOOP B	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	AUDIBLE LOOP BU
AUDIBLE (SPEAKER) A	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED W/OVERALL JACKET	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED W/OVERALL JACKET	AUDIBLE (SPEAKER) AU
VISUAL (STROBE) V	2 CONDUCTOR #12 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	2 CONDUCTOR #12 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	VISUAL (STROBE) VU
S-BUS S	4 CONDUCTOR #16 FPLR (2 PAIR)	4 CONDUCTOR #16 FPLR (2 PAIR)	S-BUS SU

NOTE:
1. ALL WIRE TO BE CLASS 'B' PATHWAY SURVIVAL LEVEL 1.
2. ALL CABLING TO BE WEST PENN OR APPROVED EQUAL.
3. COLOR CODE ALL FIRE ALARM CONDUCTORS PER DISTRICT STANDARDS. VERIFY COLOR SCHEMES PRIOR TO ORDERING FIRE ALARM CONDUCTORS.

PLAN REVIEW REQUIREMENTS AND APPLICABLE CODES AND STANDARDS

1.0 FIRE ALARM PLAN REVIEW

A. FIRE ALARM PLAN REVIEW

1. AS PART OF THE FIRE ALARM PLAN REVIEW, PLANS AND SPECIFICATIONS FOR THE FIRE ALARM SYSTEM HAVE BEEN INCLUDED FOR REVIEW AND COMMENT BY THE DIVISION OF THE STATE ARCHITECT, FIRE & LIFE SAFETY.
2. THE FLOOR PLANS AND SPECIFICATIONS INCLUDE THE FOLLOWING : LOCATIONS OF ALL ALARM-INITIATING AND SIGNALING DEVICES, CONTROL AND TROUBLE SIGNALING EQUIPMENT (FIRE ALARM CONTROL PANEL, BUILDING ANNUNCIATION (FIRE ALARM ANNUNCIATOR).

B. FIRE ALARM COMPONENTS

1. PROVIDE CALIFORNIA STATE FIRE MARSHAL LISTING SHEETS AND U.L. LISTING NUMBERS FOR EACH COMPONENT.
2. EQUIPMENT POWER CONNECTIONS.
3. RISER DIAGRAM SHOWING EACH COMPONENT.
4. VOLTAGE DROP CALCULATIONS.
5. POWER CONNECTIONS TO APPLICABLE COMPONENTS.
6. WIRE AND/OR CABLING TYPES AND SIZES.
7. PROVIDE CATALOG DATA SHEETS FOR ALL FIRE ALARM SYSTEM COMPONENTS.
8. CONTRACTOR TO FURNISH STATEMENT OF COMPLIANCE BEFORE REQUESTING FINAL APPROVAL OF INSTALLATION IN ACCORDANCE WITH CFC, SECTION 901.2.1.
9. A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE PROJECT INSPECTOR AND, IF APPLICABLE, LOCAL FIRE AUTHORITY.
10. THE INSTALLER SHALL SUPPLY THE OWNER WITH A WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS BUILT DRAWINGS AND EQUIPMENT SPECIFICATIONS. AS BUILT RECORDS SHALL BE MAINTAINED ON PREMISES FOR A MINIMUM OF THREE YEARS PER CFC, SECTION 901.6.3.

C. SCOPE OF WORK

1. INSTALL A FULLY AUTOMATIC, ADDRESSABLE, FIRE ALARM SYSTEM WITH AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM WITHIN ALL BUILDINGS IN SCOPE OF PROJECT AS DEFINED PER CFC, SECTION 907.2.3 AND NFPA 72.
2. FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE U.L. LISTED AS UUFX (CENTRAL STATION) PER CFC, SECTION 907.6.6.3.

2.0 LIST OF CURRENT CALIFORNIA CODE OF REGULATIONS

APPLICABLE CODES AS OF JANUARY 1, 2023

2022 California Administrative Code (CAC), Part 1, Title 24, C.C.R.

2022 California Building Code (CBC), Volumes 1 & 2, Part 2, Title 24, C.C.R. (2021 International Building Code of the International Code Council, with California Amendments.)

2022 California Electrical Code (CEC), Part 3, Title 24, C.C.R. (2020 National Electric Code of the National Fire Protection Assoc., NFPA)

2022 California Mechanical Code (CMC), Part 4, Title 24, C.C.R. (2021 Uniform Mechanical Code of the International Association of Plumbing and Mechanical Officials, IAPMO.)

2022 California Plumbing Code (CPC), Part 5, Title 24, C.C.R. (2021 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials, IAPMO.)

2022 California Energy Code, Part 6, Title 24, C.C.R.

2022 California Historical Building Code, Title 24, C.C.R.

2022 California Fire Code (CFC), Part 9, Title 24, C.C.R. (2021 International Fire Code with California Amendments)

2022 California Existing Building Code (CEBC), Part 10, Title 24, C.C.R. (2021 International Existing Building Code of the International Code Council, with amendments)

2022 California Green Building Standards Code (CALGreen), Part 11, Title 24, C.C.R.

2022 California Referenced Standards Code, Part 12, Title 24, C.C.R.

LIST OF FEDERAL CODES AND STANDARDS (if applicable)

Americans with Disabilities Act (ADA), Title II or Title III

For Title II: Uniform Federal Accessibility Standards (UFAS) or ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)

For Title III: ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)

Americans with Disabilities Act Accessibility Guidelines (ADAAG) (with amendments through September 2002)

PARTIAL LIST OF APPLICABLE NFPA STANDARDS:

NFPA 13-Automatic Sprinkler Systems (CA Amended)	2022 Edition
NFPA 14-Standpipes Systems (CA Amended)	2019 Edition
NFPA 17-Standard for Dry Chemical Extinguishing Systems	2021 Edition
NFPA 17a-Standard for Wet Chemical Systems	2021 Edition
NFPA 20-Installation Stationary Pumps for Fire Protection	2019 Edition
NFPA 22-Water tanks for Private Fire Protection	2019 Edition
NFPA 24-Installation of Private Fire Service Mains (CA Amended)	2019 Edition
NFPA 72-National Fire Alarm and Signaling Code (CA Amended)	2022 Edition
NFPA 80-Fire Door and Other Opening Protectives	2019 Edition
NFPA 92-Standard for Smoke Control Systems	2015 Edition
NFPA 253-Critical Radiant Flux of Floor Covering Systems	2019 Edition
NFPA 720-Carbon Monoxide (CO) Detection and Warning	2015 Edition
NFPA 2001-Clean Agent Fire Extinguishing Systems (CA Amended)	2018 Edition
ICC 300-ICC Standards on Bleachers, Folding and Telescoping Seating and Grandstands	2017 Edition
UL 38-Manual Operating Signal Boxes (with revisions through February 2, 2005 as amended)	1999 Edition
UL 268-Smoke Detectors for Fire Alarm Systems	2009 Edition
UL 268A-Smoke Detectors Duct Applications (with revisions through October 22, 2003 as amended)	2009 Edition
UL 300-Fire Testing of Fire Extinguishing Systems for Protection Of Restaurant Cooking Areas (with revisions through December 2014 as amended)	2005 Edition
UL 464-Audible Signal Appliances (with revisions through October 10, 2003 as amended)	2003 Edition
UL 521-Heat Detectors for Fire Protective Signaling Systems (with revisions through July 20, 2005 as amended)	1999 Edition
UL 864-Control Units for Fire Protective Signaling Systems (with revisions through December 2014)	2003 Edition

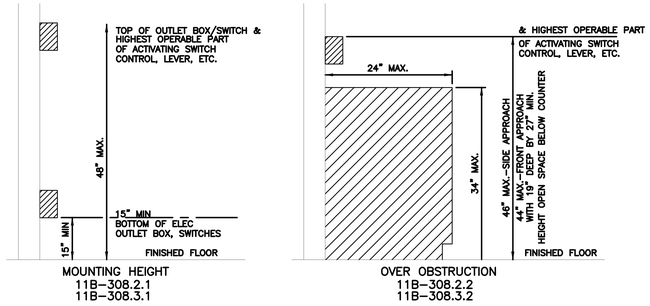
Reference code section for NFPA Standards-2022 CBC (SFM) Chapter 35
See Chapter 35 for State of California amendments to NFPA Standards.

COMPLETE FIRE ALARM SUBMITTAL
AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

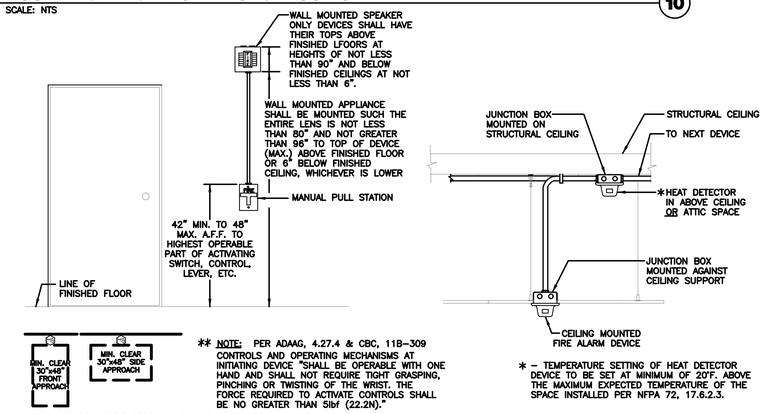
CLIENT ADDR



ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER – CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

MOUNTING HEIGHT OVER OBSTRUCTION DETAIL 10

SCALE: NTS

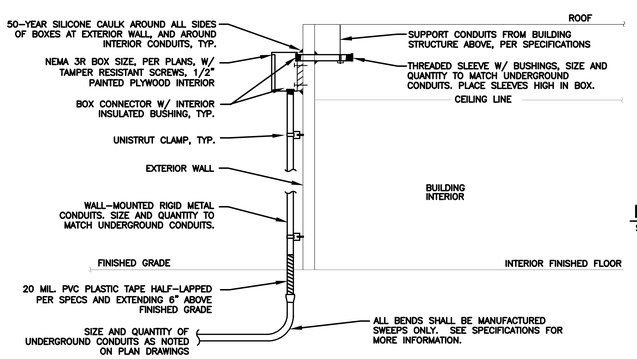


** NOTE: PER ADAAG, 4.27.4 & CBC, 11B-309 CONTROLS AND OPERATING MECHANISMS AT INITIATING DEVICE "SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5lbf (22.2N)."

* – TEMPERATURE SETTING OF HEAT DETECTOR DEVICE TO BE SET AT MINIMUM OF 20°F. ABOVE THE MAXIMUM EXPECTED TEMPERATURE OF THE SPACE INSTALLED PER NFPA 72, 17.6.2.3.

DEVICE MOUNTING DETAILS 9

SCALE: N.T.S.

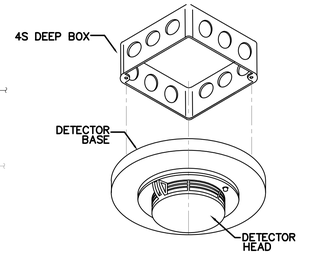


NOTES:

1. ALL BOXES/PLYWOOD TO BE SECURED TO BUILDING STRUCTURE USING MIN. ⅜" X 2" WALL ANCHORS/LAG BOLTS.
2. 50-YEAR SILICONE CAULK AROUND ALL PENETRATIONS, BOXES AND ALL THREADS AS REQUIRED.
3. SEAL ALL UNDERGROUND CONDUITS PER COMMUNICATION PATHWAY NOTES, GENERAL PROJECT NOTES, AND PROJECT SPECIFICATIONS.
4. SEE SPECIFICATIONS FOR MORE INFORMATION.

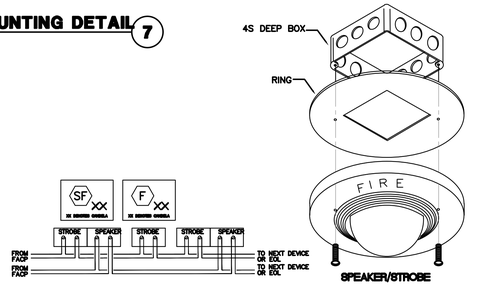
TYPICAL EXTERIOR JUNCTION BOX DETAIL 6

SCALE: N.T.S.



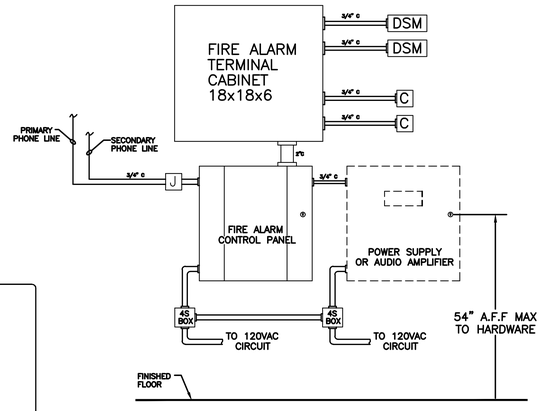
DETECTOR MOUNTING DETAIL 7

SCALE: N.T.S.



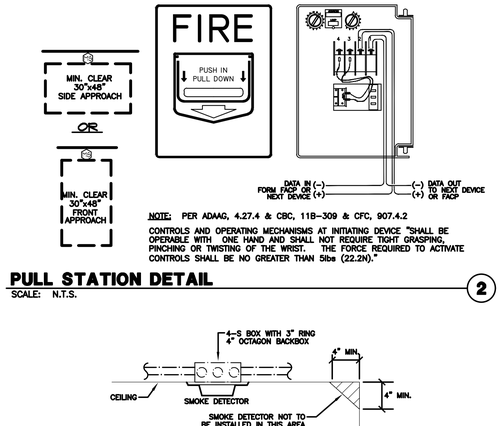
CEILING MTD. AUDIBLE/VISUAL 3

SCALE: N.T.S.



FIRE ALARM PANEL/POWER SUPPLY MOUNTING ELEVATION 5

SCALE: N.T.S.

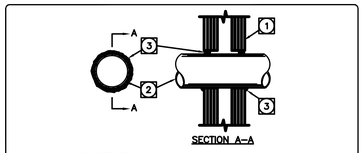


NOTE: PER ADAAG, 4.27.4 & CBC, 11B-309 & CFC, 907.4.2

CONTROLS AND OPERATING MECHANISMS AT INITIATING DEVICE "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 GREATER THAN 5lbs (22.2N)."

PULL STATION DETAIL 2

SCALE: N.T.S.



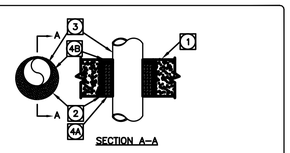
PENETRATION THRU GYPSUM BOARD WALL
NO SCALE

System No.W-J-1252
January 22, 2018
F Rating – 1, 2, 3 and 4 Hr (See Items 1 and 3)
T Rating – 0 Hr
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft

1. Wall Assembly – The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs – Wall framing may consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide by 1-⅜ in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   B. Gypsum Board – Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft (122 mm) wide with square or tapered edges. Gypsum board may be applied in single ply or multi-ply configurations. Number of layers and thickness specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 28 in. (900 mm).
   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. Through Penetrant – One metallic pipe, conduit or tube to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tube and periphery of opening shall be min 0 in. (point contact) to max 7/8 in. (22 mm). Pipe, conduit or tube to be rigidly supported on both sides of wall assembly.
   A. Steel Pipe – Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit – Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit.
   D. Conduit – Nom 4 in. (102 mm) diam (or smaller) electrical metallic tubing conduit.
   E. Copper Tubing – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   F. Copper Pipe – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material* – Sealant – Min 1 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Type and thickness of sealant is dependent on F and FH Ratings as indicated in Table below. An additional 1/2 in. (13 mm) diameter bead of sealant applied at penetrant/gypsum board interface at point contact location both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant or CP 606 Sealant

F, FH RATINGS (Hr)	SEALANT TYPE	SEALANT THICKNESS, IN. (MM)
1,2	FS-ONE, FS-ONE MAX OR CP 606	5/8 (16)
3	FS-ONE, FS-ONE MAX OR CP 606	1 (25)
4	FS-ONE, FS-ONE MAX	1 (25)

*Bearing the UL Classification Marking



SECTION A–A

PENETRATION THRU CONCRETE WALL OR FLOOR

System No. C-AJ-1630
DECEMBER 20, 2013
F Rating – 1, 2, 3 and 4 Hr (See Item 4)
T Rating – 0 Hr
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft
W Rating – Class 1 (See Item 4)

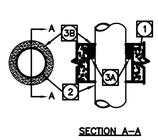
1. Floor or Wall Assembly – 1, See Configuration A above. Reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/cu meter) concrete as specified in the Table in Item 4 below. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of sleeved opening is 32 in. (813 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
1A. Floor Assembly – See Configuration B above. Min 8 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units*. Max diam of opening is 7 in. (178 mm).
   See Precast Concrete Units (QRYV) category in the Fire Resistance Directory for names of manufacturers.
2. Steel Sleeve (Optional) – Nom 32 in. (813 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast or grouted into floor or wall assembly, flush with both surfaces of floor or wall. As an option, sleeve may extend max 2 in. above top surface of floor or beyond one or both surfaces of wall. Steel sleeve may be used in 2 and 3 hr F Rated systems only.
3. Through Penetrants – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. See Table in Item 4 for sizes of penetrants A, B, D and E that may be used. See Item 3C below for size of conduit that may be used. The annular space shall be as specified in Table in Item 4 below. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe – Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Cast or ductile iron pipe.
   C. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) steel conduit.
   D. Copper Tubing – Nom 4 in. (102 mm) diam (or smaller) copper tubing.
   E. Copper Pipe – Regular (or heavier) copper pipe.
4. Firestop System – The F Rating of the system is dependent upon the type of concrete, thickness of concrete, annular space, fill and packing material thickness, packing material density and penetrant size as shown in the Table below. W Rating applies to annular spaces of min 0 in. (point contact) to max 1-⅞ in. and to Configuration A detail only.

F RATING HR	MIN THICK CONCRETE IN.	ANNULAR SPACE IN.	MIN THICK PACKING MTL IN.	MIN DENSITY PACKING MTL PCF (KG/CU M)***	MIN THICK FILL MTL IN.	PENETRANT SIZE IN. DIAM (OR SMALLER) COPPER	PENETRANT SIZE IN. DIAM (OR SMALLER) STEEL, IRON
2	5-1/2(140)	0 TO 1-7/8 (0 TO 48)	5 (127)	4 (64)	1/2 (13)	4 (102)	18 (308)
3	4-1/2(114)	0 TO 2-1/8 (0 TO 54)	4-1/4 (108)	4 (64)	1/4 (6)	6 (152)	30 (762)
4	5-1/2(140)	0 TO 1-7/8 (0 TO 48)	5 (127)	4 (64)	1/2 (13)	4 (102)	8 (203)

A. Packing Material — Min 4-1/4 or 5 in. (108 or 127 mm) thickness of min 4.0 pcf (64 kg/cu meter) mineral wool batt insulation firmly packed into opening as a permanent form as specified in the Table above. Packing material to be recessed from top surface of floor or top end of sleeve, or from both surfaces of wall or ends of sleeve, as shown in Configuration A, to accommodate required thickness of fill material. For hollow-core floor applications as shown in Configuration B, one half of the required thickness of mineral wool packing material shall be installed flush with the bottom surface of the floor and the remaining half of the mineral wool packing material installed at the top of the opening and recessed from the top surface of the floor to accommodate the required thickness of the fill material.

B. Fill, Void or Cavity Material* — Caulk — Min 1/4 or 1/2 in. (6 or 13 mm) thickness of fill material as specified in the Table above applied within the annulus, flush with top surface of floor or top end of sleeve, or with both surfaces of wall or ends of sleeve. At the point contact location between pipe and concrete or sleeve, a min 1/2 in. (13 mm) diam bead of fill material shall be applied. As an option, for hollow-core floors, the packing material (Item 4A) on the bottom surface of the floor may be recessed to accommodate a 1/4 in. (6 mm) depth of fill material installed flush with bottom surface of floor.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-S SIL GG (floors or walls) and CFS-S SIL SL (floors only)

*Bearing the UL Classification Mark



SECTION A–A

PENETRATION THRU CONCRETE FLOOR
NO SCALE

SYSTEM NO. C-AJ-1228
April 20, 2015
F RATING–3 HR
T RATING–0 HR

Floor or Wall Assembly – 1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100–150 pcf or 1600–2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 9 in. (152 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — One metallic pipe, conduit or tubing to be centered within the firestop system. A nom annular space of 3/4 in. (19 mm) is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe – Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.

3. Firestop System – The firestop system shall consist of the following:
   A. Packing or Forming Materials — Optional — One of the following packing or forming materials may be used:

A1. Foam Backer Rod — Foam backer rod tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.

A2. Mineral Wool Batt Insulation — Min 4 pcf (64 kg/m3), tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.

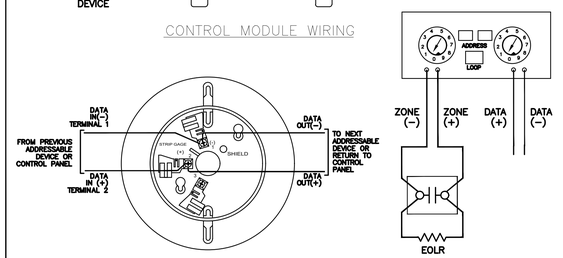
A3. Forming Material* — Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS12 or CF–AS CJP Foam Sealant

B. Fill, Void or Cavity Material* — Putty — Min 1 in. (25 mm) thickness of putty applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 618 Firestop Putty Stick

*Bearing the UL Classification Mark

THROUGH RATED WALL OR FLOOR PENETRATIONS (U.L. LISTINGS) 8

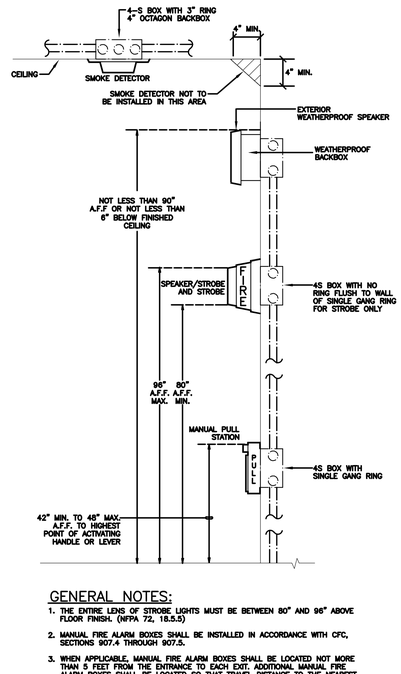
SCALE: N.T.S.



ADDRESSABLE SMOKE/HEAT DETECTOR — MANUAL PULL STATION

DEVICE WIRING DETAILS 4

SCALE: N.T.S.



GENERAL NOTES:

1. THE ENTIRE LENS OF STROBE LIGHTS MUST BE BETWEEN 80" AND 96" ABOVE FLOOR FINISH. (NFPA 72, 18.5.5)
2. MANUAL FIRE ALARM BOXES SHALL BE INSTALLED IN ACCORDANCE WITH CFC, SECTIONS 907.4 THROUGH 907.5.
3. WHEN APPLICABLE, MANUAL FIRE ALARM BOXES SHALL BE LOCATED NOT MORE THAN 5 FEET FROM THE ENTRANCE TO EACH EXIT. ADDITIONAL MANUAL FIRE ALARM BOXES SHALL BE LOCATED SO THAT TRAVEL DISTANCE TO THE NEAREST BOX DOES NOT EXCEED 200 FEET. (CFC, 907.4.2.1)

MOUNTING HEIGHT DETAIL 1

SCALE: N.T.S.

ALARM SUBMITTAL
AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWARTZ No. E15610 STATE OF CALIFORNIA

REVISIONS:

	DESCRIPTION	DATE

PROJECT NO: 2022-40191

DATE ISSUED: 2023.01.17

SCALE: AS NOTED

FA0.2

FIRE ALARM DETAILS

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
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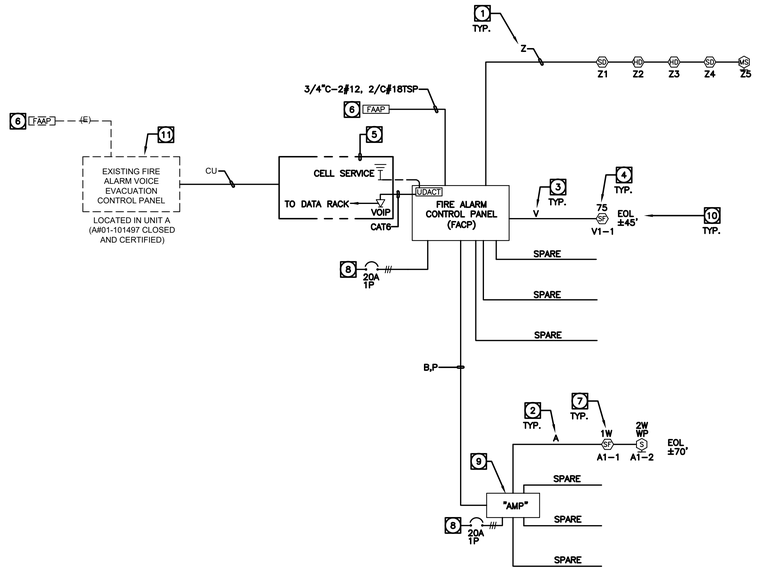
Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000



BATTERY SIZING CALCULATION

PROJECT NAME: APTITUD ACADEMY
PANEL LOCATION: RELO
DATE PERFORMED: June 16, 2023

VECP

QTY.	DEVICE NAME	STD-BY (AMPS)		ALARM (AMPS)	
1	CONTROL PANEL	0.0650	0.0650	0.0850	0.0850
1	MICROPHONE	0.0030	0.0030	0.0030	0.0030
1	PULL STATION	0.0003	0.0003	0.0003	0.0003
2	SMOKE DETECTOR	0.0003	0.0006	0.0003	0.0006
2	HEAT DETECTOR (ATTIC)	0.0003	0.0006	0.0003	0.0006
0	15cd STROBE (CEILING)	0.0000	0.0000	0.0410	0.0000
0	30cd STROBE (CEILING)	0.0000	0.0000	0.0630	0.0000
0	75cd STROBE (CEILING)	0.0000	0.0000	0.1110	0.0000
1	SYNC MODULE	0.0000	0.0000	0.0100	0.0100
1	COMMUNICATOR	0.0180	0.0180	0.0180	0.0180
		0.0000	0.0000	0.0000	0.0000
		0.0000	0.0000	0.0000	0.0000
		0.0000	0.0000	0.0000	0.0000
	TOTALS =		0.0875		0.1175

STAND-BY LOAD = 0.0875 ALARM LOAD = 0.1175 AMPS
STAND-BY TIME = 60 ALARM TIME = 15 / 60 HRS

STAND-BY = 5.2500 ALARM = 0.0294 AMP HRS

TOTAL =	STAND-BY	+	ALARM	
=	5.25	+	0.03	
=			5.28	Ah (AMP HRS)
MULTIPLY BY DERATING FACTOR OF 1.25 =			6.60	Ah (AMP HRS)

MINIMUM BATTERY SIZE = 6.60 AMPERE HOURS

PROVIDE MIN. (2) 12.00 Ah 12VDC BATTERIES AS REQUIRED FOR 24VDC OPERATION

BATTERY SIZING CALCULATION

PROJECT NAME: APTITUD ACADEMY
PANEL LOCATION: RELO
DATE PERFORMED: June 16, 2023

AMP-R

QTY.	DEVICE NAME	STD-BY (AMPS)		ALARM (AMPS)	
1	CONTROL PANEL	0.0510	0.0510	1.8500	1.8500
0	SPEAKER (1/4W)	0.0000	0.0000	0.0035	0.0000
0	SPEAKER (1/2W)	0.0000	0.0000	0.0071	0.0000
0	SPEAKER (1W)	0.0000	0.0000	0.0143	0.0000
1	WP SPEAKER (2W)	0.0000	0.0000	0.0283	0.0283
1	SYNC MODULE	0.0000	0.0000	0.0100	0.0100
		0.0000	0.0000	0.0000	0.0000
		0.0000	0.0000	0.0000	0.0000
		0.0000	0.0000	0.0000	0.0000
	TOTALS =		0.0510		1.8883

STAND-BY LOAD = 0.0510 ALARM LOAD = 1.8883 AMPS
STAND-BY TIME = 60 ALARM TIME = 15 / 60 HRS

STAND-BY = 3.0600 ALARM = 0.4721 AMP HRS

TOTAL =	STAND-BY	+	ALARM	
=	3.06	+	0.47	
=			3.53	Ah (AMP HRS)
MULTIPLY BY DERATING FACTOR OF 1.25 =			4.42	Ah (AMP HRS)

MINIMUM BATTERY SIZE = 4.42 AMPERE HOURS

PROVIDE MIN. (2) 12.00 Ah 12VDC BATTERIES AS REQUIRED FOR 24VDC OPERATION

VOLTAGE DROP CALCULATIONS
APTITUD ACADEMY

DEVICE	UL MAX. CURRENT AMPS	NO	AUDIBLE CIRCUIT A1	NO	AUDIBLE CIRCUIT SPARE	NO	AUDIBLE CIRCUIT SPARE	NO	AUDIBLE CIRCUIT SPARE
SPEAKER 1/4W	0.004		0.000		0.000		0.000		0.000
SPEAKER 1/2W	0.007		0.000		0.000		0.000		0.000
SPEAKER 1W	0.014		0.000		0.000		0.000		0.000
SPEAKER 2W (WEATHERPROOF)	0.028		0.000		0.000		0.000		0.000
			0.000		0.000		0.000		0.000
			0.000		0.000		0.000		0.000
TOTAL CURRENT ON CIRCUIT			0.000 AMPS		0.000 AMPS		0.000 AMPS		0.000 AMPS
TOTAL WIRE LENGTH IN FEET			70		0		0		0
% VOLTAGE DROP			**0.00**		**0.00**		**0.00**		**0.00**
WIRE SIZE			#16		#16		#16		#16
CIRCUIT LOCATION			AMP-A		AMP-A		AMP-A		AMP-A
VOLTS DROPPED			**0.00**		**0.00**		**0.00**		**0.00**

VOLTAGE DROP CALCULATIONS
APTITUD ACADEMY

DEVICE	UL MAX. CURRENT AMPS	NO	AUDIBLE CIRCUIT V1	NO	VISUAL CIRCUIT SPARE	NO	VISUAL CIRCUIT SPARE	NO	VISUAL CIRCUIT SPARE
STROBE (CEILING) 15 CD	0.041		0.000		0.000		0.000		0.000
STROBE (CEILING) 30 CD	0.063		0.000		0.000		0.000		0.000
STROBE (CEILING) 75 CD	0.111	1	0.111		0.000		0.000		0.000
			0.000		0.000		0.000		0.000
			0.000		0.000		0.000		0.000
TOTAL CURRENT ON CIRCUIT			0.111 AMPS		0.000 AMPS		0.000 AMPS		0.000 AMPS
TOTAL WIRE LENGTH IN FEET			45		0		0		0
% VOLTAGE DROP			**0.20**		**0.00**		**0.00**		**0.00**
WIRE SIZE			#12		#12		#12		#12
CIRCUIT LOCATION			VECP		VECP		VECP		VECP
VOLTS DROPPED			**0.04**		**0.00**		**0.00**		**0.00**

BATTERY CALCULATIONS GENERAL NOTE:

1. CONTRACTOR TO PROVIDE BATTERY MANUFACTURER DATE STAMP PER NFPA 72. TYPICAL FOR ALL CONTROL PANELS, POWER SUPPLY PANELS AND AUDIO AMPLIFIER PANELS.

VOLTAGE DROP CALCULATIONS GENERAL NOTES:

1. THE LISTED MANUFACTURE OPERATING VOLTAGE RANGE FOR EQUIPMENT AND DEVICES ARE AS FOLLOWS:

   DEVICES = 16 – 33 VDC (STROBES), 70.7 VDC (SPEAKERS)
   EQUIPMENT = +24VDC FILTERED, REGULATED
   BATTERY = 20.4 VDC END OF USEFUL LIFE PER NFPA 72 HANDBOOK AND UL 864.

2. VOLTAGE DROP OPERATING VOLTAGE FORMULA:

$$\left(\frac{\text{WIRE LENGTH} \times \text{TOTAL CURRENT AMPS} \times 21.6}{\text{CIRC. MILS.}}\right)$$

$$\left(\frac{\text{VOLTS DROPPED} \times 100}{20.4}\right) = \%\ \text{VOLTS DROPPED}$$

$$\text{VOLTS DROPPED} - 20.4 = \text{OPERATING VOLTAGE}$$

RISER DIAGRAM SPECIFIC NOTES:

1. 'Z' INDICATES ZONABLE/ADDRESSABLE CIRCUIT, PROVIDE 2#18 TWISTED PAIR PER CIRCUIT. SEE WIRE LEGEND FOR ADDITIONAL INFORMATION.
2. 'A' INDICATES AUDIBLE SPEAKER CIRCUIT, SEE WIRE LEGEND FOR ADDITIONAL INFORMATION.
3. 'V' INDICATES VISIBLE STROBE CIRCUIT, SEE WIRE LEGEND FOR ADDITIONAL INFORMATION.
4. NUMBER INDICATES CANDELA RATING OF STROBE DEVICE.
5. PROVIDE (2) SEPARATE DEDICATED APPROVED MEANS OF COMMUNICATION/TRANSMISSION PER NFPA 72 FOR FIRE ALARM SYSTEM MONITORING. CONTRACTOR TO SUPPLY UDACT (UNIVERSAL DIGITAL ALARM COMMUNICATOR TRANSMITTER) WHEN NOT SUPPLIED WITH CONTROL PANEL.
6. EXISTING FIRE ALARM ANNUNCIATOR PANEL (FAAP), VERIFY EXACT LOCATION IN FIELD.
7. INDICATES WATTAGE FOR SPEAKER.
8. PROVIDE 3/4"C. WITH 2#12, 1#12 GRD. TO 120V DEDICATED SPARE CIRCUIT WITHIN RELOCABLE PANELBOARD FOR POWER. PROVIDE 20AMP, 1-POLE CIRCUIT BREAKER WITH APPROVED LOCK-ON DEVICE, RED INDICATOR AND IDENTIFIED AS "FIRE ALARM CONTROL CIRCUIT" (NFPA 72, SECTION 10.6.5.2). CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED.
9. FIRE ALARM DIGITAL AUDIO AMPLIFIER (AMP). SEE SYMBOL LIST FOR ADDITIONAL INFORMATION.
10. INDICATES LENGTH OF WIRE IN FEET. SEE WIRING DIAGRAM FOR WIRE TYPES. SEE VOLTAGE DROP CALCULATIONS FOR PERCENT DROPPED AND ADDITIONAL INFORMATION.
11. EXISTING FIRE ALARM VOICE EVACUATION CONTROL PANEL TO REMAIN PROTECTED IN PLACE. MODIFY EXISTING FIRE ALARM PANEL AS REQUIRED TO SERVE THE NEW CONSTRUCTION. PROVIDE ALL NECESSARY RELAYS, MODULES, CABINETS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PER CFC 907.17, NFPA 10.4.1.2-10.4.1.2.2: "RE-ACCEPTANCE TESTING TO BE PERFORMED ON EXISTING PANEL TO VERIFY COMPLIANCE AND OPERATION."

FIRE ALARM GENERAL NOTES:

1. NOTIFICATION DEVICES IN ROOMS CONTAINING (2) OR MORE AUDIBLE AND/OR (2) OR MORE VISUAL DEVICES SHALL BE SYNCHRONIZED PER NFPA 72. THIS SHALL INCLUDE AUDIBLE AND VISUAL DEVICES LOCATED IN ADJACENT/ADJOINING SPACES.
2. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER / ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY AIR SUPPLY DIFFUSER.
4. THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIED SPACE WITHIN THE BUILDING PER CFC SECTION 907.5.2.1.1. THE MINIMUM SOUND PRESSURE LEVEL SHALL BE 60 dBA PER NFPA 72, TABLE A.18.4.3.
5. THE AUDIBLE ALARM SIGNAL SHALL BE THE STANDARD FIRE ALARM EVACUATION SIGNAL, ANSI S34.1 AUDIBLE EMERGENCY EVACUATION SIGNAL, "THREE PULSE TEMPORAL PATTERN", AS DESCRIBED IN NFPA 72. EXCEPTION: THE USE OF THE EXISTING EVACUATION SIGNALING SCHEME SHALL BE PERMITTED WHERE APPROVED BY THE ENFORCING AGENT. (CFC, SECTION 907.5.2.1.3)
6. THE EXISTING CAMPUS FIRE ALARM SYSTEM SHALL BE MAINTAINED AND OPERATIONAL AT ALL TIMES DURING ALTERATIONS AND CONSTRUCTION. WHEN PORTIONS OF THE SYSTEM REQUIRE ALTERATIONS, THE REMAINDER OF THE SYSTEM SHALL BE KEPT IN SERVICE. IF NECESSARY TO SHUT DOWN ENTIRE FIRE ALARM SYSTEM, CONTRACTOR SHALL PROVIDE A FIRE WATCH FOR ALL OCCUPIED AREAS OF WORK WHERE THE REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR THE DURATION OF THE SYSTEM OUTAGE. FIRE WATCH AND SYSTEM/EQUIPMENT IDENTIFICATIONS SHALL BE PER CFC, SECTION 901.7. LOCAL FIRE AUTHORITY SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY SHUT DOWN.
7. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72. THE OPERATION OF ANY AUTOMATIC FIRE DETECTOR, SPRINKLER WATERFLOW DEVICE OR MANUAL FIRE ALARM BOX SHALL AUTOMATICALLY SOUND AN ALERT TONE FOLLOWED BY VOICE INSTRUCTIONS GIVING APPROVED INFORMATION AND DIRECTIONS FOR A GENERAL OR STAGED EVACUATION IN ACCORDANCE WITH THE FIRE SAFETY EVACUATION PLANS REQUIRED BY CFC SECTION 404 PER CBC/CFC SECTION 907.5.2.2.
8. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL HAVE THE CAPABILITY TO BROADCAST LIVE VOICE MESSAGES BY PAGING ZONES ON A SELECTIVE AND ALL-CALL BASIS PER CBC/CFC, SECTION 907.5.2.2.2.
9. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE PROVIDED WITH AN APPROVED EMERGENCY POWER SOURCE PER CBC/CFC, SECTION 907.5.2.2.5.

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FIRE ALARM RISER DIAGRAM

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11870 Pierce Street, Suite 160
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Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
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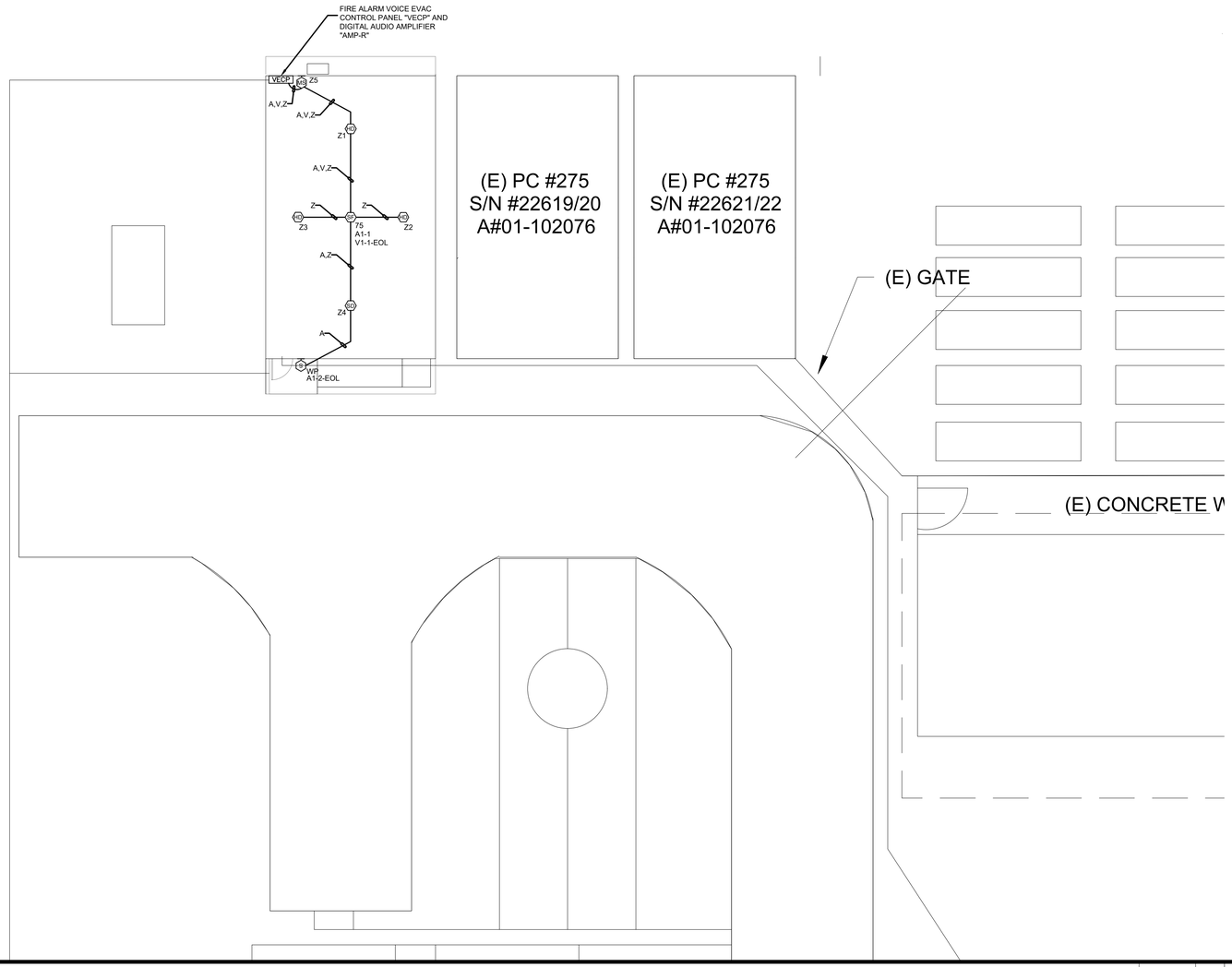

FIRE ALARM PLAN GENERAL NOTES:

1. NOTIFICATION DEVICES IN ROOMS CONTAINING (2) OR MORE AUDIBLE AND/OR (2) OR MORE VISUAL DEVICES SHALL BE SYNCHRONIZED PER NFPA 72. THIS SHALL INCLUDE AUDIBLE AND VISUAL DEVICES LOCATED IN ADJACENT/ADJOINING SPACES.
2. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER / ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY AIR SUPPLY DIFFUSER.
4. THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIED SPACE WITHIN THE BUILDING PER CFC SECTION 907.5.2.1.1. THE MINIMUM SOUND PRESSURE LEVEL SHALL BE 60 dBA PER NFPA 72, TABLE A.18.4.3.
5. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72, SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC.
6. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR PRECISE OUTLET LOCATIONS.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
8. IF SHIELDED WIRE IS USED, THE FOLLOWING MUST BE OBSERVED.
   A. METALLIC CONTINUITY OF THE SHIELD MUST BE MAINTAINED AND INSULATED THROUGHOUT THE ENTIRE LENGTH OF THE CABLE.
   B. THE ENTIRE LENGTH OF THE CABLE MUST HAVE A RESISTANCE GREATER THAN 1 MEGOHM TO EARTH.
9. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE FIRE RATING OF THE STRUCTURE / SURFACE BEING PENETRATED AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
10. A SYSTEM GROUND MUST BE PROVIDED FOR EARTH DETECTION AND LIGHTNING PROTECTION DEVICES. THIS CONNECTION SHALL BE MADE TO AN APPROVED DEDICATED EARTH CONNECTION PER CEC, ARTICLE 250.
11. WIRING IN DUCTS, PLENUMS AND OTHER AIR HANDLING SPACES MUST BE INSTALLED IN ACCORDANCE WITH CEC.
12. UNDERGROUND WIRING MUST BE FREE OF ALL WATER.
13. ALL FIRE ALARM SYSTEM CONDUCTORS SHALL BE RUN IN A DEDICATED FIRE ALARM CONDUIT SYSTEM.
14. WHERE A DETECTOR IS INDICATED TO BE INSTALLED ABOVE THE CEILING AND NO ACCESS TO THE CEILING SPACE EXISTS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS. THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED.
17. FIRE ALARM SYSTEM UTILIZES A COMPLETE COVERAGE, FULLY AUTOMATIC SYSTEM. PROVIDE RELAY MODULE(S) AT FATC/FACP LOCATIONS FOR CONTROL OF HVAC SHUT DOWN, SMOKE/FIRE DAMPER CLOSURE AND DOOR HOLD RELEASES.
18. WHERE NEW DEVICES (AND ASSOCIATED CONDUIT) CANNOT PHYSICALLY BE MOUNTED CONCEALED IN WALLS, RUN IN PANDUIT SURFACE RACEWAY/WIREWAY (AND DEVICES SHALL BE MOUNTED ON SURFACE OUTLET BOXES). REFER TO SPECIFICATIONS. PROVIDE SIZE OF RACEWAY TO ACCOMMODATE THE REQUIRED CONDUCTORS. WHERE CONDUIT IS INDICATED, PROVIDE SURFACE RACEWAY WITH AN EQUAL CROSS SECTION TO THE DIAMETER OF THE CONDUIT INDICATED.
19. DETECTOR SENSITIVITY SHALL BE TESTED USING MANUFACTURER'S CALIBRATED SENSITIVITY INSTRUMENT OR OTHER CALIBRATED TESTING METHOD. (CFC, SECTIONS 907.8.3 AND 907.8.4)
20. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72 SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC. REFER TO NFPA 72 ANNEX D, D.1 THROUGH D.6 FOR DETERMINING THE FUNDAMENTALS OF TEST PROTOCOL AND METHOD OF MEASURING INTELLIGIBILITY.

COMPLETE FIRE ALARM SUBMITTAL
AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM

VOICE EVACUATION SPEAKER NOTE:
- ALL INTERIOR SPEAKERS SHALL BE 70 VRMS TAPPED AT 1 WATT, U.O.N.
- ALL EXTERIOR SPEAKERS SHALL BE 70 VRMS TAPPED AT 2 WATTS, U.O.N.

FIRE ALARM PLAN 1/8" = 1'-0" 1

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FA1.1

FIRE ALARM PLAN

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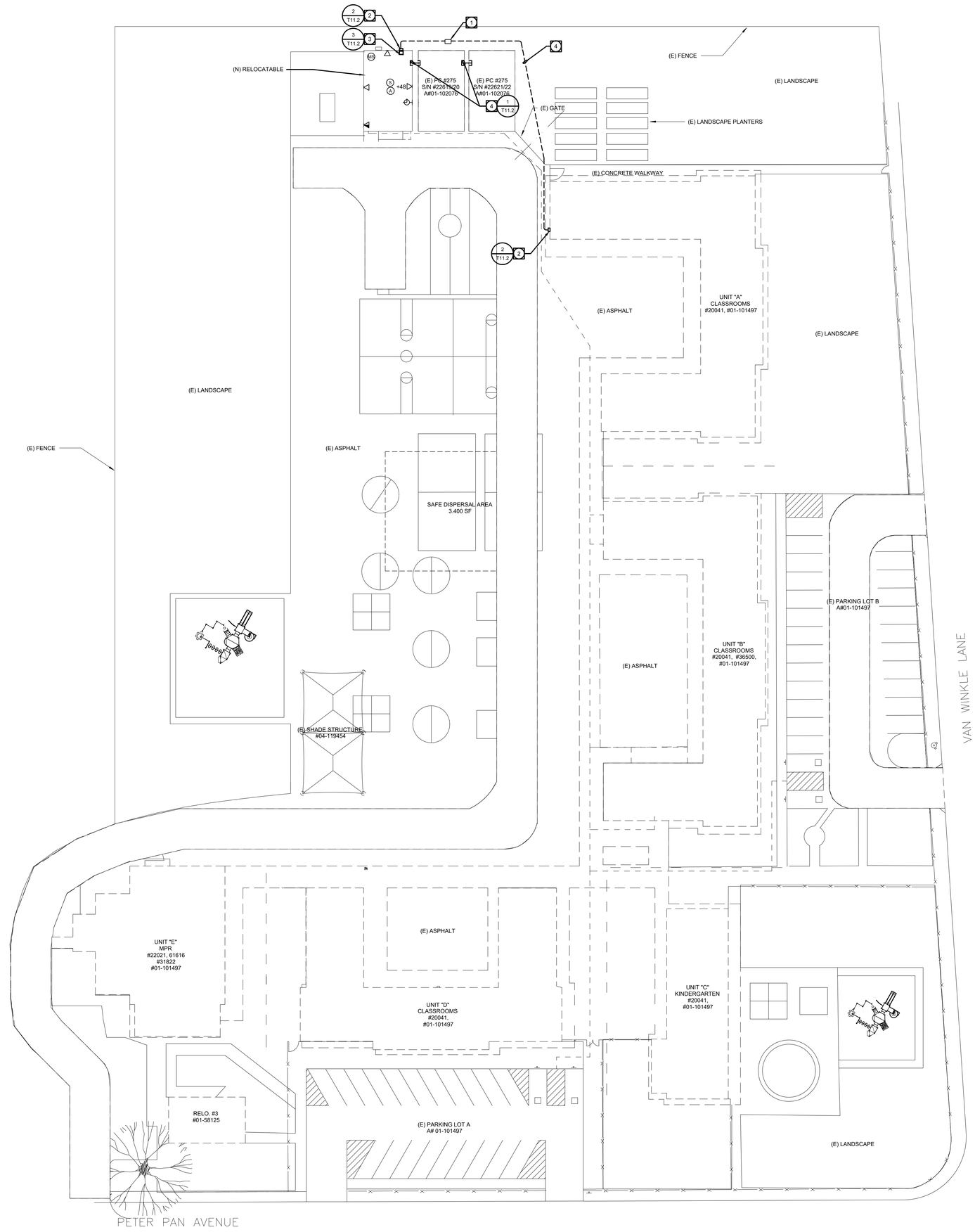

PLAN NOTES:

1. PROVIDE 24" X 36" X 36" PULLBOX WITH TRAFFIC RATED, BOLT-DOWN COVER, ENGRAVED "SIGNAL".
2. 18" WIDE X 36" TALL X 6" DEEP PULL BOX WITH TAMPER PROOF COVER MOUNTED VERTICALLY ON BUILDING WALL. RUN CONDUIT UP INTO BOX AND OUT NEAR TOP OF BOX THROUGH WALL ABOVE CEILING LEVEL.
3. IDF WALL MOUNTED CABINET. VERIFY LOCATION.
4. (2) 2" C.O.

SITE PLAN GENERAL NOTES:

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
2. CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
4. MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N.
5. ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
6. ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
7. ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
8. SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

ELECTRICAL SITE PLAN | 3/64" = 1'-0" | 1

OWNER: ALUM ROCK SCHOOL DISTRICT

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RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWATZ
No. E15610
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TECHNOLOGY SITE PLAN

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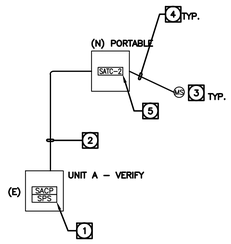
SECURITY ALARM SYSTEM SPECIFIC NOTES:

1. EXISTING SECURITY ALARM SYSTEM CONTROL PANEL.
2. PROVIDE AND INSTALL (1) FOUR CONDUCTOR #22 COMBUS CABLE–WEST PENN AQC 240 OR EQUAL TO EACH IDF LOCATION. SEE SITE PLAN FOR PATHWAYS AND MORE INFORMATION.
3. MOTION SENSOR. QUANTITY AND LOCATIONS PER PLAN DRAWINGS.
4. PROVIDE AND INSTALL (1) FOUR CONDUCTOR #22 CABLE–WEST PENN 240 OR EQUAL. SEE SPECIFICATION FOR MORE INFORMATION.
5. SECURITY ALARM TERMINAL CABINET COMPLETE WITH ALL TERMINAL STRIPS, ZONE EXPANDERS, POWER SUPPLIES, BATTERIES, AND ALL OTHER COMPONENTS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

SECURITY ALARM SYSTEM GENERAL NOTES:

1. PROVIDE ALL COMPONENTS AT HEADEND AS REQUIRED TO EXPAND EXISTING SYSTEM TO ACCOMMODATE ALL NEW DEVICES ON THIS PROJECT.
2. PROVIDE COMPLETE WITH ALL COPPER CABLES, DEVICES, EQUIPMENT, TERMINATIONS, TESTING, AND LABOR, PER THE SPECIFICATIONS.
3. TERMINATE ALL CABLING AS SPECIFIED BY MANUFACTURER, IN THEIR RESPECTIVE TERMINAL CABINETS.
4. ALL CABLING SHALL BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED, PER CALIFORNIA ELECTRICAL CODE AND TIA–568–C.
5. PROVIDE ALL REQUIRED CONDUIT, BOXES, BUSHINGS, FITTINGS, SUPPORTS, MOUNTS, FASTENERS, WEATHERPROOFING, FIREPROOFING, ETC. AS REQUIRED.
6. REFERENCE DISTRICT SPECIFICATIONS AND STANDARDS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
7. DRAWINGS AND LAYOUTS ARE PRIMARILY DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR FINAL FOOTAGES AND EXACT LOCATIONS.



SECURITY ALARM SYSTEM BLOCK DIAGRAM

SCALE: NTS

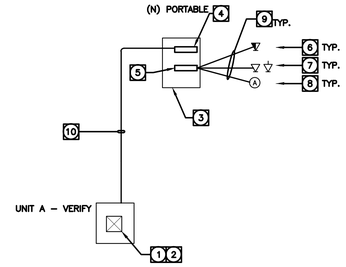
2

LAN AND WIRELESS LAN SYSTEMS DIAGRAM KEY NOTES:

1. EXISTING MDF CABINET LOCATED IN BUILDING UNIT–A
2. PROVIDE FIBER PATCH PANELS, PATCH CORDS AND ALL ACCESSORIES AS REQUIRED TO TERMINATE NEW FIBER OPTIC BACKBONES.
3. IDF CABINET. PROVIDE PATCH PANELS, PATCH CORDS, WIRE MANAGERS AND ACCESSORIES AS REQUIRED TO ACCOMMODATE ALL DATA/VOIP DROPS ON THIS PROJECT.
4. RACK MOUNTED FIBER OPTIC PATCH PANEL. SEE CABINET ELEVATION FOR MORE INFORMATION.
5. RACK MOUNTED CATEGORY–6 PATCH PANEL. SEE CABINET ELEVATION FOR MORE INFORMATION.
6. TEACHER DESK DATA/VOICE OUTLET. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
7. DATA OUTLET. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
8. OFCI WIRELESS ACCESS POINT DEVICE. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS FOR MORE INFORMATION. TERMINATE CAT–6 CABLES ON CAT–6 PATCH PANELS.
9. CATEGORY–6 4–PAIR UTP CABLE PER SPECIFICATIONS. QUANTITY OF CABLES TO EACH DEVICE PER FACEPLATE DETAILS.
10. 6–STRAND SINGLE MODE FIBER PER SPECIFICATIONS.
11. NEATLY COIL AND LABEL ALL CABLES. PROVIDE SUFFICIENT CABLE SLACK FOR TERMINATION IN FUTURE IDF RACK. CONTRACTOR TO VERIFY FINAL SLACK LENGTH AND FUTURE RACK LOCATION IN FIELD WITH OWNER.
12. PROVIDE CAT–6 CABLING TO EXISTING DEVICES IN BUILDING F. CONTRACTOR TO VERIFY QUANTITY AND LOCATIONS IN FIELD. TERMINATE CABLES AT DEVICE OUTLETS. PROVIDE SLACK COIL AT OTHER END.
13. LOCATION OF FUTURE IDF. TO BE RELOCATED TO THIS LOCATION IN JULY.

LAN AND WIRELESS LAN SYSTEMS GENERAL NOTES:

1. PROVIDE COMPLETE WITH ALL CABLES, DEVICES, MATERIAL, TERMINATIONS, TESTING, AND LABOR, PER THE SPECIFICATIONS.
2. TERMINATE ALL CABLING AS SPECIFIED BY MANUFACTURER, IN THEIR RESPECTIVE TERMINAL CABINETS.
3. ALL CABLING SHALL BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED, PER CALIFORNIA ELECTRICAL CODE AND TIA–568–C.
4. PROVIDE ALL REQUIRED CONDUIT, BOXES, BUSHINGS, FITTINGS, SUPPORTS, MOUNTS, FASTENERS, WEATHERPROOFING, FIREPROOFING, ETC. AS REQUIRED.
5. REFERENCE DISTRICT SPECIFICATIONS AND STANDARDS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



LOCAL AREA NETWORK (LAN) AND WIRELESS LAN SYSTEM BLOCK DIAGRAM

SCALE: NTS

1

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. GWATZ
No. E15610
STATE OF CALIFORNIA

REVISIONS:

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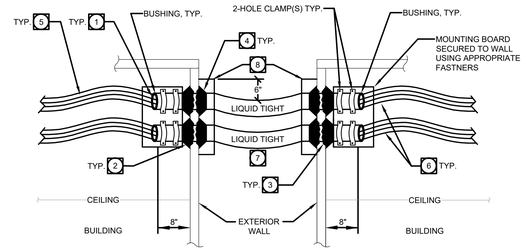
PROJECT NO:	2022-40191
DATE ISSUED:	2023.01.17
SCALE:	AS NOTED

T11.1

LV BLOCK DIAGRAMS

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 www.tk1sc.com

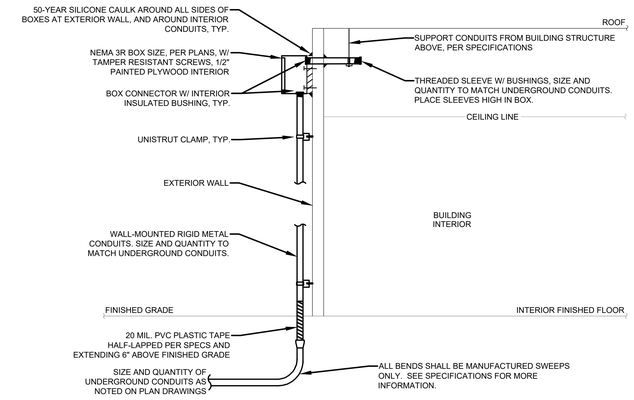
Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000



1. FIRESTOP SLEEVES WITH STI'S SPEC SEAL PUTTY (#SSP100) OR EQUAL, IN AND AROUND CABLES AT BOTH ENDS PER MANUFACTURER'S DIRECTIONS.
2. 1/2" BEAD 30-YEAR SILICONE CAULK (CLEAR) INTERIOR WALL TYPICAL.
3. SILICONE CAULK PUSHED INTO BOTH WALL VOIDS FOR A WEATHERTIGHT SEAL.
4. 1/2" BEAD 50-YEAR SILICONE CAULK (CLEAR) EXTERIOR WALL TYPICAL.
5. CABLES TO BE SUPPORTED WITHIN 24" OF BUSHING WITH APPROVED CAT-6 SUPPORT EACH SIDE.
6. MAINTAIN MINIMUM 2" BEND RADIUS FOR CABLES,
7. CONTRACTOR SHALL INSTALL LIQUID TIGHT SIDE BY SIDE W/ MINIMUM 2" SEPARATION. ENVIRONMENT WILL DICTATE BEST APPROACH. CONFIRM WITH AHJ PRIOR TO INSTALLATION. FLEXIBLE CONDUIT TO ALLOW 4 INCHES OF MOVEMENT IN ANY HORIZONTAL DIRECTION.
8. WEATHERPROOF JUNCTION BOX, SIZED AS REQUIRED.

TYPICAL LIQUID TIGHT SLEEVE DETAIL 1

SCALE: N.T.S.

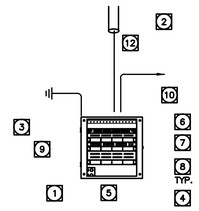


NOTES:

1. ALL BOXES/PLYWOOD TO BE SECURED TO BUILDING STRUCTURE USING MIN. 3/8" X 2" WALL ANCHORS/LAG BOLTS.
2. 50-YEAR SILICONE CAULK AROUND ALL PENETRATIONS, BOXES AND ALL THREADS AS REQUIRED.
3. SEAL ALL UNDERGROUND CONDUITS PER COMMUNICATION PATHWAY NOTES, GENERAL PROJECT NOTES, AND PROJECT SPECIFICATIONS.
4. SEE SPECIFICATIONS FOR MORE INFORMATION.

TYPICAL EXTERIOR JUNCTION BOX DETAIL 2

SCALE: N.T.S.



NOTES:

1. E.C. TO MOUNT 20 AMP DEDICATED CIRCUIT QUAD OUTLET ON INSIDE BACK OF CABINET. COORDINATE LOCATION WITH E.C.
2. CONDUIT TO BUILDING MPOE BY E.C. INSTALL 12-STRAND FIBER TO MPOE PER SPECIFICATION. PROVIDE NEW PATCH PANEL AS REQUIRED .
3. BOND RACK FRAME TO TELECOMMUNICATIONS BONDING BUSBAR WITH #6 GREEN INSULATED COPPER CONDUCTOR AND 2-HOLE COMPRESSION LUGS.
4. INSTALL 24" X 24" WALL MOUNTED CABINET PER SPECIFICATION WITH DOOR LOCKS, FAN AND FILTER KIT, AND VENTED DOOR. MOUNT CABINET TO THE E.C.-INSTALLED PLYWOOD.
5. PATCH AND CROSS-CONNECT ALL EQUIPMENT PER DISTRICT INSTRUCTIONS.
6. INSTALL FIBER OPTIC ENCLOSURE PER SPECIFICATION. TERMINATE FIBER FROM MDF AS SPECIFIED.
7. INSTALL CATEGORY-6 PATCH PANEL AS REQUIRED PER SPECIFICATION. PROVIDE QUANTITY OF PATCH PANELS AND JACKS NECESSARY TO TERMINATE ALL DATA CABLES.
8. 1U HORIZONTAL WIRE MANAGEMENT. INSTALL (1) WIRE MANAGER ABOVE AND BELOW EACH PATCH PANEL AND (1) BELOW EACH OWNER SUPPLIED DATA SWITCH.
9. DISTRICT PROVIDED CONTRACTOR INSTALLED DATA NETWORK EQUIPMENT.
10. HORIZONTAL CABLING TO LOCATIONS AND QUANTITIES AS INDICATED ON FLOOR PLANS. ROUTE, BUNDLE AND SUPPORT CABLES AT 4 FT. INTERVALS.

24" HIGH WALL MOUNTED IDF CABINET 3

SCALE: NTS

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWATZ
No. E15610
STATE OF CALIFORNIA

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PROJECT NO: 2022-40191

DATE ISSUED: 2023.01.17

SCALE: AS NOTED

T11.2

LV DETAILS

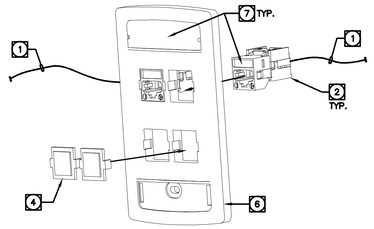
tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 www.tk1sc.com

Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

▽ ▽

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



DATA ONLY DEVICE | 1

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

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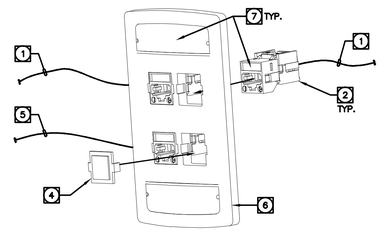
THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.

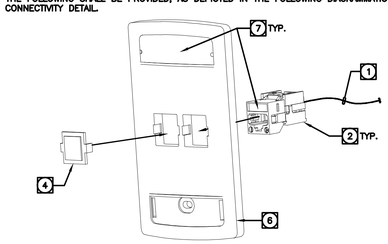


VOICE/DATA COMBINATION DEVICE | 2

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

+48"
▽

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.

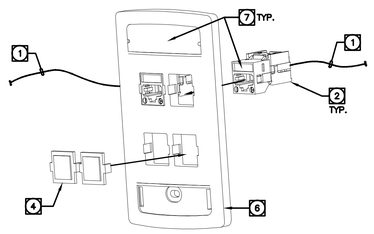


TV / CLOCK DATA DEVICE | 3

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

Ⓐ

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



WIRELESS ACCESS POINT DEVICE | 4

SPECIFIC NOTES

1. PROVIDE (1) CAT 6, 4 PAIR UTP CABLE(S) TO RESPECTIVE IDF. COLOR OF CABLE(S) SHALL BE BLUE. TERMINATE STATION END(S) IN STATION CONNECTOR(S) PER SPECIFICATIONS. TERMINATE RACK END(S) ON DATA PATCH PANEL(S) PER SPECIFICATIONS.
2. PROVIDE STATION CONNECTOR PER SPECIFICATIONS.
3. INSTALL DEDICATED SUSPENDED CEILING WIRE/HANGAR OR SUPPORT ROD/ROD HANGAR DIRECTLY TO STRUCTURAL CEILING ABOVE TO SUPPORT WAP 2-PORT HOUSING.
4. BLANK INSERT. ALL UNUSED OPENINGS SHALL BE COVERED WITH A BLANK INSERT MATCHING THE COLOR OF THE FACEPLATE.
5. PROVIDE (1) CAT 6, 4 PAIR UTP CABLE(S) TO RESPECTIVE IDF. COLOR OF CABLE(S) SHALL BE BLUE. TERMINATE STATION END(S) IN VOIP STATION CONNECTOR(S) PER SPECIFICATIONS. TERMINATE RACK END(S) ON VOICE PATCH PANEL(S) PER SPECIFICATIONS.
6. PROVIDE COVERPLATE PER SPECIFICATIONS. COVERPLATE MATERIAL AND FINISH SHALL MATCH ADJACENT/NEARBY POWER COVERPLATES. PROVIDE FLOOR BOX, POWER POLE & MODULAR FURNITURE DEVICE BRACKETS/CUSTOM ADAPTERS AS REQUIRED FOR A COMPLETE INSTALLATION. INCLUDE ALL COSTS IN BASE BID.
7. PROVIDE COVERPLATE LABELING PER SPECIFICATIONS. SEE SPECIFICATIONS FOR ALL OTHER LABELING REQUIREMENTS.

GENERAL NOTES

1. INSTALLATION OF EQUIPMENT AND WIRING MUST MEET ALL APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO NEC, NFPA, ANSI/EIA/TIA AND ISO 9001.
2. EQUIPMENT AND MATERIALS MUST COMPLY WITH UL LISTING AND EACH ITEM STAMPED OR LABELED AS SUCH.
3. COMPLIANCE WITH ANSI/TIA/EIA 569-B. COMMERCIAL BUILDING STANDARDS FOR TELECOMMUNICATIONS PATHWAYS AND SPACES.
4. COMPLIANCE WITH ANSI/TIA/EIA 568-B. COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARDS.
5. DRAWINGS AND LAYOUTS ARE PRIMARILY DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR FINAL FOOTAGES AND EXACT LOCATIONS.
6. CONTRACTOR SHALL NOTE IN WRITING. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS. AS SUCH DISCREPANCIES ARISE, THE MORE STRINGENT SHALL TAKE PRECEDENCE.
7. COMMUNICATIONS CABLES (ANY TYPE) ROUTED THRU FURNITURE SYSTEMS SHALL BE ROUTED VIA DEDICATED COMMUNICATIONS PATHWAY, WHEN AVAILABLE. WHEN DEDICATED COMMUNICATIONS PATHWAY IS UNAVAILABLE, THE ABOVE-MENTIONED CABLES SHALL BE ROUTED IN A BARRIERED SYSTEMS FURNITURE RACEWAY SEPARATE FROM POWER CONDUCTORS PER EIA/TIA STANDARDS AND NEC REQUIREMENTS.
8. CONTRACTOR SHALL VERIFY SYSTEMS FURNITURE TYPE AND CABLE ROUTING/ FACEPLATE LOCATION WITHIN SYSTEMS FURNITURE PRIOR TO BID. INCLUDE ALL COSTS IN BASE BID.
9. REFERENCE ALL ELECTRICAL DRAWINGS (SHELL & T.I.).
10. REFERENCE ALL STRUCTURED CABLING SYSTEM DRAWINGS (SCS-SHEETS).
11. REFERENCE ALL ARCHITECTURAL DRAWINGS (SHELL & T.I.).
12. REFERENCE ALL ELECTRICAL AND STRUCTURED CABLING SYSTEM SPECIFICATIONS (ALL 16600 NUMBERED SPECIFICATIONS).
13. CONTRACTOR SHALL UTILIZE CONDUIT(S)/SLEEVE(S) SEQUENTIALLY, MAXIMIZING THE CABLE FILL IN EACH BEFORE UTILIZING THE NEXT CONDUIT(S)/SLEEVE(S). MAXIMUM ALLOWABLE CONDUIT FILL SHALL BE BASED ON NEC TABLES FOR CONDUIT FILL.

OWNER: ALUM ROCK SCHOOL DISTRICT

PROJECT NAME: APTITUD ACADEMY RELOCATABLE CLASSROOMS

CLIENT ADDRESS: 2475 VAN WINKLE LANE, SAN JOSE, CA 95116

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWAYZE No. E15610 ELECTRICAL STATE OF CALIFORNIA

REVISIONS:

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PROJECT NO: 2022-40191

DATE ISSUED: 2023.01.17

SCALE: AS NOTED

T11.3

LV DETAILS

tk1sc COLLABORATIVE
11870 Pierce Street, Suite 160
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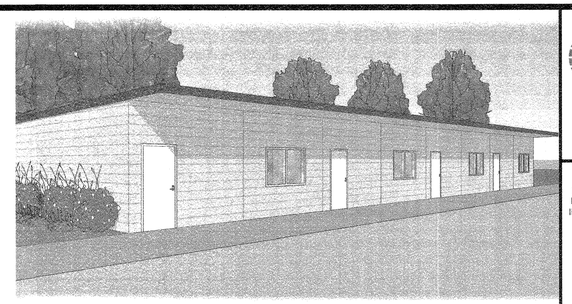
951.299.4160 www.tk1sc.com
Project Leader: Nikolas Bruno
Electrical Lead: Chris Ta
tk1sc Job #: B2305014.000

AMS® American Modular Systems

STOCKPILE (100) 24' x 40' BUILDINGS

SERIAL NUMBERS: 20-700-1071 THROUGH 20-700-1170



AMS® American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

MODULAR MANUFACTURER PROPRIETARY STATEMENT

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PRE-CHECKED SET NAME

24'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

SHEET TITLE

TITLE SHEET

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — RANDOLF PATRICK CAVANAGH — No. C-29831 — Ren. 3-31-21 — STATE OF CALIFORNIA

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
DATE SEP 19 2019
FLS: Greg Cobabe
ACS: Alex Elesgas
SS: Samantha Kissling

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS
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4

DRAWN BY: AH
SCALE: AS NOTED
DATE: 09/11/2019

SHEET NUMBER

TS

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2017

- 2016 CALIFORNIA ADMINISTRATIVE CODE (CAC) – PART 1, TITLE 24, CCR)
- 2016 CALIFORNIA BUILDING CODE (CBC), VOLUME 1 & 2 – (PART 2, TITLE 24 CCR) BASED ON THE 2015 INTERNATIONAL BUILDING CODE
- 2016 CALIFORNIA ELECTRICAL CODE (CEC) – (PART 3, TITLE 24, CCR) BASED ON THE 2014 NATIONAL ELECTRIC CODE
- 2016 CALIFORNIA MECHANICAL CODE (CMC) – (PART 4, TITLE 24, CCR) BASED ON THE 2015 UNIFORM MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE (CPC) – (PART 5, TITLE 24, CCR) BASED ON THE 2015 UNIFORM PLUMBING CODE
- 2016 CALIFORNIA ENERGY CODE (CEC) – (PART 6, TITLE 24, CCR)
- 2016 CALIFORNIA FIRE CODE (CFC) – (PART 9, TITLE 24, CCR) BASED ON THE 2015 INTERNATIONAL FIRE CODE
- 2016 CALIFORNIA GREEN BUILDING CODE (CGC) – (PART 11, TITLE 24, CCR)
- 2016 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)

PARTIAL LIST OF APPLICABLE STANDARDS

• NFPA 13	AUTOMATIC SPRINKLER SYSTEM	2016 EDITION
• NFPA 14	STANDPIPE AND HOSE SYSTEMS	2013 EDITION
• NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
• NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
• NFPA 20	STATIONARY PUMPS	2016 EDITION
• NFPA 24	PRIVATE FIRE MAINS	2016 EDITION
• NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE (CALIFORNIA AMENDED) (NOTE: SEE UL, STANDARD 1971 FOR "VISUAL DEVICES")	2016 EDITION
• NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
• NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION

GENERAL NOTES

1. PC BUILDING CLASSIFIED AS OCCUPANCY "A" WITH OCCUPANT LOAD 100 OR MORE CANNOT BE REVIEWED OVER THE COUNTER (OTC).
2. PC BUILDING APPROVED ONLY FOR OCCUPANCY "E" OR "B", OR "A" CATEGORY I & II, WITH AN OCCUPANT LOAD LESS THAN 250.
3. PC BUILDING EXITING IS BASED ON THE USE OR OCCUPANCY AND WILL BE REVIEWED AS SITE SPECIFIC.
4. PC BUILDINGS LOCATED IN FIRE HAZARD SEVERITY ZONES PER WILDLAND URBAN INTERFACE FIRE AREAS (WUI) SHALL CONFORM TO CBC CHAPTER 7A. PC IS NOT APPROVED FOR WUI.
5. SITE USE SPECIFIC REQUIREMENT FOR AUTOMATIC SPRINKLER SYSTEM MIGHT BE REQUIRED. AUTOMATIC FIRE SPRINKLER REQUIREMENTS ARE NOT INCLUDED IN THIS PC APPROVAL. (NOTE: SEE BUILDING DATA THIS SHEET FOR FIRE SPRINKLER SYSTEM WEIGHT INCLUDED IN BUILDING DESIGN)
6. FIRE SERVICE UNDERGROUND SHALL BE REVIEWED AS A SITE SPECIFIC APPLICATION. WATER SUPPLY SHALL BE DESIGNED TO MEET THE PC SPRINKLER DEMAND REQUIREMENTS.
7. PROVIDE A SITE SPECIFIC FIRE FLOW LETTER OF CERTIFICATION FROM AN APPROVED WATER PURVEYOR OR LOCAL FIRE AUTHORITY.
8. THIS PC PLAN SHALL NOT BE USED TO HOUSE "ROOMS OR AREAS WITH SPECIAL HAZARDS" SUCH AS LABORATORIES, VOCATIONAL SHOPS AND OTHER SUCH AREAS NOT CLASSIFIED AS GROUP H, LOCATED IN GROUP E OCCUPANCIES.
9. A SEPARATE DSA APPLICATION NUMBER IS REQUIRED FOR DESIGN & INSTALLATION OF SOLAR PANEL SYSTEMS, ITS ANCHORAGE & SUPPORT STRUCTURE. (NOTE: SOLAR PANEL SYSTEM WEIGHT NOT INCLUDED IN BUILDING DESIGN)
   SOLAR SYSTEM SUBMITTALS SHALL NOT BE SUBMITTED AS AN OVER-THE-COUNTER SUBMITTAL.
10. IF THE STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF THE SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.
11. THIS PC BUILDING IS NOT DESIGNED FOR FLOOD HAZARD AREAS.
12. THE PLACEMENT OF THE PC BUILDING(S) ON OR ADJACENT TO SLOPES SHALL COMPLY WITH THE 'FOUNDATION CLEARANCES FROM SLOPES' SPECIFICATIONS FOUND ON SHEET N2.0 OF THESE DRAWINGS.
13. PC BUILDING SHALL NOT BE PLACED OR BE RELOCATED IN AREAS HAVING A NOISE CONTOUR GREATER THAN OR EQUAL TO 65 CNEL, OR IN AREAS EXPOSED TO A NOISE LEVEL OF 65 dB L_{eq}-1-hr DURING ANY HOUR OF OPERATION WHEN NOISE CONTOURS ARE NOT READILY AVAILABLE, AS SPECIFIED IN CALGREEN CODE, SECTION 5.507.4.1 & 5.507.4.1.1.
14. THIS PC BUILDING IS NOT DESIGNED FOR SNOW LOADS.

SITE-SPECIFIC OPTIONS

FLOOR DECK	☒ 1⅛" PLYWOOD SHTG.		☐ NH-32 DECK 3"x18 GA.		☐ BH-36 DECK 1½"x18 GA.				
			☐ 3WH DECK 3"x18 GA.		☐ 3WxH DECK 3"x18 GA.				
WALL STUDS	☒ WOOD		☐ LIGHT-GAUGE STEEL						
EXTERIOR WALL FINISH	☒ DURATEMP 303		☐ SYNTHETIC STUCCO		☐ LAP SIDING		☐ STUCCO		
HVAC	☐ INTERIOR FLOOR MOUNTED		☒ EXTERIOR WALL MOUNTED		☐ SPLIT SYSTEM		☐ ROOF MOUNTED		
ROOFING	☒ 3" x 20 GA. STANDING SEAM		☐ 3" x 26 GA. STANDING SEAM OVER SHEATHING		☐ SINGLE-PLY		☐ BUILT-UP ROOFING		
ROOF PITCH	☒ SINGLE PITCH		☐ DUAL PITCH						
ROOF DIAPHRAGM	☐ ¾" PLYWOOD		☒ STEEL X-BRACING						
FRONT OVERHANG	☐ NO	☒ YES – LENGTH: 5'-0"		ENCLOSED	☐ YES	☒ NO			
REAR OVERHANG	☐ NO	☒ YES – LENGTH: 2'-0"		ENCLOSED	☐ YES	☒ NO			
SOLATUBE ON ROOF	☒ NO	☐ YES							
FIRE SPRINKLERS	☒ NO	☐ YES	(SEE GENERAL NOTES #5 – #7 THIS SHEET)						
PARAPETS	☒ NO	☐ YES	(SEE SHEET S4.3)						
RAMP(S)	☐ NO	☒ YES	(SEE SHEET S10.0)						
LIQUEFIABLE SOILS	☒ NO	☐ YES	(SEE GENERAL NOTE #10 THIS SHEET)						
GEOHAZARD REPORT	☒ NO	☐ YES							
IF YES	GEOTECHNICAL FIRM:								
	REPORT #:			REPORT DATE:					
GEOTECHNICAL REPORT	☒ NO	☐ YES		* REQUIRED IF BUILDING AREA > 4,000 SF					
IF YES	GEOTECHNICAL FIRM:								
	REPORT #:			REPORT DATE:					
	DEEPER FOOTINGS REQUIRED?	☒ NO		☐ YES – REQUIRED DEPTH:					
	WIDER FOOTINGS REQUIRED?	☒ NO		☐ YES – REQUIRED DEPTH:					

BUILDING DATA

OCCUPANCY	E ~~OR B (CLASSROOM USE FOR COLLEGE), OR A (CATEGORY I/II)~~
TYPE OF CONSTRUCTION	V-B (CATEGORY I & II)
WIND LOAD ASCE 7-10 SECTION 28.6.3 SIMPLIFIED PROCEDURE	V = 110 MPH ULT. WIND SPEED; EXPOSURE = C; INTERNAL PRESSURE COEFF., $GC_{P,I}$ = ±0.18; RISK CATEGORY II; K_{ZT} = 1.00
FLOOR LIVE LOAD (PSF)	☐ 50 ☒ 50+15 ☐ 100 ☐ 150 (NON-STORAGE)
ROOF LIVE LOAD (MAX PSF)	20 (REDUCIBLE)
SNOW LOAD	NOT CONSIDERED (SEE GENERAL NOTE #14 THIS SHEET)
RAMP LIVE LOAD (MAX. PSF)	100
DESIGN DEAD LOADS (MAX PSF)	14.8 RF – 10.0 WD FLR – 42.0 CONC. FLR – 13.7 EXT WALLS
ROOF SOLAR PANELS	NOT CONSIDERED (SEE GENERAL NOTE #9 THIS SHEET)
FIRE SPRINKLER SYSTEM DESIGN WT.	1.5 PSF AT ROOF (SEE GENERAL NOTES #5 – #7 THIS SHEET)
ALLOWABLE SOIL PRESSURE (PSF)	☒ 1,500 FOR CONCRETE ☒ 1,000 FOR WOOD
FLOOD HAZARD AREA	NO (SEE GENERAL NOTE #11 THIS SHEET)
BUILDING AREA (SQ. FT.)	960 MIN. THRU 4800 MAX.
CLIMATE ZONE	1-16
MODULES	MOMENT-RESISTANT FRAME (SINGLE STORY)
SYSTEM	12'x40' MODULES (2 MODULES MINIMUM)
FOUNDATION TYPE	☒ CONCRETE ☒ WOOD

SITE SPECIFIC SEISMIC CRITERIA:

SITE SPECIFIC S_S = 2.429 SITE CLASS = D

SITE SPECIFIC S_1 = 1.5

(NOTE: SITE SHALL BE SITE CLASS "D" IF NO SOILS REPORT UNLESS THERE IS EVIDENCE OF CLASS "E" OR "F" SOILS PRESENT.)

SEISMIC: RISK CATEGORY II

I_e = 1.0 T = 0.240_{S} R = 3.5 (OMF) F_V = 1.5 Max. FOR SITE CLASS A-D; = 2.4 Max. FOR SITE CLASS E

Ω_o = 3.0 C_d = 3.0 SEISMIC DESIGN CATEGORY: D ($S_1 \leq 0.75$); E ($0.75 < S_1 < 1.5$)

ρ = 1.0

LATERAL FORCE RESISTING SYSTEM: LIGHT MODULAR STEEL MOMENT FRAMES PER 2212A
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

SITE CLASS A-D:

☒ LOW SEISMIC
S_S =2.429 MAX (SITE) 1.700 (DESIGN)* F_a = 1.0 S_{DS} = 1.62 (SITE) 1.13 (DESIGN)* C_S =0.324 W (DESIGN)*

☐ HIGH SEISMIC
S_S =3.257 MAX (SITE) 2.280 (DESIGN)* F_a = 1.0 S_{DS} = 2.17 (SITE) 1.52 (DESIGN)* C_S =0.434 W (DESIGN)*

SITE CLASS E:

☐ LOW SEISMIC
S_S =1.889 MAX (SITE) 1.889 (DESIGN)* F_a = 0.9 S_{DS} = 1.13 (SITE) 1.13 (DESIGN)* C_S =0.324 W (DESIGN)*

☐ HIGH SEISMIC
S_S =2.533 MAX (SITE) 2.533 (DESIGN)* F_a = 0.9 S_{DS} = 1.52 (SITE) 1.52 (DESIGN)* C_S =0.434 W (DESIGN)*

*PER CBC 1616A.1.12 (MODIFICATION TO ASCE 7-10,12.8.1.3):
THE VALUE OF C_S AND C_V ARE PERMITTED TO BE CALCULATED USING A VALUE OF S_{DS} EQUAL TO 1.0, BUT NOT LESS THAN 70% OF S_{DS} AS DEFINED IN SECTION 11.4.4, PROVIDED THAT ALL OF THE FOLLOWING CRITERIA ARE MET:
1. STRUCTURE DOES NOT HAVE IRREGULARITIES;
2. STRUCTURE DOES NOT EXCEED FIVE (5) STORIES ABOVE THE BASE;
3. STRUCTURE HAS A FUNDAMENTAL PERIOD, T, THAT DOES NOT EXCEED 0.5 SECONDS;
4. STRUCTURE MEETS REQUIREMENTS FOR REDUNDANCY FACTOR, ρ, TO BE TAKEN AS 1.0;
5. SITE SOIL PROPERTIES ARE NOT CLASSIFIED AS SITE CLASS 'E' OR 'F';
6. STRUCTURE IS CLASSIFIED AS RISK CATEGORY II.

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OPTIONS	SHEET NUMBER	SHEET TITLE
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S2.1	WOOD FOUNDATION PLAN – 50 PSF LIVE LOAD + 15 PSF PARTITION LOAD – PLYWOOD FLOOR
S2.2	WOOD FOUNDATION PLAN – 100 PSF LIVE LOAD – PLYWOOD FLOOR
S2.3	WOOD FOUNDATION PLAN – 150 PSF LIVE LOAD – PLYWOOD FLOOR
S3.0	FLOOR FRAMING PLAN & DETAILS FOR PLYWOOD FLOOR
S3.2	FLOOR FRAMING PLAN & DETAILS FOR CONCRETE FLOOR w/NH-32 DECK OPTION (100 PSF MAX FLOOR L.L.)
S3.3	FLOOR FRAMING PLAN & DETAILS FOR CONCRETE FLOOR w/3WH-DECK OR 3WxH-DECK OPTION (150 PSF MAX FLOOR L.L.)
S5.0	MOMENT FRAME ELEVATIONS & DETAILS
S5.1	MOMENT FRAME CONNECTION DETAILS

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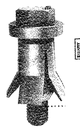
Additional Information for PC designs only, not to be added to DSA-103			
	STOCKPILE	CONSTRUCTION OF PERMANENT MODULAR OR RELOCATABLE BUILDING	RELOCATION OF CERTIFIED RELOCATABLE BUILDING
INSPECTOR CLASS (minimum requirements)	RBIP or Class 1	In Plant: RBIP or Class 1 Site: Class 4 for Single Story Site: Class 2 for Two-Story	Class 4 for Single Story Class 2 for Two-Story
Selection of the Project Inspector and Testing Agency	by the Owner and approved by DSA, A/E of Record and Structural Engineer	by the School District and approved by DSA, A/E responsible for in-plant construction observation.	by the Owner and approved by DSA, A/E of Record and Structural Engineer
Cost of the Project Inspector (Title 24, Part 1, Section 4-333(b)) and Testing/Special Agency (CAC, Section 4-335(b))	by the Owner	by the School District	

HOLLO-BOLT MANUFACTURER'S INSPECTION PROCEDURES



ICC ES ESR-3239 Listed

LA DBS

PERIODIC SPECIAL INSPECTION REQUIREMENTS

TO VERIFY CORRECT INSTALLATION INCLUDING USE IN SEISMIC OR WIND LOADING APPLICATIONS IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE SECTIONS 1705A.1, 1705A.2, AND 1704A.3 PLEASE REFER TO THE FOLLOWING INSTRUCTIONS.

A. INSPECTION PRIOR TO INSTALLATION
1. ENSURE THAT THERE ARE NO GAPS BETWEEN THE CONNECTING STEELWORK.
2. ENSURE THAT THE HOLES ARE ALIGNED AND THAT THE HOLES HAVE THE CORRECT DIAMETER AND SPACING FOR THE CHOSEN HOLLO-BOLT.
3. THE HOLES MUST BE STANDARD DIAMETER HOLES CONFORMING TO AISC 360 WHERE THE HOLE DIAMETER MUST BE NO GREATER THAN THE SLEEVE OUTER DIAMETER +1/16".
4. BURRS IN THE HOLES MUST BE REMOVED BEFORE INSERTION OF THE HOLLO-BOLT.

B. INSPECTION DURING INSTALLATION
1. ENSURE THAT THE HOLLO-BOLTS ARE INSTALLED AS PER LINDAPTER'S INSTALLATION INSTRUCTION SHEET.
2. ENSURE THAT THE TORQUE WRENCH(S) HAS A CURRENT VALID CALIBRATION CERTIFICATE AND IS CALIBRATED ON REGULAR BASIS.
3. IF USING AIR POWERED WRENCHES TO TIGHTEN THE HOLLO-BOLT, CHECK THAT THE WRENCH IS SET CORRECTLY TO AVOID OVERTIGHTING. THE FINAL TORQUE MUST BE CHECKED WITH A CALIBRATED TORQUE WRENCH.
4. IF AFTER TIGHTENING THERE IS A GAP EVIDENT BETWEEN THE HOLLO-BOLT AND THE CONTACT SURFACE OF THE CONNECTING ELEMENT THIS MAY INDICATE INCORRECT INSTALLATION. REMOVE AND DISCARD THE HOLLO-BOLT, REALIGN THE CONNECTING STEELWORK AND INSTALL A NEW HOLLO-BOLT AS PER LINDAPTER'S INSTALLATION INSTRUCTION SHEET.
5. IF AFTER TIGHTENING THE BOLT HEAD CONTINUES TO TURN THIS MAY BE AN INDICATION OF OVER TIGHTENING, OR IF USING A STAINLESS STEEL HOLLO-BOLT THIS MAY BE DUE TO GALLING*, REMOVE AND DISCARD THE HOLLO-BOLT AND INSTALL A NEW HOLLO-BOLT AS PER LINDAPTER'S INSTALLATION INSTRUCTION SHEET.

* 'GALLING' IS A TERM USED WHEN TWO SURFACES SEIZE UP AS A RESULT OF COLD WELDING AND IS COMMON WHEN TIGHTENING STAINLESS STEEL BOLTS.

C. INSPECTION AFTER INSTALLATION
1. ENSURE THAT THERE ARE NO GAPS BETWEEN THE CONNECTING STEELWORK.
2. ENSURE THAT THERE ARE NO GAPS BETWEEN THE HOLLO-BOLT AND THE CONTACT SURFACE OF THE CONNECTING ELEMENT.
3. CHECK THE TIGHTENING TORQUE OF BETWEEN 5-10% OF THE INSTALLED HOLLO-BOLTS CHOSEN AT RANDOM USING A CALIBRATED TORQUE WRENCH.

FOOTNOTES

(NOTES APPLY ONLY WHEN TESTS OR INSPECTIONS APPLY TO YOUR PC SUBMITTAL.)

1. WAIVER OF CONTINUOUS BATCH PLANT INSPECTION (PER CBC 1705A3.3.1):
   A. VERIFY THAT EITHER CONDITION a) OR b) ARE NOTED IN THE SPECIFICATIONS:
      a) CONCRETE PLANT COMPLIES FULLY WITH ASTM C94, SECTION 9 AND 10, AND HAS A CURRENT CERTIFICATION FROM THE "NATIONAL READY MIXED CONCRETE ASSOCIATION" OR ANOTHER AGENCY ACCEPTABLE TO THE ENFORCEMENT AGENCY. THE CERTIFICATION SHALL INDICATE THAT THE PLANT HAS AUTOMATIC BATCHING AND RECORDING CAPABILITIES.
      b) FOR SINGLE-STORY BUILDINGS, COMPRESSIVE STRENGTH: 3500 PSI SPECIFIED.
   B. DESIGN REQUIREMENTS c) THRU f) ARE MET:
      c) AN APPROVED AGENCY OR CERTIFIED TECHNICIAN OF THE TEST LABORATORY SHALL CHECK THE FIRST BATCHING AT START OF WORK DAY AND FURNISH MIX PROPORTIONS TO LICENSED WEIGHMASTER.
      d) LICENSED WEIGHMASTER TO POSITIVELY IDENTIFY QUANTITY OF MATERIALS AND CERTIFY EACH LOAD BY A BATCH TICKET.
      e) BATCH TICKETS, INCLDUING MATERIAL QUANTITIES AND WEIGHTS SHALL BE TRANSMITTED TO INSPECTOR OF RECORD.
      f) SUBMIT WEIGHMASTER AFFIDAVIT.
2. WAIVER OF CONTINUOUS BATCH PLANT INSPECTION NOT REQUIRED (PER CBC 1705A3.3.2):
   A. PLANT INSPECTION IS NOT REQUIRED FOR ANY OF THE FOLLOWING CONDITIONS:
      a) SITE FLATWORK,
      b) UNENCLOSED SITE STRUCTURES, INCLUDING BUT NOT LIMITED TO LUNCH OR CAR SHELTERS, BLEACHERS, SOLAR STRUCTURES, FLAG OR LIGHT POLES, OR RETAINING WALLS,
      c) CONTROLLED LOW-STRENGTH MATERIAL BACKFILL, OR
      d) SINGLE-STORY RELOCATABLE BUILDINGS LESS THAN 2,160 SQUARE FEET.
3. TESTING IS WAIVED FOR ONE-STORY BUILDINGS IF MILL CERTIFICATE IS PROVIDED.
4. REQUIRED ONLY WHERE DETAILS SPECIFY THE USE OF THESE ATTACHMENTS.
5. INSPECTION OF VENEER DETAILED ON SHT. A7.0 MAY BE WAIVED BY DSA ON A SITE SPECIFIC BASIS.
6. THE APPENDIX TO DSA-103 SHALL BE COMPLETED BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
7. TESTING SHALL BE PERFORMED ON 100% OF CJP GROOVE WELDS WHEN THE COLUMNS PER SCHEDULE ON SHEET S5.0 HAVE A THICKNESS OF 5/16" OR GREATER. MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON 25% OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS. NONDESTRUCTIVE TESTING OF COMPLETE JOINT PENETRATION WELDS AT GRAVITY CONNECTIONS SHALL COMPLY WITH AISC 360, CHAPTER N, PER 2016 CBC 1705A.2.1.
8. EXAMPLE DSA-103 FORMS WILL BE USED AS GUIDE TO DEVELOP A SITE-SPECIFIC DSA-103 FORM FOR THE SITE-SPECIFIC PROJECT. EXAMPLE FORMS ON THE PC DRAWINGS WILL BE CROSSED OUT WHEN SITE-SPECIFIC DSA-103 FORMS ARE PROVIDED DURING OTC REVIEW. SEE DSA PR 07-01, ITEM 2 & 5. QUALIFIED REPRESENTATIVE OF LABORATORY OF RECORD OR APPROVED SPECIAL INSPECTOR SHALL VERIFY ALL STEEL IDENTIFICATION PER 2016 CBC 2203A.1.

TEST OR INSPECTION (as listed on DSA-103)[6] / MATERIAL TYPE	STOCKPILE A: WOOD FLOOR ONLY	STOCKPILE B: CONCRETE FLOOR	CONSTRUCTION (Diaphragm - Foundation) C: WOOD FLOOR ONLY - WOOD FOUNDATION	CONSTRUCTION D: WOOD FLOOR - CONCRETE FOUNDATION	CONSTRUCTION E: CONCRETE FLOOR - CONCRETE FOUNDATION	RELOCATION OF CERTIFIED BUILDING F: WOOD FOUNDATION	RELOCATION OF CERTIFIED BUILDING G: CONCRETE FOUNDATION
SOILS							
1. GENERAL:							
a. Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.				X	X		X
2. COMPACTED FILLS:							
a. Perform classification and testing of fill materials.				X	X		X
b. Verify use of proper materials, densities, and inspect lift thicknesses, placement and compaction during placement of fill.				X	X		X
c. Test compaction of fill.				X	X		X
CONCRETE							
7. CAST IN PLACE CONCRETE - Lightweight over Metal Deck:							
a. Verify use of required design mix.		X			X		
b. Identify, sample, and test reinforcing steel.[3]		X			X		
c. During concrete placement, fabricate specimens for strength tests, performing slump, and air content tests, and determine the temperature of the concrete.		X			X		
d. Test concrete (f'_c - compression).		X			X		
e. Batch plant inspection[1][2] – design complies with 1705A.3.3		X			X		
f. Not Used		X			X		
h. Welding of reinforcing steel.		X			X		
7. CAST IN PLACE CONCRETE - Foundation:							
a. Verify use of required design mix.				X	X		X
b. Identify, sample, and test reinforcing steel. [3]				X	X		X
c. During concrete placement, fabricate specimens for strength tests, performing slump, and air content tests, and determine the temperature of the concrete.				X	X		X
d. Test concrete (f'_c - compression).				X	X		X
e. Batch plant inspection[1][2] – design complies with 1705A.3.3				X	X		X
f. Not Used				X	X		X
h. Welding of reinforcing steel.				X	X		X
11. POST-INSTALLED ANCHORS[4]:							
a. Inspect installation of post-installed anchors			X			X	
b. Test post-installed anchors			X			X	
MASONRY							
14. VENEER OR GLASS BLOCK[5]:							
a. Verify proportions of site-prepared mortar and grout and/or verify certification of premixed mortar.	X	X	X	X	X		
b. Inspect placement of units and construction of mortar joints.	X	X	X	X	X		
c. Inspect placement of reinforcement, connectors, and anchors.							
d. Inspect type, size, and location of anchors and all other items to be embedded in masonry including details of anchorage of masonry to structural members, frames, and other construction.							
e. Verify preparation, construction, and protection of masonry during cold weather (temperature below 40° F) or hot weather (above 90°).	X	X	X	X			
f. Test veneer bond strength.	X	X	X	X			
STEEL, ALUMINUM							
17. STRUCTURAL STEEL, COLD-FORMED STEEL, AND ALUMINUM USED FOR STRUCTURAL PURPOSES:							
a. Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements, • Material sizes, types and grades comply with requirements.	X	X	X	X	X		
b. Test unidentified materials	X	X	X	X	X		
c. Examine seam welds of HSS shapes	X	X	X	X	X		
e. Verify and document steel fabrication per DSA approved construction documents.	X	X	X	X	X		
19. WELDING:							
a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.	X	X	X	X	X		
b. Verify weld filler material manufacturer's certificate of compliance	X	X	X	X	X		
c. Verify WPS, welder qualifications and equipment.	X	X	X	X	X		
19.1 SHOP WELDING:							
a. Inspect groove, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds	X	X	X	X	X		
b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds	X	X	X	X	X		
c. Inspect welding of stairs and railing systems (only required where noted on S10.0 & S10.1)	X	X	X				
d. Verification of reinforcing steel weldability other than ASTM A706.							
e. Inspect welding of reinforcing steel.							
19.2 FIELD WELDING:							
a. Inspect groove, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds (See foundation anchorage - S1.6 sheets)				X	X		X
b. Inspect single-pass fillet welds ≤ 5/16" (See foundation anchorage - S1.6 sheets)				X	X		X
c. Inspect end-welded studs (ASTM A-108) installation (including bend test)							
d. Inspect floor and roof Jack welds							
e. Inspect welding of structural cold-formed steel							
f. Inspect welding of stairs and railing systems							
g. Verification of reinforcing steel weldability							
h. Inspect welding of reinforcing steel.							
20. NONDESTRUCTIVE TESTING[7]:							
a. Ultrasonic (Test per sheet S5.1)	X	X	X	X	X		
b. Magnetic Particle (Test per sheet S5.1)	X	X	X	X	X		
22. SPRAY APPLIED FIRE-PROOFING[6]:							
a. Examine structural steel surface conditions, inspect application, take samples, measure thickness, and verify compliance of all aspects of application with DSA approved documents.							
b. Test bond strength.							
c. Test density.							
23. ANCHOR BOLTS, ANCHOR RODS, & OTHER STEEL:							
a. Anchor Bolts and Anchor Rods							
b. Threaded rod not used for foundation anchorage.							
OTHER							
26. LOAD TEST FOR IDENTIFIED PRODUCT(S):							
a. Column fire rating where specified per 20/A8.0 and tested per 1705A.15	X	X	X	X	X		

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

FORM
DSA-103

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT PATRICK CONWAY No. C12631 Ren. 3-31-19 STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

D1

02-XXXXX - for Joel Buckens - SMTS - 3/5/2018 4:34 PM - R:\Engineering\PC DWG Files\3018_02XXXX\02-115700 - 2016 - 24'x40'-120'x40' Standard\02 - 02 - 115700 - DSA 103.dwg

SECTION 1 GENERAL REQUIREMENTS

1. GENERAL
   A. THE REQUIREMENTS OF THE GENERAL CONDITIONS OF THE AGREEMENT AND THIS GENERAL REQUIREMENT APPLY TO THE SEVERAL TRADE SECTIONS WITH THE SAME FORCE AS THOUGH FULLY REPEATED IN EACH TRADE SECTION.
   B. NAME BRANDS ARE INDICATED TO ESTABLISH A STANDARD OF QUALITY. ITEMS OF EQUAL OR BETTER QUALITY MAY BE SUBSTITUTED FOR THE LISTED BRAND NAMED PRODUCTS WITH THE WRITTEN APPROVAL OF D.S.A. AND THE ARCHITECT.
   C. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF TITLES 19 AND 24 CALIFORNIA CODE OF REGULATIONS, 2016 C.B.C. NO CHANGES SHALL BE MADE FROM D.S.A. APPROVED DRAWINGS OR SPECIFICATIONS WITHOUT PRIOR WRITTEN APPROVAL OF D.S.A. AND THE RDPRC.
2. SCOPE OF WORK
   A. THE WORK CONSISTS OF MANUFACTURING OFF-SITE IN A PLANT AND INSTALLING ON-SITE, MODULAR RELOCATABLE BUILDINGS AS DEFINED HEREIN AND SHOWN AND DETAILED ON DRAWINGS.
   B. ALL REQUIREMENTS OF TITLE 24 OF THE STATE OF CALIFORNIA, CODE OF REGULATIONS, RELATING TO INSPECTIONS AND VERIFIED REPORTS SHALL BE COMPLIED WITH AND SHALL INCLUDE:
1. GENERAL RESPONSIBLE CHARGE OF FIELD ADMINISTRATION TO BE PROVIDED BY THE RDPRC.
2. INSPECTION IN-PLANT DURING THE COURSE OF CONSTRUCTION BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE DISTRICT ARCHITECT. THE INSPECTOR SHALL BE RESPONSIBLE FOR AND APPROVED TO INSPECT THE GENERAL CONSTRUCTION WELDING, MECHANICAL, AND ELECTRICAL WORK. COST OF THESE INSPECTIONS SHALL BE BORNE BY THE SCHOOL DISTRICTS.
3. ON-SITE INSPECTION OF THE BUILDING INSTALLATION ELECTRICAL AND UTILITY INSTALLATION OR CONNECTIONS BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE DISTRICT ARCHITECT AND RETAINED BY THE SCHOOL DISTRICT.
4. OTHER SPECIAL TESTS OR INSPECTIONS AS MAY BE REQUIRED BY THE DIVISION OF THE STATE ARCHITECT.
5. ADDENDUMS SHALL BE SIGNED BY THE RDPRC & APPROVED BY D.S.A.
6. CHANGES TO CONSTRUCTION DOCUMENT AFFECTING ACS, FLS & SSS SHALL BE SIGNED BY THE OWNER & THE RDPRC & APPROVED BY D.S.A. PRIOR TO COMMENCING WORK. CHANGES TO THE CONSTRUCTION COST ARE REPORTED TO D.S.A. USING FORM DSA-168 AT THE CONCLUSION OF THE PROJECT.
7. THE TESTING LAB SHALL BE IN THE EMPLOY OF THE OWNER.
8. ALL CONTRACTORS SHALL VERIFY ALL WORK CONDITIONS, DIMENSIONS AND DETAILS AND REPORT ANY OR ALL OMISSIONS AND DISCREPANCIES TO THE DESIGNER/OWNER IMMEDIATELY BEFORE COMMENCING WORK.
9. EACH CONTRACTOR TO BE RESPONSIBLE TO SEE THAT THEIR WORK CONFORMS TO ALL GOVERNMENTAL CODES WHETHER OR NOT SO STATED ON THE DRAWINGS.
10. ALL MATERIALS AND WORKMANSHIP TO CONFORM TO THE LATEST REQUIREMENTS OF THE GOVERNING BUILDING CODES IN EFFECT AT TIME OF DSA APPLICATION.
11. ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED AND ERECTED PER MANUFACTURER'S DIRECTIONS AND INSTRUCTIONS.
12. SHOP DRAWINGS MAY BE REQUIRED. IF SO, THEY WILL BE ACCURATELY DRAWN TO A LARGE ENOUGH SCALE TO SHOW ALL PERTINENT FEATURES OF THE ITEM AND ITS CONNECTION TO RELATED WORK.
13. THE MANUFACTURER OF BUILDING IS TO PLACE TWO PERMANENT METAL IDENTIFICATION LABEL ON EACH MODULE, MECHANICALLY FASTENED TO THE FRAME SEE "GENERAL DESIGN REQUIREMENTS", SHEET N2.0. FOR PROJECTS MANUFACTURED OFF-SITE, THE PLANT INSPECTOR IS TO INDICATE THE MANUFACTURER'S NAME AND SERIAL NUMBER OF EACH MODULE ON THE VERIFIED REPORT AND D.S.A. APP. NUMBER.
14. ALL TESTS AND INSPECTIONS REQUIRED BY DSA SHALL BE COMPLIED WITH. ALL TESTS REQUIRED BY FIRE AND LIFE SAFETY REGULATIONS SHALL BE BY A NATIONALLY RECOGNIZED TESTING LABORATORY.

SECTION 2 FOUNDATION

1. ASSUMED ALLOWABLE SOIL BEARING:
   - 1500 P.S.F. FOR CONCRETE FOUNDATIONS EMBEDDED 12" MINIMUM BELOW GRADE.
   - 1000 P.S.F. FOR WOOD FOUNDATIONS ON GRADE
2. FOOTINGS SHALL BE LOCATED ON UNDISTURBED, FIRM, NATURAL SOIL OR APPROVED COMPACTED FILL.

NOTE: THE FOUNDATION SYSTEM PRESENTED HEREIN COMPLIES WITH INTERPRETATION OF REGULATIONS, IR 16-1, ISSUED BY DIVISION OF THE STATE ARCHITECT, FOR TEMPORARY BUILDINGS. THIS FOUNDATION SYSTEM IS NON-CONVENTIONAL AND THE STRUCTURAL ENGINEER TAKES NO RESPONSIBILITY FOR ITS CONSTRUCTION OR LONGEVITY.

3. WORK NOT INCLUDED:
   A. ALL ON-SITE OR OFF-SITE UTILITIES AND THE CONNECTION OF THEM TO THE BUILDING UNLESS INDICATED ON THE DRAWINGS.
   B. ALL LEVELING, GRADING OR OTHER SITE PREPARATION EXCEPT CONCRETE OR WOOD LEVELING STRIPS WHERE REQUIRED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   C. FIRE ALARM SYSTEM, PROGRAM BELL, PUBLIC ADDRESS SYSTEM, INTERCOM SYSTEM, TV, TELEPHONE SYSTEM, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, OR MODIFIED BY CHANGE ORDER.
4. WHEELS AND HITCH SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
5. ACCESSIBILITY OF SITE: THE SCHOOL DISTRICT SHALL PROVIDE ACCESS TO THE SITE FOR THE INSTALLATION OF BUILDINGS. REMOVAL OF TREES, SHRUBS, FENCING, SPRINKLERS ETC. NECESSARY FOR THE MOVE-IN OF BUILDINGS SHALL BE THE RESPONSIBILITY OF THE SCHOOL DISTRICT.

SECTION 3 CONCRETE

1. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-14.
2. THE MINIMUM 28 DAY STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:
   FOUNDATIONS.....3500 PSI (150 PCF)
   FOUNDATION VENTS & ACCESS WELLS.....3000 PSF (150 PCF
   SLABS-ON-GRADE.....3000 PSF (150 PCF)
   CONCRETE OVER METAL DECK.....3000 PSI (110 PCF)
3. THE MAXIMUM WATER TO CEMENT (W/C) RATIO SHALL BE 0.55 FOR FOUNDATIONS AND 0.40-0.45 FOR CONCRETE OVER METAL DECK SLABS.
4. CONCRETE SLUMP SHALL BE 4" ± 1".
5. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
   A. MINERAL ADMIXTURES SHALL CONFORM TO ASTM C618 CLASS 'F' OR 'N' AND SHALL NOT EXCEED 25% CEMENT REPLACEMENT BY WEIGHT.
6. CONCRETE AGGREGATES:
   A. NATURAL SAND & ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
   B. LIGHTWEIGHT AGGREGATE SHALL CONFORM TO ASTM C330.
   C. MAX AGGREGATE SIZE SHALL BE 1"±1/4" FOR NORMAL WT. CONCRETE.
   D. MAX AGGREGATE SIZE SHALL BE 1/2" FOR LIGHT WT. CONCRETE.
7. REINFORCING SHALL CONFORM TO ASTM A615-GRADE 60, UNLESS OTHERWISE NOTED.

CONCRETE continued

8. CONCRETE COVERAGE SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON DRAWINGS:
   - CONCRETE DIRECTLY AGAINST GROUND (EXCEPT SLABS) .....3"
   - CONCRETE EXPOSED TO GROUND BUT PLACED IN FORMS .....2"
   - SLABS (ON GROUND) .....POSITION IN CENTER OF SLAB
9. ALL BARS SHALL HAVE A CLASS B MINIMUM LAP SPLICE PER DETAILS 6 & 9/S1.4 AND SPLICES IN ADJACENT BARS SHALL BE STAGGERED, U.N.O.
10. REINFORCING BARS SHALL NOT BE WELDED UNLESS SPECIFICALLY DETAILED IN THE APPROVED DRAWINGS. BARS DETAILED TO BE WELDED SHALL BE ASTM A706 BARS AND WELDING ELECTRODES SHALL BE E80XX. WELDING SHALL CONFORM WITH AWS D1.4-11 AND SHALL BE CONTINUOUSLY INSPECTED.
11. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE LAP SPLICED TWO SQUARES MINIMUM EACH DIRECTION.
12. NOTIFY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.
13. CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C494.
14. AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260.

SECTION 5 STEEL

1. GENERAL - ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC 360-10, TITLE 24 OF CALIFORNIA CODE OF REGULATIONS SECTION 2212A.1.2, AND THE AMERICAN IRON AND STEEL INSTITUTE SPECIFICATIONS FOR DESIGN OF STEEL STRUCTURAL MEMBERS. A COPY OF TITLE 24 SHALL BE KEPT AT THE JOBSITE AT ALL TIMES.
   A. FABRICATION AND ERECTION SHALL COMPLY WITH AISC 360-10 CHAPTER 'M' AND AISC 341-10 CHAPTER 'I'.
2. WELDING - ALL WELDING DONE BY SHIELDED ELECTRIC-ARC OR FLUX CORED-ARC PROCESS COMPLYING WITH REQUIREMENTS OF THE "STRUCTURAL WELDING CODE" OF THE AMERICAN WELDING SOCIETY. WELDING DONE BY OPERATORS QUALIFIED BY TESTS ACCEPTABLE TO THE DIVISION OF THE STATE ARCHITECT. WELDING INSPECTION PER TITLE 24, PART 2, CCR, SECTIONS 1705A.2.5 WELDING ELECTRODE SHALL BE E70XX. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20FT-LBS AT ZERO DEGREES F AND COMPLYING WITH AWS D1.8-09. SECTION 6.3.
3. STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:
   A. WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A992, GRADE 50, TYP. U.N.O.
   B. STRUCTURAL STEEL CHANNELS SHALL CONFORM TO ASTM A36 (36 KSI) TYP. U.N.O. NOTE: ASTM A572 (50 KSI) MAY BE SUBSTITUTED FOR A36 (36 KSI). WHERE DRAWINGS SPECIFY 36 KSI MIN., CHANNELS MAY CONFORM TO EITHER ASTM A36 (36KSI) OR ASTM A572 (50 KSI).
   C. PIPE COLUMNS SHALL CONFORM TO ASTM A-53 WITH SULFUR CONTENT NOT EXCEEDING 0.05% TYP. U.N.O.
   D. STRUCTURAL STEEL TUBING (HSS) SHALL CONFORM TO ASTM A-500 GRADE B OR C OR ASTM A1085, TYP. U.N.O.
   E. STEEL PLATES, ANGLES, BARS AND MISC. SHAPES SHALL CONFORM TO ASTM A36 (36 KSI) TYP. U.N.O. NOTE: ASTM A572 (50 KSI) MAY BE SUBSTITUTED FOR A36 (36 KSI).
   F. STRUCTURAL WELDS ARE DESIGNED FOR FULL ALLOWABLE STRESS UNLESS OTHERWISE NOTED.
4. ERECTION - STRUCTURAL STEEL ERECTED TRUE, STRAIGHT, PLUMB AND TO ITS DESIGNATED LOCATIONS. FIELD CONNECTIONS BOLTED OR WELDED AS INDICATED ON THE DRAWINGS.
5. NAILS, BOLTS, SCREWS AND NUTS, ETC. - FOR EXTERIOR WORK SHALL BE CADMIUM PLATED OR GALVANIZED.
   A. BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED. ALL HOLES FOR BOLTS THRU STEEL TO BE DRILLED, OR TORCHED PILOT HOLE AND REAMED TO DIAMETER IF BOLT +1/16" UNLESS OTHERWISE NOTED. NELSON STUDS (WELDED TO STEEL) MAY BE SUBSTITUTED FOR BOLTS SAME LENGTH AND DIAMETER.
   B. SEE "FASTENERS FOR ATTACHMENT TO STEEL" ON SHEET N2.0 FOR SHOT PINS & SCREWS.
6. HANDRAILS - FABRICATED, AS DETAILED, NON-FILLET WELDS GROUND SMOOTH.
7. SHOP PAINT
   A. EXPOSED STEEL COATED WITH ONE SHOP COAT OF RED OXIDE PRIMER.
   B. ALL SURFACES THOROUGHLY CLEANED BY EFFECTIVE MEANS PRIOR TO APPLICATION OF SHOP COATS.
8. TESTS
   A. PROVIDE MILL CERTIFICATES OR TEST ALL STEEL MEMBERS PER TITLE-24 PART 2, CCR SECTION 1705A.2 & 2203A.

SECTION 6 CARPENTRY

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL CARPENTRY.
2. MATERIALS
   LUMBER GRADE MARKED IN ACCORDANCE WITH "STANDARD GRADING AND DRESSING RULES NO. 17" OF WEST COAST LUMBER INSPECTION BUREAU, OR "WESTERN LUMBER GRADING RULES", LATEST EDITION OF WESTERN WOOD PRODUCTS ASSOCIATION. OSB OR PLYWOOD GRADE MARKED IN ACCORDANCE WITH PRODUCT STANDARD PS 1-09 FOR SOFTWOOD OSB OR PLYWOOD, OF AMERICAN PLYWOOD ASSOCIATION. EACH SHEET SHALL BEAR THE STAMP OF APA, PITTSBURGH TESTING, OR TECO. MOISTURE CONTENT SHALL NOT EXCEED 19%.
   A. JOISTS, HEADERS, PLATES STUDS: DOUGLAS FIR S4S #2 OR HEM FIR S4S #2 MIN. U.N.O. NOTE: MSR 1650 E1.5 MAY BE SUBSTITUTED FOR #2 GRADE IF IT MEETS THE STRUCTURAL REQUIREMENTS FOR FLOOR AND ROOF MEMBERS.
   B. PSL HEADERS: TRUS JOIST PARALLAM PSL BY WEYERHAEUSER (ICC ESR-1387) OR EQUIV. MEETING THE FOLLOWING STRUCTURAL PROPERTIES:

BEAMS ≤ 7" DEEP & COLUMNS	BEAMS ≥ 9¼" DEEP
F_b = 2400 PSI MIN.	F_b = 2900 PSI MIN.
F_v = 190 PSI MIN.	F_v = 290 PSI MIN.
E = 1.8E6 PSI MIN.	E = 2.0E6 PSI MIN.

   C. POSTS AND TIMBERS: DOUGLAS FIR S4S #1 OR HEM FIR S4S #1 MIN.
   D. BLOCKING: DOUG FIR #3, OR HEM FIR #3, OR STD. & BET.
   E. SILLS AND LUMBER & SHIM PLATES IN CONTACT WITH CONCRETE, MASONRY OR EARTH: DOUG FIR #2 OR HEM FIR #2 MIN. PRESSURE TREATED IN ACCORDANCE WITH CBC 2304.12.1. EACH PIECE SHALL BEAR AWPA STAMP. AWPA STANDARD U1 & T1 GROUND CONTACT, D.F. (OR H.F.) #2 ABOVE GROUND.
   F. MOISTURE BARRIER: KRAFT WATERPROOF BUILDING PAPER, OR 15 LB. FELT, CBC SECTION 1404.2. & ASTM D226, TYPE I.
   G. STUDS - S4S DOUG FIR #2 OR #2 HEM FIR. MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION.
   H. FASTENERS - FASTENERS SHALL BE CORROSION RESISTANT PER C.B.C. 2304.10.1.1 COMMON NAILS PER ASTM F1667 FOR EXTERIOR SIDING & FOUNDATION ONLY.
   I. BUILDING TRIM - 2x RESAWN SELECT D.F., H.F., OR CEDAR.
   J. DOOR/WINDOW TRIM - 1x4 RESAWN D.F., H.F., OR CEDAR.
   K. FRAMING CONNECTORS SHALL BE FROM SIMPSON CATALOG LATEST ED.
   L. FIRE BLOCKS SHALL CONFORM TO CBC SECTION 718.2
   M. ALL NAILS SHALL BE COMMON NAILS PER ASTM F1667 UNLESS OTHERWISE NOTED.
   N. ALL CUT ENDS & HOLES IN PRESSURE TREATED LUMBER SHALL BE TREATED WITH "CUPRINOL".
   O. ALL BOLTS & LAG SCREWS SHALL COMPLY WITH THE 2015 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (ANSI\AWC NDS-2015).

CARPENTRY continued

   P. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
   Q. HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME NOMINAL DIAMETER AND DEPTH AS THE SHANK. THE REMAINDER OF THE HOLE SHALL BE NO LARGER THAN THE ROOT OF THE THREAD.
   R. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD.
3. WORKMANSHIP
   A. FRAMING - SECURELY NAILED, BRIDGED AND BLOCKED TO FORM RIGID STRUCTURE. WORK CUT, FITTED AND ASSEMBLED LEVEL PLUMB AND TRUE TO LINE. TRIM IN AS LONG LENGTHS AS POSSIBLE WITH ALL STANDING TRIM IN ONE PIECE. TRIM SEALED AT ALL EDGES.
   B. NAILING - IN ACCORDANCE WITH TITLE 24, CALIFORNIA BUILDING CODE, TABLE 2304.10.1.
   C. EXTERIOR WALLS - FACTORY FABRICATED. CAULKING PROVIDED BETWEEN PERIMETER OF WALL AND STRUCTURAL MEMBERS PROVIDING WEATHER-PROOF AND WATER-TIGHT SEAL. NECESSARY CLOSERS, SEALS, AND FLASHINGS PLACED AT TOP AND BASE SUPPORT OF PANELS AND AROUND OPENINGS.
   D. NAILS INTO P.T. LUMBER TO BE HOT DIPPED GALVANIZED.
   E. MACHINE APPLIED NAILING: USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE RDPRC AND THE DIVISION OF THE STATE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" OSB. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
   F. MOISTURE BARRIER - APPLIED TO STUDS WEATHER-BOARD FASHION, HORIZONTAL JOINTS LAPPED MIN 6" INCLUDING BUILDING CORNERS. SHEATHING APPLIED OVER MOISTURE BARRIER.
   G. TRIM SEALED AT ALL EDGES. SEALANT PAINTED TO MATCH TRIM OR SIDING UNLESS TRANSPARENT TYPE.

SECTION 7A SHEET METAL (NON-STRUCTURAL)

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL INDICATED SHEET METAL.
2. MATERIALS
   A. SHEET METAL - STEEL SHEETS HOT DIP GALVANIZED WITH 1.25 OZ. PER SQUARE FOOT ZINC COATING CONFORMING TO ASTM A653 MINIMUM 26 GA. UNLESS OTHERWISE NOTED ON THE DRAWINGS.
   B. SOLDER - OF STAND, GRADE "A" OF EQUAL PARTS, ARD BRAND, LEAD AND TIN ASTM B32.
   C. FLUX - ZINC SATURATED MURIATIC ACID.
   D. GUTTERS: 26 GA. G-90 GALV. STEEL
      DOWNSPOUTS: 2"x3" CONVOLUTED 30 GA. G-90 GALV. STEEL
      GUTTER ENDCAPS: 26 GA. G-90 GALV. STEEL
      GUTTER CLIPS: 18 GA. G-90 GALV. STEEL
   E. FASTENERS:
      SELF-DRILLING OR SELF-TAPPING SHEET METAL SCREWS.
      LENGTH TO HAVE (3) EXPOSED THREADS MIN.
3. WORKMANSHIP
   SHEET METAL ACCURATELY FORMED TO DIMENSIONS AND SHAPES DETAILED WITH TRUE STRAIGHT LINES, CORNERS AND ANGLES. FLASHING INSTALLED IN LONGEST LENGTHS POSSIBLE. EXTERIOR WORK FORMED, FABRICATED AND INSTALLED SO THAT IT ADEQUATELY PROVIDES FOR EXPANSION AND CONTRACTION IN THE COMPLETED WORK AND FINISHES WATER AND WEATHER TIGHT. ALUMINUM SHALL BE SEPARATED FROM FERROUS METAL BY POLYETHYLENE TAPE OR FLOOD COAT OF ASPHALTIC PAINT.

SECTION 7B METAL ROOFING

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL METAL ROOFING.
2. MATERIALS
   A. ROOF: 3 INCH STANDING SEAM, MINIMUM 20-GAUGE G-90 GALV. INTERLOCKING (UN-PENETRATED) SHEET STEEL PANELS (G90). ALTERNATE: 26 GAUGE WHEN INSTALLED OVER PLYWOOD SHEATHING.
   B. CLASS B FIRE RATING.
   C. FASTENERS SHALL BE HOT-DIPPED GALVANIZED.

SECTION 7C SEALANT

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND SERVICES TO SEAL BUILDINGS.
2. MATERIALS
   VULKEM SEALANT, POLYURETHANE, MANUFACTURED BY MAMECO INTERNATIONAL FOR ROOFS. "GEOCEL" SILICONIZED CAULK, GE, DUPONT, EAGLESEAL OR DAP FOR ALL OTHER APPLICATIONS, OR EQUAL.
   A. SEALANT V.O.C. LIMITS PER SCAQMD RULE 1168 (AS SHOWN IN TITLE 24, PART 11, TABLE 5.504.4.1 AND TABLE 5.504.4.2)
3. WORKMANSHIP
   SEALANT APPLIED TO DRY CLEAN SURFACES, WHEREVER INDICATED ON DETAILS AND AS NEEDED TO MAKE BUILDING WATERTIGHT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

SECTION 7D SINGLE-PLY / BUILT-UP ROOFING

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND SERVICES TO INSTALL SINGLY-PLY OR BUILT-UP ROOFING. TEST RESULTS OF CALCULATIONS SHOWING THE ROOFING SYSTEM WILL WITHSTAND THE UPLIFT OF 110 MPH ULTIMATE WIND SPEED SHALL BE SUBMITTED WITH THE PLANS & SPECIFICATIONS.
2. MATERIALS
   MEMBRANE: PVC FILM LAMINATED TO BOTH SIDES OF A REINFORCEMENT FABRIC, OR EQUIV. PROPRIETARY THERMOPLASTIC PVC FORMULATION OF RESINS, PLASTICIZERS, STABILIZERS, BIOCIDES, FLAME RETARDANTS, AND U.V. ABSORBENTS. CLASS B FIRE RATING.
   A. WOOD NAILERS MUST BE A #2 GRADE LUMBER, OR EQUIVALENT, TO SUBSTRATE.
3. WORKMANSHIP
   MEMBRANE APPLIED ON SUBSTRATES THAT ARE DRY, CLEAN, AND FREE OF FINS, SHARP EDGES AND LOOSE, FOREIGN MATERIALS, WHEREVER INDICATED ON DETAILS. AN INSULATION OR SNAP SHEET HAVING AN APPROVED FACER MUST BE USED WHEN ROOFING OVER ASPHALT OR COAL TAR ROOFS.
4. TESTING:
   A. MEMBRANE SHALL BE DESIGNED TO PERFORM IN ALL TYPES OF WEATHER AND SHALL COMPLY TO ASTM D-2136 TESTING METHODS.
   B. MEMBRANE SHALL BE DESIGNED IN ACCORDANCE TO ASTM D-4434 "STANDARD SPECIFICATIONS FOR POLY (VINYL CHLORIDE) SHEET ROOFING" AND BE CLASSIFIED AS A TYPE IV, INTERNALLY REINFORCED SHEET.

SECTION 8 HOLLOW METAL DOORS AND FRAMES

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL HOLLOW METAL DOORS AND FRAMES.
2. MATERIALS
   A. DOORS - INSULATED TYPE L FULL FLUSH, MANUFACTURED BY AMWELD MANUFACTURING COMPANY, 18 GA. 1-3/4" THICK PER CS242 MIN. REINFORCE FOR HARDWARE-BOTH FACES FOR CLOSER, SOUND DEADEN INTERIOR.
   B. FRAMES - 16 GA COLD ROLLED, 2" FACES, CS242 MIN. 3 ANCHORS PER JAMB + ADJUSTABLE FLOOR ANCHOR, EACH JAMB REINFORCE FOR HARDWARE. PROVIDE STRIKE BOX, PROVIDE SOUND DEADENING: 1/8" UNDERCOATING OR INSULATING FILL.
3. WORKMANSHIP
   ALL WORK FABRICATED IN SHOP TO REQUIRED PROFILES BY FORMING AND WELDING, WITH ARISES AND EDGES STRAIGHT, SHARP FIT FABRICATED ACCURATELY WITH SQUARE CORNERS, HAIRLINE JOINTS AND SURFACES FREE FROM WARP, WAVE, BUCKLE OR OTHER DEFECTS AFTER FABRICATION, DOORS AND FRAMES CLEANED THOROUGHLY, ALL WELDS GROUND SMOOTH AND GIVEN PRIME COAT.

SECTION 9A STUCCO (EXTERIOR PORTLAND CEMENT PLASTER)

LATHING AND PLASTERING MATERIALS AND ACCESSORIES SHALL BE MARKED BY THE MANUFACTURER'S DESIGNATION TO INDICATE COMPLIANCE WITH THE APPROPRIATE STANDARDS REFERENCED IN THIS SECTION AND STORED IN SUCH A MANNER TO PROTECT THEM FROM THE WEATHER, PER C.B.C 2507.1.

LATHING AND PLASTERING MATERIALS SHALL CONFORM TO THE STANDARDS LISTED IN C.B.C. TABLE 2507.2 AND CHAPTER 35, AND, WHERE REQUIRED FOR FIRE PROTECTION, SHALL ALSO CONFORM TO THE PROVISIONS OF CHAPTER 7.

GYPSUM BOARD AND GYPSUM PLASTER CONSTRUCTION SHALL BE OF THE MATERIALS LISTED IN C.B.C. TABLES 2506.2 AND 2507.2. THESE MATERIALS SHALL BE ASSEMBLED AND INSTALLED IN COMPLIANCE WITH THE APPROPRIATE STANDARDS LISTED IN TABLES 2508.1 AND 2511.1, AND CHAPTER 35 (PER 2508.1).

2510.6 WATER-RESISTIVE BARRIERS. WATER-RESISTIVE BARRIERS SHALL BE INSTALLED AS REQUIRED IN SECTION 1404.2, AND WHERE APPLIED OVER WOOD-BASED SHEATHING, SHALL INCLUDE A WATER-RESISTIVE VAPOR-PERMEABLE BARRIER WITH A PERFORMANCE AT LEAST EQUIVALENT TO TWO LAYERS OF GRADE D PAPER.

EXCEPTION: WHERE THE WATER-RESISTIVE BARRIER THAT IS APPLIED OVER WOOD-BASED SHEATHING HAS A WATER RESISTANCE EQUAL TO OR GREATER THAN THAT OF 60-MINUTE GRADE D PAPER COMPLYING WITH ASTM E 2556, TYPE II AND IS SEPARATED FROM THE STUCCO BY AN INTERVENING, SUBSTANTIALLY NONWATER-ABSORBING LAYER OR DRAINAGE SPACE.

1. PLASTER NOTES: PLASTERING WITH CEMENT PLASTER SHALL NOT BE LESS THAN THREE COATS WHEN APPLIED OVER METAL LATH OR WIRE FABRIC LATH AND SHALL NOT BE LESS THAN TWO COATS WHEN APPLIED OVER MASONRY CONCRETE OR GYPSUM BACKING AS SPECIFIED IN SECTION 2510.5.
   A. THE FIRST COAT SHALL BE MIN. 3/8" THICK & APPLIED WITH SUFFICIENT MATERIAL AND PRESSURE TO FILL SOLIDLY ALL OPENINGS IN THE LATH. THE SURFACE SHALL BE SCORED HORIZONTALLY SUFFICIENTLY ROUGH TO PROVIDE ADEQUATE BOND TO RECEIVE THE SECOND COAT.
   B. THE SECOND COAT SHALL BEBE BROUGHT OUT TO MIN. 3/8" THICKNESS, RODDED AND FLOATED SUFFICIENTLY ROUGH TO PROVIDE ADEQUATE BOND FOR THE FINISH COAT. THE SECOND COAT SHALL HAVE NO VARIATION GREATER TO THAN 1/4 INCH (6.4 mm) IN ANY DIRECTION UNDER 5-FOOT STRAIGHT EDGE.
   C. THE FINISH COATS SHALL BE MIN. 1/8" THICK & APPLIED OVER BASE COATS THAT HAVE BEEN IN PLACE FOR THE TIME PERIODS SET FORTH IN ASTM C 926. THE THIRD OR FINISH COAT SHALL BE APPLIED WITH SUFFICIENT MATERIAL AND PRESSURE TO BOND TO AND TO COVER THE BROWN COAT AND SHALL BE OF SUFFICIENT THICKNESS TO CONCEAL THE BROWN COAT.

SECTION 9B PAINTS & COATINGS

1. SCOPE OF WORK.
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO PAINT BUILDING. ALL EXPOSED SURFACES OF BUILDING AND RAMPS SHALL BE PAINTED EXCEPT ALUMINUM WINDOW FRAMES, THRESHOLDS, AND ROOFING.
2. MATERIALS
   A. FOR EXTERIOR WOOD:

REF.BRAND	DUNN EDWARDS	KELLY MOORE	SHERWIN WILLIAMS	SINCLAIR
PRIMER	42-9M	1240	Y24W20	289-N
FINISH	QD-60-XX	1240-XXX	B54WZ102	GE2-NXX

   B. FOR INTERIOR TRIM:

REF.BRAND	DUNN EDWARDS	KELLY MOORE	SHERWIN WILLIAMS	SINCLAIR
FINISH	W450-XX	1650-XXX	A26W11	40XX

   C. FOR METAL:

REF.BRAND	DUNN EDWARDS	KELLY MOORE	SHERWIN WILLIAMS	SINCLAIR
PRIMER	43-4	1710	B50NZ6	15N
FINISH	10-XX	1700-XXX	B54WZ102	GE2-NXX

   D. INTERIOR PAINT & COATINGS SHALL COMPLY WITH TITLE 24, PART 11, "CAL-GREEN" SECTION 5.504.4.3, AND V.O.C. LIMITS PER TABLE 5.504.4.3.
3. WORKMANSHIP
   ALL EXPOSED SURFACES SHALL BE PAINTED EXCEPT ALUMINUM WINDOW FRAMES, THRESHOLDS AND METAL ROOFING. MATERIAL SHALL BE OF THE GRADE SPECIFIED OR EQUAL.
   A. EXTERIOR WOOD SIDING, TRIM AND SKIRTING - FLAT OR SEMI-GLOSS LATEX. APPLY ONE COAT OF PRIME AND AT LEAST ONE FINISH COAT. PRIME COAT SHALL BE BRUSHED ON OR SPRAYED AND BACK BRUSHED INTO ALL GROOVES IN THE SIDING. IF NECESSARY, IN THE OPINION OF THE INSPECTOR, AN EXTRA COAT SHALL BE APPLIED TO ALL GROOVES SO THAT THE FINISH COAT WILL HAVE A UNIFORM APPEARANCE. ALLOW PRIME COAT TO DRY ACCORDING TO MANUFACTURER'S RECOMMENDATION. PRIME AND FINISH COATS SHALL BE COMPATIBLE AND MANUFACTURED BY THE SAME COMPANY.
   B. INTERIOR TRIM - TRIM NOT PRE-COATED SHALL BE PAINTED WITH TWO COATS OF SEMI-GLOSS LATEX OVER PRIMER.
   C. INTERIOR HARDWOOD CABINETS - TWO COATS LOW LUSTER POLYURETHANE FINISH. APPLY FIRST COAT THINNED WITH ONE QUART MINERAL SPIRITS PER GALLON. APPLY SECOND COAT AS RECOMMENDED BY MANUFACTURER.
   D. METAL - ALL METAL SURFACES SHALL BE PAINTED WITH TWO COATS OF ALKYD FINISH COAT OVER ZINC CHROMATE OR EQUAL RUST INHIBITING PRIMER.
   E. RAMP - ONE COAT OF FERROX NON-SLIP (0.8 MIN. C.O.F.) SURFACING AS MANUFACTURED BY AMERICAN ABRASIVE METALS OR COMPARABLE. ALL PAINTS OF THE TYPE INDICATED SHALL BE LISTED ON THE STATE OF CALIFORNIA QUALIFIED PRODUCTS LIST, OR EQUAL.
   F. SUBMIT ONE SET OF COLOR SAMPLES TO THE RDPRC FOR EACH PRODUCT TO ASSIST IN SELECTION.

SECTION 9C INTERIOR AIR QUALITY CONTROL

THE INTERIOR ENVIRONMENT SHALL BE ASSEMBLED WITH PRODUCTS THAT CONTRIBUTE TO A HEALTHY INDOOR AIR QUALITY (IAQ). THE FOLLOWING SHALL COMPLY TITLE 24, PART 11 ("CAL-GREEN"):

1. ADHESIVES, SEALANTS, CAULKS SECTION 5.504.4.1
2. PAINTS, COATINGS SECTION 5.504.4.3
3. AE

COORDINATION OF WORK

THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH THE SCHOOL DISTRICT AUTHORIZED REPRESENTATIVE FOR ACCESS TO GROUNDS AND REMOVAL OF EQUIPMENT, IF NECESSARY. THIS CONTACT SHALL BE MADE AT LEAST 48 HOURS PRIOR TO DELIVERY OF ANY MODULE. ON-SITE INSPECTION SHALL BE DONE BY THE SITE INSPECTOR. ALL WORK WHICH THE MANUFACTURER OR HIS SUBCONTRACTORS PERFORM AT THE SITE SHALL BE SUBJECT TO THE INSPECTION OF THE SITE INSPECTOR. THE MANUFACTURER WILL FURNISH THE SITE INSPECTOR WITH SUCH INFORMATION AS MAY BE NECESSARY TO KEEP HIM FULLY INFORMED AS TO PROGRESS OF WORK AND DATES WHEN SITE WORK WILL OCCUR. THE CONTRACTOR SHALL NOTIFY THE INSPECTION AGENCY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL VERIFY THAT THE DISTRICT'S SITE IS READY TO RECEIVE THE CLASSROOM(S) PRIOR TO THE DELIVERY OF ANY CLASSROOM(S) BY VISITING EACH SITE (THIS MAY BE DONE BY THE INSPECTOR).

MATERIALS AND WORKMANSHIP

1. ALL CONTRACTORS SHALL CERTIFY THAT NO ASBESTOS-CONTAINING BUILDING MATERIALS WHICH EXCEED STATE AND FEDERAL MANDATED SAFE ASBESTOS LEVELS HAVE BEEN USED IN THE CONSTRUCTION OF RELOCATABLE FACILITIES.
2. ALL WORKMEN SHALL BE SKILLED AND QUALIFIED FOR THE WORK WHICH THEY PERFORM. ALL MATERIALS USED, UNLESS OTHERWISE SPECIFIED, SHALL BE NEW AND OF THE TYPES AND GRADES SPECIFIED. THE CONTRACTOR SHALL, IF REQUESTED, FURNISH EVIDENCE SATISFACTORY TO THE RDPRC THAT SUCH IS THE CASE.
3. CONTRACTOR'S CREWS ASSIGNED TO ANY WORK PERFORMED UNDER THIS CONTRACT SHALL INCLUDE ONE COMPETENT AND FULLY EXPERIENCED PERSON DESIGNATED AS THE RESPONSIBLE PERSON IN CHARGE. SUCH PERSON MUST BE IDENTIFIED BY NAME TO THE DISTRICT IN ADVANCE OF ANY WORK. UPON REQUEST, THE CONTRACTOR SHALL PROMPTLY FURNISH TO THE DISTRICT INFORMATION RELATING TO THIS EMPLOYEE'S EXPERIENCE.
4. WORKMANSHIP SHALL BE EQUAL OR BETTER IN QUALITY TO THAT REQUIRED BY THE CONSTRUCTION TRADES FOR A FINISHED PRODUCT. A QUALITY CONTROL SUPERVISOR, DESIGNATED BY THE MANUFACTURER, SHALL REVIEW ALL WORK IN PROGRESS AND SHALL REVIEW THE FINISHED BUILDING PRIOR TO FINAL INSPECTION TO ASSURE IT IS COMPLETE AND CORRECT. THE QUALITY CONTROL SUPERVISOR SHALL HAVE THE AUTHORITY TO HAVE MATERIALS REPLACED AND WORK REDONE IN ORDER TO CORRECT FAULTY MATERIALS OR WORKMANSHIP.

GENERAL DESIGN REQUIREMENTS

1. UP TO TEN (10) MODULES, APPROXIMATELY 12' x 40', DESIGNED SO THAT TWO (2) OR MORE MODULES MAY BE JOINED TOGETHER TO FORM A COMPLETE STRUCTURE, TO MAINTAIN A POSITIVE ALIGNMENT OF FLOORS, WALLS, AND ROOF, AND TO PERMIT SIMPLE NON-DESTRUCTIVE DETACHMENT FOR FUTURE RELOCATION.
2. EACH MODULE SHALL BE PERMANENTLY IDENTIFIED WITH (2) IMPRINTED (STAMPED, NOT ENGRAVED) METAL IDENTIFICATION TAGS 3"x1-1/2" MINIMUM SIZE WITH THE FOLLOWING INFORMATION:
   A. MANUFACTURER'S NAME AND BUILDING SERIAL NUMBER.
   B. DESIGN WIND SPEED / EXPOSURE
   C. DESIGN SEISMIC S_{DS} VALUE
   D. DESIGN ROOF LIVE LOAD & SNOW LOAD.
   E. DESIGN FLOOR LIVE LOAD
   F. D.S.A. APPLICATION NUMBER
3. 2-TAGS PER MODULE: ONE ON EXTERIOR, AND ONE ON MODULE BEAM AT FRONT OF BUILDING ABOVE CEILING.
4. EACH MODULE SHALL BE CAPABLE OF RESISTING ALL VERTICAL AND LATERAL LOADS DURING TRANSPORTATION AND RELOCATION. (NORMAL INDUSTRY PRACTICE FOR BRACING MODULES DURING TRANSPORTATION AND RELOCATIONS IS ACCEPTABLE.) WHEN MODULES ARE ASSEMBLED JOINTS SHALL BE SEALED WITH REMOVABLE CLOSING STRIPS OR OTHER METHOD TO PRESENT A FINISHED APPEARANCE AND BE PERMANENTLY WATERPROOF.
5. EACH MODULE SHALL BE SUFFICIENTLY RIGID TO BE JACKED UP AT THE FRONT AND BACK CORNERS FOR RELOCATION WITHOUT DAMAGE OR THE MODULE SHALL HAVE LIFT LUGS AT FRONT AND BACK LOCATED AS REQUIRED SO THAT THE MODULE MAY BE JACKED UP FOR RELOCATION IN ONE PIECE WITHOUT ADDITIONAL SUPPORTS OF ANY TYPE. EVIDENCE OF EXCESSIVE BOWING DURING THE INSTALLATION OF THE MODULES WHICH, IN THE OPINION OF THE RDPRC, CAUSES EXCESSIVE WORKING AT ANY JOINT OR COMPROMISES THE STRUCTURAL INTEGRITY OF THE MODULE SHALL BE SUFFICIENT REASON FOR REJECTION OF THE MODULE.
6. FINISH AND BASE MATERIALS AT EACH MODULE SHALL TERMINATE AT INTERIOR MODULE JOINTS IN A MANNER TO JOIN FLUSH AND TIGHT WITH SAME MATERIAL IN ADJACENT MODULE SO THE MODULE MAY BE RELOCATED WITH MINIMUM CUTTING AND PATCHING.

BUILDING COMMISSIONING REQUIREMENTS

A. SITE-SPECIFIC BUILDINGS OVER 10,000 SQUARE FEET MUST BE COMMISSIONED PER CALIF. TITLE 24, PART 6 - CALIFORNIA ENERGY CODE (CEC).

SUMMARY OF COMMISSIONING REQUIREMENTS
1. OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS
2. BASIS OF DESIGN
3. DESIGN PHASE DESIGN REVIEW
4. COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS
5. COMMISSIONING PLAN
6. FUNCTIONAL PERFORMANCE TESTING
7. DOCUMENTATION AND TRAINING
8. COMMISSIONING REPORT

B. COMMISSIONING IS NOT A PART OF THE PC APPROVAL.

C. COMMISSIONING, WHEN REQUIRED, SHALL BE PROVIDED BY OTHERS.

MARKERBOARD SPECIFICATIONS

MARKERBOARDS SHALL BE 24 GA. PORCELAIN STEEL FACING SHEET SUITABLE TO ACCEPT DRY ERASE FELT MARKERS. THE FACING SHEET SHALL BE LAMINATED TO PARTICLE BOARD SUBSTRATE WITH A MINIMUM DENSITY OF 45lbs./cu.ft. THE PANEL SHALL HAVE A FOIL BACKING. THE PANELS SHALL HAVE EXTRUDED ALUMINUM MOLDING AND CHALKRAIL WITH A MINIMUM OF 2 15/16" PROJECTION FROM THE FACE OF PANEL. THREE MAP HOOKS WITH CLIPS PER PANEL SHALL BE PROVIDED. ONE FLAG HOLDER, 1/2" SIZE, SHALL BE PROVIDED FOR EACH CLASSROOM. EACH CLASSROOM SHALL HAVE 2 EACH 4'x8' PANELS INSTALLED SIDE BY SIDE TO MAKE A 4'x16' PANEL, CENTERED ON THE WALL.

FOR ANCHORAGE DETAIL, SEE DETAIL 8/A4.0.

REFERENCE BRANDS: CHATFIELD-CLARKE Co, Inc. SERIES 500 OR NELSON ADAMS Co. NACO SERIES 60.

INTERIOR

1. FLOOR COVERING: PER CBC SECTION 804, COMPLY WITH NFPA 253 CLASS I OR II. COMPLY WITH ASTM E 648 FOR SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 450. IN EXIT PASSAGEWAYS OR CORRIDORS, THE MINIMUM CRITICAL RADIANT FLUX (CBC 804.4.2) SHALL NOT BE LESS THAN CLASS II. (CARPET SHALL BE SECURELY ATTACHED, HAVE FIRM CUSHION, PAD OR BACKING, OR NONE AT ALL. PILE YARN SHALL BE BRANDED NYLON AND HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL-CUT PILE OR LEVEL-CUT/UNCUT PILE TEXTURE. THE MAXIMUM PILE HEIGHT SHALL BE 1/2" INCH. NO CROSS SEAMS SHALL BE ALLOWED. THE CARPET DENSITY SHALL BE 4600 MINIMUM. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 11B-303. COLOR TO BE SELECTED BY THE RDPRC OR OWNER.)
2. BASE: RESILIENT COVE BASE - BEST QUALITY, MOULDED RUBBER, 1/8" THICK, 4" HIGH MOULDED TOP SET COVE. PROVIDE PREFORMED BASE FOR SQUARE EXTERNAL CORNERS AND PREFORMED END STOPS WHERE BASE DOES NOT ABUT. SOLID COLOR AS MANUFACTURE BY "JOHNSONITE CO.", FLEXCO, OR EQUAL. APPLY COVE TO COMPLETE PERIMETER OF CLASSROOM.
3. INTERIOR WALLS SHALL BE VINYL COVERED TACKBOARD (U.O.N.) APPLIED IN ONE CONTINUOUS LENGTH FROM FLOOR TO CEILING. THE TACKBOARD SHALL BE INDUSTRIAL INSULATION BOARD MANUFACTURED SPECIFICALLY AS A SUBSTITUTE FOR VINYL COVERED WALL PANELS. THE BOARD SHALL BE ASPHALT FREE, SHALL HAVE AN IRONED-ON COATING AND SHALL HAVE A MINIMUM DENSITY OF 18 LBS. PER FOOT. THE VINYL COATING SHALL BE MADE OF VIRGIN VINYL CALENDERED BASE COLOR, WEIGHING A MINIMUM OF 8 OZ. PER SQUARE YARD. THE COATING BACKING SHALL BE SHEETING OR NON-WOVEN FABRIC. THE VINYL COATING SHALL BE MECHANICALLY LAMINATED, WITH THE LONG EDGES WRAPPED TO THE TACKBOARD. TACKBOARD SHALL BE APPLIED OVER 1/2" SHEETROCK OR OSB SHEATHING. THE VINYL WALL COVERED PANEL SHALL HAVE A CLASS 'C' RATING (PER ASTM E 84 OR UL 723). FLAME SPREAD/SMOKE DEVELOPED INDEX MAXIMUMS PER NOTE #6 BELOW. THE PANEL SHALL BE APPROVED FOR CLASSROOM USE BY THE CALIFORNIA STATE FIRE MARSHAL. REFERENCE BRAND: VINYL COVERED TACKBOARD AS MANUFACTURED BY CHATFIELD-CLARKE OR COMPARABLE. CARE SHALL BE TAKEN IN MOUNTING THE TACKBOARD SO THAT THE TEXTURE OF ALL PANELS WILL HAVE THE SAME ORIENTATION AND COLOR MATCH.
4. CEILING: SUSPENDED T-BAR SYSTEM, SEE SHEET M1.4 FOR DETAILS, MATERIALS AND INSTALLATION PER ASTM C635, ASTM C636, ASTM E580, AND DSA-IR 25-2.13 AS APPLICABLE TO CLASSROOMS. PANELS SHALL BE 5/8" MINIMUM THICK, MINERAL FIBERBOARD OR VINYL-FACED FIBERGLASS LAY-IN PANELS, SQUARE EDGE, LIGHT REFLECTION 75% MINIMUM. NOISE REDUCTION COEFFICIENT OF 0.65 MINIMUM. ASTM E 84 TESTED, RATED CLASS 'C': FLAME SPREAD INDEX NOT TO EXCEED 200, SMOKE DEVELOPED INDEX RATING NOT TO EXCEED 450.
5. THE INTERIOR ENVIRONMENT SHALL BE ASSEMBLED WITH PRODUCTS THAT CONTRIBUTE TO A HEALTHY INDOOR AIR QUALITY (IAQ). THE FOLLOWING SHALL COMPLY TITLE 24, PART 11 ("CAL-GREEN"), SECTION 5.504.4. (SEE SHEET N1.0, SECTION 9C "INTERIOR AIR QUALITY CONTROL")
6. FLAME SPREAD/SMOKE-DEVELOPED INDEX (TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, PER CBC 803.1.1):

WALL FINISH MATERIAL (CLASS 'C')	PIPE INSULATION (CLASS 'A')
FLAME SPREAD MAX = 200	FLAME SPREAD MAX = 25
SMOKE DEVELOPED MAX = 450	SMOKE DEVELOPED MAX = 450
BUILDING INSULATION (CLASS 'A')	**DUCT INSULATION (CLASS 'A')**
FLAME SPREAD MAX = 25	FLAME SPREAD MAX = 25
SMOKE DEVELOPED MAX = 450	SMOKE DEVELOPED MAX = 50

7. TOILET PARTITIONS: SOLID PLASTIC BY ACCURATE PARTITIONS CORP. OR EQUIVALENT w/ FLOOR ANCHORS, OVERHEAD BRACED OR EQUIVALENT. MINIMUM FLAME SPREAD RATING: 50. MINIMUM SMOKE DEVELOPMENT RATING: 450. (BY OTHERS)
8. INTERIOR VENTILATION: EAVE VENTS AND ATTIC VENTS SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF NOT LESS THAN 1/16" AND NOT MORE THAN 1/4" INCH, PER C.B.C SECTION 1203.2.1.

DOORS & WINDOWS

1. EXTERIOR DOORS: METAL DOORS - 3'-0"x7'-0" HOLLOW METAL DOOR CONSTRUCTION OF 1 SHEET OF 18 GA. GRADE II STEEL ASSEMBLED PER CS242 MINIMUM, AND REINFORCED WITH 20 GA. MINIMUM. FILL DOOR SPACES WITH MINERAL WOOL OR OTHER INSULATION. (REINFORCE BOTH FACES FOR CLOSURE.) PROVIDE FLUSH TOP ON DOORS. HARDWARE REINFORCEMENT SHALL BE 10 GA. MIN FOR HINGES, DOOR FRAME SHALL BE 16 GA. PRESSED STEEL FRAME ASTM A366 & CS242. HARDWARE REINFORCEMENT SHALL BE 10 GA. PLATE. FRAMES SHALL BE DESIGNED WITH INTEGRAL STOP AND TRIM. PROVIDE (3) ANCHORS PER JAMB PLUS ADJUSTABLE FLOOR ANCHOR. ROOMS WITH AN OCCUPANT LOAD OF FIVE OR MORE SHALL HAVE DOOR HARDWARE CAPABLE OF BEING LOCKED FROM THE INSIDE (PER CBC 1010.1.11).
2. EXTERIOR WINDOWS: PROVIDE ANODIZED ALUMINUM FRAME 5/8" MINIMUM DUAL PANE WINDOW UNITS, AS SHOWN ON FLOOR PLANS. THE 5/8" DIMENSION IS THE MINIMUM THICKNESS FOR THE DUAL GLAZED WINDOW PANEL CONSISTING OF TWO LITES OF GLASS AND THE AIR SPACE.
3. GLAZING MATERIAL SHALL BE: EXTERIOR LITE - 3/16" MINIMUM TEMPERED GLASS OR LAMINATED AS - 1 GLASS OF SOLAR GRAY GLARE REDUCING TYPE WITH A LIGHT TRANSMISSION FACTOR OF 45% MAXIMUM. INTERIOR LITE - 1/8" MINIMUM CLEAR TEMPERED. MINIMUM AIR SPACE SHALL BE 1/4" SPACE - BENT OR SEALED CORNER ALUMINUM WITH DESICCANT FILL SEALER - BUTYL PRIMARY SEAL AND POLYSULFIDE OR SILICONE SECONDARY SEAL. CERTIFICATION - ALL GLAZING TO BE CERTIFIED IN ACCORDANCE WITH ASTM E-773, E-774.
4. HEADER HEIGHT SHALL BE THE SAME AS THE DOOR. ALL OPERABLE SASH SHALL HAVE ALUMINUM SCREENS. WINDOWS SHALL NOT BE MOUNTED TO THE EXTERIOR OSB SURFACE. ALL WINDOWS SHALL MEET THE AAMA GS101-88 VOLUNTARY SPEC. FOR ALUMINUM PRIME WINDOWS AND SLIDING GLASS (ANS1), COMMERCIAL GRADE.

MECHANICAL EQUIPMENT PROTECTION

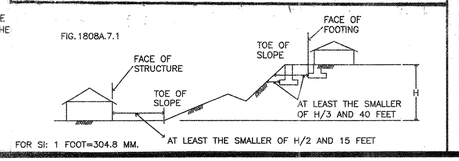
1. ALL MECHANICAL EQUIPMENT SHALL BE THOROUGLY CLEANED PROGRESSIVELY DURING CONSTRUCTION AND COMPLETION OF THE JOB. ALL OPEN ENDS OF DUCTWORK AND EQUIPMENT SHALL BE COVERED AT END OF EACH WORK DAY AND DURING SHIPMENT OF RELOCATABLE BUILDINGS

FOUNDATION CLEARANCES FROM SLOPES

1808A.7.1 BUILDING CLEARANCE FROM ASCENDING SLOPES. IN GENERAL, BUILDINGS BELOW SLOPES SHALL BE SET A SUFFICIENT DISTANCE FROM THE SLOPE TO PROVIDE PROTECTION FROM SLOPE DRAINAGE, EROSION AND SHALLOW FAILURES. EXCEPT AS PROVIDED IN SECTION 1808A.7.5 AND FIGURE 1808A.7.1, THE FOLLOWING CRITERIA WILL BE ASSUMED TO PROVIDE THIS PROTECTION. WHERE THE EXISTING SLOPE IS STEEPER THAN ONE UNIT VERTICAL IN ONE UNIT HORIZONTAL (100-PERCENT SLOPE), THE TOE OF THE SLOPE SHALL BE ASSUMED TO BE AT THE INTERSECTION OF A HORIZONTAL PLANE DRAWN FORM THE TOP OF THE FOUNDATION AND A PLANE DRAWN TANGENT TO THE SLOPE AT AN ANGLE OF 45 DEGREES (0.79 RAD) TO THE HORIZONTAL. WHERE A RETAINING WALL IS CONSTRUCTED AT THE TOE OF THE SLOPE, THE HEIGHT OF THE SLOPE SHALL BE MEASURED FROM THE TOP OF THE WALL TO THE TOP OF THE SLOPE.

1808A.7.2 FOUNDATION SETBACK FROM DESCENDING SLOPE SURFACE. FOUNDATIONS ON OR ADJACENT TO SLOPE SURFACES SHALL BE FOUNDED IN FIRM MATERIAL WITH AN EMBEDMENT AND SET BACK FROM THE SLOPE SURFACE SUFFICIENT TO PROVIDE VERTICAL AND LATERAL SUPPORT FOR THE FOUNDATION WITHOUT DETRIMENTAL SETTLEMENT. EXCEPT AS PROVIDED FOR IN SECTION 1808A.7.5 AND FIGURE 1808A.7.1, THE FOLLOWING SETBACK IS DEEMED ADEQUATE TO MEET THE CRITERIA. WHERE THE SLOPE IS STEEPER THAN 1 UNIT VERTICAL IN 1 UNIT HORIZONTAL 100-PERCENT SLOPE), THE REQUIRED SETBACK SHALL BE MEASURED FROM AN IMAGINARY PLANE 45 DEGREES (0.79 RAD) TO THE HORIZONTAL, PROJECTED UPWARD FROM THE TOE OF THE SLOPE.

FIG. 1808A.7.1



FOR SI: 1 FOOT=304.8 MM.

FIRE EXTINGUISHER

1. EACH CLASSROOM SHALL BE EQUIPPED WITH PRESSURE TYPE FIRE EXTINGUISHERS WITH 2A10BC UL RATING. MOUNT ON THE INTERIOR WALL OF THE BUILDING NEAR THE DOORWAY(S) AT A MAXIMUM HEIGHT OF 4 FEET TO THE TOP OF THE OPERATING HANDLE, AND THE BOTTOM OF F.E. MOUNTED 27" OR LESS A.F.F. FIRE EXTINGUISHERS SHALL BE TOTALLY CHARGED AND HAVE A DIAL INDICATING THE STATE OF CHARGE.

ACCESSIBILITY STANDARDS

REFERENCE: 2016 CALIFORNIA BUILDING CODE (TITLE 24, PART 2, CCR), CHAPTER 11B "ACCESSIBILITY TO PUBLIC..."

SECTION 11B-206.2 BUILDING ACCESSIBILITY, GENERAL
1. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ALL BUILDINGS, ELEMENTS, AND AREAS, AND EACH FLOOR INCLUDING MEZZANINES.

SECTION 11B-216 SIGNAGE
(ALSO REFER TO SECTIONS 11B-703, 1009.9, 1009.10, 1023.9)
SIGNAGE IS REQUIRED:
1. TO IDENTIFY PERMANENT ROOMS & SPACES
2. TO PROVIDE DIRECTIONS AND INFORMATION ABOUT SPACES & FACILITIES
3. TO IDENTIFY MEANS OF EGRESS
   A. AREAS OF REFUGE AND AREA FOR ASSISTED RESCUE (PER 1009.9 AND 1009.11)
   B. DIRECTIONS TO AN EXIT (PER 1009.10)
   C. DELAYED EGRESS LOCKS (PER 1010.1.9.7 ITEM 6)
   D. EXIT WAYS (PER 1013.4)
      - AT EACH GRADE LEVEL EXTERIOR EXIT DOOR
      - AT AN EXIT BY MEANS OF A STAIRWAY OR RAMP ("EXIT STAIR DOWN" OR "EXIT RAMP DOWN")
      - AT AN EXIT ROUTE VIA ENCLOSURE, PASSAGEWAY, CORRIDOR, HALLWAY, ETC.
      - OTHER HORIZONTAL WAYS WHERE THE EXIT OR EXIT PATH IS NOT IMMEDIATELY VISIBLE (PER 1013.1)
4. TO IDENTIFY PARKING SPACES
5. TO IDENTIFY ENTRANCES OR ROUTE TO AN ACCESSIBLE ENTRANCE
6. TO IDENTIFY ELEVATORS
7. TO IDENTIFY TOILET ROOMS
8. TO IDENTIFY PUBLIC TELEPHONES, TTY and ASSISTIVE LISTENING SYSTEMS

SIGNS, WHERE LOCATED WITHIN AN ACCESSIBLE ROUTE, MOUNTED LESS THAN 80" ABOVE THE FINISHED FLOOR, MUST HAVE ROUNDED EDGES OR AN EASED RADIUS MINIMUM OF 0.125".

SECTION 11B-404.2.8 DOOR CLOSING SPEED
1. THE SWEEP PERIOD OF ACCESSIBLE DOORS SHALL BE 5 SECONDS MINIMUM, FROM AN OPEN DOOR POSITION OF 90 DEGREES, TO A DOOR POSITION OF 12" FROM THE LATCH.

SECTION 11B-404.2.9 DOOR OPENING FORCE
1. THE EFFORT TO OPEN ANY DOOR SHALL NOT EXCEED 5LBS, EXCEPT FIRE DOORS, WHICH SHALL NOT EXCEED 15LBS FORCE. THE MINIMUM FORCE NEEDED SHALL BE USED.

SECTIONS 11B-404.2.4.3 RECESSED DOORS
1. DOORS RECESSED 8" OR MORE SHALL HAVE STRIKE EDGE CLEARANCES IN ACCORDANCE WITH FIGURE 11B-404.2.4.3.

SECTION 11B-405.5 RAMP WIDTH
1. THE CLEAR WIDTH OF A RAMP SHALL BE 48" MINIMUM.

SECTION 11B-505 HANDRAILS
1. THE TOP OF THE GRIPPING SURFACE OF HANDRAILS SHALL BE BETWEEN 34" AND 38", MEASURED VERTICALLY FROM WALKING SURFACES AND STAIR NOSINGS.
2. HANDRAILS SHALL HAVE AT LEAST 1-1/2" CLEARANCE ALL AROUND.
3. HANDRAILS SHALL EXTEND BEYOND, AND IN THE SAME DIRECTION, OF STAIRS AND RAMPS.

SECTION 11B-608.5 WATER CONTROLS
1. CONTROLS TO OPERATE A WATER FAUCET OR OUTLET SHALL BE A SINGLE-LEVER DESIGN, CAPABLE OF BEING OPERATED WITH A SINGLE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
2. THE FORCE REQUIRED TO OPERATE CONTROLS SHALL NOT EXCEED 5 LBS.

SECTION 11B-604 TOILET ROOMS AND BATHING ROOMS
1. AN ACCESSIBLE TOILET STALL SHALL HAVE A MINIMUM WIDTH OF 60" AND SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC-CLOSING DEVICE, AND SHALL HAVE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32 INCHES WHEN LOCATED AT THE END AND 34 INCHES WHEN LOCATED AT THE SIDE, WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
2. THE INSIDE AND OUTSIDE OF THE ACCESSIBLE COMPARTMENT DOOR SHALL BE EQUIPPED WITH A LOOP OR U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH. THE LATCH SHALL BE FLIP-OVER STYLE, SLIDING OR OTHER HARDWARE NOT REQUIRING THE USER TO GRASP OR TWIST.
3. EXCEPT FOR DOOR-OPENING WIDTHS AND DOOR SWINGS, A CLEAR, UNOBSTRUCTED ACCESS OF NOT LESS THAN 44 INCHES SHALL BE PROVIDED TO THE WATER CLOSET COMPARTMENTS DESIGNED FOR USE BY PERSONS WITH DISABILITIES.
4. A 27"-29" MINIMUM DIMENSION IS REQUIRED FOR LAVATORY/SINK KNEE CLEARANCE, WHICH IS THE DISTANCE FROM THE FINISH FLOOR TO THE UNDERSIDE OF THE LAVATORY/SINK.
5. TABLE 11B-604.9 SUGGESTS DIMENSIONS FOR CHILDREN'S USE.

OUTDOOR VENTILATION REQUIREMENTS:

1. CLASSROOMS ARE DESIGNED FOR MINIMUM OUTSIDE AIR OF 0.38 CFM PER SF. PER THE CALIFORNIA ENERGY CODE (CEC), SPACES SHALL BE DESIGNED TO THE MINIMUM REQUIREMENTS AS SPECIFIED OR TO 15 CFM PER OCCUPANT, WHICHEVER IS GREATER. PC MANUFACTURER SHALL VERIFY WITH THE SCHOOL DISTRICT THE EXPECTED NUMBER OF OCCUPANTS IN THE CLASSROOM SO THAT THE OUTDOOR VENTILATION RATE FOR MECHANICAL SYSTEMS CAN BE ADEQUATELY ADJUSTED UPON SITE INSTALLATION OF THE BUILDING. PC MANUFACTURER SHALL ALSO CONFIRM WITH HVAC EQUIPMENT MANUFACTURER THAT THE SELECTED EQUIPMENT WILL BE ABLE TO PERFORM TO ACCOMMODATE THE ADDITIONAL OUTDOOR AIR REQUIREMENTS UNDER PEAK DESIGN CONDITIONS FOR THE CLIMATE ZONE IN WHICH THE BUILDING IS LOCATED. AT OCCUPANCY, THE BUILDING MANUFACTURER SHALL PROVIDE TO BUILDING OWNER A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RECIRCULATED AIR THAT THE VENTILATION SYSTEMS ARE DESIGNED TO PROVIDE TO EACH AREA.
2. FOR CLASSROOMS GREATER THAN 750 SF OCCUPANT SENSOR VENTILATION CONTROL DEVICES SHALL BE INSTALLED PER CEC 120.2(e)3, AND SHALL OPERATE IN ACCORDANCE WITH CEC 120.1(c)5.

LIGHT GAUGE METAL STUDS & COLD FORMED STEEL

1. ALL LIGHT GAUGE METAL STUDS & COLD FORMED STEEL SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE AISI S100-07/S2-10.
2. ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A653.
3. CUSTOM FORMED SHAPES SHALL BE BENT FROM ASTM A1011 STEEL SHEETS.
4. STUD AND TRACK DESIGNATIONS ARE BASED ON STEEL STUD MANUFACTURERS ASSOCIATION. ICC-ES EVALUATION REPORT ESR-3064P.
5. GALVANIZED FRAMING PRODUCTS SHALL BE COATED IN ACCORDANCE WITH 2012 AISI S200-12, SECTION A4. PRODUCTS WILL BE FURNISHED WITH A G-60 OR EQUIVALENT COATING IF SPECIFIED, AND SHALL BE IN CONFORMANCE WITH ASTM C-955, OTHERWISE, G-90 OR EQUIVALENT COATING WILL BE PROVIDED.
6. LIGHT GAUGE STEEL TUBES FOR GUARD RAILS/POSTS SHALL BE 33 KSI MINIMUM w/ A MODULUS OF ELASTICITY OF 29,500 KSI ±3%. ACCEPTABLE STEEL MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   6.1. ASTM A1011 SS GRADE 33 (F_Y = 33 KSI)
   6.2. ASTM A653 SS GRADE 33 (F_Y = 33 KSI)
   6.3. ASTM A1008 SS GRADE 33 (F_Y = 33 KSI)
7. FLAT STRAP CROSS BRACING AT ROOF DIAPHRAGMS SHALL BE:
   7.1. ASTM A1011 SS GRADE 50 (F_Y = 50 KSI)
   7.2. ASTM A1008 SS GRADE 50 (F_Y = 50 KSI)
   7.3. OR ASTM A653 SS GRADE 50 (F_Y = 50 KSI)
8. WELDING OF LIGHT GAUGE METAL STUDS & COLD FORMED STEEL SHALL COMPLY WITH AWS D1.3-08.

ABBREVIATION LEGEND

A	ACCESSIBLE
AC	ASPHALT CONCRETE
A/C	AIR CONDITIONING
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS	ACOUSTICAL
ADD	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE OR ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECT(URAL)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWC	AMERICAN WOOD COUNCIL
AWPA	AMERICAN WOOD PROTECTION ASSOCIATION
AWS	AMERICAN WELDING SOCIETY
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BN	BOUNDARY NAILING
BOT/BOTT	BOTTOM
BTWN	BETWEEN
BUR	BUILT UP ROOFING
C	CARPET
CAB	CABINET
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CCR	CALIFORNIA CODE OF REGULATIONS
CEM	CEMENT
CF	CUBIC FOOT
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CLG	CEILING
CLR	CLEAR
CT	CERAMIC TILE
CMU	CONCRETE MASONRY UNIT
CNEL	COMMUNITY NOISE EQUIVALENT LEVEL
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CSK	COUNTERSINK
CTRD	CENTERED
CW	COLD WATER
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN OR DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DR	DOOR
DS	DOWNSPOUT
DSA	DIVISION OF THE STATE ARCHITECT
DWG	DRAWING
(E)	EXISTING
EA	EACH
EJ	EXPANSION JOINT
ELEV	ELEVATION
ELECT	ELECTRICAL
EMBED	EMBEDMENT
EMT	ELECTRICAL MAGNETIC TUBING
EN	EDGE NAILING
ETC	ET CETERA
EQ	EQUAL
EW	EACH WAY
EXP	EXPOSURE
EXT	EXTERIOR
F	FAHRENHEIT
FUT	FUTURE
FAB	FABRICATION
FAC	FACTORY
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FHWS	FLAT HEAD WOOD SCREW
FIN	FINISH
FLR	FLOOR
FLSHG	FLASHING
FN	FIELD NAILING
FND/FNDN	FOUNDATION
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOP	FACE OF PLYWOOD
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PLASTIC PANELS
FT	FOOT
FTG	FOOTING
FURR	FURRED (-ING)
GA	GAUGE
GB	GYPSUM BOARD
GL	GLASS OR GLAZING
GLV/GALV	GALVANIZED
GSM	GALVANIZED SHEET METAL
GYP	GYPSUM
GYP.BD.	GYPSUM BOARD
HB	HOSE BIBB
HC	HOLLOW CORE
HDR	HEADER
HDW	HARDWOOD
HF	HEM FIR
HM	HOLLOW METAL (STEEL)
HOR/HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION (STEEL)
HT	HEIGHT
HVAC	HEATING VENTILATING AIR CONDITIONING
HW	HOT WATER
IAPMO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATE (D), (ION)
INT	INTERIOR
INV	INVERT
IR	INTERPRETATION OF REGULATIONS
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY/ACCESS
JT	JOINT
KSI	KIPS PER SQUARE INCH (KIPS = 1,000LBS)
LAM	LAMINATE(D)
LAV	LAVATORY
LB, LBS	POUND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNDG	LANDING
LONG	LONGITUDINAL
LS	LAG SCREW
LT	LIGHT
LW	LIGHT WEIGHT
LWC	LIGHT WEIGHT CONCRETE
MATL	MATERIAL
MAX	MAXIMUM
MB	MECHANICAL BOLT
MECH

DOOR SCHEDULE

DOORS							FRAMES			
DOOR NO.	DOOR TYPE	DOOR SIZE	QUANTITY	MATERIAL	FINISH	HARDWARE SET NO.	FRAME TYPE	MATERIAL	FINISH	REMARKS
(1)	(D1)	3'–0" x 7'–0"	100	HM	PT	A	(F1)	S	PT	HARDWARE LOCKABLE FROM THE INSIDE, SEE DOOR NOTE #3

DOOR ABBREVIATIONS

HM – HOLLOW METAL
AL – ALUMINUM
S – STEEL
SST – STAINLESS STEEL
STL – STEEL FRAME, 16ga. FULLY WELDED
WWF – WINDOW WALL FRAME
SC – SOLID CORE WOOD
HC – HOLLOW CORE WOOD
PT – PAINTED
CA – CLEAR ANODIZED
BR – BRONZE ANODIZED
CLR – CLEAR FINISH

DOOR NOTES

1. DOORS SHALL COMPLY WITH C.B.C. SECTION 1010.
2. CLASSROOMS ≥ 1000 S.F WILL REQUIRE PANIC HARDWARE THAT COMPLIES WITH C.B.C. SECTION 1010.1.10.
3. PER C.B.C. 1010.1.11: PROVIDE LOCKS THAT ALLOW DOORS TO CLASSROOMS AND ANY ROOM WITH AN OCCUPANCY OF FIVE OR MORE PERSONS TO BE LOCKED FROM THE INSIDE. LOCKS SHALL COMPLY WITH C.B.C. SECTION 1010.1.9.

WINDOW SCHEDULE

WINDOW TYPE	QTY.	FUNCTION	'W' WIDTH	'H' HEIGHT	FINISH	GLASS TYPE	U FACTOR	SHGC	VT MIN	MIN STC RATING	REMARKS
(A)	200	FIXED	8'–0"	4'–0"	BRONZE ANODIZED	SOLAR GREY	0.780	0.430	0.37	27	INOPERABLE

WINDOW NOTES

1. EXTERIOR LITE – 3/16" MINIMUM TEMPERED GLASS, OR LAMINATED AS 1 GLASS OF SOLAR GRAY GLARE REDUCING TYPE WITH A LIGHT TRANSMISSION FACTOR OF 45% MAXIMUM.
2. WINDOWS THAT MEETS ALL OF THE FOLLOWING CONDITIONS SPECIFIED IN SECTION 2406.4.3, SHALL BE CONSIDERED A HAZARDOUS LOCATION:
   A. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET.
   B. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE FINISH FLOOR.
   C. THE TOP EDGE OF THE GLAZING IS GREATER THAN 36" ABOVE FINISH FLOOR.
   D. ONE OR MORE WALKING SURFACE(S) ARE WITHIN 36", MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE PLANE OF THE GLAZING.
3. WINDOWS THAT ARE CONSIDERED A HAZARDOUS LOCATION SHALL CONTAIN FULLY TEMPERED SAFETY GLAZING & MEET THE FOLLOWING REQUIREMENTS:
   A. PASS THE IMPACT TEST REQUIREMENTS IN ACCORDANCE WITH "CPSC 16 CFR PART 1201" PER SECTION 2406.2, WITH A TEST CRITERIA OF CATEGORY II, UNLESS OTHERWISE INDICATED IN C.B.C. TABLE 2406.2(1).
   B. IDENTIFICATION OF SAFETY GLAZING PER C.B.C. 2406.3

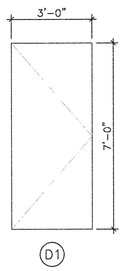
FINISHES

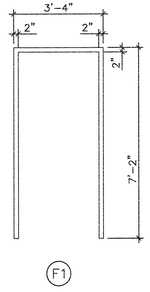
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CEILING HEIGHT	REMARKS
				FRONT	REAR	RIGHT	LEFT			
101	CLASSROOM	A	D	F	F	F	F	K	8'–6"	

FINISH INDICATOR OPTIONS

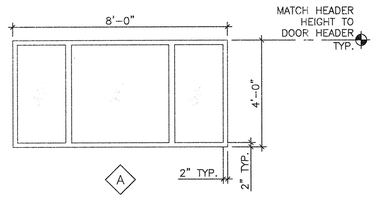
A – CARPET; PER STATE OF CALIF SPEC COMPLYING WITH GROUP 1, TYPE A OR TYPE B, CLASS 2, DENSITY 4600. (N.I.C.)
~~B – VINYL SHEET FLOORING; 0.6 MIN, C.O.F. PER ASTM D 2047~~
~~C – VCT; ARMSTRONG, STANDARD, OR EXCELON.~~
D – TOP SET BASE; 4" (N.I.C.)
~~E – TOP SET BASE; 6"~~
F – WALL FINISH; 1/2" VINYL TACKBOARD CLASS 1 OVER 1/2" GYP BOARD BACKING
~~G – 1/2" W.R. GYP BOARD; TAPE, PAINTED FINISH~~
~~H – 1/2" GYP BOARD; TAPE, PAINTED FINISH~~
~~J – 3/32" F.R.P.; OVER 1/2" W.R. GYP BOARD~~
K – ACOUSTICAL LAY–IN GRID CEILING PANELS; ~~2'x2' OR~~ 2'x4'
~~L – 1/2" VINYL TACKBOARD; CLASS 1, OVER 5/8" TYPE "X" GYP BOARD BACKING~~
~~M – 5/8" TYPE 'X' GYP BOARD; TAPE, TEXTURE, PAINTED FINISH~~
~~N – CERAMIC TILE – (FULL HEIGHT AT WALLS)~~
~~O – EXPOSED CONCRETE WITH CONCRETE SEALER~~
~~P – CLOUD CEILING PANELS~~

DOOR TYPES





WINDOW TYPES



NOTE: WINDOWS ARE INOPERABLE.

ROOM FINISHES SCHEDULE

DOOR FRAME TYPES

A	EXTERIOR DOOR LOCKSET w/LEVER RHODES SCHLAGE ND95PD
~~B~~	~~EXTERIOR DOOR PANIC BAR w/PULL ON EXTERIOR VON DUPRIN AX22NL (REQUIRED WHEN OCCUPANT LOAD IS 50 OR MORE)~~
~~C~~	~~INTERIOR PASSAGE COPPER CREEK 6220 PASSAGE w/ADA LEVER~~
~~D~~	~~INTERIOR RESTROOM COPPER CREEK 6231–RESTROOM w/ADA LEVER~~
~~E~~	~~INTERIOR ENTRY/OFFICE COPPER CREEK 6241–ENTRY/OFFICE w/ADA LEVER~~
~~F~~	~~INTERIOR STOREROOM COPPER CREEK 6250–STOREROOM w/ADA LEVER~~
~~G~~	~~INTERIOR CLASSROOM COPPER CREEK 6260–CLASSROOM w/ADA LEVER~~

EXTERIOR DOOR HARDWARE

1. HINGES: HAGER 4–1/2x4–1/2 BUTTS, BB1279 US26D, 1–1/2 PAIR PER DOOR, WITH SET SCREW IN BARREL AND BALL BEARING DESIGN.
2. CLOSER: NORTON 8500DA OR 8500BF SERIES, LCN 1460 DEL SERIES OR EQUAL. (5 LBS. MAX. PRESSURE)
3. WEATHERSTRIPPING: ALL EXTERIOR DOORS SHALL BE WEATHERSTRIPPED WITH PEMKO 299D, ULTRA WS007 OR EQUAL, AT DOOR JAMBS AND HEAD.
4. THRESHOLD: THRESHOLD SHALL BE PEMKO 271 AV 5" ALUMINUM WITH PEMKO 216 AV ULTRA TH042 DOOR BOTTOM.
5. LOCKDOWN: INTERIOR TEACHERS' MANUAL LOCK FOR CAMPUS LOCK DOWN CRITERIA – REQUIRED FOR STATE–FUNDED SCHOOLS, PER EDUCATION CODE SECTION 17075.50 (AND ALSO CBC 1010.1.11): PROVIDE LOCKS THAT ALLOW DOORS TO CLASSROOMS AND ANY ROOM WITH AN OCCUPANCY OF FIVE OR MORE PERSONS TO BE LOCKED FROM THE INSIDE. LOCKS SHALL COMPLY WITH C.B.C. SECTION 1010.1.9.

*ADDITIONAL DOORS MAY BE REQUIRED BASED ON BUILDING LAYOUT.

DOOR HARDWARE SCHEDULE

AMS American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE–CHECKED SET NAME

24'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

SHEET TITLE

TYPICAL SCHEDULES
DOORS, WINDOWS
& FINISHES

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
KENDALL PATRICK CHANDLER
No. C-32631
Renewal: 3-31-21
STATE OF CALIFORNIA

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 A1 17941
ACCT FLS 1/2 SS SMK
DATE SEP 19 2019

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS

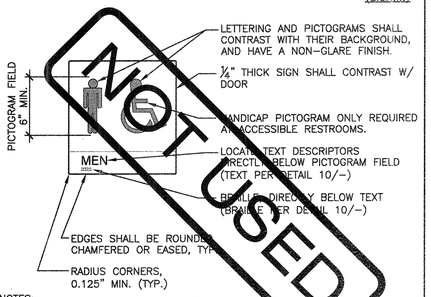
DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

SHEET NUMBER

N3.0

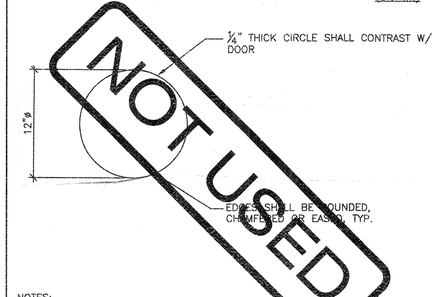
02-xxxxx - [w/ Ind] BUILDINGS - SHEETS 8/19/2019 10:56 AM P:\PROJECTS\2019\02-xxxxx - [w/ Ind] BUILDINGS - SHEETS\PRELIMINARY\SHT\04 - 02 - 11X700 - MMM 100 - Bldgs Standards\PRELIMINARY\SHT\04 - 02 - 11X700 - MMM 100 - A3.0 - Schedules.dwg

1 WALL MOUNTED RESTROOM SYMBOLS-MEN — NOT TO SCALE



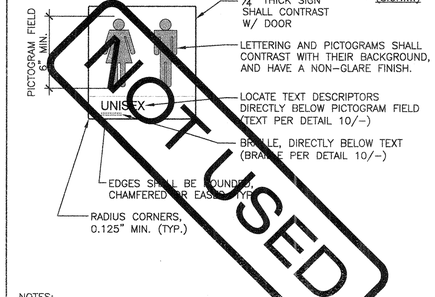
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.
2. LOCATE PER DETAIL 4/-
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

2 DOOR MOUNTED RESTROOM SYMBOLS-WOMEN — NOT TO SCALE



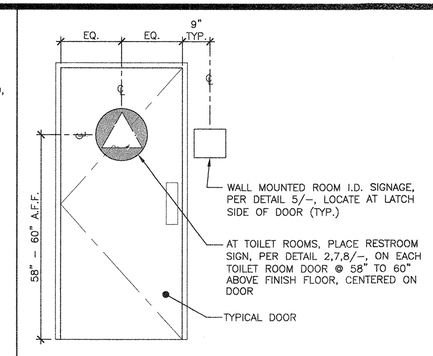
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.
2. LOCATE PER DETAIL 4/-.
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

3 WALL MOUNTED RESTROOM SYMBOLS-UNISEX — NOT TO SCALE



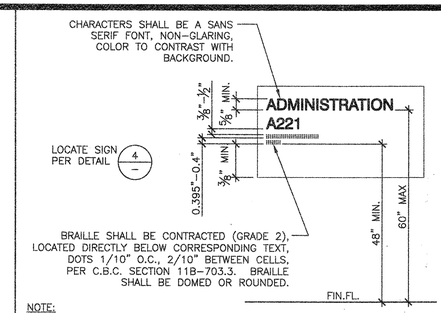
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.
2. LOCATE PER DETAIL 4/-.
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

4 ROOM IDENTIFICATION SIGNAGE — NOT TO SCALE



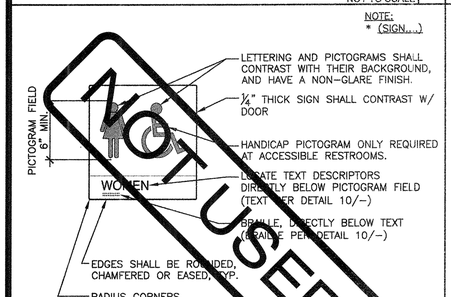
NOTE:
SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

5 PERMANENT ROOM I.D. SIGNAGE — NOT TO SCALE



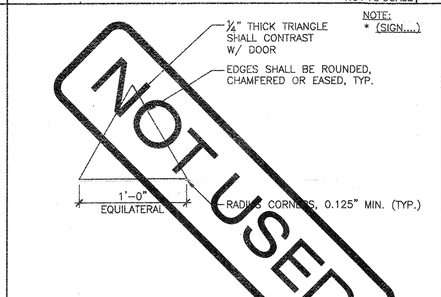
NOTE:
1. ALL REQUIRED SIGNAGE SHALL COMPLY WITH C.B.C. SECTION 11B-703.
2. FOR REQUIRED TACTILE SIGNS LOCATIONS, SEE SHEET N2.0, ACCESSIBILITY STANDARDS, "SECTION 11B-216".
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.
4. ATTACH SIGNS USING ADHESIVE OR MIN (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.

6 WALL MOUNTED RESTROOM SYMBOLS-WOMEN — NOT TO SCALE



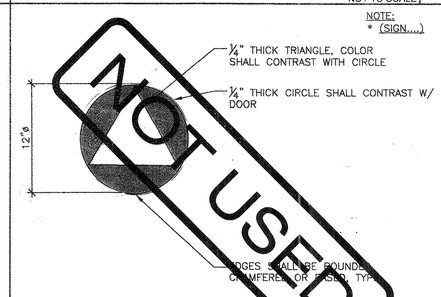
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.
2. LOCATE PER DETAIL 4/-
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

7 DOOR MOUNTED RESTROOM SYMBOL-MEN — NOT TO SCALE



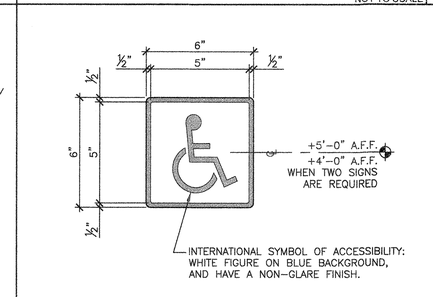
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.
2. LOCATE PER DETAIL 4/-
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

8 DOOR MOUNTED RESTROOM SYMBOLS-UNISEX — NOT TO SCALE



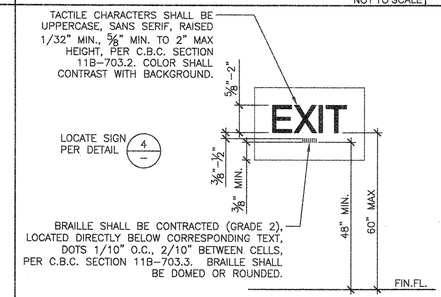
NOTES:
1. ATTACH SIGNS USING ADHESIVE AND (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH DOOR MATERIAL.
2. LOCATE PER DETAIL 4/-
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

9 INT'L SYMBOL OF ACCESSIBILITY — NOT TO SCALE



NOTES:
1. PROVIDE MECHANICAL MOUNTING w/VANDAL RESISTANT FASTENERS. PROVIDE ADHESIVE MOUNTING SYSTEM WHEN ATTACHED TO GLAZING.
2. SYMBOL PER C.B.C. SECTION 11B-703.7.2.1
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

10 TACTILE SIGNAGE REQUIREMENTS — NOT TO SCALE



NOTE:
1. ALL REQUIRED SIGNAGE SHALL COMPLY WITH C.B.C. SECTION 11B-703.
2. FOR REQUIRED TACTILE SIGNS LOCATIONS, SEE SHEET N2.0, ACCESSIBILITY STANDARDS, "SECTION 11B-216".
3. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.
4. ATTACH SIGNS USING ADHESIVE OR MIN (2) TWO FLATHEAD COUNTERSUNK SCREWS, COMPATIBLE WITH WALL MATERIAL.

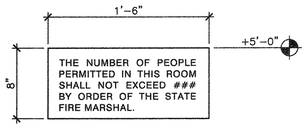
11 OCCUPANT LOAD SIGN — NOT TO SCALE

A. TYPESTYLE: 1" HIGH BLOCK 1/16" THICK ENGRAVED PLASTIC.

B. MOUNTING: (4) #8x1" SCREWS OR SELF-ADHESIVE. HEIGHT AS SHOWN.

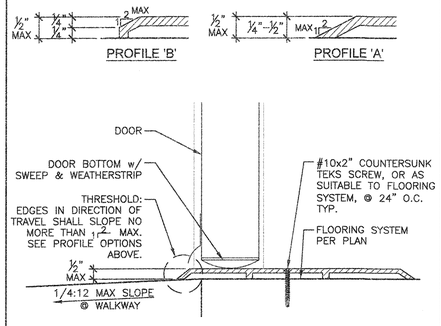
C. CAPACITY POSTING PER C.B.C. SECTION 1004.3 TITLE 19 C.C.R., SECTION 3.30: "THIS ROOM SHALL BE POSTED WITH A DURABLE SIGN NEAR THE MAIN EXIT FROM THE ROOM".

D. THE SIGN SHALL BE WORDED AS FOLLOWS, WITH THE APPROPRIATE CAPACITY NUMBER LISTED:

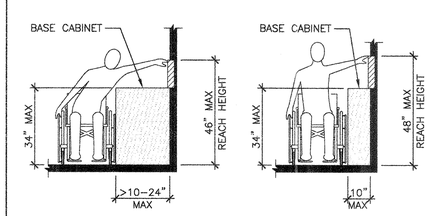


NOTE:
SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

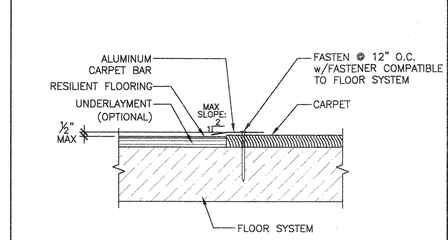
12 THRESHOLD @ EXTERIOR DOOR — NOT TO SCALE



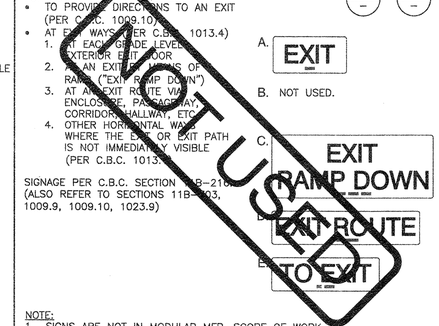
13 SIDE REACH AT BASE CABINET — NOT TO SCALE



14 FLOORING TRANSITION DETAIL — NOT TO SCALE

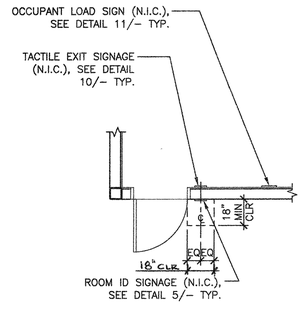


15 EGRESS SIGNAGE — NOT TO SCALE



NOTE:
1. SIGNS ARE NOT IN MODULAR MFR. SCOPE OF WORK.

16 TYPICAL CLASSROOM SIGNAGE LOCATION — NOT TO SCALE



17 NOT USED

18 NOT USED

19 SHEET NOTES

NOTE:
* (SIGN....) SHALL CONTRAST WITH BACKGROUND.

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ACCESSIBILITY STANDARDS AND DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — TIMOTHY PATRICK CONAGHAN — No. C12831 Ren. 3-31-19 — STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 11 7941
AC — LS 02 SS —
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC — LS 102 SS 103
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
1
2
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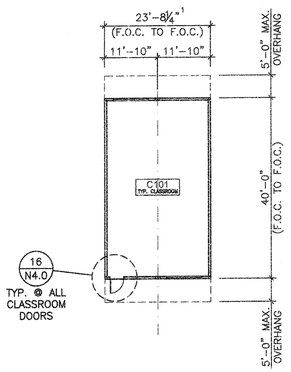
DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

N4.0

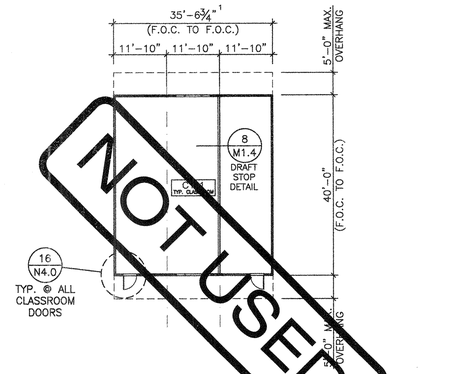
02-XXXXXX - Tim Jeff Bldg\SHEETS - SAVED: 11/1/2018 3:51 PM PLOTTED: 4/24/2018 3:15 PM W:\Engineering\AC DWG Files\2016 CODE\02-115700 - 2016 - 24'x40' thru 120'x40' Standard\02 - 02 - 115700 - ae2.0 - Accessibility.dwg



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
24' x 40'	23'-8¼"	947.5	9500	48	9.6**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

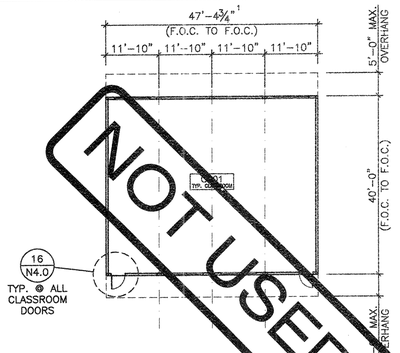
24' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 1



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
36' x 40'	35' - 6¾"	1421.6	9500	72	14.4**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

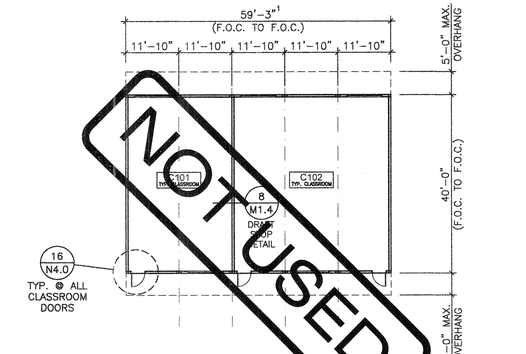
36' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 2



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
48' x 40'	47' - 4¾"	1895.8	9500	95	20.0**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

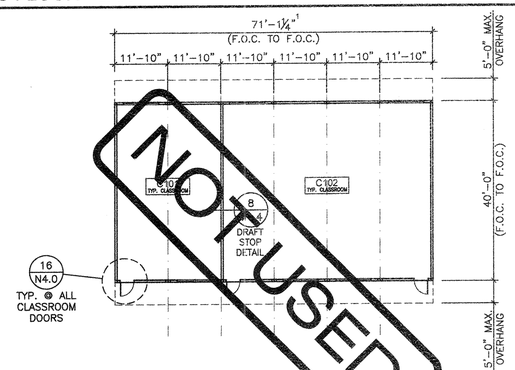
48' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 3



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
60' x 40'	59' - 3"	2370	9500	119	23.7**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

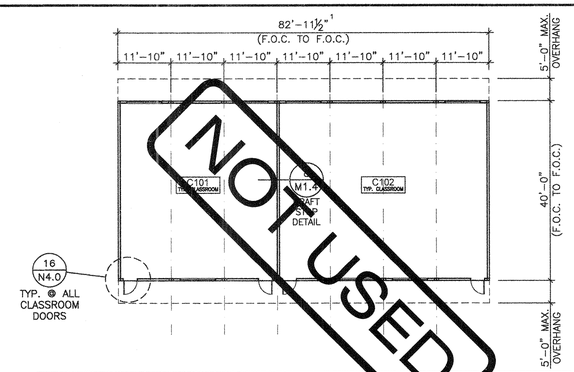
60' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 4



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
72' x 40'	71' - 1¼"	2844.1	9500	144	28.8**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

72' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 5



BUILDING DATA					
BUILDING SIZE	OVERALL SIZE[1]	SQUARE FOOTAGE PER FLOOR*	SQ FT ALLOWED PER FLOOR	MAXIMUM OCCUPANT LOAD (LOAD FACTOR: 20)	EGRESS INCHES REQUIRED (0.2 PER OCCUPANT)
84' x 40'	82' - 11½"	3318.3	9500	167	33.4**

*THE BUILDING SQUARE FOOTAGE IS SUBJECT TO INCREASE AS PERMITTED BY C.B.C. SECTION 506.2 AND 506.3. SEE SHEET NOTE 2.
**MINIMUM EGRESS WIDTH SHALL BE 34" , OR DIMENSION GIVEN IN BUILDING DATA, WHICHEVER IS GREATER.
1. SEE GENERAL NOTE #7.

84' x 40' BUILDING FLOOR PLAN — SCALE: 1/16" = 1'-0" — 6

GENERAL NOTES

1. PANIC HARDWARE IS REQUIRED TO BE INSTALLED WHEN THE CONFIGURATION OF ANY ROOM PROVIDES AN OCCUPANT LOAD OF 50 OR GREATER, PER CBC 1010.1.10.
2. THE BUILDING SIZES AND SQUARE FOOTAGES REFLECTED ON THIS SHEET ARE SUBJECT TO SQUARE FOOTAGE INCREASE AS PERMITTED BY SITE CONDITIONS, PER CBC 506.2, AND BY AUTOMATIC SPRINKLER SYSTEM, PER CBC 506.3.
3. RESTROOM CONFIGURATIONS OCCUR AT OUTER WINGS OF BUILDINGS.
4. SEE FOUNDATION DRAWINGS FOR TRUE DIMENSIONS AT FLOOR PLACEMENT AND OVERALL FOUNDATION SIZE.
5. FOR ROOM ID SIGNAGE (N.I.C.) SEE DETAIL 5/N4.0. TYPICAL FOR ALL BUILDING CONFIGURATIONS.
6. MINIMUM EGRESS REQUIRED SHALL BE 34" PER CLASSROOM OR DIMENSION SPECIFIED IN BUILDING DATA, WHICHEVER IS GREATER
7. TOTAL BUILDING WIDTH INCLUDES 1/4" PER MODULE CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS S1.0, S1.1, S1.2 & S1.3.

SITENOTE:

3/16:12 (1%) MINIMUM TO 1/4:12 (2%) MAXIMUM GRADE FROM FACE OF BUILDING MUST BE ADHERED TO FOR WATER RUN-OFF. PONDING MAY OCCUR AROUND THE PERIMETER OF THE BUILDING.

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
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www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

MULTIPLE FLOOR PLAN CONFIGURATIONS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CANNAN — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
ACC FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
ACC FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
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SCALE: AS NOTED
DATE: .

SHEET NUMBER

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05-000004 - [w_cad] 05000004 - 24x40 - 4.29.2019 1:17 PM - PLOTTED - 4/29/2019 2:13 PM - M:\Documents\Work Files\2018\05-000004\05-000004 - 24x40 - 120x40 - Standard\05 - 02 - 117000 - 24x40 - 48x40 & 60x40 & 72x40 & 84x40.dwg

DSA IR N-1
PRE-CHECK DESIGNS CALGREEN/ENERGY CODE COMPLIANCE REVIEW

Attachment 1
AMS PC 24'x40' PC

Performance Runs and Orientation Table

PC Design Review Information			Title 24, Part 6, Energy Code
Date of Title 24 Report:	2/27/2018	DSA Application:	#02-116141
Model Name and Option:	AMS PC 24'x40'	DSA File No:	
Total Floor Area:	960 sf	DSA-1 Submittal Date:	
HVAC System Type:	Split-DX HP		

Climate Zone (Reference City)	Azimuth (Front Orientation)	TDV - Proposed Design	TDV - Standard Design	Compliance Margin
14 (Palmdale)	30	284.9	329.4	44.5
	75	289.2	338.2	49.0
	120	285.6	333.9	48.4
	165	277.4	315.1	37.7
	210	284.1	325.9	41.8
	255	288.1	333.7	45.6
	300	284.7	330.0	45.2
	345	277.4	314.1	36.8
15 (Palm Springs-Intl)	30	344.8	372.3	27.4
	75	348.5	394.9	46.4
	120	346.1	391.3	45.2
	165	339.1	358.5	19.4
	210	343.8	373.5	29.7
	255	347.8	382.1	34.4
	300	346.0	375.7	29.7
	345	339.7	359.0	19.3
16 (Blue Canyon)	30	235.0	298.4	63.4
	75	239.3	306.6	67.3
	120	235.5	298.5	63.0
	165	227.8	280.3	52.5
	210	234.3	302.1	67.8
	255	238.0	310.9	72.8
	300	234.3	301.5	67.2
	345	227.4	270.5	42.1

Comments to DSA: (Explain why this Model Name and Option generates the smallest compliance margins)

Windows increases heating or cooling load due to orientation

DSA IR N-1
PRE-CHECK DESIGNS CALGREEN/ENERGY CODE COMPLIANCE REVIEW

Attachment 1
AMS PC 120'x40' PC

Performance Runs and Orientation Table

PC Design Review Information			Title 24, Part 6, Energy Code
Date of Title 24 Report:	2/27/2018	DSA Application:	#02-115700
Model Name and Option:	AMS PC 120'x40'	DSA File No:	
Total Floor Area:	4,800 sf	DSA-1 Submittal Date:	
HVAC System Type:	Split-DX HP		

Climate Zone (Reference City)	Azimuth (Front Orientation)	TDV - Proposed Design	TDV - Standard Design	Compliance Margin
14 (Palmdale)	30	275.7	312.2	36.6
	75	282.1	323.6	41.5
	120	276.8	316.2	39.3
	165	266.7	290.1	23.4
	210	276.4	311.3	34.9
	255	283.1	323.7	40.6
	300	277.5	316.3	38.9
	345	266.8	292.1	25.4
15 (Palm Springs-Intl)	30	333.5	358.1	24.7
	75	339.9	370.4	30.5
	120	337.1	361.2	24.1
	165	327.8	343.3	15.5
	210	334.4	358.7	24.3
	255	340.7	371.6	30.9
	300	337.1	362.2	25.1
	345	327.2	343.4	16.2
16 (Blue Canyon)	30	259.6	286.4	26.8
	75	265.7	299.9	34.2
	120	260.2	286.1	25.9
	165	251.1	262.9	11.8
	210	260.1	286.9	26.8
	255	266.6	300.7	34.2
	300	260.8	287.4	26.7
	345	251.2	262.8	11.5

Comments to DSA: (Explain why this Model Name and Option generates the smallest compliance margins)

Windows increases heating or cooling load due to orientation

Project Name:	AMS Modular Classroom 24x40	NRCC-PRF-01-E	Page 1 of 18
Project Address:	Palmdale	Calculation Date/Time:	09:03, Tue, Feb 27, 2018
Compliance Scope:	New/Complete	Input File Name:	AMS 24x40 for DSA - CZ14 (B).cbd16

A. PROJECT GENERAL INFORMATION

1.	Project Location (city)	Palmdale	8.	Standards Version	Compliance2016
2.	CA Zip Code		9.	Compliance Software (version)	CBECC-Com 2016.1.0 SP1
3.	Climate Zone	14	10.	Weather File	RIVERSIDE_723810_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	960 ft²	11.	Building Orientation (deg)	[N] 345 deg
5.	Total Unconditioned Floor Area	0 ft²	12.	Permitted Scope of Work	NewComplete
6.	Total # of Stories (Habitable Above Grade)	1	13.	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	14.	Gas Type	NaturalGas

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr) **$ 140.1**

BUILDING COMPLIES

1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard
Space Heating	21.88	46.49	-24.72	-114.0%
Space Cooling	138.93	153.43	-25.07	-19.6%
Indoor Fans	109.08	43.74	65.34	59.9%
Heat Rejection				
Pumps & Misc.				
Domestic Hot Water	9.43	9.43	0	0.0%
Indoor Lighting	65.63	24.38	21.25	46.6%
COMPLIANCE TOTAL	314.15	277.38	36.77	11.7%
Receptacle	64.30	64.30	0.0	0.0%
Process				
Other Ltg				
Process Motors				
TOTAL	378.45	341.68	36.8	9.7%

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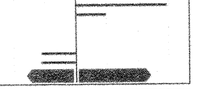
C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Indoor Fans: Check envelope and mechanical
2nd	Indoor Lighting, Check lighting
3rd	Heat Rejection: Check envelope and mechanical
4th	Pumps & Misc.: Check mechanical
5th	Domestic Hot Water: Check mechanical
6th	Space Heating: Check envelope and mechanical
7th	Space Cooling: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)



D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

Roof: the roof U-value has been calculated using EZFrame per CEC guidance; U-value = 0.070

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components use the performance or prescriptive path for compliance. "NA" = not in project
For components that utilize the performance path, indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms *(required for submittal)*	Location of Mandatory Notes on Plans
Envelope	☒ Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	ML2
	☐ Prescriptive	NRCC-ENV-03 / 02 / 03 / 04 / 05 / 06-E	
	☐ NA		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	ML7
	☐ Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	☐ NA		
Domestic Hot Water	☐ Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	P1.0
	☒ Prescriptive	NRCC-PLB-01-E	
	☐ NA		
Lighting (Indoor Conditioned)	☒ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	E1.0
	☐ Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	☐ NA		
Covered Process: Commercial Kitchens	☐ Performance	S2 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01 / 03-E	
	☒ NA		
Covered Process: Computer Rooms	☐ Performance	S3 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-02/ 04-E	
	☒ NA		
Covered Process: Laboratory Exhaust	☐ Performance	S4 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 03-E	
	☒ NA		

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building components are only eligible for prescriptive compliance. Indicate which are relevant to the project.

Yes	NA	Prescriptive Requirement	Compliance Forms
☒	☐	Lighting Indoor Uncontrolled §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E
☒	☐	Lighting (Outdoor) §140.7	NRCC-LTI-01 / 02 / 03-E
☐	☒	Lighting Signs §140.8	NRCC-LTI-03-E
☐	☒	Solar Thermal Water Heating: §140.5	NRCC-STH-01-E

The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.

Yes	NA	Mandatory Requirement	Compliance Forms
☐	☒	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
☒	☐	Electrical: §130.5	NRCC-ELC-01-E
☒	☐	Solar Ready: §110.10	NRCC-SRA-01 / 03 F
☐	☒	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Envelope	☒ NRCA-ENV-01-E - For all buildings	☐	☐
	☒ NRCA-ENV-02-F - HERS label verification for fenestration	☐	☐
	☒ NRCI-MCH-01-E - For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A - Outdoor Air	☐	☐
Mechanical	☒ NRCA-MCH-03-A – Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-H - Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A - Air Economizer Controls	☐	☐
	☐ NRCA-MCH-06-A - Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A – Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A - Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A – Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A - Hydronic System Variable Flow Controls	☐	☐
	☒ NRCA-MCH-11-A – Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A - Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A - Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A - Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A – Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A- Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A – Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A- Energy Management Controls Systems	☐	☐
	☐ NRCV-MCH-04-H- Duct Leakage Test	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Plumbing	☐ NRCI-PLB-01-E - For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-23-H- HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-STH-01-E – Any solar water heating	☐	☐
Indoor Lighting	☒ NRCI-LTI-01-E - For all buildings	☐	☐
	☒ NRCI-LTI-02-E – Lighting control system, or for an Energy Management Control System (EMCS)	☐	☐
	☐ NRCI-LTI-02-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E – Additional wattage installed in a video conferencing studio	☐	☐
	☒ NRCA-LTI-03-A – Occupancy sensors and automatic time switch controls.	☐	☐
	☒ NRCA-LTI-03-A - Automatic daylighting controls	☐	☐
	☐ NRCA-LTI-04-A - Demand responsive lighting controls	☐	☐
Outdoor Lighting	☒ NRCI-LTI-01-F – Outdoor Lighting	☐	☐
	☐ NRCI-LTI-02-E- EMCS Lighting Control System	☐	☐
	☒ NRCA-LTI-02-A - Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTI-01-E – Sign Lighting	☐	☐
Electrical	☒ NRCI-ELC-01-E - Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Covered Process	☐ NRCA-PRC-01-E Covered Processes	☐	☐
	☐ NRCA-PRC-03-F - Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-H - Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-F - Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor	☐	☐
	☐ NRCA-PRC-09-F- Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

				Confirmed Pass	Confirmed Fail
1.	Total Conditioned Floor Area: 960 ft²	5.	Number of Floors Above Grade: 1		
2.	Total Unconditioned Floor Area: 0 ft²	6.	Number of Floors Below Grade: 0		
3.	Addition Conditioned Floor Area: 0 ft²				
4.	Addition Unconditioned Floor Area: 0 ft²				

7. Opaque Surfaces & Orientation	8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio	Pass	Fail
North Wall	240 ft²	79 ft²	33.0%	☐	☐
East Wall	400 ft²	0 ft²	00.0%	☐	☐
South Wall	240 ft²	79 ft²	33.0%	☐	☐
West Wall	400 ft²	0 ft²	00.0%	☐	☐
Total:	1,280 ft²	158 ft²	12.4%	☐	☐
Roof	960 ft²	0 ft²	00.0%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY **§ 110.6** Confirmed

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type / Product Type / Frame Type	3. Certification Method[1]	4. Assembly Method	5. Area ft²	6. Overall U-factor	7. Overall SHGC	8. Overall VT	9. Exempt	Pass	Fail
Solar-Grey NFRC	Vertical/Fenestration, Fixed/Window N/A	NFRC Rated	Manufactured	158	0.28	0.43	0.37	N	☐	☐

[1] *Newly installed fenestration shall have a certified NFRC label for U-factor or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Glare ratio and U-factor values are for the glass only, determined by the manufacturer, and are shown for one of each type. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*

[2] *Status: N - New, A = Altered, E = Existing*

Tinting compliance credit for fenestration shading devices? (If "Yes", see NRCC-PRF-ENV-DETAILS for more information) No

K. OPAQUE SURFACE ASSEMBLY SUMMARY[1] **§ 120.7/ § 140.3** Confirmed

1. Surface Name	2. Surface Type	3. Area (ft²)	4. Framing Type	5. Cavity R-Value	6. Continuous R-Value	7. U-Factor / R-Factor / C-Factor	8. Exempt	Pass	Fail
Concr. Slab over Crawlspace	Exterior/Slab	960	NA	0	N/A	U-Factor: 0.210	N	☐	☐
Roof: Uvg.70 per EZFrame	Roof	960	Metal	19	2	U-Factor: 0.071	N	☐	☐
R-13 w/metal frame + R-5 c.i.	Exterior/Wall	1280	Metal	13	5	U-Factor: 0.058	N	☐	☐

[1] *Status: N - New, A - Altered, E - Existing*

L. ROOFING PRODUCT SUMMARY **§ 140.3** Confirmed

1. Product Type	2. Product Density (lb/ft²)	3. Aged Solar Reflectance	4. Thermal Emittance	5. SRI	6. Cool Roof Credit	7. Roofing Product Description	Pass	Fail
Roof: Uvg.70 per EZFrame	3.953	0.09	0.75	NA	No	NA	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) **§ 110.1 / § 110.2**

Dry System Equipment[1] (Fan & Economizer info included below in Table N)

1. Equip Name	2. Equip Type	3. System Type (Simple [2] or Complex [3])	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtuh)	8. Total Cooling Output (kBtu/h)	9. Efficiency Cooling	9. Efficiency Heating	10. Acceptance Testing Required? (Y/N) [4]	11. Status [5]	Pass	Fail
AC-1	SPVHP (Packaged/3Phase)	Simple	1	95	No	0	41	EER-10.20	COP-3.00	Yes	N	☐	☐

[1] *Dry System Equipment includes furnaces, air handling units, heat pumps, etc.*
[2] *Simple Systems must complete NRCC-CFM-02-E and applicable design review form.*
[3] *Complex Systems must complete NRCC-CFM-04-E and applicable design review form.*
[4] *A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS.*
[5] *Status: N - New, A - Altered, E - Existing*

Wet System Equipment Section Does Not Apply

Discrepancy between modeled and designed equipment sizing? (If "Yes", see Table F "Additional Remarks" for an explanation) No

N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] **§ 140.4** Confirmed

1. Equip Name	2. Outside Air CFM	3. Supply Fan CFM	3. Supply Fan HP	3. Supply Fan BHP	3. Supply Fan TSP (Inch WC)	3. Supply Fan Control	4. Return Fan CFM	4. Return Fan HP	4. Return Fan BHP	4. Return Fan TSP (Inch WC)	4. Return Fan Control	5. Economizer Type (if present)	Pass	Fail
AC-1	360	1200	0.500	0.374	1.00	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] *Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section.*

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O. EQUIPMENT CONTROLS **§ 120.2** Confirmed

1. Equip Name	2. Equip Type	3. Controls	Pass	Fail
AC-1	SPVHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

P. SYSTEM DISTRIBUTION SUMMARY **§ 120.4/ § 140.4(l)**

Dry System Distribution

1. Equip Name	2. Equip Type	3. Duct Leakage and Sealing Required per 140.4(l)	4. Duct Leakage will be verified per ISA1 and ISA2	5. Ducts Insulation R-Value	5. Ducts Location	6. Status[1]	Pass	Fail
AC-1	SPVHP	No	No	0	Conditioned	N	☐	☐

[1] *Status: N - New, E - Existing*

Does the Project Include Zonal Systems? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project Include a Solar Hot Water System? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (If "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)? **§ 160.6** Confirmed

1. Occupancy Type [1]	2. Conditioned Floor Area [1] (ft²)	3. Installed Lighting Power (Watts)	4. Lighting Control Credits (Watts)	5. Additional (Custom) Allowance Area Category Footnotes (Watts)	5. Additional (Custom) Allowance Tailored Method (Watts)	Pass	Fail
Classrooms, Lecture, Training, Vocational Arts#1	960	480	0	0	0	☐	☐
Building Totals:	960	480	0	0	0		

[1] *See Table 140.6-C*

AMS®
American Modular Systems
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PRE-CHECKED SET NAME

24'x40' THRU 24'x120' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ENERGY CALCULATIONS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GIBBS — No. C12631 — Ren. 8-31-19 — STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS
DATE SEP 19 2019

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

APPROVED
DIVISION OF STATE ARCHITECT
HIGH PERFORMANCE SECTION
APP.# 02-117700 DATE: 6-18-19

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02 115700
AC — FLS — SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 GBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS

1	
2	
3	
4	

DRAWN BY: -
SCALE: AS NOTED
DATE: -

SHEET NUMBER

EN.1

02-XXXX - [w_mod_BUILDING - SWDS - 1/22/2015 3:52 AM - RUSTED - 1/6/2016 1:01 PM - K:\Drawing\Engineering\PC_DWG_Files\2016_CODE\02-XXXX - 2016 - 24'x40'-120'x40' Stand

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B. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)* — § 150.0

Luminaire Schedule (Includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices) — Installed Watts (Conditioned) — Confirmed

Name or Item Tag	Complete Luminaire Description (i.e., 3 lamp fluorescent troffer, F32T8, case dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined: CEC Default from IAE	How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts	Pass	Fail
2x4 VTLED	2x4 – 32W CEC	60	No	Yes	9	460	☐	☐

*Lighting power definition were used in the compliance model. Building characteristics will need to check prescriptive forms for Luminaire Schedule details.

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES — § 140.9

This Section Does Not Apply

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS — § 140.9

This Section Does Not Apply

S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS — § 140.9

This Section Does Not Apply

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS — § 140.9

This Section Does Not Apply

T. UNMET LOAD HOURS

This Section Does Not Apply

U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (kWh)	Proposed Design Site (kWh)	Margin (kWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	–	3.6	–	12.5	–	–
Space Cooling	3.0	3.6	-0.6	–	–	–

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance — Report Version: NRCC-PRF-01-E-122020178-5302 — Report Generated at: 2018-02-27 09:03:27

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U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (kWh)	Proposed Design Site (kWh)	Margin (kWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Indoor Fans	8.5	3.5	2.6	–	–	–
Heat Rejection	–	–	–	–	–	–
Pumps & Misc.	–	–	–	–	–	–
Domestic Hot Water	–	–	–	6.3	6.3	0.0
Indoor Lighting	1.8	1.0	0.8	–	–	–
COMPLIANCE TOTAL	9.3	9.1	0.2	18.8	6.3	12.5
Receptacle	2.5	2.5	0.0			
Process	–	–	–			
Other Usg	–	–	–			
Process Motors	–	–	–			
TOTAL	11.8	11.6	0.2	18.8	6.3	12.5

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT — § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Hans Mansman, CEA, CEPE, LEED AP BD+C	
Company: Brunsell Energy Associates, Inc	Signature: CABEC Digitally signed by Hans Mansman
Address: 777 South Highway 101, Suite 203	Signature Date: Date: 2018.02.27 09:41:56 -08'00'
City/State/Zip: Solana Beach California 92075	CEA Identification (if applicable): HM-16-09-2062
Phone: 619.531.1126	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
2	I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.
3	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name: Randall P Cavanaugh		
Company: American Modular Systems 1 Gen7 Schools	Signature:	
Address: 787 Spreckels Avenue	Date Signed: 11/30/16	
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1	
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Lighting Designer Name: Randall P Cavanaugh		
Company: American Modular Systems 1 Gen7 Schools	Signature:	
Address: 787 Spreckels Avenue	Date Signed: 11/30/16	
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1	
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Mechanical Designer Name: Randall P Cavanaugh		
Company: American Modular Systems 1 Gen7 Schools	Signature:	
Address: 787 Spreckels Avenue	Date Signed: 11/20/16	
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1	
Phone: 209.825.1921	Title: Engineer	License #: C12631

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS — Confirmed: Pass / Fail

1. Surface Name	2. Surface Type	3. Description of Assembly Layers	4. Notes	Pass	Fail
Concr. Slab over Crawlspace	ExteriorFloor	Air - Floor - 3 1/2 in. Concrete - 140 lb/ft3 - 4 in. Carpet - .374 in.		☐	☐
Roof: U=0.70 per EZFrame	Roof	Metal Standing Seam - 1/16 in. Expanded Polystyrene - EPS - 1/2 in. R2.1 Metal framed roof, 24in. OC, S.Sn., R-19 Acoustic Tile - 3/8 in.	See EZFrame Report for U-factor 0.70	☐	☐
R-13 in metal frame + R-5 ci.	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Compliance Insulation R5.00 Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-03-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY — Confirmed: Pass / Fail

1. Opaque Door Assembly Name / Tag or I.D.	2. Door Type	3. Certification Method	4. Operation	5. Area	6. Overall U-factor	7. Status[1]	Pass	Fail
Metal Door	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	21	0.700	N	☐	☐

[1] Status: N - New, A - Altered, E - Existing

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND SEHAT (Adapted from 2016-NRCC-MCH-03-E) — Confirmed: Pass / Fail

CONDITIONED ZONE NAME	ID	SYSTEM TYPE	DESIGN SUPPLY AIRFLOW [CFM]	DESIGN OUTDOOR AIRFLOW [CFM]	MECHANICAL VENTILATION [CFM]	ECONOMIZER FUNCTIONAL SPECIFICATION	DCV REQUIRED	VARIABLE FLOW CONTROL	CONDITIONING AREA [ft2]	DESIGN HEATING LOAD [kBtu/h]	DESIGN COOLING LOAD [kBtu/h]	HEAT EXCH. EFFECTIVENESS [%]	ENERGY EXCH. AIRFLOW [CFM]	OUTDOOR AIR [CFM]	TOTAL FAN BHP [hp]	SUPPLY FAN BHP [hp]	140.4(k) [kW/cfm]	Complete HERS requirements?	Pass	Fail
Classrooms	AC-1	1,200	NA	NA	NA	NA	N	AC-1	960	NA	24.00	15.00	960	360	n/a	N	n/a	N	☐	☐
								TOTAL	960		24.00			360	360	n/a				☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY — § 140.4 — Confirmed: Pass / Fail

1. System ID	2. System Type	3. Qty	4. Rated Capacities (kBtuh) Heating	4. Rated Capacities (kBtuh) Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm) Design	7. Airflow (cfm) Min.	7. Airflow (cfm) Min. Ratio	8. Fans HHP	8. Fans Cyclos	8. Fans ECM Motor	Pass	Fail
Classrooms-TRM	Uncontrolled	1	NA	NA	NA	Classrooms	1200	NA	NA	NA	N/A		☐	☐

C. EXHAUST FAN SUMMARY

This Section Does Not Apply

D. DHW EQUIPMENT SUMMARY – (Adapted from NRCC-PLB-01-E)

This Section Does Not Apply

E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

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F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2016-NRCC-MCH-01-E) — § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that must be submitted: (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Task Description	MCH-02A	MCH-04A	MCH-04B	MCH-05A	MCH-06A	MCH-06B	MCH-07A	MCH-08A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	MCH-19A	MCH-19B	Confirmed: Pass	Confirmed: Fail
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Ventilation	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VFD	Hydronic Variable Flow	Supply Water Temp.	Heat Exchanger Flow Control	Zone Temperature Control	Fan Coil Unit Controls	Zone Ventilation	Supply Air Temp. Reset	Condenser Water Temp. Reset Controls	CCHEs				
AC-1	1	X	X	–	–	–	–	–	–	–	X	–	–	–	–	–	–	–	☐	☐

H. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) — § 140.6 — If Acceptance Test Required — Confirmed: Pass / Fail

Lighting Control Credits Schedule (includes all lighting control, installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

Location in Building	Occupancy Type (room meet requirements of Table 140.6-A)	Control Credit Calculation: Watts of Controlled Lighting	Control Credit Calculation: Power Adjustment Factor	Control Credit Calculation: Control Credit Watts	Pass	Fail
Classroom 102	Classrooms, Lecture, Training, Vocational Areas	Note specified -	1	0.00	0	☐	☐

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B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) — § 130.1

This Section Does Not Apply

130.1(a) = Manual area controls; 130.1(b) = Occupant sensing; 130.1(c) = Auto Shut-Off; 130.1(d) = Mandatory Daylight; 130.1(e) = Demand Response

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E) — § 140.6

General lighting power (see Table G)	0
General lighting power from special function areas (see Table E)	NA
Additional "use it or lose it" (See Table G)	0
Total watts	0

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) — § 140.6-D

This Section Does Not Apply

E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) — § 140.6(c) 3H — Confirmed: Pass / Fail

Room Number	Primary Function Area	Illumenance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft²)	Allowed Watts	Pass	Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is also currently implemented

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

Rectangular Spaces: Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed: Pass	Confirmed: Fail
NA	NA	NA	NA	NA	NA	☐	☐

Non-Rectangular Spaces

This Section Does Not Apply

Note: All rectangular spaces are listed under the Non-Rectangular Spaces table

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G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E) — Confirmed: Pass / Fail

1. Wall Display	2. Combined Floor Display and Task Lighting	3. Combined Ornamental and Special Effects Lighting	4. Very Valuable Merchandise	Allowed Watts	Pass	Fail
0	0	0	0	0	☐	☐

S. Wall Display

This Section Does Not Apply

S. Floor Display and Task Lighting

This Section Does Not Apply

T. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

S. Very Valuable Merchandise

This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E) — § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	# of units	Indoor: NRCA-LTI-02-A Occ Sensors / Auto Time Switch	Indoor: NRCA-LTI-03-A Auto Daylight	Indoor: NRCA-LTI-08-A Demand Responsive	Outdoor: NRCA-LTO-02-A Outdoor Controls	Confirmed: Pass	Confirmed: Fail
Occupant Sensors	1	☒	☐	☐	☐	☐	☐
Automatic Time Switch	1	☒	☐	☐	☐	☐	☐
Automatic Daylighting	1	☐	☒	☐	☐	☐	☐
Demand Responsive		☐	☐	☐	☐	☐	☐
Outdoor Controls	1	☐	☐	☐	☒	☐	☐

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Compliance Scope:	New/Complete	Input File Name:	AMS 120x40 for DSA - CZ14 (4).ribd16

A. PROJECT GENERAL INFORMATION

1. Project location (city)	Palmdale	8. Standards Version	Compliance2016
2. CA Zip Code		9. Compliance Software (version)	CBECC-Com 2016.3.0 SP1
3. Climate Zone	14	10. Weather File	PALMDALE_723830_CZ2010.epw
4. Total Conditioned Floor Area in Scope	4,800 ft²	11. Building Orientation (deg)	0	166 deg
5. Total Unconditioned Floor Area	0 ft²	12. Permitted Scope of Work	New Compone
6. Total # of Stories (Habitable Above Grade)	1	13. Building Type(s)	Nonresidential
7. Total # of dwelling units	0	14. Gas Type	Natural Gas

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft²-yr) — § 140.1

BUILDING COMPLIES

1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard
Space Heating	18.69	41.51	-22.91	-123.2%
Space Cooling	114.83	146.21	-31.38	-27.3%
Indoor Fans	102.85	43.44	59.41	57.8%
Heat Rejection	–	–	–	–
Pumps & Misc	–	–	–	–
Domestic Hot Water	11.16	11.16	–	0.0%
Indoor Lighting	44.71	24.38	20.33	45.5%
COMPLIANCE TOTAL	292.15	266.70	25.45	8.7%
Receptacle	64.30	64.30	0.0	0.0%
Process	–	–	–	–
Other Usg	–	–	–	–
Process Motors	–	–	–	–
TOTAL	356.45	331.00	25.5	7.1%

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C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Indoor Fans: Check envelope and mechanical
2nd	Indoor Lighting: Check lighting
3rd	Heat Rejection: Check envelope and mechanical
4th	Pumps & Misc.: Check mechanical
5th	Domestic Hot Water: Check mechanical
6th	Space Heating: Check envelope and mechanical
7th	Space Cooling: Check envelope and mechanical

Compliance Margin by Energy Component (from Table 3 column 6)

D. EXCEPTIONAL CONDITIONS

The building does not include process water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

Roof: the roof U-value has been calculated using EZFrame per CEC guidance, U-value = 0.070

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components use the performance or prescriptive path for compliance. "NA" = not in project.
For components that utilize the performance path, indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms (required for submittal)	Location of Mandatory Notes on Plans
Envelope	☒ Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	M1.7
	☐ Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
	☐ NA		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	M1.7
	☐ Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	☐ NA		
Domestic Hot Water	☐ Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	P1.0
	☒ Prescriptive	NRCC-PLB-01-E	
	☐ NA		
Lighting (Indoor Conditioned)	☒ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	E1.0
	☐ Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	☐ NA		
Covered Process: Commercial Kitchens	☐ Performance	S2 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 03-E	
	☒ NA		
Covered Process: Computer Rooms	☐ Performance	S3 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 04-E	
	☒ NA		
Covered Process: Laboratory Exhaust	☐ Performance	S4 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 05-E	
	☒ NA		

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building compliances are only eligible for prescriptive compliance. Indicate which are relevant to the project. — *The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.*

Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
☒	☐	Lighting (Indoor Uncondtioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	☒ ☐	☐ ☒	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
☒	☐	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E	☒	☐	Electrical: §130.5	NRCC-ELC-01-E
☐	☒	Lighting (Signs) §140.8	NRCC-LTI-01-E	☒	☐	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
☐	☒	Solar Thermal Water Heating: §140.9	NRCC-STH-01-E	☐ ☐ ☒ ☒ ☒ ☒	☒ ☒ ☐ ☐ ☐ ☐	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms (required for submittal)	Confirmed: Pass	Confirmed: Fail
Envelope	☒ NRCI-ENV-01-E – For all buildings	☐	☐
	☒ NRCA-ENV-02-F – NFRC label certification for fenestration	☐	☐
Mechanical	☒ NRCI-MCH-01-E – For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A– Outdoor Air	☐	☐
	☒ NRCA-MCH-03-A – Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-H– Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A– Air Economizer Controls	☐	☐
	☐ NRCA-MCH-06-A– Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A – Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A– Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A – Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A– Hydronic System Variable Flow Controls	☐	☐
	☒ NRCA-MCH-11-A – Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A– Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A– Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A– Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A – Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A– Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A – Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A– Energy Management Controls Systems	☐	☐
	☐ NRCI-MCH-04-H– Duct Leakage Test	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms (required for submittal)	Confirmed: Pass	Confirmed: Fail
Plumbing	☐ NRCI-PLB-01-E – For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E – required on central systems in high-rise residential, hotel/motel applications.	☐	☐
	☐ NRCI-PLB-03-E – Single dwelling unit systems in high-rise residential, hotel/motel applications	☐	☐
	☐ NRCI-PLB-214-E – HERS verified central systems in high-rise residential, hotel/motel applications.	☐	☐
	☐ NRCI-PLB-322-E – HERS verified single dwelling unit systems in high-rise residential, hotel/motel applications.	☐	☐
	☐ NRCV-PLB-214-E– HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-322-E – HERS verified single dwelling unit systems in high-rise residential, hotel/motel applications.	☐	☐
	☐ NRCI-STH-01-E – Any solar water heating	☐	☐
Indoor Lighting	☒ NRCI-LTI-01-E – For all buildings	☐	☐
	☒ NRCI-LTI-02-E – Lighting control system, or for an Energy Management Control System (EMCS)	☐	☐
	☐ NRCI-LTI-03-E – Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E – Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E – Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E – Additional wattage installed in a video conferencing studio	☐	☐
	☒ NRCA-LTI-02-A – Occupancy sensors and automatic time switch controls.	☐	☐
	☒ NRCA-LTI-03-A – Automatic daylighting controls	☐	☐
	☐ NRCA-LTI-04-A – Demand responsive lighting controls	☐	☐
Outdoor Lighting	☒ NRCI-LTO-01-E – Outdoor Lighting	☐	☐
	☐ NRCI-LTO-02-E– EMCS Lighting Control System	☐	☐
	☒ NRCA-LTO-02-A – Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTS-01-E – Sign Lighting	☐	☐
Electrical	☒ NRCI-ELC-01-E – Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

1.

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) § 110.1 / § 110.2

Dry System Equipment [1] (Fan & Economizer info included below in Table N)

1. Equip Name	2. Equip Type	3. System Type (Simple[2] or Complex[3])	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtu/h)	8. Total Cooling Output (kBtu/h)	9. Efficiency: Cooling	9. Efficiency: Heating	10. Acceptance Testing Required? (Y/N)	11. Status[4]	Confirmed: Pass	Confirmed: Fail
AC-1	SP/VHP (Packaged/1Phase)	Simple	5	39	No	0	41	EER-10.20	COP-3.00	Yes	N	☐	☐

[1] Dry System Equipment includes fan-coils, air-handling units, heat pumps, etc.
[2] Simple Systems must complete NRCC-CIM-04-E commissioning design review form
[3] Complex Systems must complete NRCC-CXR-04-E commissioning design review form
[4] A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS
Status: N – New, A – Altered, E – Existing

Was System Equipment Section Does Not Apply	
Discrepancy between modeled and designed equipment sizing? (If "Yes", see Table K "Additional Remarks" for an explanation)	No

N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] § 140.4

1. Equip Name	2. Outside Air: CFM	3. Supply Fan: CFM	3. Supply Fan: HP	3. Supply Fan: BHP	3. Supply Fan: TSP (Inch WC)	3. Supply Fan: Control	4. Return Fan: CFM	4. Return Fan: HP	4. Return Fan: BHP	4. Return Fan: TSP (Inch WC)	4. Return Fan: Control	5. Economizer Type (if present)	Confirmed: Pass	Confirmed: Fail
AC-1	360	1300	0.500	0.378	1.00	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section

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O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Confirmed: Pass	Confirmed: Fail
AC-1	SP/VHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

P. SYSTEM DISTRIBUTION SUMMARY § 120.4/ § 140.4(l)

1. Equip Name	2. Equip Type	Dry System Distribution: 3. Duct Leakage and Sealing Requirement per 140.4(l)	4. Duct Leakage will be verified per NA1 and NA2	5. Ducts: Insulation R-Value	5. Ducts: Location	6. Status[1]	Confirmed: Pass	Confirmed: Fail
AC-1	SP/VHP	No	No	0	Conditioned	N	☐	☐

Status: N – New, E – Existing

Does the Project include Zonal Systems? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project include a Solar Hot Water System? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (If "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info) § 140.6

1. Occupancy Type[1]	2. Conditioned Floor Area[2] (ft²)	3. Installed Lighting Power (Watts)	4. Lighting Control Credits (Watts)	5. Additional (Custom) Allowance: Area Category Footnotes (Watts)	5. Additional (Custom) Allowance: Tailored Method (Watts)	Confirmed: Pass	Confirmed: Fail
Classrooms, Lecture, Training, Vocational Areas	4,800	2,400	0	0	0	☐	☐
Building Totals	4,800	2,400	0	0	0		

[1] See Table 120.6-C
[2] Lighting of exempt or for exempted spaces must not be included in the table

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)[1] § 130.0

Luminaire Schedule (includes all permanent installed lighting in conditioned spaces, and portable lighting over 0.3 w/ft² in offices)		Installed Watts (Conditioned)			Confirmed	
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: CEC Default from NAB	How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts	Pass	Fail
2-A WLL02	2x4 – 60w LED	60	No	Yes	40	2,400	☐	☐

[1] Lighting power densities were used in the compliance model Building Departments will need to check prescriptive items for luminaire schedule entries.

51. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES	§ 140.9
This Section Does Not Apply	

52. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS	§ 140.9
This Section Does Not Apply	

53. COVERED PROCESS SUMMARY – COMPUTER ROOMS	§ 140.9
This Section Does Not Apply	

54. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS	§ 140.9
This Section Does Not Apply	

T. UNMET LOAD HOURS
This Section Does Not Apply

U. 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	--	--	--	--	--	--
Space Cooling	13.6	17.5	-3.9	--	--	--

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U. 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)
Indoor Fans	21.2	9.2	12.0	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	37.1	37.1	0.0
Indoor Lighting	9.0	4.9	4.1	--	--	--
COMPLIANCE TOTAL	49.8	43.3	6.5	90.7	37.1	53.6
Receptacle	12.7	12.7	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	50.5	56.0	-6.5	90.7	37.1	53.6

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E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2016-NRCC-MCH-01-E)* § 120.5

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in Field for Field Inspector to verify).

Test Description	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-11-A	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A	MCH-19-A	Confirmed: Pass	Confirmed: Fail
Equipment Requiring Testing or Verification	Outdoor air	Supply Air Temp	Air Side Econ	Economizer Controls	DCV	Supply Fan VFD	Valve Leakage	Demand Shed Controls	Supply Water Temp Reset Controls	Hydronic System Variable Flow Controls	Air Handling Units	Thermal Energy Storage	Supply Air Temp Reset Controls	Condenser Water Temp Reset Controls	Energy Management Control System	Duct Leakage	ECMS	
# of units	5	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
AC-1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Hans Marsman, CEA, CEPE, LEED AP BD+C	Signature:	CABEC Digitally signed by Hans Marsman Date: 2018.02.27 09:12:20 -08'00'
Company: Brumnitt Energy Associates, Inc	Signature Date:	Date/Version: 2016-01-01(v1.0)
Address: 777 South Highway 101, Suite 203	CEA Identification (if applicable): NR-16-09-2003	
City/State/Zip: Solana Beach California 92075		
Phone: 619.591.1126		

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer; or I am a licensed architect.
2. I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
3. I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a limited- or type-of work disciplined as exempt, pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name: Randall P Cavanaugh	Signature:
Company: American Modular Systems | Gen7 Schools	Date Signed: 11/30/16
Address: 787 Spreckels Avenue	Declaration Statement Type: 1
City/State/Zip: Manteca CA 95336	Title: Engineer
Phone: 209.825.1921	License #: C12631

Responsible Lighting Designer Name: Randall P Cavanaugh	Signature:
Company: American Modular Systems | Gen7 Schools	Date Signed: 11/30/16
Address: 787 Spreckels Avenue	Declaration Statement Type: 1
City/State/Zip: Manteca CA 95336	Title: Engineer
Phone: 209.825.1921	License #: C12631

Responsible Mechanical Designer Name: Randall P Cavanaugh	Signature:
Company: American Modular Systems | Gen7 Schools	Date Signed: 11/30/16
Address: 787 Spreckels Avenue	Declaration Statement Type: 1
City/State/Zip: Manteca CA 95336	Title: Engineer
Phone: 209.825.1921	License #: C12631

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS

1. Surface Name	2. Surface Type	3. Description of Assembly Layers	4. Notes	Confirmed: Pass	Confirmed: Fail
Concr. Slab over Crawlspace	ExteriorFloor	Air - Floor - 3 1/2 in. Concrete - 140 lb/ft3 - 8 in. Carpet - 3/4 in.		☐	☐
Roof: Uv0.70 per EZFrame	Roof	Metal Standing Seam - 1/16 in. Fiberglass Polyisocyanurate - EPS - 1/2 in. R2.1 Metal framed roof, 24in. OC, 3 in., R-19 Acoustic Tile - 3/8 in.	See EZFrame Report for U-factor 0.70	☐	☐
R-13 in metal frame = R-5 c.i.	ExteriorWall	Wood Siding - 1/2 in. Expanded polystyrene-bead - 1.0 in. Cavity(less insulation) R1.03 Metal framed wall, 16in. OC, 1.5in., R-13 Gypsum Board - 1/2 in.		☐	☐
Interior wall	InteriorWall	Gypsum Board - 1/2 in. Metal framed wall, 16in. OC, 3 in., R-13 Gypsum Board - 1/2 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY

1. Opaque Door Assembly Name / Tag or I.D.	2. Door Type	3. Certification Method	4. Operation	5. Area	6. Overall U-factor	7. Status[1]	Confirmed: Pass	Confirmed: Fail
Metal Door	MetalNonInsulatedDoubleLayerDoor	DefaultNoPerformance	Swinging	120	0.700	N	☐	☐

[1] Status: N – New, A – Altered, E – Existing

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT *(Adapted from 2016-NRCC-MCH-03-E)*

CONDITIONED ZONE NAME	1. DESIGN AIR FLOWS: HEATING(CFM)	COOLING(CFM)	DESIGN PRIMARY OA(CFM)	MINIMUM PRIMARY AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	DEC CONTROL (Y/N)	2. VENTILATION (§ 120.1): VENTILATED AREA (ft2)	CONDITIONED AREA (ft2)	MIN. VENT RTE AREA (CFM/ft2)	DESIGN MIN. OA PER PERSON (CFM/PERSON)	MIN. VENT RTE PERSON (CFM)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIR FLOW (CFM)	OCC (Y/N)	Operable Window Inlet/Exit Area (ft2)	Pass	Fail
Classrooms: Zone	AC-1	1,200	NA	NA	NA	NA	N	AC-1	4,800	NA	120.0 0	15.00	1,800	1,800	NA	N		☐	☐
								TOTAL	4,800		120.0 0		1,800	1,800	NA			☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1. System ID	2. System Type	3. Qty	4. Rated Capacity (kBtu/h): Heating	4. Rated Capacity (kBtu/h): Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm): Design	7. Airflow (cfm): Min.	7. Airflow (cfm): Min. Ratio	8. Fan: BHP	8. Fan: Cycles	8. Fan: ECM Motor	Confirmed: Pass	Confirmed: Fail
Classrooms-TERM	Uncontrolled	5	NA	NA	NA	Classrooms Zone	1200	NA	NA	NA	NA	☐	☐	☐

C. EXHAUST FAN SUMMARY

This Section Does Not Apply

D. DHW EQUIPMENT SUMMARY *(Adapted from NRCC-PLB-01)*

This Section Does Not Apply

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E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2016-NRCC-MCH-01-E)* § 120.5

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in Field for Field Inspector to verify).

Test Description	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-11-A	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A	MCH-19-A	Confirmed: Pass	Confirmed: Fail
Equipment Requiring Testing or Verification	Outdoor air	Supply Air Temp	Air Side Econ	Economizer Controls	DCV	Supply Fan VFD	Valve Leakage	Demand Shed Controls	Supply Water Temp Reset	Hydronic System Variable Flow Controls	Air Handling Units	Thermal Energy Storage	Supply Air Temp Reset	Condenser Water Temp Reset Controls	Energy Management Control System	Duct Leakage	ECMS	
# of units	5	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
AC-1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

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NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) § 140.6

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)

Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial-on occupancy sensor, manual dimming, etc.)	# of Units	Control Credit Calculation: Watts of Controlled Lighting	Control Credit Calculation: Power Adjustment Factor	Control Credit Calculation: Control Credit Watts	V If Acceptance Test Required	Confirmed: Pass	Confirmed: Fail
Classroom 101	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐
Classroom 102	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐
Classroom 103	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐
Classroom 104	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐
Classroom 105	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐

B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) § 130.1

This Section Does Not Apply

3000 SQFT < General Area Lighting < 5000 SQFT = Multi-Level (50 to 85% SP) + Automatic Daylight (35 to 65% SP) + Manual Dimming (15 to 35% SP)
5000 SQFT < General Area Lighting < 20000 SQFT = Multi-Level (50 to 85% SP) + Automatic Daylight (35 to 65% SP) + Manual Dimming (15 to 35% SP) + Occupant Sensing (10 to 30% SP)
General Area Lighting > 20000 SQFT = Multi-Level (50 to 85% SP) + Automatic Daylight (35 to 65% SP) + Manual Dimming (15 to 35% SP) + Occupant Sensing (10 to 30% SP) + Demand Responsive

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-01-E) § 140.6

General lighting power (see Table D)	0
General lighting power from special function areas (see Table E)	NA
Additional "one lt or less ft²" (See Table G)	0
Total watts	0

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) § 140.6-D

This Section Does Not Apply

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E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) § 140.6(c) 3H

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft²)	Allowed Watts	Confirmed: Pass	Confirmed: Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

Rectangular Spaces: Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed: Pass	Confirmed: Fail
NA	NA	NA	NA	NA	NA	☐	☐

Non-Rectangular Spaces

This Section Does Not Apply

Note: All applicable spaces are listed under the Non-Rectangular Spaces table

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)

1. Wall Display	2. Combined Floor Display and Task Lighting	3. Combined Ornamental and Special Effects Lighting	4. Very Valuable Merchandise	Allowed Watts	Confirmed: Pass	Confirmed: Fail
0	0	0	0	0	☐	☐

5. Wall Display

This Section Does Not Apply

6. Floor Display and Task Lighting

This Section Does Not Apply

7. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

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B. Very Valuable Merchandise

This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E) § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in Field for Field Inspector to verify).

Test Description	Indoor: NRCA-LTI-02-A	Indoor: NRCA-LTI-03-A	Indoor: NRCA-LTI-04-A	Outdoor: NRCA-LTO-02-A	Confirmed: Pass	Confirmed: Fail
Equipment Requiring Testing or Verification	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls		
# of Units	5	1	5	1		
Occupant Sensors	☒	☐	☐	☐	☐	☐
Automatic Time Switch	☒	☐	☐	☐	☐	☐
Automatic Daylighting	☐	☒	☐	☐	☐	☐
Demand Responsive	☐	☐	☐	☐	☐	☐
Outdoor Controls	☐	☐	☐	☒	☐	☐

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A. PROJECT GENERAL INFORMATION

1.	Project Location (city)	Palm Springs-Int	8.	Standards Version	Compliance2016
2.	CA Zip Code		9.	Compliance Software (version)	CBECC-Com 2016.3.0 SP1
3.	Climate Zone	15	10.	Weather File	PALM-SPRINGS-INTL_722868_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	960 ft²	11.	Building Orientation (deg)	(N) 345 deg
5.	Total Unconditioned Floor Area	0 ft²	12.	Permitted Scope of Work	NewComplete
6.	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² yr) § 140.1

BUILDING COMPLIES

	1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard
Space Heating		5.90	12.99	-7.09	-120.2%
Space Cooling		193.22	244.16	-50.94	-26.4%
Indoor Fans		106.27	50.21	56.06	52.8%
Heat Rejection		--	--	--	--
Pumps & Misc.		--	--	--	--
Domestic Hot Water		7.93	7.93	--	0.0%
Indoor Lighting		45.64	24.41	21.23	46.5%
COMPLIANCE TOTAL		358.96	339.70	19.26	5.4%
Receptacle		64.30	64.30	0.0	0.0%
Process		--	--	--	--
Other Ltg		--	--	--	--
Process Motors		--	--	--	--
TOTAL		423.26	404.00	19.3	4.6%

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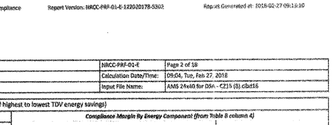
C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Indoor Fans: Check envelope and mechanical
2nd	Indoor Lighting: Check lighting
3rd	Heat Rejection: Check envelope and mechanical
4th	Pumps & Misc.: Check mechanical
5th	Domestic Hot Water: Check mechanical
6th	Space Heating: Check envelope and mechanical
7th	Space Cooling: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)



EXCEPTIONAL CONDITIONS

e building does not include service water heating. Verify that service water heating is not required and is not included in the design.

HERS VERIFICATION

is Section Does Not Apply

ADDITIONAL REMARKS

ol: the roof U-value has been calculated using EZFrame per CEC guidance: U-value = 0.070

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components are the performance or prescriptive path for compliance. "NA" is not to project for components that select the performance path. Indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms (required to submitted)	Location of Mandatory Notes on Plans
Envelope	☒ Performance ☐ Prescriptive ☐ NA	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	ML7
		NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
Mechanical	☒ Performance ☐ Prescriptive ☐ NA	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	ML7
		NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
Domestic Hot Water	☐ Performance ☒ Prescriptive ☐ NA	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	P1.0
		NRCC-PLB-01-E	
Lighting (Indoor Conditioned)	☒ Performance ☐ Prescriptive ☐ NA	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	E1.0
		NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
Covered Process: Commercial Kitchens	☐ Performance ☐ Prescriptive ☒ NA	SA (section of the NRCC-PRF-01-E)	
		NRCC-PRC-01/ 08-E	
Covered Process: Computer Rooms	☐ Performance ☐ Prescriptive ☒ NA	SA (section of the NRCC-PRF-01-E)	
		NRCC-PRC-03 / 04-E	
Covered Process: Laboratory Exhaust	☐ Performance ☐ Prescriptive ☒ NA	SA (section of the NRCC-PRF-01-E)	
		NRCC-PRC-01/ 04-E	

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Confirmed

Building Component	Compliance Forms *(required for submittal)*	Pass	Fail
Plumbing	☐ NRCI-PLB-01-E - For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-21-H - HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-STH-03-E - Any solar water heating	☐	☐
Indoor Lighting	☒ NRCI-LTI-01-E - For all buildings	☐	☐
	☒ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)	☐	☐
	☐ NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio	☐	☐
	☒ NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls.	☐	☐
	☒ NRCA-LTI-03-A - Automatic daylighting controls	☐	☐
	☐ NRCA-LTI-04-A - Demand responsive lighting controls	☐	☐
Outdoor Lighting	☒ NRCI-LTO-01-E – Outdoor Lighting	☐	☐
	☐ NRCI-LTO-02-E- EMCS Lighting Control System	☐	☐
	☒ NRCA-LTO-02-A - Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTS-01-E – Sign Lighting	☐	☐
Electrical	☒ NRCI-ELC-01-E - Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Confirmed

Building Component	Compliance Forms *(required for submittal)*	Pass	Fail
Covered Process	☐ NRCI-PRC-01-E Covered Processes	☐	☐
	☐ NRCA-PRC-01-E - Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-E - Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-E - Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-E - Refrigerated Warehouse- Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-05-E - Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-E - Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07-E - Refrigerated Warehouse- Variable Speed Compressor	☐	☐
	☐ NRCA-PRC-08-E - Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

Confirmed

1.	Total Conditioned Floor Area	960 ft²	5.	Number of Floors Above Grade	1
2.	Total Unconditioned Floor Area	0 ft²	6.	Number of Floors Below Grade	0
3.	Addition Conditioned Floor Area	0 ft²			
4.	Addition Unconditioned Floor Area	0 ft²			

7. Opaque Surfaces & Orientation	8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio	Pass	Fail
North Wall	240 ft²	79 ft²	33.0%	☐	☐
East Wall	400 ft²	0 ft²	00.0%	☐	☐
South Wall	240 ft²	79 ft²	33.0%	☐	☐
West Wall	400 ft²	0 ft²	00.0%	☐	☐
Total	1,280 ft²	158 ft²	12.4%	☐	☐
Roof	960 ft²	0 ft²	00.0%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY — § 110.6 — Confirmed

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type / Product Type / Frame Type	3. Certification Method[1]	4. Assembly Method	5. Area ft²	6. Overall U-factor	7. Overall SHGC	8. Overall VT	9. Exception[2]	Pass	Fail
Solar Grey NFRC	Vertical/Fenestration Fixed/Window N/A	NFRC Rated	Manufactured	158	0.78	0.43	0.37	N	☐	☐

[1] Simply 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 chosen 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

Taking compliance credit for fenestration shading devices? (If "Yes", see NRCC-PRF-ENV-DETAILS for more information) — No

K. OPAQUE SURFACE ASSEMBLY SUMMARY — § 120.7/ § 140.3 — Confirmed

1. Surface Name	2. Surface Type	3. Area (ft²)	4. Framing Type	5. Cavity R-Value	6. Continuous R-Value	7. U-Factor / F-Factor / C-Factor	8. Status[1]	Pass	Fail
Conc. Slab over Crawlspace	ExteriorFloor	960	NA	0	NA	U-Factor: 0.210	N	☐	☐
Roof: U=0.70 per EZFrame	Roof	960	Metal	19	2	U-Factor: 0.071	N	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	1280	Metal	13	5	U-Factor: 0.098	N	☐	☐

[1] Status: N - New, A – Altered, E – Existing

L. ROOFING PRODUCT SUMMARY — § 140.3 — Confirmed

1. Product Type	2. Product Density (lb/ft³)	3. Aged Solar Reflectance	4. Thermal Emittance	5. SRI	6. Cool Roof Credit	7. Roofing Product Description	Pass	Fail
Roof: U=0.70 per EZFrame	3.163	0.08	0.75	NA	No	NA	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) — § 110.1 / § 110.2

Dry System Equipment [1] (Pan & Economizer Info included below in Table N) — Confirmed

1. Equip Name	2. Equip Type	3. System Type (Simple [2] or Complex [3])	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtu/h)	8. Total Cooling Output (kBtu/h)	9. Efficiency: Cooling	9. Efficiency: Heating	10. Acceptance Testing Required? (Y/N) [4]	11. Status[5]	Pass	Fail
AC-1	SPVHP (Packaged1Phase)	Simple	1	39	No	0	45	EER-10.20	COP-3.00	Yes	N	☐	☐

[1] Dry System Equipment includes furnaces, air handling units, heat pumps, etc.
[2] Simple Systems must complete NRCC-MCH-04-E commissioning design review form
[3] Complex Systems must complete NRCC-MCH-04-E commissioning design review form
[4] A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS
Status: N - New, A – Altered, E – Existing

Wet System Equipment Section Does Not Apply

Discrepancy between modeled and designed equipment sizing? (if "Yes", see Table F. "Additional Remarks" for an explanation) — No

N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] — § 140.4 — Confirmed

1. Equip Name	2. Outside Air: CFM	3. Supply Fan: CFM	3. Supply Fan: HP	3. Supply Fan: BHP	3. Supply Fan: TSP (inch WC)	3. Supply Fan: Control	4. Return Fan: CFM	4. Return Fan: HP	4. Return Fan: BHP	4. Return Fan: TSP (inch WC)	4. Return Fan: Control	5. Economizer Type (if present)	Pass	Fail
AC-1	300	1380	0.500	0.435	1.00	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section

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O. EQUIPMENT CONTROLS — § 120.2 — Confirmed

1. Equip Name	2. Equip Type	3. Controls	Pass	Fail
AC-1	SPVHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

P. SYSTEM DISTRIBUTION SUMMARY — § 120.4/ § 140.4(l) — Confirmed

1. Equip Name	2. Equip Type	3. Dry System Distribution: Duct Leakage and Sealing Required per 140.4(l)	4. Dry System Distribution: Duct Leakage will be verified per RA1 and RA3	5. Ducts: Insulation R-Value	5. Ducts: Location	6. Status[1]	Pass	Fail
AC-1	SPVHP	No	No	0	Conditioned	N	☐	☐

[1] Status: N - New, E – Existing

Does the Project Include Zonal Systems? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project Include a Solar Hot Water System? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (If "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)[1] — § 140.6 — Confirmed

1. Occupancy Type [1]	2. Conditioned Floor Area [1] (ft²)	3. Installed Lighting Power (Watts)	4. Lighting Control Credits (Watts)	5. Additional (E-adom) Allowance: Area Category Footnotes (Watts)	5. Additional (E-adom) Allowance: Tailored Method (Watts)	Pass	Fail
Classrooms, Lecture, Training, Vocational Areas	960	480	0	0	0	☐	☐
Building Totals:	960	480	0	0	0		

[1] See Table 140.6-C

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[1] See NRCC-LTI-01-E for unconditioned spaces.
[2] Lighting allowances for existing space control methods is not included in this table

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)[1] — § 130.0

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.1 watt/ ft² in offices) — Installed Watts (Conditioned) — Confirmed

Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, FIXTR, new dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined: CEC Default from IAE6	How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts	Pass	Fail
2x4 VTLED	2x4 - 60w LED	60	No	Yes	8	480	☐	☐

[1] Lighting power allowance, must exist in the compliance model building departments will need to check permitted forms for luminaire Schedule details

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES — § 140.9
This Section Does Not Apply

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS — § 140.9
This Section Does Not Apply

S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS — § 140.9
This Section Does Not Apply

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS — § 140.9
This Section Does Not Apply

T. UNMET LOAD HOURS
This Section Does Not Apply

U. 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	0.7	--	0.7	1.3	--	1.3
Space Cooling	5.4	7.0	-1.6	--	--	--
Indoor Fans	4.4	2.1	2.3	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	5.2	5.2	0.0
Indoor Lighting	1.8	1.0	0.8	--	--	--
COMPLIANCE TOTAL	**11.6**	**10.8**	**0.8**	**8.5**	**5.2**	**3.3**
Receptacle	2.5	2.5	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**14.1**	**13.3**	**0.8**	**8.5**	**5.2**	**3.3**

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT *(Adapted from 2016-NRCC-MCH-03-E)* — Confirmed

CONDITIONED ZONE NAME	1. DESIGN AIR FLOWS: ZONE ID	1. DESIGN AIR FLOWS: HEATING SYSTEM TYPE	1. DESIGN AIR FLOWS: COOLING SYSTEM TYPE	1. DESIGN AIR FLOWS: ZONE HEATING AIR FLOW RATE	1. DESIGN AIR FLOWS: ZONE COOLING AIR FLOW RATE	1. DESIGN AIR FLOWS: ZONE MINIMUM AIR FLOW RATE	1. DESIGN AIR FLOWS: MINIMUM OUTDOOR AIR FLOW RATE	1. DESIGN AIR FLOWS: DEDICATED OUTDOOR AIR SYSTEM	2. VENTILATION (§ 120.1)								Pass	Fail
									VENTILATION	CONTROL MEANS (DCV)	MIN. VENTILATION RATE (CFM/ZONE)	DESIGN OUTDOOR AIR FLOW RATE (CFM/ZONE)	MIN. OUTDOOR AIR FLOW RATE (CFM/ZONE)	DESIGN OUTDOOR AIR FLOW RATE (CFM/AREA)	TRANSFER AIR FROM OUTDOORS (CFM)	CONTROL	Exception to mandatory measures		
Classrooms	AC-1	1,380	NA	NA	NA	NA	N	N	AC-1	960	NA	24.00	15.60	360	360	NA	N	☐	☐
									TOTAL	960		24.00		360	360	NA		☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY — § 140.4 — Confirmed

1. System ID	2. System Type	3. Qty	4. Rated Capacity (kBtu/h): Heating	4. Rated Capacity (kBtu/h): Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm): Design	7. Airflow (cfm): Min.	7. Airflow (cfm): Min. Ratio	8. Fan: BHP	8. Fan: Cycles	8. Fan: ECM Motor	Pass	Fail
Classrooms-TRM	Uncontrolled	1	NA	NA	NA	Classrooms	1380	NA	NA	NA	NA		☐	☐

C. EXHAUST FAN SUMMARY
This Section Does Not Apply

D. DHW EQUIPMENT SUMMARY – *(Adapted from NRCC-PLB-01)*
This Section Does Not Apply

E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS
This Section Does Not Apply

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F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)
This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2016-NRCC-MCH-01-E)* — § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Confirmed

Test Description	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	MCH-04-A	Pass	Fail
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Economizer	Air Side Ducts	Economizer Controls	DCV	Supply Fan Valve	Valve Actuator	Supply Water Temp. Reset	Hydronic Variable Flow Control	Auto Demand Shed Control	Auto FDD for AV & Zone	Auto FDD for AV & Zone	DAC Energy Storage for DX AC	TES Systems	Condenser Water Reset Controls	ECMS	☐	☐
AC-1	1	X	X	--	--	--	--	--	--	--	--	X	--	--	--	--	--	☐	☐

H. EVAPORATIVE COOLER SUMMARY
This Section Does Not Apply

NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) — § 140.6

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)

Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual-dimming, etc.)	# of Units	Control Credit Calculation: Watts of Controlled Lighting	Control Credit Calculation: Power Adjustment Factor	Control Credit Calculation: Control Credit Watts	V if Acceptance Test Required	Confirmed: Pass	Confirmed: Fail
Classroom 101	Classrooms, Lecture, Training, Vocational Areas	- none specified -	1		0.00	0		☐	☐

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B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) — § 130.1
This Section Does Not Apply
§130.1(b) = Manual area controls, §130.1(c) = Multi-Level, §130.1(c) = Auto Shut-Off, §130.1(d) = Manual-area Displays, §130.1(e) = Demand Responsive

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E) — § 140.6

General lighting power (see Table D)	0
General lighting power from special function areas (see Table E)	NA
Additional "use it or lose it" (See Table G)	0
Total watts	0

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) — § 140.6-D
This Section Does Not Apply

E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) — § 140.6(c) 3iii — Confirmed

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft²)	Allowed Watts	Pass	Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Retail Method for Special Function Areas is not currently implemented

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

Rectangular Spaces: Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed: Pass	Confirmed: Fail
NA	NA	NA	NA	NA	NA	☐	☐

Non-Rectangular Spaces
This Section Does Not Apply
Note: All applicable spaces are listed under the Non-Rectangular Spaces table

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT — § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Haris Mansman, CEA, CEPE, LEED AP BD+C	
Company: Brunsmidt Energy Associates, Inc	Signature:
Address: 777 South Highway 101, Suite 203	Signature Date:
City/State/Zip: Solana Beach California 92075	CEA Identification (if applicable): NR-16-09-20024
Phone: 619.531.1126	

CABEC Digitally signed by Haris Mansman Date: 2018.02.27 09:42:12 -08'00'

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
2. I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.
3. I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name: Randall P Cavanaugh	
Company: American Modular Systems | Gen7 Schools	Signature: Randall Cavanaugh
Address: 787 Sprockels Avenue	Date Signed: 11/30/16
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1
Phone: 209.825.1921	Title: Engineer — License #: C12631
Responsible Lighting Designer Name: Randall P Cavanaugh	Signature: Randall Cavanaugh
Company: American Modular Systems | Gen7 Schools	Date Signed: 11/30/16
Address: 787 Sprockels Avenue	Declaration Statement Type: 1
City/State/Zip: Manteca CA 95336	Title: Engineer — License #: C12631
Phone: 209.825.1921	
Responsible Mechanical Designer Name: Randall P Cavanaugh	Signature: Randall Cavanaugh
Company: American Modular Systems | Gen7 Schools	Date Signed: 11/30/16
Address: 787 Sprockels Avenue	Declaration Statement Type: 1
City/State/Zip: Manteca CA 95336	Title: Engineer — License #: C12631
Phone: 209.825.1921	

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H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-03-E) — § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	Indoor: NRCA-LTI-02-A	Indoor: NRCA-LTI-03-A	Indoor: NRCA-LTI-04-A	Outdoor: NRCA-LTO-02-A	Confirmed: Pass	Confirmed: Fail
Equipment Requiring Testing or Verification	# of units	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls		
Occupant Sensors	1	☒	☐	☐	☐	☐	☐
Automatic Time Switch	1	☒	☐	☐	☐	☐	☐
Automatic Daylighting	1	☐	☒	☐	☐	☐	☐
Demand Responsive	1	☐	☐	☐	☐	☐	☐
Outdoor Controls	1	☐	☐	☐	☒	☐	☐

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS — Confirmed

1. Surface Name	2. Surface Type	3. Description of Assembly Layers	4. Notes	Pass	Fail
Conc. Slab over Crawlspace	ExteriorFloor	Air - Floor - 3.1/2 in. Concrete - 140 lb/ft3 - 4 in. Carpet - 3/4 in.		☐	☐
Roof: U=0.70 per EZFrame	Roof	Metal Standing Seam - 1/16 in. Expanded Polystyrene - EPS - 1/2 in. R2.1 Metal framed roof, 24in. OC, 5.5in., R-19 Acoustic Tile - 3/8 in.	See EZFrame Report for U-factor 0.70	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Compliance Insulation R5.00 Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)
This Section Does Not Apply

C. OPAQUE DOOR SUMMARY — Confirmed

1. Opaque Door Assembly Name / Tag or I.D.	2. Door Type	3. Certification Method	4. Operation	5. Area	6. U-wall to Meter	7. Status[1]	Pass	Fail
Metal Door	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	21	0.700	N	☐	☐

[1] Status: N - New, A – Altered, E – Existing

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G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E) — Confirmed

1. Wall Display	2. Combined Floor Display and Task Lighting	3. Combined Ornamental and Special Effects Lighting	4. Very Valuable Merchandise	Allowed Watts	Pass	Fail
0	0	0	0	0	☐	☐

S. Wall Display
This Section Does Not Apply

T. Floor Display and Task Lighting
This Section Does Not Apply

U. Combined Ornamental and Special Effects Lighting
This Section Does Not Apply

V. Very Valuable Merchandise
This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-03-E) — § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

| Test Description | Indoor: NRCA-LTI-02-A | Indoor: NRCA-LTI-03-A | Indoor: NRCA-LTI-04-A | Outdoor: NRCA-LTO-02-A | Confirmed: Pass | Confirmed: Fail |
|---|---

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building components are only eligible for prescriptive compliance. Indicate which are relevant to this project. | *The following building components may have an mandatory requirements per Part 6. Indicate which are relevant to the project.*

Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
☒	☐	Lighting (Outdoor Unconditioned) ≤ §140.6	NRCC-LTI-03 / 02 / 03 / 04 / 05-E	☒	☐	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05 E
☒	☐	Lighting (Outdoor) ≤140.7	NRCC-LTO-03 / 02 / 03-E	☒	☐	Electrical: §130.5	NRCC-ELC-03-E
☐	☒	Lighting (Sign) §140.8	NRCC-LTS-01-E	☒	☐	Solar Ready: §110.10	NRCC-SPA-01 / 02-E
☐	☒	Solar Thermal Water Heating: §150.5	NRCC-STH-01-E	☐	☒	Covered Process: §123.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRC -PRC-10-E NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Envelope	☒ NRCI-ENV-01-E - For all buildings	☐	☐
	☒ NRCA-ENV-02-E - NFRC label verification for fenestration	☐	☐
Mechanical	☒ NRCI-MCH-01-E - For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A- Outdoor Air	☐	☐
	☒ NRCA-MCH-03-A - Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-A- Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A- Air Economizer Controls	☐	☐
	☐ NRCA-MCH-06-A- Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A - Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A- Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A - Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A- Hydronic System Variable Flow Controls	☐	☐
	☒ NRCA-MCH-11-A - Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A- Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A- Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A - Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A- Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A - Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A- Energy Management Controls Systems	☐	☐
	☐ NRCV-MCH-04-H- Duct Leakage Test	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Plumbing	☐ NRCI-PLB-01-E - For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-21-E - HERS-verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-22-E - HERS-verified single-dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-21-H- HERS-verified central-systems in high-rise residential, hotel/motel application	☐	☐
	☐ NRCV-PLB-22-H - HERS-verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-STH-01-E - Any solar water heating.	☐	☐
Indoor Lighting	☒ NRCI-LTI-01-E - For all buildings	☐	☐
	☒ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS).	☐	☐
	☐ NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio	☐	☐
	☒ NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls.	☐	☐
	☒ NRCA-LTI-03-A - Automatic daylighting controls.	☐	☐
	☐ NRCA-LTI-04-A - Demand responsive lighting controls	☐	☐
Outdoor Lighting	☒ NRCI-LTO-01-E - Outdoor Lighting	☐	☐
	☐ NRCI-LTO-02-E- EMCS Lighting Control System	☐	☐
	☒ NRCA-LTO-02-A - Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTS-01-E – Sign Lighting	☐	☐
Electrical	☒ NRCI-ELC-01-E - Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Covered Process	☐ NRCI-PRC-01-E Covered Processes	☐	☐
	☐ NRCA-PRC-01-F- Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-F- Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-F- Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor	☐	☐
	☐ NRCA-PRC-08-F- Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

						Confirmed Pass	Confirmed Fail
1.	Total Conditioned Floor Area	960 ft²	5.	Number of Floors Above Grade	1		
2.	Total Unconditioned Floor Area	0 ft²	6.	Number of Floors Below Grade	0		
3.	Addition Conditioned Floor Area	0 ft²					
4.	Addition Unconditioned Floor Area	0 ft²					

7. Opaque Surfaces & Orientation		8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio	Confirmed Pass	Confirmed Fail
North Wall		240 ft²	79 ft²	33.0%	☐	☐
Kim Wall		420 ft²	0 ft²	00.0%	☐	☐
South Wall		240 ft²	79 ft²	33.0%	☐	☐
West Wall		420 ft²	0 ft²	00.0%	☐	☐
	Total	1,320 ft²	158 ft²	12.4%	☐	☐
Roof		960 ft²	0 ft²	00.0%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY § 110.6 | Confirmed

1.	2.	3.	4.	5.	6.	7.	8.	9.	Confirmed Pass	Confirmed Fail
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	Exception		
Solar Grey NFRC	Vertical/Fenestration Fixed/Window	NFRC Rated	Manufactured	158	0.78	0.43	0.37	N	☐	☐

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Title 2 §10-3.4 and Table 110.5-A. Center-of-glass (COG) values can fit the glass only, certified by the manufacturer. Jamb and sill values, for one of each type, like-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A – Altered, E – Existing*

Taking compliance credit for fenestration shading devices? (If "Yes", see NRCC-PRF-ENV-DETAILS for more information)	No

K. OPAQUE SURFACE ASSEMBLY SUMMARY § 120.7/ § 140.3 | Confirmed

1.	2.	3.	4.	5.	6.	7.	8.	Confirmed Pass	Confirmed Fail
Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status[2]		
Conc. Slab over Crawlspace	ExteriorFloor	960	NA	0	NA	U-Factor: 0.210	N	☐	☐
Roof: U=0.70 per EZFrame	Roof	960	Metal	19	2	U-Factor: 0.071	N	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	1280	Metal	13	5	U-Factor: 0.056	N	☐	☐

[2] *Status: N - New, A – Altered, E – Existing*

L. ROOFING PRODUCT SUMMARY § 140.3 | Confirmed

1.	2.	3.	4.	5.	6.	7.	Confirmed Pass	Confirmed Fail
Product Type	Product Density (lb/ft²)	Aged Solar Reflectance	Thermal Emittance	SRI	Cool Roof Credit	Roofing Product Description		
Roof: U=0.70 per EZFrame	3.183	0.08	0.75	NA	No	NA	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) § 110.1 / § 110.2

Dry System Equipment[1] | Gas & Economizer info included (below in Table N)

1.	2.	3.	4.	5.	6.	7.	8.	9. Efficiency		10. Acceptance Testing Required[2] (Y/N)	11. Status[3]	Confirmed Pass	Confirmed Fail
Equip Name	Equip Type	System Type (Simple[4] or Complex[5])	Qty	Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Total Cooling Output (kBtu/h)	Cooling	Heating				
AC-1	SPVHP (Packaged Splitless)	Simple	1	45	No	0	41	EER-10.20	COP-3.00	Yes	N	☐	☐

[1] *Dry System Equipment includes furnaces, air handling units, heat pumps, etc.*
[2] *Simple Systems must complete NRCC-CXR-01-E commissioning design review forms*
[3] *Complex Systems must complete NRCC-CXR-04-E commissioning shop drawing review forms*
[4] *A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS*
[5] *Status: N - New, A – Altered, E – Existing*

Wet System Equipment Section Does Not Apply	
Discrepancy between modeled and designed equipment listing? (If "Yes", see Table B "Additional Remarks" for an explanation)	No

N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] § 140.4 | Confirmed

1.	2.	3. Supply Fan					4. Return Fan					5.	Confirmed Pass	Confirmed Fail
Equip Name	Outside Air CFM	CFM	HP	BHP	TSP (inch WC)	Control	CFM	HP	BHP	TSP (inch WC)	Control	Economizer Type (if present)		
AC-1	360	1200	0.500	0.038	0.50	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] *Mechanical ventilation calculations conducted per requirements in the NRCC-PRF-MCH-ISTRMD screen*

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O. EQUIPMENT CONTROLS § 120.2 | Confirmed

1. Equip Name	2. Equip Type	3. Controls	Confirmed Pass	Confirmed Fail
AC-1	SPVHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

P. SYSTEM DISTRIBUTION SUMMARY § 120.4/ § 140.4(j)

Dry System Distribution | Confirmed

1.	2.	3.	4.	5. Ducts		6.	Confirmed Pass	Confirmed Fail
Equip Name	Equip Type	Duct Leakage and Sealing Required per 140.4(j)	Duct Leakage will be verified per NA1 and NA2	Insulation R-Value	Location	Status[1]		
AC-1	SPVHP	No	No	0	Conditioned	N	☐	☐

[1] *Status: N - New, E – Existing*

Does the Project include Zonal Systems? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project include a Solar Hot Water System? (If "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (If "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)[1] § 140.6 | Confirmed

1.	2.	3.	4.	5. Additional (Custom) Allowance		Confirmed Pass	Confirmed Fail
Occupancy Type[1]	Conditioned Floor Area[2] (ft²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Area Category Footnotes (Watts)	Tailored Method (Watts)		
Classrooms, Lecture, Training, Vocational Areas	960	480	0	0	0	☐	☐
Building Totals:	960	480	0	0	0		

[1] *See Table 140.6-C*

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[1] *See NRCC-LTI-01-E for unconditioned spaces*
[2] *Lighting schedules for existing spaces established, not included in the table*

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)[1] § 130.0

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)		Installed Watts (Conditioned)				Confirmed Pass	Confirmed Fail
Name or Item Tag	Complete Luminaire Description (i.e., 4-lamp fluorescent troffer, F32T8, see dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined: CEC Default from NRA6	How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts		
2x4 VTLED	2x4 - 60w LED	60	No	Yes	8	480	☐	☐

[1] *Lighting system designers, who used in the compliance model Building Departments, adhered to check prescriptive forms for Luminaire Schedule details.*

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES	§ 140.9
This Section Does Not Apply	
S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS	§ 140.9
This Section Does Not Apply	
S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS	§ 140.9
This Section Does Not Apply	
S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS	§ 140.9
This Section Does Not Apply	

T. UNMET LOAD HOURS

Thermal Zone Name	Cooling Unmet Load Hour Limit for Thermal Zone	Proposed Cooling Unmet Load Hours	Heating Unmet Load Hour Limit for Thermal Zone	Proposed Heating Unmet Load Hours
Classroom	150	0	150	161

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U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	6.8	--	25.7	--	--
Space Cooling	1.2	1.3	-0.1	--	--	--
Indoor Fans	5.2	0.2	5.0	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	6.9	6.9	0.0
Indoor Lighting	1.8	1.0	0.8	--	--	--
COMPLIANCE TOTAL	**8.2**	**9.3**	**-1.1**	**32.6**	**6.9**	**25.7**
Receptacle	2.5	2.5	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**10.7**	**11.8**	**-1.1**	**32.6**	**6.9**	**25.7**

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Hans Monchen, CEA, CEPE, LEED AP BD+C
Company:	Envirotrit Energy Associates, Inc
Address:	777 South Highway 101, Suite 201
City/State/Zip:	Solana Beach California 92075
Phone:	619.931.1939
Signature:	CABEC Digitally signed by Hans Monchen
Signature Date:	Date: 2018.02.27 09:47:56 -08'00'
CEA / HERS Certification ID (if applicable):	NA 16 09 20037

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or as an a licensed architect
2. I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.5 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
3. I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Electrical Designer Name:	Randall P Cavanaugh
Company:	American Modular Systems | Gen2 Schools
Address:	787 Sprockels Avenue
City/State/Zip:	Manteca CA 95336
Phone:	209.825.1901
Signature:	Randall Cavanaugh
Date Signed:	11/30/16
Declaration Statement Type:	1
Title:	Engineer
License #:	C12631
Responsible Lighting Designer Name:	Randall P Cavanaugh
Company:	American Modular Systems | Gen2 Schools
Address:	787 Sprockels Avenue
City/State/Zip:	Manteca CA 95336
Phone:	209.825.1901
Signature:	Randall Cavanaugh
Date Signed:	11/30/16
Declaration Statement Type:	1
Title:	Engineer
License #:	C12631
Responsible Mechanical Designer Name:	Randall P Cavanaugh
Company:	American Modular Systems | Gen2 Schools
Address:	787 Sprockels Avenue
City/State/Zip:	Manteca CA 95336
Phone:	209.825.1901
Signature:	Randall Cavanaugh
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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS | Confirmed

1.	2.	3. Description of Assembly Layers	4. Notes	Confirmed Pass	Confirmed Fail
Surface Name	Surface Type				
Conc. Slab over Crawlspace	ExteriorFloor	Air - Floor - 3 1/2 in. Concrete - 140 lb/ft3 - 4 in. Carpet - 3/4 in.		☐	☐
Roof: U=0.70 per EZFrame	Roof	Metal Standing Seam - 1/16 in. Expanded Polystyrene - EPS - 1/2 in. R2.1 Metal framed roof, 24in. OC, 5.5in., R-19 Acoustic Tile - 3/8 in.	See EZFrame Report for U-factor 0.70	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Compliance Insulation R5.00 Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY | Confirmed

1.	2.	3.	4.	5.	6.	7.	Confirmed Pass	Confirmed Fail
Opaque Door Assembly Name / Tag or I.D.	Door Type	Certification Method	Operation	Area	Overall U-factor	Status[1]		
Metal Door	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	21	0.700	N	☐	☐

[1] *Status: N - New, A – Altered, E – Existing*

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REINAT *(Adapted from 2016-NRCC-MCH-03-E)* | Confirmed

1. DESIGN AIR FLOWS								2. VENTILATION (§ 120.1)										Confirmed Pass	Confirmed Fail
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	SUPPLY AIRFLOW (CFM)	MINIMUM OUTDOOR AIRFLOW (CFM)	MINIMUM PRIMARY AIRFLOW (CFM)	MINIMUM SECONDARY AIRFLOW (CFM)	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW RATIO	DCV CONTROL TYPE	AREA TYPE	CONDITIONED AREA (ft²)	MIN. VENT RTE AREA (CFM/ft²)	MIN. VENT RTE PERSON (CFM/PERSON)	REGEN MIN. OA (CFM/ft²)	REGEN MIN. OA (CFM/PERSON)	DESIGN MIN. OA FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	OCC'D HOURS	OCCUPANCY SCHEDULE (WEEKDAY/WEEKEND)		
Classrooms	AC-1	1,200	NA	NA	NA	NA	N	N	AC-1	960	NA	24.00	15.00	360	360	NA	N	N	N	☐	☐
									TOTAL:	960		24.00		360	360	NA				☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4 | Confirmed

1.	2.	3.	4.		5.	6.	7.		8.		Confirmed Pass	Confirmed Fail
System ID	System Type	Qty	Rated Capacity (kBtu/h)		Economizer	Zone Name	Airflow (cfm)		Fan			
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
Classrooms-TRM	Uncontrolled	1	NA	NA	NA	Classrooms	1200	NA	NA	NA	NA	☐	☐	☐

C. EXHAUST FAN SUMMARY	
This Section Does Not Apply	
D. DHW EQUIPMENT SUMMARY – *(Adapted from NRCC-PLB-01)*	
This Section Does Not Apply	
E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS	
This Section Does Not Apply	

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F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2016-NRCC-MCH-01-E)* § 3.4.4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that must be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed Pass	Confirmed Fail
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Systems	Air Dist. Ducts	Valve Leakage	Economizer Controls	DCV	Supply Fan VAV	Valve Leakage	Supply Water Temp Reset	Hot / Chilled Water Flow Control	Air Cooled Condenser Head Pressure Control	Auto-DR for JA8 & Zone	Gas Pressure Regulator ≥ 2.5 PSIG	TES Systems	Supply Air Temp Reset	Condensate Water Reset Controls	ECMs	Peer	Rat
AC-1	1	X	X	--	--	--	--	--	--	--	--	X	--	--	--	--	--	☐	☐

H. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

NRCC-PRF-LTI-DETAILS -SECTION START-

**A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Ad

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C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Indoor Fans: Check envelope and mechanical
2nd	Indoor Lighting: Check lighting
3rd	Heat Rejection: Check envelope and mechanical
4th	Pumps & Misc.: Check mechanical
5th	Domestic Hot Water: Check mechanical
6th	Space Cooling: Check envelope and mechanical
7th	Space Heating: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)

D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

Roof: the roof U-value has been calculated using EZFrame per CEC guidance; U-value = 0.070

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Strictly select building components use the performance or prescriptive path for compliance. "N/A" is not a project.
For components that utilize the prescriptive path, indicate the sheet number that includes mandatory notes on plans

Building Component	Compliance Path	Compliance Items (required for submittal)	Location of Mandatory Notes on Plans
Envelope	☒ Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	M1.7
	☐ Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05-E	
	☐ N/A		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	M1.7
	☐ Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	☐ N/A		
Domestic Hot Water	☐ Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	P1.0
	☒ Prescriptive	NRCC-PLB-01-E	
	☐ N/A		
Lighting (Indoor Conditioned)	☒ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	E1.0
	☐ Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	☐ N/A		
Covered Process: Commercial Kitchens	☐ Performance	12 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 03-E	
	☒ N/A		
Covered Process: Computer Rooms	☐ Performance	53 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-02/ 04-E	
	☒ N/A		
Covered Process: Laboratory Exhausts	☐ Performance	54 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-02/ 05-E	
	☒ N/A		

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Q. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.

Yes	NA	Prescriptive Requirement	Compliance Forms
☒	☐	Lighting Outdoor (Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E
☒	☐	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E
☐	☒	Lighting (Signs) §140.8	NRCC-LTS-01-E
☐	☒	Solar Thermal Water Heating: §160.9	NRCC-STH-01-E

Yes	NA	Mandatory Requirement	Compliance Forms
☐	☐	Commissioning: §120.8 Simple Systems	NRCC-CXR-01 / 02 / 03 / 05-E
☐	☐	Complex Systems	NRCC-CXR-01 / 02 / 04 / 05-E
☒	☐	Electrical: §130.5	NRCC-ELC-01-E
☒	☐	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
☐	☐	Covered Process: §120.6 Parking Garage	NRCC-PRC-01-E
☐	☒	Commercial Refrigeration	NRCC-PRC-05-E
☐	☒	Warehouse Refrigeration	NRCC-PRC-06/07/08-E
☐	☒	Compressed Air	NRCC-PRC-10-E
☐	☒	Process Boilers	NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Confirmed

Building Component	Compliance Forms (required for submittal)	Pass	Fail
Envelope	☒ NRCI-ENV-01-E - For all buildings	☐	☐
	☒ NRCA-ENV-02-F- NFRC label verification for fenestration	☐	☐
	☒ NRCI-MCH-01-E - For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A- Outdoor Air	☐	☐
	☐ NRCA-MCH-03-A - Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-H- Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A- Air Economizer Controls	☐	☐
	☐ NRCA-MCH-06-A- Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A – Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A- Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A – Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A- Hydronic System Variable Flow Controls	☐	☐
	☒ NRCA-MCH-11-A – Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A- Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A- Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A – Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A- Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A – Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A- Energy Management Controls Systems	☐	☐
	☐ NRCV-MCH-04-H- Duct Leakage Test	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Confirmed

Building Component	Compliance Forms (required for submittal)	Pass	Fail
Covered Process	☐ NRCI-PRC-01-E Covered Processes	☐	☐
	☐ NRCA-PRC-01-F- Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-F- Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-E- Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motors Controls	☐	☐
	☐ NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07-F- Refrigerated Warehouse- Strip/Air Curtain Case Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-08-F- Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

1.	Total Conditioned Floor Area	4,800 ft²	5.	Number of Floors Above Grade	1
2.	Total Unconditioned Floor Area	0 ft²	6.	Number of Floors Below Grade	0
3.	Addition Conditioned Floor Area	0 ft²			
4.	Addition Unconditioned Floor Area	0 ft²			

Confirmed

Pass	Fail
☐	☐

7. Opaque Surfaces & Orientation	8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio		
North Wall	1,440 ft²	475 ft²	33.0%	☐	☐
East Wall	400 ft²	0 ft²	00.0%	☐	☐
South Wall	1,200 ft²	396 ft²	33.0%	☐	☐
West Wall	400 ft²	0 ft²	00.0%	☐	☐
Total	3,440 ft²	871 ft²	25.3%	☐	☐
Roof	4,800 ft²	0 ft²	00.0%	☐	☐

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Compliance Scope:	NewComplete	Input File Name:	AMS 120x40 for DSA - CZ16 (8).cbd16

J. FENESTRATION ASSEMBLY SUMMARY — § 110.6 — **Confirmed**

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type / Product Type / Frame Type	3. Certification Method[1]	4. Assembly Method	5. Area ft²	6. Overall U-Factor	7. Overall SHGC	8. Overall VT	9. Exterior Shade[2]	Pass	Fail
Solar Grey NFRC	Vertical/Fenestration Fixed/Window/ N/A	NFRC Rated	Manufactured	871	0.78	0.43	0.57	N	☐	☐

[1] Solely 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 absent for most of architecture. See draft fenestration values; we are solved per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered E – Existing

Taking compliance credit for fen-rotation shading devices? (if "Yes", see NRCC-PRF-ENV-DETAILS for more information) — No

K. OPAQUE SURFACE ASSEMBLY SUMMARY — § 120.7/ § 140.3 — **Confirmed**

1. Surface Name	2. Surface Type	3. Area (ft²)	4. Framing Type	5. Cavity R-Value	6. Continuous R-Value	7. U-Factor / F-Factor / C-Factor	8. Status[1]	Pass	Fail
Conic: Slab over Crawlspace	ExteriorFloor	4800	NA	0	NA	U-Factor: 0.210	N	☐	☐
Roof: Uni1.7lp per EZFrame	Roof	4800	Metal	19	7	U-Factor: 0.071	N	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	3440	Metal	13	5	U-Factor: 0.068	N	☐	☐
Interior wall	InteriorWall	1600	Metal	13	NA	U-Factor: 0.188	N	☐	☐

[1] Status: N - New, A – Altered E – Existing

L. ROOFING PRODUCT SUMMARY — § 140.3 — **Confirmed**

1. Product Type	2. Product Density (lb/ft³)	3. Aged Solar Reflectance	4. Thermal Emittance	5. SRI	6. Cool Roof Credit	7. Roofing Product Description	Pass	Fail
Roof: U=0.70 per EZFrame	1.163	0.08	0.75	NA	No	NA	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) — § 110.1 / § 110.2

Dry System Equipment [1] (Fan & Economizer info included below in Table N)

Confirmed

2. Equip Name	3. Equip Type	3. System Type (Simple [2] or Complex [3])	4. Qty	5. Total Heating Output, (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtu/h)	8. Total Cooling Output (kBtu/h)	9. Efficiency Cooling	9. Efficiency Heating	10. Acceptance Testing Required? (Y/N) [4]	11. Status[5]	Pass	Fail
AC-1	SPVHP (Packaged Heat Pump)	Simple	5	45	No	0	43	EER-10.20	COP-3.00	Yes	N	☐	☐

[1] Dry System Equipment includes fanless, no humidifying units, heat pumps, etc.
[2] Simple Systems must comply with NRCC-CXR-01E if accompanying design system flyers.
[3] Complex Systems must complete NRCC-CXR-04-F commissioning design intent form.
[4] A summary of which Acceptance Tests are applicable is provided in the NRCC-PRF-MCH-DETAILS
[5] Status: N - New, A – Altered E – Existing

Steel System Equipment Section Does Not Apply

Discrepancy between modeled and designed equipment sizing? (if "Yes", see Table F, "Additional Remarks" for an explanation) — No

N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] — § 140.4 — **Confirmed**

1. Equip Name	2. Outside Air CFM	Supply Fan CFM	Supply Fan HP	Supply Fan BHP	Supply Fan TSP (Inch WC)	Supply Fan Control	Return Fan CFM	Return Fan HP	Return Fan BHP	Return Fan TSP (Inch WC)	Return Fan Control	3. Economizer Type (if present)	Pass	Fail
AC-1	360	1200	0.500	0.376	1.00	Constant Volume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] Economizer verification requirements and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section

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O. EQUIPMENT CONTROLS — § 120.2 — **Confirmed**

1. Equip Name	2. Equip Type	3. Controls	Pass	Fail
AC-1	SPVHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

P. SYSTEM DISTRIBUTION SUMMARY — **Confirmed**

Dry System Distribution								
1. Equip Name	2. Equip Type	3. Duct Leakage and Sealing Required per §40.4(l)	4. Duct Leakage will be verified per NA1 and NA2	5. Ducts: Insulation R-Value	5. Ducts: Location	6. Status[1]	Pass	Fail
AC-1	SPVHP	No	No	0	Conditioned	N	☐	☐

[1] Status: N - New, E – Existing

Does the Project include Zonal Systems? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No	
Does the Project include a Solar Hot Water System? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No	
Multifamily or Hotel/ Motel Occupancy? (if "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No	

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)[1] — § 140.6 — **Confirmed**

1. Occupancy Type [1]	2. Conditioned Floor Area [2] (ft²)	3. Installed Lighting Power (Watts)	4. Lighting Control Credits (Watts)	5. Additional (Custom) Allowance: Area Category Footnotes (Watts)	5. Additional (Custom) Allowance: Tailored Method (Watts)	Pass	Fail
Classrooms, Lecture, Training, Vocational Areas	4,800	2,400	0	0	0	☐	☐
Building Totals:	4,800	2,400	0	0	0	☐	☐

[1] See Table 140.6-C

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[1] See NRCC-CXR-01-E for recommended values
[2] Lighting information for existing spaces unaltered is not required to be listed

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)[1] — § 130.0 — **Confirmed**

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 W/ft² in conditioned spaces)

Name or Item Tag	Complete Luminaire Description (i.e., 2-lamp fluorescent troffer, F32T8, one dissuadable electronic ballast)	Installed Watts (Conditioned): Watts per luminaire	Installed Watts (Conditioned): How Wattage is Determined: CEC Default from NA5	Installed Watts (Conditioned): How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts	Pass	Fail
2x4 VTLED	2x4 - 60w LED	60	No	NA	40	2,400	☐	☐

[1] Lighting power densities were used in the compliance mode Building Departments are free to check prescriptive forms for luminaire schedule details.

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES — § 140.9

This Section Does Not Apply

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS — § 140.9

This Section Does Not Apply

S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS — § 140.9

This Section Does Not Apply

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS — § 140.9

This Section Does Not Apply

T. UNMET LOAD HOURS

This Section Does Not Apply

U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (kWh/y)	Proposed Design Site (kWh/y)	Margin (kWh/y)	Standard Design Site (MBtu/y)	Proposed Design Site (MBtu/y)	Margin (MBtu/y)
Space Heating		76.6	113.1			
Space Cooling	5.6	7.0	-1.4			

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U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (kWh/y)	Proposed Design Site (kWh/y)	Margin (kWh/y)	Standard Design Site (MBtu/y)	Proposed Design Site (MBtu/y)	Margin (MBtu/y)
Indoor Fans	24.0	9.7	14.3	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	40.0	40.0	0.0
Indoor Lighting	0.0	4.9	4.1	--	--	--
COMPLIANCE TOTAL	38.6	50.2	-11.6	153.1	60.0	113.1
Receptacle	12.7	12.7	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	51.3	62.9	-11.6	193.1	40.0	113.1

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT — § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Hans Maroman, CEA, CEPE, LEED AP BD+C	
Company: Brummitt Energy Associates, Inc	Signature: CABEC — Digitally signed by Hans Maroman
Address: 777 South Highway 101, Suite 201	Signature Date: Date: 2018.02.27 09:42:44 -08'00'
City/State/Zip: Solana Beach California 92075	CEA Identification (if applicable): NA-16-09-20024 — Field Verification Witness (if applicable):
Phone: 619.531.1240	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this documents as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
2	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.
3	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.2.

Responsible Envelope Designer Name: Randall P Cavanaugh	
Company: American Modular Systems | Gen7 Schools	Signature:
Address: 787 Sprecklels Avenue	Date Signed: 11/30/16
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1
Phone: 209.825.1921	Title: Engineer — License #: C12631
Responsible Lighting Designer Name: Randall P Cavanaugh	
Company: American Modular Systems | Gen7 Schools	Signature:
Address: 787 Sprecklels Avenue	Date Signed: 11/30/16
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1
Phone: 209.825.1921	Title: Engineer — License #: C12631
Responsible Mechanical Designer Name: Randall P Cavanaugh	
Company: American Modular Systems | Gen7 Schools	Signature:
Address: 787 Sprecklels Avenue	Date Signed: 11/30/16
City/State/Zip: Manteca CA 95336	Declaration Statement Type: 1
Phone: 209.825.1921	Title: Engineer — License #: C12631

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS — **Confirmed**

1. Surface Name	2. Surface Type	3. Description of Assembly Layers	4. Notes	Pass	Fail
Concr. Slab over Crawlspace	ExteriorFloor	Air - Floor - 3 1/2 in. Concrete - 140 lb/ft3 - 4 in. Carpet - 3/4 in.		☐	☐
Roof: U=0.70 per EZFrame	Roof	Metal Standing Seam - 1/16 in. Expanded Polystyrene - EPS - 1/2 in. R2.1 Metal framed roof, 24in. OC, 5.5in., R-19 Acoustic Tile - 3/8 in.	See EZFrame Report for U-factor 0.70	☐	☐
R-13 in metal frame + R-5 c.i.	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Compliance Insulation R5.00 Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.		☐	☐
Interior wall	InteriorWall	Gypsum Board - 1/2 in. Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY — **Confirmed**

1. Opaque Door Assembly Name / Tag or I.D.	2. Door Type	3. Certification Method	4. Operation	5. Area	6. Overall U-factor	7. Status[1]	Pass	Fail
Metal Door	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	120	0.700	N	☐	☐

[1] Status: N - New, A – Altered E – Existing

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT (Adapted from 2016-NRCC-MCH-03-E) — **Confirmed**

1. DESIGN AIRFLOWS: CONDITIONED ZONE NAME	ID	MINIMUM OUTDOOR AIRFLOW (CFM)	DESIGN PRIMARY AIRFLOW (CFM)	DESIGN PRIMARY OUTDOOR AIR FRACTION	MINIMUM PRIMARY AIR FRACTION	MAXIMUM PRIMARY AIR FRACTION	MINIMUM REHEAT AIR FRACTION	MAXIMUM REHEAT AIR FRACTION	DOAS TERMINAL UNIT	2. VENTILATION (§ 120.1): CONDITIONED ZONE (Y/N)	AIRFLOW (CFM)	MIN. AIRFLOW RESET (CFM/FT²)	DEMAND CONTROL VENTILATION (DCV)	MIN. OUTDOOR AIRFLOW WITH DCV (CFM)	MAX. OUTDOOR AIRFLOW WITH DCV (CFM)	ECONOMIZER AIR FLOW CAPACITY (CFM)	ECONOMIZER HIGH LIMIT SHUTOFF	ZONE AIR DISTRIBUTION EFFECTIVENESS	Occupant Ventilation Effectiveness	Pass	Fail
Classrooms Zone	AC-1	1,220	NA	NA	NA	NA	NA	N	AC-1	4,800	NA	100.0 0	15.00	1,800	1,800	NA	N	NA	NA	☐	☐
									TOTAL	4,800		100.0 0		1,800	1,800	NA				☐	☐

S. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY — § 140.4 — **Confirmed**

1. System ID	2. System Type	3. Qty	4. Rated Capacity (kBtuh): Heating	4. Rated Capacity (kBtuh): Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm): Design	7. Airflow (cfm): Min. Ratio	8. Fan: BHP	8. Fan: Cycles	8. Fan: EDM Motor	Pass	Fail
Classrooms-TRM	Unconditioned	5	NA	NA	NA	Classrooms Zone	1200	NA	NA	NA	NA	☐	☐

C. EXHAUST FAN SUMMARY

This Section Does Not Apply

G. DHW EQUIPMENT SUMMARY – (Adapted from NRCC-PLB-01)

This Section Does Not Apply

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E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2016-NRCC-MCH-03-E) — § RA4

Declaration of Required Acceptance Certificates (HRCA) – Acceptance Certificates that may be submitted (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

| Test Description | MCH-02E | MCH-03A | MCH-04H | MCH-05A | MCH-06A | MCH-07A | MCH-08A | MCH-09A | MCH-10A | MCH-11A | MCH-12A | MCH-13A | MCH-14A | MCH

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Compliance Scope:	NewConstruct	Input File Name:	AMS 120x40 for 2016 - CZ16 (8).ribd16x

E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) — § 140.6(c) 3N

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft²)	Allowed Watts	Conditioned: Pass	Conditioned: Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

Rectangular Spaces: Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed: Pass	Confirmed: Fail
NA	NA	NA	NA	NA	NA	☐	☐

Non-Rectangular Spaces

This Section Does Not Apply

Note: All applicable spaces are listed under the Non-Rectangular Spaces table.

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)

1. Wall Display	2. Combined Floor Display and Task Lighting	3. Combined Ornamental and Special Effects Lighting	4. Very Valuable Merchandise	Allowed Watts	Confirmed: Pass	Confirmed: Fail
0	0	0	0	0	☐	☐

5. Wall Display

This Section Does Not Apply

6. Floor Display and Task Lighting

This Section Does Not Apply

7. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

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H. WOOD & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-03-E and NRCC-LTO-01-E) — § 130.4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	NRCA-LTI-02-A	NRCA-LTI-03-A	NRCA-LTI-04-A	NRCA-LTO-02-A	Outdoor: Confirmed: Yes	Outdoor: Confirmed: No
Employees Requiring Training or Verification	# of units	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls		
Occupancy Sensors	5	☒	☐	☐	☐	☐	☐
Automatic Time Switch	1	☒	☐	☐	☐	☐	☐
Automatic Daylighting	1	☐	☒	☐	☐	☐	☐
Demand Responsive	1	☐	☐	☐	☐	☐	☐
Outdoor Controls	1	☐	☐	☐	☒	☐	☐

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 1 of 6)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A. General Information

Climate Zone:	Conditioned Floor Area: 9						
16	Unconditioned Floor Area: 480						
Building Type:	☑	Nonresidential	☐	High-Rise Residential	☐	Hotel/Motel	
☐ Schools	☐	Relocatable Public Schools	☐	Conditioned Spaces	☑	Unconditioned Spaces	
Phase of Construction:	☑	New Construction	☐	Addition	☐	Alteration	
Method of Compliance:	☐	Complete Building	☑	Area Category	☐	Tailored	

Project Address: N/A

B. Lighting Compliance Documents (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	COMP. DOC.	TITLE
☑	☐	NRCC-LTI-01-E	Certificate of Compliance - All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-02-E	Lighting Controls; Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-03-E	Indoor Lighting Power Allowance
☐	☑	NRCC_LTI-04-E	Tailored Method Worksheets
☐	☑	NRCC-LTI-05-E	Line Voltage Track Lighting Worksheets
☐	☐	NRCC-LTI-06-E	Indoor Lighting Existing Conditions

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 2 of 6)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

C. Summary of Allowed Lighting Power

Conditioned and Unconditioned space lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces		Watts		Indoor Lighting Power for Unconditioned Spaces		Watts
01	Installed Lighting NRCC-LTI-01-E, Table H, page 5	+	0		Installed Lighting NRCC-LTI-01-E, Table H, page 5	+	280
02	Portable Only for Offices NRCC-LTI-01-E, Table G, page 6	+					
03	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0		Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0
04	Adjusted Installed Lighting Power (row 1 minus row 3)	=	0		Adjusted Installed Lighting Power (row 1 minus row 3)	=	280
	Complies ONLY if Installed ≤ Allowed (Box 04 < Box 05)				Complies ONLY if Installed ≤ Allowed (Box 04 < Box 05)		
05	Allowed Lighting Power Conditioned NRCC-LTI-03-E, page 1 — Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2		0		Allowed Lighting Power Unconditioned NRCC-LTI-03-E, page 1 — Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-05, page 2		281

D. Declaration of Required Certificates of Installation

Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCI-LTI-01-E - Must be submitted for all buildings	☐ Field Inspector
☐	☑	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐ Field Inspector

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 3 of 6)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

E. Declaration of Required Certificates of Acceptance

Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
☐	☑	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐ Field Inspector
☐	☑	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐ Field Inspector
☐	☑	NRCA-LTI-05-A – Must be submitted for institutional tuning power adjustment factor (PAF).	☐ Field Inspector

A Separate Lighting Schedule Must be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:

☐ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

F. Indoor Lighting Schedule and Field Inspection Energy Checklist

- ☐ The actual indoor lighting power listed on the next 2 pages includes all installed permanent and planned portable lighting systems.
- ☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
- ☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
- ☐ Also include track lighting in schedule, and submit the track lighting compliance document (NRCC-LTI-05-E) when line-voltage track lighting is installed.

STATE OF CALIFORNIA
INDOOR LIGHTING
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Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

G. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

- ☐ This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance document.
- ☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
- ☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

1	2	3	4	5	6	7	8	9	10	
Office Portable Luminaire Schedule		Office-Installed Portable Luminaire W/ft²						Office Location	Field Inspector	
Complete Luminaire Description (e.g., LEDs, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (3X2 x 4X3)	Square feet of this office	Watts per square foot (4X5 / 6X5)	If (6X6 > 0.3, enter circ. If (6X6 ≤ 0.3, 0) (6X6-0.3)	(6X5 x 6X7)	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
								Enter sum total of all pages into NRCC-LTI-01-E, Page 1		
Total installed portable luminaire watts that are greater than 0.3 W/ft² per office										

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA
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Indoor Lighting — (Page 5 of 6)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A Separate Lighting Schedule Must be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:

☐ **CONDITIONED SPACE** ☑ **UNCONDITIONED SPACE**

H. Indoor Lighting Schedule and Field Inspection Energy Checklist

01	02	03	04		05	06	07	08	
Luminaire Schedule		Installed Watts					Location	Field Inspector	
Name or Item Tag	Complete Luminaire Description (i.e. 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	How wattage was determined: Luminaire Nameplate	Lighting Schedule	Number Luminaires	Total Installed Watts (03 x 05)	Primary Function area in which these luminaires are installed	Pass	Fail
Incandesc	incandescent	40.0	☑	☐	2	80	Electrical, Mechanical Room	☐	☐
LED	A - 40w LED	40.0	☑	☐	5	200	Corridor/Restroom/Support	☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐			INSTALLED WATTS PAGE TOTAL:	280	Enter sum total of all pages into NRCC-LTI-01-E, Page 2

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 6 of 6)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Hans Marsman	Documentation Author Signature:	Digitally signed by Hans Marsman Date: 2018.02.27 11:06:46 -08'00'
Company:	Brummitt Energy Associates	Signature Date:	2/27/2018
Address:	777 S. Highway 101, Suite 203	CEA Certification Identification (if applicable):	NR16-16-20024
City/State/Zip:	Solana Beach, CA 92075	Phone:	619.531.1126

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:	Randall P Cavannagh	Responsible Designer Signature:	
Company:	American Modular Systems | Gen7 Schools	Date Signed:	11/30/16
Address:	787 Sprockels Avenue	License:	C12631
City/State/Zip:	Manteca, CA 95336	Phone:	209.825.1921

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 1 of 5)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:

☐ **CONDITIONED SPACES** ☑ **UNCONDITIONED SPACES**

A. Mandatory Lighting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)

YES	NO	Control Requirements
☐	☑	Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
☐	☑	Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 130.0 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
☐	☐	All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
☐	☐	All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
☑	☐	General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.1(a)4.
☑	☐	The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.1 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
☐	☐	All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
☐	☐	Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
☐	☐	Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
☐	☐	Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4 (a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

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Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:

☐ **CONDITIONED SPACES** ☑ **UNCONDITIONED SPACES**

B. Mandatory and Prescriptive Indoor Lighting Control Schedule, PAF Calculation, and Field Inspection Checklist

01	02	03	04	05	06	07	08	09	10	PAF Credit Calculation: Watts of Controlled Lighting	PAF	Control Credit (Col 11 x Col 12)	# of Acceptance Tests Required	Field Inspection: Pass	Field Inspection: Fail
Lighting Control Schedule			Standards Complying With: 1 (✔ all that apply, or enter 'E' if Exempted)												
Location in Building	Type/Description of Lighting Control (i.e., occupancy sensor, automatic time switch, dimmer, automatic daylight, etc...)	# of Units	Occ Sensor (§130.1(b))	Auto Time Switch (§130.1(b))	Auto Daylight (§130.1(d))	Demand Responsive (§130.1(e))	Multi-Level (§130.1(a)2)	Auto Shut-Off (§130.1(c))	Daylight Zone (§130.1(d))						
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			Control Credit PAGE TOTAL (Sum of Column 13)									0			
			IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column 13):									0		Enter Control Credit total into NRCC-LTI-01-E, Page 1	

1. §130.1(b) = Manual occ controls, §130.1(b) = Auto Time Switch, §130.1(d) = Daylighting, §130.1(e) = Demand Responsive, §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Direct Daylight Controls.
2. Check Table 140.6-A for correct factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 08/18)
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Indoor Lighting - Lighting Controls — (Page 3 of 3)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Hans Marsman	Documentation Author Signature:	Digitally signed by Hans Marsman Date: 2018.02.27 11:06:46 -08'00'
Company:	Brummitt Energy Associates	Signature Date:	2/27/2018
Address:	777 S. Highway 101, Suite 203	CEA Certification Identification (if applicable):	NR16-16-20024
City/State/Zip:	Solana Beach, CA 92075	Phone:	619.531.1126

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:	Randall P Cavannagh	Responsible Designer Signature:	
Company:	American Modular Systems | Gen7 Schools	Date Signed:	11/30/16
Address:	787 Sprockels Avenue	License:	C12631
City/State/Zip:	Manteca, CA 95336	Phone:	209.825.1921

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 1 of 4)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:

☐ **CONDITIONED SPACES** ☑ **UNCONDITIONED SPACES**

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES

- ☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
- ☐ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

		(a)	(b)
01	Complete Building Method Allowed Watts, Documented in section B of NRCC-LTI-03-E (below on this page)		
02	Area Category Method Allowed Watts, Documented in section C-1 of NRCC-LTI-03-E (below on this page)		281
03	Tailored Method Allowed Watts, Documented in section A of NRCC-LTI-04-E		0
	TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1		281

☐ Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

01	02		03		04
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER ft²	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
Total Area:					
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)					

C - 1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES

	Watts
Total from section C-2	281
Total from section C-3	0
Total Watts. Enter Total Watts into section A, row 2 (Above on this page)	281
For **Alterations Only** – Reduced lighting power option (Total Allowed Watts x 0.85). Enter this value into section A, row 2 if using this option.	

STATE OF CALIFORNIA
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Certificate of Compliance - Indoor Lighting Power Allowance — (Page 2 of 4)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:

☐ **CONDITIONED SPACES** ☑ **UNCONDITIONED SPACES**

C-2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE

- ☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in Section Q of NRCC-LTI-01-E.
- ☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

01		02		03	04
AREA CATEGORY (From §140.6 Table 140.6-C)		WATTS PER ft²	X	AREA (ft²)	= ALLOWED WATTS
Location in Building	Primary Function Area per Table 140.6-C				
RR	Corridor/Restroom/Support	0.60		330	198
Elec	Electrical, Mechanical Room	0.05		150	83
			TOTALS	480	
Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance document)					281 WATTS

STATE OF CALIFORNIA
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Certificate of Compliance - Indoor Lighting Power Allowance — (Page 3 of 4)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:

☐ **CONDITIONED SPACES** ☑ **UNCONDITIONED SPACES**

C-3 AREA CATEGORY METHOD ADDITIONAL LIGHTING WATTAGE ALLOWANCE (From Table 140.6-C Footnotes)

01	02	03	04	05	06	07
Primary Function	Sq Ft or Linear ft	Additional Watts Allowed	Wattage Allowance (02 x 03)	Description and Quantity of Special Lumination Types in each Primary Function Area	Total Design Watts	ALLOWED WATTS Smaller of 04 or 06
				TOTALS – Enter into TOTAL AREA CATEGORY METHOD ADDITIONAL ALLOWANCES – Section C-1		0

1. Use linear feet only for additional allowances for white board or chalk board. All other additional Area Category allowances shall use watts per square foot.
2. Additional watts are available only when allowed according to the footnotes on bottom of Table 140.6-C, which include: Specialized task work; Ornamental lighting; Precision commercial and industrial work; For linear foot of white board or chalk board; Accent, display and feature lighting, and Videoconferencing studio lighting.
3. Luminaire classification and wattage shall be determined in accordance with §130.0(k) of the Standards

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 08/18)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 4 of 4)
Project Name: AMS 24-120x40 Ext & UC LTG — Date Prepared: 2/27/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Hans Marsman	Documentation Author Signature:	Digitally signed by Hans Marsman Date: 2018.02.27 11:06:46 -08'00'
Company:	Brummitt Energy Associates	Signature Date:	2/27/2018
Address:	777 S. Highway 101, Suite 203	CEA Certification Identification (if applicable):	NR16-16-20024
City/State/Zip:	Solana Beach, CA 92075	Phone:	619.531.1126

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Responsible Designer Name:	Randall P Cavannagh	Responsible Designer Signature:	
Company:	American Modular Systems | Gen7 Schools	Date Signed:	11/30/16
Address:	787 Sprockels Avenue	License:	C12631
City/State/Zip:	Manteca, CA 95336	Phone:	209.825.1921

American Modular Systems
787 Sprockels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E (Page 1 of 4)

Outdoor Lighting — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

A. General Information

Project Address: N/A Climate Zone 1-16, CA	Total Illuminated Hardscape Area: 0
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration	
Outdoor Lighting Zone (LZ)	☐ LZ-1 ☐ LZ-2 ☑ LZ-3 ☐ LZ-4

I have confirmed with the AHJ which LZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114

B. Lighting Compliance Documents (check box for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

☑	NRCC-LTO-01-E	Certificate of Compliance
☑	NRCC-LTO-02-E	Outdoor Lighting Controls Certificate of Compliance
☑	NRCC-LTO-03-E	Outdoor Lighting Power Allowance Certificate of Compliance
☐	NRCC-LTO-04-E	Outdoor Lighting Existing Conditions Certificate of Compliance

C. Summary of Allowed Outdoor Lighting Power

		Watts
01	**Sum Total ALLOWED** Outdoor Lighting Wattage from NRCC-LTO-03-E, page 3 **Alterations with NO increase of connected lighting load may instead use the allowed wattage from NRCC-LTO-04, page 2.**	48
	Complies ONLY if Installed (Box 02) ≤ **Allowed** (Box 01)	
02	**Sum Total INSTALLED** Outdoor Lighting Wattage from NRCC-LTO-01-E, page 3.	48

D. Declaration of Required Installation Certificates
Declare by checking all installation Certificates that will be submitted. (Retain copies and verify compliance documents are completed and signed.)

☑ NRCI-LTO-01-E - Must be submitted for all buildings	☐ Field Inspector
☑ 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.	☐ Field Inspector

E. Declaration of Required Certificates of Acceptance
Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify compliance documents are completed and signed.)

☑ NRCA-LTO-02-A - Must be submitted for outdoor lighting controls.	☐ Field Inspector

F. Schedule of Luminaires Exempt from the Outdoor Lighting Power Requirements in §140.7

01 Name or Symbol	02 Description of exempt luminaire in accordance with the exemptions

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E (Page 2 of 4)

Outdoor Lighting — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

G. Schedule of Luminaires Exempt from the Cutoff Requirements in §130.2(b)

01 Name or Symbol	02 Description of exempt luminaire in accordance with the exemptions

H. Schedule of Luminaires Exempt from the Outdoor Lighting Control Requirements in §130.2(c)

01 Name or Symbol	02 Description of exempt luminaire in accordance with the exemptions

STATE OF CALIFORNIA
OUTDOOR LIGHTING
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CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E (Page 3 of 4)

Outdoor Lighting — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

I. Outdoor Lighting Schedule and Field Inspection Energy Checklist

Luminaire Schedule		Installed Watts				Location	Cutoff	Field Inspector	
01	02	03	04	05	06	07	08	09	
Name or Item Tag	Complete Luminaire Description	Watts per Luminaire	How wattage was determined: ☐ CEC Default Number ☐ According to Drawings	Number of Luminaires	Total Installed Watts in this area (3 × 5)	Primary Function Area in which the luminaires are installed (Outdoor Lighting Zone)	BUG Rating	Pass	Fail
ISC	16w LED Fixture	16.0	☑ ☐	3	48	Main Entrance	UH: n/a UL: n/a FVH: n/a BVH: n/a FH: n/a BH: n/a	☐	☐
			☐ ☐				UH: UL: FVH: BVH: FH: BH:	☐	☐
			☐ ☐				UH: UL: FVH: BVH: FH: BH:	☐	☐
		INSTALLED WATTS PAGE TOTAL:	48			Enter sum total of all pages (**Sum Total INSTALLED** Outdoor lighting wattage) into NRCC-LTO-01-E, page 1.	48		

STATE OF CALIFORNIA
OUTDOOR LIGHTING
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CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E (Page 4 of 4)

Outdoor Lighting — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.			
Documentation Author Name: Hans Marsman	Documentation Author Signature: CABEC — Digitally signed by Hans Marsman, Date: 2018.02.27 11:07:18 -08'00'		
Company: Brummitt Energy Associates	Signature Date: 2/27/2018	CEA/ HERS Certification Identification (if applicable): NR16-16-20024	
Address: 777 S. Highway 101, Suite 202			
City/State/Zip: Solana Beach, CA 92075	Phone: 619.531.1126		

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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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: Randall P Cavanaugh	Responsible Designer Signature: Randall Cavanaugh		
Company: American Modular Systems | Gen7 School	Date Signed: 11/30/16	License: C12631	
Address: 787 Spreckels Avenue			
City/State/Zip: Manteca, CA 95336	Phone: 209.825.1921		

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-02-E (Page 1 of 3)

Outdoor Lighting Controls — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

A. Mandatory Outdoor Lighting Control Declaration Statements

Check all that apply:

- ☐ Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with §130.9(a).
- ☐ Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An installation Certificate shall be submitted in accordance with §130.4(b).
- ☑ All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.0(d).
- ☐ Part-Night Outdoor Lighting Controls, as defined in Section 100.1(b), shall meet the requirements in Section 110.9(b)5.
- ☐ All outdoor incandescent luminaires rated over 100 watts, disbemmised in accordance with Section 130.0(b), shall be controlled by a motion sensor.
- ☑ All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Uplight and Glare requirements in accordance with Section 130.2(b).
- ☐ All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control, or other control capable of automatically switching OFF in accordance with Section 130.2(c)1.
- ☑ All installed outdoor lighting shall be independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2.
- ☐ All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3.
- ☐ For Outdoor Sales Frontage, an automatic lighting control shall be installed in accordance with Section 130.2(c)4.
- ☐ For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control shall be installed in accordance with Section 130.2(c)5.
- ☐ Before an occupancy permit is granted for the newly constructed building or for the addition, or for any altered outdoor lighting, the outdoor lighting controls shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8.

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-02-E (Page 2 of 3)

Outdoor Lighting Controls — Date Prepared: 2/27/2018

Project Name: AMS 24-120x40 Ext & UC LTG

B. Mandatory Outdoor Lighting Control Schedule and Field Inspection Checklist

Outdoor Lighting Control Schedule		Standards Complying With (✓ all that apply, or enter 'E' if Exempted)							✓ If Acceptance Test Required	Field Inspector	
01	02	03	04	05	06	07	08	09	10	11	
Location and Application of Luminaires Being Controlled	Type/ Description of Lighting Control (i.e. outdoor motion sensor, outdoor photocontrol, outdoor astronomical time-switch control, automatic scheduling control, part-night outdoor lighting control)	# of Units	§130.2(b)	§130.2(c)1	§130.2(c)2	§130.2(c)3	§130.2(c)4	§130.2(c)5		Pass	Fail
									☐	☐	☐
									☐	☐	☐
									☐	☐	☐

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E (Revised 12/17) — CALIFORNIA ENERGY COMMISSION — NRCC-ELC-E

CERTIFICATE OF COMPLIANCE

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(b)2I or §141.0(b)2P for alterations.

Project Name: 2016 AMS 24x40 STANDARD PC — Report Page: Page 1 of 3
Project Address: N/A (SITE SPECIFIC) — Date Prepared: 12/07/2017

A. GENERAL INFORMATION

01 Project Location (city)

02 Occupancy Types Within Project:

☐ Office	☐ Retail	☐ Warehouse	☐ Hotel/ Motel	☒ School	☐ Support Areas
☐ Parking Garage	☐ High-Rise Residential	☒ Relocatable	☐ Other (Write In):		

B. PROJECT SCOPE

Table Instructions: Include any electrical service systems that are within the scope of the permit application.

01	02	03	04	05
Electrical Service Designation/ Description	Scope of Work	Rating (kVA)	Utility Provided Metering System. Exception to §130.5(a)1*	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 §130.5 and compliance documents NRCC-MCH, NRCC-LTI and NRCC-LTS will indicate when demand response controls are required.
			☐	
			☐	
			☐	
			☐	
			☐	

*FOOTNOTES: 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

Table Instructions: If this table says "DOES NOT COMPLY" refer to Table D. for guidance and review the Table that indicates "No".

01		02		03		04	05
Service Electrical Metering §130.5(a)	AND	Separation for Monitoring §130.5(b)	AND	Voltage Drop §130.5(c)	AND	Controlled Receptacles §130.5(d)	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)	
	AND		AND		AND		

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E (Revised 12/17) — CALIFORNIA ENERGY COMMISSION — NRCC-ELC-E

CERTIFICATE OF COMPLIANCE — Page 2 of 3
Project Name: 2016 AMS 24x40 STANDARD PC — Report Page:
Project Address: N/A (SITE SPECIFIC) — Date Prepared: 12/07/2017

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. SERVICE ELECTRICAL METERING

This Section Does Not Apply

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This Section Does Not Apply

H. VOLTAGE DROP

This Section Does Not Apply

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This Section Does Not Apply

J. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E, Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2016publications/CEC-400-2015-023/appendices/forms/nrlc/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector 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.

Electrical Power Distribution
NRCC-ELC-E (Revised 12/17) — CALIFORNIA ENERGY COMMISSION — NRCC-ELC-E

CERTIFICATE OF COMPLIANCE — Page 3 of 3
Project Name: 2016 AMS 24x40 STANDARD PC — Report Page:
Project Address: N/A (SITE SPECIFIC) — Date Prepared: 12/07/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Documentation Author Name: JACOB P. JONES	Documentation Author Signature:
Company: AMERICAN MODULAR SYSTEM	Signature Date: 12/07/2017
Address: 787 SPRECKELS AVE.	CEA/ HERS Certification Identification (If Applicable):
City/State/Zip: MANTECA, CA 95336	Phone: (209) 825-1921

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: RANDALL P. CAVANAGH	Responsible Designer Signature:
Company: AMERICAN MODULAR SYSTEM	Date Signed: 12/12/2017
Address: 787 SPRECKELS AVE.	License: C12631
City/State/Zip: MANTECA, CA 95336	Phone: (209) 825-1921

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40' THRU 24'x120' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ENERGY CALCULATIONS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — RANDALL PATRICK CAVANAGH — No. C12631 — Ren. 3-31-19 — STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC ___ FLS ___ SS SMV
DATE SEP 19 2019

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

APPROVED
DIVISION OF STATE ARCHITECT
HIGH PERFORMANCE SECTION
APP.# 02-115700 DATE: 6.18.18

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-115700
AC ___ FLS ✓ SS SMV
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

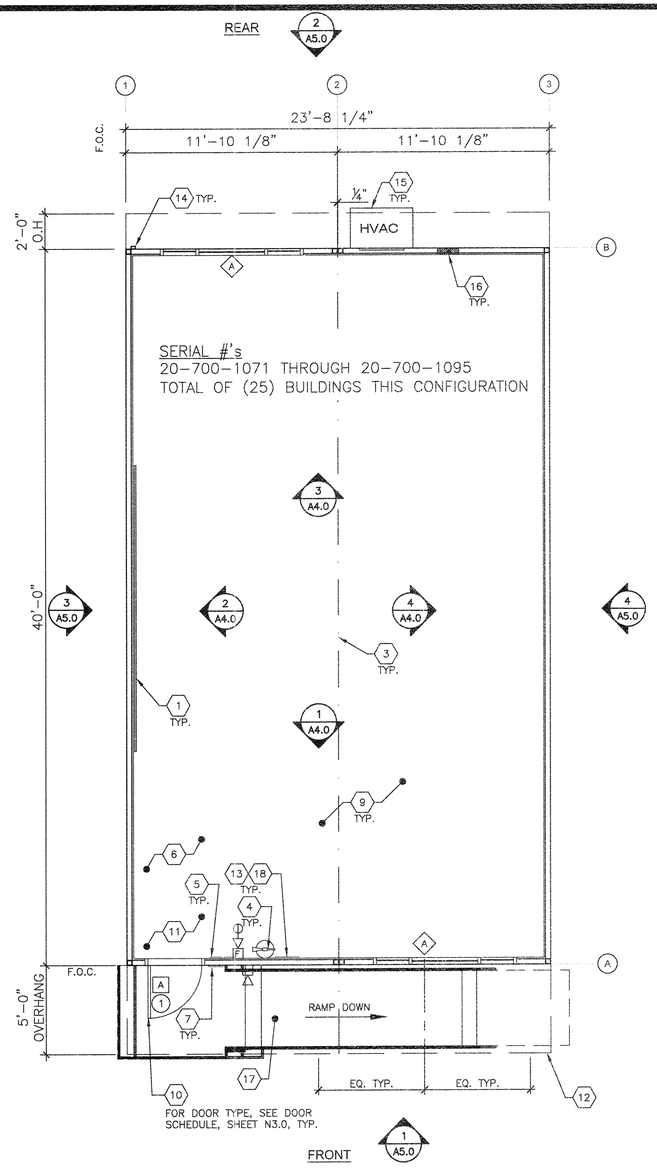
REVISIONS
1.
2.
3.
4.

DRAWN BY: .
SCALE: AS NOTED
DATE: .

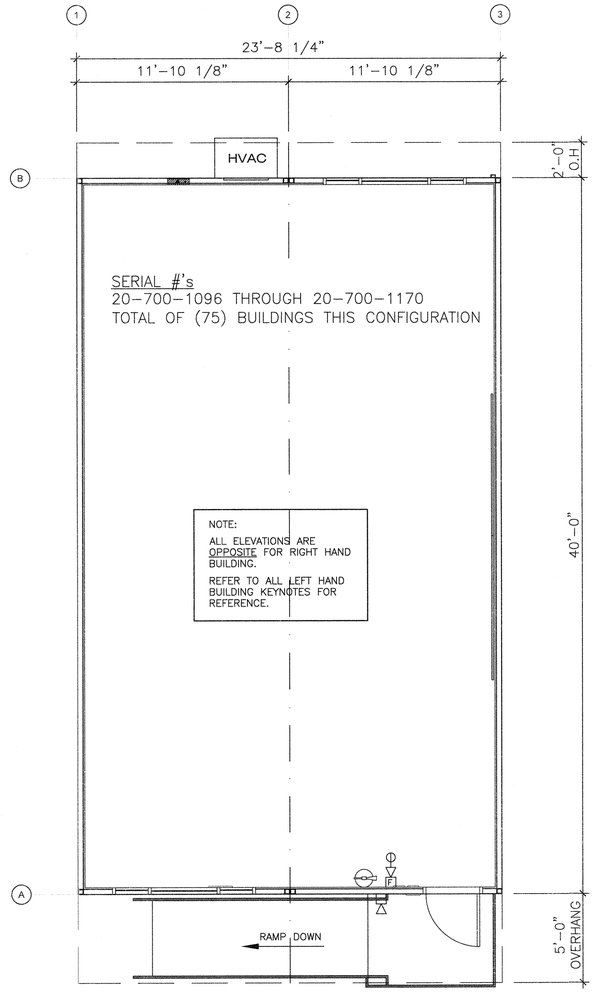
SHEET NUMBER

EN.9

05-XXXX - [project number] - SHEETS - 9/20/2019 7:20 AM - RUSTIN - 19/20/2019 2:19 PM - J:\Drawings\Engineering\PC and Plot\2019 05XXXX\05-XXXX - 2019 - 24'x40'-120'x40' Standard\05-XXXX - EN1 - EN1.DWG,EN2.DWG,EN3.DWG,EN4.DWG,EN5.DWG,EN6.DWG - TITLE 24.dwg



FLOOR PLAN (LEFT HAND BUILDING) SCALE: 1/4" = 1'-0" 1



FLOOR PLAN (RIGHT HAND BUILDING) SCALE: 1/4" = 1'-0" 2

1. (2) 8'x4' MARKER BOARDS – SEE SHEET A4.0
2. NOT USED
3. TYP. MOD LINE
4. FIRE EXTINGUISHER – TOP OF HANDLE @ +48" A.F.F. 4" MAX PROTRUSION FROM WALL IF BOTTOM OF FIRE EXTINGUISHER IS ABOVE 27" A.F.F.
5. TACTILE EXIT SIGN PER DETAIL 10/N4.0 (BY OTHERS)
6. EGRESS AREA
7. ROOM SIGNAGE AND I.S.A. PER DETAILS 5&9/N4.0 (BY OTHERS)
8. NOT USED
9. FLOORING (N.I.C.) CARPET READY
10. EGRESS DOOR
11. NON-ABSORBENT FLOOR AREA (2'-0" MIN. IN ALL DIRECTIONS @ ALL ENTRY DOOR)
12. OVERHANG SEE STRUCTURAL
13. OCCUPANT LOAD SIGN PER DETAIL 11/N4.0 (BY OTHERS)
14. DOWNSPOUT – DISCHARGE TO SPLASH BLOCK (U.O.N.)
15. HVAC – SEE MECHANICAL
16. ELECTRICAL PANEL
17. TYPICAL RAMP REFER TO DETAIL 16/–.
18. FLOOR LIVE LOAD & SNOW LOAD SIGN PER 2016 CBC SECTION 106.1 *(FLOOR LIVE LOAD SIGN IS REQUIRED ONLY FOR COMMERCIAL OR INSTITUTIONAL BUILDINGS DESIGNED WITH LIVE LOADS EXCEEDING 50 PSF)*

KEY NOTES

1. REFER TO SHEETS N5.0 AND N5.1 FOR POSSIBLE ADDITIONAL FLOOR PLAN CONFIGURATIONS.
2. INTERIOR WALLS MAY OCCUR THROUGHOUT BUILDING. REFER TO SHEETS S8.1 ~~OR S9.1~~ FOR ATTACHMENTS.
3. PANIC HARDWARE COMPLYING WITH C.B.C. 1010.1.10 IS REQUIRED TO BE INSTALLED WHEN THE CONFIGURATION OF ANY ROOM PROVIDES AN OCCUPANT LOAD OF 50 OR GREATER.
4. IF OCCUPANCY LOAD EXCEEDS 50, PROVIDE A SECOND EXIT DOOR, PER CBC TABLE 1006.2.1.
5. FOR ROOMS OR SPACES CLASSIFIED AS AN ASSEMBLY OCCUPANCY, PROVIDE AN OCCUPANT LOAD SIGN (BY OTHERS) IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT, PER C.B.C. SECTION 1004.3.
6. ALL PRIMARY EXTERIOR DOOR ENTRIES SHALL BE COVERED TO PREVENT WATER INTRUSION BY USING NONABSORBENT FLOOR AND WALL FINISHES WITHIN AT LEAST 2 FEET AROUND AND PERPENDICULAR TO OPENING, PER CALGREEN, SECTION 5.407.2.2.1.
7. PRIMARY EXTERIOR DOOR ENTRIES SHALL HAVE AT LEAST ONE OF THE FOLLOWING:
   - INSTALLED AWNING AT LEAST 4 FEET IN DEPTH (BY OTHERS).
   - ROOF OVERHANG AT LEAST 4 FEET IN DEPTH.
   - DOOR RECESSED AT LEAST 4 FEET.
   - OTHER METHODS WHICH PROVIDE EQUIVALENT PROTECTION (BY OTHERS).

SITE NOTE

3/16:12 (1%) MINIMUM TO 1/4:12 (2%) MAXIMUM GRADE FROM FACE OF BUILDING MUST BE ADHERED TO FOR WATER RUN-OFF. PONDING MAY OCCUR AROUND THE PERIMETER OF THE BUILDING.

SHEET NOTES

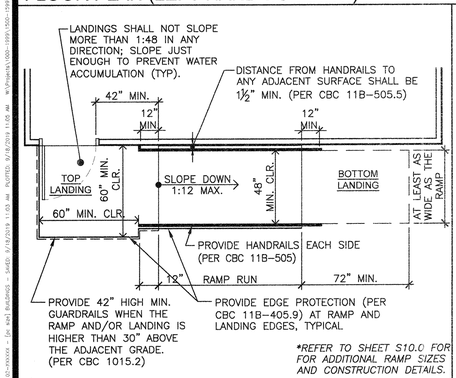
(X) = KEY NOTE – SEE KEY NOTES ABOVE

(X) = DOOR TYPE – SEE SCHEDULE, SHEET N3.0

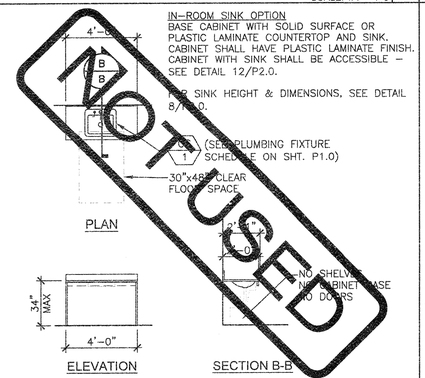
[X] = DOOR HARDWARE – SEE HARDWARE SCHEDULE, SHEET N3.0

◇X◇ = WINDOW TYPE – SEE SCHEDULE, SHEET N3.0

SYMBOLS LEGEND



TYPICAL RAMP PLAN - OPTIONAL SCALE: 1/4" = 1'-0" 16



CLASSROOM SINK - OPTIONAL SCALE: 1/4" = 1'-0" 17

ENERGY CONTROLS

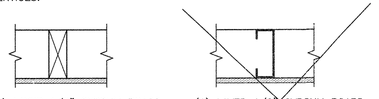
1. DEMAND RESPONSE CONTROLS:
   ONLY REQUIRED IN BUILDINGS LARGER THAN 10,000 S.F., THEREFORE, NOT REQUIRED FOR THIS PC.
2. AUTOMATIC DAYLIGHTING CONTROLS:
   NOT REQUIRED IN ROOMS WHERE COMBINED INSTALLED LIGHTING POWER IN COMBINED SKYLIT & PRIMARY DAYLIT ZONES ARE <120 WATTS. INSTALLED WATTAGE IN PRIMARY SIDELIT DAY LIT ZONE IS 80 WATTS (2x 40w, AS SHOWN ON SHEET E1.0). THEREFORE, AUTOMATIC DAYLIGHTING CONTROLS ARE ONLY REQUIRED WHEN "SOLATUBES" ARE INSTALLED. SEE A1.1
3. ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) CONNECTION:
   PER TITLE 24 CODE, "AN EMCS MAY BE INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ONE OR MORE LIGHTING CONTROLS IF IT MEETS THE MINIMUM REQUIREMENTS". PC MAY CONTAIN OCCUPANCY SENSORS AND PHOTOCELL CONTROL LIGHTING, IN THAT CASE, AN EMCS IS NOT REQUIRED FOR THIS PC.
4. SOLAR-READY ZONE REQUIREMENTS:
   REQUIREMENTS & TABLE CAN BE FOUND ON SHEET A2.0

NOTE: ANT MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED IN THE BASE PC.

ENERGY NOTES

ACOUSTIC CONTROLS

1. WHEN THE PRE-CHECK (PC) BUILDING IS SITE ADAPTED, THE BUILDING AND SITE FEATURES SHALL COMPLY WITH THE CALGREEN CODE, SECTION 5.507.4, FOR THE SPECIFIC SITE LOCATION.
2. MINIMUM WALL ASSEMBLIES:
   WALL ASSEMBLIES SHALL BE CONSTRUCTED PER DETAIL SHEETS A5.1, A5.3, A5.5, A5.7, & A8.0, WITH EITHER 2x4 WOOD STUDS OR 6" STEEL STUDS PER LISTED OPTIONS.
   MINIMUM STC RATINGS LISTED BELOW ARE PER THE CATALOG OF STC & IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES, PRODUCED BY THE OFFICE OF NOISE CONTROL, CA DEPARTMENT OF HEALTH SERVICES.



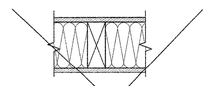
(1) LAYER 1/2" GYPSUM BOARD SECURED TO MIN. 2x4 STUDS @ 16" O.C. MAX.

STC=28
(CATALOG SECTION 1.2.1.5.4.1)
TEST REF.: NATIONAL RESEARCH COUNCIL OF CANADA – NRC #66

(1) LAYER 1/2" GYPSUM BOARD SECURED TO MIN. 2½" METAL STUDS @ 24" O.C. MAX.

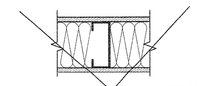
STC=27
(CATALOG SECTION 1.3.2.5.4.1)
TEST REF.: NATIONAL RESEARCH COUNCIL OF CANADA – NRC #86

~~3. IN THE EVENT THAT A PC CLASSROOM IS DESIGNED TO CONNECT TO ANOTHER PC CLASSROOM OR RESTROOM, INTERIOR SOUND TRANSMISSION IN THE INTERIOR ADJOINING WALL AND FLOOR/CEILING SHALL MEET THE MINIMUM REQUIREMENT OF A STC OF 40, PER CALGREEN CODE SECTION 507.4.3. (EXAMPLES OF QUALIFYING ASSEMBLIES SHOWN BELOW).~~



(2) LAYER 5/8" GYPSUM BOARD SECURED TO MIN. 2x4 STUDS @ 24" O.C. MAX. W/ 3½" THK. BATT INSULATION

STC=40
TEST REF.: AUDIO ALLOY L.L.C
TEST NUMBER: OL-05-1003



(2) LAYER 5/8" GYPSUM BOARD SECURED TO MIN. 2½" METAL STUDS @ 24" O.C. MAX. W/ 3½ THK BATT INSULATION

STC=48
TEST REF.: AUDIO ALLOY L.L.C
TEST NUMBER OL-92-410

4. MINIMUM WINDOW & DOOR RATINGS:
   ALL WINDOWS AND DOORS SPECIFIED ON THE SCHEDULES FOUND ON SHEET N3.0 OF THIS PACKAGE SHALL MEET A MINIMUM STC RATING OF 27.

ACOUSTIC NOTES

AMS American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40'
STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

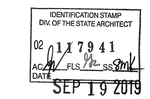
SHEET TITLE

TYPICAL
FLOOR PLAN

MANUFACTURER PROFESSIONAL OF RECORD ON PC

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL



PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS

1	
2	
3	
4	

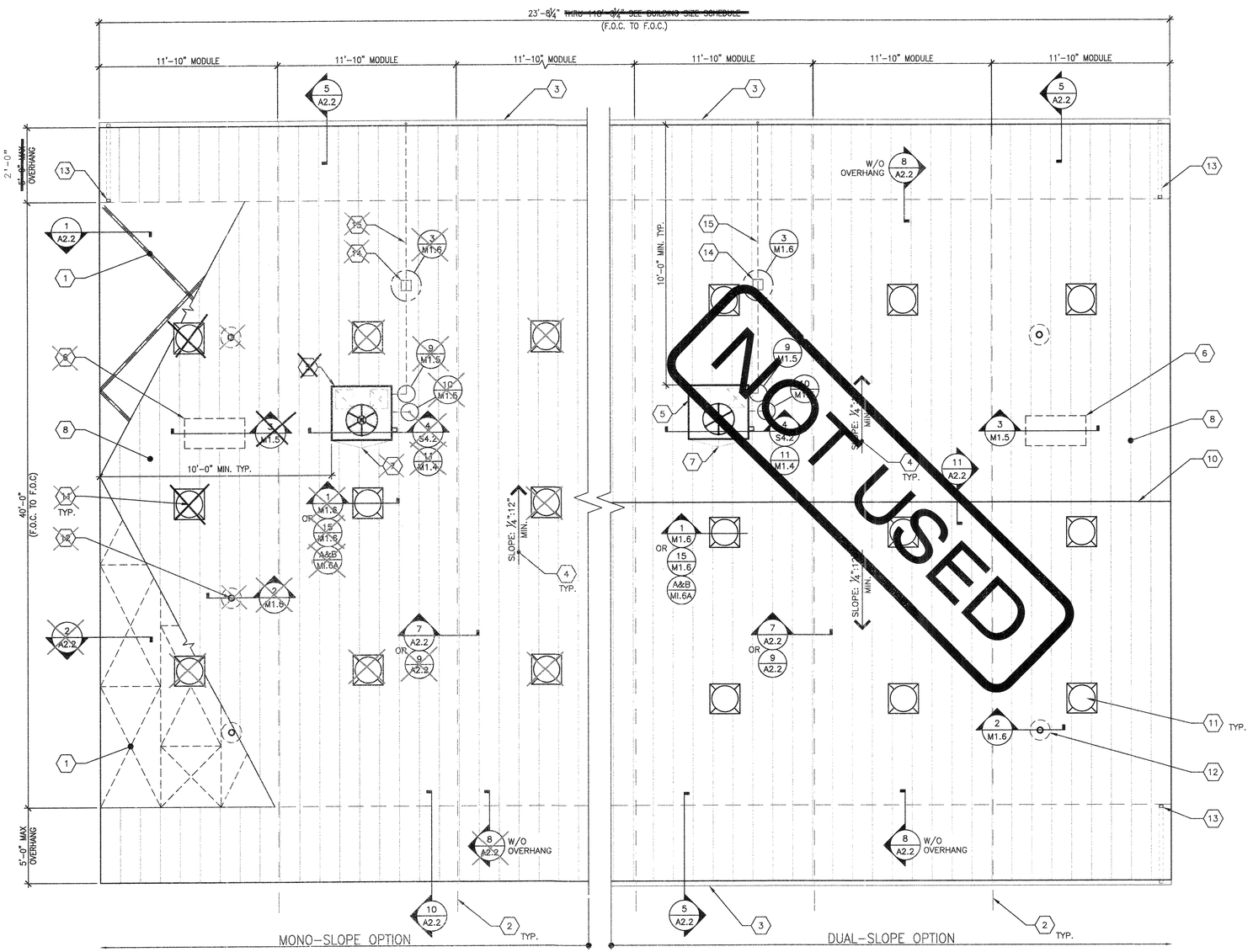
DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

SHEET NUMBER

A1.0

30'-XXXX - [or sec] Buildings - SHEET 9/18/2019 11:03 AM W:\Projects\300-1999\1500-1599\1585-19 Wild (3) Bldgs Stockpile\Plot\master\CMPLV.4 - 02 - 11X17.pc - A1.0 - TYP FLOOR PLAN.dwg

REAR



FRONT

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

1. ROOF SHEATHING OR STRAP CROSS BRACING PER SHEET S4.0 ~~OR S4.1~~
2. TYPICAL MOD LINE
3. OPTIONAL GUTTER PER DETAIL 5/A2.2
4. TYPICAL ROOF SLOPE
5. ~~OPTIONAL ROOF MOUNTED HVAC PER M1.7~~
6. ~~OPTIONAL ATTIC MOUNTED SPLIT SYSTEM HVAC PER M1.7~~
7. ~~CRICKET @ OPTIONAL HVAC PER 10/A2.2~~
8. STANDING SEAM METAL ROOF PER 7/S0.0 & DETAILS ON SHEET A2.2
9. NOT USED
10. ~~RIDGE @ DUAL SLOPE OPTION~~
11. ~~OPTIONAL SOLATUBE - SEE SHEET NOTE #1~~
12. ~~PIPE VENT PER PLUMBING PLANS & 9/M1.6~~
13. OPTIONAL DOWNSPOUT – SEE ROOF DRAIN SCHEDULE BELOW FOR MIN. # OF DRAINS.
14. ~~ROOF TOP PIPE SUPPORT BLOCK PER DETAIL 3/M1.6~~
15. ~~CONDENSATE LINE PER DETAIL 9/M1.5~~
16. NOT USED

KEY NOTES

1. ~~SOLATUBE LOCATIONS SHOWN ON PLAN ARE GENERIC AND ACTUAL LOCATIONS MAY VARY. (4) MAX. PER MOD. - FRAMING PER S4.0 & S4.1. INSTALLATION PER DETAILS 7 OR 15/M1.6~~

2. OPTIONAL GUTTERS SHALL BE LOCATED ALONG THE END-WALLS OF THE BUILDING(S):
   - MONO-SLOPE: REAR END WALLS ONLY.
   - ~~DUAL PITCH: BOTH FRONT & REAR END WALLS.~~

2. EITHER ROOF-SHEATHING OR STRAP CROSS BRACING MAY BE USED FOR MONO-SLOPE OR DUAL PITCH SLOPED BUILDING(S).

SHEET NOTES

SOLAR ZONE REQUIRED, PER TITLE 24 SECTION 110.10: FOR NON-RESIDENTIAL BUILDINGS, 3 STORIES OR LESS, A MINIMUM OF 15% OF ROOF AREA (EXCLUDING SKYLIGHTS) MUST BE SET ASIDE FOR PHOTO-VOLTAICS (PV). THE ROOF MUST HAVE NO ROOF OBSTRUCTIONS.

1. REQUIRED SOLAR-READY ZONE, AREA PER THE CHART BELOW, MUST BE PROVIDED ON BUILDING ROOF.
2. ZONE MUST BE LEFT VOID OF ROOF-MOUNTED HVAC UNITS, SKYLIGHTS OR OTHER OBSTRUCTIONS THAT WOULD HINDER FUTURE INSTALLATION OF SOLAR SYSTEM COMPONENTS, INCLUDING PV PANELS.
3. TOTAL AREA REQUIRED FOR SOLAR-READY ZONE DOES NOT NEED TO BE LOCATED IN ONE AREA BUT CAN BE SPREAD OUT OVER ROOF.
4. SOLAR-READY ZONE SHALL NOT INCLUDE ROOF OVERHANGS, AND SOLAR SYSTEM COMPONENTS MAY NOT BE PLACED THERE.
5. THE ROOF STRUCTURE HAS BEEN DESIGNED PER THE DESIGN LOADS SPECIFIED ON SHEET TS, WHICH DOES NOT INCLUDE ADDITIONAL LOADS FROM SOLAR EQUIPMENT THAT MIGHT BE INSTALLED AT A LATER DATE.
6. EQUIPMENT SUCH AS SOLAR MODULES, INVERTERS, AND METERING EQUIPMENT DO NOT NEED TO BE INSTALLED, NOR DOES CONDUIT, PIPING, OR PRE-INSTALLED MOUNTING HARDWARE.
7. A STRUCTURAL ENGINEER SHOULD BE CONSULTED PRIOR TO ANY FUTURE SOLAR INSTALLATIONS TO DETERMINE THE ADEQUACY OF THE ROOF FRAMING TO SUSTAIN THE LOADS OF THE INSTALLATION ON THE BUILDING STRUCTURE.
8. A SEPARATE DSA APPLICATION NUMBER IS REQUIRED FOR DESIGN & INSTALLATION OF THE SOLAR PANEL SYSTEM, ITS ANCHORAGE & ROOF SUPPORT STRUCTURE.

TYPICAL ROOF PLAN

ROOF AREA DRAINS (WITH 5'+2' OVERHANGS)

BUILDING SIZE (NOM.)	ROOF AREA	MINIMUM NO. OF DRAINS	SIZE OF DRAIN
☒ 24'x40'	960	2	2x3
☐ 36'x40'	1440	2	2x3
☐ 48'x40'	1920	3	2x3
☐ 60'x40'	2400	3	2x3
☐ 72'x40'	2880	4	2x3
☐ 84'x40'	3360	5	2x3
☐ 96'x40'	3840	5	2x3
☐ 108'x40'	4320	6	2x3
☐ 120'x40'	4800	6	2x3

NOTES:
1. DOWNSPOUTS & LEADERS PER C.P.C. 1106.1 AND TABLE 1101.11.
2. PC DOWNSPOUT SIZING BASED ON ROOF AREA AND MAX RAINFALL RATE OF 3" PER HOUR. SITE SPECIFIC BUILDING MAY UTILIZE LOCAL RAINFALL RATE--PROVIDE SITE RAINFALL RATE TO DETERMINE MINIMUM NUMBER OF DRAINS REQUIRED.

ROOF DRAIN SCHEDULE

BUILDING SIZE SCHEDULE

BUILDING SIZE (FT)	TOTAL # OF 12'-0" WIDE MODULES	TOTAL # OF CENTER MODULES	TOTAL BLDG WIDTH[1]
☒ 24'x40'	2	0	23'-8¾"
☐ 36'x40'	3	1	35'-6½"
☐ 48'x40'	4	2	47'-4¾"
☐ 60'x40'	5	3	59'-3"
☐ 72'x40'	6	4	71'-1¼"
☐ 84'x40'	7	5	82'-11½"
☐ 96'x40'	8	6	94'-9¾"
☐ 108'x40'	9	7	106'-8"
☐ 120'x40'	10	8	118'-6¼"

NOTES:
1. TOTAL BUILDING WIDTH INCLUDES 1/4" PER MODULAR CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS S1.0, S1.1, S1.2, & S1.3.

BUILDING SIZE SCHEDULE

NOT USED | 3

NOT USED | 4

REQUIRED SOLAR-READY ZONE

BUILDING SIZE (NOM.)	MAX. ROOF AREA (SQ. FT.)	REQ'D ZONE AREA (SQ. FT.)
☒ 24'x40'	1200	180
☐ 36'x40'	1800	270
☐ 48'x40'	2400	360
☐ 60'x40'	3000	450
☐ 72'x40'	3600	540
☐ 84'x40'	4200	630
☐ 96'x40'	4800	720
☐ 108'x40'	5400	810
☐ 120'x40'	6000	900

SOLAR-READY ZONE REQUIREMENTS

AMS® American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

TYPICAL ROOF PLAN
METAL STANDING SEAM
(WITHOUT PARAPETS)

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANDREW PATRICK GAHAGAN — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS SMK
DATE

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS SMK
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

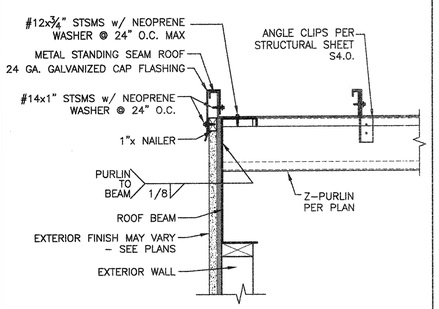
REVISIONS
1
2
3
4

DRAWN BY:
SCALE: AS NOTED
DATE:

SHEET NUMBER

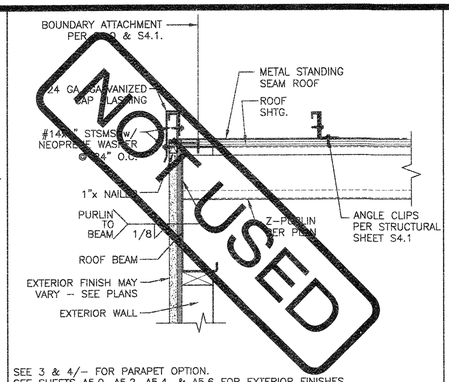
A2.0

00-XXXXX - [by user] BUILDING - SMITS, 4/25/2018 3:10 PM - M:\Engineering\PC DWG Files\2018 CODE\2018-115700 - 2016 - 24'x40'-120'x40' Standard\17 - S2 - 115700 - A2.0 - ROOF PLAN - METAL STANDING SEAM (NO PARAPETS).dwg



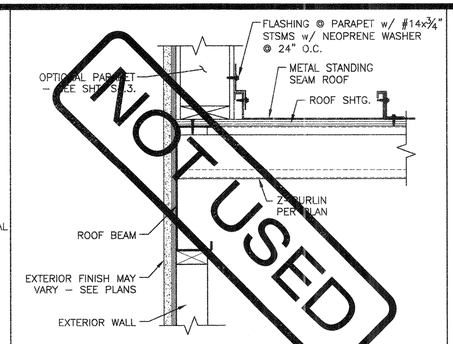
SEE 3 & 4/– FOR PARAPET OPTION.
SEE SHEETS A5.0, A5.2, A5.4, & A5.6 FOR EXTERIOR FINISHES.

METAL ROOF w/ STRAPS — SCALE : 1 1/2"=1'-0" — 1



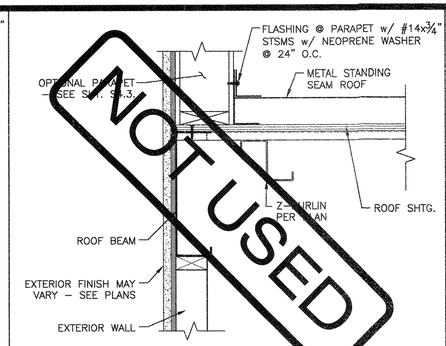
SEE 3 & 4/– FOR PARAPET OPTION.
SEE SHEETS A5.0, A5.2, A5.4, & A5.6 FOR EXTERIOR FINISHES.

METAL ROOF w/ DECKING — SCALE : 1 1/2"=1'-0" — 2



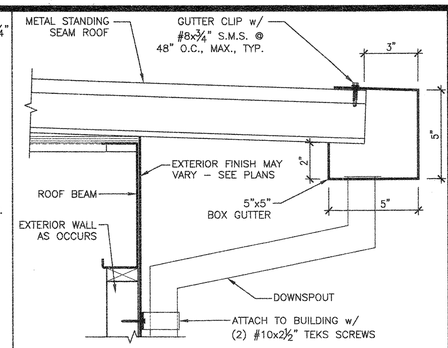
SEE 6/– FOR SCUPPER AT PARAPET.
SEE SHEETS A5.0, A5.2, A5.4, & A5.6 FOR EXTERIOR FINISHES.

OPTIONAL PARAPET @ METAL ROOF SIDE — SCALE : 1 1/2"=1'-0" — 3



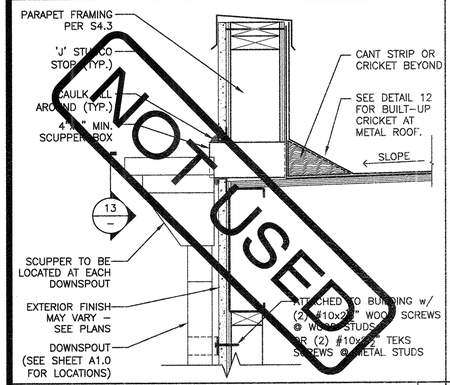
SEE 6/– FOR SCUPPER AT PARAPET.
SEE SHEETS A5.0, A5.2, A5.4, & A5.6 FOR EXTERIOR FINISHES.

OPTIONAL PARAPET @ METAL ROOF END — SCALE : 1 1/2"=1'-0" — 4

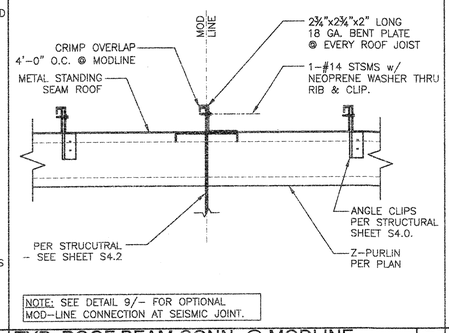


SEE DETAIL 8/– WITHOUT OVERHANG, GUTTER, & DOWNSPOUT OPTION.
SEE DETAIL 10/– WITH OVERHANG OPTION ONLY.
SEE SHEETS S4.0 OR S4.1 FOR SOFFIT OPTIONS.

TYP. GUTTER ATTACHMENT — SCALE : 1 1/2"=1'-0" — 5

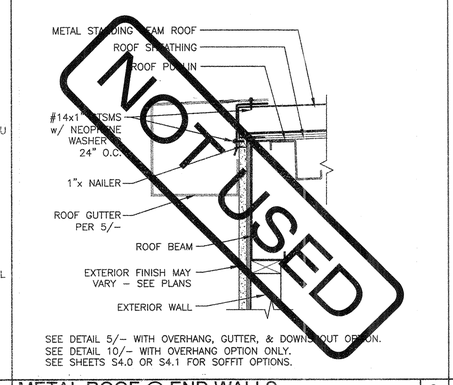


TYP. SCUPPER DETAIL — SCALE : 1 1/2"=1'-0" — 6



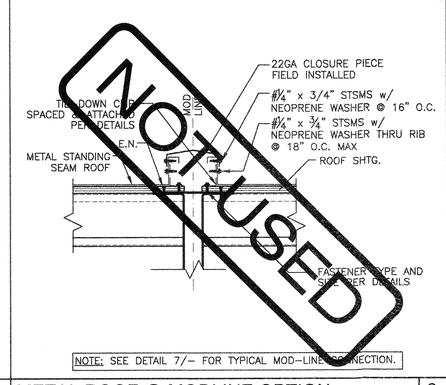
NOTE: SEE DETAIL 9/– FOR OPTIONAL MOD–LINE CONNECTION AT SEISMIC JOINT.

TYP. ROOF BEAM CONN. @ MODLINE — SCALE : 1 1/2"=1'-0" — 7



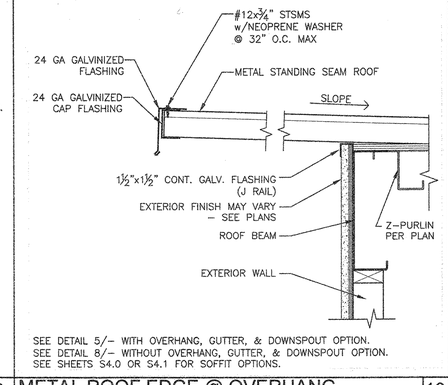
SEE DETAIL 5/– WITH OVERHANG, GUTTER, & DOWNSPOUT OPTION.
SEE DETAIL 10/– WITH OVERHANG OPTION ONLY.
SEE SHEETS S4.0 OR S4.1 FOR SOFFIT OPTIONS.

METAL ROOF @ END WALLS (w/o OVERHANGS) — SCALE : 1 1/2"=1'-0" — 8



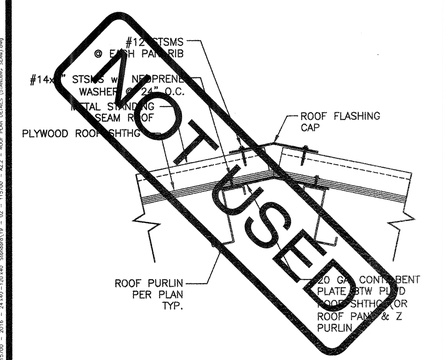
NOTE: SEE DETAIL 7/– FOR TYPICAL MOD–LINE CONNECTION.

METAL ROOF @ MODLINE OPTION — SCALE : 1 1/2"=1'-0" — 9

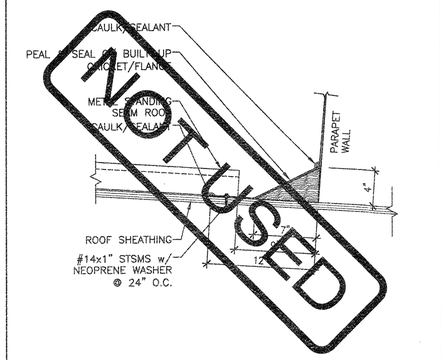


SEE DETAIL 5/– WITH OVERHANG, GUTTER, & DOWNSPOUT OPTION.
SEE DETAIL 8/– WITHOUT OVERHANG, GUTTER, & DOWNSPOUT OPTION.
SEE SHEETS S4.0 OR S4.1 FOR SOFFIT OPTIONS.

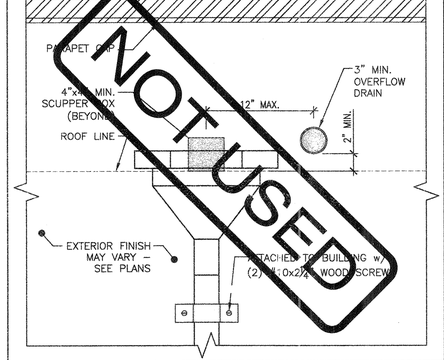
METAL ROOF EDGE @ OVERHANG — SCALE : 1 1/2"=1'-0" — 10



OPTIONAL METAL DUAL SLOPED — SCALE: 1-1/2"=1'-0" — 11



BUILT-UP CRICKET AT METAL ROOF — SCALE: 1-1/2"=1'-0" — 12



TYP. SCUPPER w/ OVERFLOW DRAIN — SCALE: 1-1/2"=1'-0" — 13

NOT USED — 14

NOT USED — 15

NOT USED — 16

NOT USED — 17

NOT USED — 18

NOT USED — 19

NOT USED — 20

American Modular Systems
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

TYPICAL ROOF DETAILS METAL STANDING SEAM

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — BRIAN PATRICK CANNON — No. C12631 — Ren. 3-31-18 — STATE OF CALIFORNIA

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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
ACCPT FLS SS SMK
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02–115700
ACCPT FLS SS SMK
DATE 8-31-2018

PRE–CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

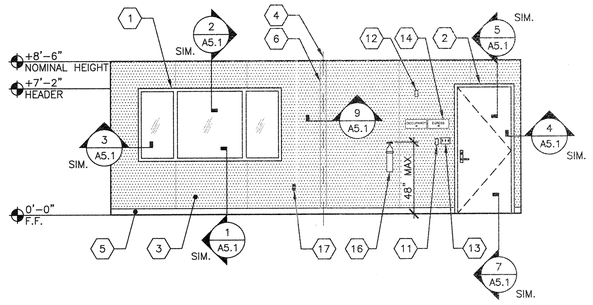
REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

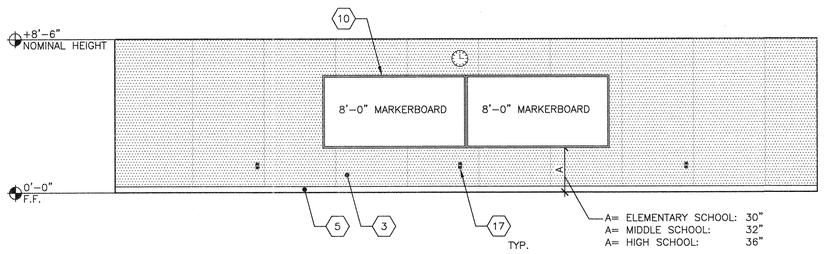
SHEET NUMBER

A2.2

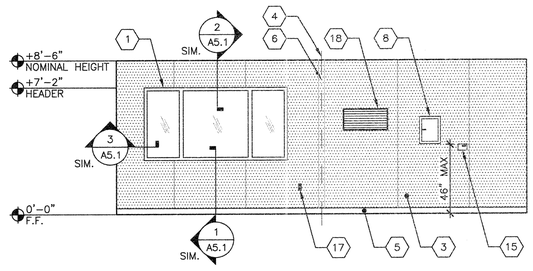
02–XXXXX – [ex. test] BUILDINGS – SHEETS 4/26/2018 3:16 PM 4/5/2018 4:26 PM W:\Engineering\PC SMC Files\2018 CODES\02–115700 – 2018 – 24'x40'–120'x40' Standard\19 – 02 – 115700 – A2.2 – ROOF PLAN DETAILS STANDING SEAM.dwg



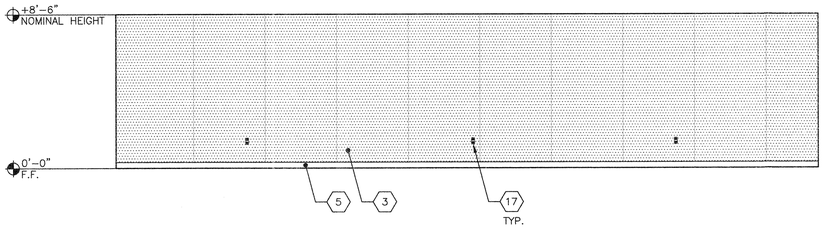
TYPICAL CLASSROOM FRONT END WALL ELEVATION — SCALE : 1/4"=1'-0" — 1



TYPICAL CLASSROOM SIDE WALL ELEVATION — SCALE : 1/4"=1'-0" — 2



TYPICAL CLASSROOM REAR END WALL ELEVATION — SCALE : 1/4"=1'-0" — 3



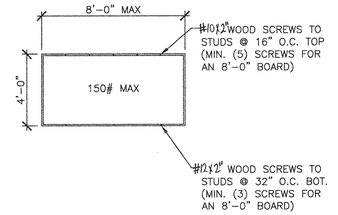
TYPICAL CLASSROOM SIDE WALL ELEVATION — SCALE : 1/4"=1'-0" — 4

NOTE:
ALL ELEVATIONS ARE REFERECED FROM A LEFT HAND BUILDING

NOT USED

1. WINDOW, SEE SPEC'S
2. EXTERIOR DOOR
3. VINYL WRAPPED TACKABLE WALLS
4. TYP. MOD LINE
5. TOP SET BASE
6. BATTEN CLOSE-UP AT MOD-LINES, TYP.
7. NOT USED
8. ELECTRICAL PANEL – SEE ELECTRICAL SHEETS
9. NOT USED
10. (2) 8'x4' MARKER BOARDS – SEE DETAIL A/A4.0
11. FIRE ALARM PULL STATION SEE ELECTRICAL PLANS
12. FIRE ALARM HORN/STROBE SEE ELECTRICAL PLANS
13. LIGHT SWITCH – SEE ELECTRICAL SHEETS
14. EXIT TACTILE SIGN PER DETAIL 10/N4.0 (NIC)
15. THERMOSTAT, TOP @ 48" A.F.F. – SEE MECHANICAL SHEETS
16. FIRE EXTINGUISHER TOP OF HANDLE @ +48" MAX. A.F.F. PROTRUSION MAX 4" FROM WALL OR BOTTOM OF FIRE EXTINGUISHER LESS THAN +27" A.F.F
17. TYP DUPLEX OUTLET – SEE ELECTRICAL SHEETS
18. HVAC GRILL

KEY NOTES



NOTE: ATTACHMENT IS FOR EACH MAKERBOARD

MARKERBOARD ATT. DETAIL — SCALE : 1/4"=1'-0" — A

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PRE-CHECKED SET NAME

24'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE (100) 24'x40' BUILDINGS

SHEET TITLE

INTERIOR ELEVATIONS CLASSROOM

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CAVANAUGH — No. C-28531 — Ren. 3-31-21 — STATE OF CALIFORNIA

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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 / 117941
AC FLS SS
DATE SEP 19 2019

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS

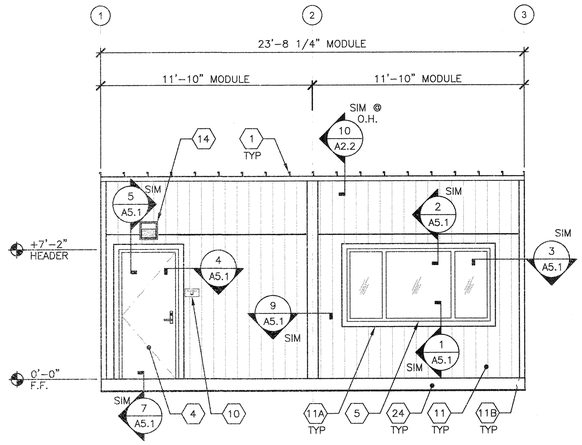
DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

SHEET NUMBER

A4.0

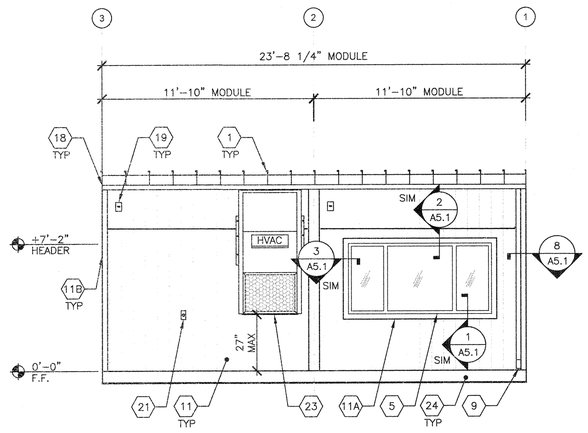
02-XXXXX - [pc-seq] BUILDINGS - SHEETS 9/18/2019 8:18 AM PLOTTED: 9/18/2019 8:14 AM W:\Projects\1000-1999\1500-1599\1558-13 JAMA 100 Bays Modular\PRESEMAKER\DWG\19 - JAMA 100 Stockpile - A4.0 - CLASSRM ALT ELEV.dwg

NOTE:
ALL ELEVATIONS ARE REFERECED FROM A LEFT HAND BUILDING



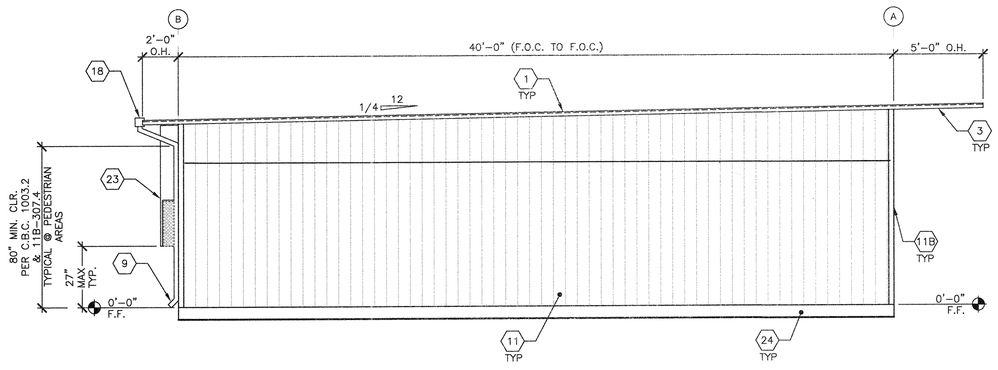
EXTERIOR ELEVATION - FRONT

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



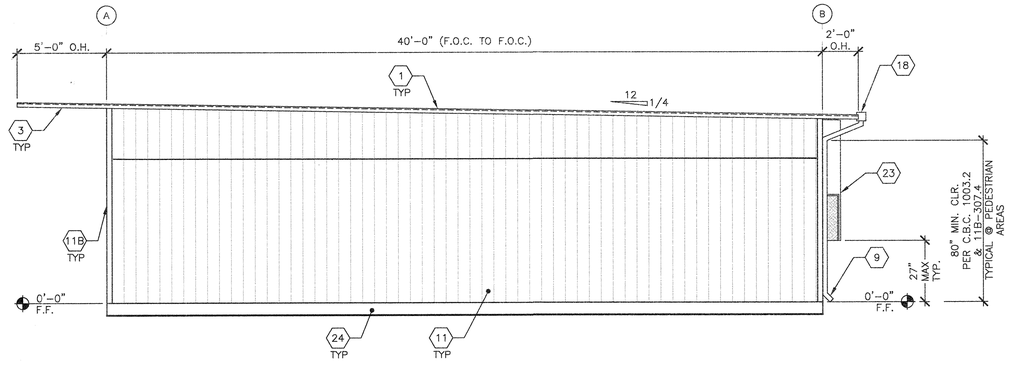
EXTERIOR ELEVATION - REAR

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



EXTERIOR ELEVATION - LEFT

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



EXTERIOR ELEVATION - RIGHT

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

1	STANDING SEAM METAL ROOFING
2	NOT USED
3	OVERHANG – SEE STRUCTURAL
4	TYP. EXTERIOR DOOR – SEE SCHEDULE SHEET N3.0
5	WINDOW – SEE SCHEDULE SHEET N3.0
6	NOT USED
7	NOT USED
8	NOT USED
9	DOWNSPOUT SEE DETAIL 8/A5.1 FOR ATTACHMENT
10	ROOM ID AND ISA SIGNAGE (BY OTHER) SEE DETAILS 5 & 9/N4.0 – TYP.
11	5/8" OSB SHEATHING DURATAMP 303
11A	1x4 TRIM
11B	22 GA. CORNER FLASHING
12	NOT USED
13	NOT USED
14	EXTERIOR LIGHT – SEE ELECTRICAL
15	NOT USED
16	NOT USED
17	NOT USED
18	GUTTER – SEE ATTACHMENT DETAIL 5/A2.2 AT STANDING SEAM ROOFING, ~~OR 5/A2.5 AT SINGLE PLY / BUILT UP ROOFING~~
19	MODULAR IDENTIFICATION TAG +90" ABOVE A.F.F.
20	FIRE ALARM HORN(BY OTHERS)–REFER TO ELECTRICAL PLANS
21	WP/G.F.C.I. @ HVAC UNITS – REFER TO ELECTRICAL PLANS
22	NOT USED
23	HVAC UNIT
24	SHEET METAL FLASHING

KEYNOTES

PROJECT SPEC BUILDING SIZE	BUILDING	12'–0" MODULES	OVERALL SIZE'
☒	24'x40'	2	23'–8¼"
☐	36'x40'	3	35'–6½"
☐	48'x40'	4	47'–4¾"
☐	60'x40'	5	59'–3"
☐	72'x40'	6	71'–1¼"
☐	84'x40'	7	82'–1½"
☐	96'x40'	8	94'–9¾"
☐	108'x40'	9	106'–8"
☐	120'x40'	10	118'–6¼"

NOTES:

1. TOTAL BUILDING WIDTH INCLUDES ¼" PER MODULE CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS ~~S1.0~~, S1.1, ~~S1.2 & S1.3~~.

BUILDING SIZE SCHEDULE

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE–CHECKED SET NAME

24'x40'
STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

SHEET TITLE

TYPICAL EXTERIOR ELEVATIONS- DURATEMP 303 SIDING OPTION

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT ANDREW PATRICK CAVANAGH No. C-29531 Ren. 3-31-21 STATE OF CALIFORNIA

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC ___ FLS ___ SS ___
DATE SEP 19 2019

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

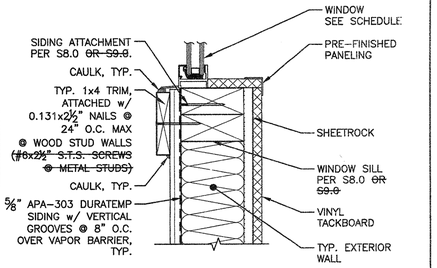
REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

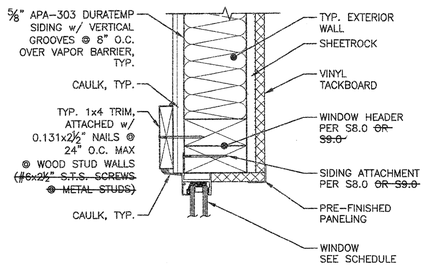
SHEET NUMBER

A5.0

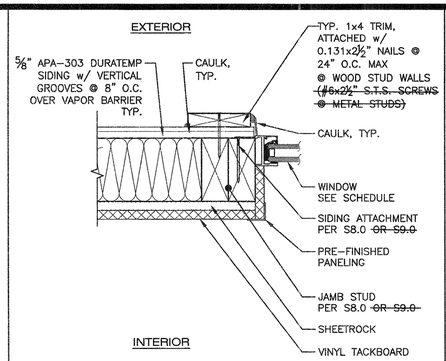
02-XXXXX - [pc set] Buildings - SHEET - 9/18/2019 9:53 AM PLOTTED: 9/18/2019 9:54 AM M:\Projects\1000-1999\1500-1599\1555-19 MAM 100 Bldgs Stockpile\PREL\Model\Dwg\A5.0 - 02 - 11x17(P) - MAM 100 STOCKPILE - A5.0 - Exterior Elevation (Duratemp) 08819.dwg



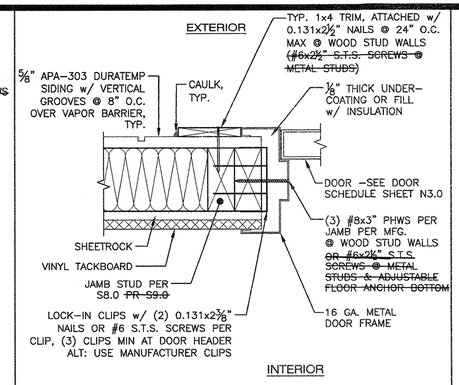
TYPICAL WINDOW SILL — SCALE 3" = 1'-0" — 1



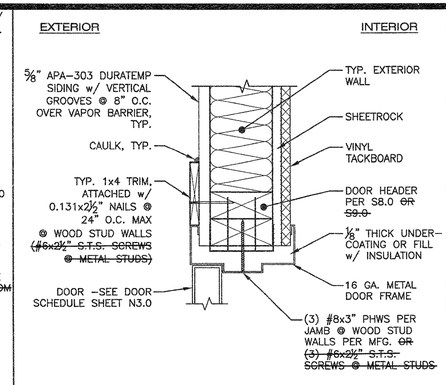
TYPICAL WINDOW HEADER — SCALE 3" = 1'-0" — 2



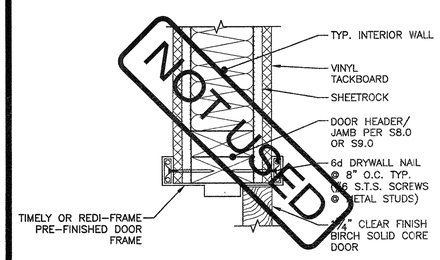
TYPICAL WINDOW JAMB — SCALE 3" = 1'-0" — 3



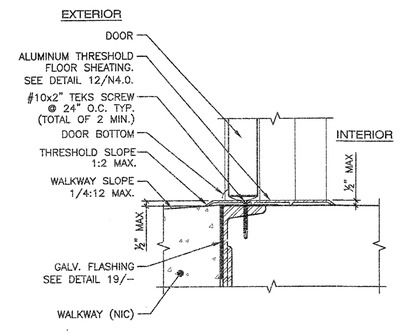
TYPICAL DOOR JAMB — SCALE 3" = 1'-0" — 4



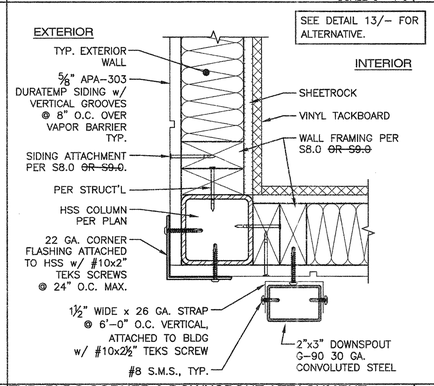
TYPICAL DOOR HEADER — SCALE 3" = 1'-0" — 5



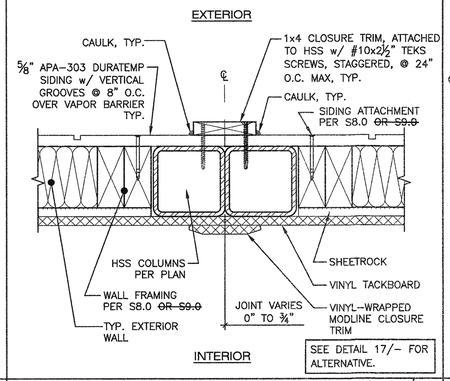
TYP. INTERIOR DOOR HEADER/JAMB — SCALE 3" = 1'-0" — 6



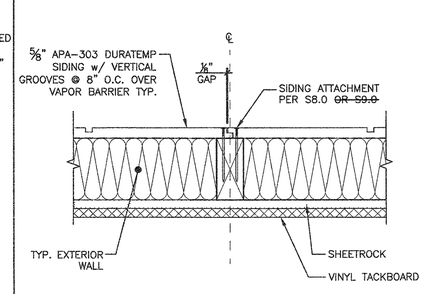
TYPICAL THRESHOLD DETAIL — SCALE 3" = 1'-0" — 7



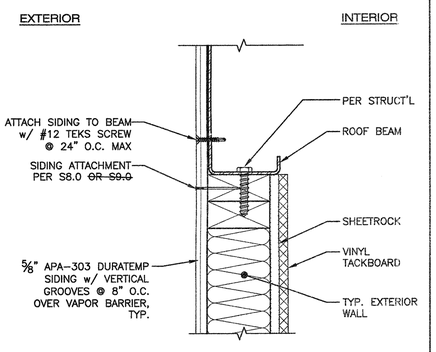
TYP. BLDG CORNER & DOWNSPOUT ATTACHMENT DETAIL — SCALE 3" = 1'-0" — 8



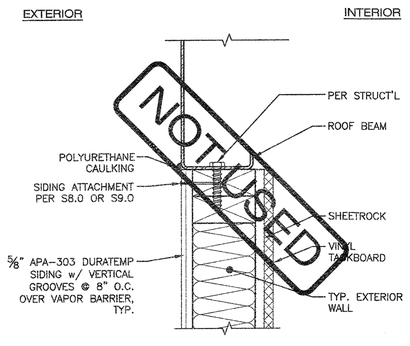
TYP. MODLINE CLOSURE DETAIL — SCALE 3" = 1'-0" — 9



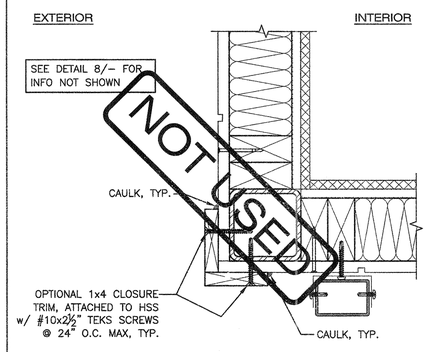
TYP. SIDING JOINT DETAIL — SCALE 3" = 1'-0" — 10



SIDING DETAIL @ ROOF BEAM — SCALE 3" = 1'-0" — 11



ALTERNATE SIDING @ ROOF BEAM — SCALE 3" = 1'-0" — 12

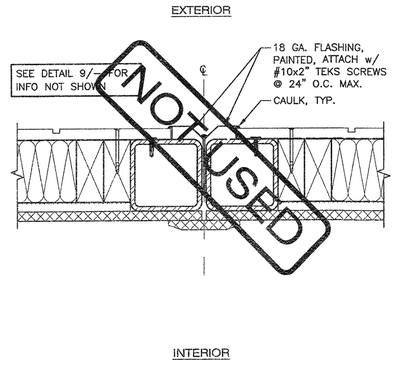


ALTERNATE BUILDING CORNER DETAIL — SCALE 3" = 1'-0" — 13

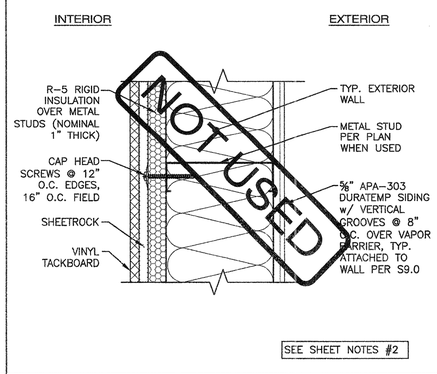
NOTES:

1. FOR OPTIONAL METAL STUD FRAMING, SEE S9.0–S9.2.
2. ADDITIONAL R–5 RIGID INSULATION REQUIRED @ METAL STUD WALLS, PER INSULATION SCHEDULE SHEET M1.7 & DETAIL 18/–
3. FOR FINISH OPTIONS, SEE SHEET A7.0.

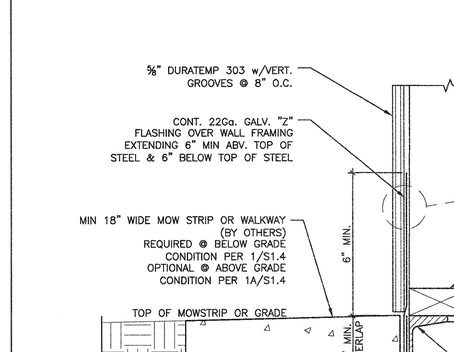
SHEET NOTES



ALTERNATE MODLINE CLOSURE DETAIL — SCALE 3" = 1'-0" — 17



RIGID INSULATION @ METAL STUDS — SCALE 3" = 1'-0" — 18



FLASHING DETAIL — SCALE 3" = 1'-0" — 19

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787 Spreckels Ave , Manteca, CA 95336
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

TYP. ARCHITECTURAL DETAILS - DURATEMP 303 SIDING OPTION

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GRAHAM — No C12631 Ren 3-31-19 — STATE OF CALIFORNIA

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS/MC
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
REV 1
PC 02-115700
AC TM FLS 02 SS 101
DATE 6-21-2019

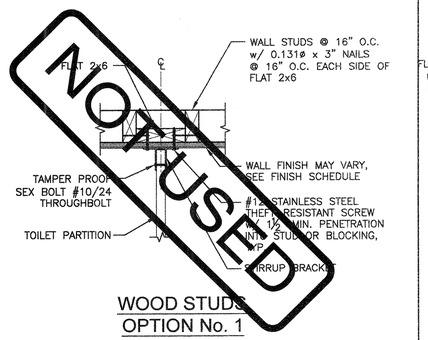
PRE-CHECK (PC) DOCUMENT
CODE 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS
1 GENERAL REVISIONS - 01/09/19
2
3
4

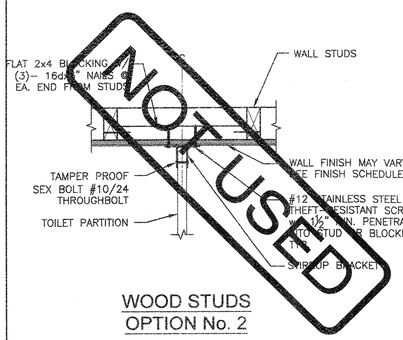
DRAWN BY:	.
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

A5.1

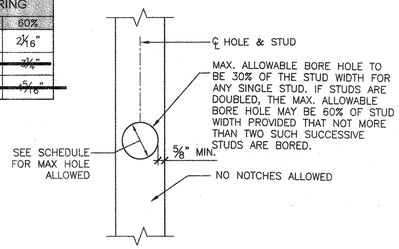


WOOD STUDS
OPTION No. 1

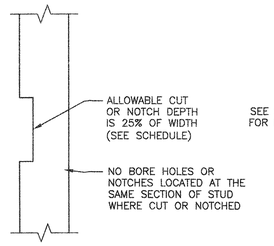


WOOD STUDS
OPTION No. 2

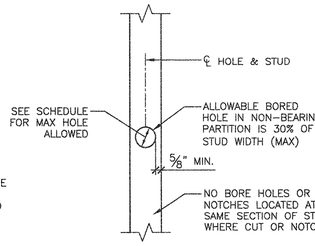
NOTCH & BORING SCHEDULE					
	STUD WIDTH		NOTCHING	BORING	
SIZE	NOMINAL	ACTUAL	25%	30%	60%
2x4	4"	3½"	⅞"	1"	2⅛"
2x6	6"	5½"	1⅜"	1⅝"	3¼"
2x8	8"	7¼"	1 13/16"	2⅛"	4⅜"



EXTERIOR WALL
BORING



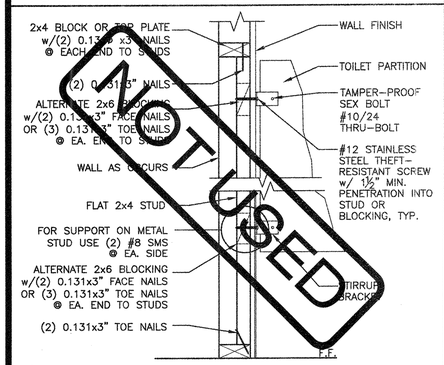
INTERIOR WALL
NOTCHING



INTERIOR WALL
BORING

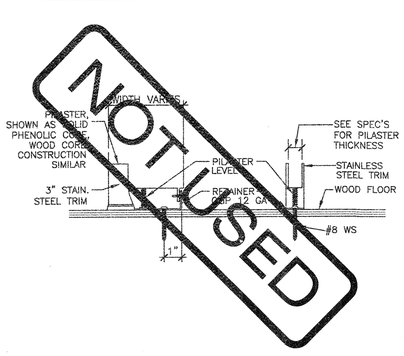
TOILET PARTITION ANCHORAGE BLOCKING DETAILS @ WALL — SCALE: 1-1/2" = 1'-0" — 1

STUD NOTCHING AND BORING DETAILS — NOT TO SCALE — 2

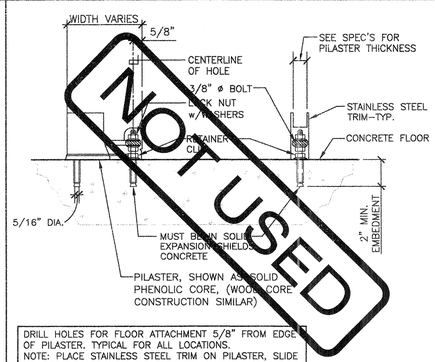


NOTE: FOR METAL STUD OPTION, SEE SHEET 20/S9.1 FOR BLOCKING.

TOILET PARTITION WALL BLOCKING — NOT TO SCALE — 3

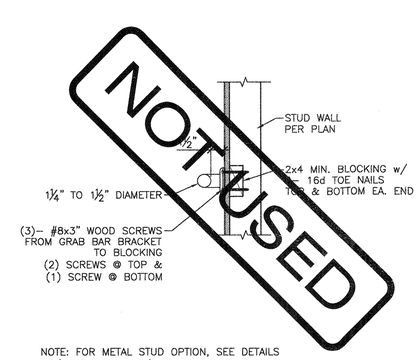


PARTITION TO WOOD FLOOR — NOT TO SCALE — 4



DRILL HOLES FOR FLOOR ATTACHMENT 5/8" FROM EDGE OF PILASTER. TYPICAL FOR ALL LOCATIONS.
NOTE: PLACE STAINLESS STEEL TRIM ON PILASTER, SLIDE UP BEFORE SECURING PILASTER TO FLOOR ATTACHMENT.

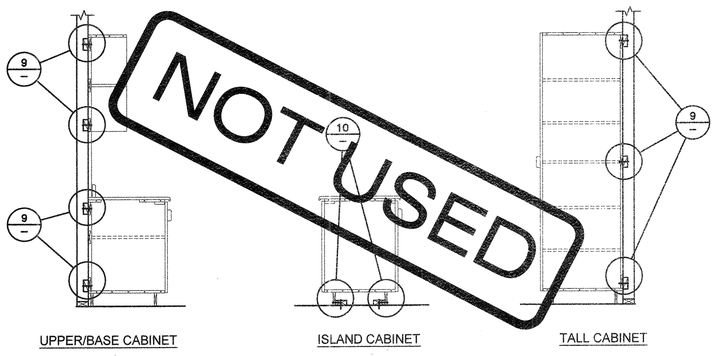
PARTITION TO CONCRETE FLOOR — NOT TO SCALE — 5



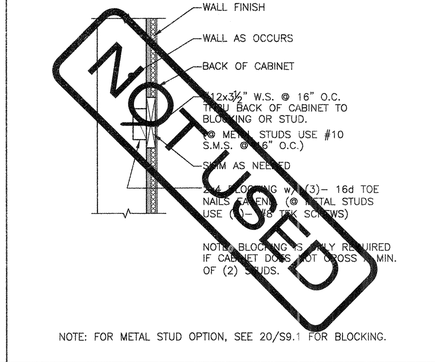
NOTE: FOR METAL STUD OPTION, SEE DETAILS 20/S9.1 AND 9&10/S9.2 FOR BLOCKING.

GRAB BAR BLOCKING DETAIL — SCALE: 1-1/2" = 1'-0" — 6

NOT USED — 7

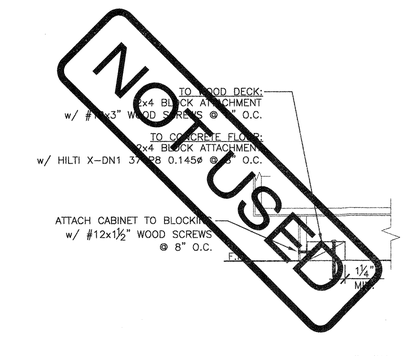


TYP. CABINET BLOCKING — NOT TO SCALE — 8



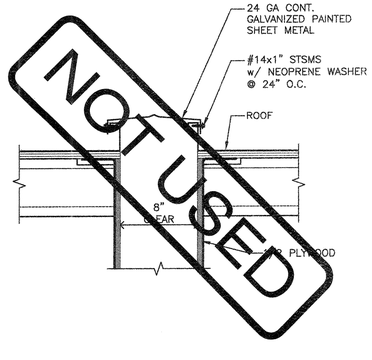
NOTE: FOR METAL STUD OPTION, SEE 20/S9.1 FOR BLOCKING.

CABINET BLOCKING IN WALL — SCALE: 1-1/2" = 1'-0" — 9

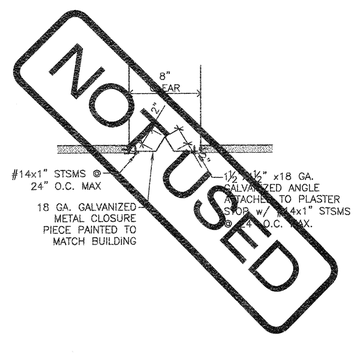


CABINET BLOCKING @ FLOOR — SCALE: 1-1/2" = 1'-0" — 10

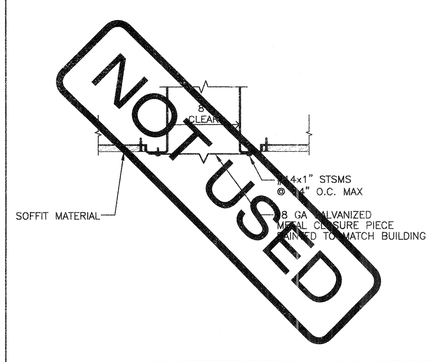
NOT USED — 11



SEISMIC CLOSURE @ ROOF — 12



SEISMIC CLOSURE @ WALL — 13



SEISMIC CLOSURE @ SOFFIT — 14

NOT USED — 15

NOT USED — 16

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

MISCELLANEOUS
ARCHITECTURAL DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
PATRICK CANNON
No. C12631
Ren. 3-31-19
STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
ACCEPTED FLS SS SMK
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-115700
ACCEPTED FLS SS JGA
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

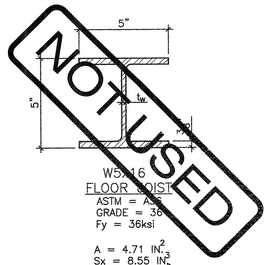
REVISIONS

DRAWN BY:	.
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

A7.1

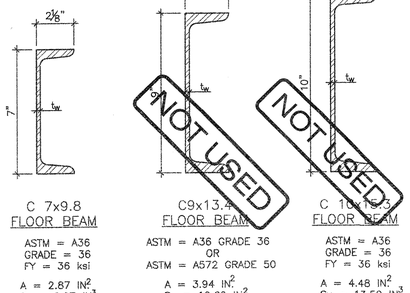
02-XXXXX - Eps and Buildings - Shared - 4/26/2018 3:15 PM - N:\Documents\DC Ditto Files\2018 CODE\02-115700 - 2018 - 24'x40'-120'x40' Standard\A - 02 - 115700 - A7.1 - Misc Arch Details.dwg



W5x16
FLOOR JOIST
ASTM = A36
GRADE = 36
Fy = 36ksi

A = 4.71 IN^2
Sx = 8.55 IN^3
Zx = 9.63 IN^3
Ix = 21.4 IN^4
t_w = .25 IN.

HOT ROLLED FLOOR JOIST PROPERTIES | 1



C 7x9.8
FLOOR BEAM
ASTM = A36
GRADE = 36
FY = 36 ksi

A = 2.87 IN^2
Sx = 6.07 IN^3
Zx = 7.19 IN^3
Ix = 21.20 IN^4
t_w = .21 IN.

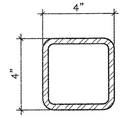
C9x13.4
FLOOR BEAM
ASTM = A36 GRADE 36
OR
ASTM = A572 GRADE 50

A = 3.94 IN^2
Sx = 10.60 IN^3
Zx = 12.60 IN^3
Ix = 47.80 IN^4
t_w = .22 IN.

C 10x15.3
FLOOR BEAM
ASTM = A36
GRADE = 36
FY = 36 ksi

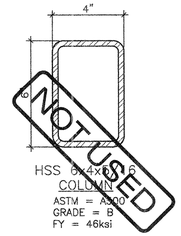
A = 4.48 IN^2
Sx = 13.50 IN^3
Zx = 15.90 IN^3
Ix = 67.30 IN^4
t_w = .24 IN.

HOT ROLLED FLOOR BEAM PROPERTIES | 2



HSS 4x4x5/16
COLUMN
ASTM = A500
GRADE = B
FY = 46ksi

A = 4.10 IN^2
Sx = 4.57 IN^3
Zx = 5.59 IN^3
Ix = 9.14 IN^4
t_w = .3125 IN.

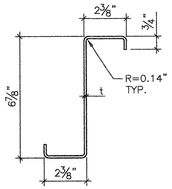


HSS 6x4x5/16
COLUMN
ASTM = A500
GRADE = B
FY = 46ksi

A = 5.26 IN^2
Sx = 8.27 IN^3
Zx = 10.30 IN^3
Ix = 24.80 IN^4
t_w = .3125 IN.

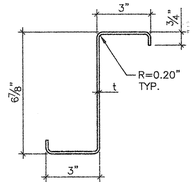
Sy = 6.58 IN^3
Zy = 7.75 IN^3
Iy = 13.2 IN^4

HSS COLUMN PROPERTIES | 3



6-7/8" x2-3/8" x14 GA.
FLOOR JOIST (1)
ASTM A1011 GRADE 45
F_Y = 45KSI

A = 0.89 IN^2
Sx = 1.85 IN^3
Ix = 6.37 IN^4
t = 0.068 IN. MIN.



6-7/8" x3" x12 GA.
FLOOR JOIST(1)
ASTM A1011 GRADE 45
F_Y = 45KSI

A = 1.38 IN^2
Sx = 2.97 IN^3
Ix = 10.20 IN^4
t = 0.097 IN. MIN.

LIGHT GAUGE FLOOR JOIST ROPERTIES | 5

(26 GA. MAY BE USED w/ PLYWOOD SHEATHING)

ASTM = A101
GRADE = 36
FY = 36ksi

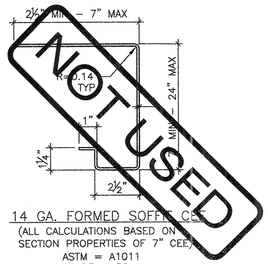
W/ GALVANIZATION
t=0.0356 IN. MIN.

W/O GALVANIZATION
t=0.0329 IN. MIN.

$S_X(t)$ = 0.364 IN^3
$S_X(b)$ = 1.372 IN^3
I_X = 0.863 IN^4

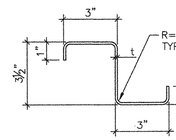
$S_X(t)$ = 0.330 IN^3
$S_X(b)$ = 0.305 IN^3
I_X = 0.476 IN.
A = 0.84 IN^2

20 GALVANIZED ROOF PAN PROPERTIES | 7

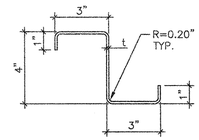


14 GA. FORMED SOFFIT CEE
(ALL CALCULATIONS BASED ON
SECTION PROPERTIES OF 7" CEE)
ASTM = A1011
GRADE = 36
Fy = 36ksi
A = 0.97 IN^2
Sx = 1.78 IN^3
Ix = 6.87 IN^4
t = 0.068 IN. MIN.

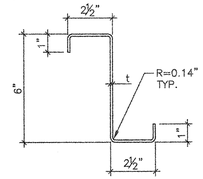
14GA FORMED SOFFIT CEE PROPERTIES | 8



10 GA. ROOF PURLIN
ASTM = A1011
GRADE = 36
Fy = 36ksi
A = 1.30 IN^2
Sx = 1.49 IN^3
Ix = 2.60 IN^4
t = 0.129 IN. MIN.

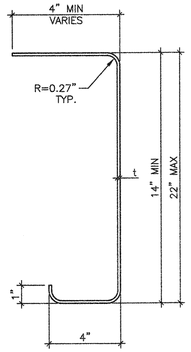


12 GA. ROOF PURLIN
ASTM = A1011
GRADE = 36
Fy = 36ksi
A = 1.14 IN^2
Sx = 1.50 IN^3
Ix = 3.00 IN^4
t = 0.097 IN. MIN.



14 GA. ROOF PURLIN
ASTM = A1011
GRADE = 36
Fy = 36ksi
A = 0.089 IN^2
Sx = 1.65 IN^3
Ix = 4.95 IN^4
t = 0.068 IN. MIN.

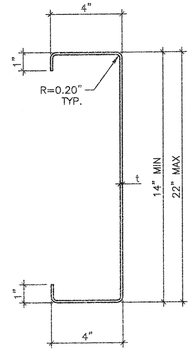
LIGHT GAUGE ROOF PURLIN PROPERTIES | 10



10 GA. LONGITUDINAL BEAM

ASTM = A1011
GRADE = 50
Fy = 50ksi
t = 0.129 IN. MIN.

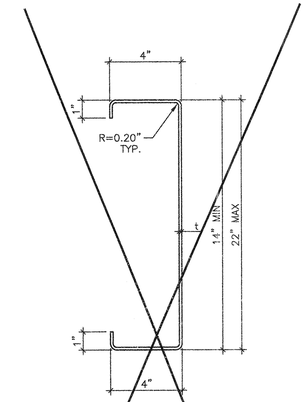
BEAM DEPTH	14"	18"	22"
A (IN^2)	2.99	3.53	4.07
S_X MIN. (IN^3)	11.5	16.50	22.22
I_X MIN. (IN^4)	82.87	152.26	249.90



12 GA. TRANSVERSE BEAM/HEADER

ASTM = A1011
GRADE = 36
Fy = 36ksi
t = 0.097 IN. MIN.

BEAM DEPTH	14"	22"
A (IN^2)	2.36	3.17
S_X MIN. (IN^3)	9.57	18.18
I_X MIN. (IN^4)	97.02	199.97



10 GA. TRANSVERSE BEAM/HEADER

ASTM = A1011
GRADE = 50
Fy = 50ksi
t = 0.129 IN. MIN.

BEAM DEPTH	14"	22"
A (IN^2)	3.09	4.17
S_X MIN. (IN^3)	12.41	23.68
I_X MIN. (IN^4)	86.88	260.50

LIGHT GAUGE ROOF BEAM PROPERTIES | 18

NOT USED | 14

NOT USED | 15

NOT USED | 19

1. THE MATERIAL THICKNESS OF LIGHT GAUGE STRUCTURAL MEMBERS, IN THEIR END-USE, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ON SHEET S0.0 THE MATERIAL GAGE DESIGNATION IN THE PLAN SHALL BE USED AS REFERENCE ONLY.
2. UNLESS NOTED OTHERWISE, ALL SECTION PROPERTIES ARE GROSS SECTION PROPERTIES.
3. LIGHT GAUGE STRUCTURAL MEMBERS TO BE FABRICATED FROM HOT ROLLED SHEETS WITH RUST INHIBITIVE COATING. SEE SHEET N2.0, "LIGHT GAUGE METAL STUDS & COLD FORMED STEEL", FOR ADDITIONAL INFORMATION.

SHEET NOTES | 20

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

STEEL
MEMBER
PROPERTIES

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
ANTHONY PATRICK CONNOLLY
No. C12631
Ren. 3-31-19
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRIAS
No. 53380
STRUCTURAL
STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC ___ FLS ___ SS
DATE
SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-117700
AC ___ FLS ___ SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

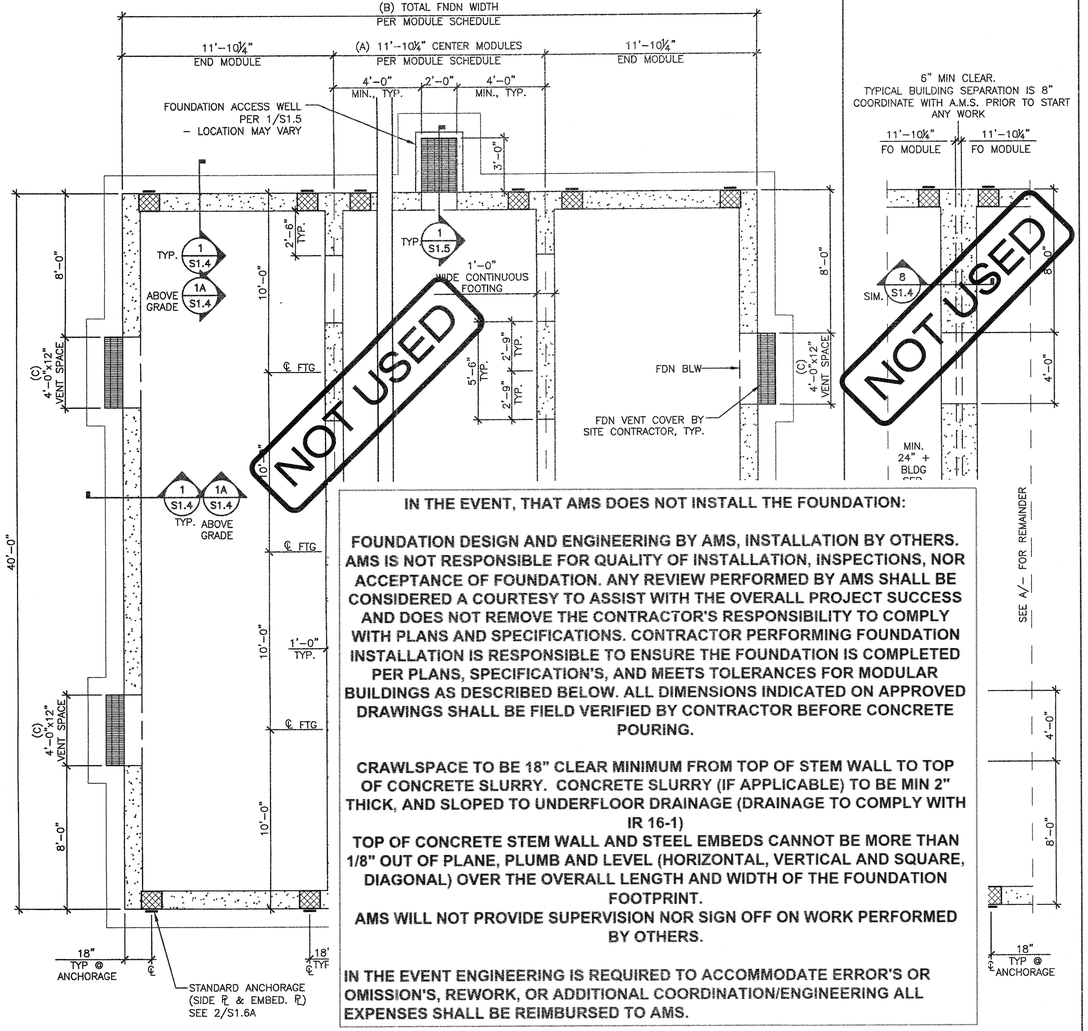
REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

S0.0

02-XXXXX - [pc set] BUILDING1 - SHEETS - 8/9/2018 9:39 AM W:\Engineering\PC DWG Files\2016 CODES\02-115700 - 2016 - 24'x40'-120'x40' Standard\S0 - 02 - 115700 - S0.0 - STEEL MEMBER PROPERTIES.dwg



IN THE EVENT, THAT AMS DOES NOT INSTALL THE FOUNDATION:

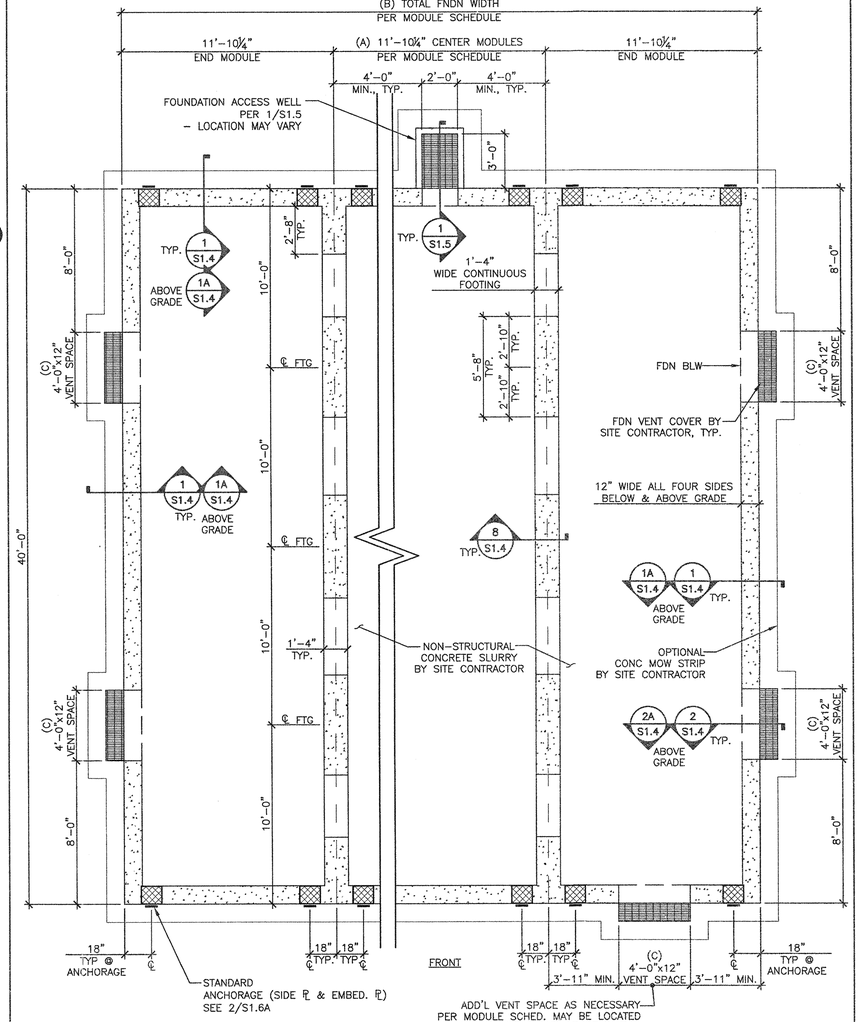
FOUNDATION DESIGN AND ENGINEERING BY AMS, INSTALLATION BY OTHERS. AMS IS NOT RESPONSIBLE FOR QUALITY OF INSTALLATION, INSPECTIONS, NOR ACCEPTANCE OF FOUNDATION. ANY REVIEW PERFORMED BY AMS SHALL BE CONSIDERED A COURTESY TO ASSIST WITH THE OVERALL PROJECT SUCCESS AND DOES NOT REMOVE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH PLANS AND SPECIFICATIONS. CONTRACTOR PERFORMING FOUNDATION INSTALLATION IS RESPONSIBLE TO ENSURE THE FOUNDATION IS COMPLETED PER PLANS, SPECIFICATION'S, AND MEETS TOLERANCES FOR MODULAR BUILDINGS AS DESCRIBED BELOW. ALL DIMENSIONS INDICATED ON APPROVED DRAWINGS SHALL BE FIELD VERIFIED BY CONTRACTOR BEFORE CONCRETE POURING.

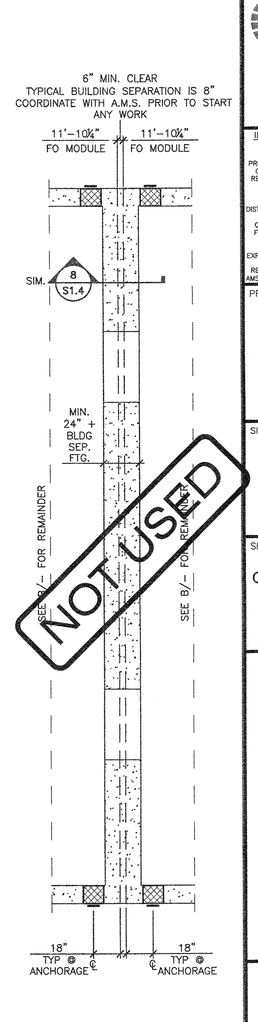
CRAWLSPACE TO BE 18" CLEAR MINIMUM FROM TOP OF STEM WALL TO TOP OF CONCRETE SLURRY. CONCRETE SLURRY (IF APPLICABLE) TO BE MIN 2" THICK, AND SLOPED TO UNDERFLOOR DRAINAGE (DRAINAGE TO COMPLY WITH IR 16-1)

TOP OF CONCRETE STEM WALL AND STEEL EMBEDS CANNOT BE MORE THAN 1/8" OUT OF PLANE, PLUMB AND LEVEL (HORIZONTAL, VERTICAL AND SQUARE, DIAGONAL) OVER THE OVERALL LENGTH AND WIDTH OF THE FOUNDATION FOOTPRINT.

AMS WILL NOT PROVIDE SUPERVISION NOR SIGN OFF ON WORK PERFORMED BY OTHERS.

IN THE EVENT ENGINEERING IS REQUIRED TO ACCOMMODATE ERROR'S OR OMISSION'S, REWORK, OR ADDITIONAL COORDINATION/ENGINEERING ALL EXPENSES SHALL BE REIMBURSED TO AMS.





CONCRETE FOUNDATION PLAN (PLYWOOD FLOOR) 50 PSF LIVE LOAD + 15 PSF PARTITION LOAD

SCALE: 1/4"=1'-0" — A

FOUNDATION PLAN COMBINED

SCALE: 1/4"=1'-0" — A1

1. DO NOT INSTALL BUILDING IN AREAS OF WATER FLOW LINES.
2. CONCRETE MIXTURES:
   A. ULTIMATE 28-DAY CONCRETE COMPRESSIVE STRENGTH (f'c) SHALL BE 3500 PSI MIN. EXCEPT VENTS & ACCESS WELLS MAY BE 3,000 PSI MIN.
   B. PROPORTIONING OF CONCRETE MIXTURES SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.3.
   C. DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.4.
   D. CEMENT SHALL BE CERTIFIED PER TITLE 24, PART 2, SECTION 1910A.1.
3. BUILDINGS MAY BE SET ON CONCRETE FOUNDATIONS THAT HAVE REACHED A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 70% OF THE SPECIFIED DESIGN STRENGTH (f'c) STATED ABOVE IN NOTE #2. PRIOR TO THE SETTING OF THE MODULAR BUILDING ON CONCRETE FOUNDATIONS THAT HAVE NOT YET CURED 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE, THE FOUNDATION CONTRACTOR SHALL
   A. HAVE THE PROJECT TESTING LAB PERFORM CONCRETE CYLINDER COMPRESSION TESTS OF THE FOUNDATION CONCRETE USED AT THE SITE,
   B. FURNISH THE PROJECT IOR AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WITH THE CONCRETE TEST REPORTS VERIFYING THAT THE FOUNDATION CONCRETE HAS REACHED THE MINIMUM STRENGTH AS SPECIFIED ABOVE, AND
   C. NOTIFY THE PROJECT IOR AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THEIR INTENT TO SET THE MODULAR BUILDING PRIOR TO 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE.
4. THE REINFORCING BARS MUST BE TESTED PER TITLE 24, PART 2, SECTION 1910A.2. TEST OF REINFORCING BARS MAY BE WAIVED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WITH THE APPROVAL OF DSA FOR A ONE-STORY BUILDING, PROVIDED CERTIFIED MILL TEST REPORTS ARE PROVIDED FOR EACH SHIPMENT OF SUCH REINFORCEMENT.
5. REINFORCING STEEL SHALL BE 60,000 PSI MINIMUM, PER ASTM A615.
6. DESIGN SOIL BEARING CAPACITY: 1500 PSF.
   (1/3 INCREASE IN SOIL BEARING CAPACITY NOT PERMITTED UNLESS USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605A.3.2)
7. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL VERIFY THE NET AREA OF THE UNDER-FLOOR VENTING IS EQUAL TO OR LARGER THAN THE VENT AREA REQUIRED (AS SHOWN ON THE ADJACENT TABLE).

NOTES

NOMINAL BLDG SIZE (FT)	TOTAL # OF 12' WIDE MODULES	"A" TOTAL # OF CENTER MODULES	"B" TOTAL FNDN WIDTH[1]	TOTAL NOMINAL FLOOR AREA (FT^2)	"C" MIN. TOTAL # 4'x1' VENTS REQ'D[3]	NET FREE VENT AREA REQ'D[3] (FT^2)	NET FREE VENT AREA PROVIDED[3] (FT^2)
☐ 24'x40'	2	0	23'-8½"	960	3	6.4	8.7
☐ 36'x40'	3	1	35'-6¾"	1440	4	9.6	11.6
☐ 48'x40'	4	2	47'-5"	1920	5	12.8	14.6
☐ 60'x40'	5	3	59'-3¾"	2400	6	16.0	17.5
☐ 72'x40'	6	4	71'-1½"	2880	7	19.2	20.4
☐ 84'x40'	7	5	82'-11¼"	3360	8	22.4	23.3
☐ 96'x40'	8	6	94'-10"	3840	9	25.6	26.2
☐ 108'x40'	9	7	106'-8¾"	4320	10	28.8	29.2
☐ 120'x40'	10	8	118'-6½"	4800	11	32.0	32.1

NOT USED

NOTES:

1. TOTAL FOUNDATION WIDTH INCLUDES ¼" PER MODULE CONSTRUCTION TOLERANCE.
2. UNLESS NOTED OTHERWISE, DIMENSIONS ARE FROM FACE OF CONCRETE TO FACE OF CONCRETE (F.O.C. TO F.O.C.)
3. THE NUMBER OF VENTS REQUIRED IS BASED ON THE VENT NET FREE AREA (NFA) PROVIDED BEING GREATER OR EQUAL TO THE VENT NFA REQUIRED. VENT NFA REQUIRED IS BASED ON A 1:150 VENTILATION RATIO OF THE NOMINAL BUILDING FLOOR AREA. VENT NFA PROVIDED IS THE ACTUAL OPEN AREA WITH A VENT GROSS AREA REDUCTION PERCENTAGE OF 73% & NUMBER OF VENTS PROVIDED.

$NFA_{REQUIRED} = A_{FLOOR} / 150$

$A_{VENT,GROSS} \times 73\% \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$
$(12"x4') \times 0.73 \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$
$2.92\ FT^2 \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$

MODULE SCHEDULE

CONCRETE FOUNDATION PLAN (CONCRETE FLOOR) 50 PSF LIVE LOAD + 15 PSF PARTITION LOAD

SCALE 1/4"=1'-0" — B

FOUNDATION PLAN COMBINED

SCALE 1/4"=1'-0" — B1

1. DO NOT INSTALL BUILDING IN AREAS OF WATER FLOW LINES.
2. CONCRETE MIXTURES:
   A. ULTIMATE 28-DAY CONCRETE COMPRESSIVE STRENGTH (f'c) SHALL BE 3500 PSI MIN. EXCEPT VENTS & ACCESS WELLS MAY BE 3,000 PSI MIN.
   B. PROPORTIONING OF CONCRETE MIXTURES SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.3.
   C. DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.4.
   D. CEMENT SHALL BE CERTIFIED PER TITLE 24, PART 2, SECTION 1910A.1.
3. BUILDINGS MAY BE SET ON CONCRETE FOUNDATIONS THAT HAVE REACHED A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 70% OF THE SPECIFIED DESIGN STRENGTH (f'c) STATED ABOVE IN NOTE #2. PRIOR TO THE SETTING OF THE MODULAR BUILDING ON CONCRETE FOUNDATIONS THAT HAVE NOT YET CURED 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE, THE FOUNDATION CONTRACTOR SHALL
   A. HAVE THE PROJECT TESTING LAB PERFORM CONCRETE CYLINDER COMPRESSION TESTS OF THE FOUNDATION CONCRETE USED AT THE SITE,
   B. FURNISH THE PROJECT IOR AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WITH THE CONCRETE TEST REPORTS VERIFYING THAT THE FOUNDATION CONCRETE HAS REACHED THE MINIMUM STRENGTH AS SPECIFIED ABOVE, AND
   C. NOTIFY THE PROJECT IOR AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THEIR INTENT TO SET THE MODULAR BUILDING PRIOR TO 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE.
4. THE REINFORCING BARS MUST BE TESTED PER TITLE 24, PART 2, SECTION 1910A.2. TEST OF REINFORCING BARS MAY BE WAIVED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WITH THE APPROVAL OF DSA FOR A ONE-STORY BUILDING, PROVIDED CERTIFIED MILL TEST REPORTS ARE PROVIDED FOR EACH SHIPMENT OF SUCH REINFORCEMENT.
5. REINFORCING STEEL SHALL BE 60,000 PSI MINIMUM, PER ASTM A615.
6. DESIGN SOIL BEARING CAPACITY: 1500 PSF.
   (1/3 INCREASE IN SOIL BEARING CAPACITY NOT PERMITTED UNLESS USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605A.3.2)
7. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL VERIFY THE NET AREA OF THE UNDER-FLOOR VENTING IS EQUAL TO OR LARGER THAN THE VENT AREA REQUIRED (AS SHOWN ON THE ADJACENT TABLE).

NOMINAL BLDG SIZE (FT)	TOTAL # OF 12' WIDE MODULES	"A" TOTAL # OF CENTER MODULES	"B" TOTAL FNDN WIDTH[1]	TOTAL NOMINAL FLOOR AREA (FT^2)	"C" MIN. TOTAL # 4'x1' VENTS REQ'D[3]	NET FREE VENT AREA REQ'D[3] (FT^2)	NET FREE VENT AREA PROVIDED[3] (FT^2)
☒ 24'x40'	2	0	23'-8½"	960	3	6.4	8.7
☐ 36'x40'	3	1	35'-6¾"	1440	4	9.6	11.6
☐ 48'x40'	4	2	47'-5"	1920	5	12.8	14.6
☐ 60'x40'	5	3	59'-3¾"	2400	6	16.0	17.5
☐ 72'x40'	6	4	71'-1½"	2880	7	19.2	20.4
☐ 84'x40'	7	5	82'-11¼"	3360	8	22.4	23.3
☐ 96'x40'	8	6	94'-10"	3840	9	25.6	26.2
☐ 108'x40'	9	7	106'-8¾"	4320	10	28.8	29.2
☐ 120'x40'	10	8	118'-6½"	4800	11	32.0	32.1

NOTES:

1. TOTAL FOUNDATION WIDTH INCLUDES ¼" PER MODULE CONSTRUCTION TOLERANCE.
2. UNLESS NOTED OTHERWISE, DIMENSIONS ARE FROM FACE OF CONCRETE TO FACE OF CONCRETE (F.O.C. TO F.O.C.)
3. THE NUMBER OF VENTS REQUIRED IS BASED ON THE VENT NET FREE AREA (NFA) PROVIDED BEING GREATER OR EQUAL TO THE VENT NFA REQUIRED. VENT NFA REQUIRED IS BASED ON A 1:150 VENTILATION RATIO OF THE NOMINAL BUILDING FLOOR AREA. VENT NFA PROVIDED IS THE ACTUAL OPEN AREA WITH A VENT GROSS AREA REDUCTION PERCENTAGE OF 73% & NUMBER OF VENTS PROVIDED.

$NFA_{REQUIRED} = A_{FLOOR} / 150$

$A_{VENT,GROSS} \times 73\% \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$
$(12"x4') \times 0.73 \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$
$2.92\ FT^2 \times (\#\ OF\ VENTS) > NFA_{REQUIRED}$

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Phone (209) 825-1921 - Fax (209) 825-7018
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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

CONCRETE FOUNDATION PLAN (50 PSF LIVE LOAD + 15 PSF FLOOR PARTITION LOAD)

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT PATRICK KEVIN MAY No C12631 Ren 3-31-19 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MARY D. FRANCOM No. 53380 STRUCTURAL STATE OF CALIFORNIA

8-20-18
RST18175

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT

CODE 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS

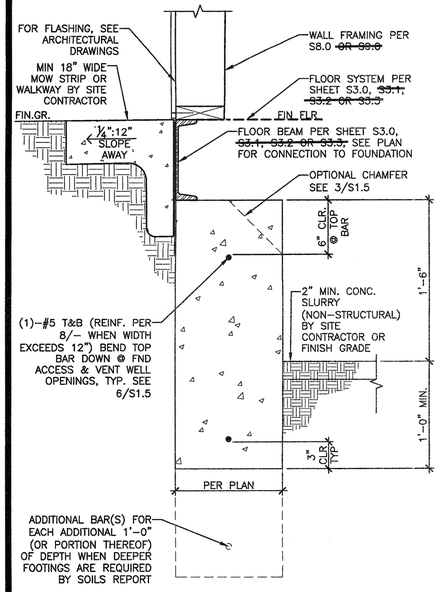
1
2
3
4

DRAWN BY: -
SCALE: AS NOTED
DATE: -

SHEET NUMBER

S1.1

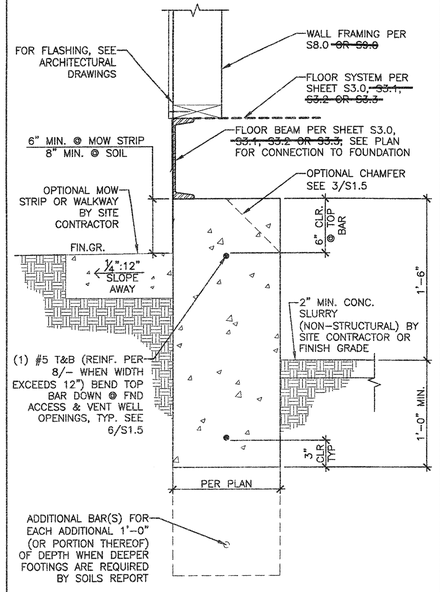
02-XXXXXX | Dr. and Detailed | Sheet | 8/7/2018 8:38 AM | ACPRO | 8/7/2018 8:38 AM | W:\Engineering\DC Dwg Files\2018 CD\02-115700 - 2018 - 24x40 - 120x40 Standard.DWG - 02 - 115700 - S1.1 - 24'x40' to 120'x40' SSP Plot Plans



NOTE:
SEE 12/S1.6A OR 12/S1.6B FOR ADDITIONAL FOOTING REINFORCEMENT @ ANCHORS – REFERENCE FOUNDATION PLAN FOR ANCHOR REQUIREMENTS AND LOCATION.

TYP. FOOTING - BELOW GRADE

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



NOTE:
SEE 12/S1.6A OR 12/S1.6B FOR ADDITIONAL FOOTING REINFORCEMENT @ ANCHORS – REFERENCE FOUNDATION PLAN FOR ANCHOR REQUIREMENTS AND LOCATION.

TYP. FOOTING - ABOVE GRADE

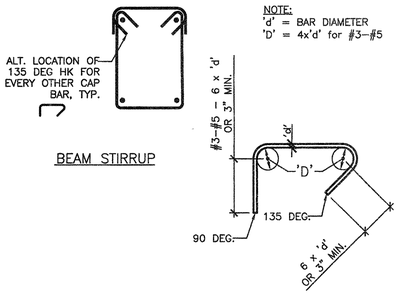
SCALE 1-1/2" = 1'-0" | 1A

NOT USED

| 3 |

NOT USED

| 3A |

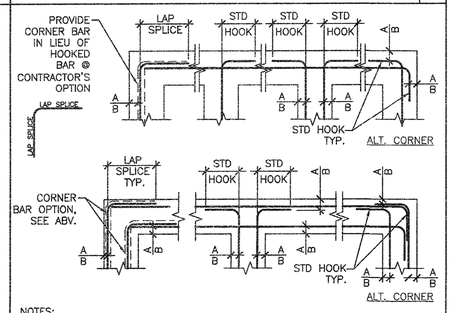


BEAM STIRRUP

TYP. TIE & STIRRUP HOOKS

TYPICAL HOOP-STIRRUP DETAIL

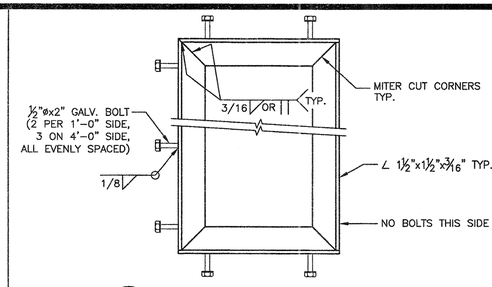
SCALE 1-1/2" = 1'-0" | 5



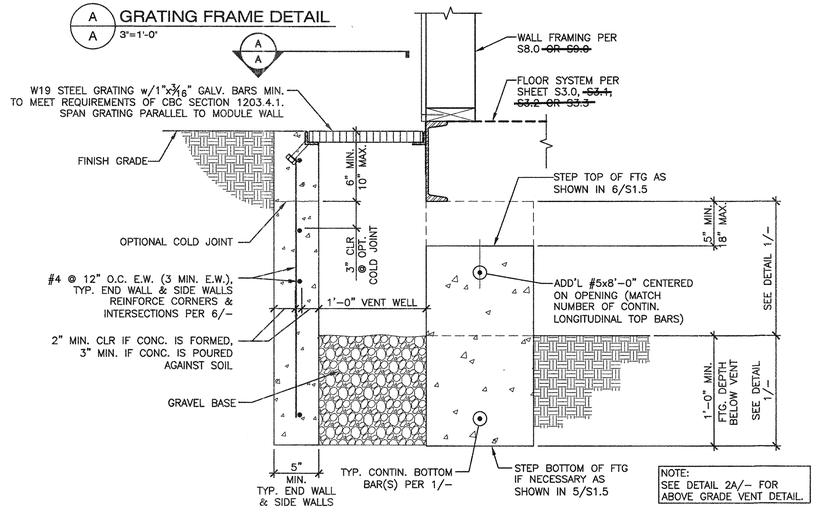
NOTES:
1. LAP SPLICE SHALL BE TYPICAL CLASS B SPLICE PER DETAIL 9/–.
2. HOOK LENGTH SHALL BE MIN 12d OR 12", WHICHEVER IS GREATER, WHERE d = DIAMETER OF THE BAR.
3. "A" = 2" COVER @ FORMED FOOTING
4. "B" = 3" COVER @ UNFORMED FOOTING

TYPICAL FOOTING REINFORCING

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



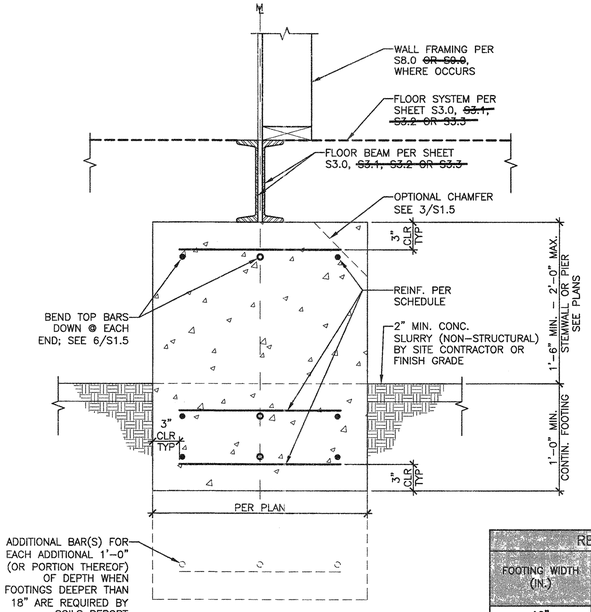
A/A GRATING FRAME DETAIL
3"=1'-0"



NOTE:
SEE DETAIL 2A/– FOR ABOVE GRADE VENT DETAIL.

TYP. VENT DETAIL - BELOW GRADE

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

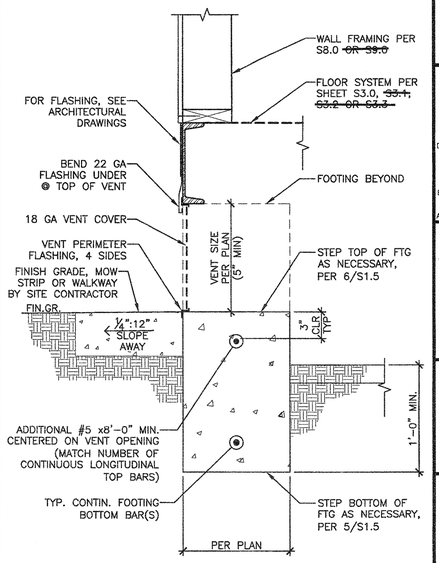


REINFORCING SCHEDULE		
FOOTING WIDTH (IN.)	CONTINUOUS LONGITUDINAL REINFORCING (EACH LEVEL*)	TRANSVERSE REINFORCING (EACH LEVEL*)
12"	(1) #5	NOT REQ'D
12"< W ≤16"	(1) #6	NOT REQ'D
	(2) #5	#4 @ 24" O.C.
16"< W ≤ 24"	(2) #5	#4 @ 24" O.C.
24"< W ≤ 36"	(2) #6 or (3) #5	#4 @ 24" O.C.
36"< W ≤ 48"	(3) #6 or (4) #5	#4 @ 24" O.C.

* – TOP & BOTTOM ONLY @ PERIMETER FOOTINGS PER 1 & 1A/–.

TYPICAL CENTER PIER SECTION

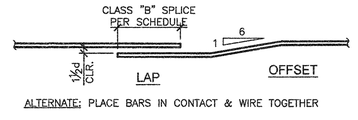
SCALE 1-1/2" = 1'-0" | 8



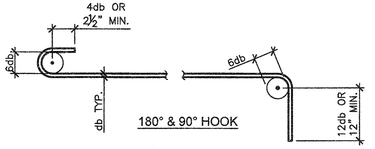
NOTE:
SEE DETAIL 2/– FOR INFO NOT SHOWN

TYP. VENT DETAIL - ABOVE GRADE

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



ALTERNATE: PLACE BARS IN CONTACT & WIRE TOGETHER



BAR SIZE #	DEVELOPMENT LENGTH*			TYPICAL CLASS B LAP SPLICE LENGTH*					
				3000 PSI		3500 PSI		4000 PSI	
	3000 PSI (IN)	3500 PSI (IN)	4000 PSI (IN)	TOP¹ (IN)	BOTTOM (IN)	TOP¹ (IN)	BOTTOM (IN)	TOP¹ (IN)	BOTTOM (IN)
3	13	12	12	21	16	20	16	20	16
4	17	16	15	28	22	26	20	24	19
5	21	20	18	35	27	33	25	30	24
6	25	23	22	42	32	39	30	36	28

NOTES:
1. THE ABOVE TABLE IS BASED ON GRADE 60 STEEL
2. TOP BARS ARE ANY BARS WITH MORE THAN 12" OF CONCRETE PLACED BELOW.
3. DEVELOPMENT LENGTH IS CALCULATED FOR TYP. BARS – Ψ_t=1.0
4. LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED, UNLESS OTHERWISE NOTED.

TYP. REINFORCING LAPS & BENDS

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

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

CONCRETE FOUNDATION DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — TIMOTHY PATRICK HOWARD — No C12631 Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — DANNY D FRANK — No S3388 — STRUCTURAL — STATE OF CALIFORNIA — 01-08-19

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
REV 1
PC 02-115700
AC — FLS — SS
DATE 6-21-2019

PRE-CHECK (PC) DOCUMENT
CODE 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

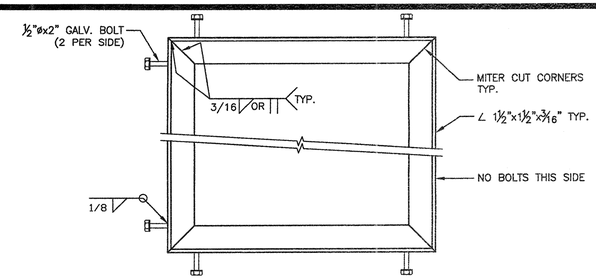
REVISIONS
1 GENERAL REVISIONS - 01/02/19
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

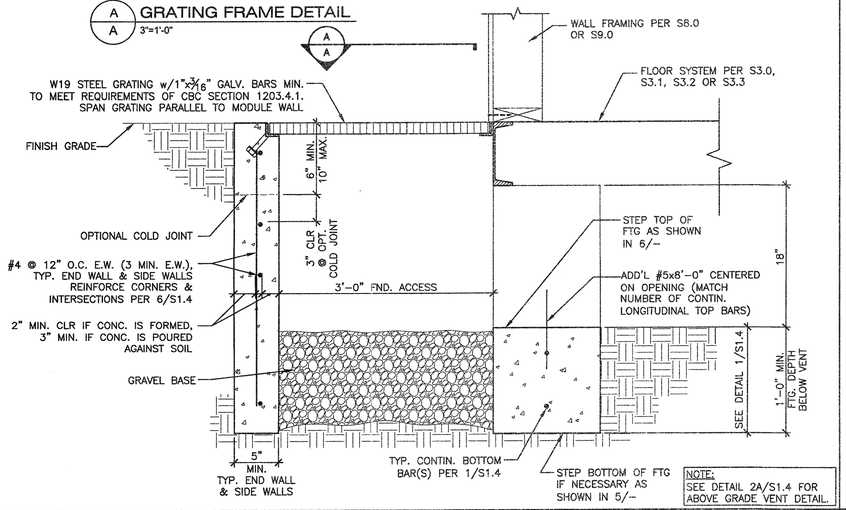
SHEET NUMBER

S1.4

02-XXXXX - [or sim] BUILDING - SMDS - 2/20/2019 9:30 AM - R:\Engineering\DP_ONE Email\2019_02\02-115700 - 2016 - 24-40 - 120-40\ - Standard\S1.1 - 02 - 115700 - S1.4 - Concrete Foundation Details.dwg

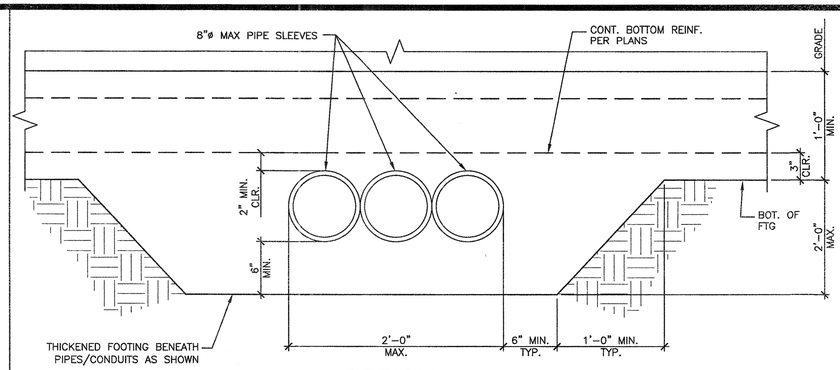


A/A GRATING FRAME DETAIL
3"=1'-0"

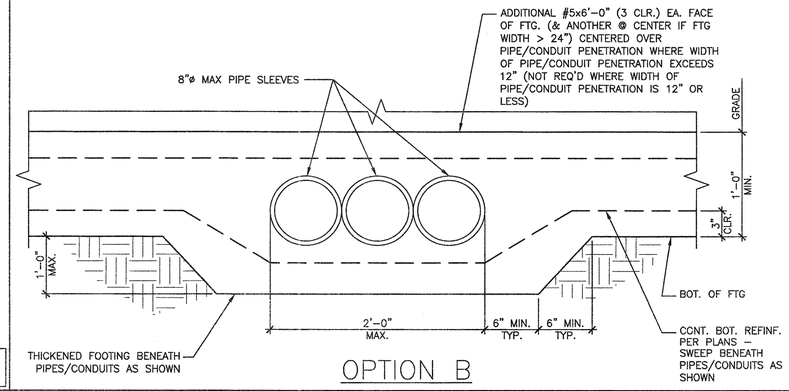


NOTE:
SEE DETAIL 2A/S1.4 FOR ABOVE GRADE VENT DETAIL.

BELOW GRADE SECTION / ACCESS WELL DETAIL
SCALE: 1 1/2"=1'-0" | 1

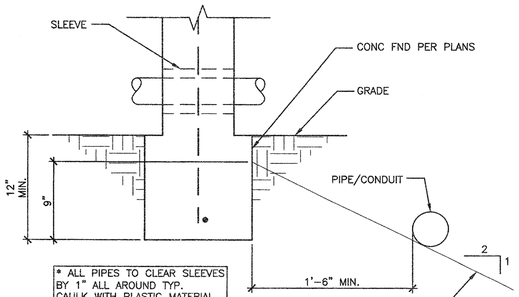


OPTION A



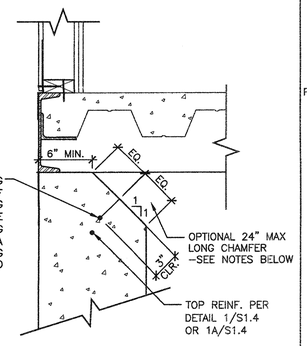
OPTION B

PIPE SLEEVE DETAIL
SCALE: 1-1/2"=1'-0" | 2



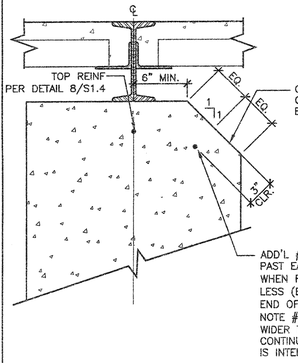
* ALL PIPES TO CLEAR SLEEVES BY 1" ALL AROUND TYP. CAULK WITH PLASTIC MATERIAL

NOTES:
1. AS AN OPTION TO INDIVIDUAL PIPE SLEEVES, THE FOOTING MAY BE BLOCKED OUT FOR MULTIPLE PIPES (10" HIGH x 24" WIDE MAX @ OPTION "A", 8" HIGH x 24" WIDE MAX OPTION "B") OR INDIVIDUAL PROVIDE 1" MIN. CLEARANCE ALL AROUND BETWEEN PIPES/CONDUITS & BLOCKOUT/SLEEVES & FILL w/ CAULK.
2. CONCRETE SHALL BE WELL CONSOLIDATED AROUND & UNDER PIPES, CONDUITS, SLEEVES, BLOCKOUTS TO PREVENT CONCRETE VOIDS.
3. PROVIDE 2" CLEAR MIN BETWEEN BLOCKOUT SLEEVES AND REINFORCEMENT.
4. WHERE TOP OF PIPES/CONDUITS ARE 12" OR MORE BELOW THE BOTTOM OF THE FOOTING, THICKENED FOOTING AROUND PIPES/CONDUITS IS NOT REQUIRED. BACKFILL & COMPACT TO 95% OVER PIPES / CONDUITS PRIOR TO PLACING FOOTING.



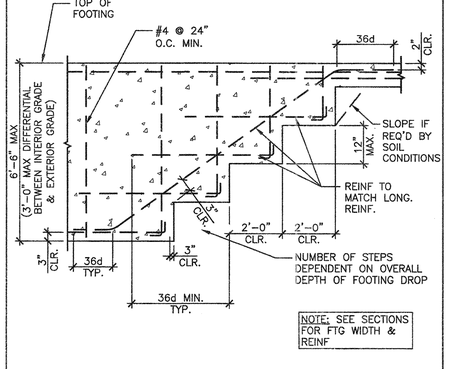
NOTES:
1. CHAMFER MAY BE LOCATED ALONG ALL LOCATIONS OF THE PERIMETER OF THE BUILDING FOUNDATION UNLESS OTHERWISE NOTED ON PLAN OR AS DESCRIBED BELOW.
2. CHAMFER SHALL NOT BE LOCATED WITHIN 3'–6" OF THE CORNERS OF THE BUILDING FOUNDATION.
3. CHAMFER SHALL NOT BE LOCATED WITHIN 1'–6" OF ANCHORAGE EMBED. PLATE LOCATIONS
4. CHAMFERS AT FRONT OR REAR END WALL FOOTINGS SHALL NOT BE LOCATED WITHIN 3'–6" OF A MODULE LINE
5. CHAMFERS SHALL NOT BE LOCATED WITHIN 1'–6" OF UTILITY OPENINGS PER SHEET S1.7
6. CHAMFER MAY OCCUR AT THE ENDS OF VENT OR ACCESS OPENINGS (ALONG THE INTERIOR EDGE OF THE STEMWALL PARALLEL TO THE FLOOR BEAM AS SHOWN ABOVE)
7. BOTTOM OF CHAMFER SHALL NOT BE LOWER THAN FINISHED GRADE
8. WHERE THE FOOTING IS WIDER THAN 16" AND THE CHAMFER INTERRUPTS A CONTINUOUS LONGITUDINAL REINFORCING BAR, PROVIDE AN ADDITIONAL #5 x 6'–0" BAR 3" CLEAR AND CENTERED ON THE CHAMFER
9. FOR ALL ITEMS NOT SHOWN OR NOTED SEE DETAILS 1/S1.4 & 1A/S1.4.

CHAMFER DETAILS @ PERIMETER
SCALE: 1 1/2"=1'-0" | 3



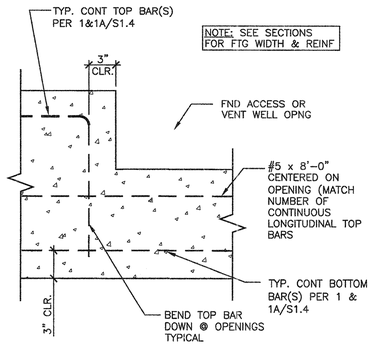
NOTES:
1. CHAMFER MAY BE LOCATED ALONG ALL LOCATIONS OF INTERIOR FOOTING OF THE BUILDING FOUNDATION UNLESS OTHERWISE NOTED ON PLAN OR AS DESCRIBED BELOW.
2. CHAMFER SHALL NOT BE LOCATED WITHIN 2'–6" OF THE ENDS OF THE BUILDING.
3. CHAMFER MAY OCCUR ON BOTH SIDES OF THE FOOTING CONCURRENTLY.
4. CHAMFER SHALL NOT BE LOCATED WITHIN 1'–6" OF UTILITY OPENING PER SHEET S1.7
5. CHAMFER MAY OCCUR AT THE ENDS OF INTERIOR PIERS (ALONG THE SIDE OF THE PIER PARALLEL TO THE FLOOR BEAMS AS SHOWN ABOVE)
6. BOTTOM OF CHAMFER SHALL NOT BE LOWER THAN FINISHED GRADE
7. WHERE THE FOOTING IS WIDER THAN 16" AND THE CHAMFER INTERRUPTS A CONTINUOUS LONGITUDINAL REINFORCING BAR, PROVIDE AN ADDITIONAL #5 x 6'–0" BAR 3" CLEAR AND CENTERED ON THE CHAMFER (BEND BAR DOWN IF AT END OF INTERIOR PIER)
8. FOR ALL ITEMS NOT SHOWN OR NOTED – SEE DETAIL 8/S1.4.

CHAMFER DETAILS @ INTERIOR
SCALE: 1 1/2"=1'-0" | 4



NOTE: SEE SECTIONS FOR FTG WIDTH & REINF

TYPICAL STEPPED FOOTING DETAIL
SCALE: 1 1/2"=1'-0" | 5



VENT/ACCESS OPENING DETAIL
SCALE: 1 1/2"=1'-0" | 6

NOT USED | 7

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

CONCRETE FOUNDATION DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT PATRICK GRAHAM No C12631 Ren 3-31-19 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MANNY D FRIOS No 33380 STRUCTURAL STATE OF CALIFORNIA 01-08-19

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
Rev 1
PC 02-115700
AC FLS SS
DATE 8-21-2019

PRE-CHECK (PC) DOCUMENT
CODE 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

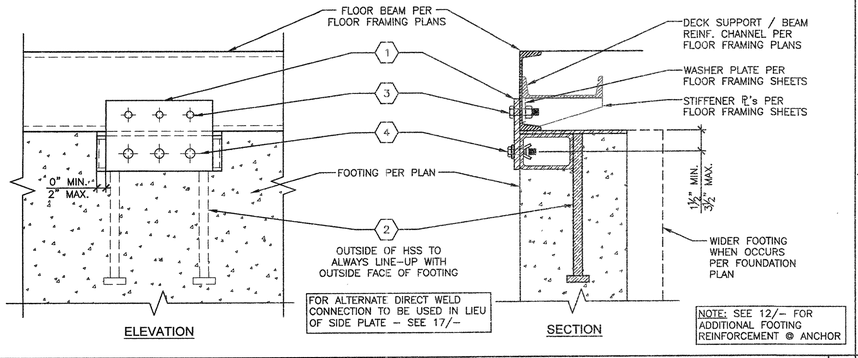
REVISIONS
1 GENERAL REVISIONS - 01/02/19
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

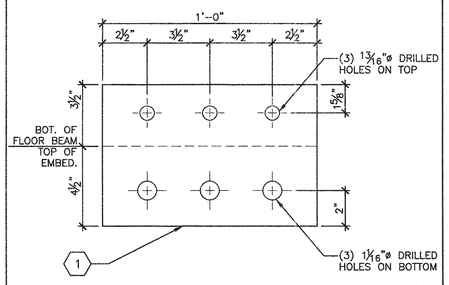
S1.5

02-XXXXX - Fac and Backings - Shell - 4/5/2019 10:51 AM - RVETO - 4/14/2019 10:14 AM - W:\Engineering\PC Rev 2016 CODE\02-115700 - 2016 - 24x40-120x40 Standard\S1.5 - 02 - 115700 - F1S - Concrete Foundation Details.dwg



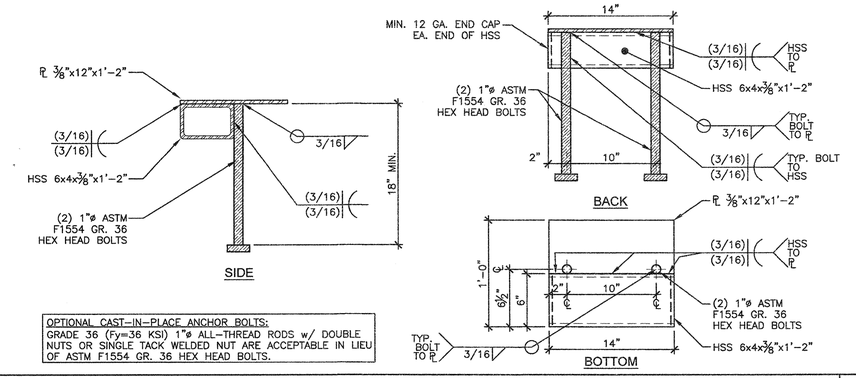
STANDARD ANCHORAGE DETAIL

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



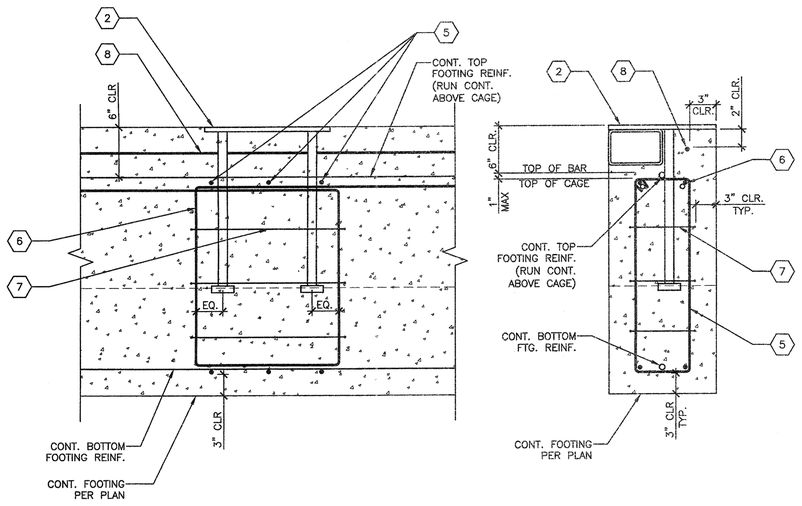
SIDE PLATE DETAIL

SCALE 3" = 1'-0" | 3



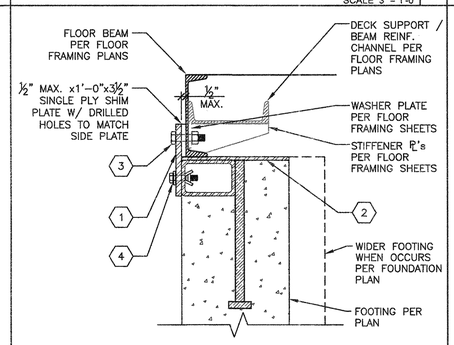
EMBEDDED ANCHOR DETAIL

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



EMBEDDED ANCHOR REINFORCEMENT DETAIL

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



OPT. SHIM @ TOP

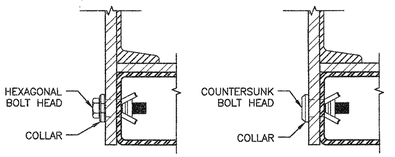
SCALE 1-1/2" = 1'-0" | 8

NOT USED | 9

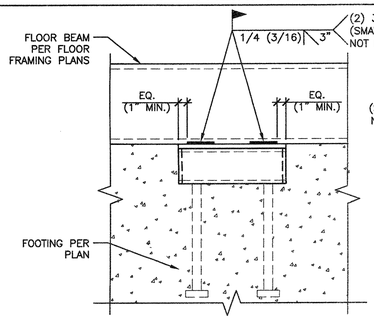
1. ½"x8"x1'–0" (36 KSI) OR 3/8"x8"x1'–0" (50 KSI) SIDE PLATE. LOCATION PER PLAN – SEE 3/–
2. EMBEDDED ANCHOR. LOCATION PER PLAN – SEE 5/–
3. (3) 3/4"ø M.B. THRU–BOLTED THROUGH SIDE PL & FLOOR BEAM w/ 1 13/16"ø HOLES – SEE 8/– FOR OPTIONAL SHIM DETAIL.
4. (3) 5/8"ø LHBM16 "HOLLO–BOLT" EXPANSION BOLTS PER ICC ESR–3330 THROUGH SIDE PL INTO THE HSS OF THE EMBEDDED ANCHOR w/ 1 1/16"ø HOLES – SEE GENERAL NOTES FOR SPECS. & INSTALLATION REQUIREMENTS, – SEE 13/– FOR OPTIONAL SHIM DETAIL.
5. (3) #3 VERTICAL HOOPS PER 12/–, FORMED PER 5/S1.4 & EVENLY SPACED @ ANCHORS.
6. (2) #4 BENT BARS CENTERED ON ANCHORS – (1) EA. SIDE OF ANCHORS. 30" * 30" * 16" — * BEND DOWN @ VENTS OR AROUND PERIMETER @ CORNER.
7. #3 HORIZONTAL HOOPS PER 12/–, FORMED PER 5/S1.4 & SPACED @ 6" O.C.
8. ADDITIONAL #5x8'–0" CENTERED @ ANCHOR. BEND DOWN @ VENTS OR AROUND PERIMETER @ CORNERS.

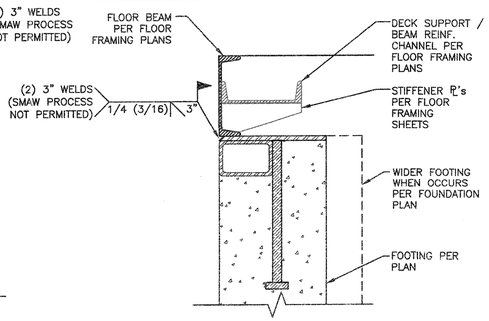
KEY NOTES

1. DETAILS ON THIS SHEET SHALL APPLY WHERE STANDARD ANCHORAGE IS SPECIFIED ON THE FOUNDATION PLANS.
2. EACH ANCHORAGE POINT SPECIFIED ON PLAN SHALL CONSIST OF AN EMBEDDED ANCHOR AND EITHER A BOLTED SIDE PLATE OR ALTERNATE DIRECT WELD AS DETAILED ON DETAIL 2/–.
3. ANCHOR REINFORCEMENT PER DETAIL 12/– SHALL BE PLACED AT ALL EMBEDDED ANCHOR LOCATIONS.
4. EXPANSION BOLTS SHALL BE "HOLLO–BOLTS" BY LINDAPTER OR AN EQUIVALENT ICC ACCEPTED BOLT.
5. "HOLLO–BOLTS" ARE SPECIFIED AND TO BE INSTALLED PER ICC–ES REPORT ESR–3330 WITH AN INSTALLATION TIGHTENING TORQUE OF 140 FT.–LBS & ARE TO BE SUBJECT TO THE MANUFACTURER'S INSPECTION PROCEDURES FOUND ON SHEET D1 OF THESE DRAWINGS.
6. "HOLLO–BOLT" HEADS MAY BE HEXAGONAL OR COUNTERSUNK, AS SHOWN BELOW (NOT TO SCALE). FLUSH FIT "HOLLO–BOLT" OPTION NOT PERMITTED.



7. UPGRADED ANCHORAGE PER SHEET S1.6B MAY BE USED AS AN ALTERNATIVE TO STANDARD ANCHORAGE WHERE STANDARD ANCHORAGE IS SPECIFIED ON PLANS.

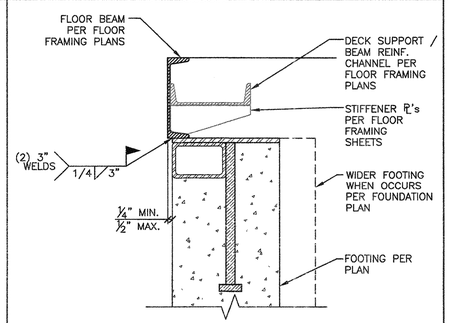




NOTE:
1. SEE 18/– FOR CONDITION WHERE FLOOR BEAM EXTENDS PAST FOOTING.
2. SEE 19/– FOR CONDITION WHERE FOOTING EXTENDS PAST FLOOR BEAM.

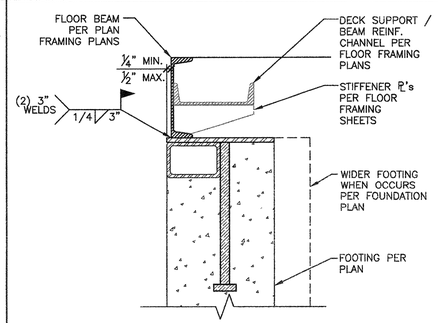
ALTERNATE DIRECT WELD CONNECTION

SCALE 1-1/2" = 1'-0" | 17



OPT. SHIM @ BOT

SCALE 1-1/2" = 1'-0" | 13



NOT USED | 14

ALTERNATE DIRECT WELD @ OFFSET

SCALE 1-1/2" = 1'-0" | 18

ALTERNATE DIRECT WELD @ OFFSET

SCALE 1-1/2" = 1'-0" | 19

GENERAL NOTES

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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

STANDARD FOUNDATION ANCHORAGE DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GRAHAM — No C12631 Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRAGOSO — No. S3367 — STRUCTURAL — STATE OF CALIFORNIA — 01-08-19

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS SML
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
REV 1
PC 02-115700
AC — FLS — SS JDS
DATE 6-21-2019

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CODE 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS
1 GENERAL REVISIONS - 01/02/19
2
3
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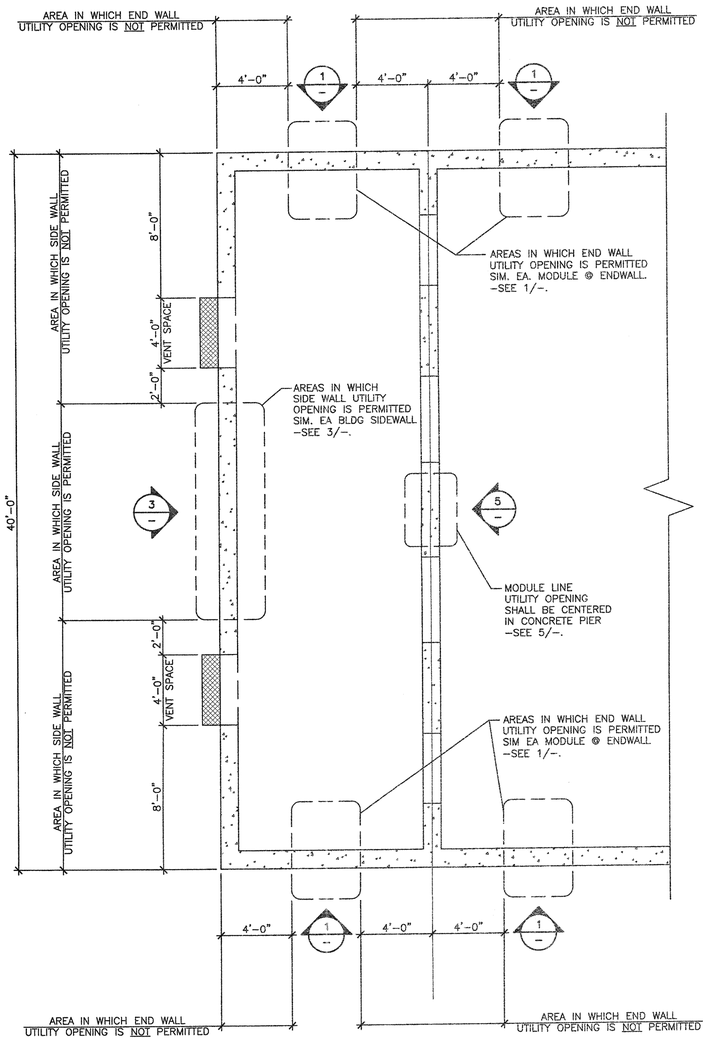
DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

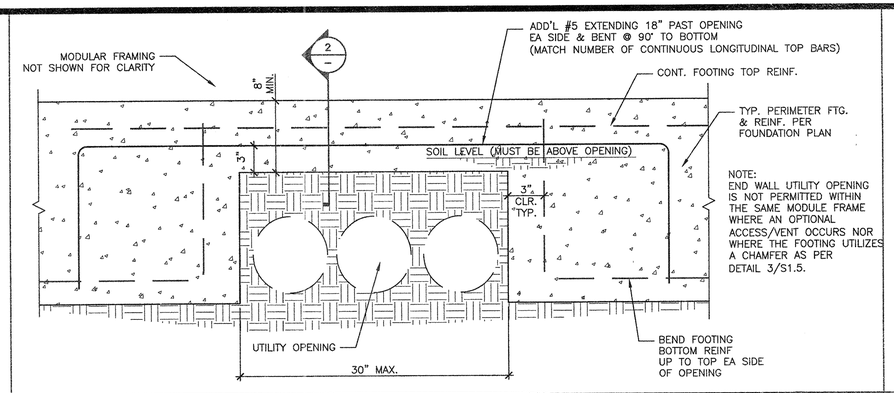
S1.6A

02-YYXXX - [pr-ent] BUILDINGS - SHEETS - 1/2/2019 9:51 AM - PLOTTED: 6/14/2019 10:15 AM - K:\Engineering\AMS Detail Files\2018 CODE\02A-115700 - 2018 - 24'x40' - STD.dwg - Standard Anchorage Foundation Details.dwg



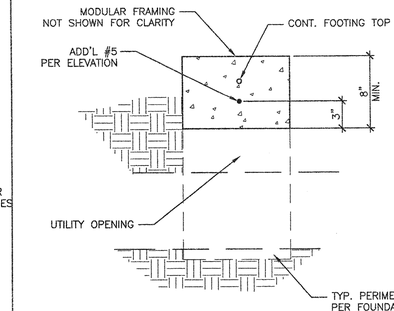
OPTIONAL UTILITY OPENINGS PLAN

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



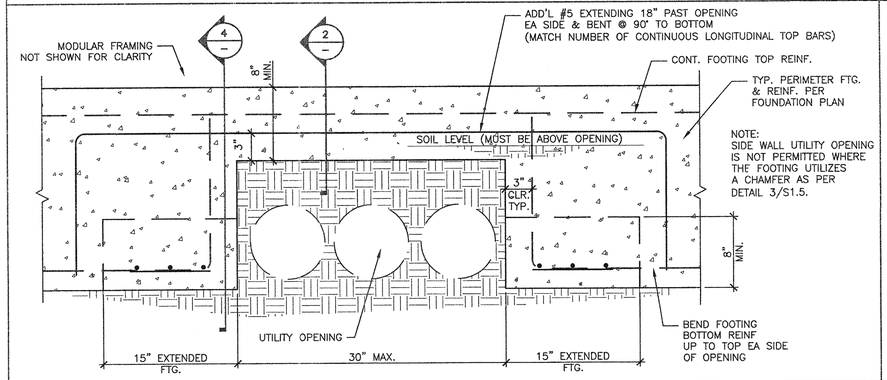
OPTIONAL UTILITY OPENINGS IN END WALL FOOTINGS

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



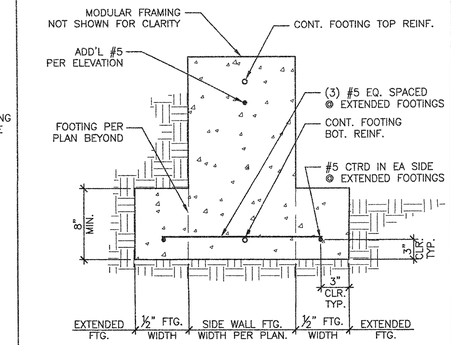
DETAIL

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



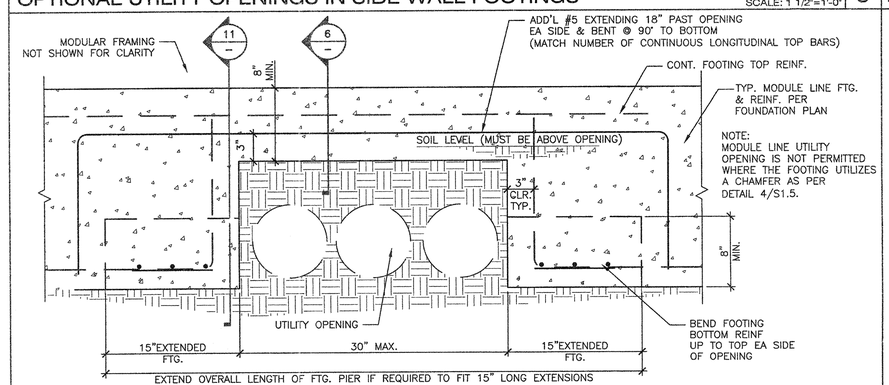
OPTIONAL UTILITY OPENINGS IN SIDE WALL FOOTINGS

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



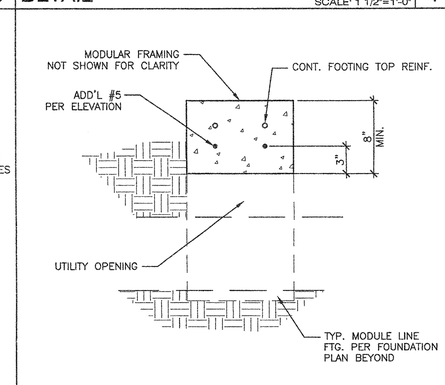
DETAIL

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



OPTIONAL UTILITY OPENINGS IN MODULE LINE FOOTINGS

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



DETAIL

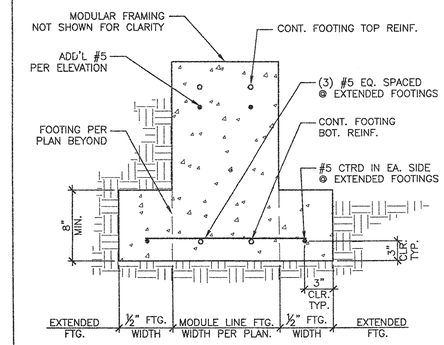
SCALE: 1 1/2"=1'-0" | 6

NOT USED | 7

NOT USED | 8

NOT USED | 9

NOT USED | 10



DETAIL

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

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — MARY PATRICK CONNAUGHTON — No. C12631 — Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRIAS — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS — SMK
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC — FLS — SS-JDD
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT

CODE 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS

DRAWN BY.	-
SCALE	AS NOTED
DATE.	-

SHEET NUMBER

S1.7

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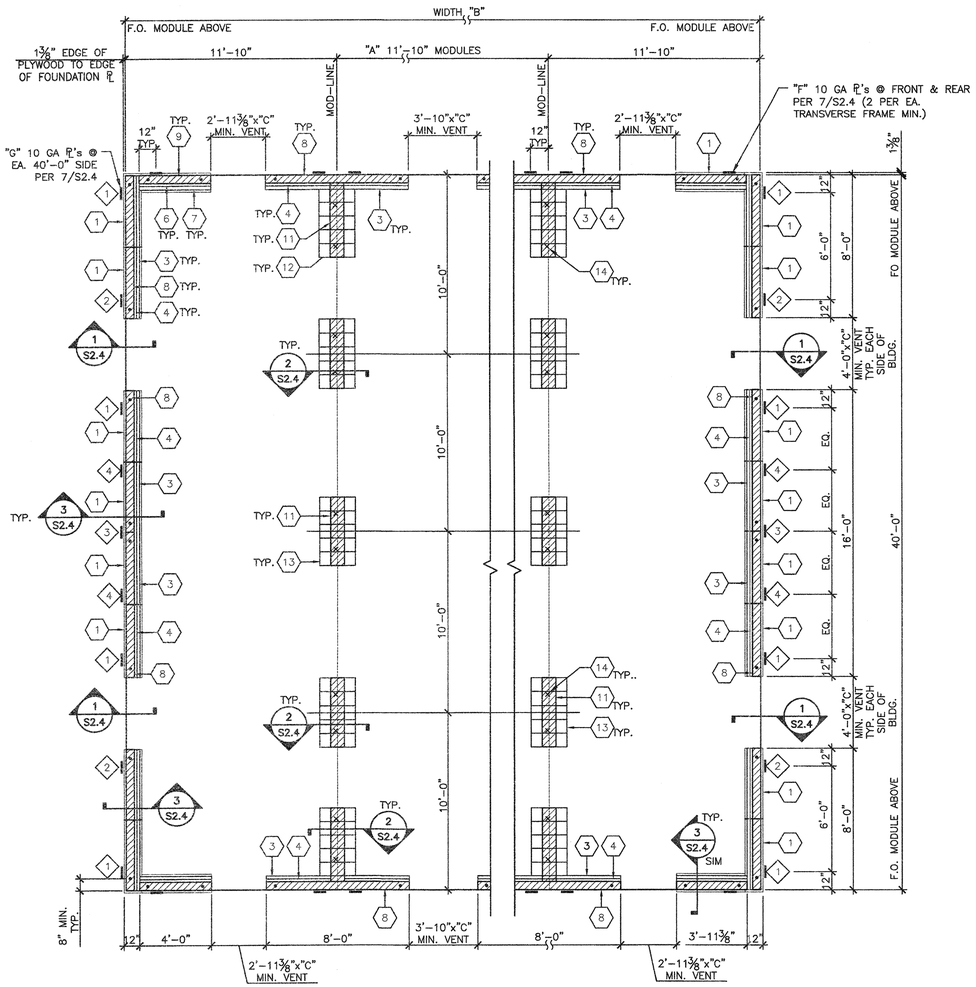
REAR



FRONT

1	½"x12" WIDEx48" LONG PT STRUCTURAL PLYWOOD WITH FACE GRAIN IN SHORT DIRECTION (CDX PLYWOOD)
2	NOT USE
3	SINGLE 2x10x8'–0" LONG ℄ (PT ℄ WHERE PLYWOOD DOESN'T OCCUR)
4	SINGLE 2x8x8'–0" LONG
5	NOT USED
6	SINGLE 2x8x4'–0" LONG ℄
7	SINGLE 2x10x4'–0" LONG ℄
8	MULTIPLE 2x6x8'–0" LONG NAILER AS REQ'D FOR HEIGHT
9	MULTIPLE 2x6x4'–0" LONG NAILER AS REQ'D FOR HEIGHT
10	NOT USED
11	2x10 BLKG, SEE 2/S2.4
12	(4) 2x12x3'–0" PT ℄ OR (5) 2x10x3'–0" PT ℄ OR (6) 2x8x3'–0" PT ℄, SEE 2/S2.4
13	(5) 2x12x3'–0" PT ℄ OR (6) 2x10x3'–0" PT ℄ OR (7) 2x8x3'–0" PT ℄, SEE 2/S2.4
14	X LOCATION OF FLOOR BEAM ATTACHMENT TO ISOLATED PAD. REFER TO DETAIL 2/S2.4
•	1"ø GALVANIZED PIPE LOCATIONS – TYPICAL.

KEY NOTES

ON SOIL:
1"ø STANDARD WEIGHT (1.315 ACTUAL O.D.) HOT DIPPED GALV. PIPE w/ 12" MIN. PENETRATION MEASURED VERTICALLY BELOW SOIL SURFACE @ 10'–0" O.C., MIN. 2 EA. 2x ℄. DRILL SILL 1⅜"ø MAX. PIPE MAY BE DRIVEN MAX 45° ANGLE TO ⊞ VERTICAL.

ON A/C PAVING:
1"ø STANDARD WEIGHT (1.315 ACTUAL O.C.) HOT DIPPED GALV. PIPE w/ 12" MIN. PENETRATION MEASURED VERTICALLY BELOW PAVING SURFACE @ 10'–0" O.C., MIN. 2 EA 2x ℄. DRILL SILL 1⅜"ø MAX.

ON CONC PAVING:
1"ø STANDARD WEIGHT (1.315 ACTUAL O.D.) HOT DIPPED GALV. PIPE w/ 12" MIN. PENETRATION MEASURED VERTICALLY BELOW PAVING SURFACE @ 10'–0" O.C., MIN. 2 EA. 2x ℄. DRILL SILL 1⅜"ø MAX.
ALT: SIMPSON STRONG–BOLT 2"S THRU SILL ℄ w/ 3⅜" MIN. CONC. EMBEDMENT PER SCHEDULE BELOW (PROVIDE A MINIMUM OF 2 BOLTS AT 2x PLATE LESS THAN 5'–0" AND 4 BOLTS AT 2x PLATE LARGER THAN 5'–0")

LOW SEISMIC

HILTI KB-TZ OR SIMPSON STRONG-BOLT 2 SPACING SCHEDULE		
BUILDING SIZE	LONGITUDINAL SPACING	TRANSVERSE SPACING
☒ 24'x40'	62" O.C.	34" O.C.
☐ 36'x40'	44" O.C.	36" O.C.
☐ 48'x40'	34" O.C.	36" O.C.

HIGH SEISMIC

HILTI KB-TZ OR SIMPSON STRONG-BOLT 2 SPACING SCHEDULE		
BUILDING SIZE	LONGITUDINAL SPACING	TRANSVERSE SPACING
☐ 24'x40'	45" O.C.	26" O.C.
☐ 36'x40'	33" O.C.	27" O.C.
☐ 48'x40'	20" O.C.	27" O.C.

ANCHOR TYPE	SIMPSON STRONG-BOLT 2 ICC ESR-3037
ANCHOR SIZE (IN.)	½"ø
MIN. EMBED (IN.)	4⅛"
INSTALLATION TORQUE (FT–LB)	60

1. TORQUE TEST PER CBC 1910A.5 TORQUE TEST – MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE AS APPROVED IN AN ICC–ESR PER C.B.C 1910A.5

WOOD FOUNDATION PLAN (PLYWOOD FLOOR) 50 P.S.F LIVE LOAD + 15 PSF PARTITION LOAD

SCALE: 1/4"=1'–0" A

LOW SEISMIC

BUILDING SIZE (FT)	TOTAL # OF 12' WIDE MODULES	"A" TOTAL # OF CENTER MODULES	"B" TOTAL FOUNDATION WIDTH	TOTAL FLOOR AREA (FT²)	NET FREE VENT AREA REQ'D (FT²)	"C" MINIMUM HT OF VENTS (IN)	NET FREE VENT AREA PROVIDED (FT²)	"D" GALV. NAIL O.C. SPACING (IN) (40' WALLS) SEE 3/S2.4	"E" GALV. NAIL O.C. SPACING (IN) ("B" WALLS) SEE 3/S2.4	"F" # OF 10 GA. SHEAR ℄'S @ FRONT & REAR SEE 3/2.4	"G" # OF 10 GA. SHEAR ℄'S @ SIDES (40' WALLS) SEE 3 & 7/S2.4		"H" EDGE NAIL (EN) SPACING (IN) (40' WALLS) SEE 3/S2.4	"J" EDGE NAIL (EN) SPACING (IN) ("B" WALLS) SEE 3/S2.4	"K" # OF ALT. SHEAR ℄'S @ SIDES (40' WALLS) SEE 5/S2.4	"L" PIPE ANCHORS REQUIRED? 40' INTERIOR MODLINE ISOLATED PAD FOOTINGS SEE 2/S2.4
											# OF ℄'S	℄ LOCATIONS				
☒ 24'x40'	2	0	23'–8"	960	6.4	3	6.9	14	8	4/SIDE	4/SIDE	1	6	4	4/SIDE	NO
☐ 36'x40'	3	1	35'–6"	1440	9.6	4.5	13.3	10	8	6/SIDE	5/SIDE	1 3	4	4	5/SIDE	NO
☐ 48'x40'	4	2	47'–4"	1920	12.8	4.5	16.2	8	8	8/SIDE	7/SIDE	1 2 3	4	4	7/SIDE	YES

HIGH SEISMIC

BUILDING SIZE (FT)	TOTAL # OF 12' WIDE MODULES	"A" TOTAL # OF CENTER MODULES	"B" TOTAL FOUNDATION WIDTH	TOTAL FLOOR AREA (FT²)	NET FREE VENT AREA REQ'D (FT²)	"C" MINIMUM HT OF VENTS (IN)	NET FREE VENT AREA PROVIDED (FT²)	"D" GALV. NAIL O.C. SPACING (IN) (40' WALLS) SEE 3/S2.4	"E" GALV. NAIL O.C. SPACING (IN) ("B" WALLS) SEE 3/S2.4	"F" # OF 10 GA. SHEAR ℄'S @ FRONT & REAR SEE 3/2.4	"G" # OF 10 GA. SHEAR ℄'S @ SIDES (40' WALLS) SEE 3 & 7/S2.4		"H" EDGE NAIL (EN) SPACING (IN) (40' WALLS) SEE 3/S2.4	"J" EDGE NAIL (EN) SPACING (IN) ("B" WALLS) SEE 3/S2.4	"K" # OF ALT. SHEAR ℄'S @ SIDES (40' WALLS) SEE 5/S2.4	"L" PIPE ANCHORS REQUIRED? 40' INTERIOR MODLINE ISOLATED PAD FOOTINGS SEE 2/S2.4
											# OF ℄'S	℄ LOCATIONS				
☐ 24'x40'	2	0	23'–8"	960	6.4	3	6.9	10	6	5/SIDE	5/SIDE	1 3	4	3	6/SIDE	NO
☐ 36'x40'	3	1	35'–6"	1440	9.6	4.5	13.3	8	6	7/SIDE	7/SIDE	1 2 3	4	3	8/SIDE	NO
☐ 48'x40'	4	2	47'–4"	1920	12.8	4.5	16.2	6	6	9/SIDE	9/SIDE	1 2 3 4	3	3	10/SIDE	YES

MODULE SCHEDULE - 48' x 40' MAX

B

SILL RESTRAINT

1. TOP OF WOOD PADS TO BE LEVEL.
2. DO NOT INSTALL BUILDINGS IN AREAS OF WATER LINES.
3. SITE TO BE GRADED TO PREVENT WATER PONDING BENEATH THE STRUCTURE.
4. FOUNDATION PLYWOOD TO BE CUT PERPENDICULAR TO THE FACE GRAIN.
5. PER THE CONTRACT OF THIS PROJECT– THE BUILDING PAD MUST BE A MINIMUM OF 38'–0" FRONT TO REAR, BUILDING WIDTH PLUS 6'–0" SIDE TO SIDE AND SHALL NOT EXCEED 6" OUT OF LEVEL IN ANY DIRECTION.
6. STUCCO WALLS ARE NOT ALLOWED ON WOOD FOUNDATIONS.
7. PROJECT ARCHITECT SHOULD VERIFY THE NET AREA OF THE VENT COVER BE EQUAL TO OR LARGER THAN THE VENT AREA REQUIRED SHOWN ON THE TABLE.

SHEET NOTES

FOUNDATIONS:
ALL FOUNDATION MATERIALS IN CONTACT WITH THE GROUND SHALL BE PRESSURE TREATED OR REDWOOD EXCEPT SHIMS MAY BE REDWOOD, HEM FIR OR CEDAR. PRESSURE TREATED DOUGLAS FIR, HEM FIR, PLYWOOD ETC. SHALL BE VERIFIED BY A CERTIFICATE OF TREATMENT STATING: "THE MATERIAL IN THIS UNIT WAS TREATED PER 2016 CALIFORNIA BUILDING CODE. ALL MATERIAL FOR USE IN GROUND CONTACT SHALL BE STAMPED "FOR GROUND CONTACT" (U1 & T1). ALL MATERIAL NOT USED IN GROUND CONTACT SHALL BE HF℔2 OR DF℔2 "FOR ABOVE GROUND USE." THE IN–PLANT INSPECTOR SHALL VERIFY THAT ALL PRESSURE TREATED FOUNDATION MATERIAL IS CUT FROM AWPA STAMPED STOCK AND THAT ALL CUTS AND HOLES ARE RETREATED PER SPECIFICATIONS. U1 AND T1 MATERIAL SHALL BE BANDED SEPARATELY FOR SHIPMENT TO THE JOB SITE. THE IN–PLANT INSPECTOR'S VERIFICATION OF EACH BANDED UNIT SHALL BE ATTACHED TO THE MATERIAL. CONCRETE OR CONCRETE BLOCK FOUNDATIONS ARE NOT ALLOWED. THE FOOTING DESIGN SHALL PROVIDE FOR SHIMS AND BLOCKS NECESSARY TO PERMIT INSTALLATION ON SITES NOT LEVEL, BUT WITHIN TOLERANCE ALLOWED. INSTALLATION SHALL BE PERMITTED ON EITHER SOIL, CONCRETE OR A/C PAVING, HAVING SUITABLE DESIGN BEARING CAPACITY, THE BUILDINGS SHALL BE SECURELY FASTENED TO THE FOUNDATIONS. THE FOUNDATIONS AND THE METHOD OF FASTENING SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT AND DSA. PADS SHALL BE DESIGNED FOR A MAXIMUM OF 1000 PSF LOAD ON THE SOIL. PADS SHALL NOT BE PLACED ON TURF.

A VAPOR RETARDING MOISTURE BARRIER SHALL BE INSTALLED UNDER THE FLOOR WHEN THE BUILDING IS INSTALLED LESS THAN 12" ABOVE THE SOIL. A BARRIER IS NOT REQUIRED AT HEIGHT IF THE BUILDING IS INSTALLED OVER CONCRETE (INCLUDING A RAT SLAB) OR A/C/ PAVING.

American Modular Systems
787 Spreckels Ave , Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

WOOD FOUNDATION PLAN 50 PSF LIVE LOAD + 15 PSF PARTITION LOAD PLYWOOD FLOOR

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GRANGER — No C12631 — Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D PRASAD — No 23380 — STRUCTURAL — STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT 02 117941 AC — FLS — SS — DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT REV 1 PC 02-116700 AC — FLS — SS — DATE 6-21-2019

PRE-CHECK (PC) DOCUMENT
CODE 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

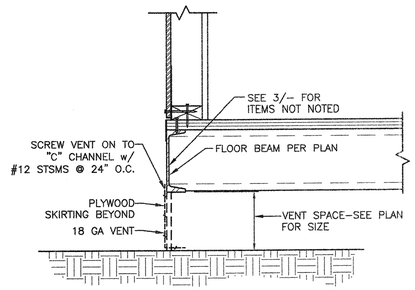
REVISIONS
1 GENERAL REVISIONS - 01/02/19
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

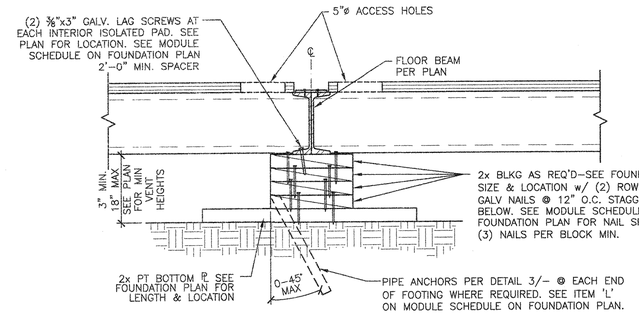
SHEET NUMBER

S2.1

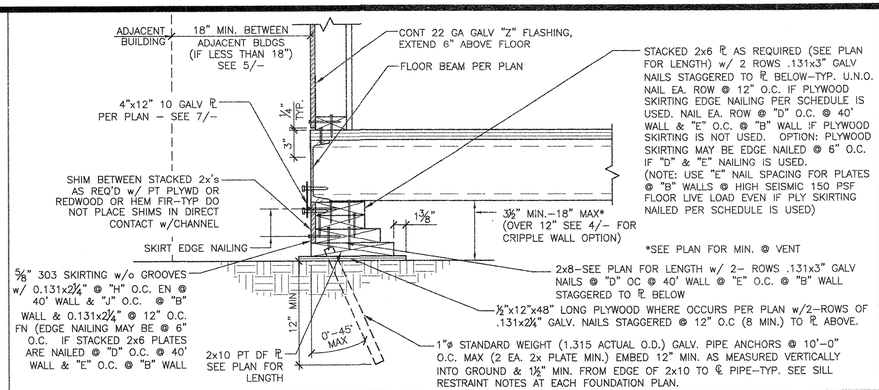
02-XXXXX - [S1 and] BUILDINGS - SAVED: 6/14/2019 2:24 PM PLOTTED: 6/14/2019 9:18 AM by M:\Documents\DWG Files\2019 DWG\02-115700 - 2019 - 24'x40' 120'x40' Standard\A2 - S2 - 115700 - S2.1 - Wood Foundation 50 # x 15 # P.dwg



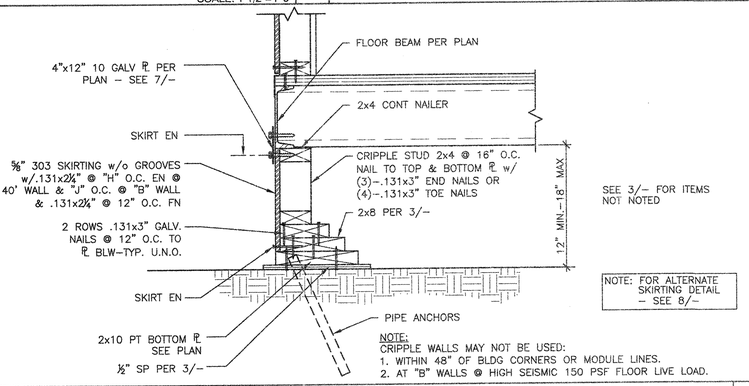
FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 1



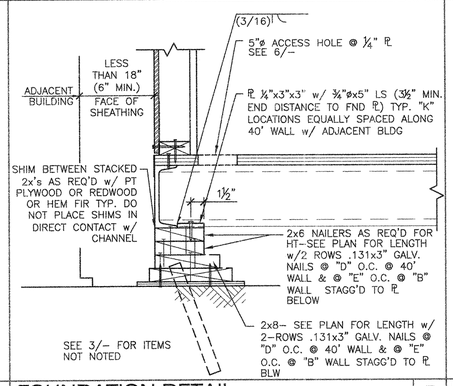
FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 2



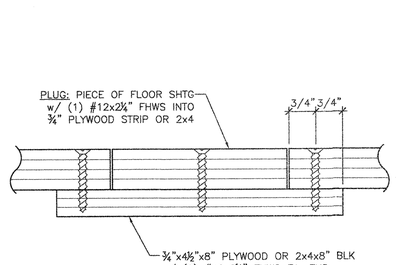
FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 3



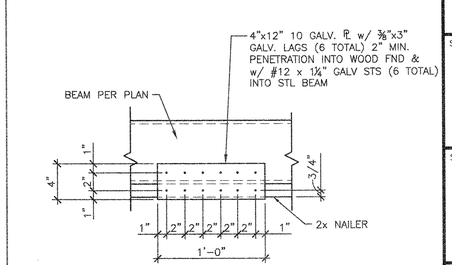
FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 4



FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 5

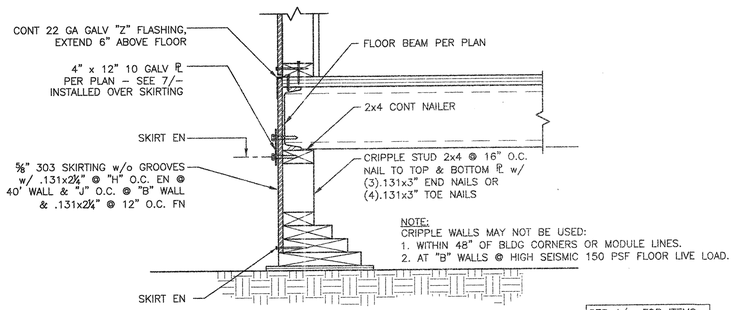


FILLER ACCESS HOLE DETAIL SCALE: 1 1/2"=1-0" | 6



NOTE: PLATE MAY BE INSTALLED OVER SKIRTING

FOUNDATION DETAIL SCALE: 1 1/2"=1-0" | 7



ALTERNATE SKIRTING DETAIL SCALE: 1 1/2"=1-0" | 8

NOT USED | 9

NOT USED | 10

NOT USED | 11

NOT USED | 12

NOT USED | 13

NOT USED | 14

NOT USED | 15

NOT USED | 16

AMS American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

WOOD FOUNDATION DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — KEVIN PATRICK MCINERNEY — No. C12631 — Ren. 2-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MARK A. REICH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-117700
AC — FLS — SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

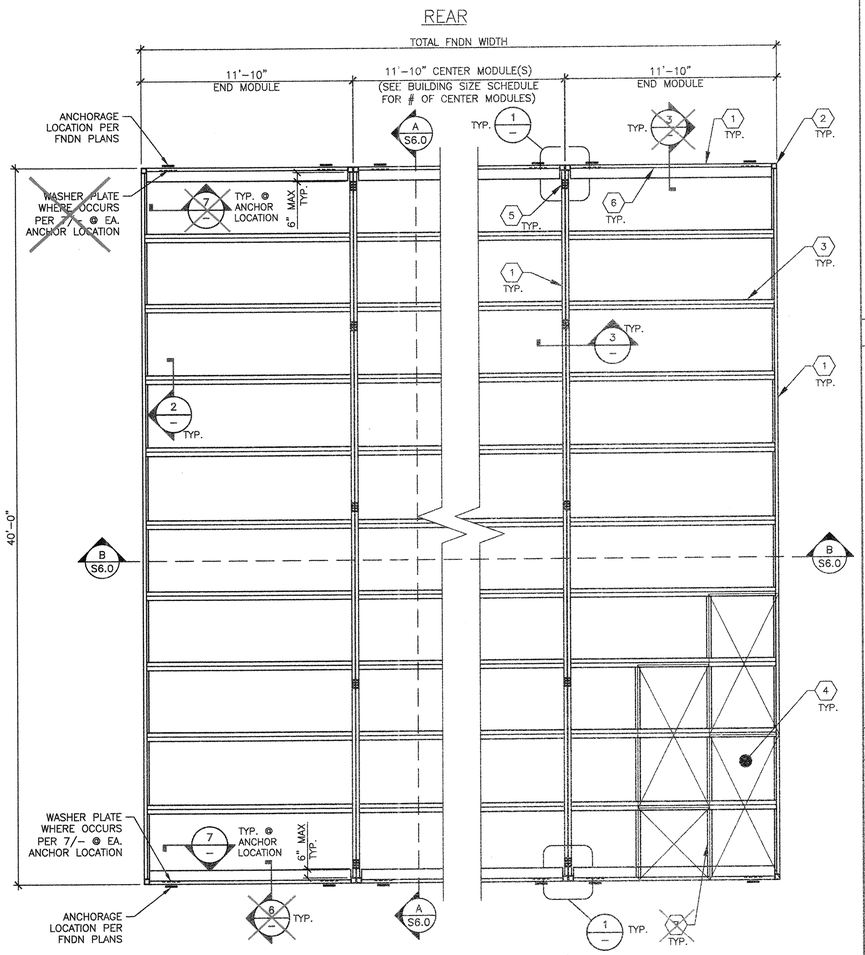
REVISIONS

DRAWN BY:	.
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

S2.4

02-XXXXX – [or not] BUILDINGS – SHED 8/6/2018 11:26 AM plotted: 8/17/2018 8:10 AM W:\Engineering\PE DWG Files\2018 CODES\02-117700 – 2018 – 24'x40'-120'x40' Standard\A5 – 02 – 117700 – S2.4 – Wood Foundation Details.dwg



FLOOR JOIST SCHEDULE			
LIVE LOAD PSF	14 GA. JOIST	12 GA. JOIST	
☐ 50 PSF	32" O.C.	48" O.C.	
☒ 50+15 PSF	32" O.C.	48" O.C.	
☐ 100 PSF	16" O.C.	32" O.C.	
☐ 150 PSF	–	16" O.C.	

NOTE: FOR SECTION PROPERTIES – SEE S0.0

FRAMING PLAN (PLYWOOD FLOOR)

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

BUILDING SIZE SCHEDULE			
BUILDING SIZE (FT)	TOTAL # OF 12'-0" WIDE MODULES	TOTAL # OF CENTER MODULES	TOTAL FNDN WIDTH[1]
☒ 24'x40'	2	0	23'-8½"
☐ 36'x40'	3	1	35'-6¾"
☐ 48'x40'	4	2	47'-5"
☐ 60'x40'	5	3	59'-3¼"
☐ 72'x40'	6	4	71'-1½"
☐ 84'x40'	7	5	82'-11¾"
☐ 96'x40'	8	6	94'-10"
☐ 108'x40'	9	7	106'-8¼"
☐ 120'x40'	10	8	118'-6½"

NOTE:

1. TOTAL BUILDING WIDTH INCLUDES ¼" PER MODULE CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS S1.0, S1.1, S1.2, & S1.3.

BUILDING SIZE SCHEDULE

FASTENER SPACING @ WOOD FOUNDATION

LOW SEISMIC

FASTENER SPACING SCHEDULE			
BUILDING SIZE	BOUNDARY #10x2½" TEKS SCREW	EDGE ET&F 0.144#x2" POWER DRIVEN PINS	**FIELD ET&F 0.144#x2" POWER DRIVEN PINS
☒ 24'x40'	6" O.C.	6" O.C.	12" O.C.
☐ 36'x40'	6" O.C.	6" O.C.	12" O.C.
☐ 48'x40'	6" O.C.	6" O.C.	12" O.C.

**6" O.C WHEN FLOOR JOIST ARE SPACED @ 48" O.C.

HIGH SEISMIC

FASTENER SPACING SCHEDULE			
BUILDING SIZE	BOUNDARY #10x2½" TEKS SCREW	EDGE ET&F 0.144#x2" POWER DRIVEN PINS	**FIELD ET&F 0.144#x2" POWER DRIVEN PINS
☐ 24'x40'	6" O.C.	6" O.C.	12" O.C.
☐ *36'x40'	6" O.C.	6" O.C.	12" O.C.
☐ *48'x40'	5" O.C.	6" O.C.	12" O.C.

*BLOCK UNSUPPORTED PLYWOOD EDGES @ TWO END MODULES PER DETAIL 5/–
**6" O.C. WHEN FLOOR JOISTS ARE SPACED @ 48" O.C.

STANDARD FASTENERS

LOW SEISMIC

ALTERNATE FASTENER SPACING SCHEDULE			
BUILDING SIZE	BOUNDARY #10x2½" TEKS SCREW	EDGE #10x2½" TEKS SCREW	**FIELD #10x2½" TEKS SCREW
☒ 24'x40'	6" O.C.	6" O.C.	12" O.C.
☐ 36'x40'	6" O.C.	6" O.C.	12" O.C.
☐ *48'x40'	6" O.C.	6" O.C.	12" O.C.

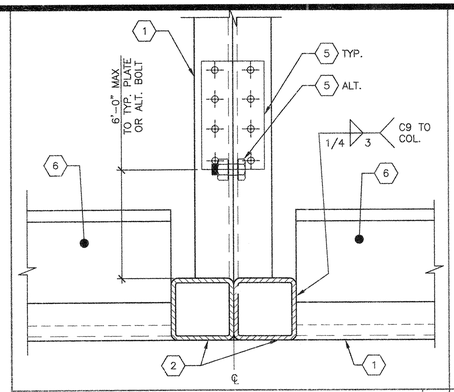
*BLOCK UNSUPPORTED PLYWOOD EDGES @ TWO END MODULES PER DETAIL 5/–
**6" O.C. WHEN FLOOR JOISTS ARE SPACED @ 48" O.C.

HIGH SEISMIC

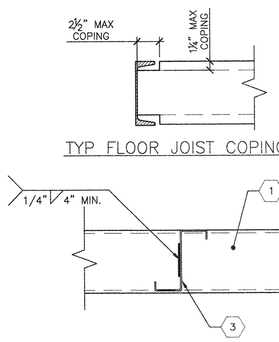
ALTERNATE FASTENER SPACING SCHEDULE			
BUILDING SIZE	BOUNDARY #10x2½" TEKS SCREW	EDGE #10x2½" TEKS SCREW	**FIELD #10x2½" TEKS SCREW
☐ 24'x40'	6" O.C.	6" O.C.	12" O.C.
☐ *36'x40'	6" O.C.	6" O.C.	12" O.C.
☐ *48'x40'	6" O.C.	6" O.C.	12" O.C.

*BLOCK UNSUPPORTED PLYWOOD EDGES @ TWO END MODULES PER DETAIL 5/–
**6" O.C. WHEN FLOOR JOISTS ARE SPACED @ 48" O.C.

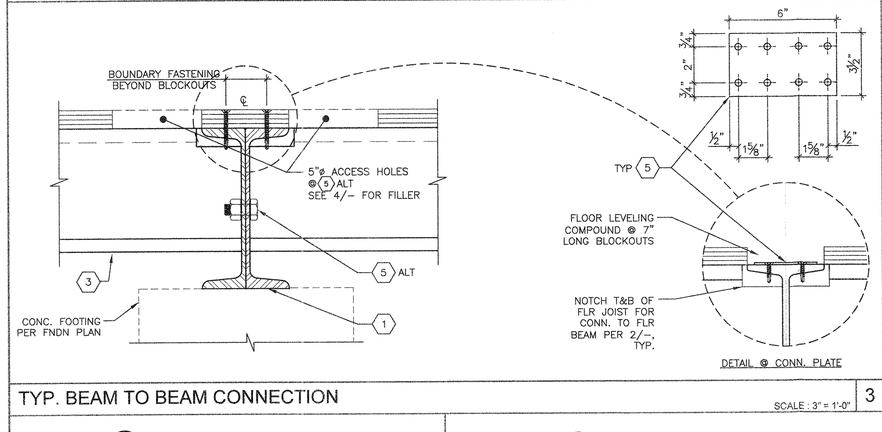
ALTERNATE FASTENERS



TYP. FLOOR BEAMS CONNECTION SCALE : 3" = 1'-0" 1



TYP. JOIST ATTACTMENT TO BEAM SCALE : 3" = 1'-0" 2



TYP. BEAM TO BEAM CONNECTION SCALE : 3" = 1'-0" 3

FASTENER SPACING SCHEDULE			
ALL BUILDING SIZES	BOUNDARY #10x2½" TEKS SCREW	EDGE ET&F 0.144#x2" POWER DRIVEN PINS	**FIELD ET&F 0.144#x2" POWER DRIVEN PINS
	6" O.C.	6" O.C.	12" O.C.

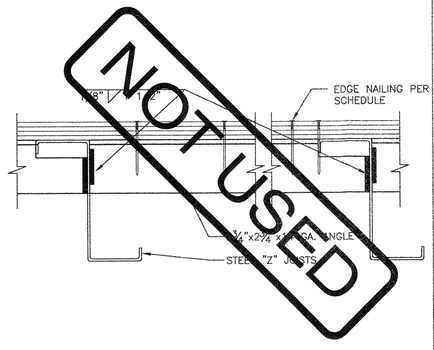
**6" O.C. WHEN FLOOR JOISTS ARE SPACED @ 48" O.C.

NOT USED

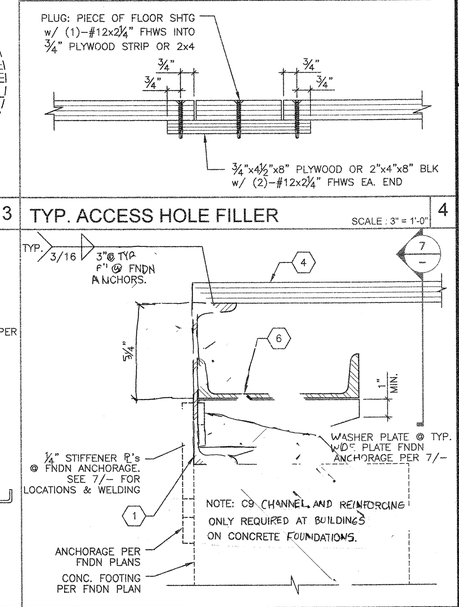
ALTERNATE FASTENER SPACING SCHEDULE			
ALL BUILDING SIZES	BOUNDARY #10x2½" TEKS SCREW	EDGE #10x2½" TEKS SCREW	**FIELD #10x2½" TEKS SCREW
	6" O.C.	6" O.C.	12" O.C.

**6" O.C. WHEN FLOOR JOISTS ARE SPACED @ 48" O.C.

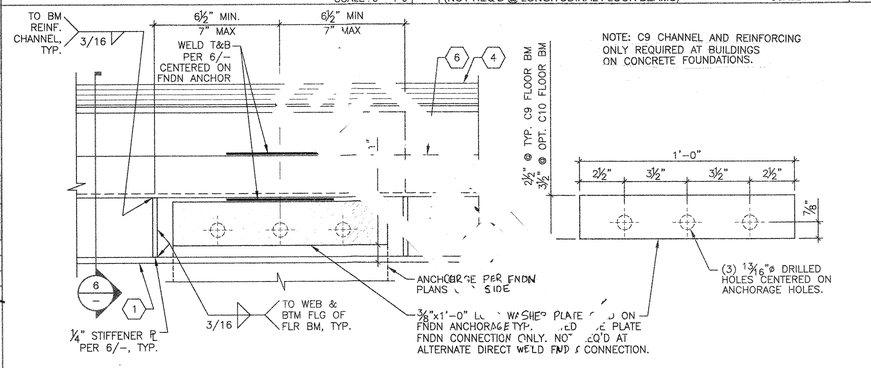
FASTENER SPACING @ CONCRETE FOUNDATION



OPTIONAL BLOCKING ANGLE ATTACHMENT SCALE : 3" = 1'-0" 5



TYP. TRANSVERSE FLOOR BEAM REINFORCING (NOT REQ'D @ LONGITUDINAL FLOOR BEAMS) SCALE : 3" = 1'-0" 6



TYP. REINFORCED FLOOR FRAMING @ FOUNDATION ANCHORAGE SCALE : 3" = 1'-0" 7

1 FLOOR BEAM PER SHEET S5.0.
USE SINGLE SIZE CHANNEL THROUGHOUT FLOOR SYSTEM.

2 HSS COLUMN PER SHEET S5.0

3 FLOOR JOIST – SEE SCHEDULE

4 1⅛" T&G PLYWOOD FLOOR SHTG STURDI-I-FLOOR 48" O.C. SPAN RATING EXP. 1 CONFORMING TO PS 1-09, 2 SPANS MIN. (EXCEPT CENTER PANEL @ MODULE END BAYS WHEN JOIST SPACING IS MORE THAN 24" O.C.) OPTION: UNI-FLOOR BY PITTSBURGH TESTING LAB CONFORMING TO PS 1-09. STAGGER SHEETS 48" O.C. AS SHOWN w/ FACE GRAIN PERPENDICULAR TO FLOOR JOISTS. FASTEN PER SCHEDULES.

5 PLATE ⅜"x3½"x6" @ 10'-0" O.C. MAX w/ (8) #12-24x1" SHEET METAL SCREWS; SEE DETAIL 3/–.
ALTERNATE: ½"ø x1½" MB @ 10'-0" O.C. MAX AND 6" MAX FROM EACH END OF MODULE. BOLT ø ±1/16" MAX HOLE THRU CHANNELS; SEE DETAIL 3/–.

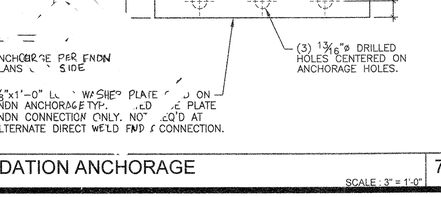
6 ~~C9x13.4 TRANSVERSE FLOOR BEAM REINFORCING CHANNEL PER DETAIL 6/–. C9 MAY HAVE 3 ø MAX HOLES THRU WEB WITHOUT WEB REINFORCEMENT PER THE FOLLOWING:~~
~~1. HOLES MUST BE CENTERED ON WEB.~~
~~2. MULTIPLE HOLES MUST BE SPACED 4 MIN. OF 2" APART.~~
~~3. HOLES MUST BE 24" MIN. FROM INSIDE FACE OF COLUMNS.~~

NOTE: C9 CHANNEL AND REINFORCING ONLY REQUIRED AT BUILDINGS ON CONCRETE FOUNDATIONS.

KEY NOTES

1. THE LONGITUDINAL FLOOR CHANNEL CONNECTIONS ARE NOMINAL AND ARE NOT REQUIRED STRUCTURALLY AT BUILDINGS ON CONCRETE FOUNDATIONS.
2. THE MATERIAL THICKNESS OF LIGHT GAUGE STRUCTURAL MEMBERS, IN THEIR END-USE, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ON SHEET S0.0. THE MATERIAL GAUGE DESIGNATION IN THE PLAN SHALL BE USED AS REFERENCE ONLY.
3. TEKS SCREWS PER ICC ESR-1976.
4. ET&F PINS PER IAPMO REPORT ER-335

GENERAL NOTES



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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

FLOOR FRAMING PLAN & DETAILS FOR PLYWOOD FLOOR

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT PATRICK J. FRANCH No. C12631 Ren. 3-31-19 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES D. FRANCH No. S3380 STRUCTURAL STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS SMK
DATE ~~SEP 19 2019~~

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS JDF
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS

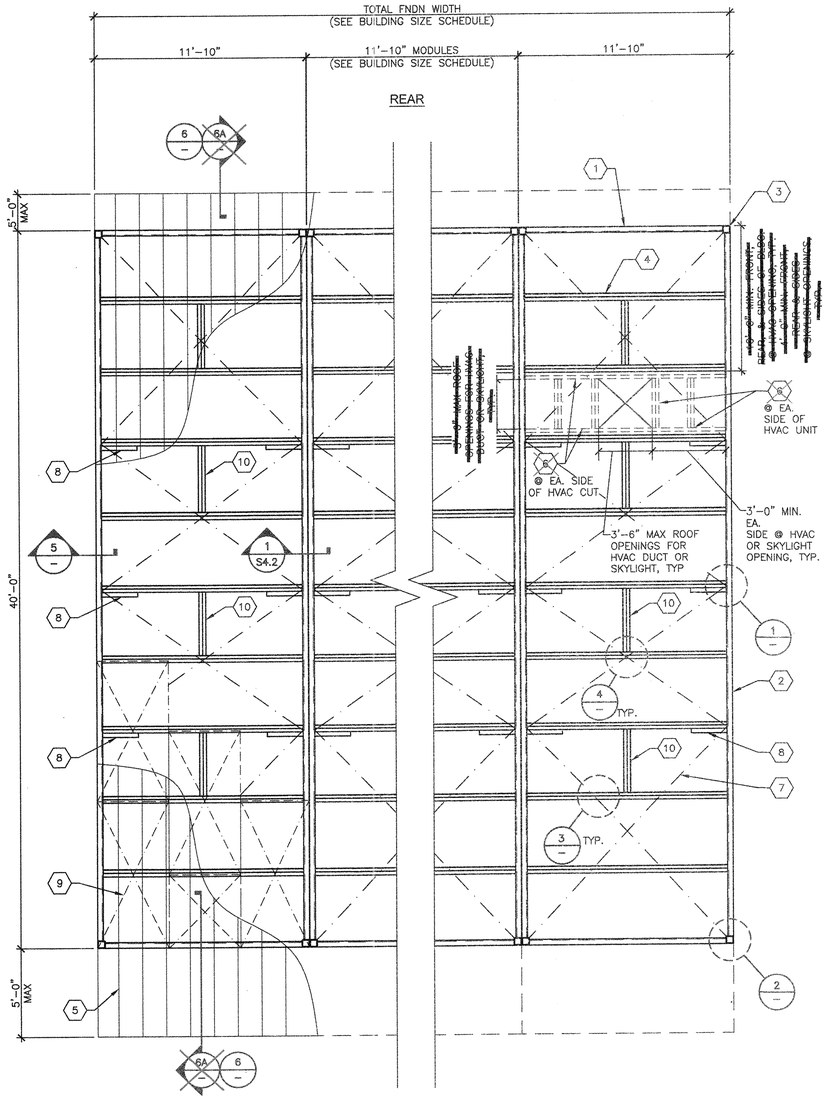
1	
2	
3	
4	

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

S3.0

S3.0.DWG — for revit purposes — saved: 8/7/2018 9:41 AM — plotted: 8/7/2018 9:41 AM — by: C:\Documents\AP_Data\Revit\AMS\20-24\20-24SP-15SAB_Standard.rvt — 20' – 24'x40'x15SAB — Floor Framing Plywood & Floor.dwg



TYPICAL ROOF FRAMING LAYOUT

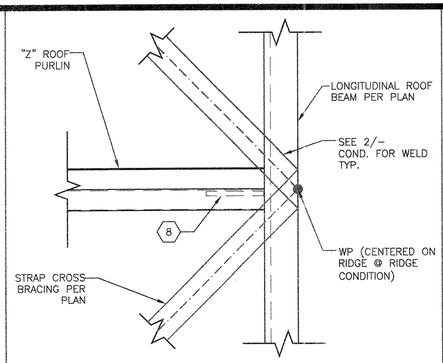
SCALE: 1/4"=1'-0" | A

BUILDING SIZE SCHEDULE			
BUILDING SIZE (FT)	TOTAL # OF 12'-0" WIDE MODULES	TOTAL # OF CENTER MODULES	TOTAL FNDN WIDTH[1]
☒ 24'x40'	2	0	23'-8½"
☐ 36'x40'	3	1	35'-6½"
☐ 48'x40'	4	2	47'-5"
☐ 60'x40'	5	3	59'-3½"
☐ 72'x40'	6	4	71'-1½"
☐ 84'x40'	7	5	82'-11¾"
☐ 96'x40'	8	6	94'-10"
☐ 108'x40'	9	7	106'-8¼"
☐ 120'x40'	10	8	118'-6½"

NOTES:

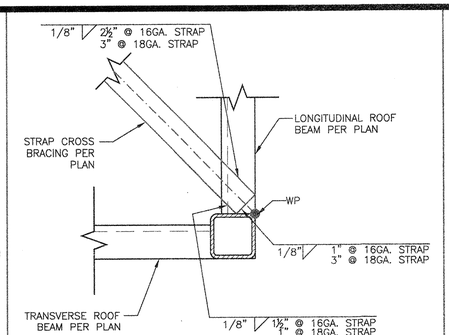
1. TOTAL BUILDING WIDTH INCLUDES 1/4" PER MODULAR CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS S1.1, S1.2, & S1.3.

BUILDING SIZE SCHEDULE



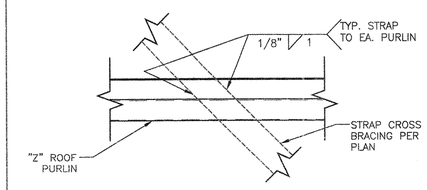
TYP. CROSS BRACING DETAILS

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



TYP. CROSS BRACING DETAILS

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



TYP. CROSS BRACING DETAILS

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

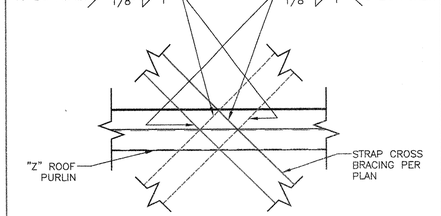
1. THE MATERIAL THICKNESS OF LIGHT GAUGE STRUCTURAL MEMBERS IN THEIR END-USE, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ON SHEET S0.0. THE MATERIAL GAUGE DESIGNATION IN THE PLAN SHALL BE USED AS REFERENCE ONLY.
2. SEE SHEET S8.0 & S9.0 FOR TYP. SIDE WALL FRAMING.
3. SEE SHEET S8.0 & S9.0 FOR TYP. END WALL FRAMING.
4. ALL FASTENERS THRU METAL ROOF PANEL SHALL BE INSTALLED w/NEOPRENE WASHERS.

GENERAL NOTES

SHEATHING FASTENING SCHEDULE				
NAILING	0.144 PINS SPACING		#10 SMS SPACING	
	TYPICAL	WITHIN 4' OF BUILDING CORNERS	TYPICAL	WITHIN 4' OF BUILDING CORNERS
BOUNDARY	6" O.C.	6" O.C.	6" O.C.	6" O.C.
EDGE	6" O.C.	6" O.C.	6" O.C.	6" O.C.
FIELD	6" O.C.	6" O.C.	12" O.C.	12" O.C.

NOTE: ET&F 0.144 PINS PER IAPMO REPORT UES ER-0335.

FASTENING SPACING SCHEDULE



TYP. CROSS BRACING DETAILS

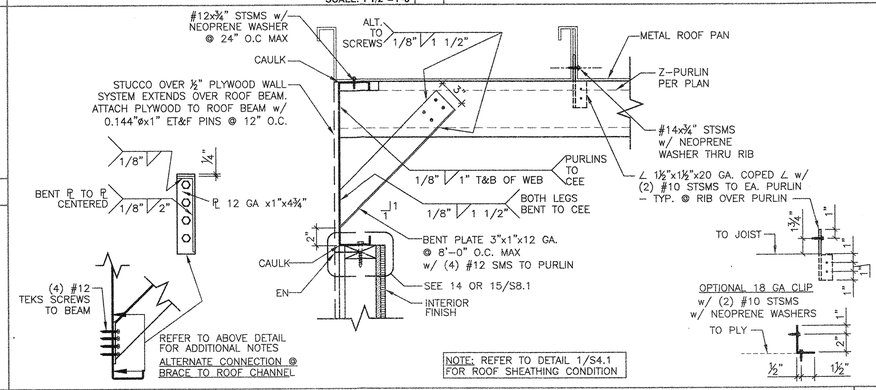
SCALE: 1 1/2"=1'-0" | 4

1. TRANSVERSE ROOF BEAM PER SHEET S5.0.
2. LONGITUDINAL ROOF BEAM PER SHEET S5.0.
3. HSS COLUMN PER SHEET S5.0.
4. ROOF PURLINS @ 48" O.C. MAX. —SEE SHEET S0.0
5. METAL ROOF PAN — SEE SHEET S0.0. ~~ALTERNATE: 26 GA. ROOF PAN w/ ROOF SHEATHING & ENCLOSED SOFFIT OVERHANG OPTIONS ONLY. SEE SHEET S4.1 FOR DETAILS.~~
6. ~~PROVIDE DOUBLE PURLINS AND BLOCKING PER 2 4/S4.2 @ OPTIONAL HVAC UNIT (800# MAX), (1) HVAC UNIT PER MODULE MAX. PROVIDE SINGLE PURLINS AND BLOCKING PER 3/S4.2 @ OPTIONAL SKYLIGHT OPENINGS, (4) SKYLIGHT OPENINGS PER MODULE MAX. LOCATE OPENINGS PER ROOF PLAN & PROVIDE 48" CLEAR MIN. BETWEEN ALL OPENINGS, TYP.~~

   ~~NOTE: DO NOT HEAD OFF ROOF PURLINS FOR OPENINGS FOR HVAC/SKYLIGHT FRAMING. ALL ROOF PURLINS SHALL BE CONTINUOUS ACROSS MODULE. LAYOUT OF CONTINUOUS ROOF PURLINS MAY BE ADJUSTED TO ACCOMMODATE HVAC/SKYLIGHT LAYOUT AS LONG AS SPACING DOES NOT EXCEED 48" O.C.~~

   ~~PLACE HVAC/SKYLIGHT OPENINGS TO AVOID INTERRUPTION OF STRAP CROSS BRACING WHERE OSB/PLYWOOD SHEATHING IS NOT UTILIZED. CROSS BRACING MAY BE INTERRUPTED ONLY IF OSB/PLYWOOD SHEATHING IS USED.~~
7. 2"x16 GA. STRAP CROSS BRACING GRADE 50
   ALTERNATE: CROSS BRACING 3"x18 GA. GRADE 50
8. 3x1x12 GA. BENT PLATE DIAGONAL BRACE TO ROOF BEAM @ 12'-0" O.C. MAX & AT ROOF STRAP CROSS BRACING LOCATIONS PER 1/—. SEE DETAIL 5/— @ BEAMS. PROVIDE PURLIN BLOCKING @ EACH BRACE @ END MODULES ONLY PER 10 BELOW
9. ~~ALTERNATE TO STRAP CROSS BRACING: ⅜" APA RATED 1 P OSB OR ⅜" PLYWOOD (ALL OSB OR PLYWOOD SHALL BE EITHER T&G OR EDGE CLIPPED AT UNSUPPORTED EDGES) CONFORMING TO PS 1-09 OR PS 2-10, CD EXPOSURE 1 40/24 SPAN INDEX, 2 SPANS MIN. (EXCEPT CENTER PANEL @ MODULE END BAYS), STAGGERED JOINTS, FACE GRAIN NORMAL TO ROOF PURLINS, ALL BOUNDARY, EDGE & FIELD ATTACHMENTS SHALL BE 4" MIN. FROM EDGE OF OSB OR PLYWOOD & EDGE OF STEEL SUPPORTING MEMBER. REFER TO FASTENING SCHEDULE FOR FASTENING.~~
10. MID-SPAN PURLIN BLOCKING WELD TO ROOF PURLINS PER DETAIL 3/S4.2 BLOCKING IS ONLY REQUIRED AT END MODULES AT PURLINS WITH DIAGONAL BEAM BRACING AT EXTERIOR SIDE WALLS PER 8 ABOVE.

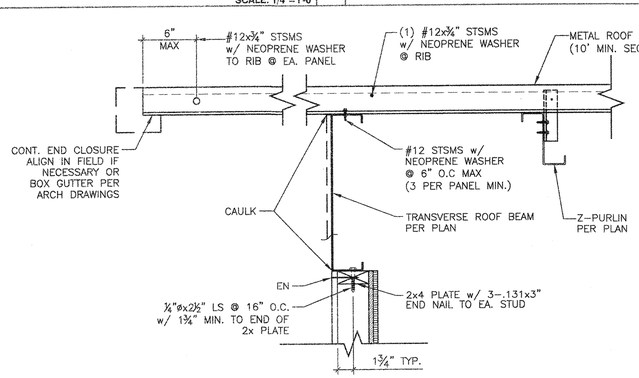
KEY NOTES



NOTE: REFER TO DETAIL 1/S4.1 FOR ROOF SHEATHING CONDITION

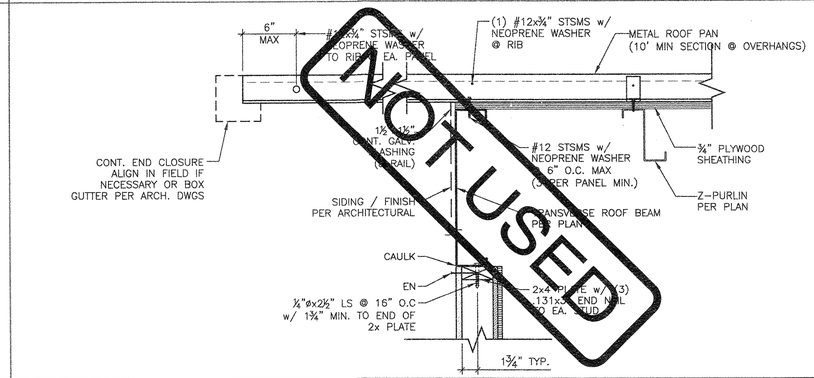
SIDE WALL TO ROOF BEAM DETAIL @ ROOF CHANNEL

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



OVERHANG DETAIL

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



NOT USED

OVERHANG DETAIL w/ SHEATHING

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

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24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ROOF FRAMING PLAN & DETAILS OPEN SOFFIT OPTION

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — GREGORY PATRICK CORNEJO — No. C12831 Ren. 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D'FRIOS — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-29-18
RST18175

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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC — FLS — SS JDS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
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REVISIONS

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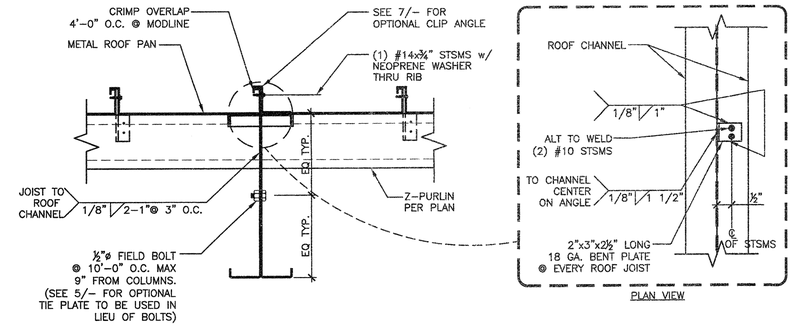
SCALE:	AS NOTED
DATE:	

SHEET NUMBER

S4.0

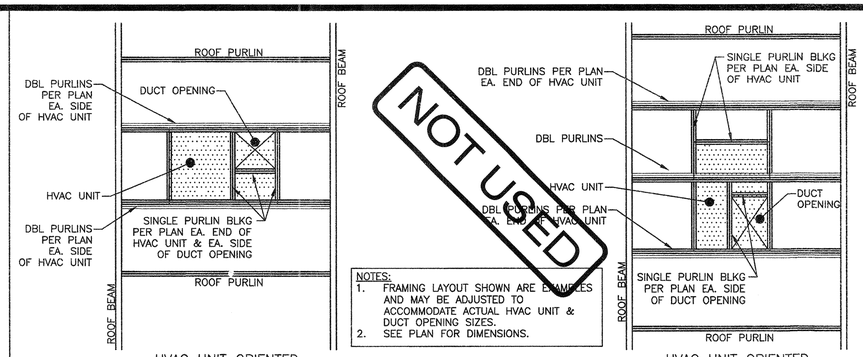
02-xxxxx - [or req] BUILDING - SetDt: 8/16/2018 4:42 PM PLOTTED: 8/28/2018 12:47 PM W:\Engineering\JOC DWG Files\2018 CODES\02-115700 - 2016 - 24'x40'-120'x40' Standard\S0 - 02 - 115700 - S4.0 - Roof Framing Open Soffit.dwg



PLAN VIEW

ROOF BEAM CONNECTION DETAIL

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

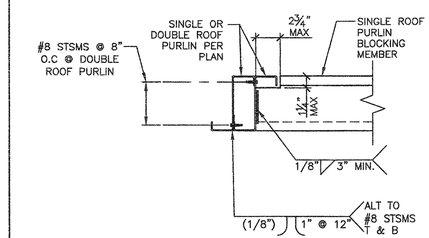


HVAC UNIT ORIENTED TRANSVERSE TO MODULE

HVAC UNIT ORIENTED LONGITUDINAL TO MODULE

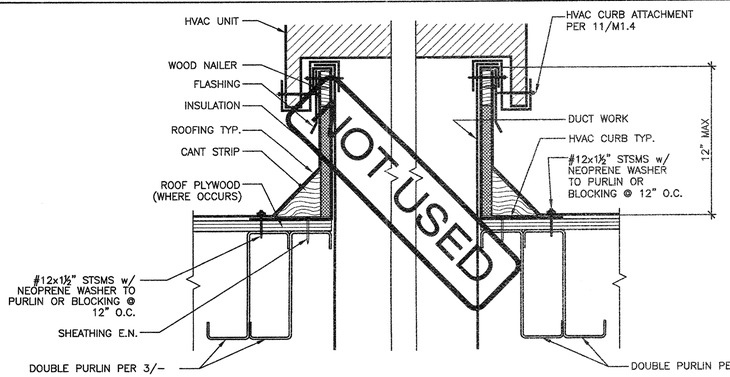
EXAMPLE OF ROOF FRAMING AT ROOFTOP HVAC UNITS

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



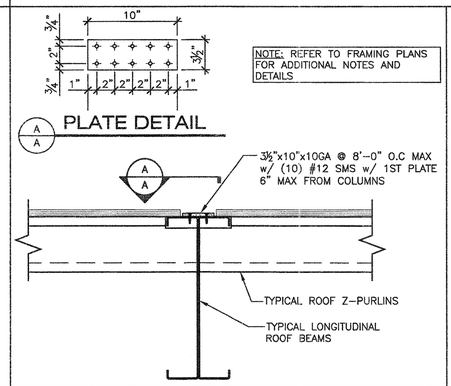
BLOCKING & DBL PURLIN CONNECTION DETAIL

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



HVAC CURB DETAIL ANCHORAGE

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



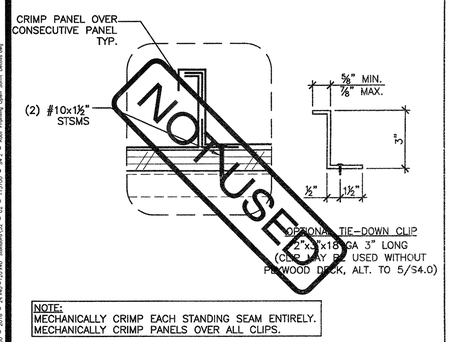
NOTE: REFER TO FRAMING PLANS FOR ADDITIONAL NOTES AND DETAILS

OPTIONAL ROOF TIE PLATE

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

NOT USED

6



NOTE:
MECHANICALLY CRIMP EACH STANDING SEAM ENTIRELY.
MECHANICALLY CRIMP PANELS OVER ALL CLIPS.

ROOF DETAIL

(OPTIONAL ROOF PAN CLIP)
SCALE: 1 1/2"=1'-0" | 7

NOT USED

8

NOT USED

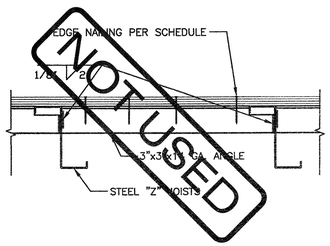
9

NOT USED

10

NOT USED

11



TYP. ANGLE TO Z-PURLIN ATTACHMENT

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

NOT USED

13

NOT USED

14

NOT USED

15

GENERAL NOTES

1. THE MATERIAL THICKNESS OF LIGHT GAUGE STRUCTURAL MEMBERS, IN THEIR END-USE, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ON SHEET S0.0 THE MATERIAL GAGE DESIGNATION IN THE PLAN SHALL BE USED AS REFERENCE ONLY.

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ROOF FRAMING DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CANAVAN — No C12631 — Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRIAS — No 33380 — STRUCTURAL — STATE OF CALIFORNIA

01-08-19

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC — FLS — SS SMV
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
REV 1
PC 02-115700
AC — FLS — SS JDS
DATE 6-21-2019

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CODE 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS

1 GENERAL REVISIONS - 01/02/19
2
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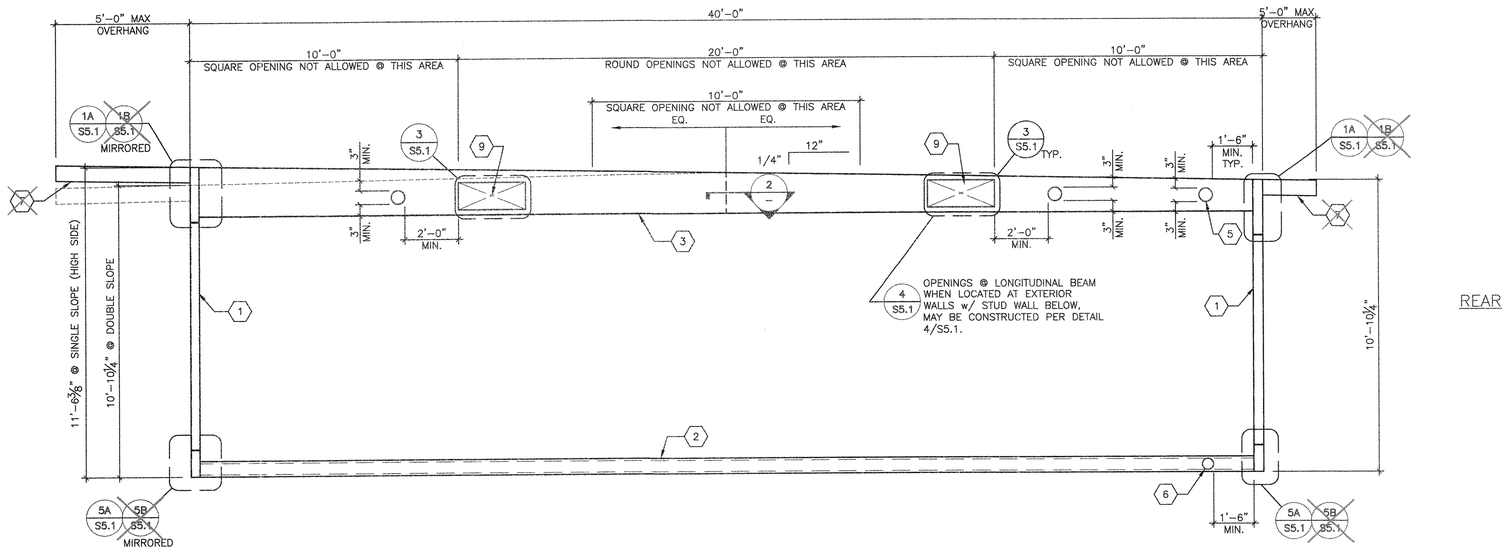
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

S4.2

K:\2019\19-... Jobs and Projects\19-... Detail Sheets\S4.2 - Roof Framing Details.dwg, 1/2/2019 1:09:36 AM, PLOTTED: 1/2/2019 1:09:36 AM, XREFS: 24'x40'-120'x40' Standard.dwt - 11"x17" - 24'x40'-120'x40' Standard.dwt - FS - 11"x17" - S4.2 - Roof Framing Details.dwg



NOTE:
'A' SERIES DETAILS (I.E. 5A) COINCIDE WITH "LOW SEISMIC" DETAILS.
'B' SERIES DETAILS (I.E. 5B) COINCIDE WITH "HIGH SEISMIC" DETAILS.

TYPICAL LONGITUDINAL FRAME ELEVATION

SCALE: 3/8"=1'-0" | 1

1. HSS COLUMN – SEE SCHEDULE 3/– BELOW
2. FLOOR BEAM – SEE SCHEDULE 3/– BELOW
3. LONGITUDINAL ROOF BEAM – SEE SCHEDULE 3/– BELOW
~~14"–18" @ DOUBLE SLOPE TYPE~~
14"–22" @ SINGLE SLOPE TYPE
4. TRANSVERSE ROOF BEAM – SEE SCHEDULE BELOW 14" MIN. 22" MAX.
5. 6"ø MAX OPENING IN WEB OF FLOOR BEAM WITHOUT WEB REINFORCEMENT MINIMUM SPACING OF HOLES @ 48" O.C., HOLES MAY OCCUR @ ANY LOCATION ALONG LENGTH OF ROOF BEAM EXCEPT AS NOTED OTHERWISE ON FRAMING ELEVATION. – SEE 6/S5.1

   NOTE: IF HOLE IS 3" OR LESS, THEY MAY BE SPACED @ 24" O.C. MINIMUM
6. 4"ø MAX OPENING IN WEB OF FLOOR BEAM WITHOUT WEB REINFORCEMENT MINIMUM SPACING OF HOLES @ 48" O.C. HOLES MAY OCCUR @ ANY LOCATION ALONG LENGTH OF FLOOR BEAM WITH DIRECT FOUNDATION SUPPORT BELOW. OPENINGS ARE NOT ALLOWED WHERE BEAMS ARE SPANNING BETWEEN FOUNDATIONS OR ACROSS VENT OPENINGS. – SEE 6/S5.1

   NOTE: IF HOLE IS 2" OR LESS, THEY MAY BE SPACED @ 24" O.C. MINIMUM.
7. ~~14 GA. OUTRIGGER CHANNEL (FORMED SOFFIT CEE) AT OPTIONAL ENCLOSED OVERHANG – REFER TO DETAIL 1A OR 1B/S5.1 & S5.0 FOR PROPERTIES.~~
8. NOT USED
9. LONGITUDINAL BEAM OPENING: REFER TO DETAIL 3/S5.1 FOR OPENING REINFORCEMENT (10"x18" MAX OPENING SIZE)
10. TRANSVERSE BEAM OPENING: REFER TO DETAIL 4/S5.1 FOR OPENING REINFORCEMENT (10"x30" MAX OPENING SIZE)

KEY NOTES

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787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

MOMENT FRAME ELEVATIONS & DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — JOHN PATRICK CANNAN — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — JIMMY D FRANCUM — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC ___ FLS ___ SS 3mk
DATE ~~SEP 19 2018~~

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-116700
AC ___ FLS ___ SS 3mk
DATE 8-31-2017

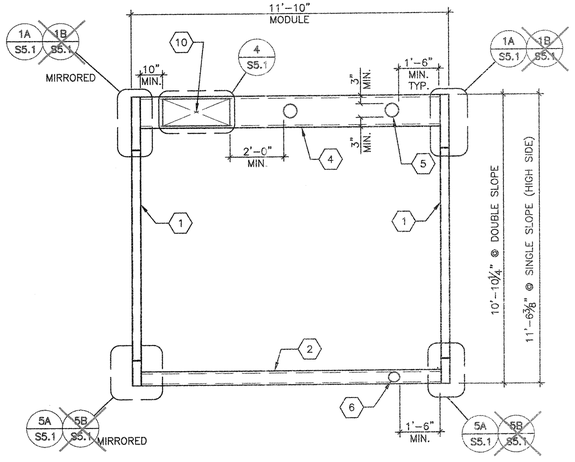
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

S5.0

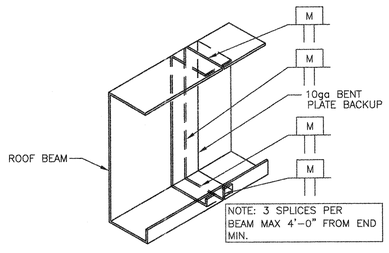


NOTE:
'A' SERIES DETAILS (I.E. 5A) COINCIDE WITH "LOW SEISMIC" DETAILS.
'B' SERIES DETAILS (I.E. 5B) COINCIDE WITH "HIGH SEISMIC" DETAILS.

TYPICAL TRANSVERSE FRAME ELEVATION

SCALE : 3/8"=1'-0" | 4

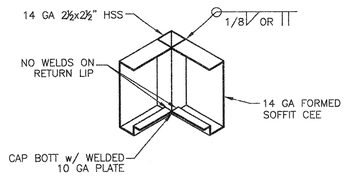
THE WELDING PROCEDURE QUALIFICATION TEST RECORD AND WELDING PROCEDURE SPECIFICATION FOR THIS WELD SHALL BE PREPARED IN ACCORDANCE WITH AWS D1.1–10 & D1.3–08 AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND SUBMITTAL TO THE D.S.A. TYPICAL ALL DETAILS THIS SHEET. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE–RESISTING SYSTEMS SHALL BE MADE WITH FILLER METAL THAT HAS A MINIMUM CHARPY V–NOTCHTOUGHNESS OF 20 FT.–LBS AT ZERO DEGREES F, AS DETERMINED BY AWS CLASSIFICATION.



NOTE: 3 SPLICES PER BEAM MAX 4'–0" FROM END MIN.

TYPICAL BEAM SLICE

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



OVERHANG CORNER DETAIL

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

FRAME MEMBER SCHEDULE - (LOW SEISMIC) | 3A

FLOOR BEAMS		ALT. FLOOR BEAMS		COLUMNS	LONGITUDINAL ROOF CHANNEL	TRANSVERSE ROOF CHANNEL
PLYWOOD FLOOR	~~CONCRETE FLOOR~~	PLYWOOD FLOOR	~~CONCRETE FLOOR~~			
C7x9.8	~~C9x13.4 (36 KSI)~~	C9x13.4 (36 KSI) OPTIONAL: C10x15.3	~~C10x15.3~~	HSS 4x4x5/16	10 GA.	12 GA.

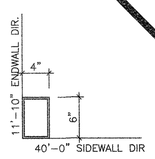
NOTE: SEE ALL SECTION PROPERTIES ON SHEET S0.0

☐ FRAME MEMBER SCHEDULE - (HIGH SEISMIC) | 3B

NOT USED

FLOOR BEAMS		ALT. FLOOR BEAMS		COLUMNS	LONGITUDINAL ROOF CHANNEL	TRANSVERSE ROOF CHANNEL
PLYWOOD FLOOR	CONCRETE FLOOR	PLYWOOD FLOOR	CONCRETE FLOOR			
C9x13.4 (50 KSI)	C9x13.4 (50 KSI)	C10x15.3	C10x15.3	HSS 6x4x5/16 (SEE ORIENTATION BELOW)	10 GA.	10 GA.

NOTE: SEE ALL SECTION PROPERTIES ON SHEET S0.0



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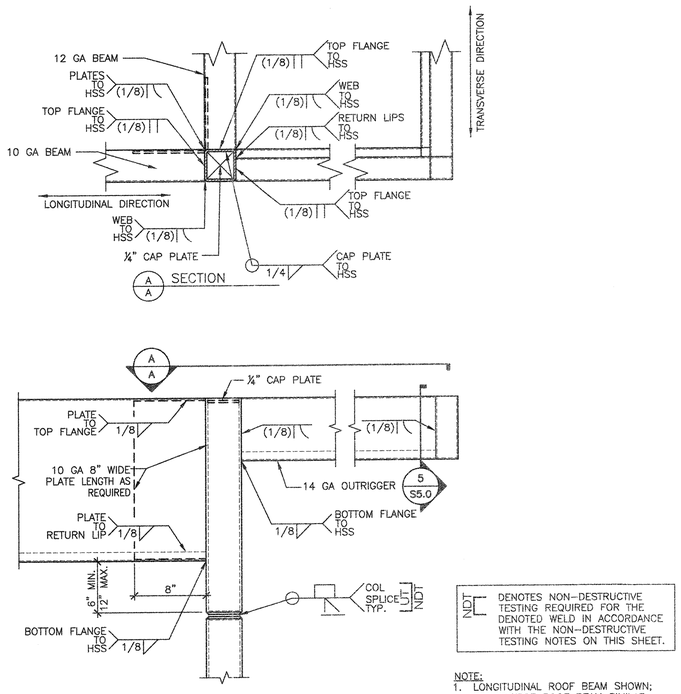
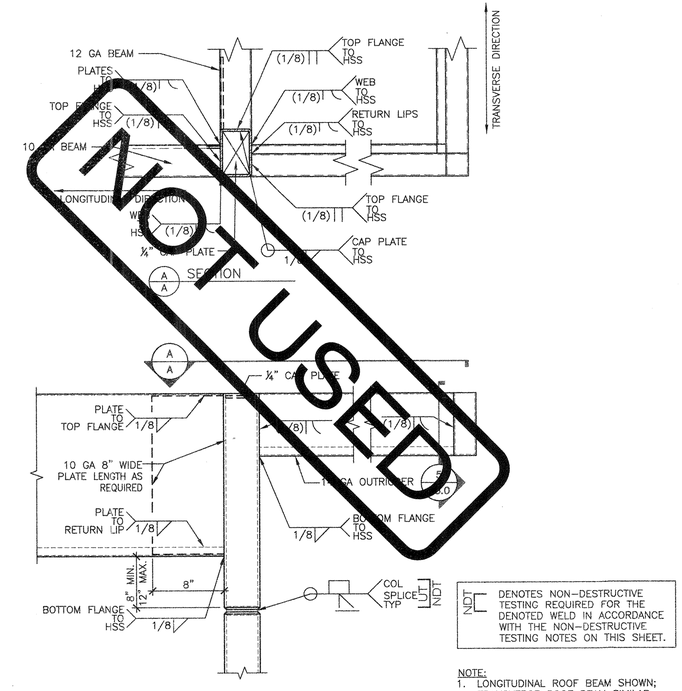


NDT DENOTES NON-DESTRUCTIVE TESTING REQUIRED FOR THE DENOTED WELD IN ACCORDANCE WITH THE NON-DESTRUCTIVE TESTING NOTES ON THIS SHEET.

NOTE:
1. LONGITUDINAL ROOF BEAM SHOWN; TRANSVERSE ROOF BEAM SIMILAR

☒ TYPICAL ROOF CHANNEL TO HSS DETAIL - (LOW SEISMIC) — 1A

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

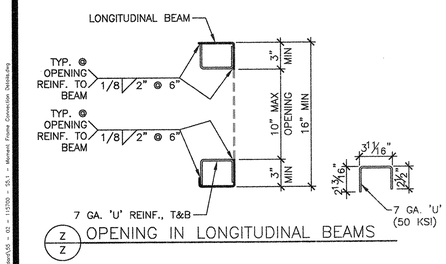


NDT DENOTES NON-DESTRUCTIVE TESTING REQUIRED FOR THE DENOTED WELD IN ACCORDANCE WITH THE NON-DESTRUCTIVE TESTING NOTES ON THIS SHEET.

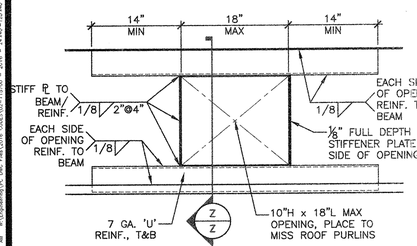
NOTE:
1. LONGITUDINAL ROOF BEAM SHOWN; TRANSVERSE ROOF BEAM SIMILAR

☐ TYPICAL ROOF CHANNEL TO HSS DETAIL - (HIGH SEISMIC) — 1B

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



Z OPENING IN LONGITUDINAL BEAMS

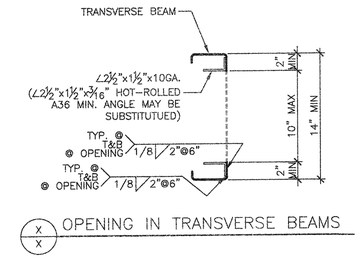


NOTES:

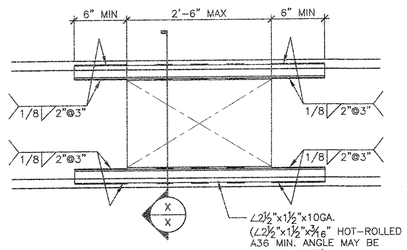
1. LOCATE DIAGONAL BRACE (SEE 1/S4.1) AT PURLINS CLOSEST TO EACH SIDE OF BEAM OPENING, TYP.
2. BEAM OPENING(S), LOCATED AT EXTERIOR WALLS w/ STUD WALL BELOW, MAY BE CONSTRUCTED PER DETAIL 4/S5.1.

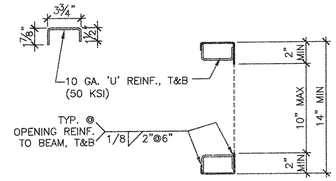
OPENING @ ROOF BEAMS (LONGITUDINAL BEAMS) — 3

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



X OPENING IN TRANSVERSE BEAMS

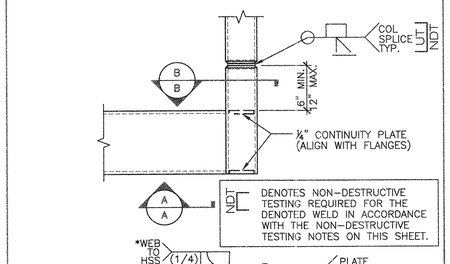




OPTIONAL OPENING REINFORCEMENT

OPENING @ ROOF BEAMS (TRANSVERSE BEAMS) — 4

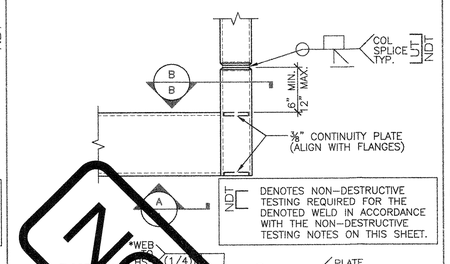
SCALE: 1 1/2"=1'-0"



* FULL PEN WELD MAY BE USED AS AN ALTERNATIVE TO THE DOUBLE SIDED BEAM WEB-TO-COLUMN WELD SHOWN.

☒ TYP. CORNER TO FLOOR BM DETAIL (LOW SEISMIC) — 5A

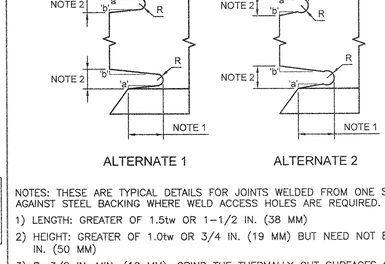
SCALE: 1 1/2"=1'-0"



* FULL PEN WELD MAY BE USED AS AN ALTERNATIVE TO THE DOUBLE SIDED BEAM WEB-TO-COLUMN WELD SHOWN.

☐ ALTERNATE CORNER DETAIL (HIGH SEISMIC) — 5B

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

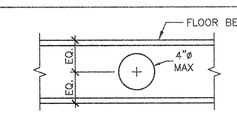


ALTERNATE 1 ALTERNATE 2

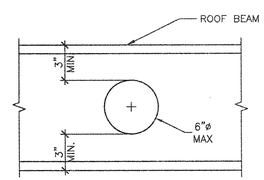
NOTES: THESE ARE TYPICAL DETAILS FOR JOINTS WELDED FROM ONE SIDE AGAINST STEEL BACKING WHERE WELD ACCESS HOLES ARE REQUIRED.

1) LENGTH: GREATER OF 1.5tw OR 1-1/2 IN. (38 MM)
2) HEIGHT: GREATER OF 1.0tw OR 3/4 IN. (19 MM) BUT NEED NOT EXCEED 2 IN. (50 MM)
3) R: 3/8 IN. MIN. (10 MM). GRIND THE THERMALLY CUT SURFACES OF WELD ACCESS HOLES IN HEAVY SHAPES AS DEFINED IN SECTIONS A3.1(c) AND (d) OF AISC 360-10.
4) SLOPE 'a' FORMS A TRANSITION FROM THE WEB TO THE FLANGE. SLOPE 'b' MAY BE HORIZONTAL.
5) THE BOTTOM OF THE TOP FLANGE IS TO BE CONTOURED TO PERMIT THE TIGHT FIT OF BACKING BARS WHERE THEY ARE TO BE USED.

REQ. FOR FR. MOMENT CONNECTIONS



4" OPENING IN FLOOR BEAM



6" OPENING IN ROOF BEAM

OPENING IN BEAMS — 6

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

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GENERAL NOTES

NON-DESTRUCTIVE TESTING OF COMPLETE JOINT PENETRATION GROVE WELDS AT THE MOMENT-RESISTING BEAM-TO-COLUMN CONNECTIONS SHALL COMPLY WITH AISC 341-10 CHAPTER J PER CBC 1705A.2.1.

1. WELDS SUBJECT TO THE REQUIREMENTS OF NON-DESTRUCTIVE TESTING ARE NOTED ON THESE DRAWINGS WITH THE SYMBOL: NDT
2. ALL WELDS DESIGNATED FOR NON-DESTRUCTIVE TESTING REQUIRE MAGNETIC PARTICLE TESTING (MT) TO BE PERFORMED ON 25% OF THOSE WELDS.
3. ULTRASONIC TESTING (UT) IS TO BE PERFORMED ON 100% OF WELDS DENOTED WITH THE SYMBOL NDT UT, AND IS ONLY REQUIRED ON THOSE DESIGNATED WELDS.
4. ULTRASONIC TESTING (UT) IS ONLY REQUIRED WHERE THE THICKNESS OF THE COLUMN IS 5/16" OR GREATER. UT IS NOT REQUIRED WHERE THE COLUMN THICKNESS IS LESS THAN 5/16". MAGNETIC PARTICLE TESTING (MT) IS STILL REQUIRED.
5. ULTRASONIC TESTING (UT) IS NOT REQUIRED ON WELDS FROM STRUCTURAL STEEL CHANNEL BEAM FLANGES TO COLUMNS AS UT TESTING IS NOT APPROPRIATE FOR SECTIONS WITH VARYING DEPTHS. MAGNETIC PARTICLE TESTING (MT) IS STILL REQUIRED.

NON-DESTRUCTIVE TESTING NOTES

1. FILLER METALS SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SEISMIC PROVISIONS.
2. WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH THE AISC SEISMIC PROVISIONS.
3. QUALITY CONTROL AND QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH THE AISC SEISMIC PROVISIONS.
4. WELD ACCESS HOLES SHALL BE IN ACCORDANCE WITH AISC 360-10, SECTION J1.6, AND SHALL BE CONSTRUCTED PER THE FOLLOWING DETAILS & NOTES.

WELD ACCESS HOLE GEOMETRY

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

MOMENT FRAME CONNECTION DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — TIMOTHY PATRICK CANAUGH — No. C12631 — Ren. 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY D. PEACH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC. FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC. FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS

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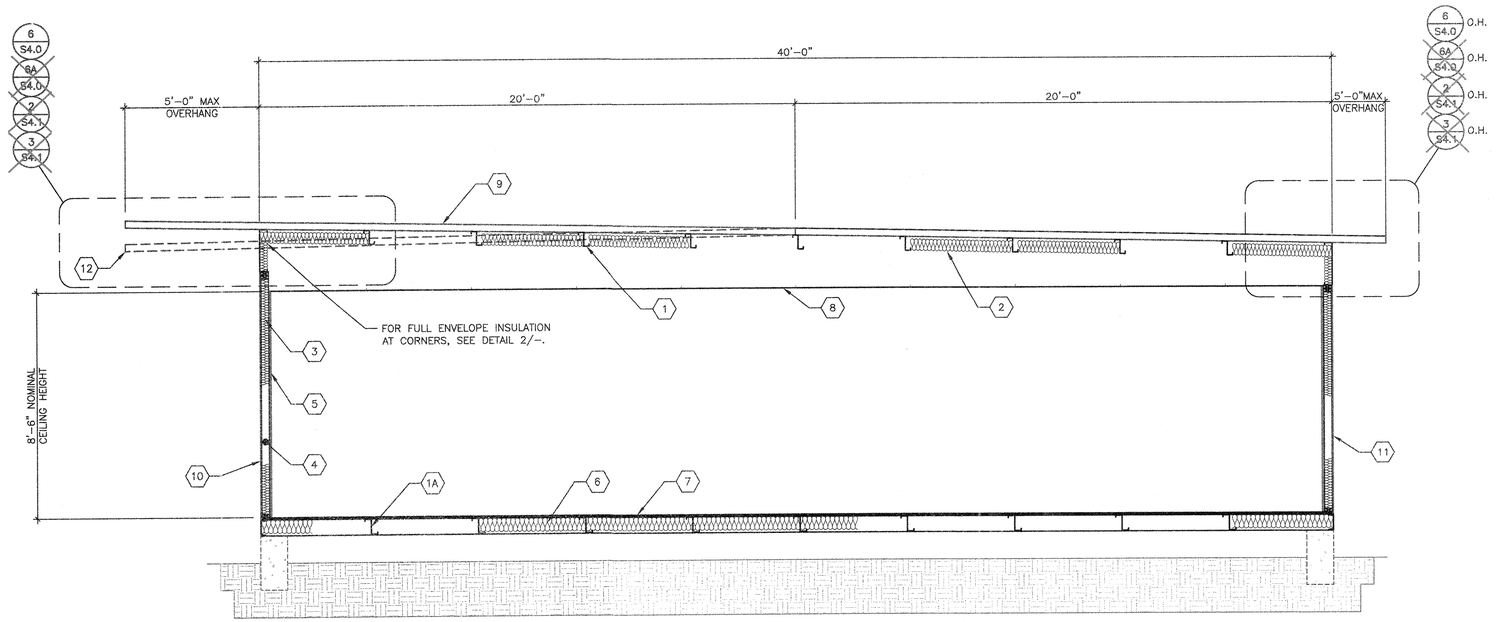
3	
4	
DRAWN BY:	.
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

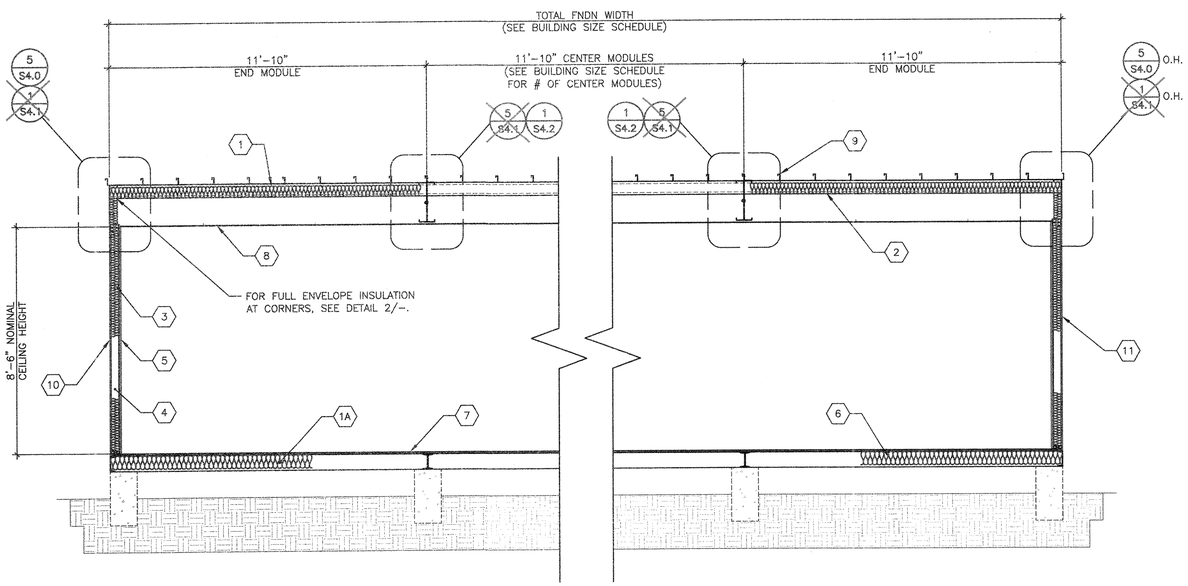
S5.1

G:\CURRENT - Jobs and Buildings - 2018\ 8/17/2018 9:31:48 AM - Plotted by: Jeff Peach - Plotted at: 24"x36" (ISO A1) - Plotted on: 1:1 (100%) - Drawing File: P:\Drawings\Jeff Peach\Typical Details\S5.1.dwg



TYP. LONGITUDINAL SECTION-MONO/DUAL PITCH

SCALE: 3/8"=1'-0" | A



TYP. TRANSVERSE SECTION-MONO/DUAL PITCH

SCALE: 3/8"=1'-0" | B

1. "Z" PURLINS @ 48" O.C. PER ROOF FRAMING PLAN
1A. STEEL "Z" FLOOR JOISTS PER FLOOR FRAMING PLAN
2. R-19 INSULATION w/ 22 GA WIRE @ 16" O.C.
3. INSULATION w/ KRAFT PAPER
4. WALL STUDS PER SHEETS S8.0 & S9.0.
5. VINYL FABRIC OVER TACKABLE BRACING PANELS.
6. INSULATION w/ KRAFT PAPER AND CHICKEN WIRE.
7. PLYWOOD OR CONCRETE FLOOR PER SHEETS S3.0, S3.1, S3.2, & S3.3.
8. SUSPENDED T-BAR CEILING PER M1.0
8A. NOT USED
9. FINISHED ROOFING PER ROOF PLAN & ROOF FRAMING PLAN
10. TYPICAL SHEATHING NAILING .131x2¼" GALV. @ 6" O.C.
PANEL EDGES (ALL EDGES BLOCKED) .131x2¼" GALV. @ 12" O.C. FIELD.
11. EXTERIOR WALL FINISH PER EXTERIOR ELEVATIONS.
12. ALTERNATE DUAL PITCH.

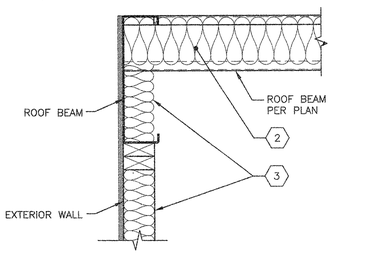
KEY NOTES

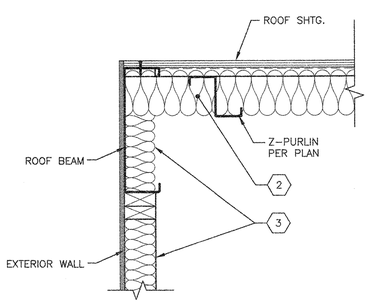
BUILDING SIZE SCHEDULE			
BUILDING SIZE (FT)	TOTAL # OF 12'-0" WIDE MODULES	TOTAL # OF CENTER MODULES	TOTAL FNDN WIDTH
☒ 24'x40'	2	0	23'-8½"
☐ 36'x40'	3	1	35'-6¾"
☐ 48'x40'	4	2	47'-5"
☐ 60'x40'	5	3	59'-3¼"
☐ 72'x40'	6	4	71'-1½"
☐ 84'x40'	7	5	82'-11¾"
☐ 96'x40'	8	6	94'-10"
☐ 108'x40'	9	7	106'-8¼"
☐ 120'x40'	10	8	118'-6½"

NOTES:

1. TOTAL BUILDING WIDTH INCLUDES 1/4" PER MODULE CONSTRUCTION TOLERANCE PER FOUNDATION SHEETS ~~S1.0~~, S1.1, ~~S1.2 & S1.3~~

BUILDING SIZE SCHEDULE





INSULATION CORNER DET.

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

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787 Spreckels Ave., Manteca, CA 95336
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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

TYPICAL LONGITUDINAL AND TRANSVERSE FRAME SECTIONS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — MANNY PATRICK GONYEA — No. C12631 Ren. 3-31-18 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRESCH — No. 53380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC ___ PLS ___ SS/PE SME
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

~~IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT~~
~~PC 02-115700~~
~~AC ___ PLS ___ SS/PE ___~~
~~DATE 8-31-2018~~

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

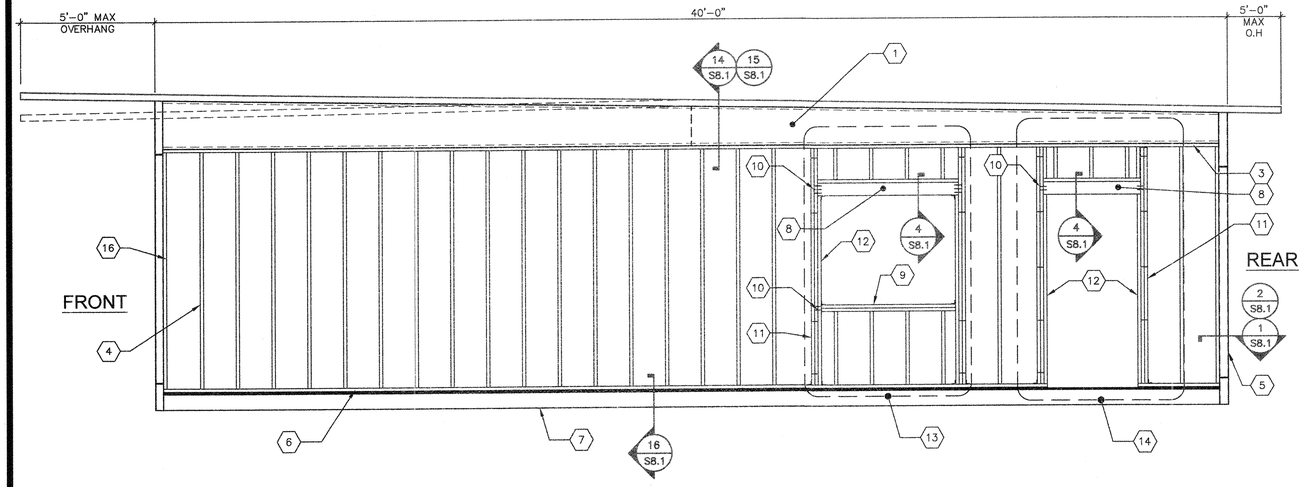
REVISIONS

DRAWN BY:	.
SCALE:	AS NOTED
DATE:	.

SHEET NUMBER

S6.0

02-000000 - Typ. and Building - SWD: 8/17/2018 1:43 PM PLOTTED: 8/17/2018 8:12 AM W:\Engineering\PE DWG Files\2018 CODES\02-115700 - 2018 - 24'x40'-120'x40' Standard\S6 - 02 - 115700 - S6.0 - Typ. Longitudinal & Transverse Frame Sections.dwg



NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

1. ROOF BEAM PER SHEET S5.0.
2. 2x4 PLATE, NO SPLICE
3. 2x4 PLATE
4. 2x4 STUDS SPACED PER SCHEDULE w/ (3) 0.131"øx3" END NAILS OR (4) 0.131"øx3" TOE NAILS T&B TO PLATES, TYP.
5. HSS COLUMN PER SHEET S5.0
6. 2x4 BOTTOM PLATE P.T. @ CONCRETE FLOORS
7. PERIMETER FLOOR BEAM PER SHEET S5.0
8. HEADER PER SCHEDULE AND DETAIL 4/S8.1
9. WINDOW SILL PER SCHEDULE
10. END NAILS THRU KING STUD TO HEADER OR SILL PER SCHEDULE
11. KING STUDS PER SCHEDULE
12. 2x4 TRIMMER
13. OPTIONAL WINDOW OPENING FRAMING PER SCHEDULE (REFER TO 4/– FOR DETAILS AND FLOOR PLANS FOR LOCATIONS)
14. OPTIONAL DOOR OPENING FRAMING PER SCHEDULE (REFER TO 5/– FOR DETAILS AND FLOOR PLANS FOR LOCATIONS)
15. HVAC OPENING @ EXTERIOR WALL (600# MAX. WT.)
16. 2x NAILER

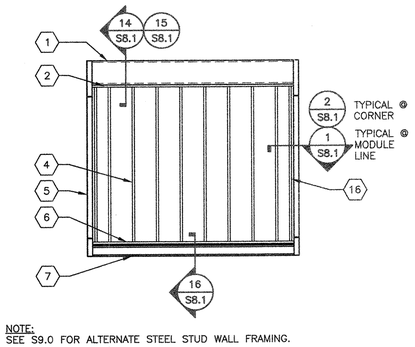
KEY NOTES

EXTERIOR WALL SCHEDULE					
FINISH TYPE	FOUNDATION TYPE	WALL FINISH COMMENTS	STUD TYPE	STUD SPACING TYPICAL	STUD SPACING @ CORNERS[2]
5/8" PLYWOOD SHEATHING 303 CONFORMING TO PS1–09. VERTICAL GROOVES @ 8" O.C.	WOOD OR CONCRETE	WALL FINISH PER A5.0 & A5.1; JOINT DETAIL PER 12/S8.1; NAILING PER BLDG SECTIONS[1,3] (MAY INCLUDE METAL "S" WAVE PANELS PER DETAILS 1–3/A7.0)	HEM FIR #2	16" O.C. MAX	16" O.C. MAX
			DOUG FIR #2	16" O.C. MAX	16" O.C. MAX
5/16" HARDI–BOARD w/ SYNTHETIC STUCCO OR 9/16" HARDI–LAP SIDING	WOOD OR CONCRETE	WALL FINISH PER A5.4 & A5.5 OR A5.6 PANELS[3] (MAY INCLUDE TILE/BRICK VENEER PER A7.0)	HEM FIR #2	16" O.C. MAX	16" O.C. MAX
			DOUG FIR #2	16" O.C. MAX	16" O.C. MAX
½" PLYWOOD SHEATHING CONFORMING TO PS1–95, APA RATED, 5 PLY 32/16", OR ½" OSB PANELS EXPOSURE 1 w/ ⅞" STUCCO	CONCRETE ONLY	WALL FINISH PER A5.2 & A5.3; NAILING PER BLDG SECTIONS[3] (MAY INCLUDE TILE/BRICK VENEER PER A7.0)	HEM FIR #2	16" O.C. MAX	12" O.C. MAX
			DOUG FIR #2	16" O.C. MAX	16" O.C. MAX

FOOTNOTES
1. ALL NAILS IN EXTERIOR APPLICATIONS SHALL BE GALVANIZED.
2. BUILDING CORNERS ARE DEFINED AS A DISTANCE OF 4 FEET IN BOTH DIRECTIONS FROM EACH CORNER OF THE BUILDING.
3. TYPICAL PLYWOOD NAILING WHERE OCCURS: 0.131"ø x2¼" GALV. NAILS @ 6" O.C. E.N. & 12" O.C. F.N. (ALL EDGES BLOCKED).

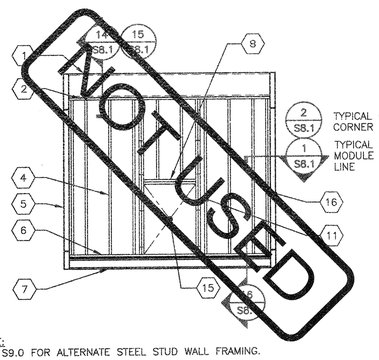
TYPICAL SIDE WALL FRAMING (MONO/DUAL PITCH)

SCALE: 3/8"=1'-0" | A



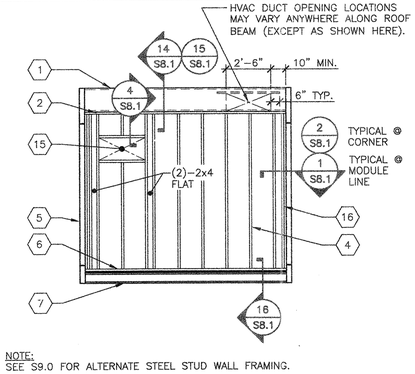
NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

TYP. END WALL FRAMING w/ NO OPENINGS | 1
SCALE: 1/4"=1'-0"



NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

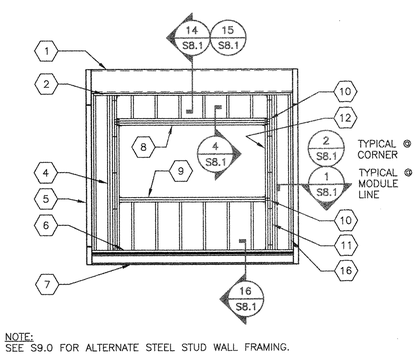
TYP. END WALL FRAMING w/ INDOOR HVAC UNIT (OPTIONAL) | 2
SCALE: 1/4"=1'-0"



NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

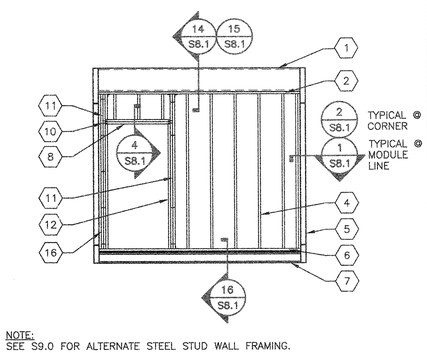
TYP. END WALL FRAMING w/ WALL HUNG HVAC UNIT (OPTIONAL) | 3
SCALE: 1/4"=1'-0"

EXTERIOR WALL FINISH/WALL STUD SCHEDULE



NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

TYPICAL END WALL FRAMING WINDOW | 4
SCALE: 1/4"=1'-0"



NOTE:
SEE S9.0 FOR ALTERNATE STEEL STUD WALL FRAMING.

TYPICAL END WALL FRAMING w/ DOOR | 5
SCALE: 1/4"=1'-0"

OPENING SCHEDULE

DOOR/WINDOW OPENINGS AT TYPICAL NON–STUCCO WALLS @ BLDG CORNERS[3]						
OPENING SIZE	HEADER	WINDOW SILL[2] (AS APPLICABLE)	JAMB/ KING STUDS[1]	JAMB/KING STUD INTERNAILING SPACING w/ 0.131x3" NAILS, STAGGERED	HEADER TO KING STUD NAILS	WINDOW SILL TO KING STUD NAILS
>8'–0" TO 10'–0"	(4) 2x4	(4) 2x4	4	20" O.C. MAX	6	5
>6'–0" TO 8'–0"	(3) 2x4	(3) 2x4	3	20" O.C. MAX	5	4
>3'–0" TO 6'–0"	(2) 2x4	(2) 2x4	3	20" O.C. MAX	5	3
3'–0" OR LESS	(2) 2x4	(2) 2x4	2	20" O.C. MAX	3	3

DOOR/WINDOW OPENINGS AT TYPICAL STUCCO WALLS @ BLDG CORNERS[3]						
OPENING SIZE	HEADER	WINDOW SILL[2] (AS APPLICABLE)	JAMB/ KING STUDS[1]	JAMB/KING STUD INTERNAILING SPACING w/ 0.131x3" NAILS, STAGGERED	HEADER TO KING STUD NAILS	WINDOW SILL TO KING STUD NAILS
>8'–1" TO 10'–0"	(5) 2x4	(5) 2x4	6	16" O.C. MAX	6	6
>6'–1" TO 8'–0"	(3) 2x4	(3) 2x4	5	16" O.C. MAX	5	4
>3'–1" TO 6'–0"	(2) 2x4	(2) 2x4	4	16" O.C. MAX	6	3
3'–0" OR LESS	(2) 2x4	(2) 2x4	3	16" O.C. MAX	3	3

DOOR/WINDOW OPENINGS AT TYPICAL NON–STUCCO WALLS NOT @ BLDG CORNERS[3]						
OPENING SIZE	HEADER	WINDOW SILL[2] (AS APPLICABLE)	JAMB/ KING STUDS[1]	JAMB/KING STUD INTERNAILING SPACING w/ 0.131x3" NAILS, STAGGERED	HEADER TO KING STUD NAILS	WINDOW SILL TO KING STUD NAILS
>8'–0" TO 10'–0"	(4) 2x4	(4) 2x4	3	20" O.C. MAX	6	5
>6'–0" TO 8'–0"	(3) 2x4	(2) 2x4	3	20" O.C. MAX	5	4
>3'–0" TO 6'–0"	(2) 2x4	(2) 2x4	2	20" O.C. MAX	5	3
3'–0" OR LESS	(2) 2x4	(2) 2x4	2	20" O.C. MAX	3	3

DOOR/WINDOW OPENINGS AT TYPICAL STUCCO WALLS NOT @ BLDG CORNERS[3]						
OPENING SIZE	HEADER	WINDOW SILL[2] (AS APPLICABLE)	JAMB/ KING STUDS[1]	JAMB/KING STUD INTERNAILING SPACING w/ 0.131x3" NAILS, STAGGERED	HEADER TO KING STUD NAILS	WINDOW SILL TO KING STUD NAILS
>8'–0" TO 10'–0"	(4) 2x4	(5) 2x4	5	16" O.C. MAX	6	5
>6'–0" TO 8'–0"	(3) 2x4	(2) 2x4	4	16" O.C. MAX	5	4
>3'–0" TO 6'–0"	(2) 2x4	(2) 2x4	3	16" O.C. MAX	5	3
3'–0" OR LESS	(2) 2x4	(2) 2x4	2	16" O.C. MAX	3	3

FOOTNOTES
1. PROVIDE (2) SIMPSON A34 T&B OF KING STUDS TO PLATES FOR OPENINGS GREATER THAN 3'–0". PROVIDE (1) SIMPSON A34 T&B OF KING STUDS TO PLATES FOR OPENINGS 3'–0" OR LESS.
2. WHEN MORE THAN A SINGLE SILL PLATE IS REQUIRED, INTERNAIL w/ 0.131"øx3" NAILS @ 12" O.C. STAGGERED.
3. BUILDING CORNERS ARE DEFINED AS A DISTANCE OF 4 FEET IN BOTH DIRECTIONS FROM EACH CORNER OF THE BUILDING.

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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

WALL FRAMING ELEVATIONS & SCHEDULES - WOOD STUDS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — JOSEPH PATRICK CONNAGHAN — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D'FRISCO — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

8-20-18
RST18175

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2018

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

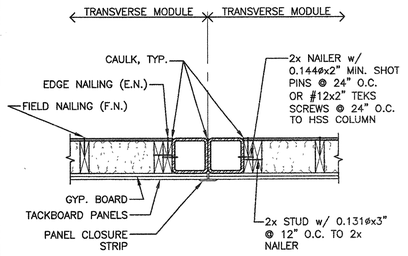
REVISIONS
1
2
3
4

DRAWN BY:
SCALE: AS NOTED
DATE:

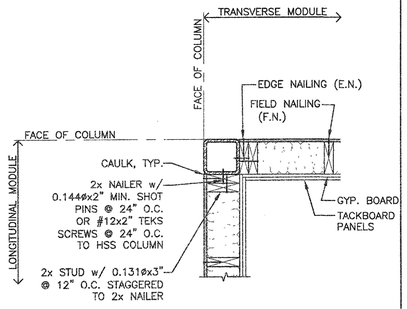
SHEET NUMBER

S8.0

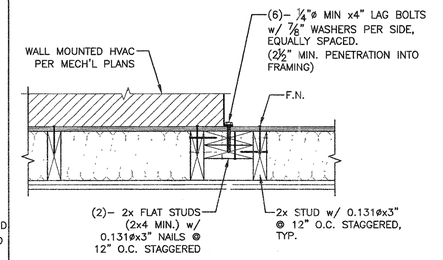
DC-XXXXX — [Job Title] [Location] — DATE: 8/7/2018 3:53:46 PM — PLOTTED: 8/7/2018 3:53:46 PM — X:\Engineering\AE Group Projects\DC-XXXXX\DWG\[DC-XXXXX - 24'x40' (REV.6)* Standard].dwt — 24'x40' (REV.6)* Standard.dwt — 24'x40' (REV.6)* Standard.dwt — Joe Connaghan Professional Architect



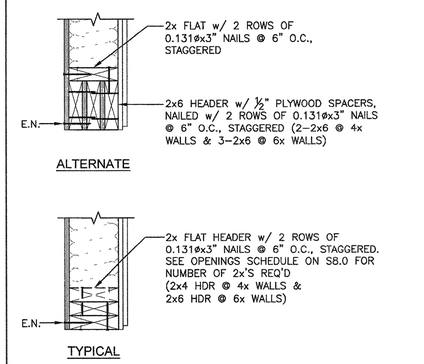
WALL TO COLUMN TYP. DETAIL @ MODLINES 1
FOR COLUMN LOCATION REFER TO ARCH DETAILS — SCALE 1-1/2" = 1'-0"



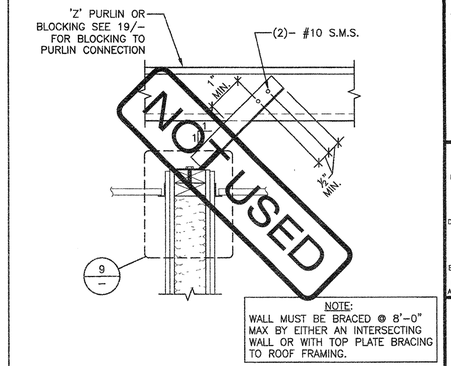
WALL TO COLUMN TYP. DETAIL @ CORNER 2
FOR COLUMN LOCATION REFER TO ARCH DETAILS — SCALE 1-1/2" = 1'-0"



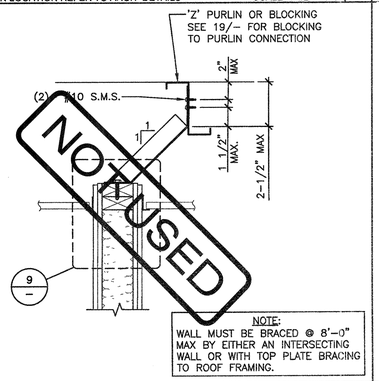
WALL HUNG HVAC ATTACHMENT DETAIL 3
SCALE 1-1/2" = 1'-0"



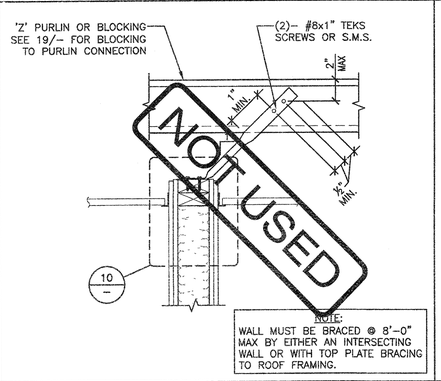
WALL HEADER DETAIL 4
TYPICAL & ALTERNATE — SCALE 1-1/2" = 1'-0"



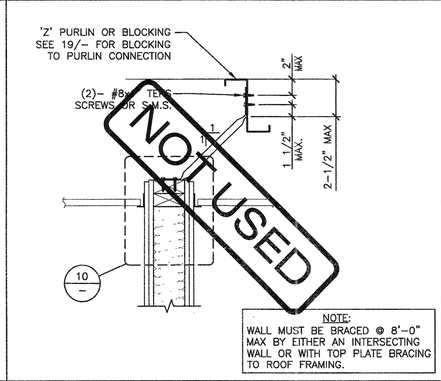
TYP. INTERIOR WALL BRACING 5
BRACE PARALLEL TO PURLINS — SCALE 1-1/2" = 1'-0"



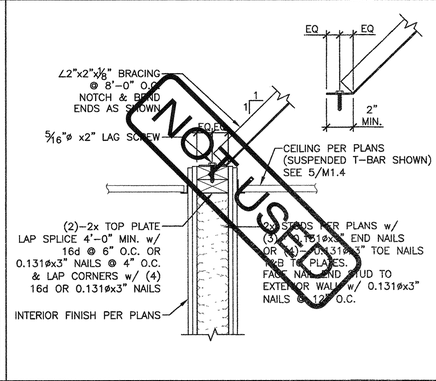
TYP. INTERIOR WALL BRACING 6
BRACE PERPENDICULAR TO PURLINS — SCALE 1-1/2" = 1'-0"



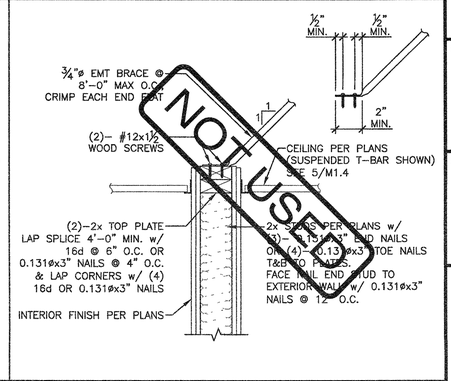
ALT. INTERIOR WALL BRACING w/ EMT BRACE 7
BRACE PARALLEL TO PURLINS — SCALE 1-1/2" = 1'-0"



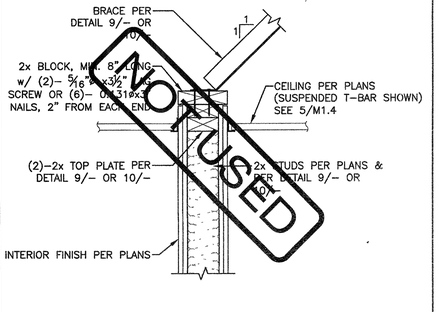
ALT. INTERIOR WALL BRACING w/ EMT BRACE 8
BRACE PERPENDICULAR TO PURLINS — SCALE 1-1/2" = 1'-0"



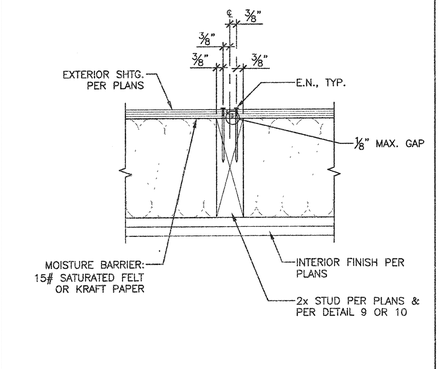
TYP. INTERIOR WALL BRACING 9
INTERIOR PARTITION BRACING — SCALE 1-1/2" = 1'-0"



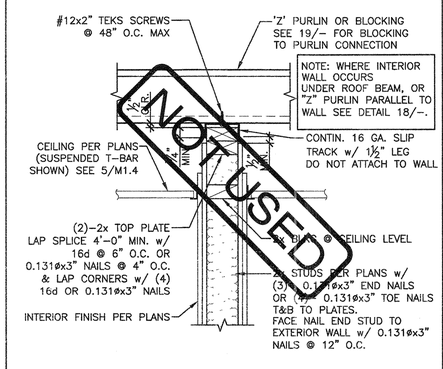
ALT. INTERIOR WALL BRACING 10
INTERIOR PARTITION BRACING w/ EMT BRACE — SCALE 1-1/2" = 1'-0"



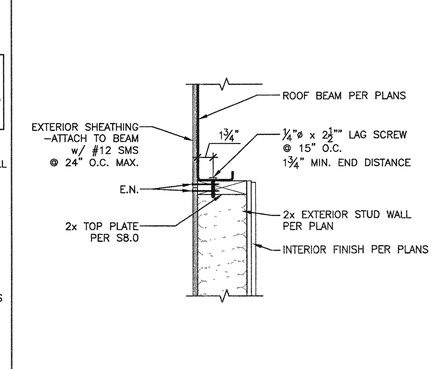
ALT. BLOCKING @ INT. WALL BRACING 11
SCALE 1-1/2" = 1'-0"



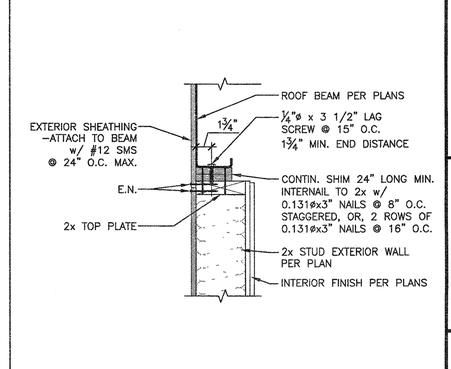
TYP. SHEATHING JOINT 12
SCALE 1-1/2" = 1'-0"



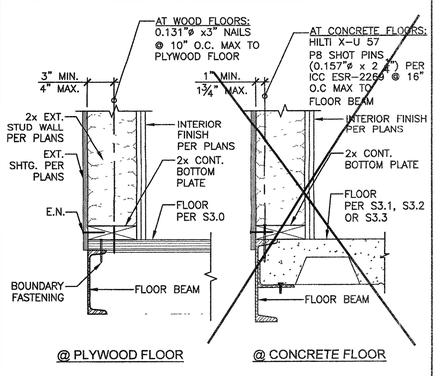
ALT. INTERIOR WALL ATTACHMENT 13
TO PURLINS OR BLOCKING PERPENDICULAR TO WALL — SCALE 1-1/2" = 1'-0"



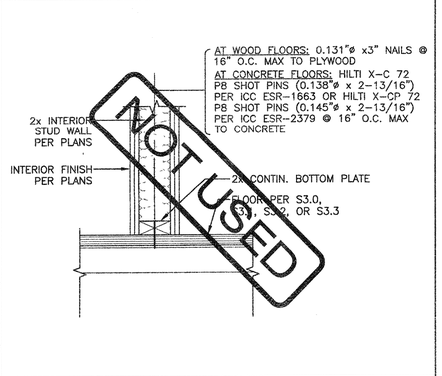
EXTERIOR WALL TO ROOF BEAM DETAIL 14
SCALE 1-1/2" = 1'-0"



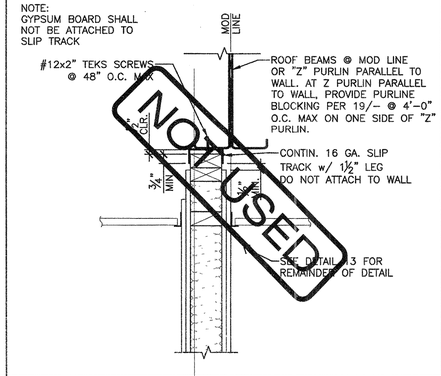
EXTERIOR WALL TO ROOF BEAM DETAIL 15
AT SHIM CONDITION — SCALE 1-1/2" = 1'-0"



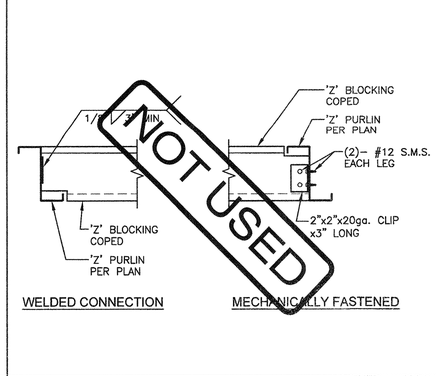
TYP. EXTERIOR WALL TO FLOOR DETAIL 16
SCALE 1-1/2" = 1'-0"



TYP. INTERIOR NON-BEARING WALL ATTACHMENT 17
SCALE 1-1/2" = 1'-0"



TYP. INTERIOR NON-BEARING WALL ATTACHMENT 18
TO ROOF BEAMS @ MODLINE OR 'Z' PURLINS PARALLEL TO WALL — SCALE 1-1/2" = 1'-0"



ALT. INTERIOR WALL ATTACHMENT 19
AT ROOF BEAM

PURLIN BLOCKING CONNECTIONS 20

TYPICAL INTERIOR NON–BEARING PARTITION WALL NOTES:

1. STUD SIZE: 2x4 MIN.
2. STUD SPACING: 16" O.C. MAX
3. WOOD SPECIES & GRADE: PER CARPENTRY NOTES SHEET N1.0 SECTION 6.
4. STUD NAILING TO T&B PLATES: (3)–0.131"ø x 3" END NAILS OR (4)–0.131"ø x 3" TOE NAILS.
5. DOUBLE 2x TOP PLATES: 0.131"ø x 3" NAILS @ 16" O.C. TYP. LAP SPLICE 4'–0" MIN. w/0.131"ø x 3" NAILS @ 4" O.C. & LAP CORNERS w/(4)–0.131"ø x 3" NAILS.
6. INTERSECTIONS: FACE NAIL END STUD TO CROSS WALL (INCLUDING EXTERIOR WALLS) w/0.131"ø x 3" NAILS @ 12" O.C. (ATTACH PER 2/– @ HSS COLUMNS).
7. DOOR, WINDOW, & HVAC OPENINGS: PER REQUIREMENTS FOR EXTERIOR STUCCO WALLS NOT AT BUILDING CORNERS PER SHEET S8.0 EXCEPT FRAMING MAY BE 2x4 MIN. AND HEADER/SILL TO KING STUD NAILING MAY BE PER TYPICAL EXTERIOR WALL (NO STUCCO) NOT AT BUILDING CORNERS.
8. PROVIDE (1) SIMPSON A35 T&B OF KING STUDS TO PLATES @ ALL INTERIOR OPENINGS.

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

WALL FRAMING DETAILS - WOOD STUDS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CAVANAGH — No C12631 Ren 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRESNEDA — No S33804 — STRUCTURAL — STATE OF CALIFORNIA — 01-08-19

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP — DIV. OF THE STATE ARCHITECT — 02 117941 — AC. — FLS — SS. — DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP — DIV. OF THE STATE ARCHITECT — Rev 1 — PC 02–115700 — AC. — FLS — SS. JDS — DATE 6-21-2019

PRE-CHECK (PC) DOCUMENT

CODE 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS

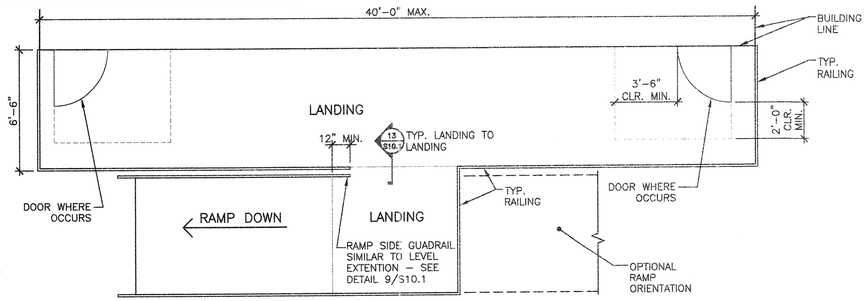
1 GENERAL REVISIONS - 01/02/19
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

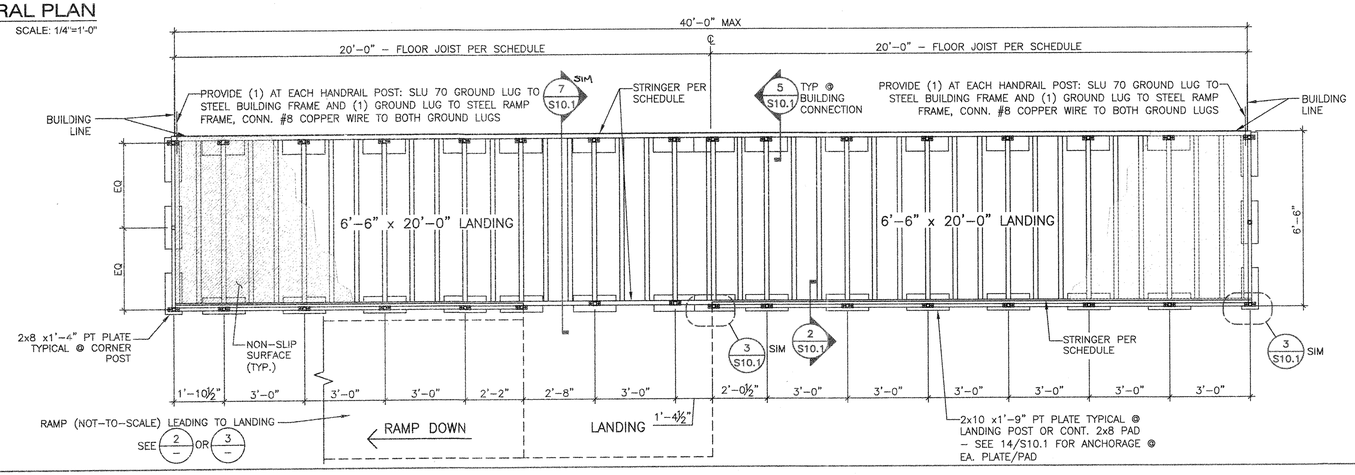
S8.1

ID:\\AMS\...\S8.1.dwg, 8/1/2019 8:15:34 AM, PLOTTED: 8/1/2019 8:15:34 AM BY Emmanuel Mc Dell, 0.4 in/Unit, 0.4 in/Unit, 0.4 in/Unit



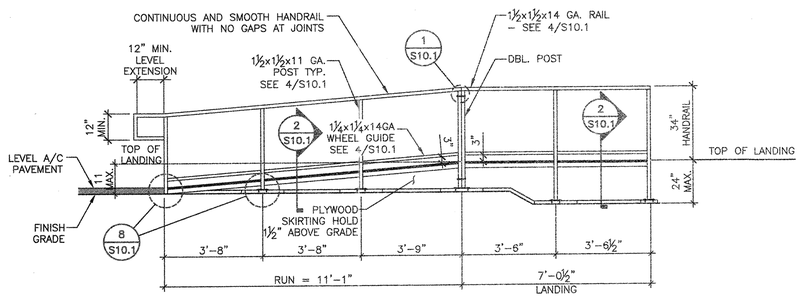
TYPICAL ARCHITECTURAL PLAN

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



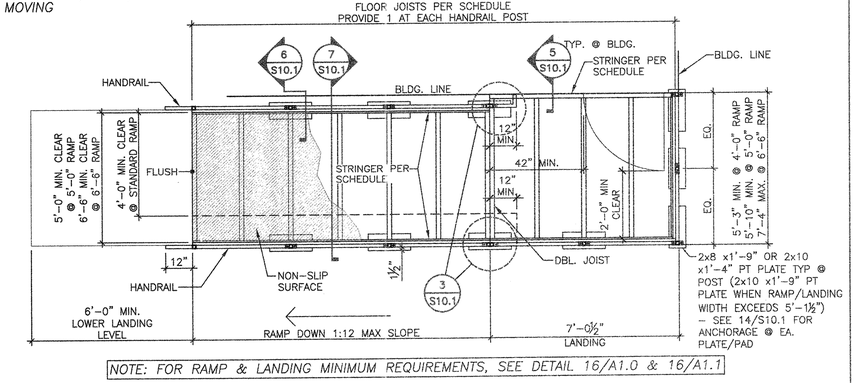
LANDING PLAN OPTION

SCALE: 3/8" = 1'-0" | 1



NOTE: RAMP & LANDING TO BE FABRICATED IN SECTIONS (2 MIN.) FOR MOVING

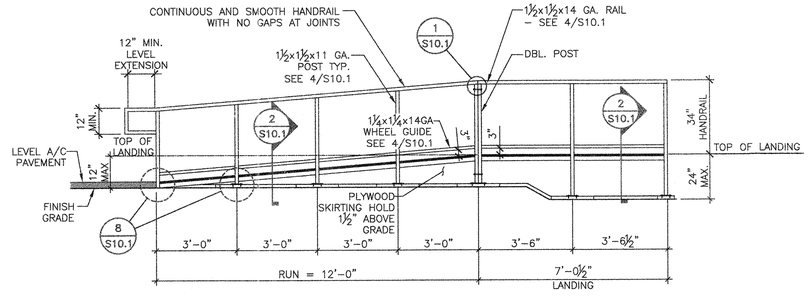
RAMP ELEVATION



NOTE: FOR RAMP & LANDING MINIMUM REQUIREMENTS, SEE DETAIL 16/A1.0 & 16/A1.1

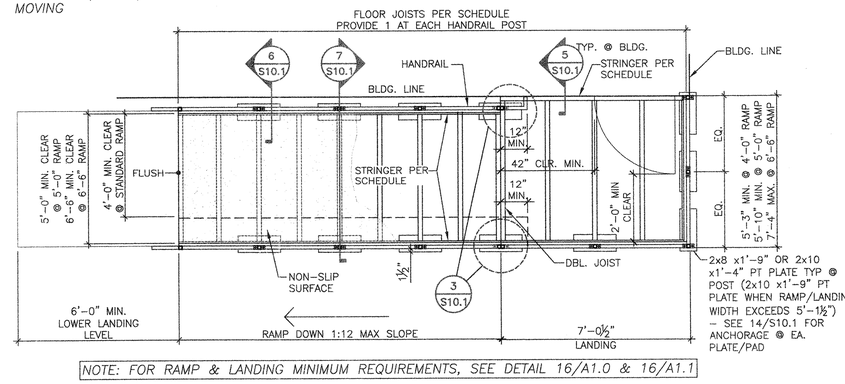
11-FOOT TYPICAL RAMP

SCALE: 3/8" = 1'-0" | 2



NOTE: RAMP & LANDING TO BE FABRICATED IN SECTIONS (2 MIN.) FOR MOVING

RAMP ELEVATION



NOTE: FOR RAMP & LANDING MINIMUM REQUIREMENTS, SEE DETAIL 16/A1.0 & 16/A1.1

12-FOOT TYPICAL RAMP

SCALE: 3/8" = 1'-0" | 3

1. ENTRY RAMP AND LANDING SPECIFICATIONS

EACH BUILDING SHALL HAVE A RAMP AND LANDING TO CONFORM TO TITLE 24 C.C.R. SECTIONS 11B–405, 1010 AND 1012. THE RAMP AND LANDING STRUCTURES INCLUDING HANDRAILS AND WHEEL GUIDE RAILS ARE TO BE PREFABRICATED METAL IN SECTIONS THAT ARE DEMOUNTABLE FOR MOVING AND REINSTALLATION AT A NEW SITE. HANDRAILS AND WHEEL GUIDE RAILS SHALL BE CONTINUOUS AND SMOOTH WITH NO GAPS AT JOINTS. DESIGN SHALL BE SUCH THAT HEIGHT ADJUSTMENT CAN BE MADE AT THE INSTALLATION SITE.

THE RAMP AND LANDING SURFACE SHALL BE ¾" MARINE GRADE PLYWOOD OR 11GA SHEET METAL. RAMP AND LANDING SHALL HAVE A NON–SLIP SURFACE FINISH APPLIED. NON–SLIP FINISH SHALL BE AMCOE GRIP II MANUFACTURED BY AMERICAN ABRASIVE METALS OR COMPARABLE. ALL RAMP SURFACES SHALL BE PAINTED AS INDICATED IN SECTION 9B ON SHEET N1.0. RAMPS SHALL HAVE HANDRAILS ON BOTH SIDES. WALL MOUNTED HANDRAILS SHALL BE OF SIMILAR CONSTRUCTION TO THE INTEGRAL RAMP HANDRAIL. RAMP AND LANDING SHALL BE FULLY SKIRTED WITH THE SAME MATERIAL USED FOR BUILDING SKIRT. SIDES OF RAMP AND LANDING THAT DO NOT ADJOIN BUILDING WALL SHALL BE SKIRTED. ALL EDGES OF THE PLYWOOD SKIRT SHALL BE SUPPORTED AND PROTECTED FROM WEATHER. FOUNDATION MEMBERS SHALL BE AS FOR BUILDING FOUNDATION. ONLY THE FOUNDATION PAD RESTING ON GRADE MAY EXTEND BEYOND THE OUTSIDE FACE OF THE SKIRT 1" MAXIMUM.

2. FLOOR DECKING

¾" MARINE EXTERIOR A.P.A. 48/24 PLYWOOD w/ NON–SLIP SURFACE. DECK SURFACES SHALL BE SEALED ON ALL SIDES. FASTENED TO STEEL FRAMING WITH #10 SELF DRILLING BUGLE HEAD 1" GALV. SCREWS OR 0.144"ø x 1½" MIN. GALV ET&F PINS (IAPMO REPORT ER–3355) OR EQUIV. @ 6" O.C. EDGES AND 12" O.C. FIELD, TYP.

3. ALT. FLOOR DECKING

11 GA. SHEET METAL WITH NON–SLIP SURFACE (0.8 MIN COEFFICIENT OF FRICTION) ATTACHED TO STEEL FRAMING WITH #12x1" STS @ 6" O.C. E.N. & 12" O.C. F.N. MATERIAL STRENGTH SHALL BE 36 KSI MIN. w/ A MODULUS OF ELASTICITY OF 29,500 KSI ± 3%. ACCEPTABLE STEEL MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: ASTM A1011 SS GRADE 36 (Fy=36 KSI) ASTM A653 SS GRADE 37 (Fy=37 KSI) ASTM A1008 SS GRADE 40 (Fy=40 KSI)

4. GROUNDING OF BUILDING COMPONENT

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NECESSARY CONNECTORS TO GROUND THE METAL PORTIONS OF THE BUILDING (I.E. FRAME, RAMP, ETC.) GROUNDING ROD, WIRES AND TESTING SHALL BE PROVIDED BY OTHER AND MEET THE REQUIREMENTS OF I.R. E–1 ISSUED BY D.S.A.

5. RAMP SLOPE

RAMPS SHALL NOT SLOPE MORE THAN 1" RISE OVER A 12" RUN (1:12). CROSS SLOPE SHALL NOT EXCEED 1:48.

6. HANDRAILS

HANDRAILS SHALL BE INSTALLED ON BOTH SIDES OF RAMP AT 34" HIGH MAX.

7. RAMP PLANNING

DUE TO VARYING SITE CONDITIONS, THE MAXIMUM HEIGHT OF FINISH FLOOR FROM GRADE IS 24", THEREFORE IT IS POSSIBLE THAT THE ACCESS RAMP ATTACHED TO THE BUILDING COULD BE 24'–0" LONG AT A SLOPE OF 1:12. ARCHITECT MUST TAKE INTO ACCOUNT THAT THE RAMP SUPPLIED BY AMS, INC. IS 12'–0" LONG AT A SLOPE OF 1:12, THEREFORE THE ARCHITECT WILL HAVE TO DESIGN AND PROVIDE SUFFICIENT DETAILS OF RAMP EXTENSIONS AND BOTTOM LANDING DEPENDING ON PARTICULAR SITE CONDITIONS. IN NO WAY IS AMS, INC. RESPONSIBLE FOR ANY RAMP EXTENSION EXCEEDING THE ORIGINAL PLAN AS SHOWN ON THIS SHEET.

8. LANDINGS

OVERALL LENGTH OF A LANDING MAY VARY FROM 60" UP TO 40'–0". LENGTH MUST CONFORM TO APPROVED LANDING. SLOPE LANDING NOT TO EXCEED 1:48 TO PREVENT WATER PONDING.

9. FASTENERS

ALL EXTERIOR USE FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL.

10. WELDING

THE DESIGN PROFESSIONAL HAS EXEMPTED THIS RAMP FROM SPECIAL INSPECTION REQUIREMENTS FOR MATERIAL IDENTIFICATION AND STRUCTURAL WELDING. RAMP SHALL NOT BE MODIFIED NOR HAVE SHIMS ADDED CAUSING THE DISTANCE BETWEEN THE HIGHEST RAMP WALKING SURFACE AND THE ADJACENT GRADE TO BE MORE THAN 30 INCHES. IF THIS CONDITION IS NOT MET, STRUCTURAL TESTING AND/OR INSPECTION WILL BE REQUIRED TO VERIFY MATERIALS AND STRUCTURAL WELDING. THIS APPLIES TO SCOPES OF WORK INCLUDING NEW CONSTRUCTION, ALTERATION, OR RELOCATION OF THE RAMP.

RAMP NOTES

STRINGER SCHEDULE(1)

RAMP/LANDING WIDTH	MAX STRINGER SPANS (FT)		
	3'–0"	3'–6"	3'–9"
4'–0"	2x2x14 GA	2x2x14 GA	2x2x14 GA
5'–0"	2x2x14 GA	2x2x14 GA	2x2x14 GA
5'–5½"	2x2x14 GA	2x2x14 GA	2x2x14 GA
5'–10"	2x2x14 GA	2x2x14 GA	2x2x11 GA
6'–6"	2x2x14 GA	2x2x14 GA	2x2x11 GA
7'–4"	2x2x14 GA	2x2x14 GA	2x2x11 GA

(1) SEE 4/S10.1 FOR LIGHT GAUGE STEEL TUBE PROPERTIES, SIZES INDICATED ARE MINIMUM. THICKER TUBES MAY BE USED. HSS 2x2x1/8 OR LARGER PER 11/S10.1 MAY BE SUBSTITUTED FOR LIGHT GAUGE TUBES.

JOIST SCHEDULE(1)

RAMP/ LANDING WIDTH	MAX JOIST SPACING									
	2x2x14 GA.		2x2x11 GA.		HSS 2x2x⅛		HSS 2x2x¼		HSS 2x2x¼	
	DECKING		DECKING		DECKING		DECKING		DECKING	
	PLY.	11 GA.	PLY.	11 GA.	PLY.	11 GA.	PLY.	11 GA.	PLY.	11 GA.
4'–0"	28"	24"	30"	24"	30"	24"	30"	24"	30"	24"
5'–0"	14"	14	21"	21"	21"	21"	28"	24"	30"	24"
5'–5½"	14"	14"	21"	21"	21"	21"	28"	24"	30"	24"
5'–10"	10"	10"	15"	15"	15"	15"	19"	19"	23"	23"
6'–6"	6"	6"	9"	9"	9"	9"	12"	12"	14"	14"
7'–4"	5"	5"	7"	7"	7"	7"	9"	9"	11"	11"

(1) SEE 4/S10.1 FOR LIGHT GAUGE STEEL TUBE PROPERTIES, AND 11/S10.1 FOR HSS PROPERTIES

RAMP/ LANDING MEMBER SCHEDULE

American Modular Systems
767 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

TYPICAL RAMP PLANS & NOTES

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — TIMOTHY PATRICK MURPHY — No. C12631 — Ren. 3-31-19 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRIESEN — No. P-8380 — STRUCTURAL — STATE OF CALIFORNIA

8-24-2018
RST18175

THESE DRAWINGS ARE PRELIMINARY AND NOT FER CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC PA FLS TZ SS PMK
DATE

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC PA FLS TZ SS JDH
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

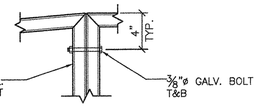
REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

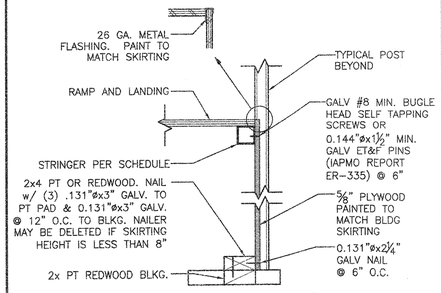
SHEET NUMBER

S10.0

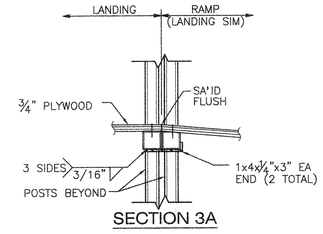
02-XXXXX - [pr_sea] BLK.DWG - SHEET: 8/22/2018 4:38 PM - PLOTTED: 8/22/2018 4:53 PM - K:\Engineering\PC DWG Files\2016 CODE\02-115700 - 2018 - 24'x40'-120'x40' Standard\A1S - 02 - 115700 - Ramp Plans & Notes.dwg



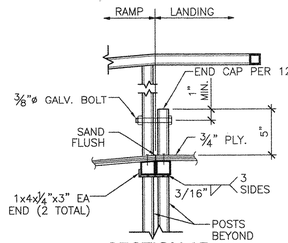
DETAIL
SCALE: 3/8"=1'-0" | 1



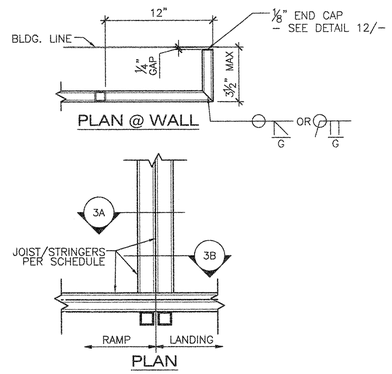
RAMP SKIRT DETAIL
SCALE: 3/8"=1'-0" | 2



SECTION 3A



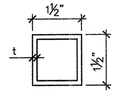
SECTION 3B



PLAN @ WALL

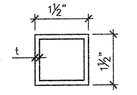
PLAN

RAMP TO LANDING CONNECTION DETAIL
SCALE: 3/8"=1'-0" | 3



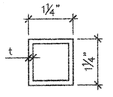
1½"x1½"x11 GA. TUBE

A = 0.602 IN²
Sx = 0.244 IN³
Ix = 0.183 IN⁴
t = 0.112" MIN.
(0.1175" DESIGN)



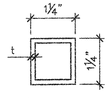
1½"x1½"x14 GA. TUBE

A = 0.390 IN²
Sx = 0.173 IN³
Ix = 0.129 IN⁴
t = 0.068" MIN.
(0.0713" DESIGN)



1¼"x1¼"x14 GA. TUBE

A = 0.319 IN²
Sx = 0.114 IN³
Ix = 0.072 IN⁴
t = 0.068" MIN.
(0.0713" DESIGN)



1¼"x1¼"x11 GA. TUBE

A = 0.497 IN²
Sx = 0.163 IN³
Ix = 0.102 IN⁴
t = 0.112" MIN.
(0.1175" DESIGN)

2x2x11 GA TUBE

A = 0.837 IN²
Sx = .479 IN³
Ix = .479 IN⁴
t = 0.112" MIN.
(0.1175" DESIGN)

2x2x14 GA TUBE

A = 0.533 IN²
Sx = 0.324 IN³
Ix = 0.324 IN⁴
t = 0.068" MIN.
(0.0713" DESIGN)

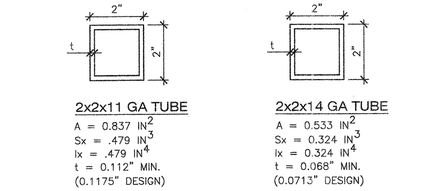
MATERIAL STRENGTH SHALL BE 36 KSI MIN. w/ A MODULUS OF ELASTICITY OF 29,500 KSI ± 3%. ACCEPTABLE STEEL MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

ASTM A1011 SS GRADE 36 (Fy=36 KSI)
ASTM A653 SS GRADE 37 (Fy=37 KSI)
ASTM A1008 SS GRADE 40 (Fy=40 KSI)

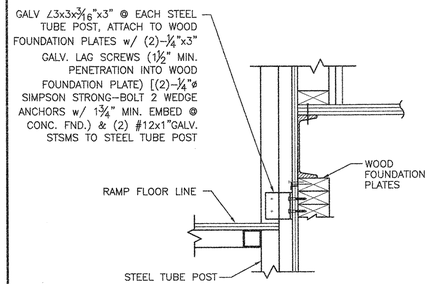
MATERIAL SHALL BE GIVEN A RUST INHIBITIVE COATING.

THE MATERIAL THICKNESS OF LIGHT GAUGE STEEL MEMBERS, IN THEIR END US, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ABOVE. THE MATERIAL GAUGE DESIGNATION SHALL BE USED AS REFERENCE ONLY. SPECIFIED STEEL TUBE THICKNESSES ARE MINIMUM. THICKER TUBES MAY BE USED.

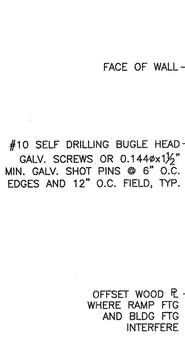
LIGHT GAUGE STEEL TUBE PROPERTIES
SCALE: 3/8"=1'-0" | 4



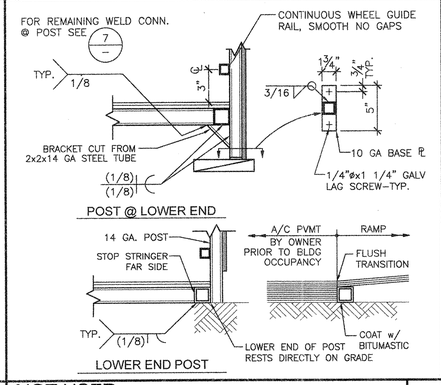
LANDING ATTACHMENT DETAIL
SCALE: 3/8"=1'-0" | 5



RAMP CONNECTION DETAIL
SCALE: 3/8"=1'-0" | 6

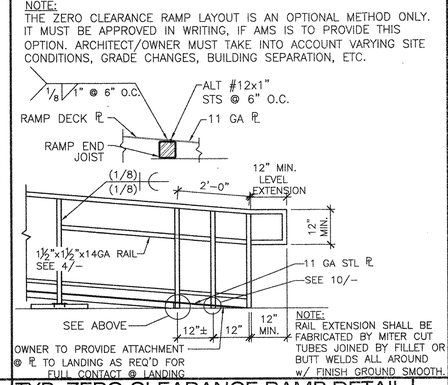


HANDRAIL & RAMP SECTION
SCALE: 3/8"=1'-0" | 7

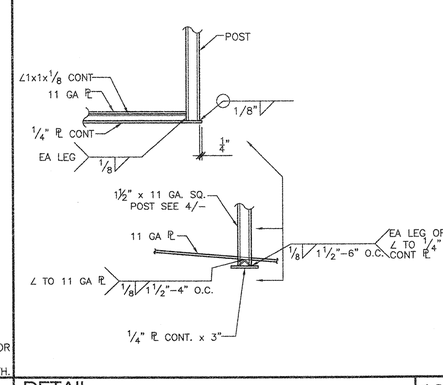


LOWER END POST

NOT USED
8



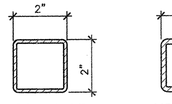
TYP. ZERO CLEARANCE RAMP DETAIL
SCALE: 3/8"=1'-0" | 9



DETAIL
SCALE: 3/8"=1'-0" | 10

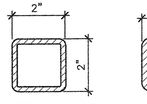
1. STEEL IN CONTACT WITH GROUND OR PT WOOD FOUNDATION PLATE SHOULD BE GALVANIZED.

GENERAL CONNECTION NOTES



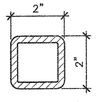
HSS 2x2x1/8

ASTM A500 GRADE B
Fy = 46 KSI
A = 0.840 IN²
Sx = 0.486 IN³
Ix = 0.486 IN⁴



HSS 2x2x3/16

ASTM A500 GRADE B
Fy = 46 KSI
A = 1.19 IN²
Sx = 0.641 IN³
Ix = 0.641 IN⁴

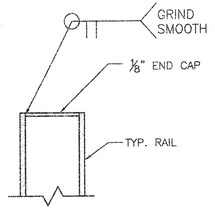


HSS 2x2x1/4

ASTM A500 GRADE B
Fy = 46 KSI
A = 1.51 IN²
Sx = 0.747 IN³
Ix = 0.747 IN⁴

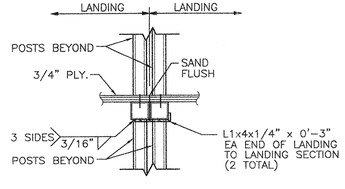
MATERIAL SHALL BE GIVEN A RUST INHIBITIVE COATING

HSS PROPERTIES
11

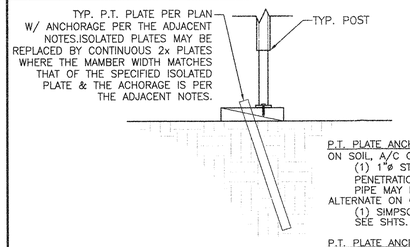


NOTE: END CAP MAY ALSO BE PLASTIC SNAP–ON CAP

END CAP DETAIL
SCALE: N.T.S. | 12



LANDING TO LANDING CONNECTION
SCALE: 3/8" = 1'-0" | 13



P.T. PLATE ANCHORAGE (ISOLATED PLATES)
ON SOIL, A/C OR CONCRETE PAVING:
(1) 1"ø STANDARD WEIGHT (1.315 ACTUAL O.D.) HOT DIPPED GALV. PIPE PER PLATE w/ 12" MIN. PENETRATION MEASURED VERTICALLY BELOW SOIL OR PAVING SURFACE. DRILL PLATE 1⅜"ø MAX. PIPE MAY BE DRIVEN MAX 45° ANGLE TO VERTICAL.
ALTERNATE ON CONC PAVING ONLY:
(1) SIMPSON STRONG–BOLT 2 THRU EA PLATE w/ 3½" MIN. CONC. EMBEDMENT. SEE SHTS. S2.0–S2.3 FOR INSTALLATION REQUIREMENTS.

P.T. PLATE ANCHORAGE (CONTINUOUS PLATES)
ON SOIL, A/C OR CONCRETE PAVING:
1"ø STANDARD WEIGHT (1.315 ACTUAL O.D.) HOT DIPPED GALV. PIPE @ 4'–0" O.C. MAX. w/ 12" MIN. PENETRATION MEASURED VERTICALLY BELOW SOIL OR PAVING SURFACE. PROVIDE A MIN. OF (2) PIPE ANCHORS FOR ANY SECTION OF PLATE. DRILL PLATE 1⅜"ø MAX. PIPE MAY BE DRIVEN MAX 45° ANGLE TO VERTICAL.

ALTERNATE ON CONC PAVING ONLY:
(1) SIMPSON STRONG–BOLT 2 THRU PLATE @ 3'–0" O.C. MAX. w/ 3½" MIN. CONC. EMBEDMENT. PROVIDE A MIN. OF (2) ANCHORS FOR ANY SECTION OF PLATE. SEE SHTS. S2.0–S2.3 FOR INSTALLATION REQUIREMENTS.

P.T PLATE ANCHORAGE
SCALE: 3/8" = 1'-0" | 14

AMS®
American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
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PRE–CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

RAMP DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — THOMAS PATRICK CONNOR — No. C12631 Ren. 3-31-18 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRESCO — No. 93380 — STRUCTURAL — STATE OF CALIFORNIA

8-24-2018
RST18175

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 11 7941
AC FLS SS
DATE SEP 19 2018

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02–115700
AC FLS SS
DATE 8-31-2018

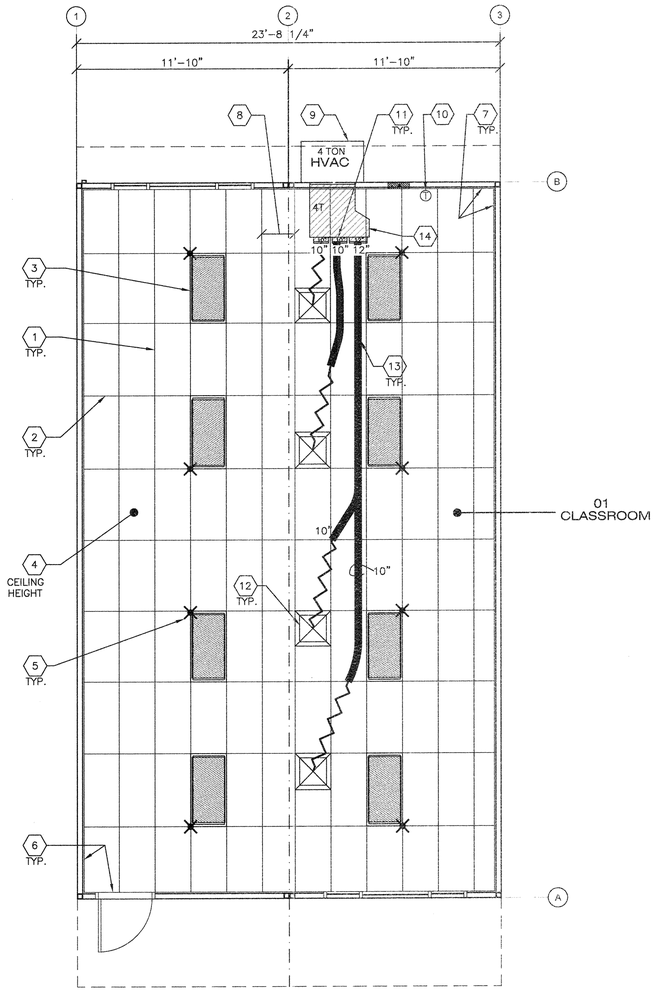
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
1
2
3
4

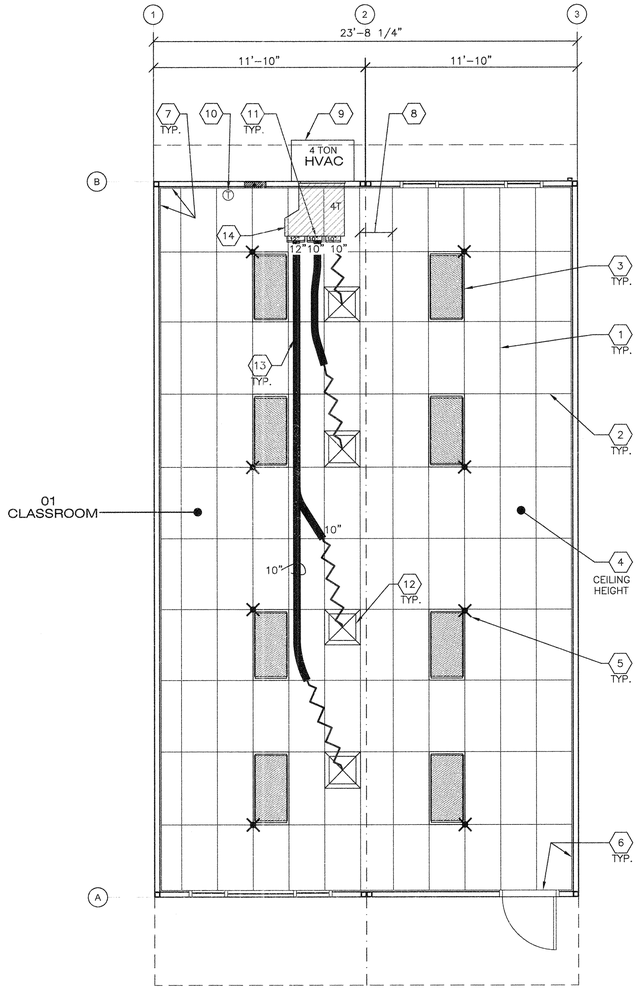
DRAWN BY: -
SCALE: AS NOTED
DATE: -

SHEET NUMBER

S10.1



SERIAL #'s
20-700-1071 THROUGH 20-700-1095
TOTAL OF (25) BUILDINGS THIS CONFIGURATION



SERIAL #'s
20-700-1096 THROUGH 20-700-1170
TOTAL OF (75) BUILDINGS THIS CONFIGURATION

1. MAIN RUNNER TYP.
2. CROSS RUNNER TYP.
3. INTERIOR LIGHT FIXTURE REFER TO SHEET SHEET E1.0 FOR SPEC'S
4. CEILING HEIGHT @ 8'-6" NOMINAL
5. SPLAY WIRE SEE 3/M1.4 FOR DETAILS
6. FIXED CEILING END
7. FREE CEILING END
8. CENTER SECTION THAT CROSSES MODULE LINE TO BE FIELD INSTALLED
9. HVAC- WALL HUNG UNIT
10. THERMOSTAT TOP OF UNIT MAX 48" A.F.F. 11B-308
11. CONCEALED SUPPLY AIR DUCT ABOVE T-BAR CEILING
12. TYPICAL 4-WAY SUPPLY AIR REGISTER LOCATION ANDY SIZE MAY VARY PER CEILING LAYOUT AND BUILDING SIZE
13. RIGID DUCT- NOMINAL 10" (5'-0" MAX. FLEX DUCT LENGTH ALLOWED FROM REGISTER)
14. RETURN AIR AS PART OF UNIT

KEY NOTES

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2013 CBC, SECTIONS 161A.1.18 THROUGH 161A.1.26 AND ASCE 7-10 CHAPTER 13, 26, AND 30.

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 AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

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

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPM#).

COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

SHEET TITLE

REFLECTIVE CEILING PLAN
24'x40' BUILDING

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
KENDRICK PATRICK CRUMP
No. C-26031
Ren. 3-31-21
STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
ACC FLS SS SMK
DATE SEP 19 2019

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

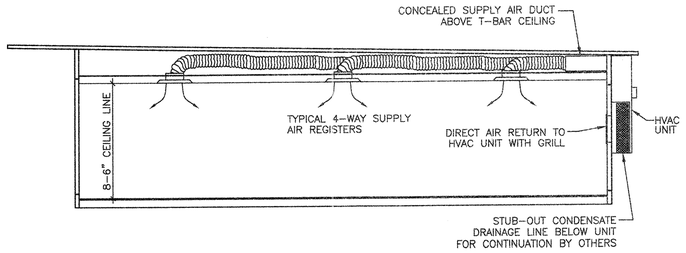
SHEET NUMBER

M1.0

REFLECTED CEILING PLAN (LEFT HAND BUILDING) SCALE: 1/4" = 1'-0" | 1

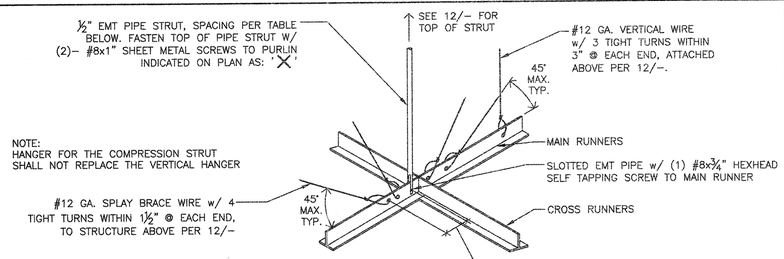
REFLECTED CEILING PLAN (RIGHT HAND BUILDING) SCALE: 1/4" = 1'-0" | 2

GENERAL NOTES



TYPICAL MECHANICAL SECTION

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

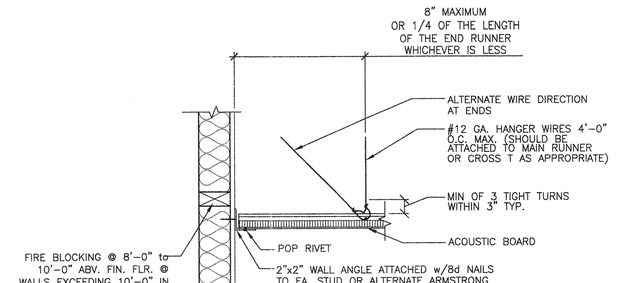


BRACING SCHEDULE	
SITE SPECIFIC S_S (PER SHEET TS)	MAX. SPACING
☒ $S_S \leq 2.60$	8'x12'
☐ $S_S \geq 2.60$	8'x8'

NOTES:
1. MAXIMUM BRACE SPACING SHALL BE PER ADJACENT SCHEDULE.
2. THERE SHALL BE A BRACE ASSEMBLY A DISTANCE OF NOT MORE THAN ONE HALF OF THE ABOVE SPACING FROM EACH SURROUNDING WALL, EXPANSION JOINT AND AT THE EDGES OF ANY CEILING VERTICAL OFFSET. FOR EXAMPLE, WHERE THE BRACE SPACING IS 8'x12", THE DISTANCE SHALL BE 4 FEET IN THE DIRECTION OF THE 8 FOOT SPACING AND 6 FEET IN THE DIRECTION OF THE 12 FOOT SPACING. FOR FURTHER INFORMATION REFER TO SPECIFICATIONS ON SHEET M1.7.

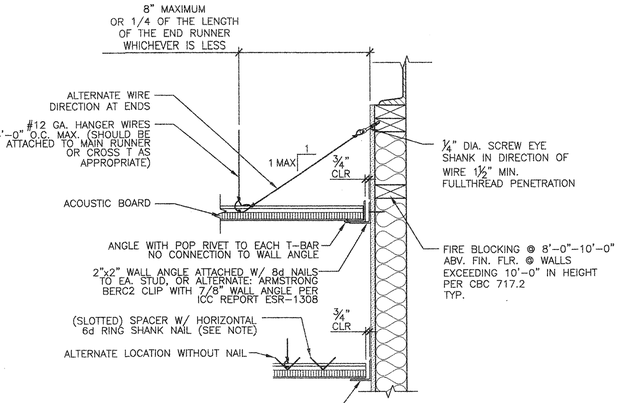
STRUT/SPLAY WIRE ASSEMBLY DETAIL

NOT TO SCALE | 2

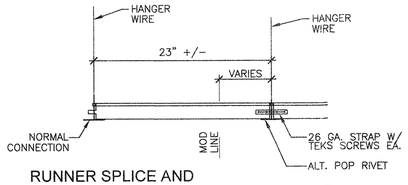


A FIXED END

NOTE:
NAILS AT THE END OF HORIZONTAL STRUTS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTERLINE OF SPAN OF STRUT.



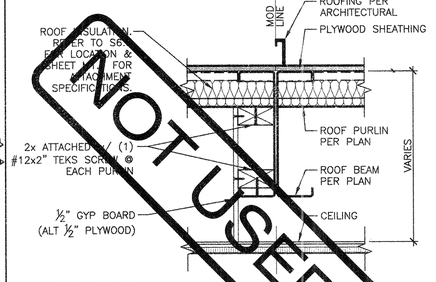
B FREE END



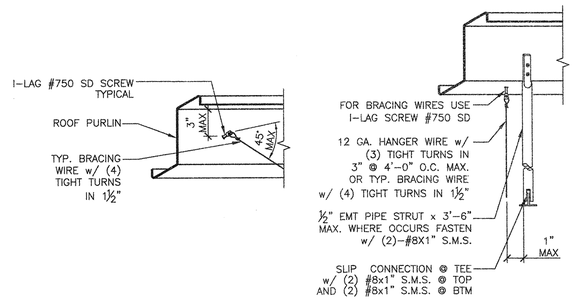
C RUNNER SPLICE AND CEILING CONNECTION @ MODULE LINE

SUSPENDED CEILING ATTACHMENT DETAILS

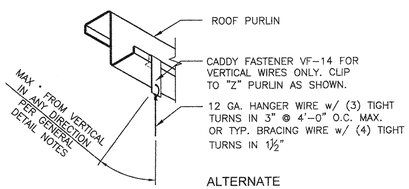
SCALE: 1-1/2" = 1'-0" | 5



C.B.C. SECTION 718.4.3:
"DRAFTSTOPPING SHALL BE INSTALLED IN ATTICS AND CONCEALED ROOF SPACES, SUCH THAT ANY HORIZONTAL AREA DOES NOT EXCEED 1,000 SQUARE FEET."
NOTE EXCEPTION #2:
IN GROUP A, E, H, I, L OCCUPANCIES, WHERE AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 IS INSTALLED, THE AREA BETWEEN DRAFT STOPS MAY BE 9,000 SQUARE FEET AND THE GREATEST HORIZONTAL DISTANCE MAY BE 100 FEET.



AT STEEL JOIST OR RAFTER | TO BOTTOM OR WEB OF JOIST OR RAFTER | ALTERNATE WIRE CONNECTIONS

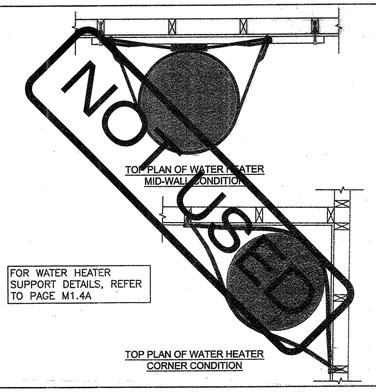


ALTERNATE WIRE CONNECTIONS | TO BOTTOM OF JOIST OR RAFTER

GENERAL DETAIL NOTES:
1. TYPICAL HANGER WIRES & VERTICAL STRUTS SHALL BE INSTALLALED AT A MAXIMUM 1:6 ANGLE FROM VERTICAL.
2. TYPICAL SPLAY BRACING WIRES & WIRES FOR SLACK BRACING OF FIXTURES OR REGISTERS SHALL BE INSTALLALED AT A MAXIMUM 45° ANGLE FROM THE SURFACE TO WHICH THEY ARE ATTACHED.

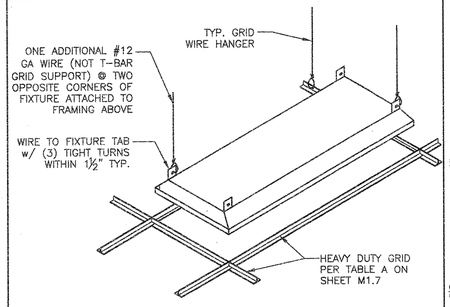
SUSPENDED CEILING TO PURLIN CONNECTION DETAILS

NOT TO SCALE | 12



WATER HEATER STRAP DETAIL

NOT TO SCALE | 6

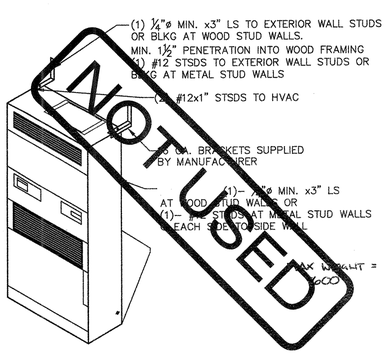


LIGHT FIXTURE ATTACHMENT

NOT TO SCALE | 7

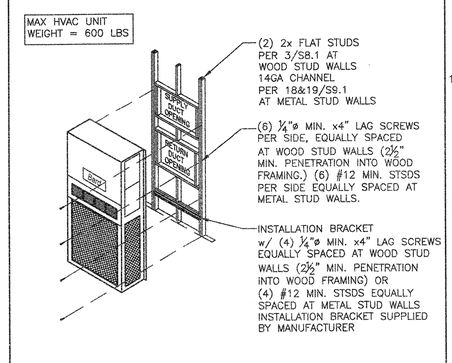
CEILING DRAFT STOP DETAIL

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



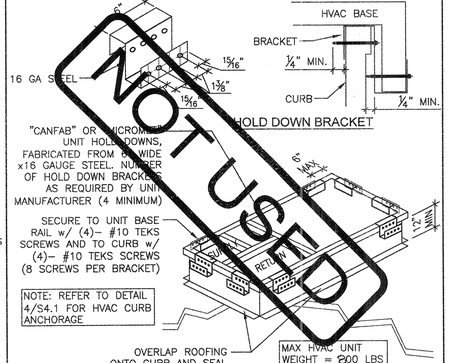
INTERIOR HVAC ANCHORAGE

NOT TO SCALE | 9



WALL MOUNT HVAC ANCHORAGE

NOT TO SCALE | 10



OPTIONAL HVAC ROOF CURB

NOT TO SCALE | 11

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

MECHANICAL AND CEILING DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT PATRICK LOWE No. C12631 Ren. 3-31-19 STATE OF CALIFORNIA

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AC. FLS SS
DATE: SEP 19 2019

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CODE: 2016 CBC
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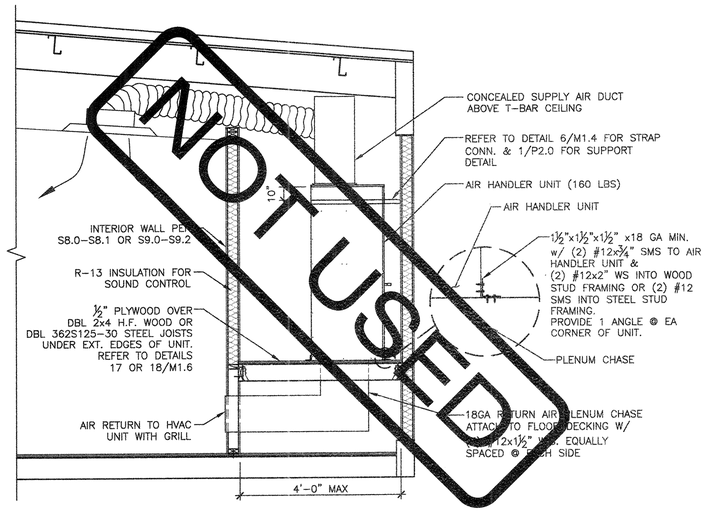
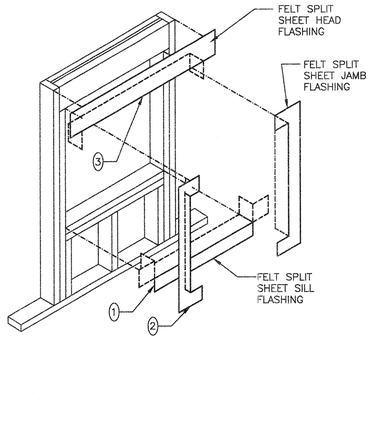
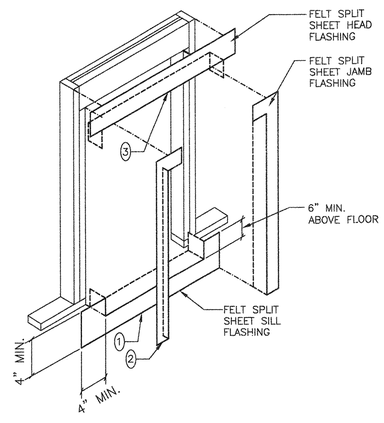
02-XXXXX - [pc cad] BlkA3M02 - SiteID: x/27/2018 9:50 AM PLOTTED: 4/27/2018 1:41 PM K:\Engineering\AC Dtrl Files\2018 CDS\02-117700 - 2018 - 24'x40'-120'x40' Standard\01 - 02 - 117700 - M1.4 - Mechanical Bldg Section & Ceiling Details.dwg



SPLIT SYSTEM CROSS SECTION — SCALE: 1/2" = 1'-0" — 1



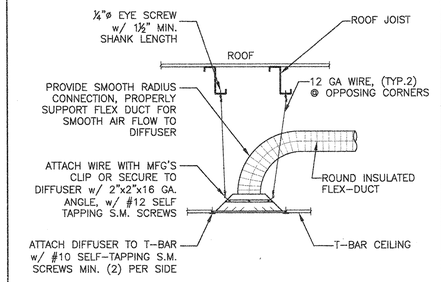
WINDOW CONDITION



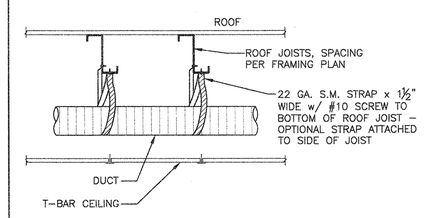
DOOR CONDITION

(#) = SEQUENCE OF ORDER

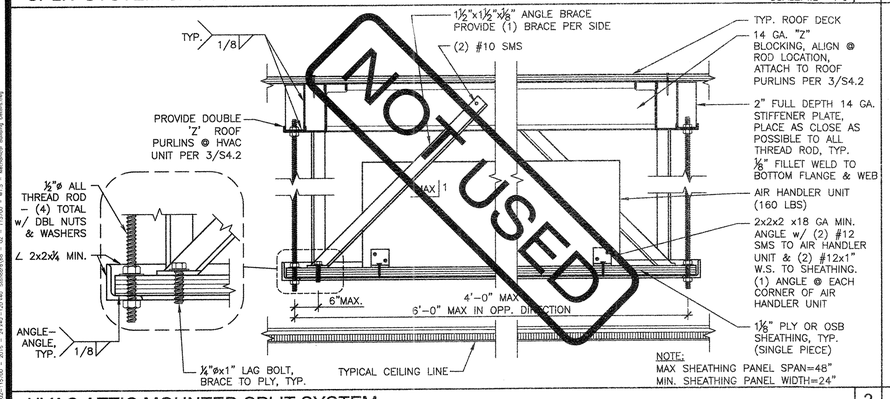
FLASHING @ WALL OPENINGS — NOT TO SCALE — 2



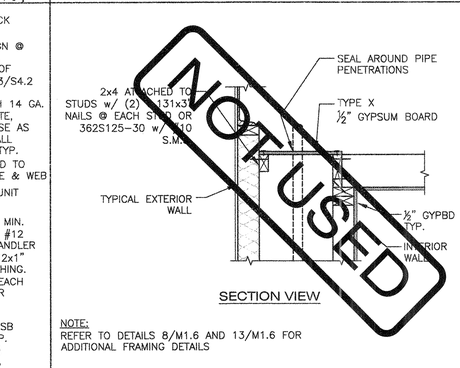
REGISTER MOUNTING DETAIL — NOT TO SCALE — 7



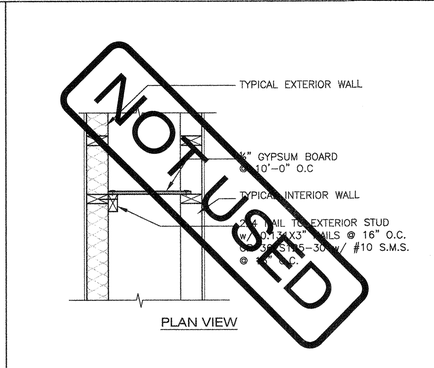
FLEX DUCTING SUPPORT DETAIL — NOT TO SCALE — 8



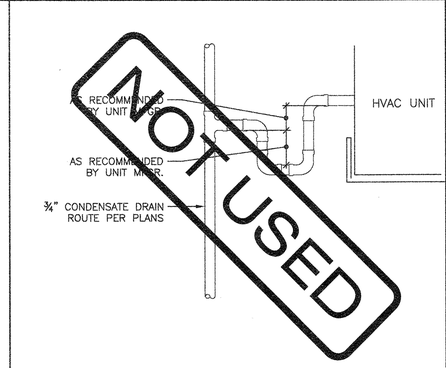
HVAC ATTIC MOUNTED SPLIT SYSTEM — NOT TO SCALE — 3



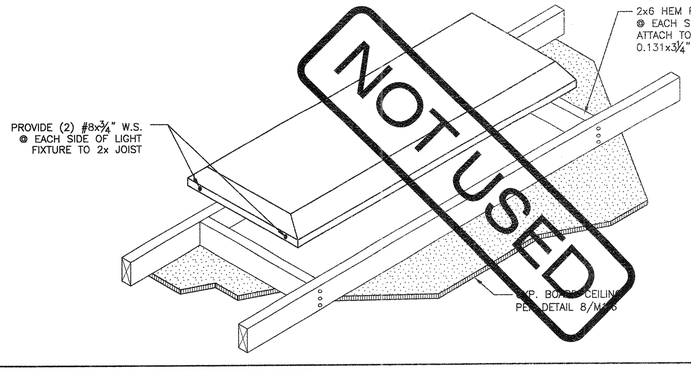
DRAFT STOP @ PLUMBING CHASE — SCALE: 1" = 1'-0" — 4



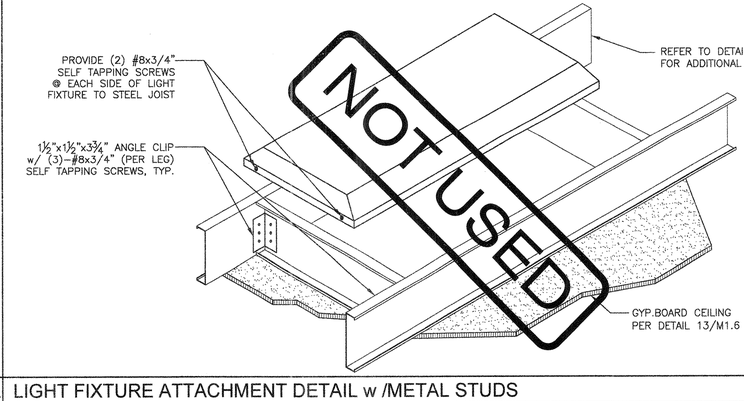
DRAFT STOP @ PLUMBING CHASE — SCALE: 1" = 1'-0" — 5



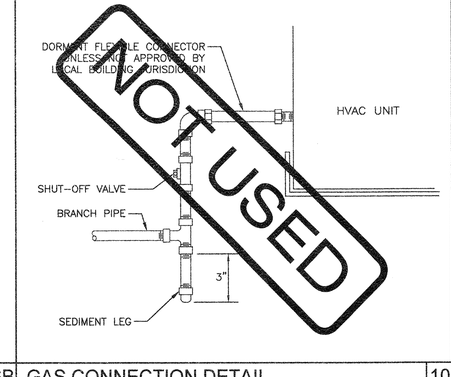
CONDENSATE DETAIL — NOT TO SCALE — 9



LIGHT FIXTURE ATTACHMENT DETAIL — NOT TO SCALE — 6A



LIGHT FIXTURE ATTACHMENT DETAIL w /METAL STUDS — NOT TO SCALE — 6B



GAS CONNECTION DETAIL — NOT TO SCALE — 10

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02 117941
AC. FLS SS
DATE SEP 10 2019

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NOT USED

1. CEILING GRID SYSTEMS IN SEISMIC ZONES D, E, F, MUST BE RATED "HEAVY DUTY", AS DEFINED BY ASTM C635. PROVIDE GRID COMPONENTS AS SPECIFIED IN TABLE A BELOW, OR APPROVED EQUAL. GRID METAL FRAMING PIECES SHALL BE DESIGNED TO CARRY A MEAN ULTIMATE TEST LOAD OF NOT LESS THAN 180 LBS. IN COMPRESSION AND TENSION, PER ASTM E580.

2. SUSPENSION WIRE SHALL BE CLASS 1 ZINC-COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641. WIRE SHALL BE #12 GAGE WITH SOFT TEMPER AND A MINIMUM TENSILE STRENGTH OF 70 KSI.

3. WHEN HANGER AND BRACING WIRES ARE ATTACHED TO CONCRETE ABOVE, TESTS PER D.S.A. IR 25-2.13 SECTION 6.8 MUST BE PERFORMED. POWER ACTUATED FASTENERS IN CONCRETE ARE NOT ALLOWED FOR BRACING WIRE.

4. 12 GA. (MINIMUM) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4'-0" x 4'-0 GRID SPACING, ATTACH TO MAIN RUNNER. SPLICES WILL NOT BE PERMITTED IN ANY HANGER WIRES UNLESS SPECIFICALLY APPROVED BY D.S.A.

5. PROVIDE 12 GA. HANGER WIRES WITHIN 8" OF THE ENDS OF ALL MAIN AND CROSS RUNNERS OR AT 1/4 OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, AT THE PERIMETER OF THE CEILING AREA.

6. PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO MAINTAIN HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1:6 OUT OF PLUMB ARE TO HAVE COUNTER-BRACED WIRES.

7. CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS. CEILING GRID MEMBERS SHOULD BE AT LEAST 3/4 INCH CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE AND A MINIMUM OF 3/4 INCH CLEAR OF WALL.

8. PERIMETER SUPPORT ANGLES SHALL BE AT LEAST 2 INCHES WIDE, OR USE PROPRIETARY ANGLES & SEISMIC CLIPS THAT HAVE A VALID EVALUATION REPORT.

9. AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A 16 GA. WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNERS MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNERS IS 8" OR LESS, THIS INTERLOCK IS NOT REQUIRED.

10. CEILING AREAS EXCEEDING 2,500 SQUARE FEET SHALL HAVE A SEISMIC SEPARATION JOINT.

11. EXPANSION JOINTS SHALL BE PROVIDED AT INTERSECTIONS OF CORRIDORS, LOBBIES AND OTHER SIMILAR AREAS.

12. PENETRATIONS THROUGH THE CEILING, SUCH AS FIRE SPRINKLERS, SHALL HAVE A 2 INCH OVERSIZED RING, SLEEVE OR ADAPTER TO ALLOW FREE MOVEMENT INDEPENDENT OF THE CEILING. ALTERNATE: A FLEXIBLE SPRINKLER FITTING THAT ALLOWS 1 INCH OF MOVEMENT CAN BE USED.

13. LATERAL FORCE BRACING IS REQUIRED FOR ALL CEILINGS, EXCEPT CEILING AREAS OF 144 SQUARE FEET OR LESS WITH PERIMETER WALLS THAT ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES. SPACING OF BRACING ASSEMBLIES MUST BE SHOWN ON THE PLANS.

14. LATERAL FORCE BRACING CONSISTS OF A SET OF 1 COMPRESSION STRUT AND FOUR #12 GA. SPLAYED BRACING WIRES, ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING:
    (A) FOR SCHOOL BUILDINGS, PLACE SETS OF SPLAY WIRES AT A SPACING NOT MORE THAN 8 FEET BY 12 FEET ON CENTER.
    (B) PROVIDE SPLAY WIRES AT LOCATIONS NOT MORE THAN 1/2 THE ABOVE SPACING FROM EACH PERIMETER WALL OR AT THE EDGE OF VERTICAL CEILING OFFSETS. THE SLOPE OF THESE WIRES SHOULD NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHOULD BE TAUT WITHOUT CAUSING THE CEILING TO LIFT. SPLICES IN BRACING WIRES ARE NOT PERMITTED WITHOUT SPECIAL D.S.A. APPROVAL.

15. COMPRESSION STRUTS SHALL BE ABLE TO RESIST THE VERTICAL PULL INDUCED BY BRACING WIRES, AND SHALL NOT BE MORE THAN 1:6 OUT OF PLUMB.

16. FASTEN HANGER WIRES WITH NOT LESS THAN 3 TIGHT TURNS WITHIN A DISTANCE OF 3 INCHES. FASTEN SPLAY WIRES WITH 4 TIGHT TURNS WITHIN A DISTANCE OF 1-1/2 INCHES. HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE WIRE ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE FORCES ACTING ON THE WIRE.

17. SEPARATE ALL CEILING HANGING AND BRACING WIRES AT LEAST 6 INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT ETC.

18. ATTACH ALL LIGHT FIXTURES AND AIR TERMINALS TO THE CEILING GRID RUNNERS WITH SCREWS OR APPROVED FASTENERS AS REQUIRED TO RESIST A HORIZONTAL FORCE EQUAL TO THE FIXTURES' WEIGHT. MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH LIGHT FIXTURE.

19. FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS WEIGHING LESS THAN 56 POUNDS MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM, BUT THEY MUST HAVE A MINIMUM OF TWO #12 GA. SLACK SAFETY WIRES ATTACHED AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. FIXTURES WEIGHING LESS THAN 10 POUNDS MAY HAVE AT LEAST ONE #12 GA. SLACK SAFETY WIRE.

20. LIGHT FIXTURES AND OTHER CEILING DEVICES WEIGHING MORE THAN 56 POUNDS SHALL BE INDEPENDENTLY SUPPORTED BY NO LESS THAN FOUR (4) TAUT #12 GAGE WIRES, ATTACHED TO THE STRUCTURE ABOVE. WIRES MUST BE ABLE TO SUPPORT FOUR (4) TIMES THE WEIGHT OF THE UNIT.

21. ALL LIGHT-WEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID PER SECTION 2.6.3 OF D.S.A. IR 25-2.13. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS SHALL HAVE A #12 GAUGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE PER SECTION 7.2.2 OF D.S.A. IR 25-2.13. DEVICES WEIGHING MORE THAN 20 LBS. SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE PER SECTION 7.3.4 OF D.S.A. IR 25-2.13.

22. PANELS THAT WEIGH MORE THAN 0.5 LBS/SQ.FT. (PSF), OTHER THAN MINERAL FIBER ACOUSTIC TILES, SHALL BE POSITIVELY ATTACHED TO CEILING SUSPENSION RUNNERS.

23. ACOUSTICAL PANELS SHALL BE 5/8" MINIMUM THICK, MINERAL FIBERBOARD OR VINYL-FACED FIBERGLASS, LAY-IN PANELS, SQUARE EDGE, ASTM FLAME SPREAD CLASS I, 24"x48" MODULAR SIZE, LIGHT REFLECTION 75% MINIMUM, NOISE REDUCTION COEFFICIENT OF 0.65 MINIMUM, MAXIMUM SMOKE DENSITY NOT TO EXCEED 450. FLAME SPREAD RATING MAXIMUM OF 200. PANELS ARE NOT ALLOWED TO SUPPORT ANY FIXTURE, TERMINAL OR DEVICE.

TABLE A - HEAVY DUTY GRID COMPONENTS

MANUFACTURER	MAIN TEE	H.D. 4' CROSS TEE	H.D. 2' CROSS TEE	RUNNER SPLICE DETAIL
DONN/USG	DX-26	DX-424	DX-216	N/A
ARMSTRONG	7301	XL7341	XL8320	N/A
CHICAGO/ROCKFON	200.01	1274.01	1202.01	N/A

NOTE: ALL GRID COMPONENTS SHALL BE BY THE SAME MANUFACTURER

METAL SUSPENSION SYSTEMS FOR LAY IN PANEL CEILING

HVAC CFM CHART

	MODEL #	DESCRIPTION	MAX. CFM	UNIT WEIGHT (LBS)	EER	COP	CLIMATE ZONE(S)
BARD WALL HUNG	~~W42HA-A~~	~~3½ TON HEAT PUMP~~	~~1250~~	~~471~~	~~10.2~~	~~3.0~~	~~1-16~~
	W48HA-A	4 TON HEAT PUMP	1400	480	10.0	3.0	1-16
	~~W60HA-A~~	~~5 TON HEAT PUMP~~	~~1450~~	~~525~~	~~10.1~~	~~3.0~~	~~1-16~~

HVAC CFM CHART

	MODEL #	DESCRIPTION	MAX. CFM	UNIT WEIGHT (LBS)	EER	COP	CLIMATE ZONE(S)
BARD Q-TEC	Q43H3-A	3½ TON HEAT PUMP	1200	615	10.0	3.0	1-16
	Q48H3-A	4 TON HEAT PUMP	1400	620	10.0	3.0	1-16
	Q60H3-A	5 TON HEAT PUMP	1550	625	10.0	3.0	1-16

HVAC CFM CHART

	MODEL #	DESCRIPTION	MAX. CFM	UNIT WEIGHT (LBS)	EER	SEER	CLIMATE ZONE(S)
CARRIER ROOF MOUNT	50VT-C42----3--TP	3½ TON HEAT PUMP	1400	435	11.5	14.0	1-16
	50VT-C48----3--TP	4 TON HEAT PUMP	1600	456	12.0	14.0	1-16
	50VT-C60----3--TP	5 TON HEAT PUMP	1750	487	11.5	14.0	1-16

HVAC CFM CHART

	MODEL #	DESCRIPTION	AIR HANDLER MODEL #	MAX. CFM	UNIT WEIGHT (LBS)	EER	SEER	CLIMATE ZONE(S)
CARRIER SPLIT DX SYSTEM	25HCE442A003	3½ TON HEAT PUMP	FX4DN043	3610	170	11.5	14.0	1-16
	25HCE448A003	4 TON HEAT PUMP	FX4DN049	4046	170	11.7	14.0	1-16
	25HCE460A003	5 TON HEAT PUMP	FX4DN061	4046	198	11.7	14.0	1-16

HVAC SCHEDULE

BUILDING SIZE	# OF HVAC		
	3½ TON HVAC	4 TON HVAC	5 TON HVAC
☒ 24'x40'	1		
☐ 36'x40'		1	
☐ 48'x40'	2		
☐ 60'x40'		2	
☐ 72'x40'	3		2
☐ 84'x40'		3	
☐ 96'x40'	4		3
☐ 108'x40'		4	
☐ 120'x40'	5		

INSULATION SCHEDULE

ZONE	WALL	ROOF		FLOORS (NON-CONCRETE)	CONCRETE FLOORS
		BATTS	OTHER		
1-14, & 15	*R-13	**R-19	***R-1	R-13	-
16	*R-13	**R-19	***R-1	R-13	-

*R-5 RIGID INSULATION TO BE USED OVER METAL FRAMED WALLS
**R-19 w/ 22 GA WIRE @ 16" O.C.
***R-1 MAY BE ACHEIVED w/ POLYSTYRENE OR INSULATION TAPE APPLIED TO TOP FLANGE OF PURLINS, OR EQUAL.

HVAC SCHEDULES

HEATING VENTILATING AND AIR CONDITIONING (HVAC)

1. HEAT PUMP: SINGLE PACKAGE WALL-MOUNTED AIR-TO-AIR ELECTRIC HEAT PUMP UNIT SHALL BE RATED IN ACCORDANCE WITH A.R.I. STANDARD 240-77. MAXIMUM AC SIZE FOR THIS BUILDING WILL BE A 5-TON UNIT. ALL UNITS SHALL BE 230/208 VOLT, 1 PHASE SYSTEM, UL TESTED & APPROVED OR COMPARABLE, AND MEET CURRENT ENERGY STANDARDS.
   A. THE SYSTEM SHALL MAINTAIN AN AUTOMATICALLY CONTROLLED INDOOR CLASSROOM TEMPERATURE OF 78 DEGREES F. WHEN THE OUTDOOR DRY BULB TEMPERATURE VARIES BETWEEN 100 DEGREES F. IN THE SUMMER.
   B. THE SYSTEM MUST MAINTAIN THE ABOVE TEMPERATURE WHEN THE DAMPER IS ADJUSTED TO USE APPROXIMATELY ONE-THIRD FRESH AIR.
2. DUCTWORK
   A. CONSTRUCT ALL DUCTWORK OF GALVANIZED SHEET METAL IN ACCORDANCE WITH C.M.C., ASHRAE GUIDE EQUIPMENT VOLUME, AND SMACNA LOW VELOCITY DUCT CONSTRUCTION MANUAL, LATEST EDITIONS. ALL DUCTWORK SHALL BE INSULATED WITH 1" THICK FIBERGLASS DUCT WRAP WITH VAPOR BARRIER. PROVIDE 1" DUCT ATTENUATION AT ALL DUCTWORK WITHIN 2'-0" OF HVAC UNIT.
   B. NON-METALLIC DUCTWORK OPTION: IN ACCESSIBLE CONCEALED PORTIONS OF DUCT SYSTEM, RIGID 1" FIBERGLASS OR INSULATED FLEX-DUCT WITH VAPOR BARRIER MAY BE SUBSTITUTED FOR SHEET METAL DUCTWORK. ALL DUCTWORK WITHIN 2'-0" OF THE HVAC UNIT AND ALL INTERFACE CONNECTIONS SHALL BE METAL. DUCTWORK AND REINFORCEMENT SHALL BE DESIGNED FOR 2" STATIC PRESSURE. REFERENCE BRANDS: OWENS-CORNING FIBERGLASS DUCTBOARD, 1" THICK, AND MICRO-AIRE TYPE 475. NON-METALLIC DUCTWORK SHALL CONFORM TO NFPA 90-A AND SMACNA CLASS 1 RATING.
3. AIR DUCT INSULATION AND LININGS SHALL COMPLY WITH FLAME SPREAD LESS THAN OR EQUAL TO 25, SMOKE GENERATION LESS THAN OR EQUAL TO 50.
4. SUPPLY AIR DIFFUSERS SHALL BE 675 CFM MAXIMUM, 12" ROUND. 1" FIBERGLASS OR FLEXDUCT DUCTWORK SPECIFICALLY DESIGNED TO PROVIDE AIR THERMAL COOLING SYSTEMS. 24"x8"x1" MICRO-AIRE TYPE #475 OWENS-CORNING, KNAUF, CERTAINTEED, OR EQUAL AND 90-B: UL #131 TEST, CLASS 1 RATING WITH "SMACNA".
5. REGISTERS AND DIFFUSERS: PROVIDE THREE (MINIMUM) 4-WAY THROW AIR DIFFUSERS AS MANUFACTURED BY CARNES, TITUS, HART AND COOLEY, METALAIRE, SHOEMAKER, BARBER-COLEMAN OR KRUEGER COMMERCIAL GRADE GRILLS AND REGISTERS.
6. AIR CONDITIONING CONTROLS: PROVIDE ELECTRONIC PROGRAMMABLE THERMOSTAT. THERMOSTAT SHALL HAVE THE FOLLOWING FUNCTIONS:
   A. 5 AND 2 WEEKDAY/WEEKEND PROGRAMMING DAYS WITH 4 SEPARATE TIME/TEMPERATURE SETTINGS FOR A 24-HOUR PERIOD.
   B. KEY BOARD LOCKOUT SWITCH.
   C. PROGRAMMABLE DISPLAY.
   D. 2-HOUR OVERRIDE MINIMUM.
   E. STATUS INDICATED LED'S.
   F. BATTERY BACK-UP.
   G. PROVIDE LOCKING CLEAR THERMOSTAT COVER WITH THERMOSTAT COVER WITH ACCESS HOLE FOR PROGRAM OVERRIDE. WHITE RODGERS 1F92-371. MOUNT TOP OF BOX @ 48" A.F.F. MAX.
7. THERMAL INSULATION
   A. ROOF INSULATION: R-19 WITH 22 GA. WIRE @ 16" O.C. & R-1 TOP OF PURLINS.
   B. WALLS INSULATION: R-13 KRAFT FACED. (R-5 INSULATION OVER METAL FRAMED WALLS)
   C. NON-CONCRETE FLOORS INSULATION: R-13
   D. CONCRETE FLOORS INSULATION: N/A
   E. FLAME SPREAD AND SMOKE DEVELOPMENT SHALL CONFORM TO CALIFORNIA BUILDING CODE SEC. 720.
8. FACTORY-MADE AIR DUCTS
   A. FACTORY-MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL CONFORM TO THE REQUIREMENTS OF C.M.C. SECTION 601.0.
   B. EACH PORTION OF A FACTORY-MADE AIR DUCT SYSTEM SHALL BE IDENTIFIED BY THE MANUFACTURER WITH A LABEL OR OTHER SUITABLE IDENTIFICATION INDICATING COMPLIANCE WITH C.M.C. SECTION 601.0 AND ITS CLASS DESIGNATION. THESE DUCTS SHALL BE LISTED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING AND THE REQUIREMENTS OF C.M.C. SECTION 601.0.
   C. DUCT SUPPORT FLEX DUCT TO BE SUPPORTED WITH 1-1/2" WIDE x26 GA. GALV. STRAP @ MAX 6'-0" O.C. ATTACH TO RAFTER WITH TWO #8 S.M.S. @ EACH END.
   D. SUPPLY AIR PLENUM TO BE SUPPORTED WITH 1-1/2" WIDE x26 GA. GALV. STRAPS MINIMUM 2 PER PLENUM.
   E. SUPPLY AIR BOX AND DIFFUSERS TO BE SUPPORTED WITH (2) 12 GA. HANGER WIRES TO BOX @ OPPOSITE CORNERS.
   F. SUPPLY AIR BOX AND DIFFUSERS TO BE BRACED WITH (2) 12 GA. SLACK WIRES TO BOX @ OPPOSITE CORNERS. ATTACH SUPPLY AIR DIFFUSERS TO CEILING GRID TO RESIST A LATERAL LOAD EQUAL TO THE WEIGHT OF THE DIFFUSER AND SUPPLY AIR BOX WITH TWO #8 S.M.S.
9. FIREBLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
   A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES;
   B. AT THE CEILING AND FLOOR LEVELS;
   C. AND AT 10-FOOT (3048mm) INTERVALS BOTH VERTICAL AND HORIZONTAL.
   REFERENCE 2016 CBC SECTION 718.
10. THE INTERIOR ENVIRONMENT SHALL BE ASSEMBLED WITH PRODUCTS THAT CONTRIBUTE TO A HEALTHY INDOOR AIR QUALITY (IAQ). THE FOLLOWING SHALL COMPLY TITLE 24, PART 11 ("CAL-GREEN"), SECTION 5.504.4.
    (SEE SHEET N1.0, SECTION 9C "INTERIOR AIR QUALITY CONTROL")
11. HVAC FILTER
    A. FILTERS SHALL HAVE A "MINIMUM EFFICIENCY REPORTING VALUE" OF 8 (MERV 8) AND SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL, PER 2016 CEC SECTION 5.504.5.3.
    B. INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INCLUDING THE MERV RATING, PER 2016 CEC SECTION 5.504.5.3.1

HVAC NOTES

AMS® American Modular Systems
787 Spreckels Ave., Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
www.americanmodular.com

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

CEILING & MECHANICAL NOTES & SCHEDULES

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — GREGORY PATRICK CUNNINGHAM — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS SMK
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

~~IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS SMK
DATE 8-31-2018~~

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

REVISIONS
1
2
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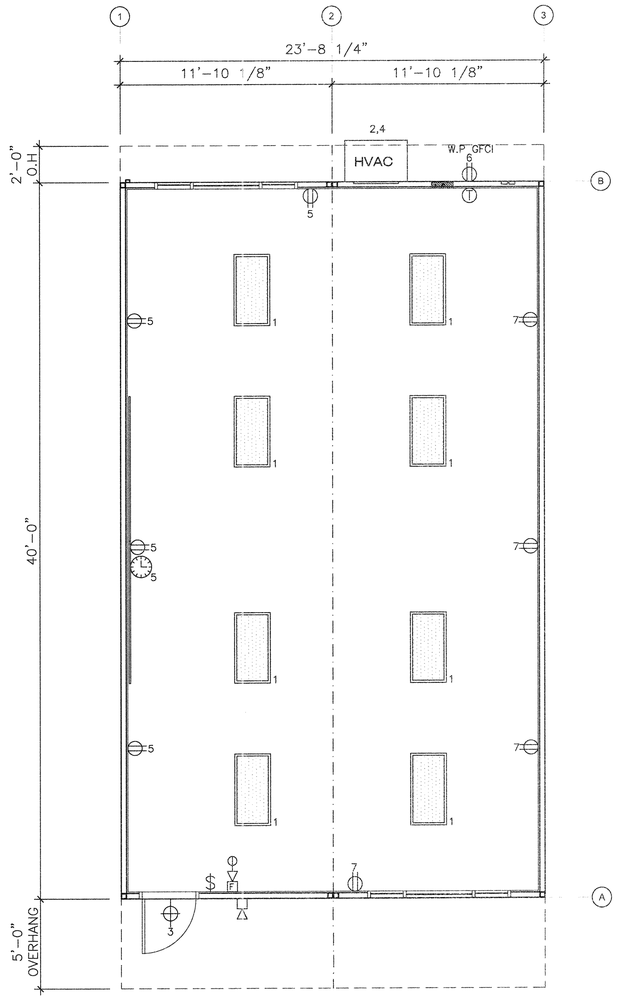
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

M1.7

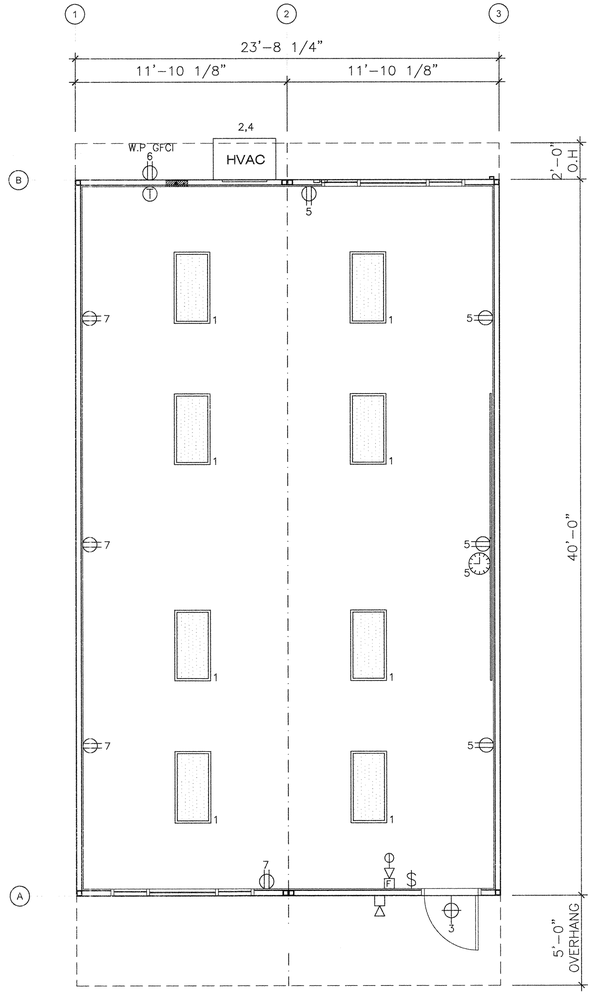
25, 2/2016 by cunningham AMS - 1/8/2016 4:35 PM W:\Documents\AE Jobs\2016 JOBS\[16-115700 - 2016 - 24'x40'-120'x40' Standard] M1.7 - Ceiling & Mechanical Notes.dwg



SERIAL #'s
20-700-1071 THROUGH 20-700-1095
TOTAL OF (25) BUILDINGS THIS CONFIGURATION

ELECTRICAL PLAN (LEFT HAND BUILDING)

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



SERIAL #'s
20-700-1096 THROUGH 20-700-1170
TOTAL OF (75) BUILDINGS THIS CONFIGURATION

ELECTRICAL PLAN (RIGHT HAND BUILDING)

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

Panel: TYPICAL — PHASE: SINGLE — VOLTS: 120/240 — MAIN (AMPS): 125 — BUSS (AMPS): 125 — LOCATION: INTERIOR — FEED: OUT BACK - ABOVE FLOOR — MOUNTING: RECESSED

OBJECT DESCRIPTION	WATTS PER	QTY	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT #	LEG A	LEG B	CKT #	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	QTY	WATTS PER	OBJECT DESCRIPTION
INT. LIGHTS	50	8		400		20	1	#12	1	X		2	#4	2	60	5760		X	1	5760	HVAC
EXT. LIGHTS	100	1			100	20	1	#12	3		X	4	-	-	-		5760	X	-	5760	-
RECEPTS	180	5		900		20	1	#12	5	X		6	#12	1	20	180			1	180	W.P. GFI
RECEPTS	180	4			720	20	1	#12	7		X	8	#12	1	20		0				SPARE
				0					9	X		10				0					
					0				11		X	12					0				
				0					13	X		14				0					
					0				15		X	16					0				
				0					17	X		18				0					
					0				19		X	20					0				
				0					21	X		22				0					
					0				23		X	24					0				
				0					25	X		26				0					
					0				27		X	28					0				
				0					29	X		30				0					
LEG TOTALS				1300	820											5940	5760	LEG TOTALS			

LCL=2880+13820=16700

TOTAL WATTS: 16700 — LEG BALANCE: 4.8% — TOTAL AMPS: 69.58

ELECTRICAL PANEL SCHEDULE

1. F.A.: STUB-UP ALL FIRE ALARM JUNCTION BOXES TO ACCESSIBLE ATTIC SPACE WITH 1/2" MIN. GALV. THIN WALL TUBING (EMT). DO NOT CONNECT FIRE ALARM CONDUIT WITH ANY OTHER ELECTRICAL CONDUIT.
2. IF OPTIONAL DOOR OCCURS, A PULL STATION J-BOX AND EXIT SIGN ARE REQUIRED. PULL STATIONS ARE REQUIRED AT EVERY EXIT.
3. STUB OUT LOCATIONS FOR ELECTRICAL PANEL, FIRE ALARM, AND DATA BOXES SHOWN ARE DIAGRAMMATICAL ONLY. EXACT LOCATIONS MAY VARY +/- SEVERAL FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS. POINT OF CONNECTION WILL BE AT FACE OF BUILDING.
4. SEE TYPICAL CLASSROOM LAYOUT FOR LOCATIONS OF ALL DEVICES. FIXTURE MOUNTING SHALL COMPLY WITH CALIFORNIA SEISMIC REGULATIONS.
5. THE LIGHTS FOR EACH ROOM OVER 250' SQ FT SHALL BE CONTROLLED BY ULTRASONIC OCCUPANCY SENSOR---WATT STOPPER W-500A, W-1000A, OR W-2000A (OR EQUAL) BASED ON THE ROOM SIZE, IN CONJUNCTION WITH BI-LEVEL SWITCHING.

GENERAL NOTES

NOTES

A. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE PLACEMENT OF HEAT, SMOKE DETECTORS, EVACS AND PULL STATIONS AND COMPLETE FIRE ALARM SYSTEM WHEN THE SITE SPECIFIC PROJECT IS REQUIRED TO MEET THE PROVISIONS OF SB 575 & CBC 907.2.3.

B. AT ANY SPACE REQUIRING 2 OR MORE EXITS PROVIDE EXIT SIGNS (CBC 1011) AND EMERGENCY EXIT ILLUMINATION (CBC 1006).

C. ANY MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED IN THIS BASE PC.

D. LIGHTING FIXTURES MAY BE INSTALLED ROTATED 90° FROM SHOWN TO MATCH T-BAR GRID LAYOUT.

	UNCONTROLLED-DUPLEX WALL CONVENIENCE OUTLET - MOUNT @ +18" A.F.F. TO CENTERLINE - U.O.N.
W.P. GFCI	WEATHER PROOF GROUND FAULT CIRCUIT INTERRUPT OUTLET - MOUNT @ 18" A.F.F. TO CENTERLINE - U.O.N.
$	CONTROLLED-SINGLE POLE LIGHT SWITCHES - MOUNT @ +48" A.F.F. MAX TO TOP OF BOX - HUBBELL PREMIUM, BRYANT HEAVY DUTY, OR LEVITON SPECIFICATIONS GRADE.
F	FIRE ALARM PULL STATION - OUTLET ONLY - PROVIDE (1) 4" SQ. BOX WITH SINGLE DEVICE RING AND COVER - TOP OF OPERATING HANDLE MOUNTED BETWEEN +42" TO +48" A.F.F. - DEVICE BY OTHERS
	FIRE ALARM HORN - OUTLET ONLY - 4" SQ. SINGLE GANG J-BOX WITH BLANK WEATHERPROOF COVER - MOUNTED +90" A.F.F. TO CENTERLINE - DEVICE BY OTHERS
	VISUAL FIRE ALARM ALARM - OUTLET ONLY - 4" SQ. BOX WITH SINGLE DEVICE RING AND COVER - MOUNT SO THAT LENS IS BETWEEN 80"-96" A.F.F. (CEILING MOUNT PER NFPA72 TABLE 6-4.4.1(b)) DEVICE BY OTHERS.
M	MINI HORN BOX - OUTLET ONLY - SINGLE DEVICE RING AND COVER - MOUNTED +80" A.F.F. TO CENTERLINE BUT NO GREATER THAN +96" - DEVICE BY OTHERS
T	THERMOSTAT - TOP OF BOX MOUNTED @ +48" A.F.F.
	ULTRASONIC OCCUPANCY SENSOR - MOUNTED TO FINISH CEILING
	ELECTRICAL PANEL - MOUNTED FLUSH WITH WALL FINISH U.O.N.
	2'x4' LED DROP IN FIXTURE
	INCANDESCENT EXTERIOR LIGHT FIXTURE @ EACH DOOR

ELECTRICAL SYMBOLS

AMS American Modular Systems
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PRE-CHECKED SET NAME

24'x40'
STANDARD MODULAR
BUILDINGS

SITE SPECIFIC PROJECT NAME

STOCKPILE
(100) 24'x40' BUILDINGS

SHEET TITLE

ELECTRICAL PLAN

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — KENDALL PATRICK CAVANAUGH — No. C-32631 — Exp. 3-31-21 — STATE OF CALIFORNIA

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2019

PRE-CHECK (PC) DOCUMENT

CODE: 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORIGINAL PC STATE AGENCY APPROVAL

REVISIONS

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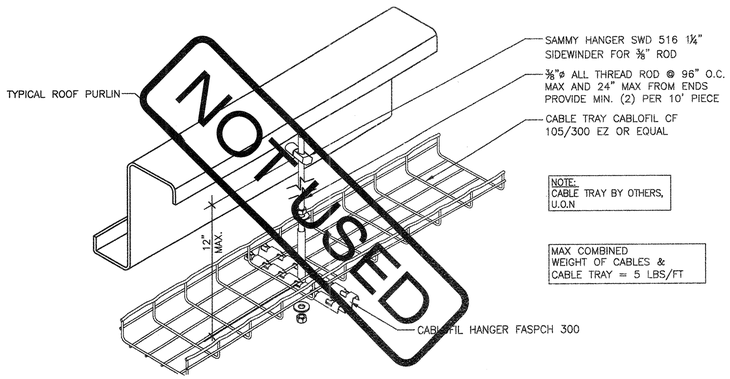
DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	09/11/2019

SHEET NUMBER

E1.0

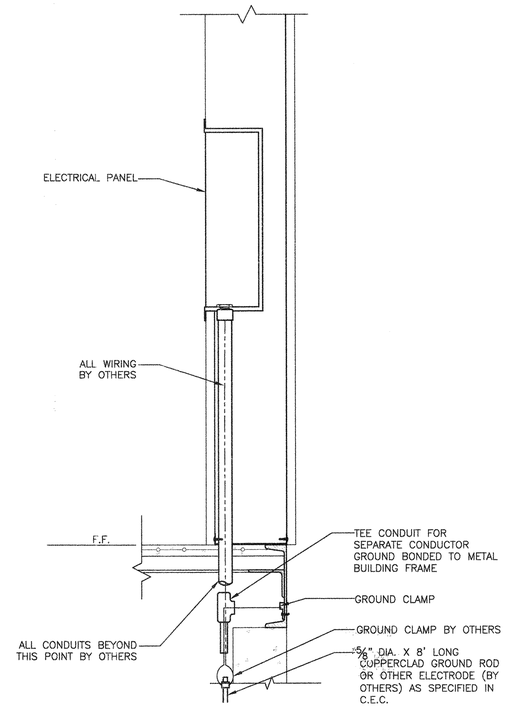
02-XXXXX - [or xref] BUILDING - SHEET: E1.0 PLOTTED: 9/18/2019 10:07 AM BY: KPatrick \\300-1991\300-1991-19 3304 100 Bldg Stockpile\DRG\Layout\300\E1.0 - Electrical Plan.dwg



1 CABLE TRAY DETAIL

SCALE: N.T.S.

2 NOT USED



1. SIZE OF CONDUCTORS SHALL COMPLY w/CEC.A
2. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL & METAL BUILDING FRAME (CEC). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10' INTO THE SOIL IF AVAILABLE (CEC).
3. ELECTRICAL BOND MODULES TOGETHER W/#8 CU @ MODLINE. BY MANUFACTURER. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS (CEC) AS REQUIRED. GROUNDING DETAIL PER DSA IR E-1. INSPECTOR TO WITNESS GROUNDING TEST.

3 ELECTRICAL PANEL CONNECTION DETAIL - UNDERFLOOR OPTION

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

PANEL: A	PHASE:			VOLTS:		BUSS:			MAIN:				LOCATION:		FEED:				MOUNTING:
S/N:	SINGLE			120/240		125 AMP			100				INTERIOR		BOTTOM				SURFACE
OBJECT DESCRIPTION	WATT PER	NO. OF	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT NO	A	B	CKT NO	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	NO OF	WATTS PER	OBJECT DESCRIPTION
INT. LIGHTS-LED	40	8	x	320		20	1	#12	1	X		2	#6	1	60	5760		x	1	5760	4 TON A/C HVAC UNIT
BLANK/SPARE					0				3		X	4	#6	1	60		5760	x	1	5760	4 TON A/C HVAC UNIT
EXT. LIGHTS	75	1	x	75		20	1	#12	5	X		6				0				*	F.A.C.P.
REC-CONTROLLED	180	1	x		180	20	1	#12	7		X	8					0			*	FUTURE SOLAR ELEC
REC-UNCONTROLLED	180	1	x	180		20	1	#12	9	X		10				0					BLANK/SPARE
REC-GFIC	180	1	x		180	20	1	#12	11		X	12					0				BLANK/SPARE
	LEG TOTALS			575	360											5760	5760	LEG TOTALS			
LCL=3113.75+12455=15568.75																					
TOTAL WATTS=15568.75									LEG BALANCE = 1.7%								TOTAL AMPS: 64.87				

NOTE:
FIRE ALARM DEDICATED CIRCUIT SHALL BE IDENTIFIED WITH A RED MARKED DISCONNECT WITH LOCK-ON CAPABILITY (NFPA 72 10.6.5.2)

LOAD PANEL CALCULATIONS

FIRE ALARM SYSTEM

1. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE AND THE CALIFORNIA BUILDING CODE.
2. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTINGS FOR EACH COMPONENT OF THE SYSTEM, HAVE BEEN APPROVED BY DSA.
3. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY.
4. JUNCTION BOXES – GALVANIZED SHEET METAL, SQUARE OR RECTANGULAR WITH BLANK COVERS. LOCATE ONE BOX AT REAR OF BUILDING NEAR MAIN ELECTRICAL PANEL @ +18" ABOVE FINISH FLOOR FOR FUTURE CONNECTION.
5. COVERS – INSTALL GASKETED, METAL, WATERPROOF, FINISH COVERS AT EXTERIOR LOCATIONS. INSTALL FINISH COVERS AT INTERIOR LOCATIONS.
6. THE AUTOMATIC ALARM SYSTEM SHALL BE INSTALLED, TESTED, AND MAINTAINED IN ACCORDANCE WITH THE STATE FIRE MARSHALL'S REGULATIONS (CBC SEC. 907.2.3) AND THE 2016 EDITION OF NFPA 72.
7. THE LOCATION OF AUTOMATIC DETECTORS, MANUAL STATIONS AND OTHER FIRE ALARM EQUIPMENT AND DEVICES, AS SHOWN ON PLAN, ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE SHOP DRAWINGS WHICH ARE REQUIRED FOR REVIEW AND APPROVAL.
8. ALARM-INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15 dBA ABOVE THE AVERAGE AMBIENT NOISE LEVELS OR 5dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5' ABOVE THE FLOOR. AMBIENT NOISE LEVELS MEANS THE LEVEL WHICH CAN NORMALLY BE EXPECTED WHEN THE FACILITY, BUILDING, ROOM, OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS (NFPA 72, SEC. 18.4.1).
9. THE ALARM SYSTEM SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING TWO FLASHES PER SECOND (2 HZ), NOR BE LESS THAN ONE FLASH EVERY SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED (NFPA 72, SEC. 18.5.3).
10. AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 CHAPTER 26 AS AMENDED BY ARTICLE 91. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER. IF TESTING RESULTS DETERMINE FIRE ALARM AUDIBILITY DOES NOT MEET 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL FIRE ALARM SIGNALING DEVICES MAY BE REQUIRED BY THE ENFORCING AGENCY.

GENERAL NOTES

1. GROUNDING ELECTRODE CONDUCTOR SIZED PER CEC.
2. PROVIDE BONDS TO BLDG. STEEL & PANEL (#8 CU)
3. PANEL A LISTED FOR USE AS SERVICE EQUIPMENT.
4. ALL PANELS, SWITCHES, DISCONNECTS, BREAKERS, METERS, AND OTHER ELECTRICAL ELEMENTS SHALL BE PLACED ABOVE THE ELEVATION REQUIRED BY ASCE 24-14, SECTION 7.2.

FIXTURE NOTES:

1. ALL FLUORESCENT LIGHT FIXTURES SHALL HAVE ENERGY SAVING LAMPS AND BALLASTS.
2. LUMINARIES/BALLASTS SHALL BE CERTIFIED PER CALIFORNIA BUILDING CODE, TITLE 24.
3. FLUORESCENT LIGHT FIXTURE TYPE "A" SHALL BE CONTROLLED TO PROVIDE TWO LEVELS OF LIGHTING. SWITCH (SA) SHALL CONTROL THE TWO OUTER LAMPS AND SWITCH (SB) SHALL CONTROL THE TWO INNER LAMPS.
4. ELECTRICAL SERVICE DROP AND CONNECTIONS SUPPLIED BY OTHERS.
5. MANUFACTURER TO PROVIDE STUB-OUT FROM BACK OF ELECTRICAL PANEL THROUGH THE EXTERIOR WALL OR TO BELOW FLOOR FOR RECEIVING EITHER UNDERGROUND OR OVERHEAD SERVICE & FITTING FOR GROUNDING CABLE.
6. ELECTRICAL PANEL BOARD SHALL BE RECESS MOUNTED INSIDE THE BUILDING, SIZED TO ACCOMMODATE ALL CONNECTED LOADS INCLUDING SPACES AS SHOWN. OVERCURRENT PROTECTIVE DEVICES IN THE PANEL BOARDS SHALL HAVE ADEQUATE SHORT CIRCUIT INTERRUPTING CAPACITY. ALL BUSES INCLUDING BUS SHALL BE COPPER OR ALUMINUM.
7. 2X4 FLUORESCENT FIXTURES SHALL HAVE A STEEL FRAME, LENS SHALL BE HINGED AND LOCKED IN PLACE BY TWO LOCKING DEVICES. THE LENS DIFFUSERS SHALL BE KHS, INC. #KSH-2, CAROLITE, INC. #C-12 OR PLASKOLITE, INC. #PL21A. MINIMUM LENS THICKNESS SHALL BE 0.125 INCHES.
8. FLUORESCENT BALLAST SHALL BE ENERGY SAVER WHILE MAINTAINING FULL LIGHT OUTPUT, CLASS "P" EQUIPPED WITH THERMAL PROTECTORS, GUARANTEED AGAINST FAILURE FOR (2) YEARS AND BE REPLACEABLE FROM INSIDE THE FIXTURE.
9. CLOCK – 12" DIAL CLOCK ON CLOCK OUTLET.
   A. CLOCK SHALL BE GENERAL ELECTRIC MODEL 2912 129V 60 CYCLE
   B. CLOCK OUTLET SHALL BE BRYANT #2828 OR EQUAL WITH SEPARABLE HANGING CLIP & APP'D RECEPT. THE H.V.A.C. UNIT FEEDER CIRCUIT – PANEL CIRCUIT BREAKER, FEEDER WIRE, UNIT DISCONNECT AND FUSES (WHERE USED) – IS TO BE COORDINATED WITH THE NAME PLATE DATA AT THE TIME OF MANUFACTURE. H.V.A.C. UNITS HAVING KVA RATINGS LARGER THAN THAT INDICATED ON THIS PANEL SCHEDULE WILL NOT BE ALLOWED TO BE INSTALLED ON THIS BUILDING.
   C. IF 60 DEGREES WIRE IS TO BE USED IN THIS INSTALLATION, CALCULATIONS DEMONSTRATING AMPACITY SHALL BE PROVIDED ON THE DRAWING.
10. ALL PANELS, SWITCHES, DISCONNECTS, BREAKERS, METERS, AND OTHER ELECTRICAL ELEMENTS SHALL BE PLACED ABOVE THE ELEVATION REQUIRED BY ASCE 24-14, SECTION 7.2.

GENERAL NOTES

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PRE-CHECKED SET NAME

24'x40' THRU 120'x40' STANDARD MODULAR BUILDINGS

SITE SPECIFIC PROJECT NAME

SHEET TITLE

ELECTRICAL NOTES & DETAILS

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CAVANAGH — No. C12631 Ren. 3-31-19 — STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 117941
AC FLS SS
DATE SEP 19 2019

ORIGINAL PC STATE AGENCY APPROVAL

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
PC 02-115700
AC FLS SS
DATE 8-31-2018

PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

REVISIONS
1
2
3
4

DRAWN BY: .
SCALE: AS NOTED
DATE: .

SHEET NUMBER

E1.2

DO-XXXXX - Dgn: xxx2 Date:09/05 - Sheet: 1/1/2016 4:15 PM - By:DTTR - K:\Engineering\DC Shed Files\2016 CBC\DO-115700 - 2016 - 24'x40'-120'x40' Standard\E1.2 - DO - 115700 - r 01.2 - Electrical Notes and Details.dwg