SYCAMORE CANYON ELEM. SCHOOL

SANTEE SCHOOL DISTRICT

LIBRARY RESOURCE CENTER (LRC)

10201 SETTLE ROAD, SANTEE, CA 92071

SUPERINTENDENT: Dr. Kristin Baranski.

GOVERNING BOARD MEMBERS:
PRESIDENT: **Ken Fox**
VICE PRESIDENT: **Dustin Burns**
CLERK: **Barbara Ryan**
MEMBER: **Elana Levens-Craig**
MEMBER: **Dianne El-Hajj**

DIRECTOR OF FACILITIES, PLANNING + CONSTRUCTION: Christina Becker

SYMBOL LEGEND

Reference	Symbol	Label
BUILDING SECTION REFERENCE	1 / A2.8	SECTION NUMBER; SHEET NUMBER
DETAIL SECTION REFERENCE	4 / A5.1	DETAIL NUMBER; SHEET NUMBER
OPENING REFERENCE	101	OPENING NUMBER
DEMOLITION KEY NOTE REFERENCE	3	KEY NOTE NUMBER
KEY NOTE REFERENCE	1	KEY NOTE NUMBER
EXTERIOR ELEVATION REFERENCE	3 / A3.1	ELEVATION NUMBER; SHEET NUMBER
COLUMN LINE REFERENCE	A3	COLUMN LINE LETTER/NUMBER
ROOM NAME IDENTIFICATION	OFFICE / A120	ROOM NAME; ROOM NUMBER
INTERIOR ELEVATION REFERENCE	3 / A4.1	NUMBER ON ELEVATION SHEET; INTERIOR ELEVATION SHEET NUMBER
TARGET ELEVATION REFERENCE	1'-2" / T.O.CURB	TARGET ELEVATION; REFERENCE TO ELEVATION
EQUIPMENT IDENTIFICATION REFERENCE	1	EQUIPMENT / ACCESSORY NUMBER
BUILDING SIGN REFERENCE	2A	SIGN NUMBER

ABBREVIATIONS

@ at
.S.T.M. American Society for Testing and Materials
A/C air conditioning
AB anchor bolt
ABV above
ACOUST acoustical
ACP acoustic ceiling panel
ACP asphaltic concrete paving
ACT acoustical tile
AD area drain
ADD addendum
ADJ adjacent
ADJUST adjustable
AFF above finished floor
AGG aggregate
ALT alternate
ALUM aluminum
ANOD anodized
AP access panel
APPROX approximate
ARCH architect(ural)
AUTO automatic

BD board
BEL below
BIT bituminous
BLDG building
BLK block
BLKG blocking
BM bench mark
BOT bottom
BP blank panel
BRG bearing
BS both sides
BSMT basement
BTWN between
BUR built-up roofing
BW both ways

C.A.C. California Administrative Code
C.B.C. California Building Code
C.C.R. California Code of Regulations
C.F. cubic foot
C.O. conduit only
C.Y. cubic yard
CAB'T cabinet
CAD cadmium
CB catch basin
CDS Casework Design Series
CEM cement
CER ceramic
CGF ceramic granule flooring
CHBD chalkboard
CI cast iron
CIPC cast-in-place concrete
CJ control joint
CL centerline
CLF chain link fence
CLG ceiling
CLOS closet
CMT ceramic mosaic (tile)
CMU concrete masonry unit
COL column
COMB combination
COMPO composition
COMPT compartment
CONC concrete
CONN connect(ion),(or)
CONST construction
CONT continuous or continue
CONTR contract(or)
CORRUG corrugated
CPT carpet
CRS course(s)
CS countersink
CT ceramic tile
CTR counter
CTSK countersink screw
CUST custodian
CWP carpet with pad

DBL.ACT. double acting
DEMO demolish, demolition
DET detail
DF drainking fountain
DH double hung
DIM dimension
DL dead load
DN down
DPRF dampproofing
DR door
DS downspout
DSA Division of the State Architect
DTA dovetail anchor
DTL detail
DTS dovetail anchor slot
DW drywall
DWG drawing
DWR drawer

E East
EA each
EB expansion bolt
EC evaporative cooler
EF each face
EHD electric hand dryer
EJ expansion joint
EL elevation
ELEC electric(al)
ELEV elevation
EMER emergency
EMT electrical metallic conduit
ENCL enclose(ure)
EP electrical panelboard
EQ equal
EQUIP equipment
EST estimate
EW each way
EWC electric water cooler
EXH exhaust
(E) existing
EXP exposed
EXT exterior

FB face brick
FBD fiberboard
FBO furnished by others
FD floor drain
FDN foundation
FE fire extinguisher
FEC fire extinguisher cabinet
FF finish floor
FFE finished floor elevation
FGL fiberglass
FH fire hydrant
FHC fire hose cabinet
FHMS flathead machine screw
FHWS flathead wood screw
FIN finish(ed)
FIN.FLR. finished floor line
FL flow line
FLR floor
FLSH flashing
FLUR fluorescent
FND feminine napkin disposal
FOC face of concrete
FOF face of finish
FOM face of masonry
FOS face of studs
FP fireproof
FRM(G) frame(d),(ing)
FRT fire-retardant
FT foot
FTG footing
FUR furred(ing)
FUT future
FWP fabric-wrapped acoustic panel

GA gage, gauge
GBBR grab bar
GC general contractor
GCMU glaze concrete masonry units
GD gutter drain
GI galvanized iron
GLB glued laminated beam
GPL gypsum plaster
GR grade(ing)
GRT grout
GSKT gasket
GV gravity vent
GWB gypsum drywall
GWG gypsum drywall water-resistant
GWX gypsum drywall type X
GYP gypsum

HB hose bibb
HC hollow core
HDBD hardboard
HDR header
HDW hardware
HDWD hardwood
HEX hexagonal
HM hollow metal
HORIZ horizontal
HP high point
HR handrail
HT height
HTG heating
HVAC heating, ventilating, and air conditioning
HWH hot water heater

I.C.B.O. International Conference of Building Officials
ID inside diameter
IN inch
INCL. include(d),(ing)
INSUL. insulate(d),(ing)
INT interior
IPS iron pipe size

JC janitor's closet
JST joist
JT joint

KIT kitchen
KO knockout
KS knee space

L length
L.P.G. liquified propane gas
LAB laboratory
LAM laminate(d)
LAV lavatory
LB lag bolt
LBL label
LLL live load
LT light
LT.WT. lightweight
LVR louver

M modified
MAS masonry
MATL material(s)
MAX maximum
MB machine bolt
MC medicine cabinet
MECH mechanic(al)
MED medium
MFR(S) manufacturer(s)
MH manhole
MIN minimum
MIR mirror
MISC miscellaneous
MO masonry opening
MOD modular
MOD.BIT. modified bitumen
MOLD molding, moulding
MTD mount(ed)
MTG mount(ing)
MTL metal
MULL mullion
MWP membrane waterproofing

N North
NAT natural
NIC not in contract
NOM nominal
NR noise reduction
NRC noise reduction coefficient

OBL oblique
O/C on center(s)
OD outside diameter
OFD overflow drain
OFS overflow scupper
OH overhead
OPG opening
OPP opposite
OSA Office of the State Architect

PA public address system
PAR parallel
PART.BD. particle board
PCC pre-cast concrete
PCF pounds per cubic foot
PCPL Portland cement plaster
PH panic hardware
PKG parking
PL property line
PL plate
PL.GL. plate glass
PLAM plastic laminate
PLAS plaster
PLF pounds per lineal foot
PLWD plywood
PNL panel
PNT paint(ed)
\# pound(s)
PSF pounds per square foot
PSI pounds per square inch
PT point
PTD painted
PTD paper towel dispenser
PTDF pressure treated douglas fir
PTF flat paint
PTG gloss paint
PTR paper towel receptacle
PTS semi-gloss paint
PVC polyvinyl chloride
PVMT pavement
PWJ plywood web joist

QT quarry tile

R riser
RAD radius
RAR return air register
RB rubber base
RCB rubber carpet base
RD roof drain
RDWD redwood
REF reference
REFL reflect(ed),(ive),(or)
REFR refrigerator
REG register
REINF reinforced (concrete pipe)
RES resilient
RET return
REV revision
RFG roofing
RFND recessed feminine napkin disposal
RFNS recessed feminine napkin dispenser
RH roof hatch
RHB recessed hose bibb
RJ roof jack
RL roof ladder
RM room
RO rough opening
ROD roof overflow drain
ROW right-of-way
RPTD recessed paper towel dispenser
RPTR recessed paper towel receptacle/disposal
RSCD recessed seat cover dispenser
RTPD recessed toilet paper dispenser
RTSB rubber topset base
RWC rainwater conductor

S South
S.F.M. State Fire Marshal
S.Y. square yard
SAR supply air register
SC solid core
SCB sheet cove base
SCH schedule
SD storm drain
SECT section
SFGL safety glass
SHT sheet
SHTG sheathing
SIM similar
SKYLT skylight
SNT sealant
SPECS specification(s)
SQ square
SS service sink
SS stainless steel
STA station
STC sound transmission coefficient
STD standard
STL steel
STOR storage
STR structural
SUSP suspended
SYST system

T tread
TAC tectum acoustic panel
TEL telephone
THK thick(ness)
TOGLB top of glued laminated beam
TOP top of parapet
TOS top of sheathing
TOW top of wall
TP top of plywood
TPD toilet paper dispenser
TPTN toilet partition
TR transom
TS top of steel
TSCD toilet seat cover dispenser
TV television
TYP typical

U.B.C. Uniform Building Code
U.L. Underwriters' Laboratory
U.N.O. unless noted otherwise
UC undercut
UNFIN unfinished
UR urinal

VAR varies
VB vapor barrier
VCR video cassette recorder/player
VCT vinyl composition tile
VERT vertical
VEST vestibule
VF vinyl fabric
VG vertical grain
VPL veneer plaster
VS vent stack
VTS vinyl wrapped tack surface
VWC vinyl wall covering

W West
W width, wide
WI Woodwork Institute
W/ with
W/O without
WB wood base
WC water closet
WD wood
WDW window
WG wired glass
WH wallhung
WI wrought iron
WJ weakened plane joint
WKTP walk top
WP waterproofing
WPT working point
WR water repellent
WSCT wainscot
WT weight
WTR water
WTW wall to wall

X factory finish
XG existing grade

YD yard

GENERAL NOTES

1. ACCESSIBILITY: THE SITE AND ALL BUILDINGS SHALL BE ACCESSIBLE TO PERSONS WITH DISABILITIES IN COMPLIANCE WITH TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS AND THE ACCESSIBILITY GUIDELINES OF THE AMERICANS WITH DISABILITIES ACT OF 1990. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ACCESS TO PERSONS WITH DISABILITIES.

2. COORDINATION AND CLARITY: FOR THE CLARITY OF SEPARATE ITEMS OF WORK, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, CIVIL AND LANDSCAPING ITEMS MAY NOT APPEAR ON THE ARCHITECTURAL DRAWINGS. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO COMPLEMENT EACH OTHER, AND WHAT IS REQUIRED BY ONE SHALL BE REQUIRED BY ALL.

3. JOB SITE OBSERVATIONS: THE ARCHITECT AND CONSULTANT ENGINEERS WILL MAKE VISITS TO THE JOB SITE TO OBSERVE THE WORK TO DETERMINE, IN GENERAL, IF THE WORK IS BEING PERFORMED IN A MANNER INDICATING THAT THE WORK, WHEN COMPLETED, WILL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE JOB SITE OBSERVATIONS BY THE ARCHITECT AND CONSULTING ENGINEERS DO NOT RELIEVE THE CONTRACTOR OF ANY OF HIS RESPONSIBILITY. THE JOB SITE OBSERVATIONS BY THE ARCHITECT AND CONSULTING ENGINEERS DO NOT RELIEVE THE CONTRACTOR OF ANY OF HIS RESPONSIBILITY. THE JOB SITE OBSERVATIONS BY THE ARCHITECT AND CONSULTING ENGINEERS DO NOT IN ANY WAY MEAN THAT THE ARCHITECT OR ENGINEER IS A GUARANTOR OF THE CONTRACTOR'S WORK; IN CONTROL OF THE SAFETY IN, ON, OR ABOUT THE JOB SITE; IN CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, FORMS, OR OTHER WORK AIDS; OR SUPERINTENDING OF THE WORK.

4. DEFECTS IN THE WORK: IF THE ARCHITECT OR CONSULTING ENGINEERS FIND DEFECTS IN THE WORK, THEY WILL NOTIFY THE CONTRACTOR SO THAT THE DEFECT MAY BE CORRECTED. IT IS NOT THE INTENT , UNDER ANY CIRCUMSTANCES, FOR THE ARCHITECT OR CONSULTING ENGINEER TO BECOME A GUARANTOR OF THE CONTRACTOR'S PERFORMANCE BY THESE ACTIVITIES. THE FACT THAT A CONSTRUCTION DEFECT OR ERROR GOES UNDETECTED DURING A JOB SITE VISIT SHALL NOT MAKE THE CORRECTION OF CONSTRUCTION DEFECTS AND ERRORS IN THE WORK, AND THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES AND THE SAFETY PRECAUTIONS REQUIRED FOR COMPLETING THE WORK AS INDICATED BY THE CONTRACT DOCUMENTS.

5. EXISTING UTILITIES: THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES, IF SHOWN ON THE DRAWINGS, ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE DISTRICT OR ITS REPRESENTATIVE.
THE ARCHITECT AND HIS CONSULTING ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES, WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED UNDER THIS OR ANY OTHER CONTRACTS.
PRIOR TO ANY EXCAVATION UNDER THIS CONTRACT, THE CONTRACTOR SHALL:
A. REQUEST FROM THE OWNER ALL AVAILABLE RECORD DRAWINGS OF THE AREAS COVERED BY THE WORK.
B. ARRANGE AND CONDUCT A MEETING WITH THE DISTRICT'S REPRESENTATIVE TO CONDUCT A SITE REVIEW OF POTENTIAL UTILITY LOCATIONS WITH THE DISTRICT'S MAINTENANCE STAFF.
C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR THE SERVICES OF A PRIVATE UTILITY LOCATING SERVICE, WHICH SHALL, BASED ON INFORMATION OBTAINED FROM THE ABOVE RESOURCES, AND FROM THE TOPOGRAPHIC SURVEY AND THE PRESENCE OF VISIBLE FACILITIES SUCH AS BUILDINGS, METERS, JUNCTION BOXES, PIPES LEAVING BUILDINGS, CATCH BASINS, CLEANOUTS, SPRINKLER HEADS, VALVES, ETC., LOCATE AND MARK ALL EXISTING UNDERGROUND UTILITY LINES.
D. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA 1800.422.4133. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, AND SHALL NOT EXCAVATE UNTIL VERIFICATION FROM UNDERGROUND SERVICE ALERT THAT ALL PUBLIC UTILITIES SERVING THE SITE HAVE LOCATED AND MARKED THEIR UNDERGROUND SERVICES.

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING UNDERGROUND UTILITIES, AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

6. SHOULD UNIDENTIFIED UTILITIES BE DISCOVERED BY THE CONTRACTOR IN THE COURSE OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DISTRICT, AND SHALL UNDERTAKE WHATEVER EMERGENCY PROCEDURES HE DEEMS NECESSARY TO PROTECT PEOPLE AND PROPERTY. THE DISTRICT SHALL REIMBURSE THE CONTRACTOR FOR THE COST OF SUCH REPAIRS, IN ACCORDANCE WITH THE GENERAL CONDITIONS.

7. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN THE ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 C.C.R., SEE DESCRIPTION BELOW.

8. ADDENDA: CHANGES OR ALTERATIONS OF THE APPROVED PLANS OR SPECIFICATIONS PRIOR TO EDITING A CONSTRUCTION CONTRACT FOR THE WORK INVOLVED SHALL BE MADE BY MEANS OF ADDENDA. ADDENDA SHALL BE MANUALLY SIGNED BY THE ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE OF PREPARATION OF THE PLANS AND SPECIFICATIONS AND BY THE ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THE PORTION AFFECTED BY THE ADDENDA AND SHALL BE APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ONE COPY IS REQUIRED FOR THE FILES OF THE DIVISION OF THE STATE ARCHITECT.

9. CONSTRUCTION CHANGE DIRECTIVES: CHANGES OR ALTERATIONS OF THE APPROVED PLANS OR SPECIFICATIONS AFTER A CONTRACT FOR THE WORK HAS BEEN LET SHALL BE MADE BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT (CCD). CCDs SHALL STATE THE REASON FOR THE CHANGE AND SHALL BE ACCOMPANIED BY SUPPLEMENTARY DRAWINGS WHERE NECESSARY. ALL CCDs SHALL BE MANUALLY SIGNED BY THE ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE OF OBSERVATION OF THE WORK OF CONSTRUCTION OF THE PROJECT AND BY THE ARCHITECT OR REGISTERED ENGINEER DELEGATED RESPONSIBILITY FOR OBSERVATION OF THE PORTION OF THE WORK OF CONSTRUCTION AFFECTED BY THE CCD AND SHALL BEAR THE APPROVAL OF THE SCHOOL BOARD AND THE DIVISION OF THE STATE ARCHITECT. ONE COPY OF EACH CCD IS REQUIRED FOR THE FILES OF THE DIVISION OF THE STATE ARCHITECT.

10. FIRE SAFETY: SEE C.F.C. CHAPTER 33 FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

11. A PROJECT INSPECTOR EMPLOYED BY SANTEE SCHOOL DISTRICT, APPROVED BY DSA, IN ACCORDANCE WITH THE REQUIREMENTS OR STATE OF CALIFORNIA BUILDING CODE, TITLE 24, PART1, AND QUALIFIED IN ACCORDANCE WITH DIVISION OF STATE ARCHITECT WILL BE ASSIGNED TO THE WORK. HIS DUTIES ARE SPECIFICALLY DEFINED IN TITLE 24, PART 1, SECTION 4-342. SEE SPECIFICATION FOR COMPLETE LISTING OF DUTIES.

CLASSIFICATION TO BE "CLASS 2 AND CERTIFIED BY THE DIVISION OF THE STATE ARCHITECT.

12. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

13. ALL WORK SHALL CONFORM TO 2016 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.)

14. UNLESS SPECIFIED ON STRUCTURAL DRAWINGS, ANY ALTERATIONS OF MODIFICATIONS TO A STRUCTURAL ELEMENT BY CUTTING, DRILLING, BORING, BRACING, WELDING, ETC. SHALL HAVE WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD AND D.S.A. PRIOR TO STARTING WORK.

15. FIRE BLOCKING AND DRAFT STOPS SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTION 708

16. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT

17. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 21, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD_, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITHT HE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)

APPLICABLE CODES

ALL WORK ON THIS PROJECT SHALL COMPLY WITH THE CALIFORNIA CODE OF REGULATIONS (C.C.R.) TITLE 19, AND THE FOLLOWING PARTS OF TITLE 24:

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2019

- 2019 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
- 2016 CALIFORNIA BUILDING CODE (C B C), PART 2, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen), PART 11, TITLE 24 C.C.R.
- 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.

TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
2013 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS.

PARTIAL LIST OF APPLICABLE NFPA STANDARDS

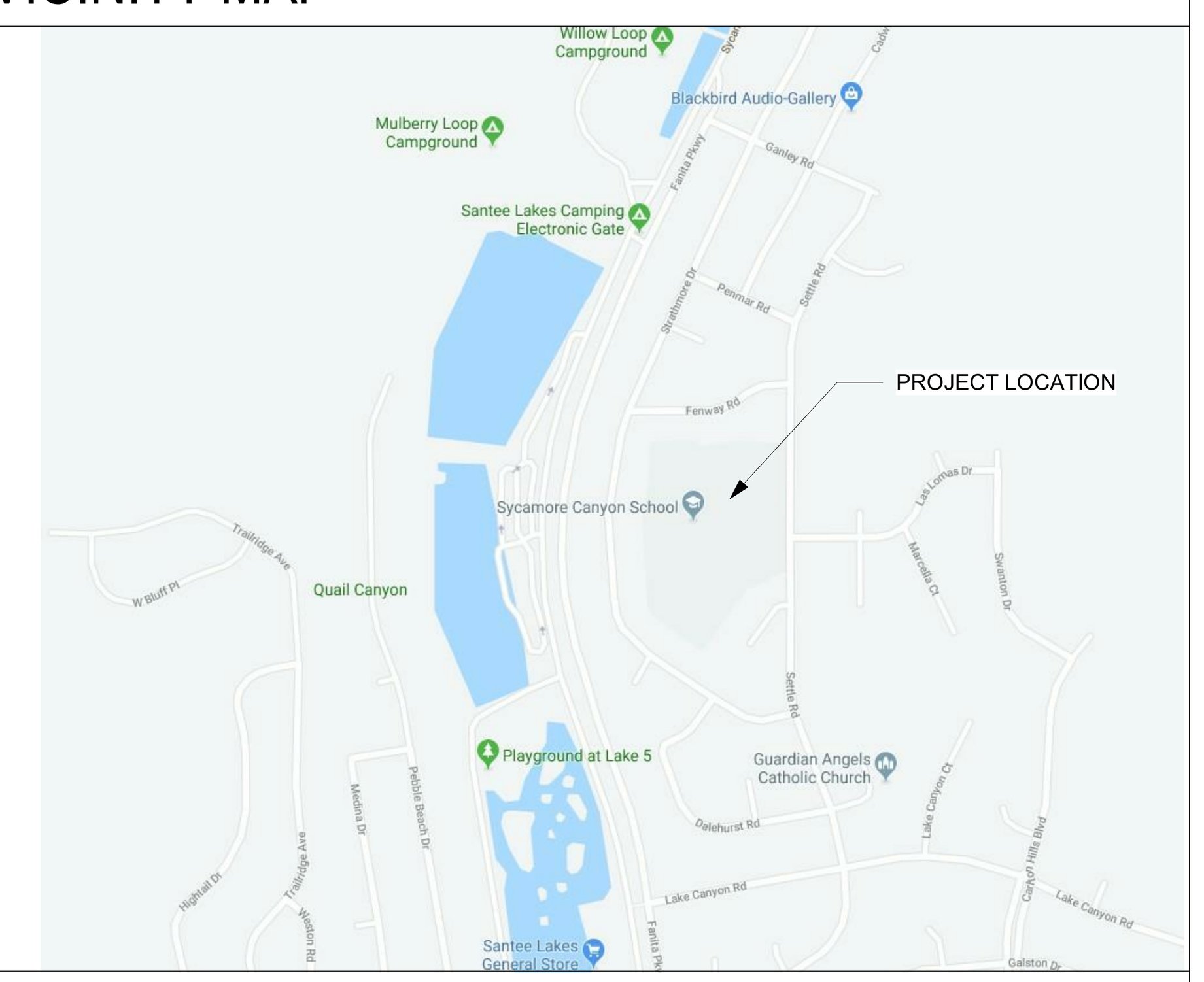
NFPA 13	AUTOMATIC SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	STANDPIPE AND HOSE SYSTEMS	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE MAINS & THEIR APPURTENANCES	2016 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE	2016 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300 ICC	STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING	2012 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2016 CBC (SFM) CHAPTER 35.
SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

SCOPE OF WORK

NEW CONSTRUCTION OF LIBRARY RESOURCE CENTER BUILDING "E" WITH RELATED NEW SITEWORK AND SITE UTILITIES; ACCESSIBLE RESTROOM UPGRADES AT BUILDING "A"; DEMOLITION OF THE EXISTING BUILDING "E" AND RELATED SITEWORK.

VICINITY MAP



INDEX OF DRAWINGS

INDEX OF DRAWINGS CONT.

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Date
Revision
Consultant
Engineer

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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TITLE SHEET

RI
RDW
OCT. 18, 2019
Job:
SSD-SC-03

T1.1

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EXISTING RELOCATABLE BUILDING TO REMAIN

CIVIL LIMIT OF WORK

DEMOLITION KEY NOTES

1. SAWCUT AND REMOVE EXISTING CONCRETE TO NEAREST CONTROL JOINT.
2. PROTECT IN PLACE EXISTING WATER/FIRE WATER TO REMAIN
3. PROTECT IN PLACE EXISTING SEWER TO REMAIN
4. REMOVE EXISTING PLANTER BOX, INCLUDING FOOTINGS
5. REFER TO ELECTRICAL PLANS FOR LOCATIONS OF EXISTING ELECTRICAL AND COMMUNICATIONS UTILITIES TO REMAIN AND ELECTRICAL AND TELECOM REMOVALS AND RELOCATIONS
6. REFER TO LANDSCAPE PLANS FOR REMOVAL AND RELOCATION OF EXISTING SITE IRRIGATION
7. REMOVE EXISTING FENCE AND GATES INCLUDING FOOTINGS. REFER TO ARCHITECTURAL PLANS FOR LIMITS OF FENCE REMOVALS.
8. EXISTING CONCRETE PAVING TO REMAIN. PROTECT IN PLACE.
9. CAP EXISTING UTILITY BELOW GRADE. MATCH EXISTING UTILITY SIZE AND TYPE
10. REFER TO ARCHITECTURAL PLANS FOR REMOVAL LIMITS OF EXISTING COVERED WALKWAY AND COLUMN REMOVAL

DEMOLITION KEY NOTES (CONT'D)

11. CLEAR AND GRUB EXISTING VEGETATION, INCLUDING TREE REMOVAL AND DECORATIVE ROCK REMOVAL WITHIN LIMIT OF WORK SHOWN.
12. PROTECT IN PLACE EXISTING SD TO REMAIN
13. DECOMMISSION, CAP AND REMOVE ANY EXISTING UTILITIES ASSOCIATED WITH REMOVAL OF EXISTING BUILDING
14. REMOVE EXISTING STRUCTURE, INCLUDING FOOTINGS
15. DEMOLISH AND REMOVE EXISTING STORM DRAIN STRUCTURE. CAP EXISTING STORM DRAIN LINE BELOW GRADE
16. REMOVE EXISTING SOCCER GOAL. COORDINATE REMOVAL WITH DISTRICT REPRESENTATIVE
17. REMOVE EXISTING SITE FEATURE
18. PROTECT IN PLACE EXISTING AT GRADE UTILITY. ADJUST TO NEW GRADE AS NECESSARY
19. EXISTING AC PAVING TO REMAIN. PROTECT IN PLACE
20. REFER TO MECHANICAL PLANS FOR GAS REMOVALS AND RELOCATIONS
21. REMOVE EXISTING SHADE STRUCTURE AND PLAYGROUND EQUIPMENT, INCLUDING FOOTINGS
22. EXISTING UTILITY TO REMAIN. ADJUST COVER TO NEW GRADE

DEMOLITION KEY NOTES (CONT'D)

23. REMOVE EXISTING SITE FEATURE, INCLUDING FOOTINGS

DEMOLITION LEGEND

- REMOVE EXISTING PAVEMENT, INCLUDING BASE
- EXISTING STRUCTURE TO BE REMOVED INCLUDING FOOTINGS. DECOMMISSION AND REMOVE ANY UTILITIES SERVING STRUCTURES
- CIVIL LIMIT OF WORK
- EXISTING UTILITY TO BE REMOVED

SCALE IN FEET
1 inch = 10 ft.

Consultant
Engineer
studiowc
ARCHITECTURE + ENGINEERING
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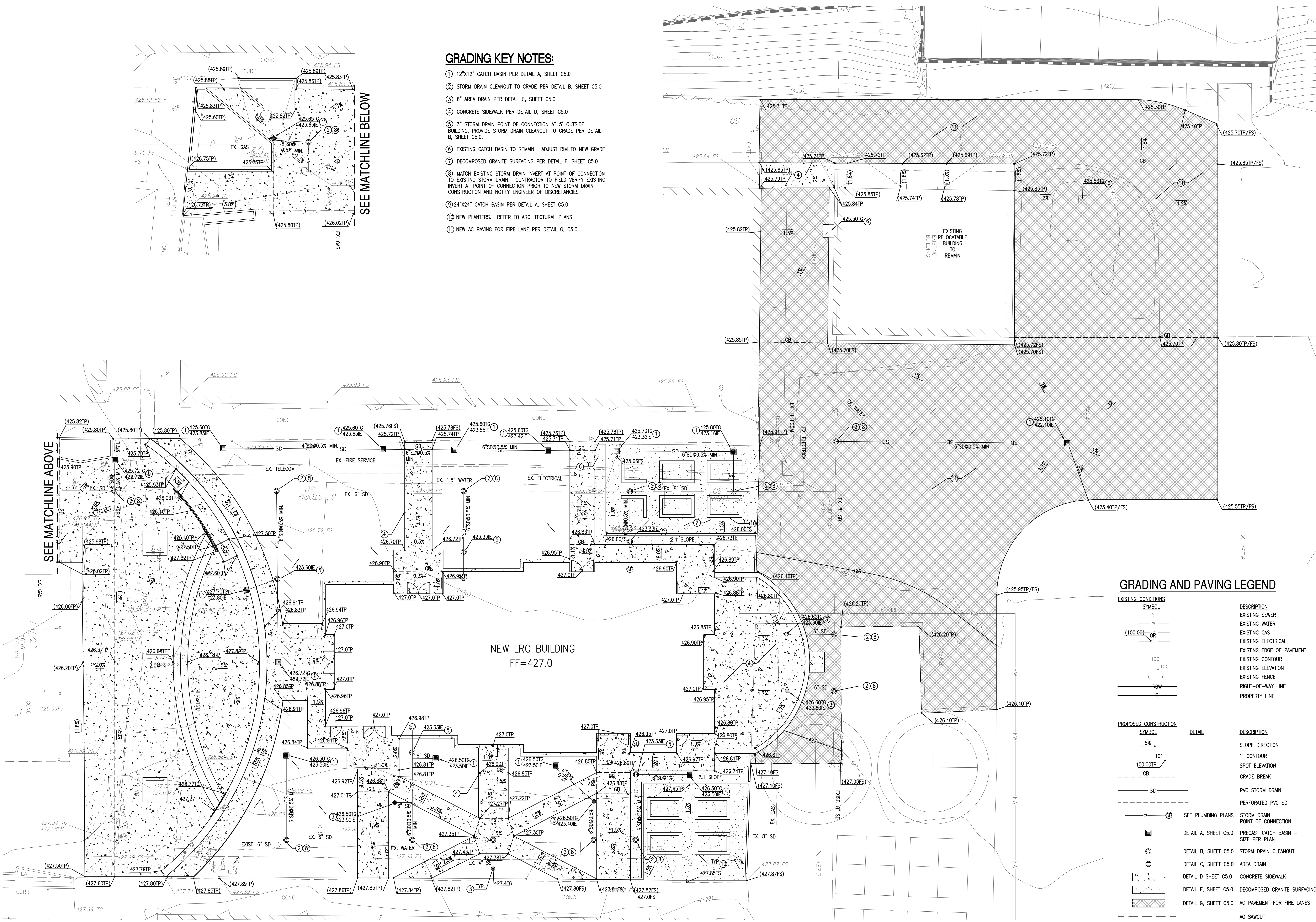
LICENSED ARCHITECT
REGISTERED PROFESSIONAL
STATE OF CALIFORNIA

SYCAMORE CANYON
ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TOPOGRAPHIC SURVEY/ SITE DEMOLITION PLAN

Drawn: CAR
Checked: DVC/RI
Date: FEB 1, 2020
Job: SSD-SC-03

C1.0



GRADING KEY NOTES:

1. 12"X12" CATCH BASIN PER DETAIL A, SHEET C5.0
2. STORM DRAIN CLEANOUT TO GRADE PER DETAIL B, SHEET C5.0
3. 6" AREA DRAIN PER DETAIL C, SHEET C5.0
4. CONCRETE SIDEWALK PER DETAIL D, SHEET C5.0
5. 3" STORM DRAIN POINT OF CONNECTION AT 5' OUTSIDE BUILDING. PROVIDE STORM DRAIN CLEANOUT TO GRADE PER DETAIL B, SHEET C5.0.
6. EXISTING CATCH BASIN TO REMAIN. ADJUST RIM TO NEW GRADE
7. DECOMPOSED GRANITE SURFACING PER DETAIL F, SHEET C5.0
8. MATCH EXISTING STORM DRAIN INVERT AT POINT OF CONNECTION TO EXISTING STORM DRAIN. CONTRACTOR TO FIELD VERIFY EXISTING INVERT AT POINT OF CONNECTION PRIOR TO NEW STORM DRAIN CONSTRUCTION AND NOTIFY ENGINEER OF DISCREPANCIES
9. 24"X24" CATCH BASIN PER DETAIL A, SHEET C5.0
10. NEW PLANTERS. REFER TO ARCHITECTURAL PLANS
11. NEW AC PAVING FOR FIRE LANE PER DETAIL G, C5.0

GRADING AND PAVING LEGEND

EXISTING CONDITIONS

SYMBOL	DESCRIPTION
— S —	EXISTING SEWER
— W —	EXISTING WATER
(100.00) — G — OR	EXISTING GAS
— E —	EXISTING ELECTRICAL
———	EXISTING EDGE OF PAVEMENT
— 100 —	EXISTING CONTOUR
x 100	EXISTING ELEVATION
—X——X—	EXISTING FENCE
— ROW —	RIGHT-OF-WAY LINE
— PL —	PROPERTY LINE

PROPOSED CONSTRUCTION

SYMBOL	DETAIL	DESCRIPTION
5% →		SLOPE DIRECTION
—101—		1' CONTOUR
100.00TP		SPOT ELEVATION
— — GB — —		GRADE BREAK
— SD —		PVC STORM DRAIN
- - - - - -		PERFORATED PVC SD
— os — (SD)	SEE PLUMBING PLANS	STORM DRAIN POINT OF CONNECTION
▤	DETAIL A, SHEET C5.0	PRECAST CATCH BASIN – SIZE PER PLAN
◎	DETAIL B, SHEET C5.0	STORM DRAIN CLEANOUT
⊜	DETAIL C, SHEET C5.0	AREA DRAIN
▭	DETAIL D SHEET C5.0	CONCRETE SIDEWALK
▭	DETAIL F, SHEET C5.0	DECOMPOSED GRANITE SURFACING
▩	DETAIL G, SHEET C5.0	AC PAVEMENT FOR FIRE LANES
— — — —		AC SAWCUT

CIVIL WORK TO BE DONE:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL WORK SHALL CONFORM WITH THE FOLLOWING STANDARD SPECIFICATIONS AND DRAWINGS:

1. SAN DIEGO REGIONAL STANDARD DRAWINGS (SDRSD), LATEST EDITION
2. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SPECIAL PROVISIONS, LATEST EDITION.
3. CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES," LATEST EDITION.
4. CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA), STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK–CONSTRUCTION, LATEST EDITION.
5. CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.

GENERAL NOTES

1. PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED PER PLAN.
2. REPLACE PAVING OVER NEW UTILITY TRENCHES TO MATCH EXISTING WHERE OCCURS
3. NOTIFY ENGINEER OF RECORD IMMEDIATELY IF FIELD LOCATION OR DEPTH OF EXISTING UTILITIES DIFFER SIGNIFICANTLY FROM PLAN.
4. CONTRACTOR SHALL VERIFY VIA TOPOGRAPHIC SURVEY ELEVATIONS OF EXISTING PAVEMENT AT INTERFACE OF NEW PAVING PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF DISCREPANCIES BETWEEN PLAN AND ACTUAL FIELD CONDITIONS.
5. ALL PROPOSED UTILITY TRENCHING SHALL CONFORM TO SAN DIEGO REGIONAL STANDARD DRAWING DETAILS SDG–107 AND SDG–108, UNLESS OTHERWISE NOTED.
6. BUILDING ENVELOPE DEPICTED ON CIVIL PLANS REPRESENTS LIMITS OF SITEWORK. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND PRECISE SITING OF NEW BUILDING

10 5 0 10 20
SCALE IN FEET
1 inch = 10 ft.

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LICENSED ARCHITECT ROBERT D. WEBB A.I.A. C-23036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

GRADING AND DRAINAGE PLAN

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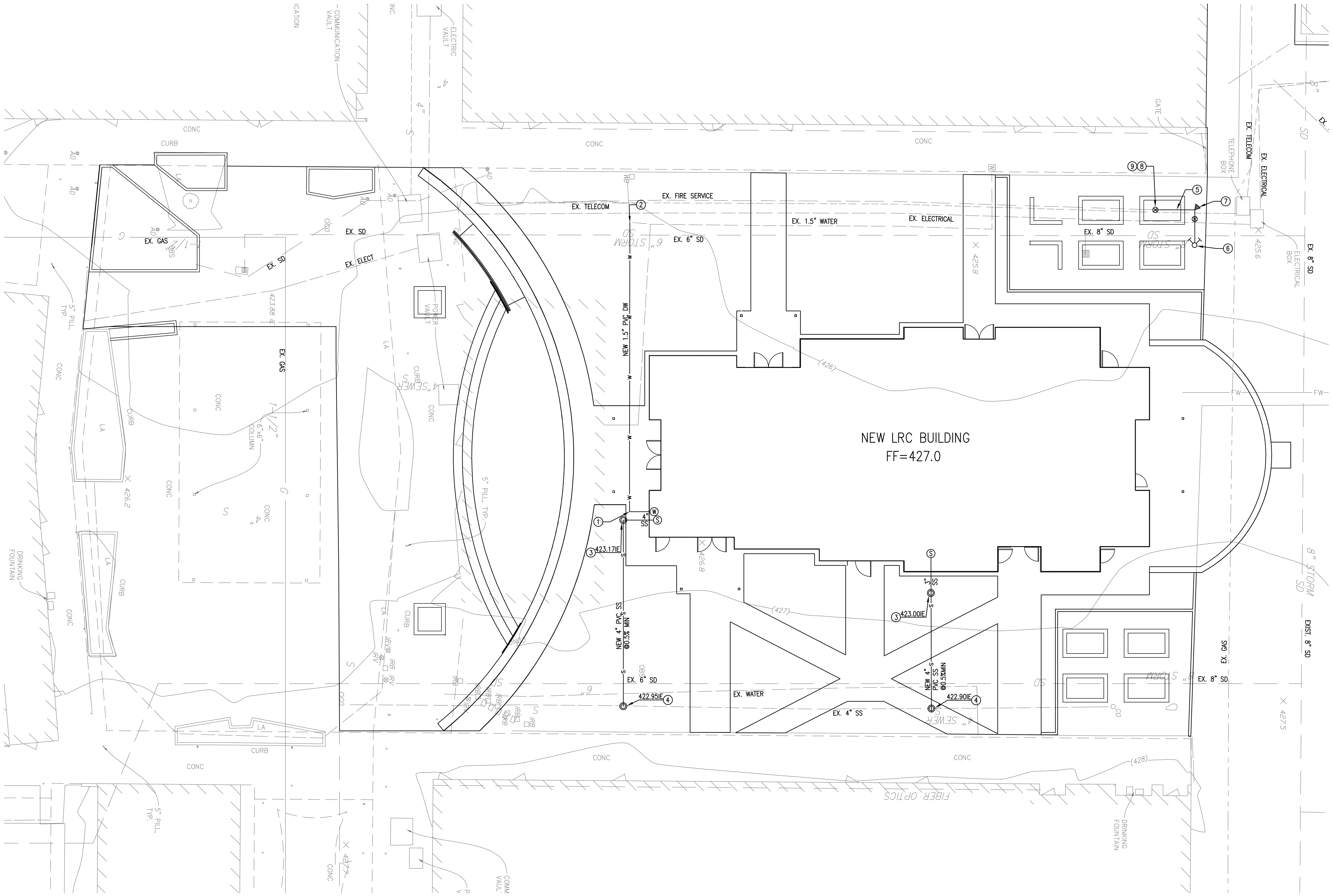

UTILITY KEY NOTES

① 1.5" DOMESTIC WATER SERVICE POINT OF CONNECTION AT 5' OUTSIDE BUILDING. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING WATER ON-SITE. REFER TO PLUMBING PLANS FOR CONTINUATION

② CONNECT TO EXISTING 1.5" SITE DOMESTIC WATER. CONTRACTOR TO VERIFY EXACT LOCATION AND DEPTH OF EXISTING SERVICE AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO LATERAL CONSTRUCTION.

③ 4" SEWER POINT OF CONNECTION AT 5' OUTSIDE BUILDING. PROVIDE SEWER CLEANOUT TO GRADE PER DETAIL B, SHEET C5.0. REFER TO PLUMBING PLANS FOR CONTINUATION

④ CONNECT TO EXISTING 4" SANITARY SEWER. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING SEWER AND NOTIFY ENGINEER OF WORK OF CONFLICTS PRIOR TO NEW LATERAL CONSTRUCTION. PROVIDE SEWER CLEANOUT TO GRADE PER DETAIL B, SHEET C5.0.

⑤ WATER PIPE TRENCHING AND BEDDING PER SDRSD SDW-110

⑥ 6" FIRE HYDRANT ASSEMBLY WITH 6" GATE VALVE PER DETAIL B, SHEET C6.0

⑦ CONCRETE THRUST BLOCK PER DETAIL C, SHEET C6.0

⑧ CONNECT TO EXISTING 6" FIRE WATER. VERIFY EXISTING PIPE SIZE AND PROVIDE REDUCER IF REQUIRED

⑨ PROVIDE 6" GATE VALVE PER DETAIL A, SHEET C6.0

CIVIL UTILITY LEGEND

SYMBOL	DETAIL/REFERENCE	DESCRIPTION
—M— (W)	SEE PLUMBING PLANS	DOMESTIC WATER POINT OF CONNECTION
—S— (S)	SEE PLUMBING PLANS	SANITARY SEWER POINT OF CONNECTION
◎	DETAIL B, SHEET C5.0	4" SANITARY SEWER CLEANOUT
—FW—		6" PVC FIRE WATER
	DETAIL B,C SHEET C6.0	6" FIRE HYDRANT ASSEMBLY W/ CONCRETE THRUST BLOCK
⊗	DETAIL A, SHEET C6.0	6" GATE VALVE

NOTES FOR UNDERGROUND PIPING FOR PRIVATE FIRE HYDRANTS

1. PRIOR TO INSTALLATION, ALL PLANS AND SPECIFICATIONS SHALL BE APPROVED BY DSA. REFER TO DSA IR A-25 FOR DESIGN, INSTALLATION AND MAINTENANCE GENERAL REQUIREMENTS.

2. INSPECTIONS ARE REQUIRED: 1) PRIOR TO POURING THRUST BLOCKS. 2) FOR HYDROSTATIC TESTING, AND 3) FOR FLUSH.

3. INSTALLATION, INSPECTION, AND TESTING SHALL CONFORM TO 2016 EDITION CFC AND NFPA 24.

4. PRIVATE FIRE HYDRANTS SHALL BE APPROVED WET BARREL STYLE WITH A MINIMUM OF ONE 2 ½" AND ONE 4" OUTLET. THE 4" OUTLET SHALL FACE THE FIRE DEPARTMENT ACCESS ROAD. ALL OUTLETS SHALL BE PROVIDED WITH NATIONAL STANDARD THREADS (NST). NFPA 24, 7.1.1.2.

5. FIRE HYDRANT SUPPLY PIPING SHALL BE A MINIMUM OF 6" IN DIAMETER. THE CENTER OF THE HOSE OUTLET SHALL NOT BE LESS THAN 18" ABOVE FINAL GRADE OR, WHERE LOCATED IN A HOSE HOUSE, 12" ABOVE THE FLOOR. NFPA 24, 7.1.1 &7.3.3

6. FIRE HYDRANTS SHALL BE A MINIMUM OF 40 FEET FROM ALL STRUCTURES. NFPA 24, 7.2.3

7. A KEYED GATE VALVE SHALL BE PROVIDED FOR EACH HYDRANT IN AN ACCESSIBLE LOCATION. VALVES SHALL NOT BE LOCATED IN PARKING STALLS. NFPA 24, 7.1.1.1

8. ALL PIPING SHALL BE LISTED FOR USE IN FIRE PROTECTION SERVICE AND COMPLY WITH AWWA STANDARDS (CLASS 150 MINIMUM) CLASS 200 PIPE SHALL BE USED WHERE THE PRESSURE MAY EXCEED 150 PSI. NFPA 24, 10.1.1 & 5.

9. ALL BOLTED JOINTS SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER INSTALLATION. NFPA 24, 10.3.6.2.

10. BACKFILL SHALL BE WELL TAMPED LAYERS TO CONSIST OF 6" MINIMUM BED OF CLEAN FILL SAND OR PEA GRAVEL BELOW AND 12" ABOVE THE PIPE (TOTAL 18" MINIMUM). NFPA 24, 10.9.1.

11. FITTINGS SHALL BE OF AN APPROVED TYPE. NFPA 24, 10.2.1.

12. A MINIMUM OF 30" OF COVER, FROM FINISH GRADE TO TOP OF PIPE, SHALL BE PROVIDED. WHEN SURFACE LOADS ARE EXPECTED, A MINIMUM OF 36" OF COVER SHALL BE PROVIDED. NFPA 24, 10.4.4.

13. THRUST BLOCKS, OR OTHER APPROVED METHOD OF THRUST RESTRAINT, SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION. BACKFILL BETWEEN THE JOINTS TO PREVENT THE MOVEMENT OF THE PIPE. PROVIDE DETAILS AND CALCULATIONS FOR SIZING THRUST BLOCKS BASED ON ACTUAL SOIL CONDITIONS. NFPA 24, 10.8

14. A HYDROSTATIC TEST (200 PSI FOR TWO HOURS OR 50 PSI OVER MAXIMUM STATIC PRESSURE, WHICHEVER IS GREATER) SHALL BE PERFORMED. NFPA 24 10.10.2.2.1

15. THE SYSTEM SHALL BE THOROUGHLY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD PIPING. FLOW SHALL BE THROUGH A MINIMUM OF 4" HOSE OF PIPE. NFPA 24, 10.10.2.1.

16. TESTS SHALL BE MADE BY THE INSTALLING CONTRACTOR IN THE PRESENCE OF TRHE (AHJ). PROVIDE A COMPLETED CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING TO DSA. NFPA 24, 10.10.1 & 14.1, CFC 901.5 & 6.

UTILITY NOTES

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON VISUAL OBSERVATION OF ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED BY THE OWNER. LOCATIONS OF UNDERGROUND UTILITIES\STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES\STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES\STRUCTURES. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK.

GENERAL NOTES

1. PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED PER PLAN.
2. REPLACE PAVING OVER NEW UTILITY TRENCHES TO MATCH EXISTING WHERE OCCURS
3. NOTIFY ENGINEER OF RECORD IMMEDIATELY IF FIELD LOCATION OR DEPTH OF EXISTING UTILITIES DIFFER SIGNIFICANTLY FROM PLAN.
4. REFER TO SITE PLUMBING PLAN FOR LOCATION OF NEW GAS
5. REFER TO LANDSCAPE PLANS FOR LOCATION OF NEW AND RELOCATED IRRIGATION
6. SEE ARCHITECTURAL, PLUMBING, ELECTRICAL, AND LANDSCAPE PLANS FOR ADDITIONAL COORDINATION OF SITE ITEMS

10 5 0 10 20
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DATE: 02.05.20

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C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
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SANTEE SCHOOL DISTRICT

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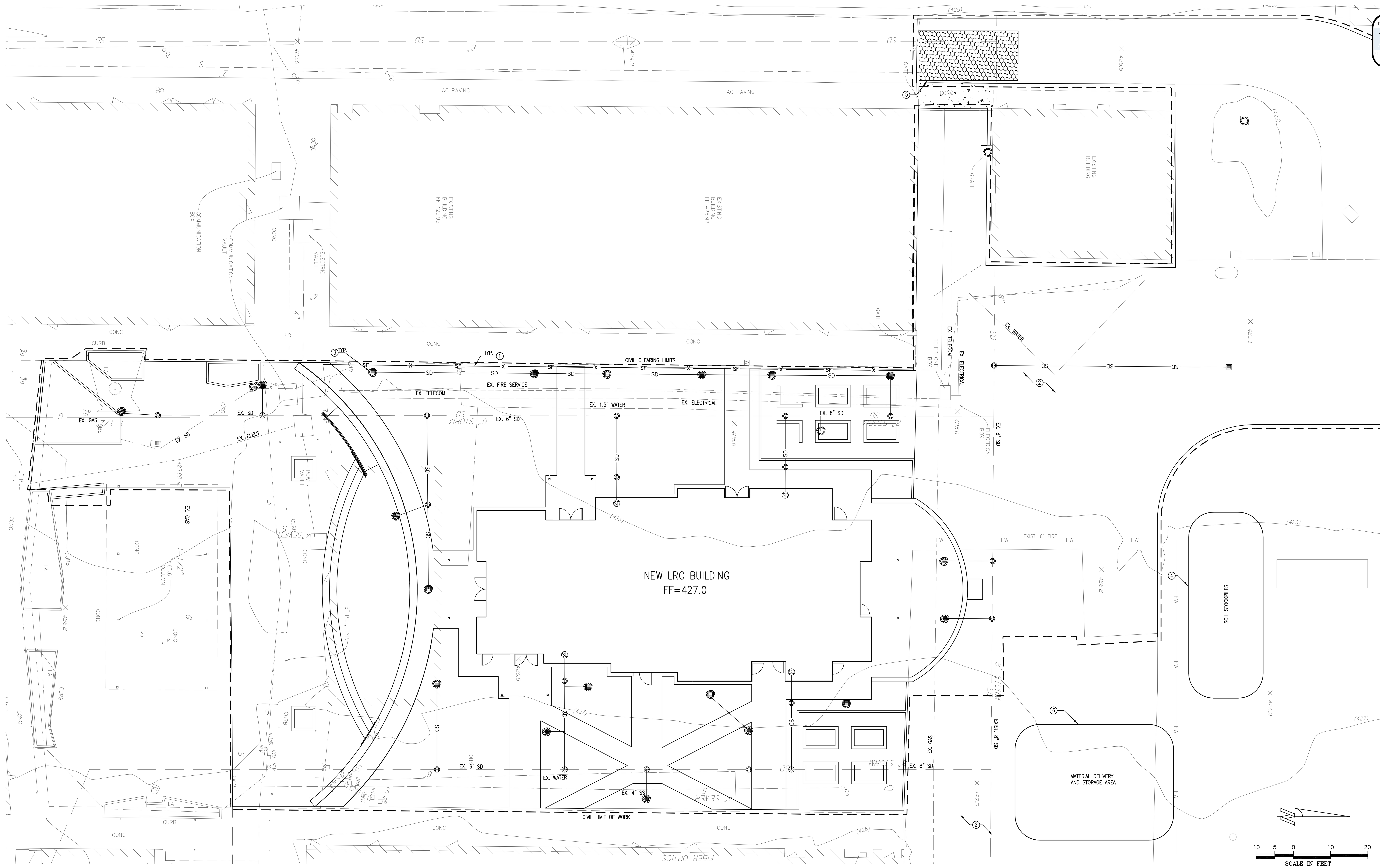

EROSION CONTROL NOTES

TEMPORARY EROSION CONTROL PRIOR TO COMPLETION OF FINAL IMPROVEMENTS SHALL BE PERFORMED BY THE CONTRACTOR AS INDICATED BELOW:

1. FOR GRADED DRIVEWAYS WITH SLOPE GREATER THAN 2%, PROVIDE DESILTING BASINS AS INDICATED ON DETAILS.

2. FOR STORM DRAIN INLET, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.

3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.

4. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET DUE TO CONSTRUCTION ACTIVITY.

5. THE CONTRACTOR SHALL CHECK AND MAINTAIN LINED AND UNLINED DITCHES AFTER EACH RAINFALL.

6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL, OR WHEN SILT REACHES AN ELEVATION OF 0.5' BELOW WEIR OPENING FOR GRAVEL BAG BASINS.

7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.

8. DEVICES SHOWN ON PLAN SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE QUALIFIED SWPPP PRACTIONER AND THE ENGINEER OF WORK.

9. THE CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE QUALIFIED SWPPP PRACTIONER AND ENGINEER OF WORK AFTER EACH RUN-OFF PRODUCING RAINFALL.

10. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE QUALIFIED SWPPP PRACTIONER AND THE ENGINEER OF WORK DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES WHICH MAY ARISE.

11. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

12. ALL EROSION CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON.

13. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

14. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.

15. THE CONTRACTOR SHALL GRADE, INCLUDING CLEARING AND GRUBBING, ONLY FOR THE AREAS FOR WHICH THE CONTRACTOR CAN PROVIDE EROSION CONTROL MEASURE.

16. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 30TH TO MARCH 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED SWPPP PRACTIONER, EROSION CONTROL SUBCONTRACTOR IF ANY, AND DISTRICT REPRESENTATIVE TO EVALUATE THE ADEQUACY OF THE EROSION CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

MINIMUM POST CONSTRUCTION BMP MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH) AND REPAIRED AND REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILED.

2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.

3. OPERATION AND MAINTENANCE, FUNDING: POST-CONSTRUCTION MANAGEMENT MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TRANSFER OF RESPECTIVE SITE TO THE SCHOOL DISTRICT. AT THAT TIME, THE DISTRICT SHALL ASSUME RESPONSIBILITY FOR THEIR RESPECTIVE PORTIONS OF THE DEVELOPMENT.

EROSION AND SEDIMENT CONTROL KEY NOTES:

(1) PLACE SILT FENCE (SE-1) ALONG PERIMETER OF THE PROJECT VICINITY, BOTTOM OF SLOPES

(2) PROVIDE STREET SWEEPING (SE-7) ANYWHERE SEDIMENT IS TRACKED FROM PROJECT SITE ONTO PAVED ROADS

(3) INSTALL STORM DRAIN INLET PROTECTION (SE-10) TYPE 2 (EXCAVATED DROP INLET SEDIMENT TRAP) FOR NEW DRAIN INLETS AND EXISTING DRAIN INLETS WHERE APPLICABLE. PROVIDE TEMPORARY GEOTEXTILE FILTER FABRIC INLET PROTECTION BENEATH GRATE FOR SMALL AREA DRAINS.

(4) SUGGESTED LOCATION OF SOIL STOCKPILES. APPLY WATER AT INTERVALS REQUIRED TO PROVIDE WIND EROSION OONTROL (WE-1) AT STOCKPILES

(5) INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT (TC-01). SUGGESTED LOCATION SHOWN ON PLAN: LOCATE WHERE MOST CONVENIENT FOR CONSTRUCTION OPERATIONS

(6) SUGGESTED LOCATION OF MATERIALS DELIVERY AND STORAGE AREA (WM-1), LOCATE WHERE CONVENIENT TO CONSTRUCTION OPERATIONS

EROSION CONTROL LEGEND

SYMBOL	DETAIL REFERENCE	DESCRIPTION
—SF—X—	CASQA SE-1	SILT FENCE
	CASQA TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT
	CASQA SE-10	TEMPORARY INLET PROTECTION

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EROSION AND SEDIMENT CONTROL PLAN

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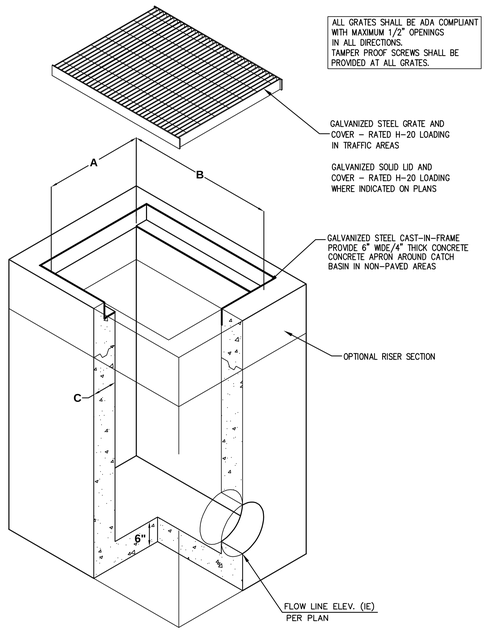


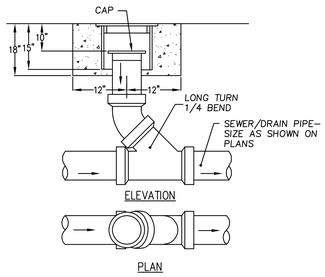
SIZE	A	B	C	WEIGHT CALC - LBS.
12"X12"	12"	12"	4"	208 (BASE) + 266 VF
18"X18"	18"	18"	5"	602 (BASE) + 604 VF
24"X24"	24"	24"	6"	675 (BASE) + 750 VF

NOTES:
1) FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST OR BROOKS PRODUCTS INC.

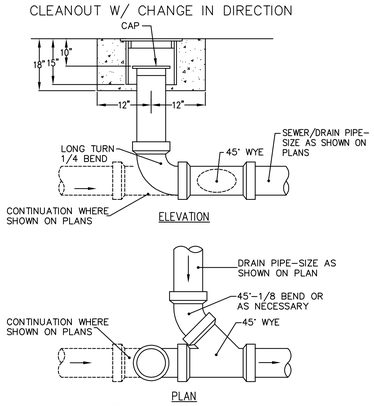
2) CONTRACTOR SHALL PROVIDE CUT SHEETS FOR ALL CATCH BASIN GRATES AND AREA DRAIN GRATES WHICH SHOWS CONFORMANCE TO ADA REGULATIONS.

A C5.0 PRECAST CATCH BASIN
NO SCALE

CLEANOUT W/ NO CHANGE IN DIRECTION

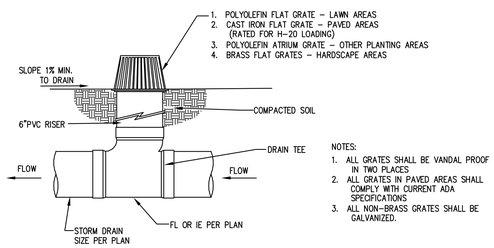


CLEANOUT W/ CHANGE IN DIRECTION



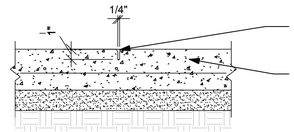
NOTE:
STAND PIPE SIZE SHALL BE EQUIVALENT TO MAINLINE UP TO AND INCLUDING 8" PIPE. MAINLINE GREATER THAN 8" SHALL HAVE AN 8" STANDPIPE.

B C5.0 SEWER/STORM DRAIN CLEANOUT
NO SCALE

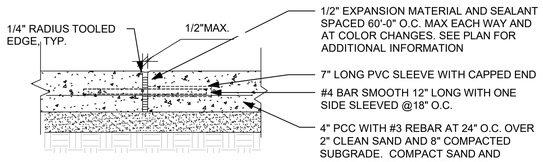


NOTES:
1. ALL GRATES SHALL BE VANDAL PROOF IN TWO PLACES
2. ALL GRATES IN PAVED AREAS SHALL COMPLY WITH CURRENT ADA SPECIFICATIONS
3. ALL NON–BRASS GRATES SHALL BE GALVANIZED.

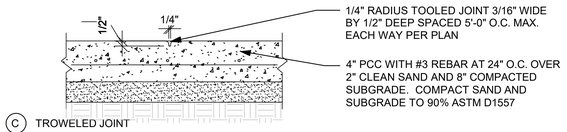
C C5.0 AREA DRAIN
NO SCALE



A CONTROL JOINT OR WEAKENED PLAN JOINT (WPJ)
TO BE PROVIDED AT 5' O.C. UNLESS OTHERWISE SPECIFIED



B EXPANSION JOINT
TO BE PROVIDED AT 20' O.C. IN PLACE OF TROWELED JOINT



C TROWELED JOINT

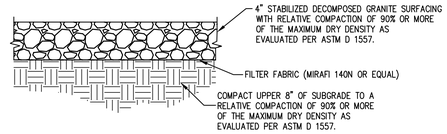
NOTES:

1) CONCRETE SHALL BE AT LEAST AS SLIP RESISTANT AS A MEDIUM BROOM FINISH

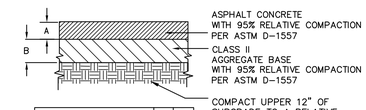
2) REFER TO ARCHITECTURAL PLANS A10.1-A10.3 FOR EDGE CONDITION DETAILS FOR CONCRETE FLATWORK

3) REFER TO PROJECT SOILS REPORT BY NINYO AND MOORE FOR OVEREXCAVATION REQUIRED FOR ALL ON-SITE PAVING. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL OVEREXCAVATION REQUIREMENTS AS SPECIFIED.

D C5.0 CONCRETE WALKWAY AND JOINTS
NO SCALE



F C5.0 DECOMPOSED GRANITE SURFACING
SCALE: NTS



	A	B
VEHICULAR/PLAYGROUND	3"	7"
FIRE LANES	4"	12"

NOTE: REFER TO PROJECT SOILS REPORT BY NINYO AND MOORE FOR ADDITIONAL PAVEMENT REQUIREMENTS INCLUDING SECTION 9.1.8 FOR OVEREXCAVATION REQUIREMENTS.

G C5.0 ASPHALT CONCRETE PAVEMENT
SCALE: NTS

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APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Consultant

Engineer

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LICENSED ARCHITECT
CHRISTY D. WEBB
RENEWAL 08/31/2021
STATE OF CALIFORNIA

SYCAMORE CANYON
ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

CIVIL DETAILS

Drawn: CAR
Checked: DVC/RI
Date: FEB 1, 2020
Job: SSD-SC-03

C5.0

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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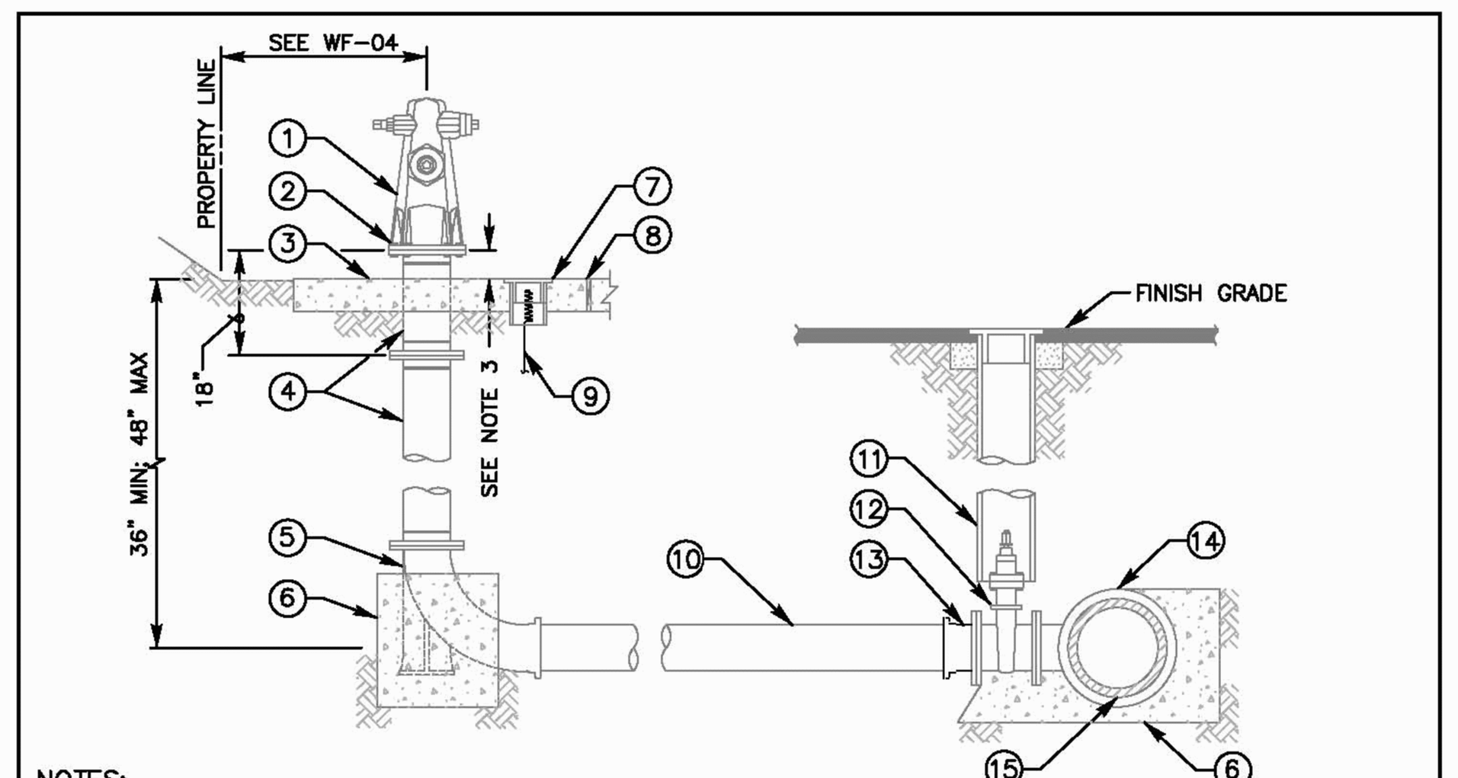


NOTES:
1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) THE NUMBER OF OUTLETS SHALL BE AS SHOWN ON PLANS
3) FIRE HYDRANT FLANGE SHALL BE 6" ± 1" ABOVE TOP OF CURB OR SPLASH PAD SEE PLANS FOR ELEVATION
4) LOCATE FIRE HYDRANT AS SHOWN ON WF-04
5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
6) FIRE HYDRANT FLANGE BOLTS SHALL BE BREAK AWAY BOLTS INSTALLED WITH NUTS ON TOP OF THE FLANGE. BOLT SHAFT SHALL BE FILLED WITH SILICONE SEALANT
7) CONNECTIONS TO STEEL MAINS WILL BE MADE IN ACCORDANCE WITH AGENCY'S SPECIFICATIONS
8) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

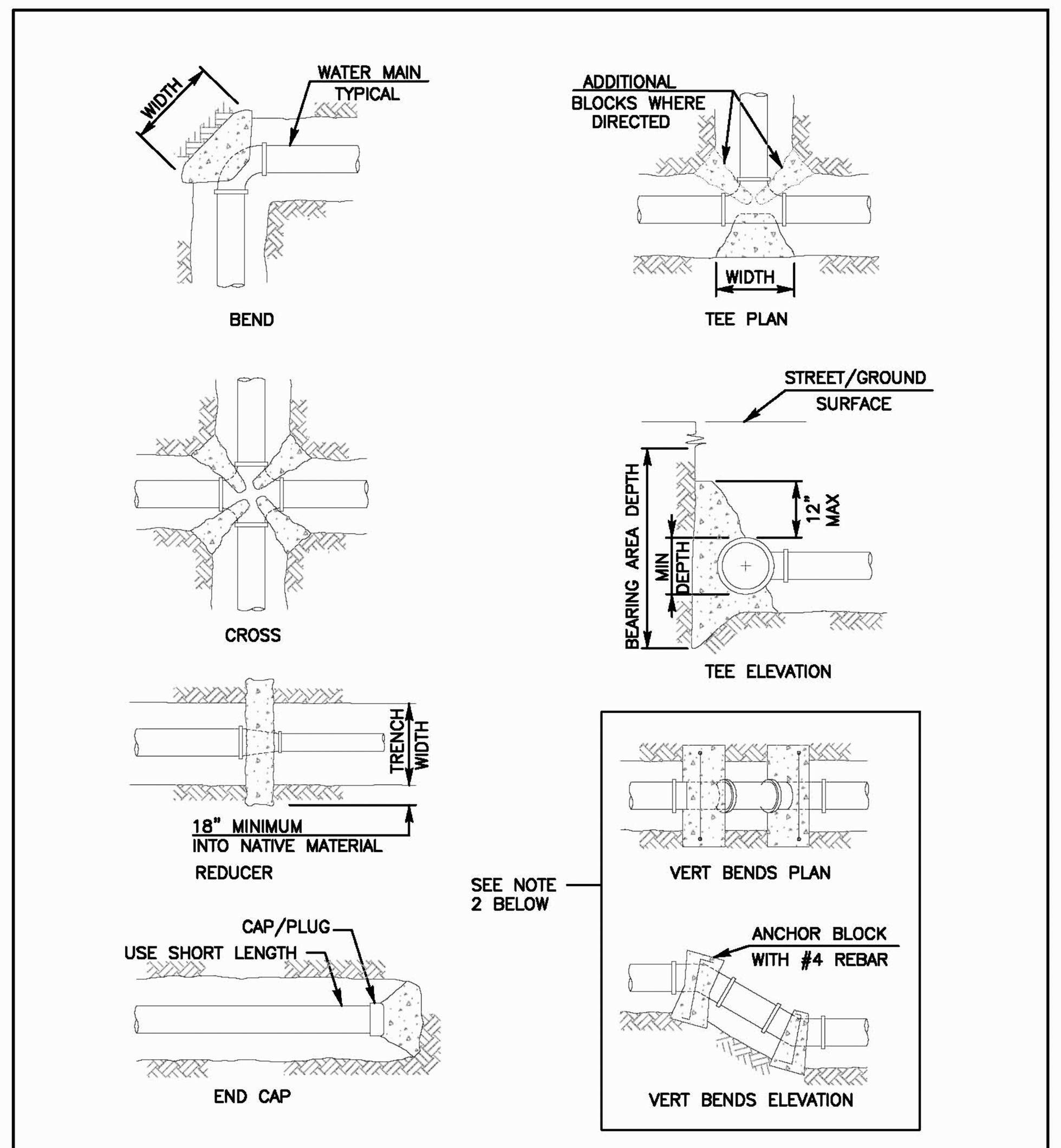
LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	6" FIRE HYDRANT SEE NOTE 2	8	COLD JOINT STRIP
2	BREAK-AWAY BOLTS, SEE NOTE 6	9	TRACER WIRE (AS REQUIRED) PER WP-01
3	4' x 4' x 6" THICK CONCRETE SPLASH PAD	10	6" C-900 PVC PIPE
4	6" FLANGE DI HYDRANT EXTENSION SPOOL(S) WITH BREAK OFF GROOVES (MAXIMUM OF 2 SPOOLS)	11	GATE WELL WITH CAP SEE WV-01 OR WV-02
5	6" x 16" LONG RADIUS FLG x MJ/PO BURY ELL	12	6" FLG x MJ/PO/FLG RWGV
6	CONCRETE THRUST BLOCK SEE WT-01	13	6" FLG x MJ/PO ADAPTER (IF REQUIRED)
7	TRACER WIRE ACCESS PORT, 4" x 8" LONG SDR 35 SEWER PIPE W/ CAP (AS-REQUIRED)	14	SIZE x 6" MJ/PO/FLG x FLG TEE
		15	WATER MAIN

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Add Metric		T. Stanton	03/03
Replaced W-10		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Updated	BK	B. KNOLL	10/18

SAN DIEGO REGIONAL STANDARD DRAWING
6" FIRE HYDRANT INSTALLATION
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
10/25/2018
Chairperson R.C.E. 19246 Date
DRAWING NUMBER WF-01

B / C6.0
6" FIRE HYDRANT ASSEMBLY
SCALE: NTS



NOTES:
1) FOR ADDITIONAL THRUST BLOCKS, ANCHOR BLOCKS AND NOTES SEE WT-01 (2 OF 3) & (3 OF 3)
2) THE ANCHOR BLOCKS ON VERTICAL BENDS REQUIRE AGENCY APPROVAL

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Repl. W-17 through W-22		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Reviewed	MR	B. KNOLL	10/15
Reviewed	MR	B. KNOLL	10/18

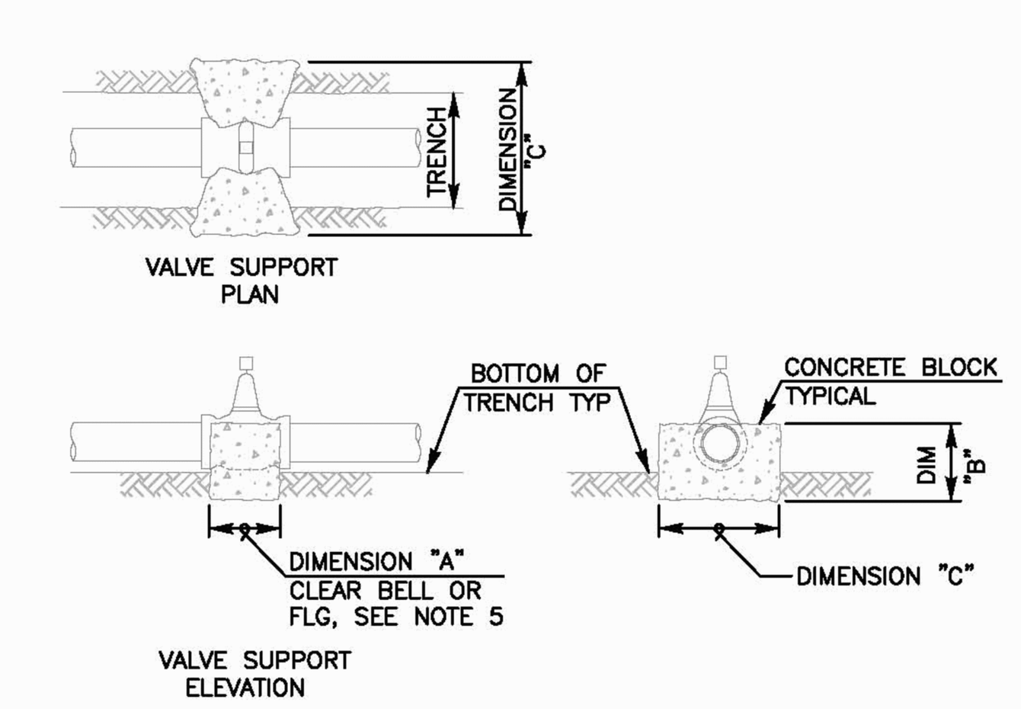
SAN DIEGO REGIONAL STANDARD DRAWING
CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
10/25/2018
Chairperson R.C.E. 19246 Date
DRAWING NUMBER WT-01 (1 OF 3)

VALVE SUPPORT BLOCK

VALVE SIZE	DIMENSION "A"	DIMENSION "B"
4"	12"	12"
6"	12"	12"
8"	13"	14"
10"	14"	16"
12"	15"	18"
DIMENSION "C" = TRENCH WIDTH PLUS TWO TIMES THE PIPE DIAMETER		

THRUST AND ANCHOR BLOCKS

MINIMUM BEARING AREA IN SQUARE FOOT SEE NOTE 2				
MAIN SIZE	TEES	90° BEND	45° BEND	22½° BEND
4"	4	5	3	1.5
6"	8	10	5	2.5
8"	12	16	9	4.5
10"	17	24	13	6.5
12"	24	33	19	9.5



NOTES:
1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) BEARING AREA BASED ON SOIL BEARING VALUE OF 1500 PSF AND 225 PSI LINE PRESSURE AND A MINIMUM OF 36" COVER*
   FOR BEARING= 1000 PSF, 1.5 x AREA SHOWN
   FOR BEARING= 500 PSF, 3.0 x AREA SHOWN
3) DESIGN ENGINEER SHALL DETERMINE SIZES, REFER TO AGENCY SPECIFICATIONS FOR THRUST AND ANCHOR BLOCK SIZING*
4) THRUST BLOCKS SHALL BE CENTERED ON THE FITTING SO THAT THE BEARING AREA IS EXACTLY OPPOSITE THE RESULTANT DIRECTION OF THRUST
5) CONCRETE SHALL BE PLACED SO THAT FITTINGS AND VALVES WILL BE ACCESSIBLE FOR REPAIR OR REPLACEMENT
6) ALL THRUST AND ANCHOR BLOCKS SHALL BE POURED AGAINST WETTED UNDISTURBED SOIL
7) FOR MINIMUM CONCRETE CURING TIME REFER TO AGENCY SPECIFICATIONS
8) FOR ADDITIONAL THRUST BLOCKS SEE WT-01 (1 OF 3) & (3 OF 3)

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Repl. W-17 through W-22		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Reviewed	MR	B. KNOLL	10/15
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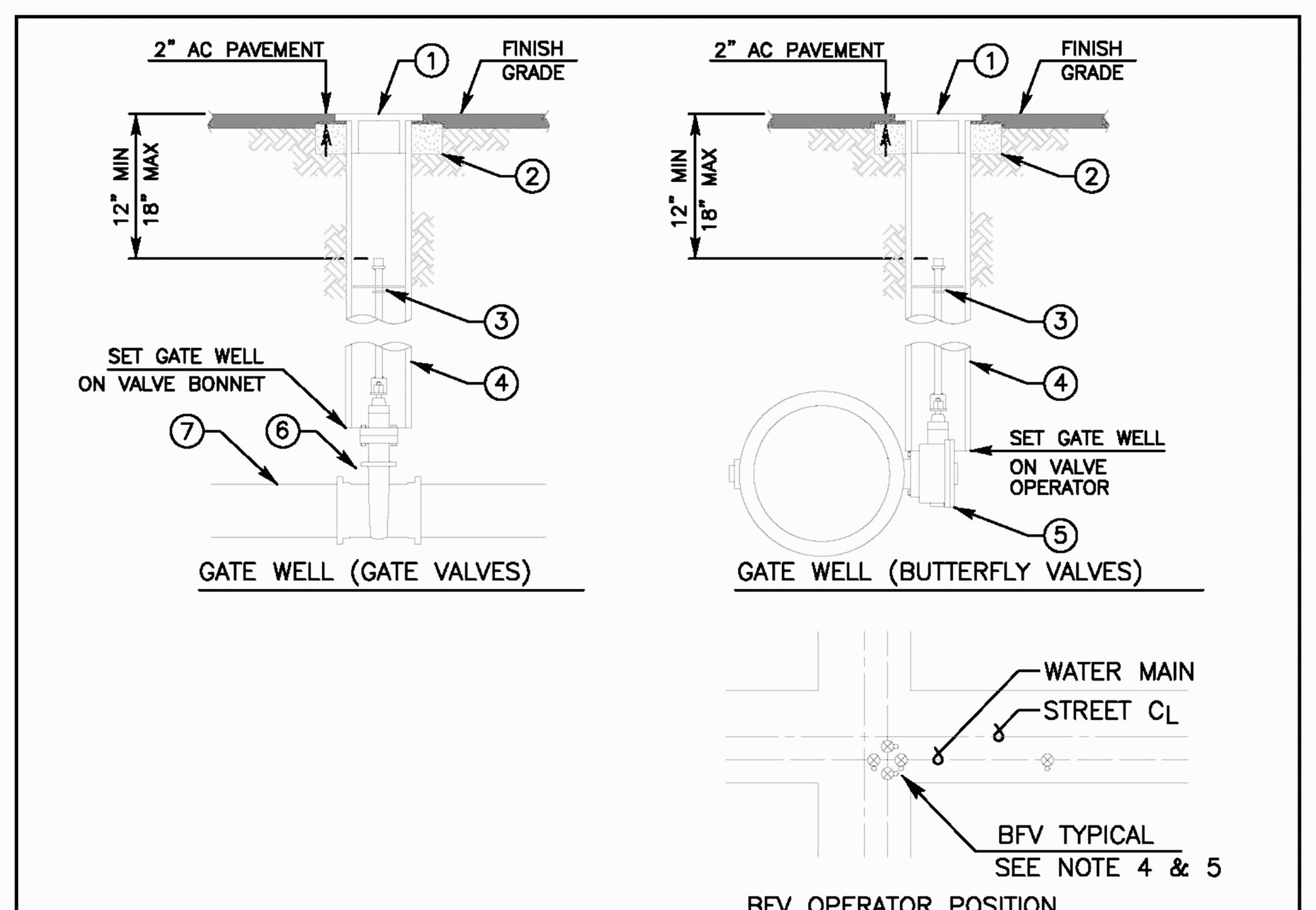
SAN DIEGO REGIONAL STANDARD DRAWING
CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
10/25/2018
Chairperson R.C.E. 19246 Date
DRAWING NUMBER WT-01 (2 OF 3)

* REFER TO TABLE BELOW FOR BEARING AREAS, THRUST BLOCK, ANCHOR BLOCK SIZING

THRUST/ANCHOR BLOCK TABLE

DESCRIPTION	TYPE OF FITTING	TYPE OF BLOCK	TEST PRESSURE (PSI)	TOTAL THRUST (LBS)	SOIL CAPACITY (PSF)	BEARING/THRUST AREA OR VOLUME OF BLOCK
6" 90° BEND	BEND	THRUST	250	13220	1500	14 CF
6" GATE VALVE	VALVE	ANCHOR	250	9348	1500	101 SF
HYDRANT THRUST BLOCK	BEND	THRUST	250	13220	1500	14 CF

C / C6.0
CONCRETE THRUST/ANCHOR BLOCKS
SCALE: NTS



NOTES:
1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) VALVES DEEPER THAN 5' REQUIRE A VALVE STEM EXTENSION
3) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT
4) GATE WELL AND CAP SHALL BE SET SO THAT NO MORE THAN TWO 1" ADJUSTMENT RINGS ARE USED
5) BFV OPERATORS TO BE LOCATED TO THE CURBLINE SIDE OF WATER MAIN
6) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY'S SPECIFICATIONS
7) GATE WELLS AND CAPS SHALL BE IDENTIFIED AS DESCRIBED ON WV-03
8) FOR INLINE VALVE ANCHOR BLOCK INSTALLATION SEE WT-02
9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	GATE WELL WITH CAP SEE NOTE 7	4	8" PVC CL 200, C-900 PIPE x REQUIRED LENGTH GATE WELL SEE NOTE 7
2	6" HIGH x 6" WIDE COMPACTED ASPHALT-CONCRETE RING	5	BUTTERFLY VALVE
3	VALVE STEM EXTENSION SEE NOTES 2 & 3	6	RESILIENT WEDGE GATE VALVE
		7	WATER MAIN

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Repl. W-12A and W-12B		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Reviewed	MR	B. KNOLL	10/15
Reviewed	MR	B. KNOLL	10/18

SAN DIEGO REGIONAL STANDARD DRAWING
GATE WELL CAP INSTALLATION, FOR VALVES 4" AND LARGER
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
10/25/2018
Chairperson R.C.E. 19246 Date
DRAWING NUMBER WV-01

A / C6.0
6" GATE VALVE
SCALE: NTS

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

CIVIL DETAILS

Drawn: CAR
Checked: DVC/RI
Date: FEB 1, 2020
Job: SSD-SC-03

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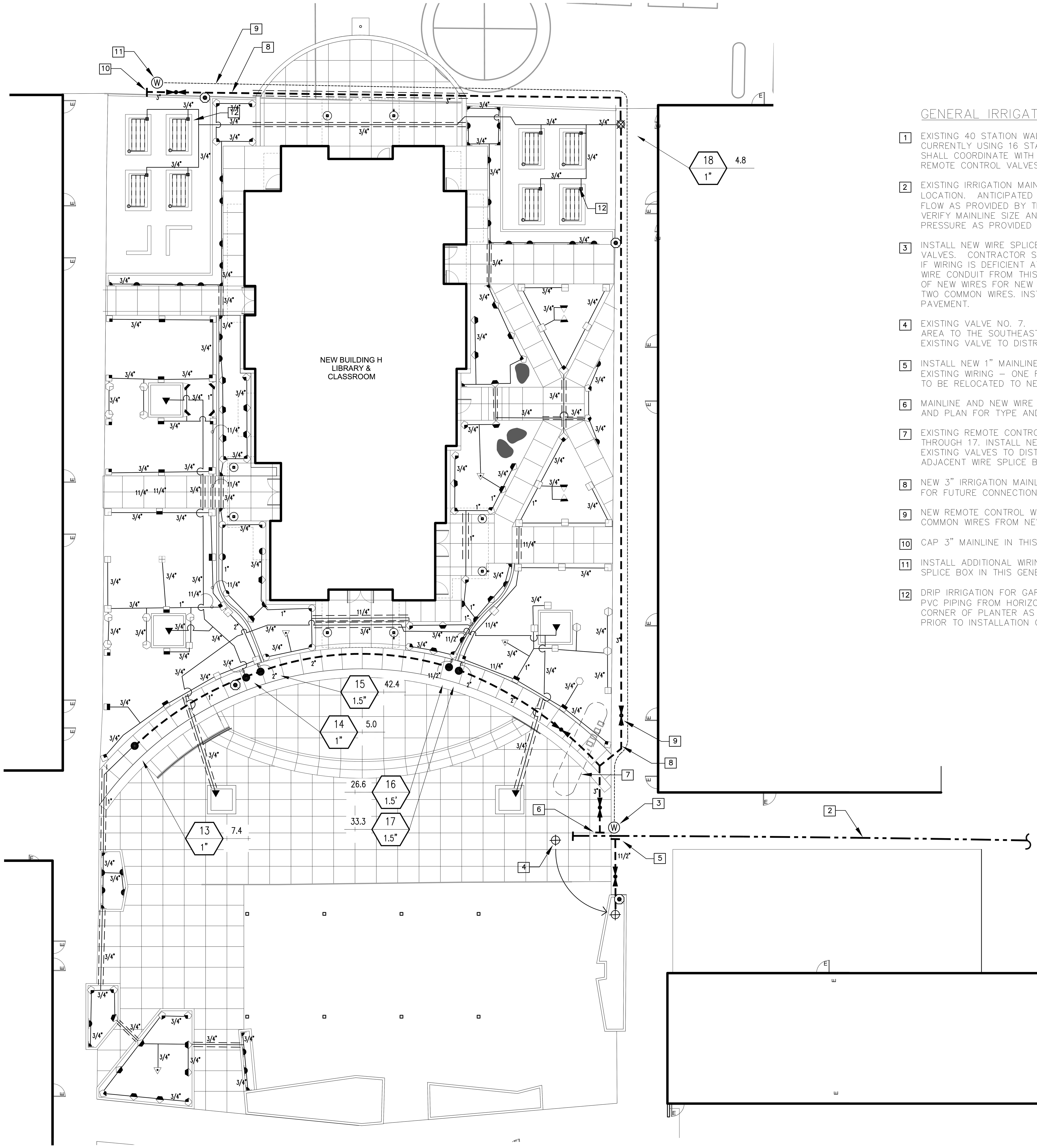

GENERAL IRRIGATION NOTES

1. EXISTING 40 STATION WALL MOUNTED CALSENSE CONTROLLER. CONTROLLER US CURRENTLY USING 16 STATIONS THAT SERVE THE CAMPUS AREA. CONTRACTOR SHALL COORDINATE WITH DISTRICT REPRESENTATIVE FOR STATIONING NEW REMOTE CONTROL VALVES.

2. EXISTING IRRIGATION MAINLINE SERVING CENTER OF CAMPUS – APPROXIMATE LOCATION. ANTICIPATED SIZE IS 4" DIA. WITH A FLOW OF 120 GPM – ASSUMED FLOW AS PROVIDED BY THE DISTRICT REPRESENTATIVE.. CONTRACTOR SHALL VERIFY MAINLINE SIZE AND SHALL VERIFY AVAILABLE PRESSURE. ASSUMED PRESSURE AS PROVIDED BY THE DISTRICT REPRESENTATIVE IS 85 PSI.

3. INSTALL NEW WIRE SPLICE BOX AT THIS LOCATION FOR NEW WIRING TO NEW VALVES. CONTRACTOR SHALL USE EXISTING WIRING FROM ABANDONED VALVES. IF WIRING IS DEFICIENT AT THIS LOCATION, CONTRACTOR SHALL INSTALL NEW WIRE CONDUIT FROM THIS LOCATION TO EXISTING CONTROLLER. TOTAL NUMBER OF NEW WIRES FOR NEW SYSTEM INCLUDES 10 REMOTE CONTROL WIRES AND TWO COMMON WIRES. INSTALL IN CONCRETE BOX IF LOCATED IN CONCRETE PAVEMENT.

4. EXISTING VALVE NO. 7. RELOCATE TO NEW LOCATION IN EXISTING PLANTING AREA TO THE SOUTHEAST AS SHOWN. INSTALL NEW VALVE AND DELIVER EXISTING VALVE TO DISTRICT REPRESENTATIVE.

5. INSTALL NEW 1" MAINLINE SERVICE TO SERVE RELOCATED VALVE NO. 7. REUSE EXISTING WIRING – ONE RCV WIRE AND ONE COMMON WIRE FROM THIS LOCATION TO BE RELOCATED TO NEW VALVE NO. 7 LOCATION.

6. MAINLINE AND NEW WIRE POINT OF CONNECTION. REFER TO IRRIGATION LEGEND AND PLAN FOR TYPE AND SIZE. APPROXIMATE LOCATION OF EXISTING MAINLINE.

7. EXISTING REMOTE CONTROL VALVES AND CONTROL WIRING – VALVES 13 THROUGH 17. INSTALL NEW VALVES TO ALTERNATE LOCATIONS. DELIVER EXISTING VALVES TO DISTRICT REPRESENTATIVE. INSTALL NEW WIRING FROM ADJACENT WIRE SPLICE BOX TO NEW VALVES.

8. NEW 3" IRRIGATION MAINLINE. EXTEND TO NORTHWEST CORNER OF QUAD AREA FOR FUTURE CONNECTION.

9. NEW REMOTE CONTROL WIRING. INSTALL 10 REMOTE CONTROL WIRES AND TWO COMMON WIRES FROM NEW SPLICE BOX TO NORTHWEST CORNER OF QUAD AREA.

10. CAP 3" MAINLINE IN THIS GENERAL LOCATION FOR FUTURE USE.

11. INSTALL ADDITIONAL WIRING ALONGSIDE MAINLINE PIPING AND SET IN WIRE SPLICE BOX IN THIS GENERAL LOCATION FOR FUTURE USE.

12. DRIP IRRIGATION FOR GARDEN PLANTER BOXES. INSTALL 1/2 INCH VERTICAL PVC PIPING FROM HORIZONTAL LATERAL LINES AND EXTEND VERTICALLY INTO CORNER OF PLANTER AS SHOWN. INSTALL HORIZONTAL BALL VALVE IN CORNER PRIOR TO INSTALLATION OF NEW DRIP IRRIGATION PIPING.

SEE SHEETS LI-2 AND LI-3 FOR IRRIGATION LEGEND, NOTES AND DETAILS.

IRRIGATION PLAN 1" = 10'-0" 1

Revision
Date
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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

IRRIGATION PLAN

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

LI-1.0

WATER METER NUMBER	N/A	WATER METER SIZE	N/A
HYDRAULIC GRADE LINE (FT)	N/A	WATER METER ELEVATION (FT)	N/A
ELEVATION DIFFERENCE (FT)	N/A	STATIC PRESSURE (PSI)	85.0
REMOTE CONTROL VALVE #	15	REMOTE CONTROL VALVE SIZE	1.5"
R.C.V. DEMAND (GPM)	32.3	TOTAL DEMAND (GPM)	32.3
HIGHEST HEAD SERVED (FT)	N/A	STATIC PRESSURE AT HIGHEST HEAD	N/A

SIZE	DESCRIPTION	FLOW	#	PSI LOSS	
N/A	WATER METER	N/A	1	N/A	PSI
N/A	BACKFLOW PREVENTER	N/A	2	N/A	PSI
N/A	MASTER VALVE	N/A	3	N/A	PSI
N/A	FLOW SENSOR	N/A	4	N/A	PSI
N/A	GATE VALVES	N.A	5	N/A	PSI
2-3"	BALL VALVE	32.3	6	3.0	PSI
3"	20 FEET OF MAINLINE	32.3	7	1.0	PSI
2"	85 FEET OF MAINLINE	32.3	8	1.0	PSI
1.5"	REMOTE CONTROL VALVE	32.3	9	2.5	PSI
10%	LATERAL LINE LOSS	32.3	10	3.0	PSI
20%	FITTING LOSS	32.3	11	1.0	PSI
N/A	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	12	N/A	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #12)			13	11.5	PSI
PRESSURE REQUIRED AT HEAD			14	30.0	PSI
TOTAL RESIDUAL PRESSURE REQUIRED (SUM OF #13 AND #14)			15	41.5	PSI
STATIC WATER PRESSURE (DISTRICT PROVIDED) - POC			16	75.0	PSI
EXCESS PRESSURE (SUBTRACT #15 FROM #16)			17	33.5	PSI
SET PRV OR MCV AT (#15 PLUS 15 PSI)			18	N/A	PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI ADDITIONAL)			19	N/A	PSI

IRRIGATION NOTES

1 ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE DRAWINGS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.

2 THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE STARTING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DISTRICT'S REPRESENTATIVE.

3 THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.

4 THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.

5 THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.

6 THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DISTRICT'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE DISTRICT.

7 ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.

8 ALL QUICK COUPLER AND REMOTE CONTROL VALVES SHALL BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.

9 THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT REPRESENTATIVE FOR PROGRAMMING THE NEW IRRIGATION VALVEs FOR TIMING, LENGTH OF RUN AND STATION NUMBERING. CONTRACTOR SHALL HAVE ACCESS TO THE CONTROLLER FOR MAKING ADJUSTMENTS TO THE NEW SYSTEM PROGRAMMING.

LANDSCAPE IRRIGATION WATER BUDGET (FOR NEW LANDSCAPE AREAS ONLY)

(based on MWELO)

PROJECT: Sycamore Canyon Elementary School
Santee School District
Santee, California

Project ETo: 51.10

MAXIMUM APPLIED WATER ALLOWANCE:
(GALLONS PER YEAR)

MAWA=(ETo)x(.62)x[(.65)(LA)+(.35)(SLA)]

51.10 x 0.62 x 5,136 + 1,236 = **201,862** Gal/yr.
Hundred Cu. Ft. / Yr. (divide by748) = **270** CCF/yr.

ESTIMATED APPLIED WATER USED:
(GALLONS PER YEAR)

ETWU=(ETo) x (.62) x [(Plant Factor)x(Hydrozone Sq. Ft.)] + SLA]
Irrigation Efficiency

HYDROZONE # 1: (Shrub Areas - Spray)
51.10 x 0.62 x 0.5 x 2,010 / 0.70 = 45,486 Gal/yr.

HYDROZONE # 2: (Turf Areas - Spray)
51.10 x 0.62 x 0.75 x 3,530 / 0.70 = 119,826 Gal/yr.

HYDROZONE # 3: (Garden Areas - Drip)
51.10 x 0.62 x 0.8 x 460 / 0.90 = 12,954 Gal/yr.

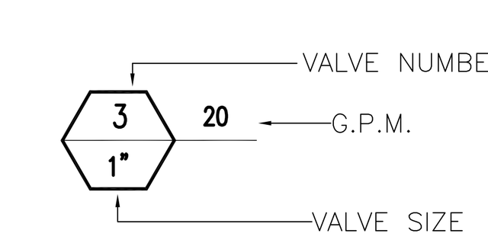
MAXIMUM APPLIED WATER ALLOWANCE: 201,862 Gal/yr.

TOTAL ESTIMATED WATER USE: 178,267 Gal/yr.
238 CCF/yr.

Water Conservation Note: This is a new construction project. New landscape areas consist of shredded mulch and shrub plantings, recreation turf areas and vegetable garden boxes. New plantings consist of xerixcape plantings.Shrubs and mulch are use in lieu of living groundcovers. Irrigation system consists of low volume spray heads and drip emitter tubing.

IRRIGATION MATERIAL LEGEND

SYMBOL Q T H F	MANUFACT.	MODEL NO. / DESCRIPTION	GPM	PSI	RADIUS	DETAIL
	RAINBIRD	1806-SAM-PRS POP-UP TURF HEAD W/ 8 SERIES Q,H,F MPR NOZZLES	.26, .52, 1.05	30	10 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP TURF HEAD W/ 10 SERIES Q,H,F MPR NOZZLES	.39, .79, 1.58	30	10 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP TURF HEAD W/ 12 SERIES Q,H,F MPR NOZZLES	.65, .1.30, 2.60	30	12 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP TURF HEAD W/ 15 SERIES Q,H,F MPR NOZZLES	.92, 1.85, 3.70	30	15 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP SHRUB HEAD W/5Q/5H/5F MPR NOZZLES	.10, .20, .41	30	5 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP SHRUB HEAD W/8Q/8H/8F MPR NOZZLES	.26, .52, 1.05	30	8 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP SHRUB HEAD W/10Q/10H/10F MPR NOZZLES	.39, .79, 1.58	30	10 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP SHRUB HEAD W/12Q/12H/12F MPR NOZZLES	.65, .1.3, 2.60	30	12 FT	C/LI-3.0
	RAINBIRD	1806-SAM-PRS POP-UP SHRUB HEAD W/15Q/15H/15F MPR NOZZLES	.92, 1.85, 3.70	30	15 FT	C/LI-3.0
	RAINBIRD	RWS-B-C-1402 W/SOCK AND GRATE EACH SYMBOL REPRESENTS TWO BUBBLERS	.50 (1.0)	30	N/A	D/LI-3.0
	NIBCO	T-FP-600A FULL PORT BRASS BALL VALVE - LINE SIZE				G/LI-3.0
	RAINBIRD	33DRC, 3/4" QUICK COUPLER VALVE INSTALLED WITHIN 10" ROUND VALVE BOX. PROVIDE VALVE KEY AND SH SERIES HOSE SWIVEL. INSTALL WITH LASCO G13T-212 STABILIZER ASSEMBLY.				H/LI-3.0
	RAINBIRD	EFB-CP SERIES BRASS REMOTE CONTROL VALVE. INSTALL WITH A NIBCO T-FP-600A FULL PORT BRASS BALL VALVE, STEM AND HANDLE DIRECTLY BEFORE EACH REMOTE CONTROL VALVE, SAME SIZE AS VALVE.				K/LI-3.0
	RAINBIRD	XCZ-100-PRF SERIES LOW VOLUME CONTROL ZONE KIT. INSTALL WITH A NIBCO T-FP-600A FULL PORT BRASS BALL VALVE, STEM AND HANDLE DIRECTLY BEFORE REMOTE CONTROL VALVE, SAME SIZE AS VALVE.				K/LI-3.0
		1/2" SCHEDULE 40 PVC BALL VALVE - INSTALL 1/2" PVC SCHEDULE 40 LATERAL LINE VERTICALLY THROUGH BOTTOM OF GARDEN BOX. ATTACH BALL VALVE HORIZONTALLY, ON THE SOIL SURFACE, WITH STREET ELBOW. ATTACH TO PVC DRIP HEADER AT THE END OF THE GARDEN BOX. ALL FITTINGS SHALL BE SLIP TYPE.				E/LI-3.0
	NETAFIM	TECHLINE FLUSHING VALVE SET IN MANUFACTURER VALVE BOX, AT GRADE. ATTACH TO PVC DRIP HEADER.				F/LI-3.0
	NETAFIM	DRIP LINE - TECHLINE EZ. FLOW IS .4 GPH WITH 6" EMITTER SPACING AND DRIPLINE SPACED AT 12" ON CENTER. FOR CAMPUS AREAS EMITTER SPACING. DRIP LINE SHALL BE INSTALLED ON GRADE AND STAPLED INSTALLATION SHALL CONSIST OF 1/2" PVC SUPPLY HEADERS. INSTALLATION SHALL INCLUDE ALL 12MM FITTINGS, AND FLUSH VALVES AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.				E/LI-3.0
	PACIFIC PLASTICS	PVC PIPE 3/4" - 2" SCH. 40 AS LATERAL LINES 12" BELOW GRADE WITH SCHEDULE 40 FITTINGS.				A/LI-3.0
	PACIFIC PLASTICS	PVC PIPE 1"-3" CLASS 315 SOLVENT WELD AS MAINLINES 18" BELOW GRADE WITH SCHEDULE 80 FITTINGS.				A/LI-3.0
	PACIFIC PLASTICS	PVC PIPE SCH. 40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED PLACE BELOW ALL PAVING, HARDSCAPE, ETC., AND AS DIRECTED BY DISTRICT REPRESENTATIVE.				B/LI-3.0
	EXISTING	PVC MAINLINE PIPING - CONTRACTOR SHALL VERIFY SIZE AND LOCATION.				N/A
NO SYMBOL	AS APPROVED	IRRIGATION CONTROL WIRE #14UF AWG (U.L. APPROVED). ALL CONTROLLER WIRING SHALL BE COLOR CODED AND LABELED TO MATCH CORRESPONDING VALVE STATION NUMBER. ALL CONTROL WIRE SHALL BE HOUSED IN PVC CONDUIT BETWEEN CONTROLLER AND REMOTE CONTROL VALVES.				A,B/LI-3.0
	AS APPROVED	IRRIGATION CONTROL WIRE FOR FUTURE IMPROVEMENTS - RUN ALONGSIDE MAINLINE PIPING IN PVC CONDUIT. REFER TO SPECIFICATIONS FOR CONDUIT SIZE BASED ON NUMBER OF WIRES.				N/A
Ⓦ	CARSON	REMOTE CONTROL WIRE SPLICE BOX - 16"X10" GREEN PLASTIC VALVE BOX. BOXES SHALL BE USED TO CONNECT NEW AND EXISTING REMOTE CONTROL AND COMMON WIRING.				N/A
NO SYMBOL	3M	DBYR-6 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED).				
NO SYMBOL	CARSON	VALVE BOXES, SIZE PER EQUIPMENT LEGEND, WITH T-COVER LIDS AND CAPTIVE BOLT AND LOC-KIT. 10" ROUND SHALL BE MODEL 910, 12" STANDARD RECTANGULAR. SHALL BE MODEL 1419.				G,H,K/LI-3.0
NO SYMBOL	AS APPROVED	ALL MAINLINE - 2" AND LARGER - TO RECEIVE CONCRETE THRUST BLOCKS AT DIRECTIONAL CHANGES.				I/LI-3.0



SEE SHEET LI-3 FOR IRRIGATION DETAILS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison	Date

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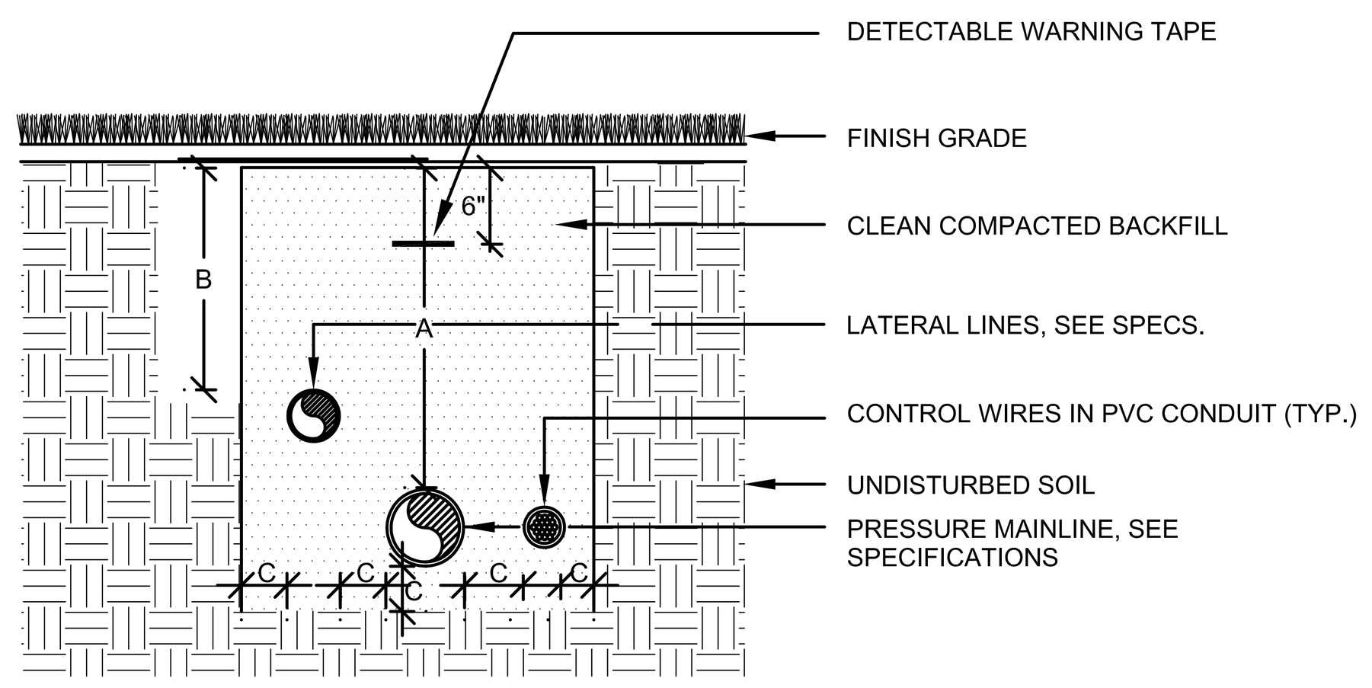
LICENSED ARCHITECT ROBERT D. WEBB A.I.A. C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

IRRIGATION LEGEND AND NOTES

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

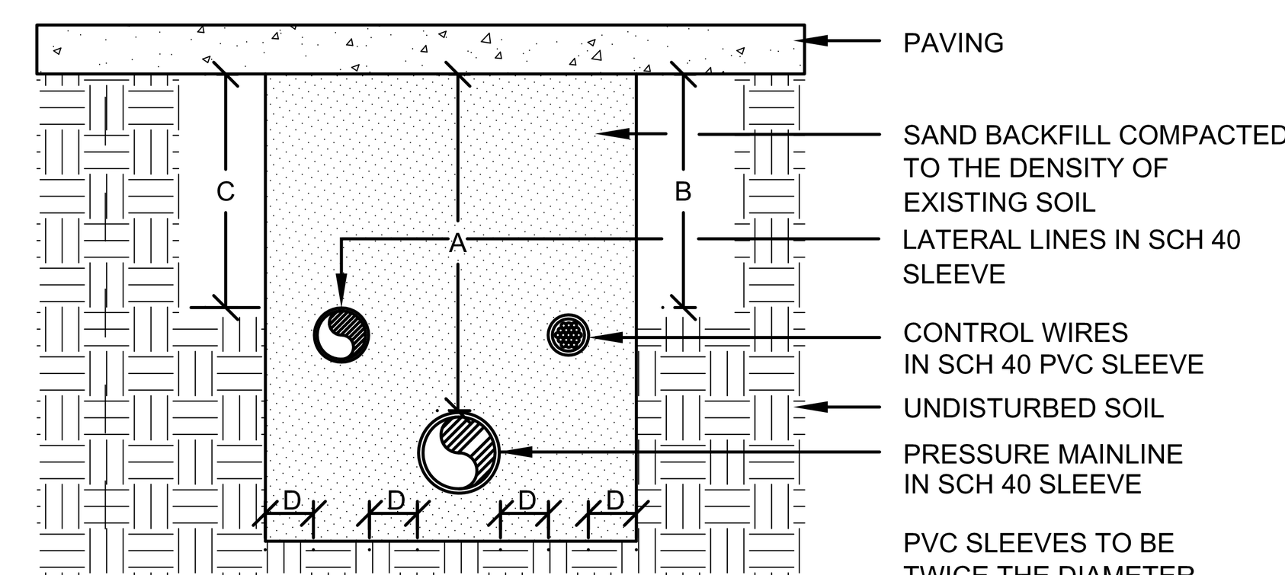
LI-2.0



DIMENSION	A	B	C
1/2" TO 2-1/2" IN SIZE	18"	12"	4"
3" TO 6" IN SIZE	24"		4"

FRONT VIEW - N.T.S.

(A) TRENCHING DETAIL



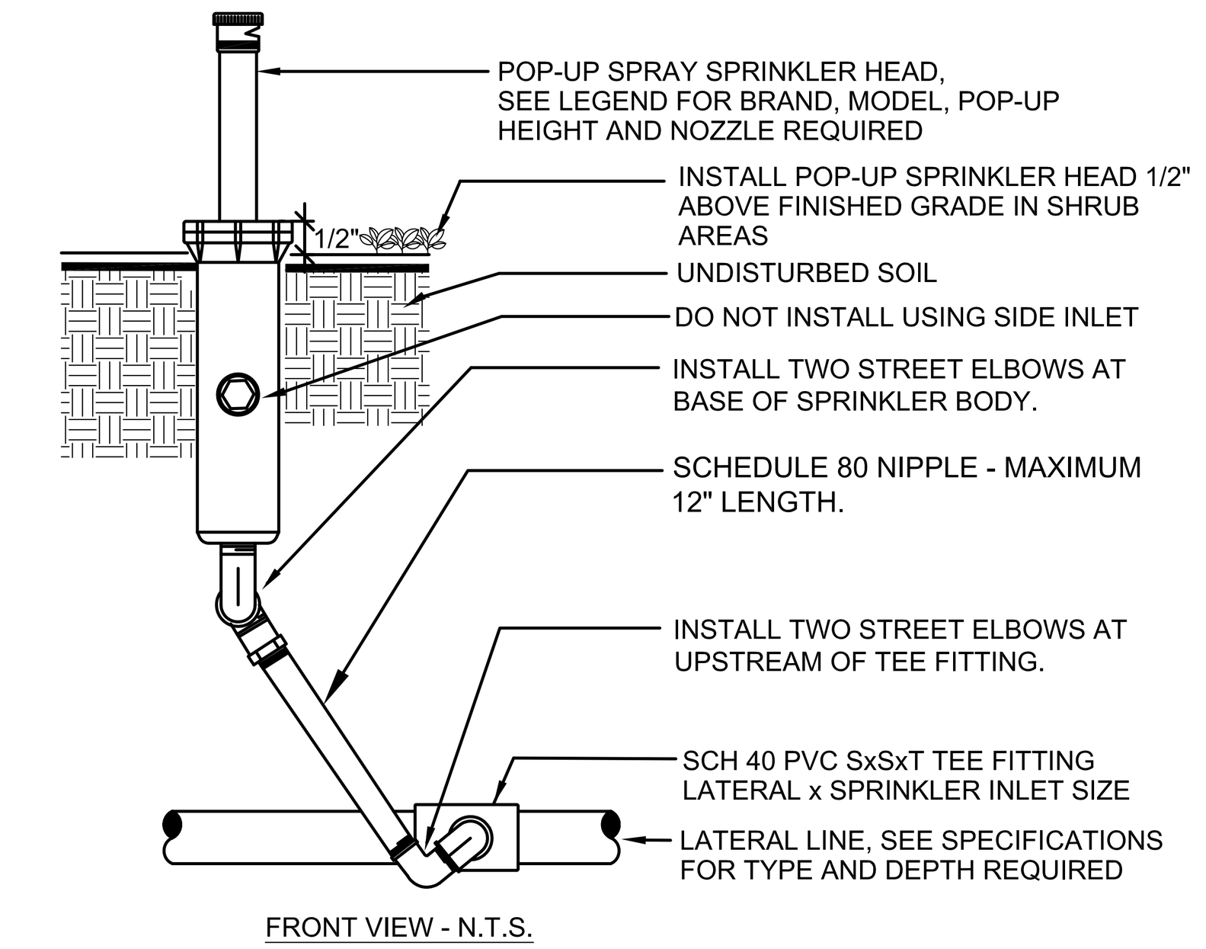
PVC SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED.

DETAIL ALSO FOR PIPE INSTALLED IN ROCK SOIL.

DIMENSION	A	B	C	D
1 1/2" TO 6" IN SIZE	36"	24"	24"	4"

FRONT VIEW - N.T.S.

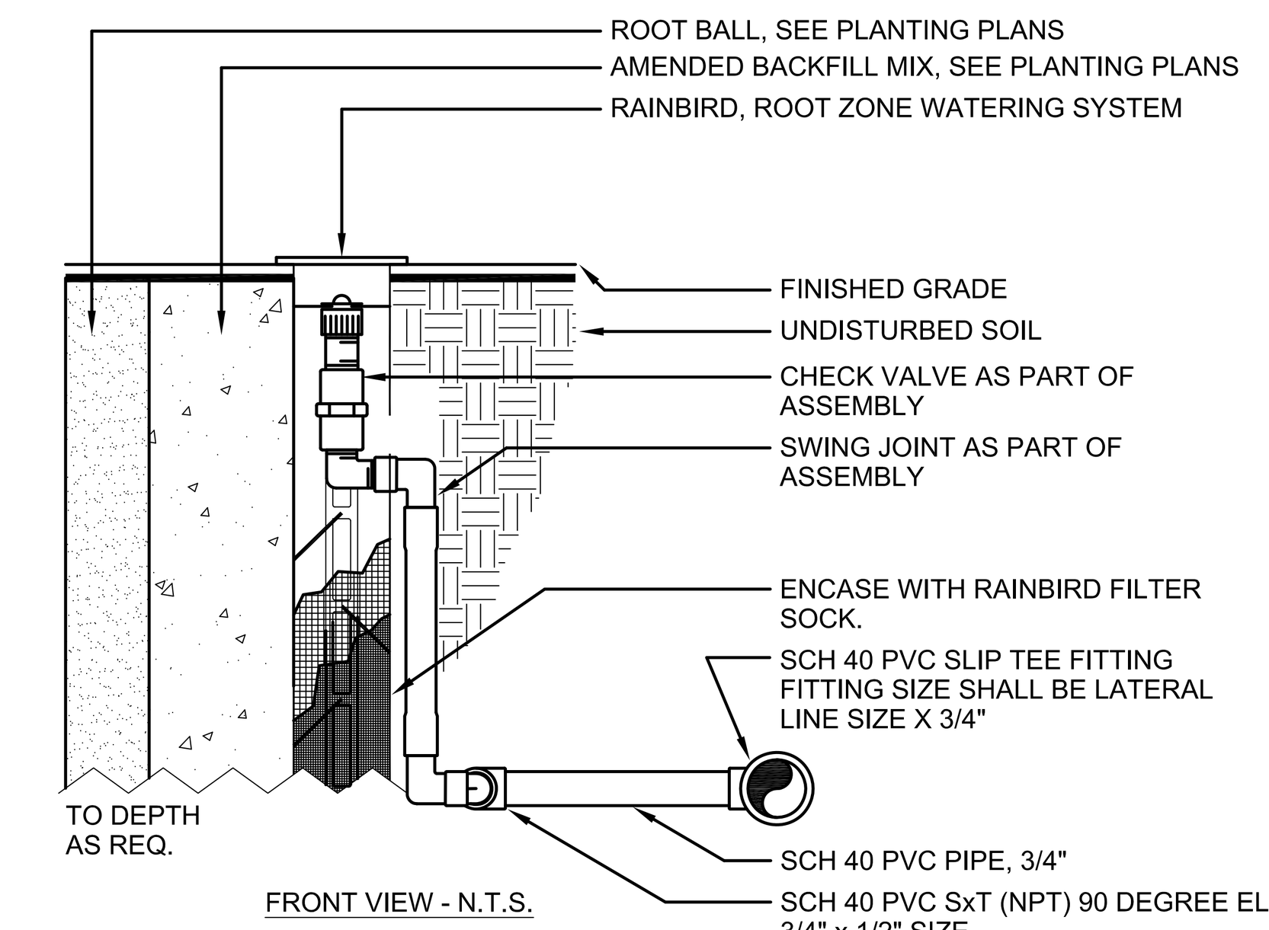
(B) SLEEVE INSTALLATION



FRONT VIEW - N.T.S.

NOTE:
INSTALL SPRINKLER HEADS 6" FROM PAVING EDGE IN SHRUB AREAS.
INSTALL SPRINKLER HEADS 12" FROM THE FACE OF BUILDING WALLS OR WINDOWS.
INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAYS OR NOZZLE STREAM TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.
INSTALL SWING JOINT AT THE SIDE OF THE HORIZONTAL LATERAL LINE WITH TEE INSTALLED SIDEWAYS.

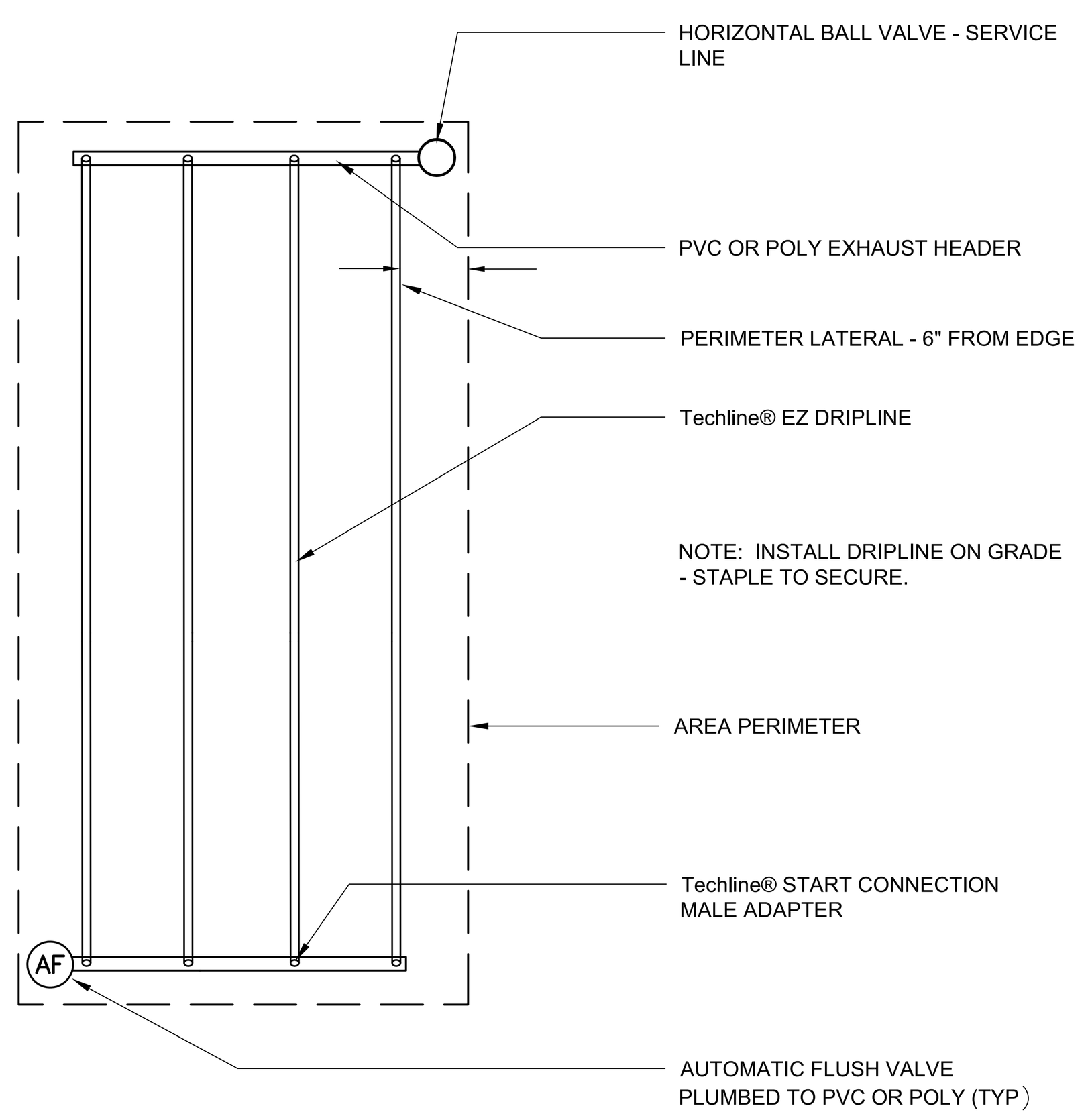
(C) POP-UP SPRINKLER



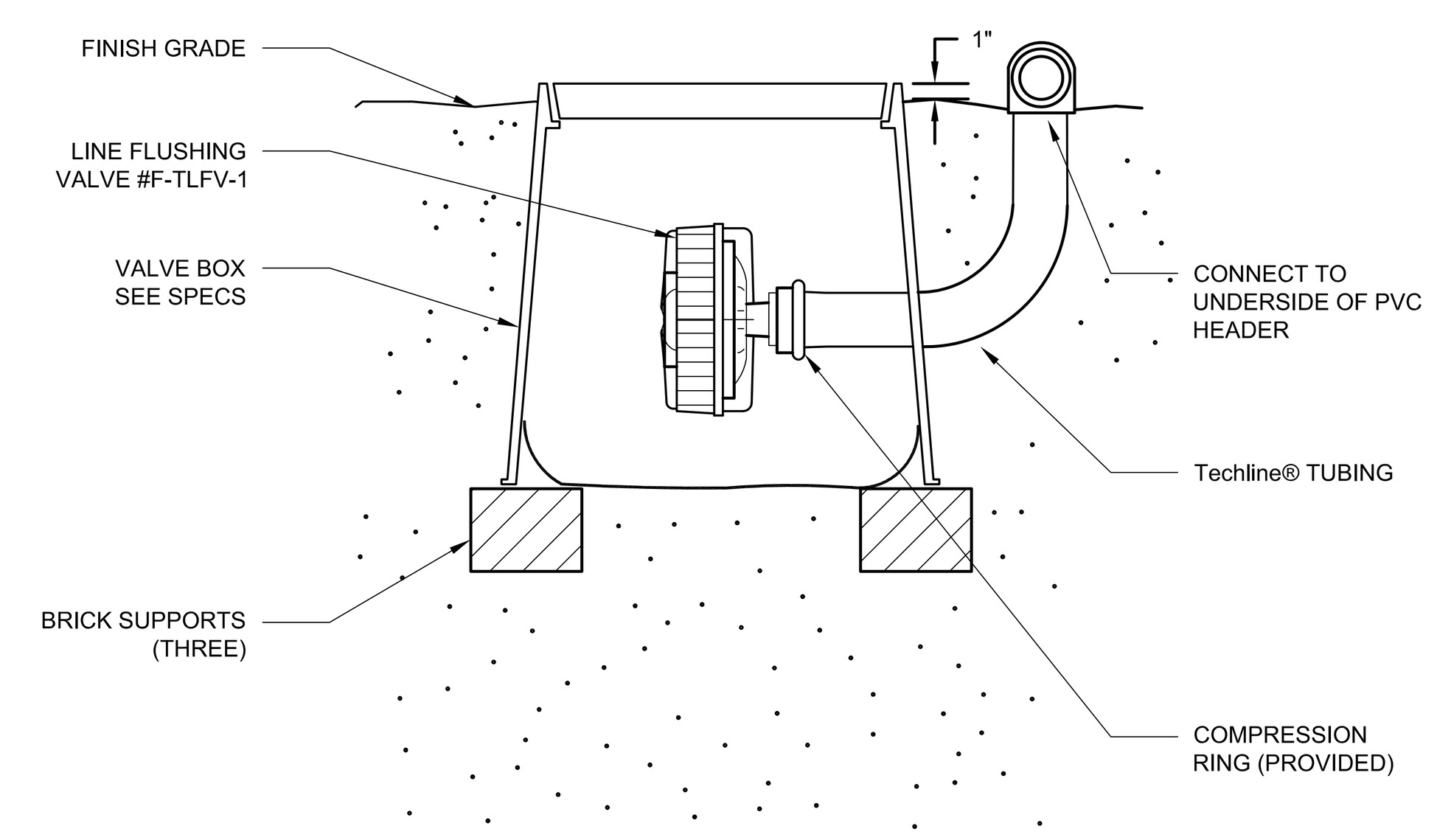
FRONT VIEW - N.T.S.

NOTE:
INSTALL BUBBLER SO THAT WATER IS APPLIED TO ROOT BALL AND SURROUNDING SOIL.
USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

(D) DEEP WELL BUBBLER



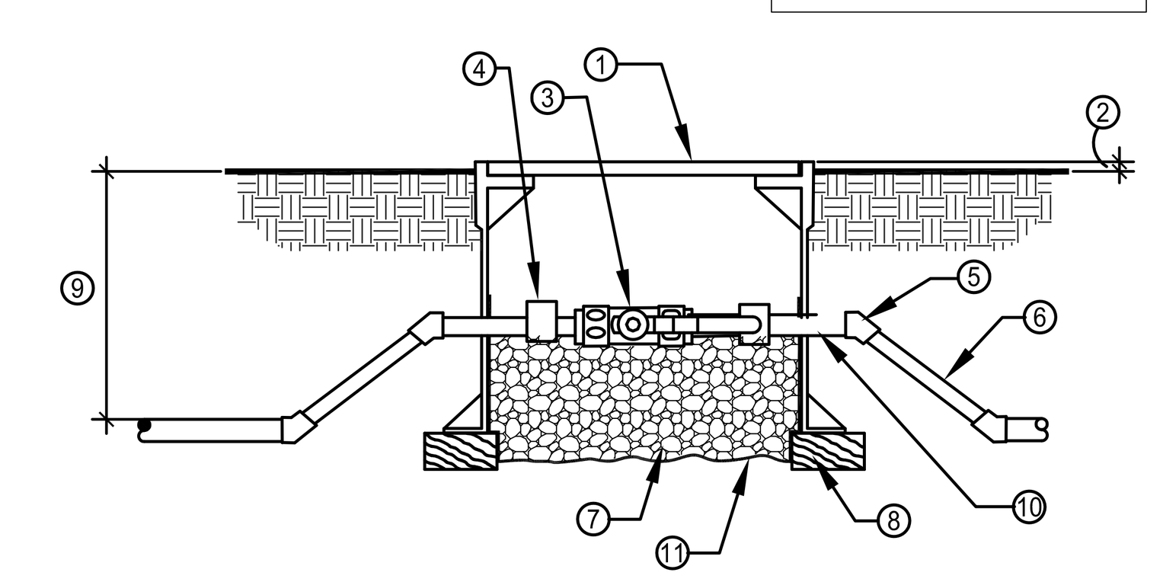
(E) TECHLINE EZ - END FEED LAYOUT



(F) TECHLINE FLUSHING VALVE

VALVE BOX SIZING

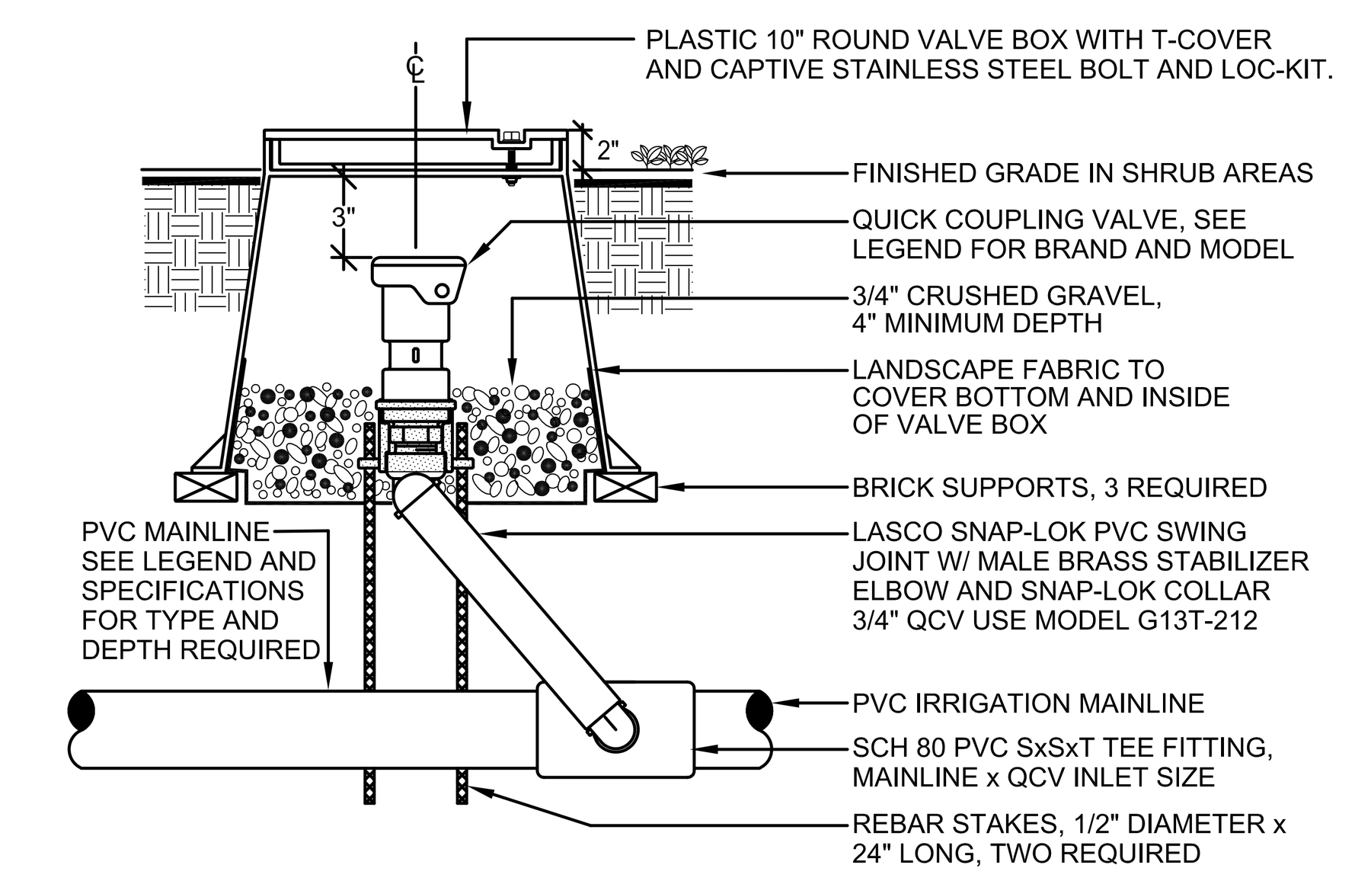
VALVE SIZE / BOX SIZE	
3/4" - 1"	10" ROUND
11" X 17"	1 1/2" - 2"
15" X 21"	2 1/2" +



1. PLASTIC VALVE BOX W/ BOLT-DOWN COVER.
2. 2" IN SHRUB AREAS.
3. BRASS BALL VALVE.
4. SCHEDULE 80 PVC UNION. BOTH SIDES.
5. PVC SCH. 40, 45 ELL' (TYP.)
6. PVC PRESSURE MAINLINE PIPE.
7. 4" MIN. PEA GRAVEL.
8. 2" X 4 " BRICK OR CONCRETE BLOCKING.
9. DEPTH-SEE TRENCHING DETAIL.
10. SCHEDULE 80 PVC NIPPLE.
11. FILTER FABRIC - TYPICAL

NOTE:
INSTALL BALL VALVE ON SIDE POSITION FOR MORE LEVERAGE AND EASIER ACCESS.

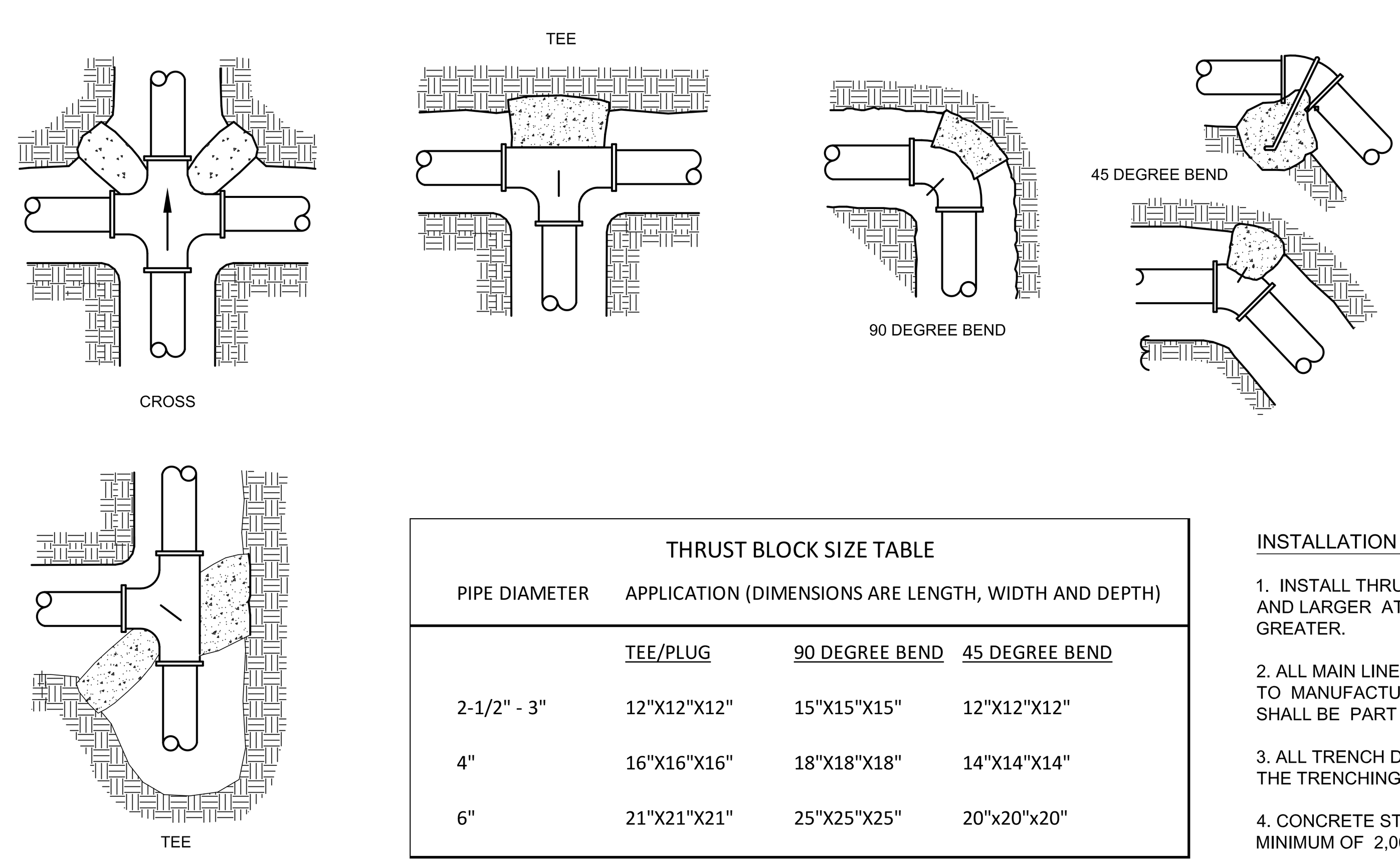
(G) BALL VALVE



FRONT VIEW - N.T.S.

NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.

(H) QUICK COUPLER VALVE



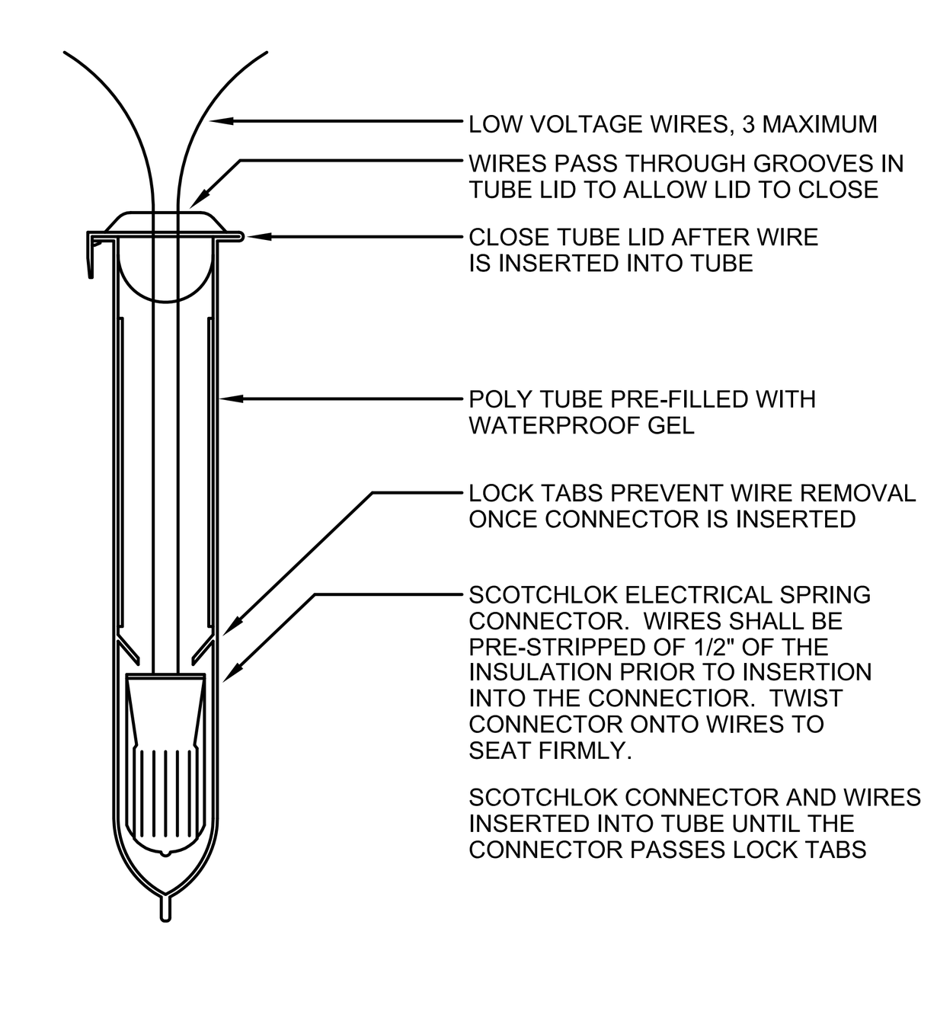
PIPE DIAMETER	APPLICATION (DIMENSIONS ARE LENGTH, WIDTH AND DEPTH)		
	TEE/PLUG	90 DEGREE BEND	45 DEGREE BEND
2-1/2" - 3"	12"X12"X12"	15"X15"X15"	12"X12"X12"
4"	16"X16"X16"	18"X18"X18"	14"X14"X14"
6"	21"X21"X21"	25"X25"X25"	20"x20"x20"

THRUST BLOCK SIZE TABLE

INSTALLATION NOTES:

1. INSTALL THRUST BLOCKS FOR ALL MAIN LINE 3 INCHES AND LARGER AT CHANGES IN DIRECTION OF 45 DEGREES OR GREATER.
2. ALL MAIN LINE TO BE INSTALLED AND TESTED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS WHICH SHALL BE PART OF THE INSTALLATION SPECIFICATIONS.
3. ALL TRENCH DEPTHS AND WIDTHS SHALL BE AS SHOWN ON THE TRENCHING DETAILS.
4. CONCRETE STRENGTH FOR THRUST BLOCKS SHALL BE A MINIMUM OF 2,000 PSI.

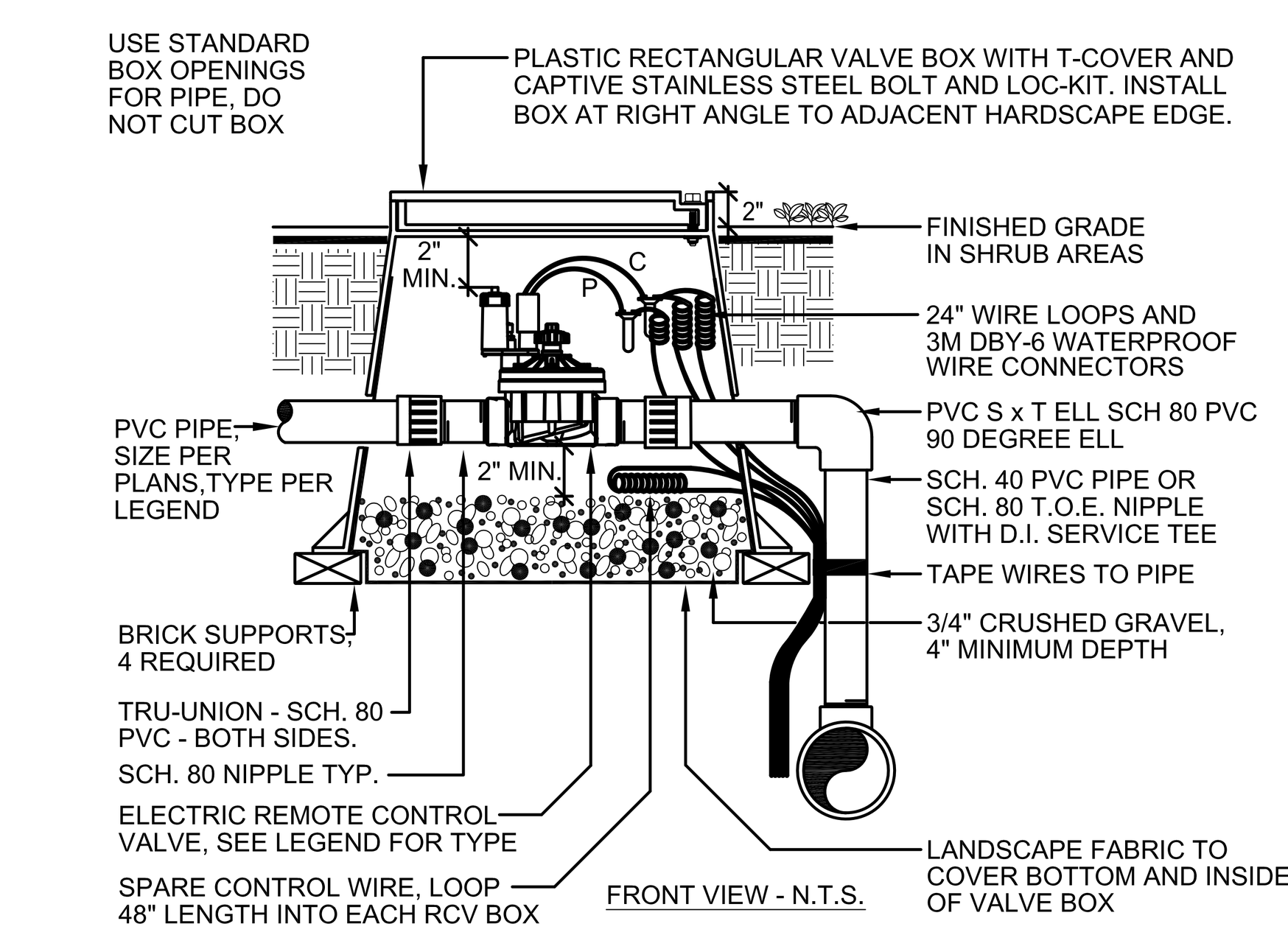
(I) MAINLINE THRUST BLOCK DETAIL



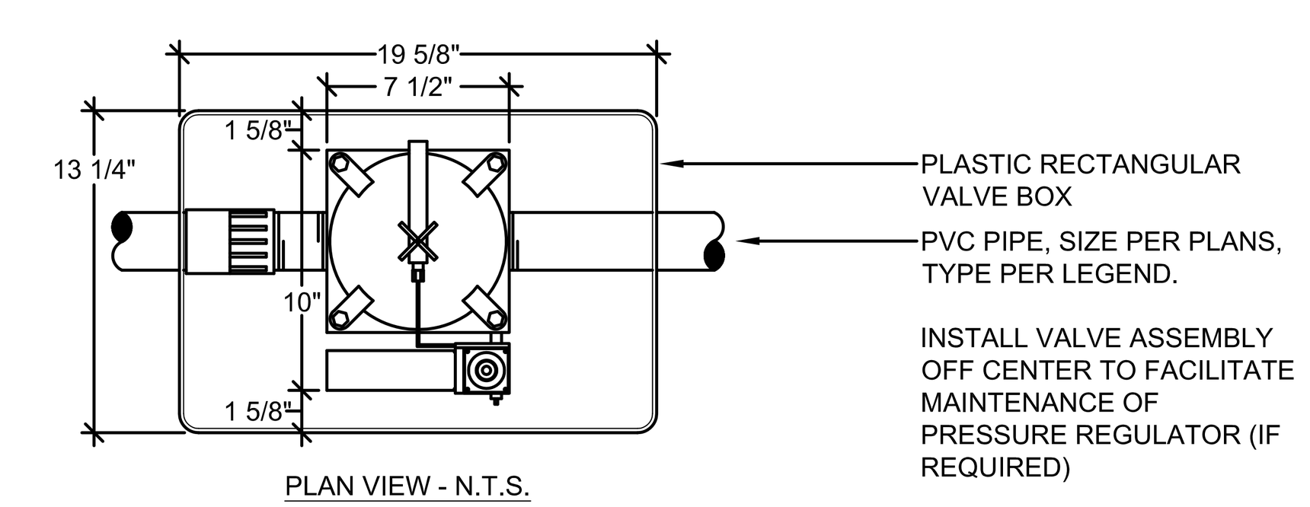
FRONT VIEW - N.T.S.

NOTE:
WIRE CONNECTOR SHALL BE A 3M DBYR-6 DIRECT BURY SPLICE KIT.
KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.
DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 - 3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

(J) WIRE CONNECTION



FRONT VIEW - N.T.S.



PLAN VIEW - N.T.S.

(K) REMOTE CONTROL VALVE

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

IRRIGATION DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

LI-3.0

IDENTIFICATION STAMP
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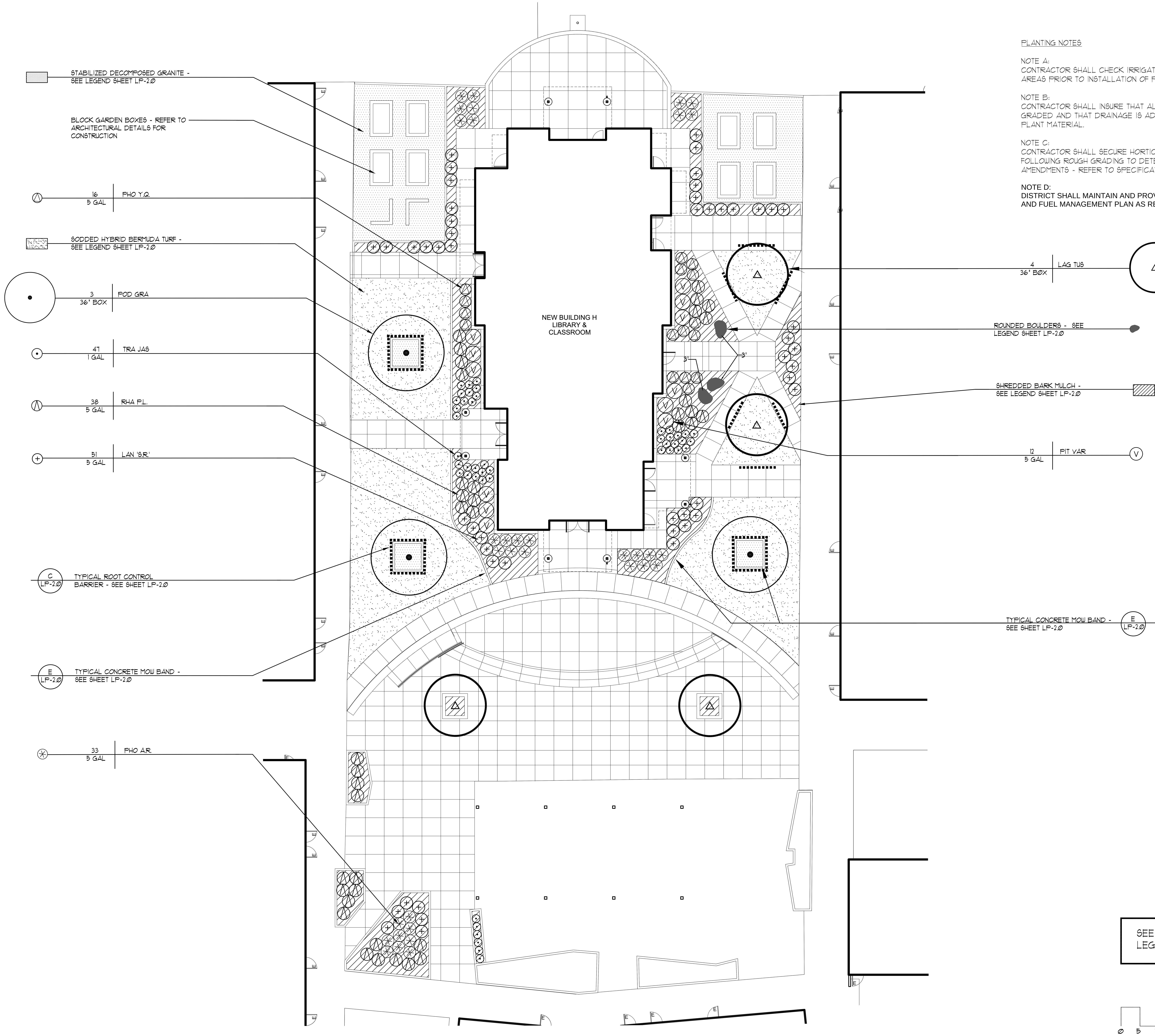

PLANTING NOTES

NOTE A:
CONTRACTOR SHALL CHECK IRRIGATION COVERAGE IN ALL LANDSCAPE AREAS PRIOR TO INSTALLATION OF PLANT MATERIALS.

NOTE B:
CONTRACTOR SHALL INSURE THAT ALL LANDSCAPE AREAS ARE FINE GRADED AND THAT DRAINAGE IS ADEQUATE PRIOR TO INSTALLATION OF PLANT MATERIAL.

NOTE C:
CONTRACTOR SHALL SECURE HORTICULTURAL SOILS TEST IMMEDIATELY FOLLOWING ROUGH GRADING TO DETERMINE TYPE AND QUANTITY OF SOIL AMENDMENTS - REFER TO SPECIFICATIONS FOR TESTING REQUIREMENTS.

NOTE D:
DISTRICT SHALL MAINTAIN AND PROVIDE A HAZARDOUS VEGETATION AND FUEL MANAGEMENT PLAN AS REQUIRED PER CFC 4906.

SEE SHEET LP-2.0 FOR PLANTING LEGEND AND DETAILS.

Revision | Date

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLANTING PLAN

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

LP-1.0

LANDSCAPE PLANTING PLAN 1" = 10'-0" 1

PLANT LEGEND

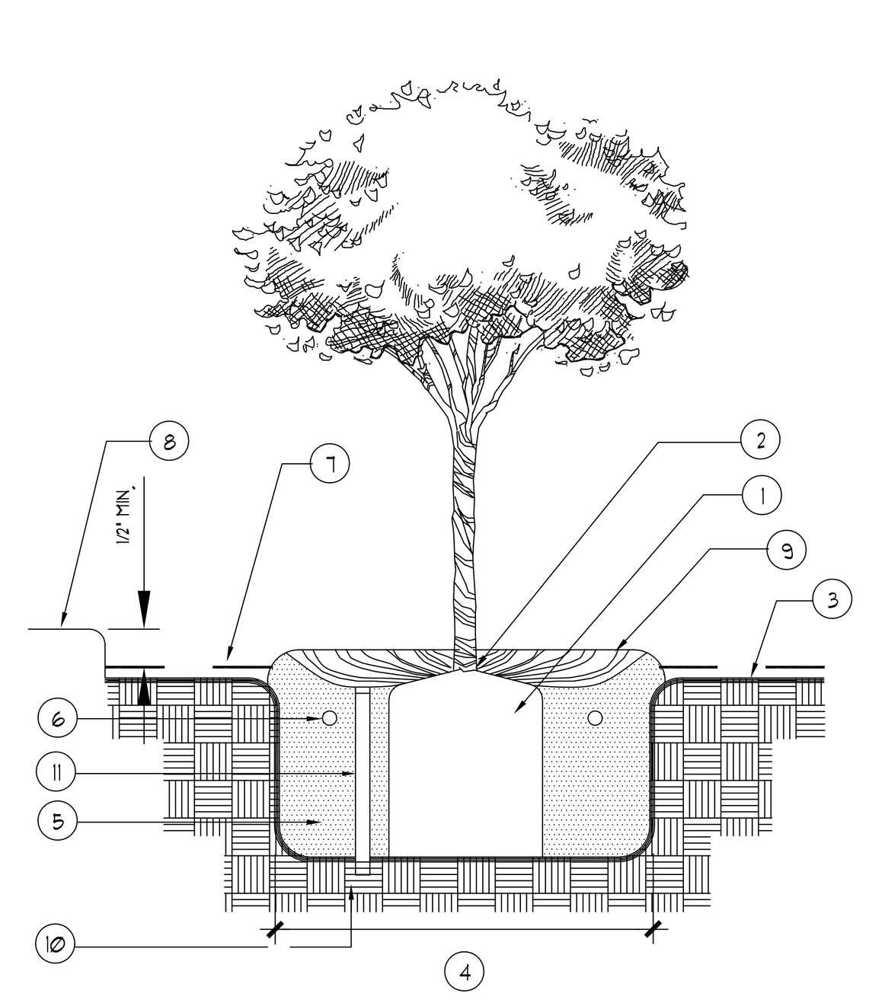
SYM.	ABR.	SCIENTIFIC NAME - COMMON NAME	SIZE	QTY.	REMARKS/	DETAILS
	TREES					
	LAG MUS	LAGERSTROEMIA I. 'TUSCARORA' - RED CRAPE MYRTLE	36" BOX	4	STANDARD	A/LP-2.Ø, B/LP-2.Ø
	POD GRA	PODOCARPUS GRACILIOR - FERN PINE	36" BOX	3	STANDARD	A/LP-2.Ø, B/LP-2.Ø

SYM.	DESCRIPTION	REMARKS
	GROUNDCOVER	
	SHREDDED BARK MULCH (APPROVED BY DISTRICT)	4" LAYER IN SHRUB PLANTING AREAS- SEE SPECIFICATIONS FOR PARTICLE SIZE
	STABILIZED DECOMPOSED GRANITE - SOUTHWEST BOULDER AND STONE	3" LAYER OVER WEED BARRIER FABRIC FOR GATHERING AND GARDENING AREAS. USE SOUTHWEST BOULDER AND STONE 'MOJAVE GOLD' COLOR. SEE SPECIFICATIONS FOR APPLICATION.
	SODDED HYBRID BERMUDA GRASS (APPROVED BY DISTRICT)	TIFWAY HYBRID BERMUDA - NORMAL CUT SUPPLIED BY AG SOD FARMS OR APPROVED EQUAL.
	ROUNDED BOULDERS - SOUTHWEST BOLDER AND STONE	NAVAJO CATEGORY BY SOUTHWEST BOULDER AND STONE - APPROVED BY DISTRICT. SIZE: 3-3' DIAMETER.

SYM.	ABR.	- COMMON NAME	SIZE	QTY.	REMARKS/	DETAILS
	SHRUBS					
	LAN 'S.R.'	LANTANA 'SUNRISE YELLOW' - YELLOW TRAILING LANTANA	5 GAL	51	3' O.C.	D/LP-2.Ø
	PHO AR	PHORMIUM T. 'AMAZING RED' - RED NEW ZEALAND FLAX	5 GAL	33	3' O.C.	D/LP-2.Ø
	PHO YQ	PHORMIUM T. 'YELLOW QUEEN' - YELLOW NEW ZEALAND FLAX	5 GAL	16	3' O.C.	D/LP-2.Ø
	PIT VAR	PITTOSPORUM T. 'VARIEGATA' - VARIEGATED TOBRIA	5 GAL	12	4' O.C.	D/LP-2.Ø
	RHA PL	RHAPHIOLEPIS I. 'PINK LADY' - PINK INDIA HAWTHORN	5 GAL	38	3' O.C.	D/LP-2.Ø
	TRA JAS	TRACHELOSPERMUM JASMINOIDES - STAR JASMINE	1 GAL	47	2' O.C.	D/LP-2.Ø

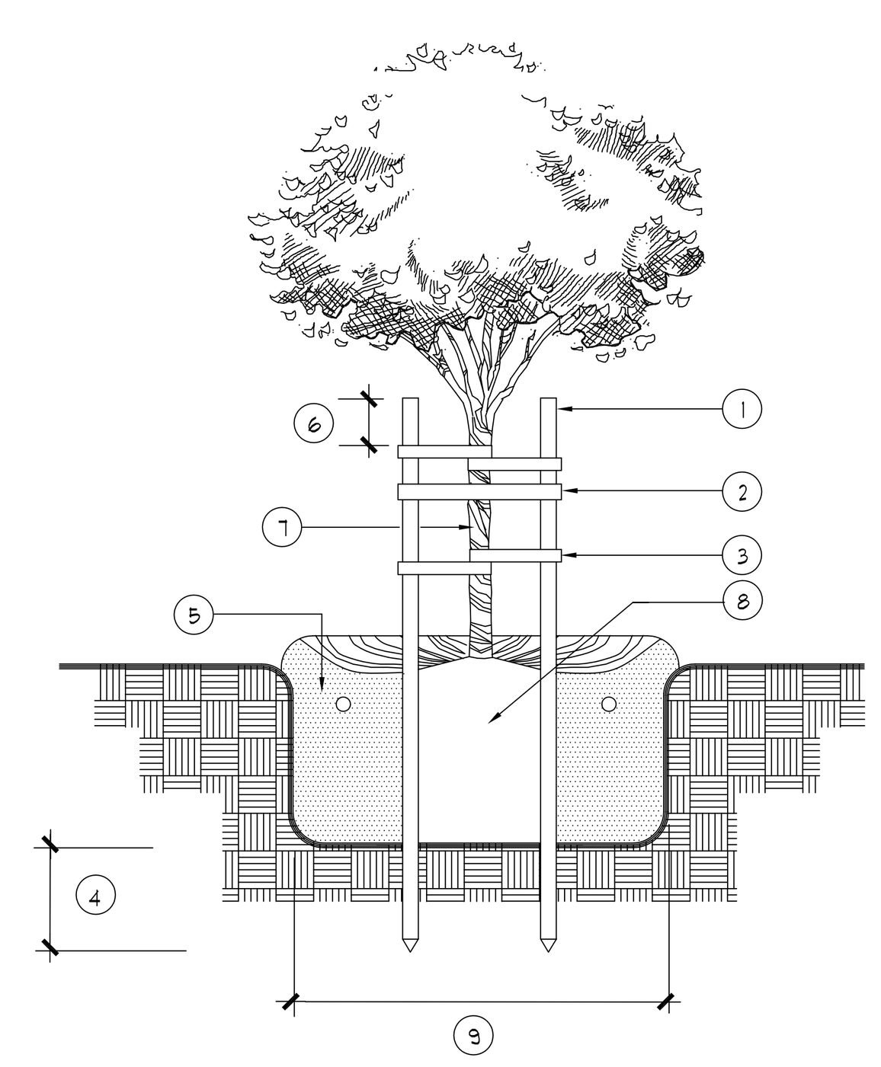
GENERAL FIRE HAZARD NOTE:

THE SITE FALLS WITHIN A HIGH FIRE HAZARD SEVERITY ZONE. THE SELECTED PLANTS ABOVE ARE ORNAMENTAL PLANTS, HAVE BEEN REVIEWED AND WE VERITY THAT THEY ARE WITHIN VEGETATIVE MANAGEMENT COMPLIANCE PER CBC 7Ø1A.5

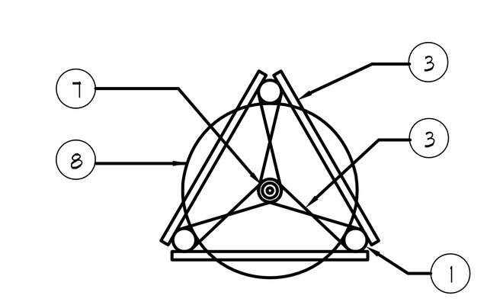


1. ROOTBALL.
2. CROWN-1" ABOVE FINISH GRADE.
3. FINISH GRADE.
4. 2 X ROOTBALL WIDTH.
5. PLANTING BACKFILL .
6. PLANT TABLETS.
7. BARK MULCH / D.G. (WHERE APPLICABLE).
8. TOP OF PAVING.
9. 6" HIGH WATERING BASIN.
10. UNDISTURBED NATIVE SOIL.
11. 3" DIA. X 3' DEEP PERFORATED PVC BREATHER TUBE W/ NDS DRAIN GRATE (1 PER TREE).

A — TREE PLANTING
NO SCALE

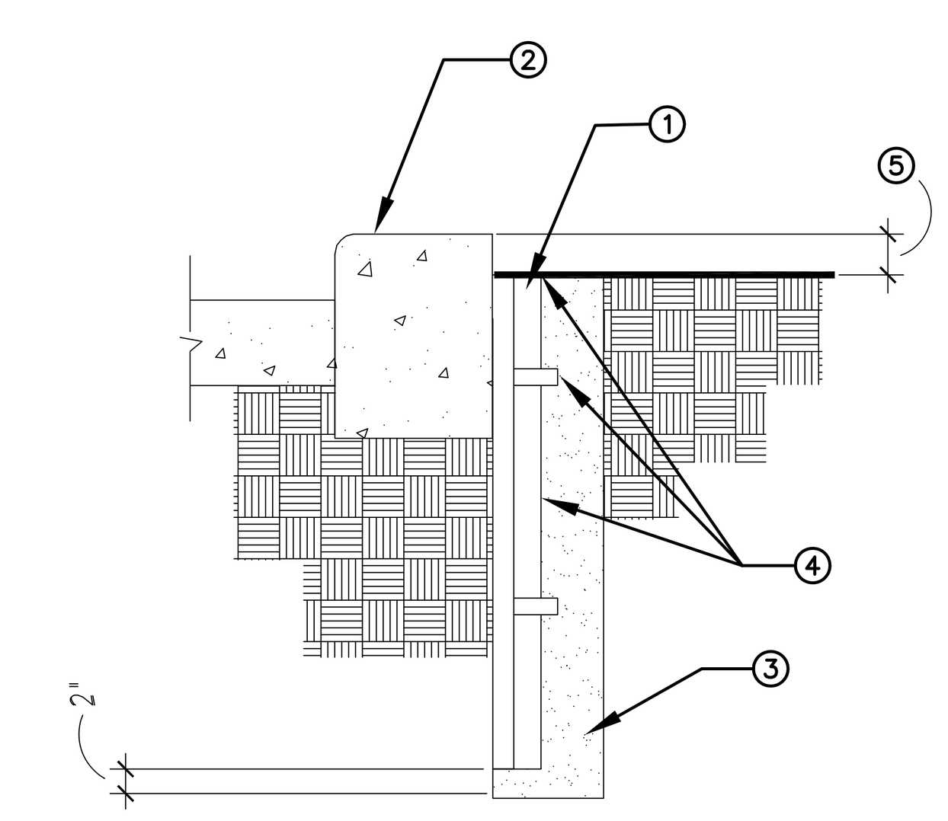


1. 3" DIA. X 1Ø' LODGEPOLE PINE STAKE (3 REQ'D.).
2. 1 X 2" WOOD BRACE (3 REQ'D.).
3. VINYL TREE TIE 3 REQ'D. PER STAKE).
4. 24" MIN.
5. SEE TREE PLANTING DETAIL.
6. 12" MIN.
7. TREE TRUNK.
8. ROOTBALL.
9. 2x ROOTBALL WIDTH



PLAN VIEW

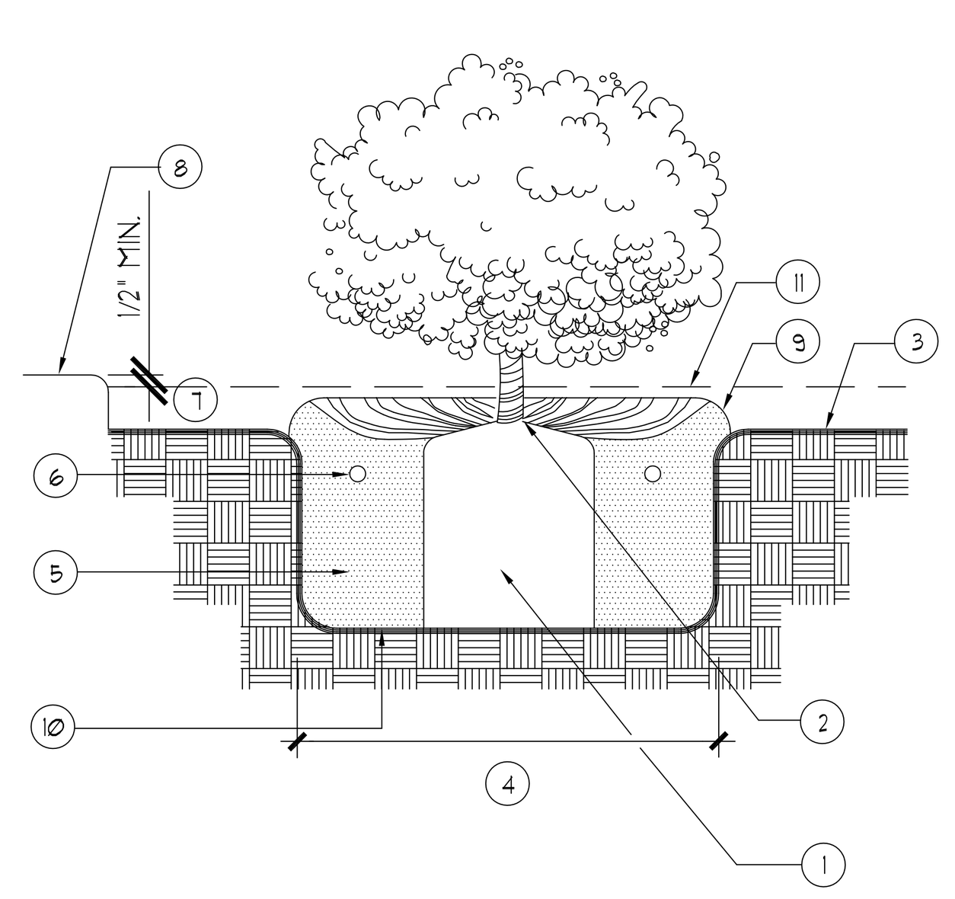
B — TRIPLE STAKING
NO SCALE



1. 24" X 24" INTERLOCKING ROOT CONTROL BARRIER PANELS - ROOT SOLUTIONS (1-8ØØ-554-Ø914) OR EQUAL -16' OF BARRIER PER TREE (MIN.).
2. SIDEWALK, CURB, SWALE OR PAVEMENT
3. ROOT CONTROL BARRIER TRENCH BACKFILLED WITH CLEAN SITE SOIL.
4. TOP OF ROOT CONTROL BARRIER 1/2" BELOW FINISH GRADE. ROOT DEFLECTORS AND SOIL ANCHORS MUST FACE TREE.
5. 2" MINIMUM.

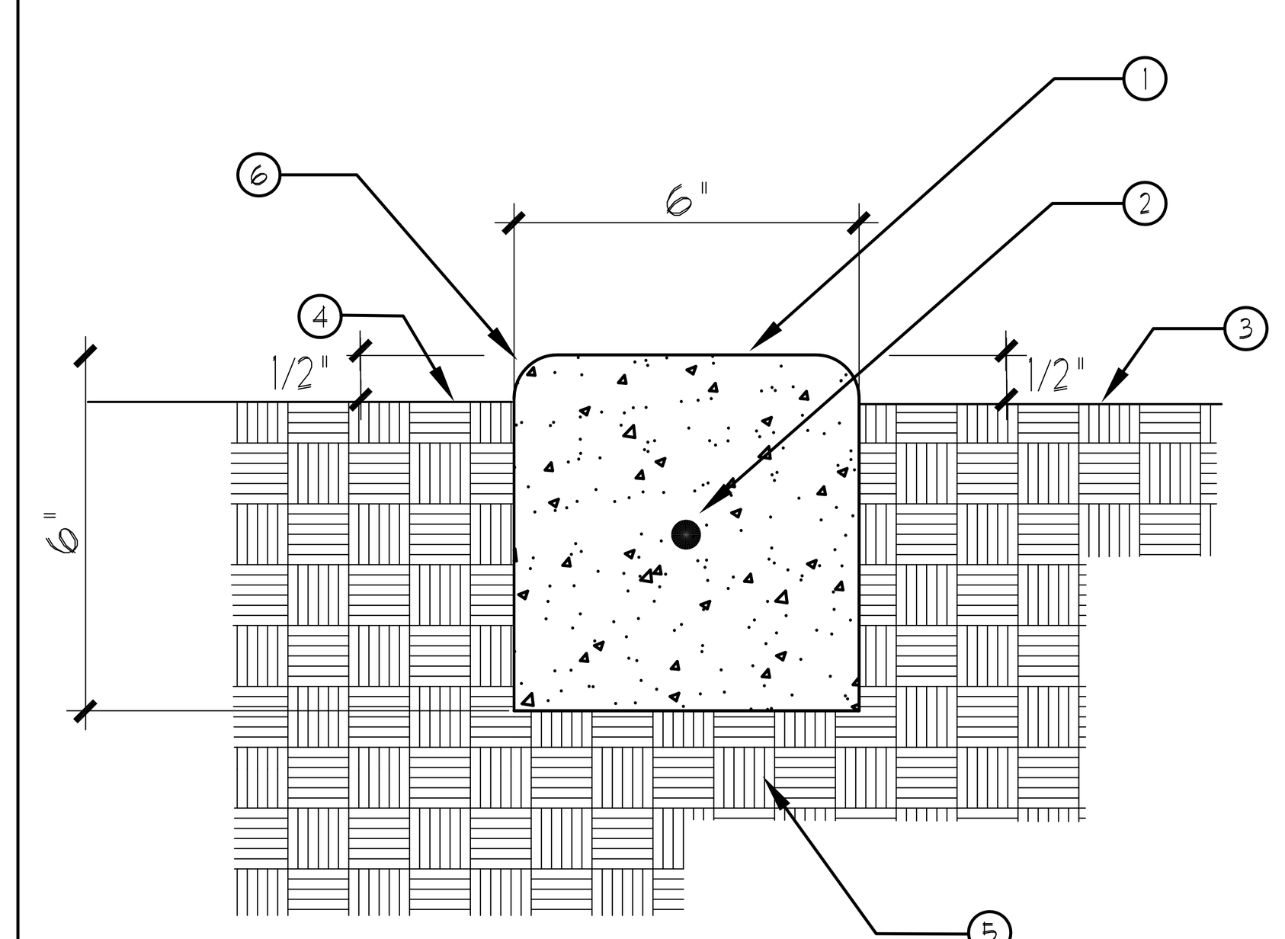
NOTE:
- TOP OF ROOT CONTROL BARRIER SHALL BE INSTALLED SO IT IS NOT VISIBLE OR ABOVE GRADE.
- INSTALL BARRIER FLUSH WITH BACK OF CURB/PAVEMENT.

C — ROOT CONTROL BARRIER
NO SCALE



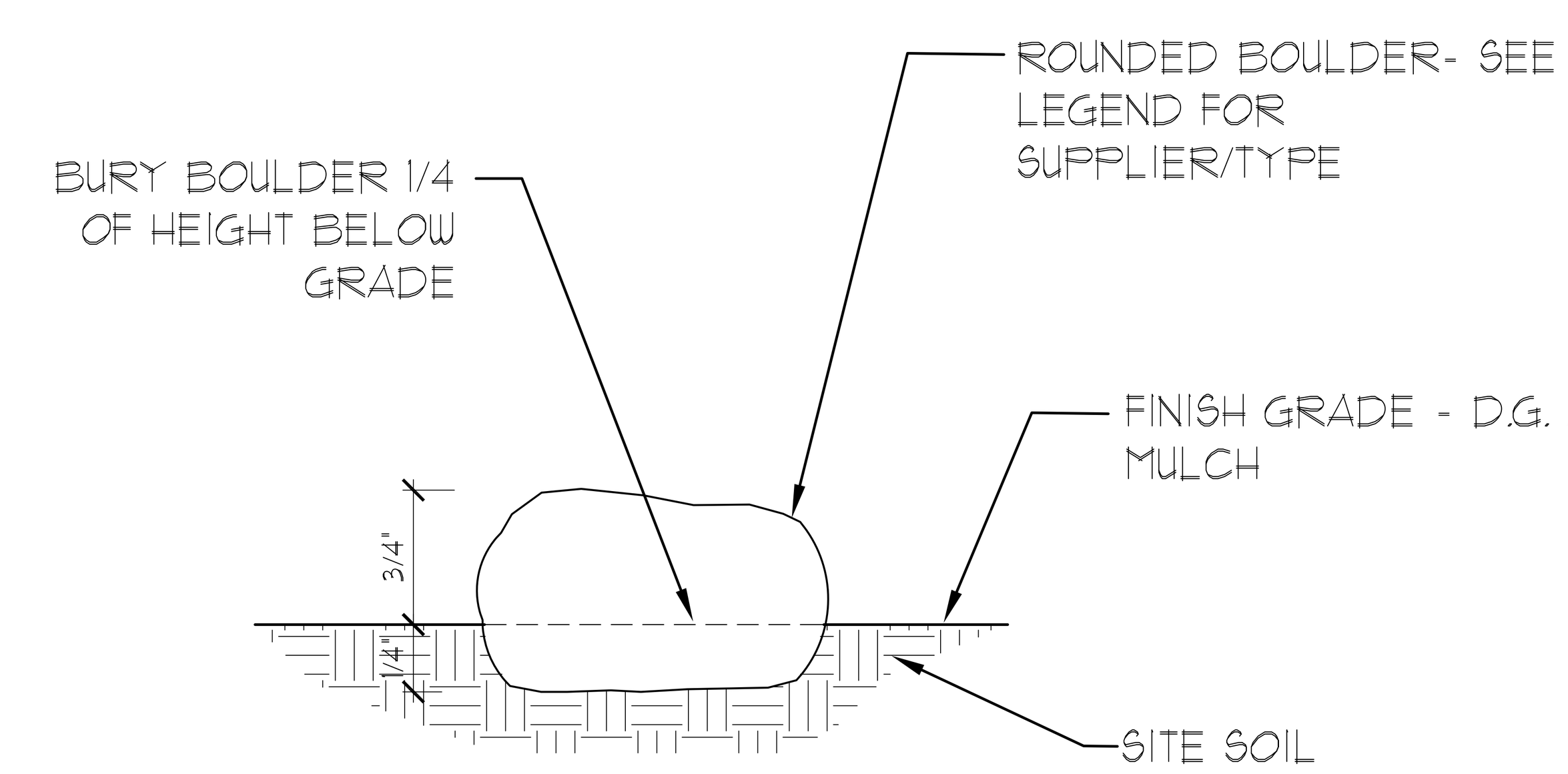
1. ROOTBALL.
2. CROWN-1" ABOVE FINISH GRADE.
3. FINISH GRADE.
4. 2 X ROOTBALL DIA.
5. PLANTING BACKFILL.
6. PLANT TABLETS.
7. 2" MAX. DEPTH.
8. TOP OF PAVING.
9. 4" HIGH WATERING BASIN.
10. UNDISTURBED NATIVE SOIL.
11. BARK MULCH / D.G. (SEE SPECS).

D — SHRUB PLANTING
NO SCALE



1. CONCRETE MOWBAND.
2. #4 BAR CONT. (TYP.).
3. FINISH GRADE OF D.G.
4. FINISH GRADE/ SHREDDED MULCH.
5. 95% COMPACTED SUBGRADE.
6. 1/2" TROWELLED EDGES.

E — CONCRETE MOW BAND
NO SCALE



F — BOULDER INSTALLATION DETAIL
NO SCALE

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLANTING LEGEND AND DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

LP-2.0

OVERALL SITE PLAN | 1" = 30'-0" | 1

SITE PLAN LEGEND

- IMAGINARY PROPERTY LINE
- PROPERTY LINE
- C.L.F. (CHAIN LINK FENCE)
- ROOF OVERHANG INDICTAED ABOVE
- NEW ACCESSIBLE PATH OF TRAVEL
- EXISTING ACCESSIBLE PATH OF TRAVEL (DSA APPROVED APPL. 04-109082)
- (DF) ACCESSIBLE DRINKING FOUNTAIN
- (B) BOYS
- (G) GIRLS
- (A) ALL GENDER

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SS ☑ FLS ☑ ACS ☑
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ACCESS COMPLIANCE NOTES

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:

THE ACCESSIBLE PATH OF TRAVEL (P.O.T.) AS INDICATED IN THESE CONSTRUCTION DOCUMENTS IS 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 P.O.T. WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPIANT 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 P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF THE 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 A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

OPENINGS IN GRATINGS AT DRAINS LOCATED IN THE SURFACE OF ANY PEDESTRIAN WAYS OF TRAVEL, SHALL BE LIMITED TO 1/2" MAX.

ALL BUILDINGS CONTAIN ACCESSIBLE PLUMBING FIXTURES. REFER TO FLOOR PLANS FOR EXACT LOCATIONS.

GATES IN THE PATH OF TRAVEL SHALL COMPLY WITH EXIT DOOR REQUIREMENTS PER CBC SECTION 11B-404

CODE ANALYSIS

NEW LIBRARY & CLASSROOM BUILDING

CONSTRUCTION TYPE:	VB
OCCUPANCY:	MIXED: E / A3
STORIES:	1
SPRINKLED:	NO
ACTUAL AREA:	5,980 SF
E: 3, 016 SF	
A3: 2,964 SF	
ALLOWABLE AREA:	
E: 9,500 SF	
A3: 6,000 SF	

MIXED OCCUPANCY ANALYSIS

E		A3		
3,016 / 9,500	+	2,964 / 6,000	=	0.81 (LESS THAN 1)

EXISTING CLASSROOM BUILDING A (FOR REFERENCE ONLY)

CONSTRUCTION TYPE:	VB
OCCUPANCY:	E
STORIES:	1
SPRINKLERED:	NO
ACTUAL AREA:	9,547 SF
ALLOWABLE AREA:	9,500 SF + (9,500 x .66) = 15,770 SF
	(440/440 - .025)26.4/30 = .66
	(160x30) + (160*20) + (60*30) + (60*30)/440 = 26.4

EXISTING CLASSROOM BUILDING B (FOR REFERENCE ONLY)

CONSTRUCTION TYPE:	VB
OCCUPANCY:	E
STORIES:	1
SPRINKLERED:	NO
ACTUAL AREA:	9,357 SF
ALLOWABLE AREA:	9,500 SF

PARKING COUNT

55	STANDARD SPACES
1	ACCESSIBLE VAN SPACE
2	ACCESSIBLE STANDARD SPACE
58	TOTAL PARKING SPACES

Revison	Date

Consultant

Engineer

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ARCHITECTURE + ENGINEERING
515 Encinitas Blvd, Ste 201, Encinitas, California 92024
Telephone: (760) 634-8800 Fax: (760)452-7541

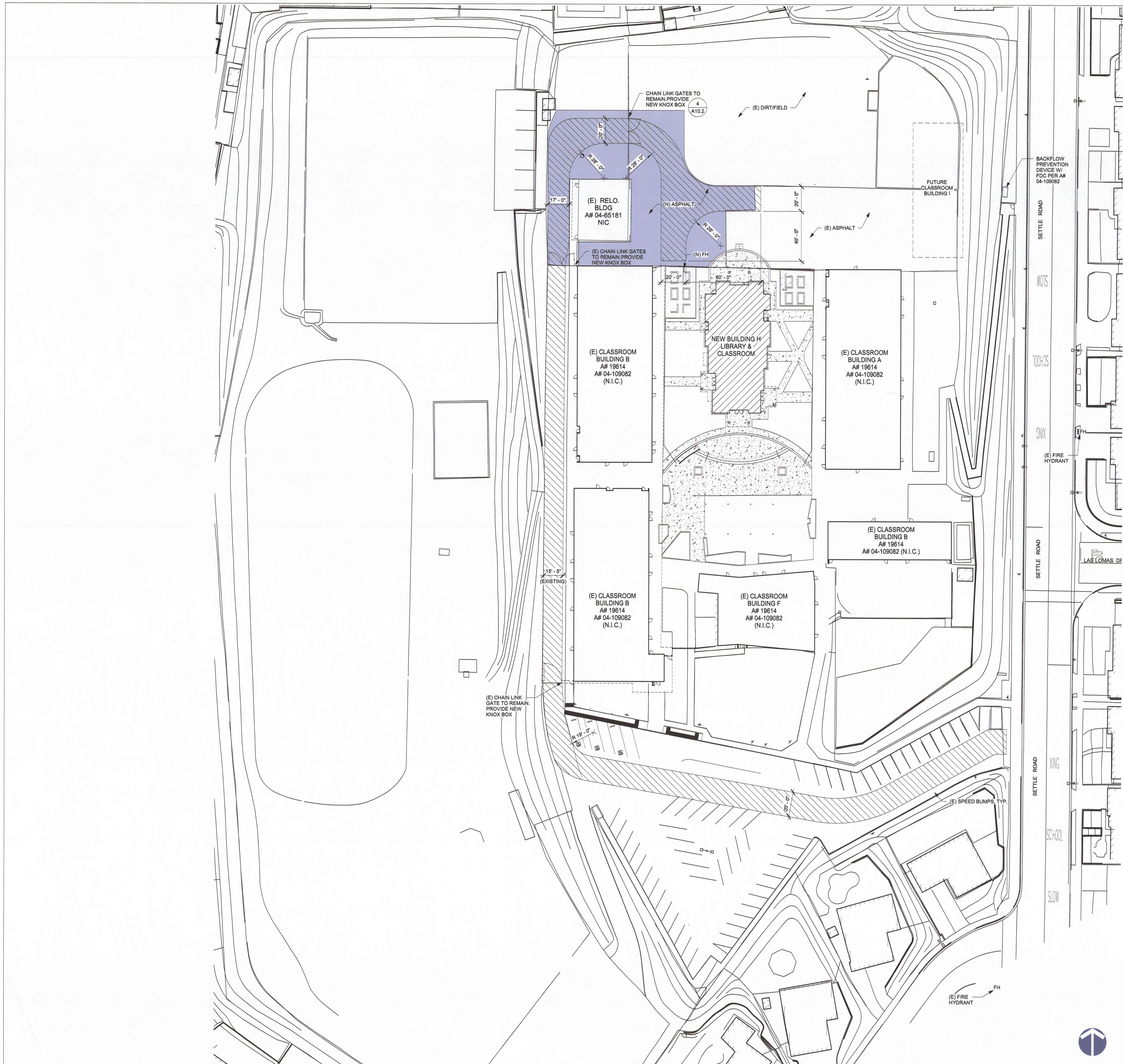
LICENSED ARCHITECT
ROBERT D. WEBB #24
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

OVERALL SITE PLAN

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A0.1



OVERALL FIRE ACCESS SITE PLAN 1" = 30'-0" 1

FIRE ACCESS PLAN LEGEND

(hatch)	FIRE LANE
(fill)	NEW ASPHALT
FH	FIRE HYDRANT

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DATE: 02.05.20

FIRE FLOW RESULTS

PADRE DAM Municipal Water District — 9300 Fanita Parkway, Santee, CA; P.O. Box 719003, Santee, CA 92072

Fire Flow Request Form

Section A: TO BE COMPLETED BY CUSTOMER

Name: CHRISTINA BECKER
Project Name: SYCAMORE CANYON ELEMENTARY SCHOOL - LIBRARY RESOURCE CENTER (LRC)
Project Address: 10201 SETTLE ROAD, SANTEE, CA 92071
Phone: 619-258-2323
E-mail: CHRISTINA.BECKER@SANTEESD.NET

Section B: TO BE COMPLETED BY PADRE DAM

Water Purveyor: Padre Dam Municipal Water District
Location of Test: Sycamore Canyon School, Santee Fire Hydrant # 348

☑ Looped system ☐ Dead end system

Flow Test Results	
Hydrant Number[1]:	348
Static Pressure (PSI)[2]:	77
Residual Pressure at Fire Flow (PSI)[2]:	74
Model Flow (GPM) at 20 PSI Residual[2]:	14,054
Certified Flow (GPM) at 20 PSI Residual restricted by 10 ft/sec max velocity[3]:	4,796

1. See plat attached
2. Information obtained using a computer model
3. Results are valid for 6 months

Comments: Max flow limited from 14" ACP water main.

Courtney Mael
Name
Development Services Manager
Title
[illegible]
Signature
10/15/19
Date

Section C: PAYMENT

Modeled Fire Flow fees are $50 per fire hydrant
Check # 828
Date Paid 10/15/19

Cost Center: 00031
Object Acct: 44101

DSA FORM 810

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

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 1–3 below is to be provided for all project types indicated above. Information associated with items 4–7 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.

Page 1 of the completed form must be imaged onto the fire access site plan. When an alternate design/means is proposed, completed pages 1 *and* 2 are to be imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy 09-01.

PROJECT INFORMATION	
School District/Owner:	SANTEE SCHOOL DISTRICT
Project Name/School:	SYCAMORE CANYON E.S. - LIBRARY RESOURCE CENTER (LRC)
Project Address:	10201 SETTLE ROAD, SANTEE, CA 92071

FIRE & LIFE SAFETY INFOMATION				
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 as established by Cal-Fire? *(If yes, indicate fire hazard zone classification below)*	Yes ☒		No ☐
	Refer to the following for fire hazard zone locations: www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps	Moderate ☐	High ☐	Very High ☒
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☒

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.	X	☐		
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.	X	☐		
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.	X	☐		
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.	X	☐		

DSA 810 (rev 10-22-18)
DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES Page 1 of 4 STATE OF CALIFORNIA

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

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: Christina Becker Title: Dir of Const. & Fac
Signature: [illegible] Date: 1-27-20

LOCAL FIRE AUTHORITY (LFA) INFORMATION	
LFA Agency Name:	SANTEE FIRE
LFA Review Official:	CARISA WORKMAN
Title:	FIRE MARSHAL
Work E-mail:	[illegible]

DSA 810 (rev 10-22-18)
DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES Page 2 of 4 STATE OF CALIFORNIA

Date
Revision
Consultant
Engineer

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Telephone: (760)753-6800 Fax: (760)452-7541

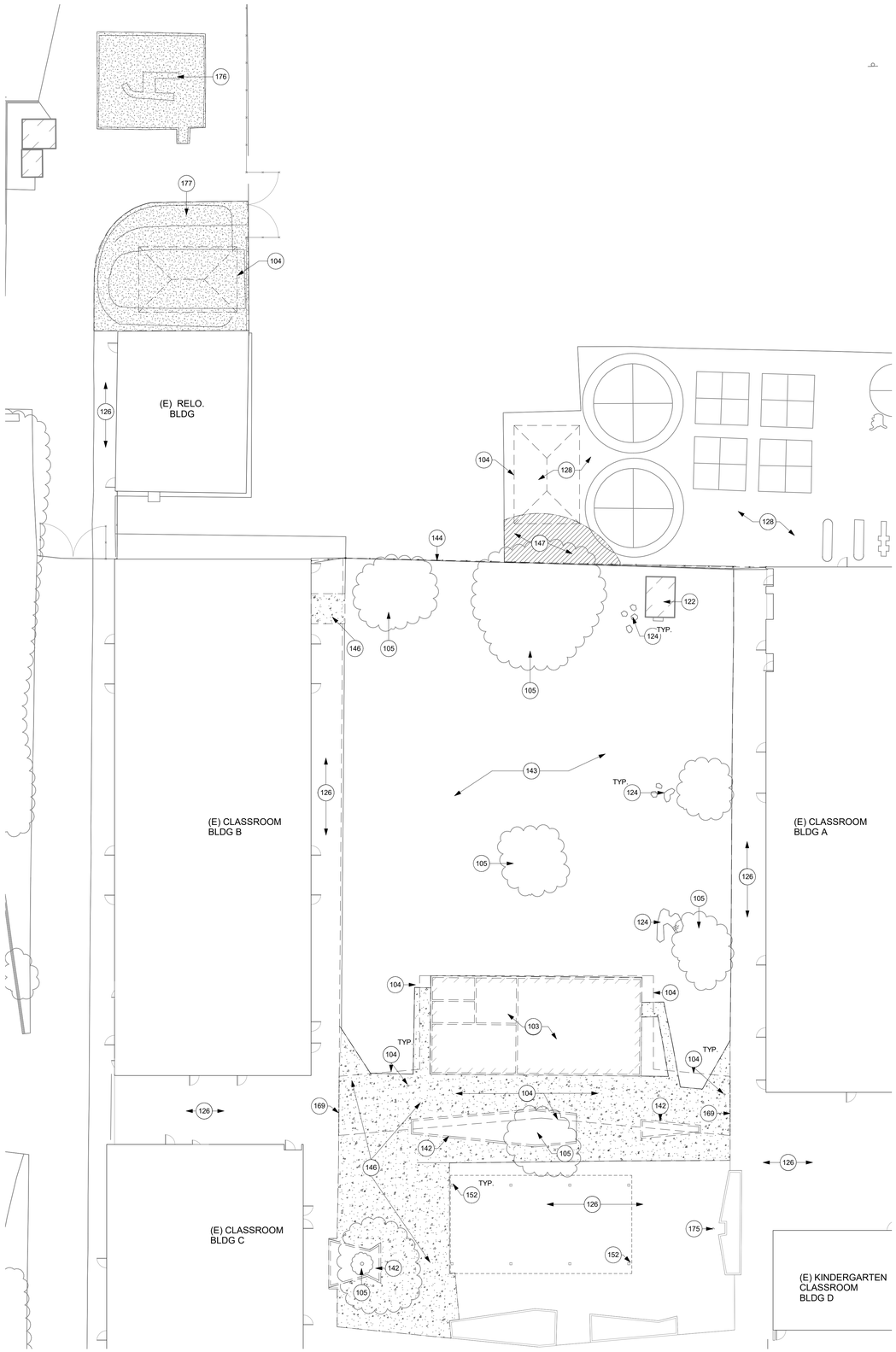
LICENSED ARCHITECT ROBERT D. WEBB C-28036 STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

FIRE ACCESS PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A0.2



ENLARGED SITE PLAN- DEMO | 1/16" = 1'-0" | 1

LEGEND

- DEMO CONCRETE W/ REBAR
- DEMO FENCING
- DEMO ASPHALT PAVING
- DEMO LANDSCAPING
- DEMO PLAY AREA

KEYNOTES

103	SAFE OFF AND DEMOLISH EXISTING BUILDING, COMPLETE, INCLUDING ALL CONCRETE FOUNDATIONS, EQUIPMENT AND UTILITIES.
104	REMOVE EXISTING CANOPY AND CANOPY POSTS. DISPOSE.
105	REMOVE EXISTING TREE, COMPLETE, INCLUDING ALL ROOTS. TREES VARY FROM 6" TO 24" DIAMETER. DISPOSE.
122	REMOVE EXISTING SHED, COMPLETE
124	REMOVE AND SALVAGE EXISTING LANDSCAPING ROCKS. RETURN TO DISTRICT
126	(E) CONCRETE PAVING TO REMAIN
128	(E) ASPHALT PAVING TO REMAIN
142	REMOVE (E) CURB AND LANDSCAPE PLANTER
143	REMOVE (E) TURF AND IRRIGATION
144	REMOVE/DEMO (E) CHAIN LINK FENCING COMPLETE, INCLUDING POST FOUNDATIONS
146	REMOVE/DEMO PORTION OF (E) CONCRETE WALK
147	REMOVE/DEMO PORTION OF (E) ASPHALT PAVING
152	(E) SHADE STRUCTURE COLUMNS TO REMAIN, PROTECT IN PLACE
169	(E) CANOPY ABOVE TO REMAIN. PATCH, PLASTER & MODIFY FLASHING WHERE PORTION OF ADJACENT CANOPY WAS REMOVED.
175	REMOVE EXISTING FLAG POLE AND SALVAGE FOR RELOCATION.
176	DEMO/REMOVE EXISTING PLAY STRUCTURE AND SURFACE
177	DEMO/REMOVE EXISTING PLAY SURFACE AREA. PREP TO RECEIVE NEW ASPHALT

GENERAL NOTES

1. ALL ITEMS INDICATED FOR REMOVAL SHALL BE REMOVED COMPLETELY, INDLUDING ALL FOUNDATIONS, TREE ROOTS, ELECTRICAL BOXEDS, CONDUITS, ETC. ALL ITEMS SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH THE CITY OF SANTEE AND COUNTY OF SAN DIEGO ENVIRONMENTAL AND TRANSPORTATION REGULATIONS.
2. REMOVE ALL IRRIGATION WITHIN THE BUILDING/GRADING FOOTPRINT. POTHOLE AND TRACK EXISTING IRRIGATION AT ALL BOUNDARY POINTS. PROVIDE TEMPORARY IRRIGATION TO ALL EXISTING PLANTERS DURING CONSTRUCTION TO MAINTAIN LANDSCAPING IN GOOD CONDITION UNTIL FINAL LANDSCAPING AND IRRIGATION IS COMPLETED.
3. REFERENCE SPECIFICATIONS, TITLE SHEET GENERAL NOTES, AND APPLICABLE DRAWINGS AND NOTES ON MECHANICAL, ELECTRICAL PLUMBING AND CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
4. HALFTONE LINEWORK RESPRESENTS CONSTRUCTION TO REMAIN.
5. DARK LINES REPRESENT MATERIALS OR WALL FRAMING TO BE PROVIDED. REFERENCE KEYNOTES FOR ADDITIONAL INFORMATION.
6. KEYNOTES ARE INDICATED AT ONLY A PORTION OF THE BUILDING ELEMENTS. ELEMENTS ILLUSTRATED SIMILARLY, MIRRORED DESIGN, AND SIMILAR CONDITIONS SHALL BE ASSUMED TO BE NOTED SIMILARLY. QUANITITIES SHALL NOT BE DENOTED BY KEYNOTES.
7. REFERENCE PLUMBING AND ELECTRICAL DRAWINGS FOR SITEWORK UTILITY ROUTINGS. CONTRACTOR SHALL BE RESPONSIBLE TO SAW CUT PAVING, TRENCHING, COMPACT TRENCH BACKFILL, PAVING FINISHES MATCHING IN DEPTHS AND TYPES OF THAT REMOVED SHALL BE PROVIDED.
8. KEYNOTES WITHOUT ARROWS DENOTE AN ITEM OR REGION OF THE GENERAL AREA IN WHICH THEY ARE LOCATED AND ARE REFERENCING.

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DATE: 02.05.20

Revison	Date

Consultant

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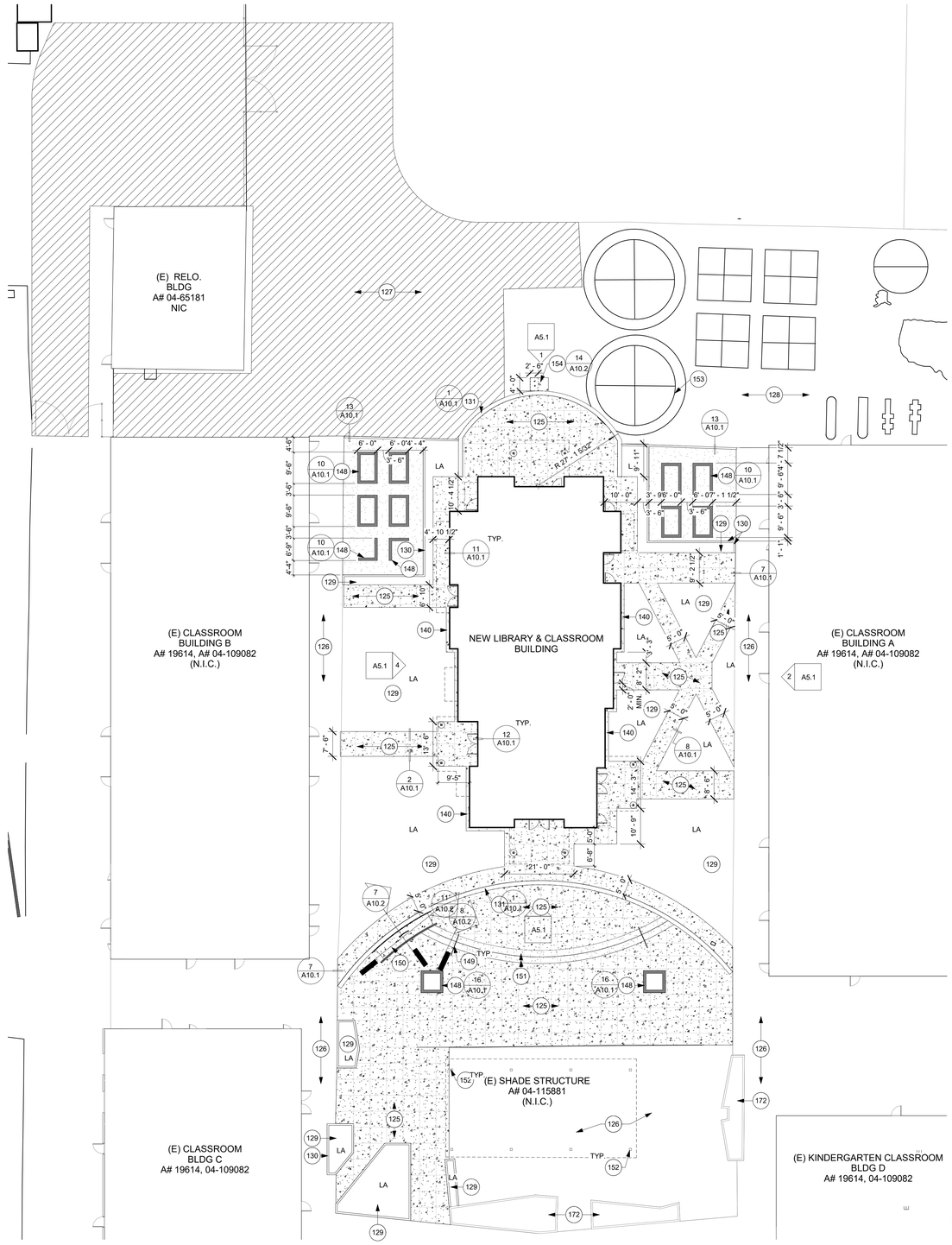
LICENSED ARCHITECT
ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

ENLARGED SITE PLAN- DEMO

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A1.1



PAVING LEGEND

(N) CONCRETE

(N) DECOMPOSED GRANITE

LA — (N) LANDSCAPE AREA

(N) ASPHALT AREA

(N) CONCRETE BLOCK PLANTER/SEAT WALL

(N) CONCRETE BENCH WALL

KEYNOTES

125	(N) CONCRETE PER CIVIL DETAILS
126	(E) CONCRETE PAVING TO REMAIN
127	(N) ASPHALT PAVING PER CIVIL DETAILS
128	(E) ASPHALT PAVING TO REMAIN
129	(N) LANDSCAPE AREA
130	(N) CONCRETE CURB PER CIVIL DETAILS
131	(N) BENCH WALL, SEE DETAIL 1/A10.1
140	(N) 12" WIDE CONCRETE MOW CURB AT BUILDING PERIMETER
148	(N) BLOCK PLANTER/SEAT WALL, SEE LANDSCAPE DRAWINGS
149	(N) STAIR HANDRAIL
150	(N) RAMP, HANDRAIL AND CURB, SEE TYPICAL DETAIL ON PLAN AND CIVIL DRAWINGS
151	(N) 24" WIDE STAGE STEP
152	(E) SHADE STRUCTURE COLUMNS TO REMAIN, PROTECT IN PLACE
153	HARDSCAPE GAME STRIPING TO BE REPAINTED IN NEW LOCATION
154	PROVIDE (N) CONCRETE PAD AND INSTALL SALVAGED FLAGPOLE, SEE DTL ON PLAN
172	(E) LANDSCAPE AND RAISED CURB PLANTERS TO REMAIN. PROTECT IN PLACE.

ENLARGED SITE PLAN | 1/16" = 1'-0" | 1

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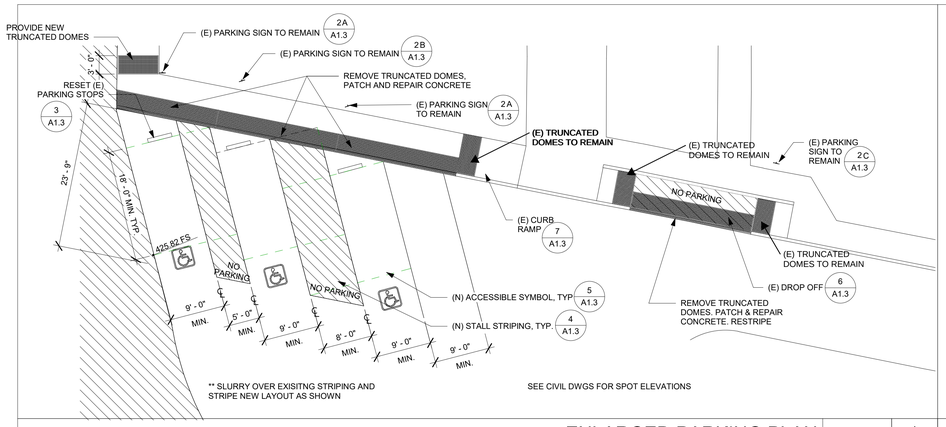
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

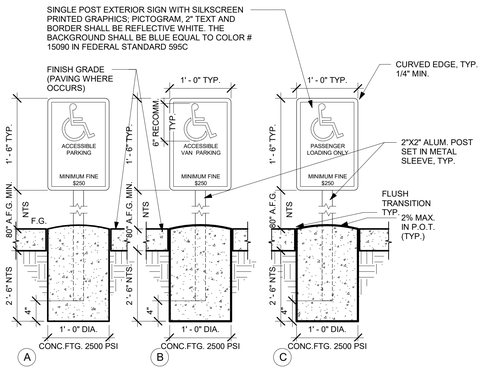
ENLARGED SITE PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

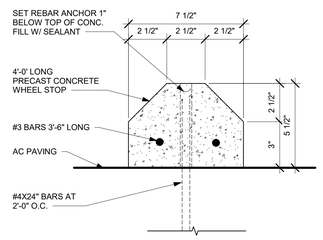
A1.2



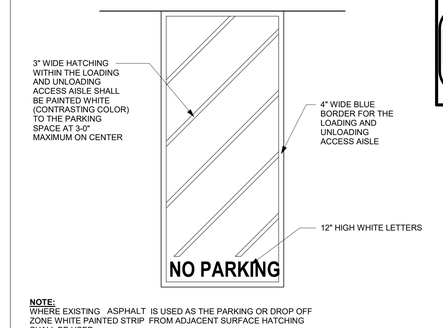
ENLARGED PARKING PLAN | 1" = 10'-0" | 1



ACCESSIBLE PARKING SIGN | 1" = 1'-0" | 2

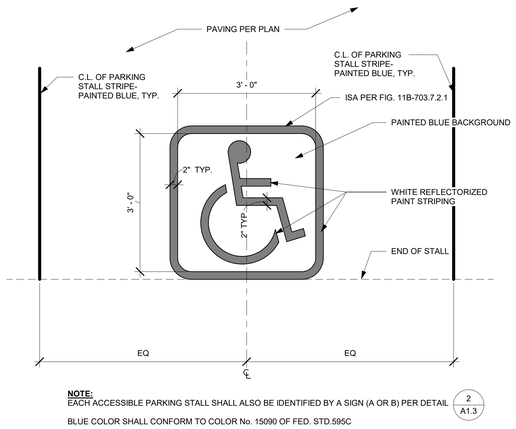


PARKING STOP | 3" = 1'-0" | 3



NOTE:
WHERE EXISTING ASPHALT IS USED AS THE PARKING OR DROP OFF ZONE WHITE PAINTED STRIP FROM ADJACENT SURFACE HATCHING SHALL BE USED

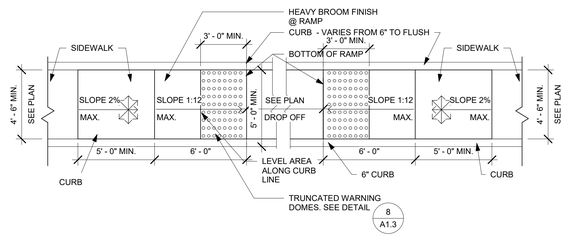
STRIPING REQUIREMENTS | 1/4" = 1'-0" | 4



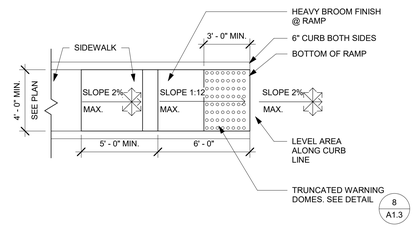
NOTE:
EACH ACCESSIBLE PARKING STALL SHALL ALSO BE IDENTIFIED BY A SIGN (A OR B) PER DETAIL 2 A1.3

BLUE COLOR SHALL CONFORM TO COLOR No. 15090 OF FED. STD.595C

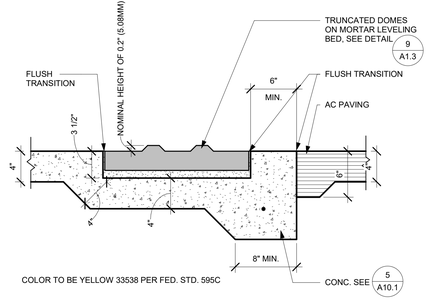
SYMBOL OF ACCESSIBILITY | 3/4" = 1'-0" | 5



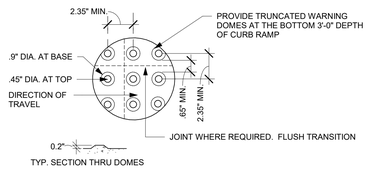
STRAIGHT RUN CURB RAMP/DROP OFF | 1/4" = 1'-0" | 6



STRAIGHT RUN CURB RAMP | 1/4" = 1'-0" | 7

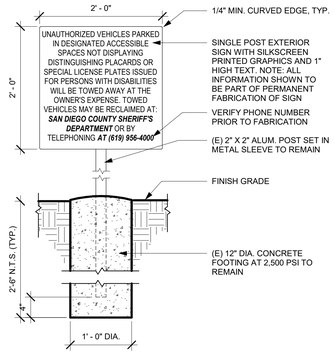


TRUNCATED DOMES AT PAVING | 1 1/2" = 1'-0" | 8



TYP. SECTION THRU DOMES

TRUNCATED DOMES DETAIL VIEW | 1/4" = 1'-0" | 9



TOW-AWAY SIGN | 1" = 1'-0" | 10

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Revison	Date

Consultant

Engineer

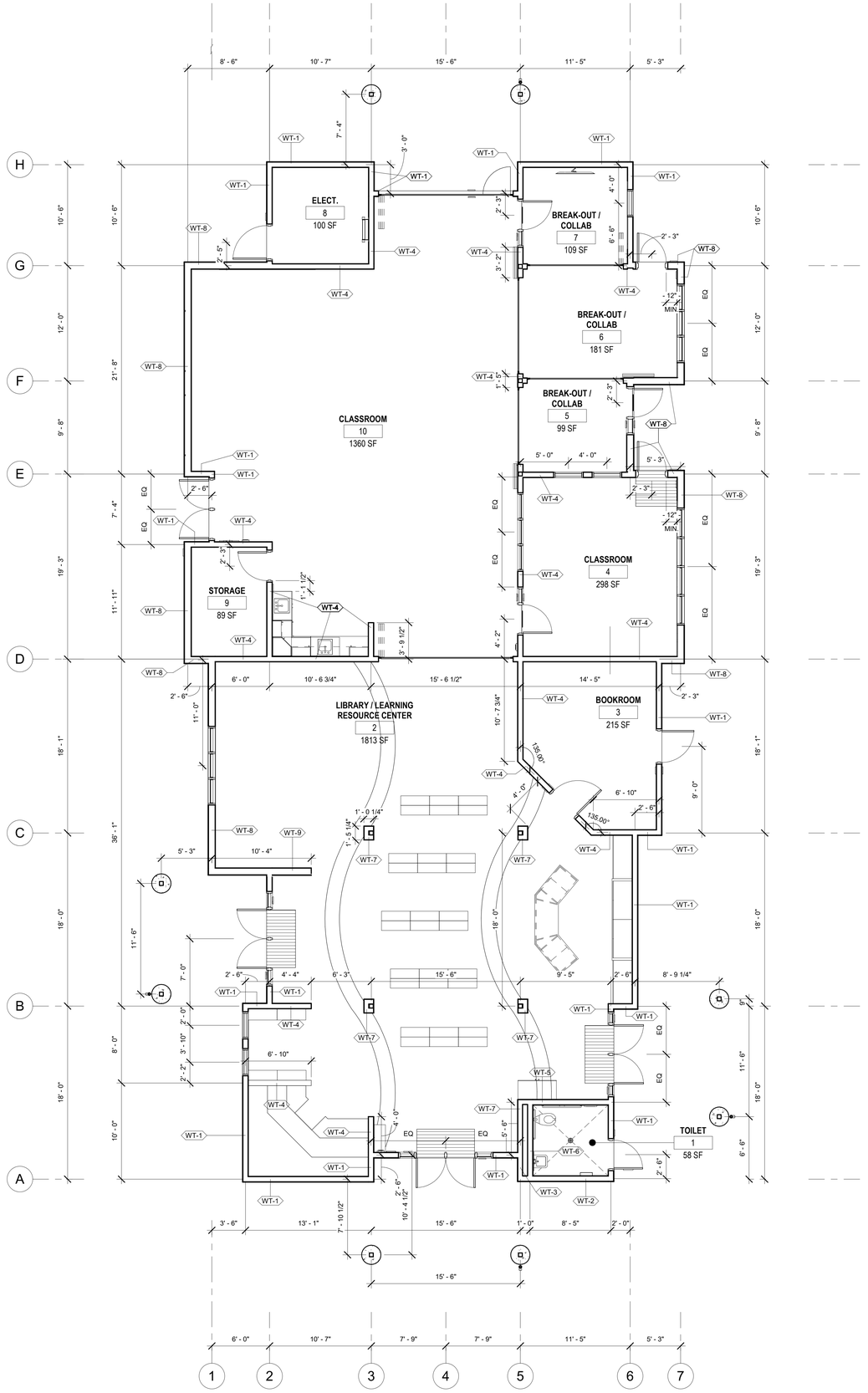
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

ENLARGED PARKING PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A1.3



WALL LEGEND

WT-"X" WALL TYPE - SEE 1/A20.0

NOTE:
INTERIOR WALLS ARE TO BOTTOM OF DECK, INSULATED WITH 5" BATT INSULATION NO-FACE AND GYP. EA. SIDE, UNLESS NOTED OTHERWISE.

PH PANIC HARDWARE- SEE DOOR SCHEDULE

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DATE: 02.05.20

GENERAL NOTES

1. FOR SIGNAGE, SEE SHEET 1/A2.2
2. ALL DIMENSIONS ARE CENTER OF STUD, U.N.O.
3. ALL DIMENSIONS FOR ACCESSIBLE CLEARANCE ARE TO FINISH SURFACE
4. ALL EXTERIOR WALL TO HAVE R-19 BATT INSULATION
5. ALL ROOF TO HAVE R-38 BATT INSULATION
6. SEE FINISH SCHEDULE FOR ROOM FINISHES
7. MAXIMUM FLAME SPREAD SHALL COMPLY WITH SECTION 504 CBC, CLASS III PER TABLE 8B
8. SMOKE DENSITY FOR FINISH MATERIALS NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH CBC CHAPTER 7
9. SEE OVERALL FLOOR PLAN FOR KEYNOTES 1/A2.3

ENLARGED FLOOR PLAN - FF - DIMENSION | 3/16" = 1'-0" | 1

Revison | Date

Consultant

Engineer

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Telephone: (760) 632-8800 Fax: (760) 452-7341

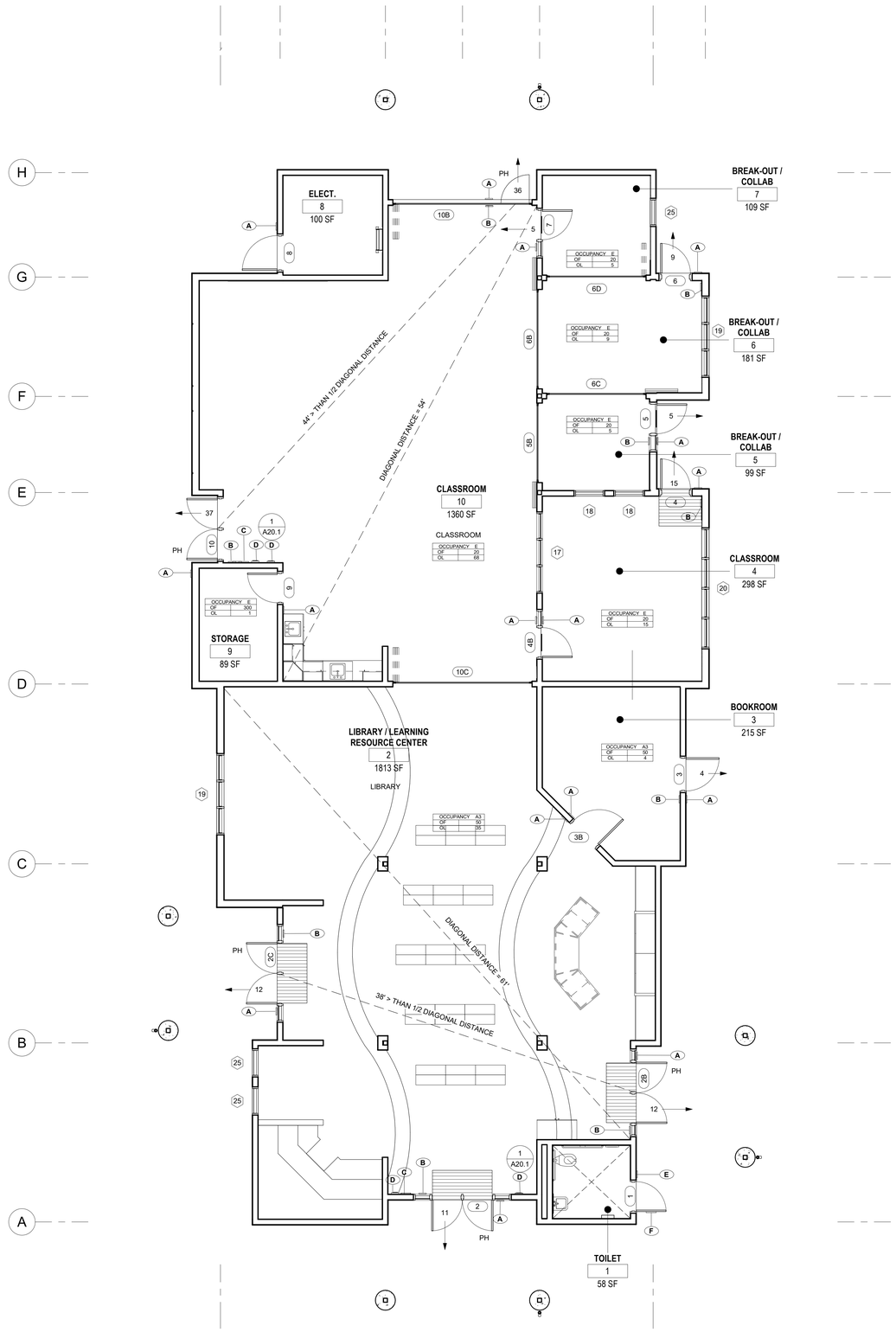
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

DIMENSION FLOOR PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A2.1



EXITING, SIGNAGE & OPENING FLOOR PLAN | 3/16" = 1'-0" | 1

WALL LEGEND

NOTE:
INTERIOR WALLS ARE TO BOTTOM OF DECK, INSULATED WITH 5" BATT INSULATION NO-FACE AND GYP. EA. SIDE, UNLESS NOTED OTHERWISE.

PH PANIC HARDWARE- SEE DOOR SCHEDULE

SIGNAGE LEGEND

- A — ROOM ID SIGN, SEE DTL 6 / A20.1
- B — EXIT SIGN, SEE DTL 16 / A20.1
- C — ALS SIGN, SEE DTL 4 / A20.1
- D — OCCUPANCY LOAD SIGN, SEE DTL 8 / A20.1 U.N.O.
- E — TOILET SIGN AT WALL, SEE DTL 2 / A20.1
- F — TOILET SIGN AT DOOR, SEE DTL 7A / A20.1

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Revison	Date

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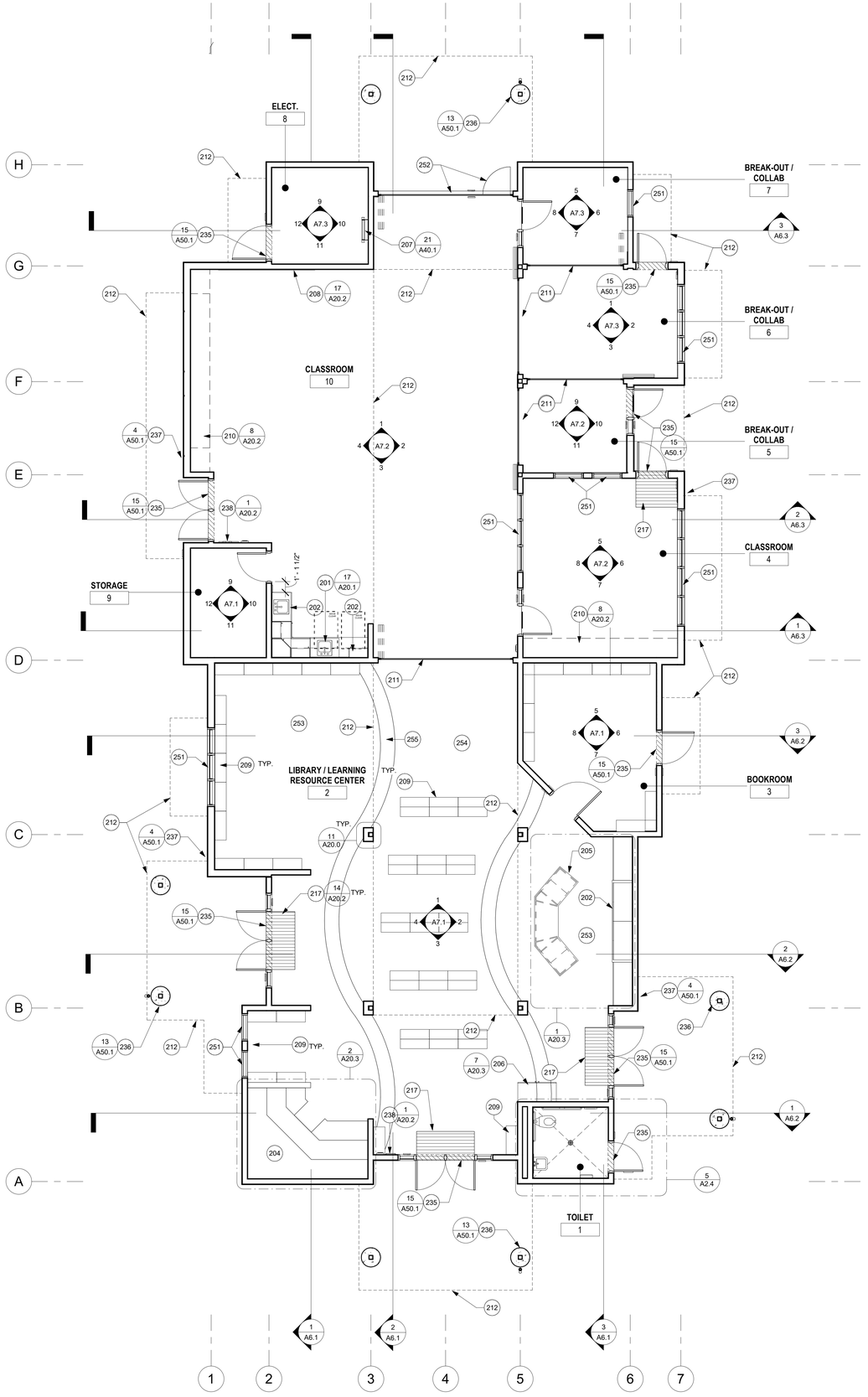
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

EXITING, SIGNAGE AND OPENING FLOOR PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A2.2



OVERALL FLOOR PLAN | 3/16" = 1'-0" | 1

KEYNOTES

201	ACCESSIBLE SINK CASEWORK - SEE INT. ELEVATIONS
202	CASEWORK - SEE INT. ELEVATIONS
204	RAISED READING AREA- SEE ENLARGED PLAN
205	LIBRARY RECEPTION DESK - SEE ENLARGED PLAN
206	DISPLAY CABINET - SEE INTERIOR ELEVATIONS
207	ROOF ACCESS HATCH AND LADDER
208	MARKER BOARD- SEE INT. ELEVATIONS FOR SIZE
209	FUTURE SHELVING, OFOI. CONTRACTOR TO PROVIDE BLOCKING FOR WALL MOUNTED UNITS
210	FUTURE TEACHING WALL- OFOI. CONTRACTOR TO PROVIDE BLOCKING IN THIS CONTRACT
211	INTERIOR OPERABLE GLASS WALL, SEE DOOR AND OPENING SCHEDULES
212	DASHED LINE INDICATES SOFFIT OR CANOPY ABOVE
217	PROVIDE WALK OFF MAT, FLUSH WITH ADJACENT CARPET
235	(N) THRESHOLD. SEE DETAIL ON DRAWINGS
236	(N) CONCRETE WRAPPED COLUMN
237	(N) ROOF OVER FLOW DRAIN OUTLET. SEE DETAIL REFERENCED ON PLAN AND PLUMBING
238	(N) FIRE EXTINGUISHER. SEE DETAIL REFERENCED ON PLAN
251	WINDOW, SEE DOOR AND OPENING SCHEDULES
252	EXTERIOR OPERABLE GLASS WALLS WITH SWING DOOR, SEE DOOR AND OPENING SCHEDULES
253	MAIN CARPET COLOR SELECTION, SEE SPECS
254	ACCENT CARPET COLOR SELECTION 1, SEE SPECS
255	ACCENT CARPET CIOLOR SELECTION 2, SEE SPECS

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APP. 04-118743 INC:
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DATE: 02.05.20

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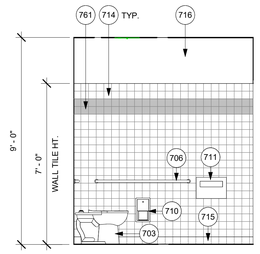
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

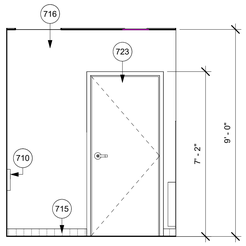
OVERALL FLOOR PLAN

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

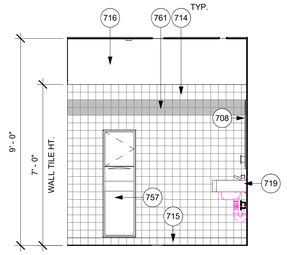
A2.3



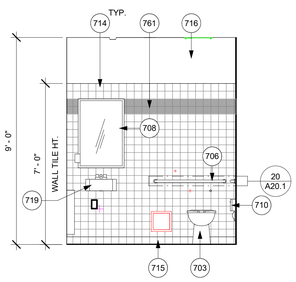
TOILET- NORTH | 3/8" = 1'-0" | 1



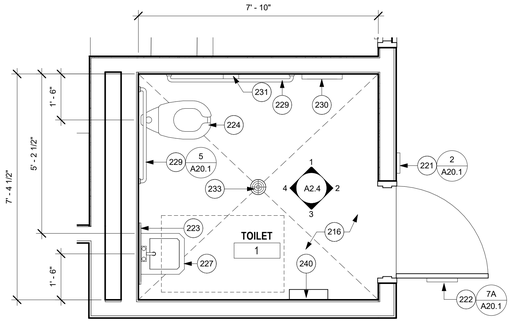
TOILET- EAST | 3/8" = 1'-0" | 2



TOILET- SOUTH | 3/8" = 1'-0" | 3



TOILET- WEST | 3/8" = 1'-0" | 4



NOTE:
FOR FIXTURE & ACCESSORY MOUNTING DIMENSIONS, SEE DETAIL 5 A20.1
ALL DIMENSIONS SHOWN ARE TO FINISH SURFACES

ENLARGED TOILET PLAN | 1/2" = 1'-0" | 5

KEYNOTES

213	(E) ACCESSIBLE DRINKING FOUNTAIN PER PREVIOUS A# TO REMAIN. PROTECT IN PLACE. SEE DETAIL REFERENCED ON PLAN
216	CERAMIC FLOOR TILE
221	TOILET ROOM WALL SIGN, SEE DETAIL ON DRAWINGS
222	TOILET ROOM DOOR SIGN, SEE DETAIL ON DRAWINGS
223	MIRROR
224	ACCESSIBLE TOILET, SEE PLUMBING
225	(E) DRINKING FOUNTAIN TO REMAIN. SEE DETAIL REF'D ON PLAN
227	ACCESSIBLE LAVATORY- SEE PLUMBING
229	GRAB BAR
230	SEAT COVER DISPENSER
231	RECESSED TOILET TISSUE DISPENSER
233	FLOOR DRAIN. SLOPE FLOOR TOWARDS DRAIN 1% MAX
240	(N) PAPER TOWEL AND TRASH DISPENSER COMBO UNIT, NOT TO EXCEED 4" PROJECTION FROM WALL
241	(E) HAND DRYER TO REMAIN, NOT TO EXCEED 4" MAX. PROJECTION
242	(E) TOILET PARTITION TO REMAIN
244	(E) ACCESSIBLE TOILET TO REMAIN
246	(E) ACCESSIBLE URINAL TO REMAIN
247	(E) ACCESSIBLE LAVATORIES TO REMAIN
248	(E) WALL SIGN TO BE REMOVED & REPLACED W/ (N) WALL SIGN PER DETAIL REFERENCED ON PLAN. TOUCH UP WALL FINISH & PAINT WHERE SIGN WAS REMOVED
249	(E) DOOR SIGN TO BE REMOVED & REPLACED W/ (N) DOOR SIGN PER DETAIL REFERENCED ON PLAN. TOUCH UP DOOR FINISH & PAINT WHERE SIGN WAS REMOVED
250	REMOVE & REPLACE TOILET TISSUE DISPENSER. PATCH WALL TILE AS NECESSARY
703	ACCESSIBLE TOILET
706	GRAB BAR
708	MIRROR
710	RECESSED TOILET TISSUE DISPENSER
711	SEAT COVER DISPENSER
714	TILE AND TILE BACKING
715	CERAMIC TILE COVED BASE
716	WALL TO RECEIVE TEXTURE AND PAINT
719	ACCESSIBLE LAVATORY
723	HOLLOW METAL DOOR FRAME, SEE DOOR/WINDOW SCHEDULES
757	PAPER TOWEL AND TRASH DISPENSER COMBO UNIT
761	ACCENT TILE

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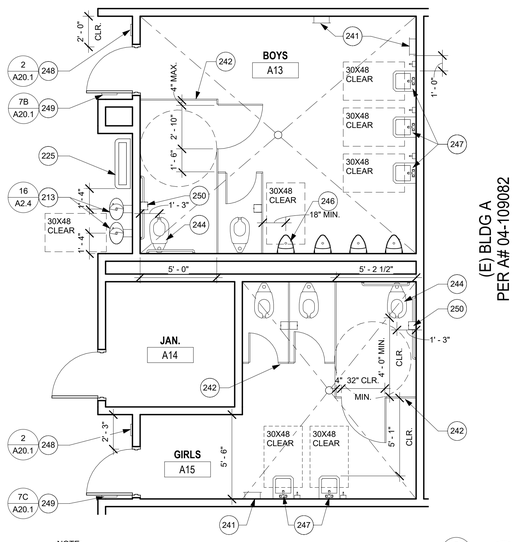


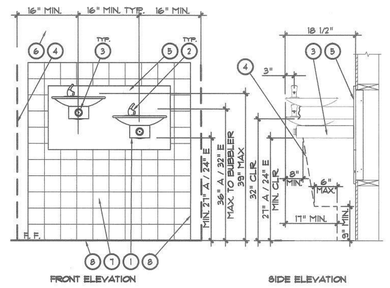
(E) BLDG A
PER A# 04-109082

NOTE:
1) U.N.O., ALL FIXTURES & ACCESSORIES SHOWN ARE COMPLIANT W/ CBC 2016 & PER DETAIL 5 A20.1 DIMENSIONS ARE AGES 5-8
2) ALL DIMENSIONS ARE TO FINISH SURFACE

(E) B/G RESTROOM PER 04-109082 | 1/4" = 1'-0" | 12

KEYNOTES:
1. "HI-LO ACCESSIBLE DRINKING FOUNTAIN PER PLUMBING DRAWINGS.
2. BUBBLER LOCATED WITHIN 3" MAX. AT ROUND BOWL.
3. PUSH BUTTON OPERATOR NOT REQUIRING A FORCE GREATER THAN 5 LBS.
4. DASHED LINE INDICATES AREA OF MAXIMUM ENCROACHMENT TO ALLOW FOR ACCESSIBILITY.
5. PROVIDE MOUNTING PLATE AND STAINLESS STEEL FINISH PLATE COVER PER MANUFACTURER.
6. N/A
7. N/A
8. PROVIDE FULL PERIMETER SEALANT AT TILE INTERFACE TO WOOD SIDING AND CONCRETE WALKEWAY.

GENERAL NOTES:
1. THIS DETAIL IS INTENDED TO ILLUSTRATE DIMENSIONS AND BASIC ELEMENTS. ACTUAL FICTURES MAY BE SINGLE OR COMBINATION UNITS AND MAY VARY FROM THOSE SHOWN. REFERENCE PLUMBING DRAWINGS FOR DRINKING FOUNTAIN YES AND LOCATIONS.
2. REFERENCE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
THIS DETAIL PROVIDES BASIC DIMENSIONAL REQUIREMENTS FOR AN ACCESSIBLE DRINKING FOUNTAIN. ALL OTHER REQUIREMENTS OF TITLE 24, SECTION 11B-602 SHALL BE MET.



FOR REFERENCE ONLY

ACCESSIBLE D.F. ELEVATION PER 04-109082 | 3/4" = 1'-0" | 16

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SANTEE SCHOOL DISTRICT

ENLARGED TOILET PLAN

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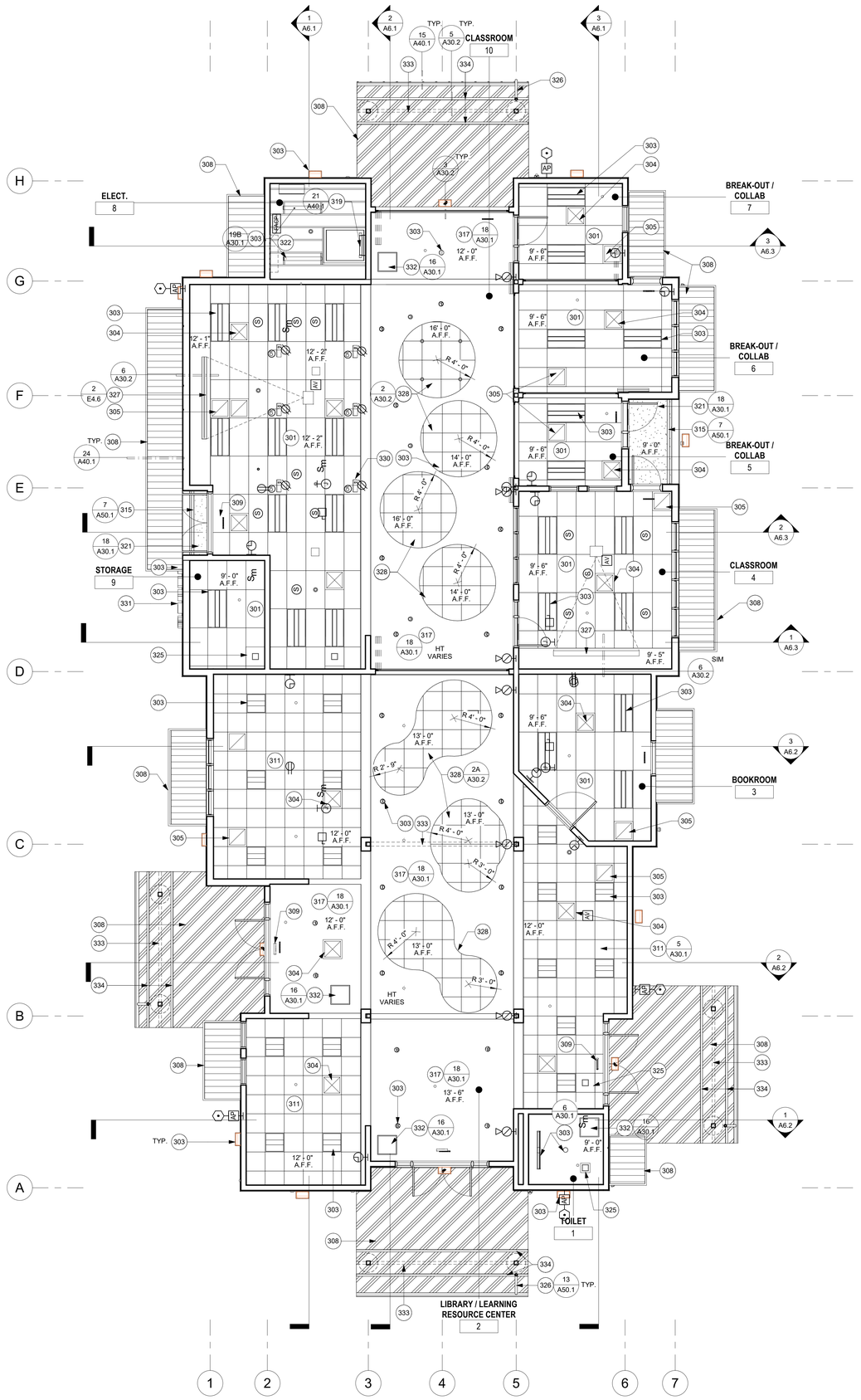
A2.4



REFLECTED CEILING PLAN - FF | 3/16" = 1'-0" | 1

CEILING LEGEND

- 2x2 ACOUSTICAL CEILING
- 2x4 ACOUSTICAL CEILING
- GYPSUM BOARD CEILING
- CEMENT PLASTER CEILING WITH CONTROL JOINTS
- METAL SOFFIT PANEL
- METAL CANOPY
- AIR REGISTER. SEE MECHANICAL DRAWINGS
- LIGHT FIXTURES. SEE ELECTRICAL DRAWINGS
- FIRE ALARM AND ELECTRICAL EQUIP. SEE ELECTRICAL DRAWINGS

NOTE:

1. ALL WALLS EXTEND TO UNDERSIDE OF ROOF DECK UNLESS NOTED OTHERWISE ON THIS SHEET
2. FOR CEILING DETAILS, SEE SHEET A30.1 & A30.2

KEYNOTES

301	PROVIDE 24" X 48" HEAVY DUTY CLASSIFICATION ACOUSTIC CEILING TILE SUSPENSION SYSTEM AND CEILING TILES IN THIS AREA
303	PROVIDE LIGHT FIXTURE TYPICAL. SEE ELECTRICAL DRAWINGS
304	PROVIDE SUPPLY GRILLE TYPICAL. SEE MECHANICAL DRAWINGS
305	PROVIDE RETURN REGISTER TYPICAL SEE MECHANICAL DRAWINGS
308	INDICATED ROOF OR CANOPY ABOVE
309	PROVIDE LIGHTED EXIT SIGNAGE. SEE ELECTRICAL DRAWINGS
311	PROVIDE 24" X 24" ACOUSTICAL CEILING TILE SUSPENSION SYSTEM AND CEILING TILES IN THIS AREA
315	PLASTER VENT SCREED, SEE TYP. DETAIL REF. ON PLAN
317	5/8" GYP. BD. CEILING AT BOTTOM OF JOIST IN THIS AREA
319	PROVIDE ROOF ACCESS LADDER AND HATCH
321	PROVIDE EXTERIOR PLASTER SOFFIT AND FRAMING
322	NO CEILING - EXPOSED JOISTS
325	PROVIDE TRANSFER GRILLE TYPICAL. SEE MECHANICAL DRAWINGS
326	PROVIDE DOWNSPOUT ALONG CONCRETE COLUMN. SEE DETAIL REF. ON PLAN
327	PROVIDE RECESSED CEILING-MOUNTED PROJECTOR SCREEN. SEE ELECTRICAL DRAWINGS
328	FLOATING ACOUSTIC CEILING TILE CLOUD SYSTEM WITH 4" PERIMETER TRIM, PER SPECS. PROVIDE HORIZONTAL SEISMIC CABLE BRACING AND VERTICAL STRUTS PER DTL REF'D ON PLAN, WIRED PERIMETER CHANNEL PER SPECIFICATIONS
330	PROVIDE CEILING-MOUNTED POWER CHORD REEL. SEE ELECTRICAL DRAWINGS
331	PROVIDE 18" ALUMINUM SIGN TO READ "LEARNING RESOURCE CENTER". SEE ELEVATION DRAWINGS
332	24" X 24" CEILING ACCESS PANEL. PER DTL REF'D ON PLAN
333	EXPOSED BEAM PER STRUCTURAL. PREMIUM GRADE FINISH. PROVIDE STAIN AND SEALER.
334	SHEET METAL VENT SCREED, TYP.

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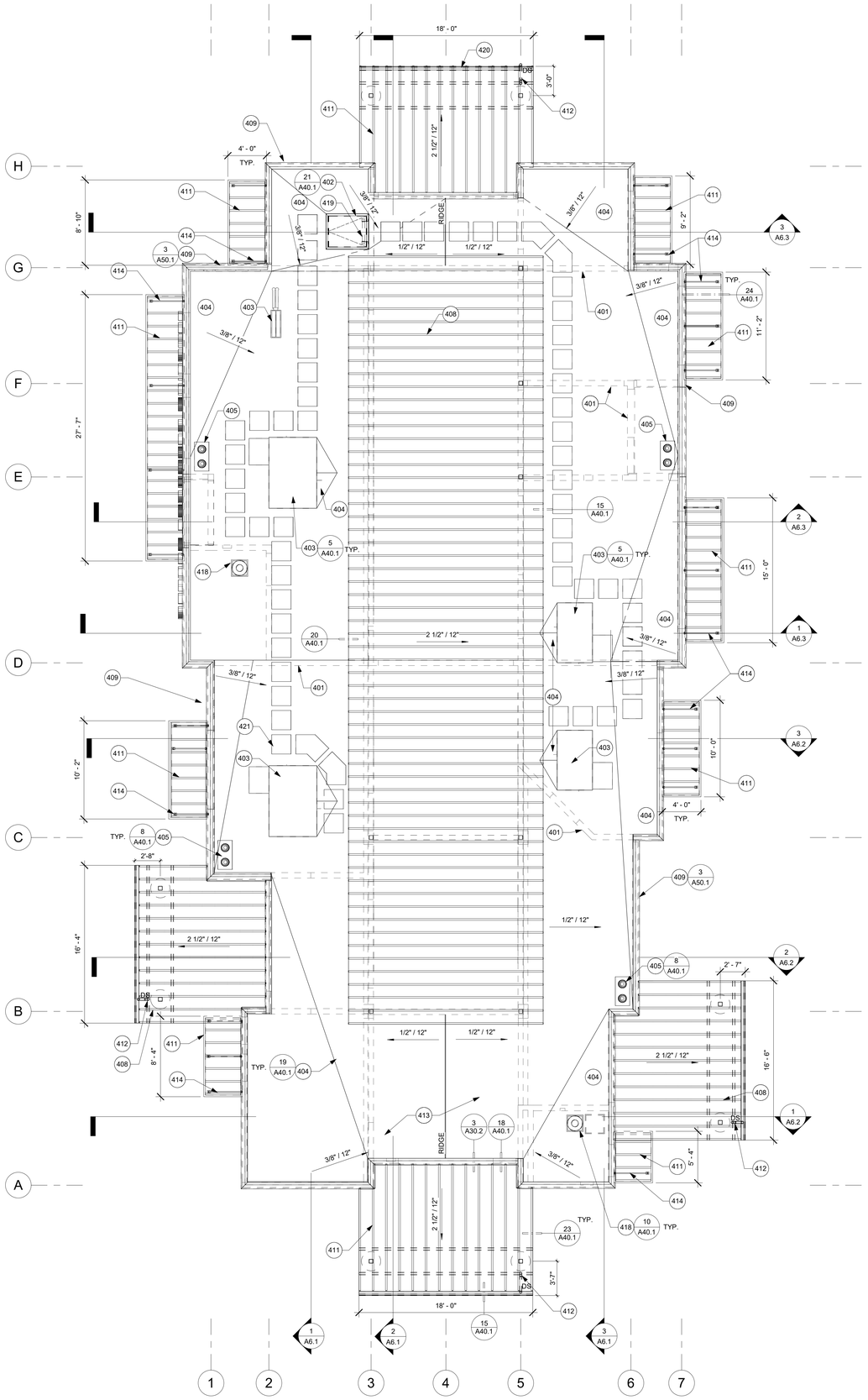
A3.1



ROOF PLAN - FF | 3/16" = 1'-0" | 1

ROOF LEGEND

TPO ROOFING

24 GA SLOPED VERTICAL SEAM METAL ROOFING WITH PANEL CLIPS LOCATED 20" O.C., PER ESR #2385 OR EQUAL

2 X 2 ROOF WALKWAY PADS

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KEYNOTES

401 DASHED LINES INDICATE WALL BELOW, TYP.
402 PROVIDE ROOF HATCH, SEE TYP. DETAIL REF. ON PLAN
403 PROVIDE / INSTALL NEW MECHANICAL UNIT. SEE MECHANICAL DRAWINGS, SEE TYP. ARCH. DETAIL REF. ON PLAN
404 PROVIDE ROOF CRICKET, TYP.
405 PROVIDE ROOF DRAIN AND OVERFLOW DRAIN, SEE PLUMBING DRAWINGS, SEE TYP. ARCH. DETAIL REF. ON PLAN
408 PROVIDE CLASS A METAL ROOFING OVER MEMBRANE - PER SPECIFICATIONS
409 PROVIDE PREFINISHED METAL PARAPET CAP, SEE TYP. DETAIL REF. ON PLAN
411 PROVIDE METAL CANOPY STRUCTURE, SEE WALL SECTIONS AND STRUCTURAL DRAWINGS FOR DETAIL
412 PROVIDE DOWNSPOUT AT LOCATION INDICATED AS "DS"
413 PROVIDE CLASS A SINGLE PLY ROOFING - PER SPECIFICATIONS
414 CANOPY BRACE LOCATION - SEE TYP. DETAIL REF. ON PLAN
418 PROVIDE EXHAUST FAN, SEE MECHANICAL DRAWINGS
419 ROOF ACCESS LADDER
420 PROVIDE GUTTER AND DOWNSPOUT. SEE PLUMBING DRAWINGS
421 PROVIDE WALKWAY PADS, SEE SPECS FOR ADDITIONAL INFORMATION. PLACE PADS 1" MIN. - 6" MAX. APART FOR PROPER DRAINAGE U.N.O. BY MANUFACTURER

GENERAL NOTES

1. ALL ROOFING SHALL MEET CLASS "A" RATING
2. ALL ROOF PENETRATIONS ARE NOT SHOWN ON THIS PLAN, REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS
3. SEE WALL SECTION FOR ROOF FLASHING DETAILS
4. NOT ALL LOCATIONS OF TYPICAL DETAILS ARE SHOWN - REFER TO ROOF DETAIL SHEET FOR TYPICAL DETAILS
5. PROVIDE 4" CANT STRIPS AT ALL VERTICAL SURFACES, TYP.

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ROOF PLAN

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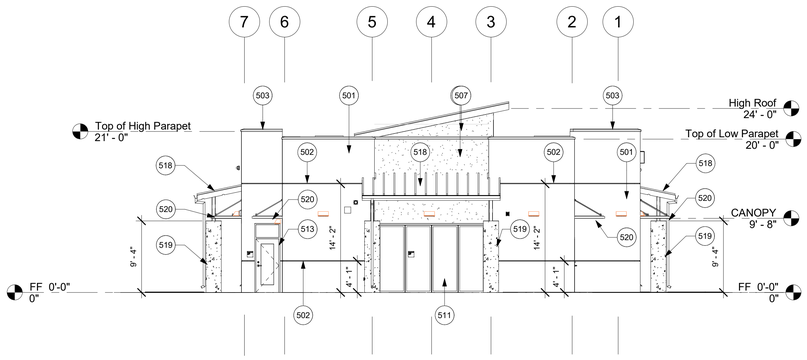
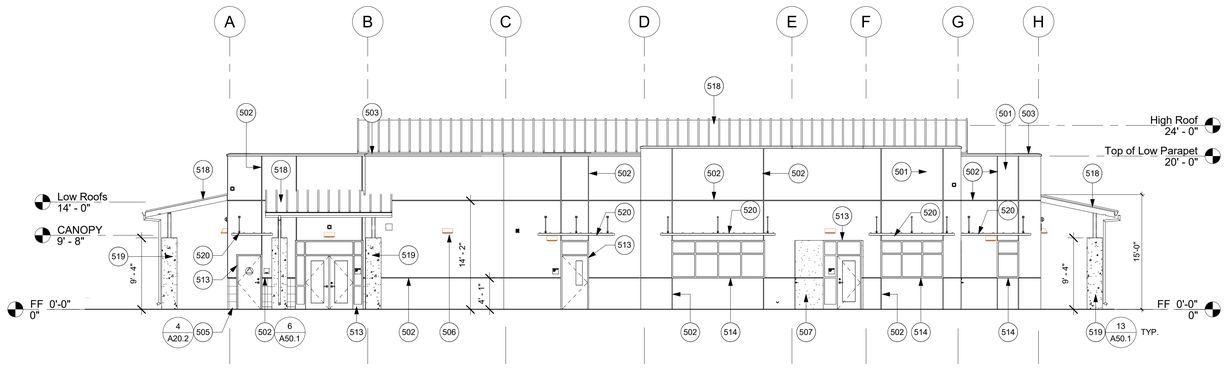
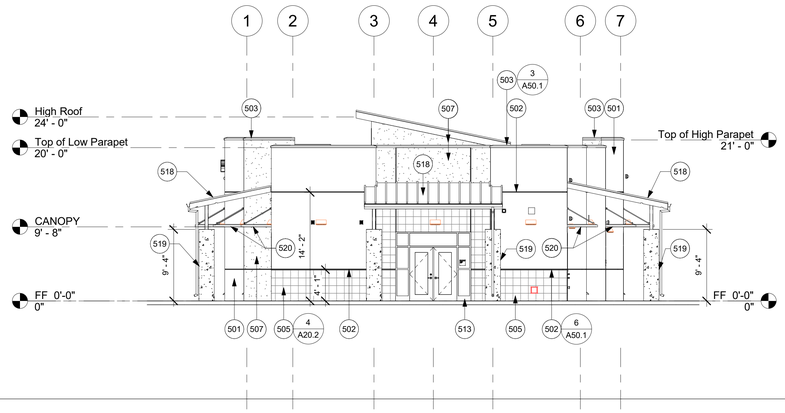
A4.1



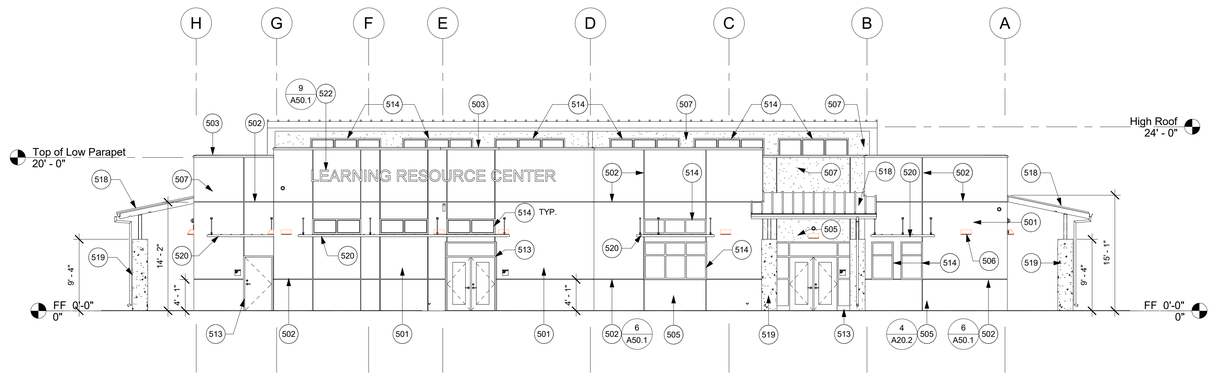
NORTH ELEVATION | 1/8" = 1'-0" | 1



EAST ELEVATION | 1/8" = 1'-0" | 2



SOUTH ELEVATION | 1/8" = 1'-0" | 3



WEST ELEVATION | 1/8" = 1'-0" | 4

BUILDING ELEVATION LEGEND

- MAIN PLASTER- TRUFFLE SP147
- ACCENT PLASTER- QUICKSAND DEC754
- ACCENT SLATE TILE, PER SPEC
- STANDING SEAM METAL ROOFING

BUILDING KEYNOTES

501	7/8" EXT. CEMENT PLASTER
502	1" ALUMINUM REVEAL
503	PREFINISHED METAL PARAPET CAP
505	TILE FINISH- THICKNESS NOT TO EXCEED 5/8"
506	EXTERIOR LIGHT FIXTURE - SEE ELECTRICAL
507	7/8" EXTERIOR CEMENT PLASTER TO RECEIVE ACCENT COLOR
511	EXTERIOR OPERABLE GLASS WALL
513	HOLLOW METAL DOOR FRAME, SEE DOOR/WINDOW SCHEDULE
514	HOLLOW METAL WINDOW FRAME, SEE DOOR/WINDOW SCHEDULES
518	SLOPED STANDING SEAM METAL CANOPY
519	CONCRETE WRAPPED METAL COLUMNS - SEE STRUCTURAL DRAWINGS
520	METAL CANOPY & BRACING - SEE STRUCTURAL DRAWINGS
522	18" CAST ALUMINUM LETTERS, STUD MOUNTED W/ QUICK DRY CEMENT, TO READ "LEARNING RESOURCE CENTER". CENTER OF WALL AT ELEVATIONS SHOWN- SEE SPECS

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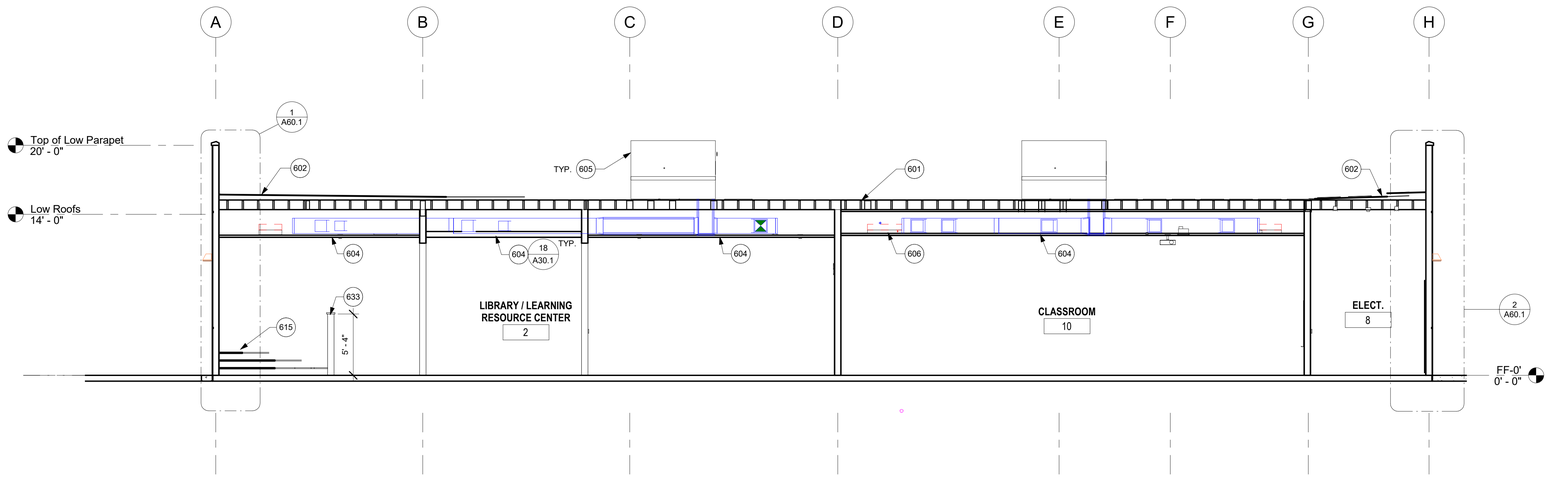
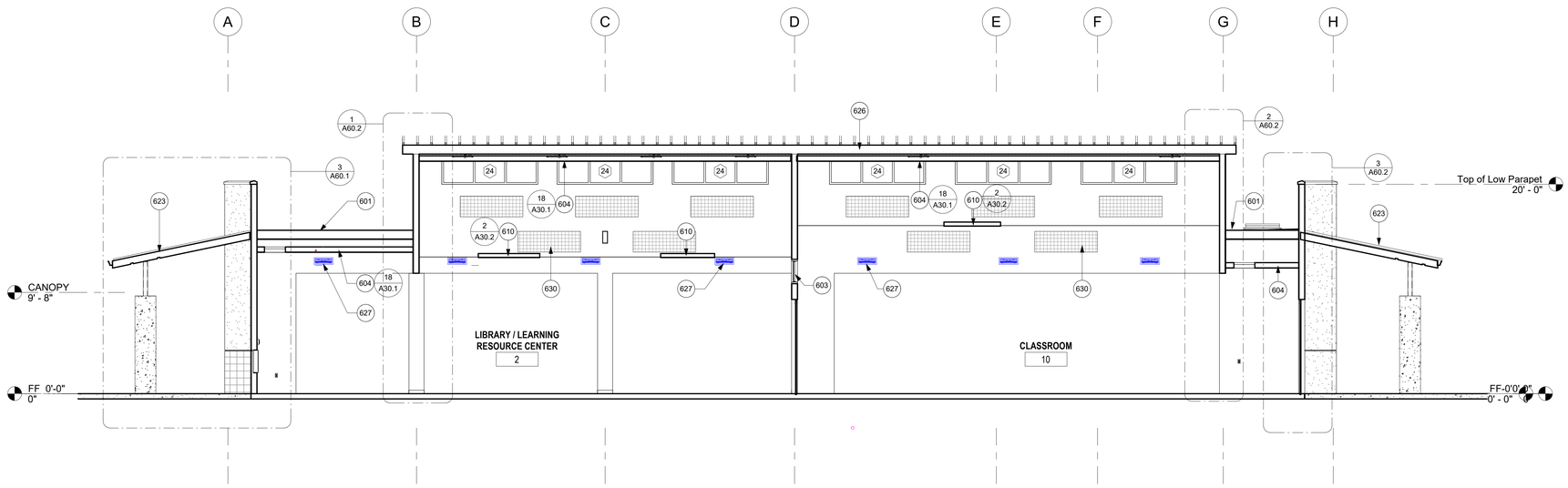
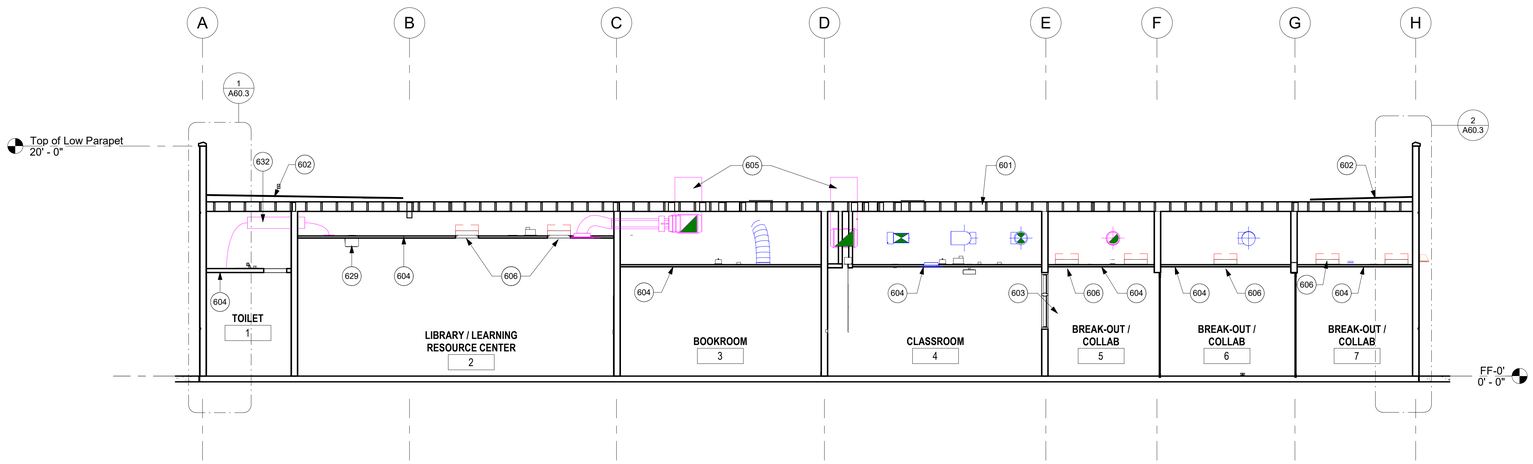
A5.1



SECTION 1 | 3/16" = 1'-0" | 1



SECTION 2 | 3/16" = 1'-0" | 2



SECTION 3 | 3/16" = 1'-0" | 3

SECTION KEYNOTES

601	TPO ROOFING MATERIAL
602	CRICKET
603	DOOR / WINDOW FRAME - SEE SCHEDULE
604	CEILING, SEE SCHEDULE
605	ROOF MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
606	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
610	FLOATING CEILING CLOUDS
615	RAISED READING STEPS
623	SLOPED STANDING SEAM METAL CANOPY
626	SLOPED STANDING SEAM METAL ROOF
627	SIDE WALL REGISTERS. SEE MECHANICAL DRAWINGS
629	PROVIDE LIGHTED EXIT SIGNAGE. SEE ELECTRICAL DRAWINGS
630	ACOUSTIC WALL PANEL
632	MECHANICAL DUCTWORK, TYP.
633	WOOD WALL CAP, PREMIUM GRADE FINISH. PROVIDE STAIN AND SEALER.

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BUILDING SECTIONS

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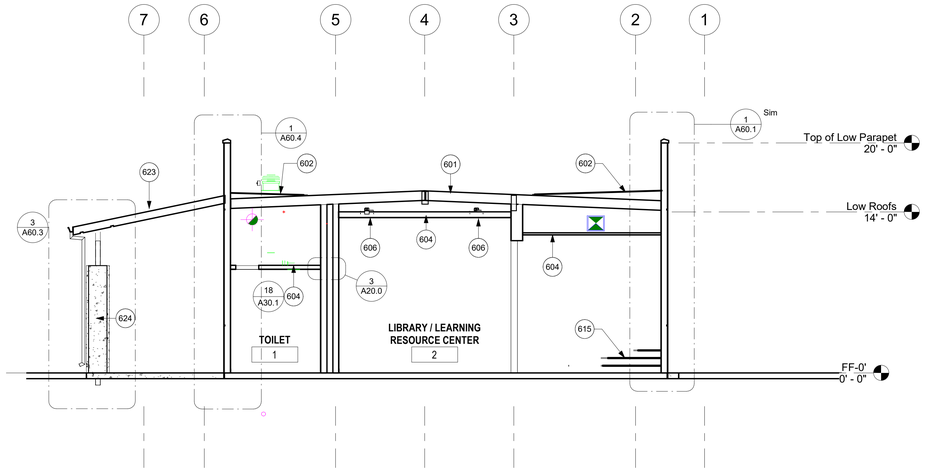
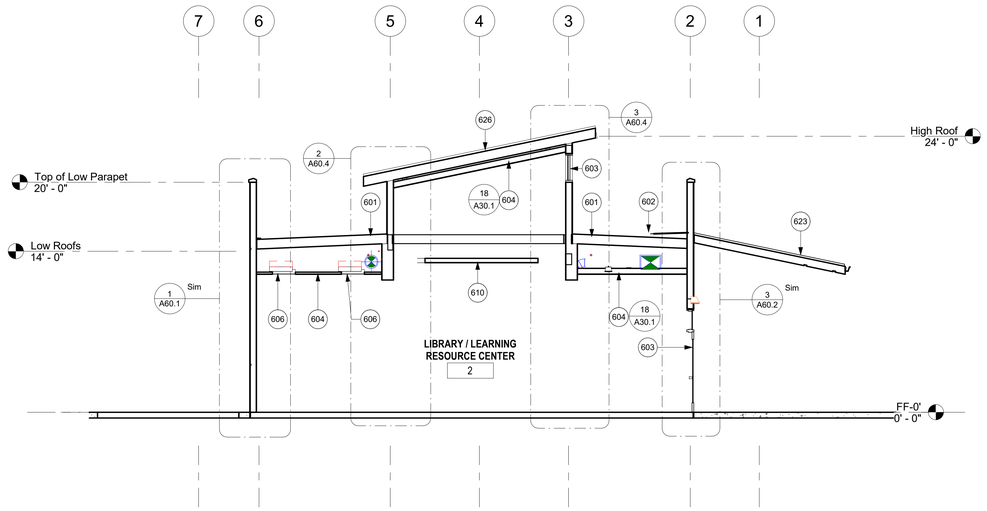
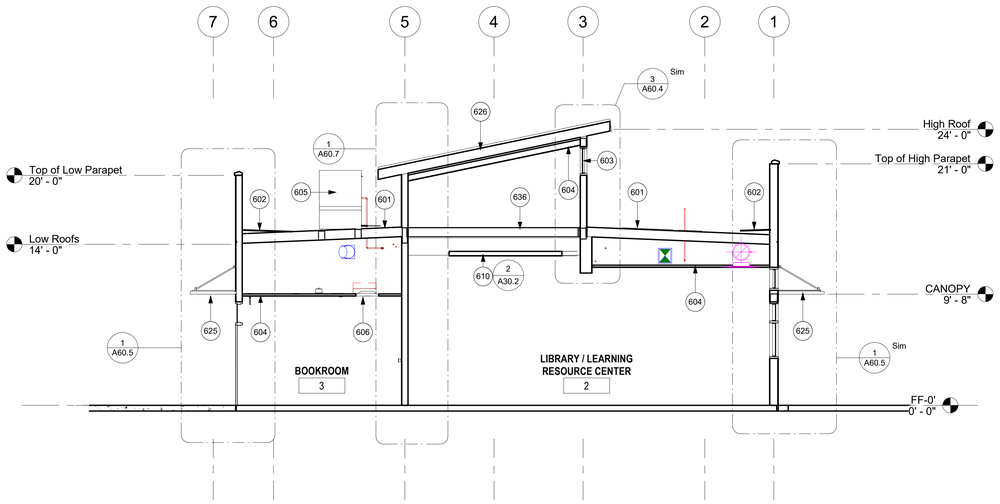


SECTION 4 | 3/16" = 1'-0" | 1



SECTION 5 | 3/16" = 1'-0" | 2



SECTION 6 | 3/16" = 1'-0" | 3

SECTION KEYNOTES

601	TPO ROOFING MATERIAL
602	CRICKET
603	DOOR / WINDOW FRAME - SEE SCHEDULE
604	CEILING, SEE SCHEDULE
605	ROOF MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
606	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
610	FLOATING CEILING CLOUDS
615	RAISED READING STEPS
623	SLOPED STANDING SEAM METAL CANOPY
624	CONCRETE WRAPPED METAL COLUMNS - SEE STRUCTURAL DRAWINGS
625	METAL CANOPY & BRACING - SEE STRUCTURAL DRAWINGS
626	SLOPED STANDING SEAM METAL ROOF
636	EXPOSED GLB, FINISH GRADE. STAINED

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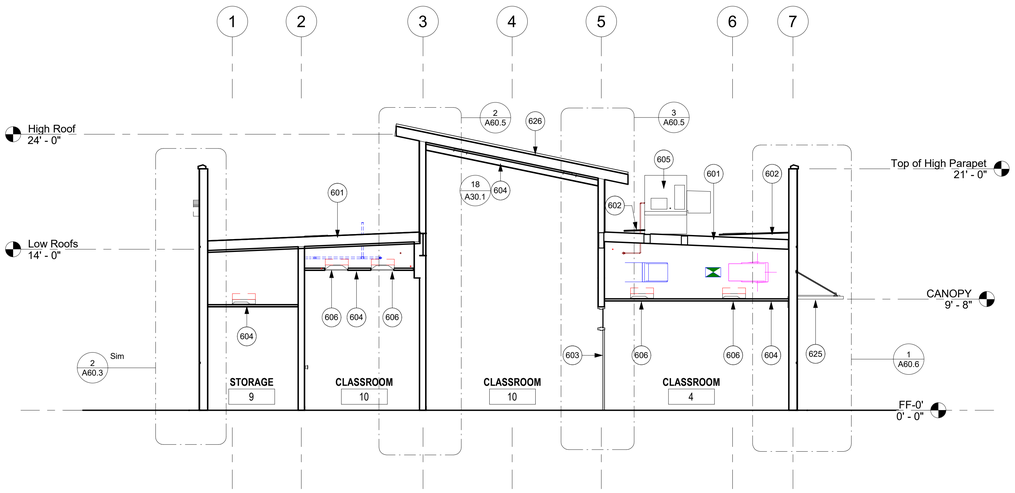
LICENSED ARCHITECT
ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

BUILDING SECTIONS

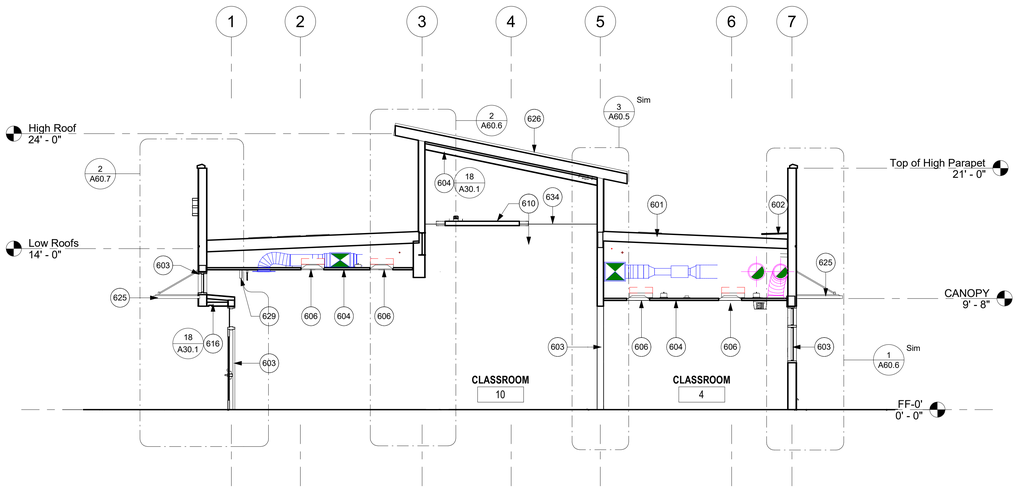
SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

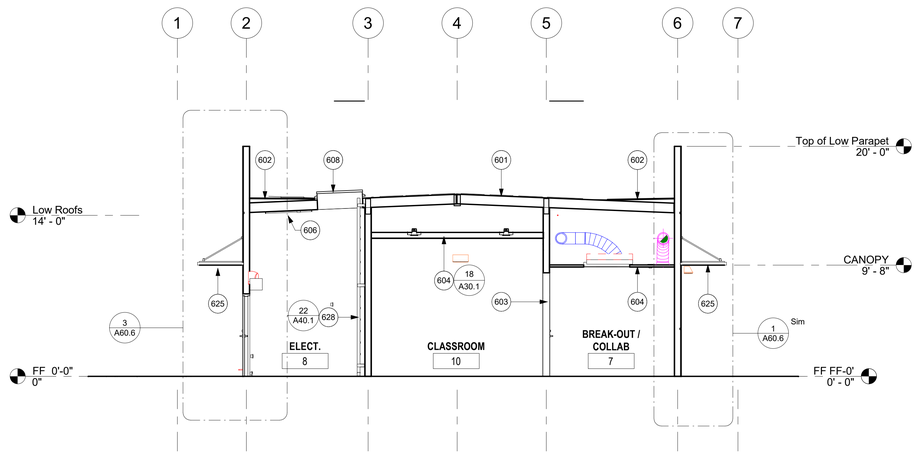
A6.2



SECTION 7 | 3/16" = 1'-0" | 1



SECTION 8 | 3/16" = 1'-0" | 2



SECTION 9 | 3/16" = 1'-0" | 3

SECTION KEYNOTES

601	TPO ROOFING MATERIAL
602	CRICKET
603	DOOR / WINDOW FRAME - SEE SCHEDULE
604	CEILING, SEE SCHEDULE
605	ROOF MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
606	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
608	ROOF HATCH
610	FLOATING CEILING CLOUDS
616	EXTERIOR PLASTER SOFFIT
625	METAL CANOPY & BRACING - SEE STRUCTURAL DRAWINGS
626	SLOPED STANDING SEAM METAL ROOF
628	ROOF ACCESS LADDER
629	PROVIDE LIGHTED EXIT SIGNAGE, SEE ELECTRICAL DRAWINGS
634	HORIZONTAL SEISMIC CABLE BRACING FOR FLOATING CEILING CLOUDS

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APP. 04-118743 INC:
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DATE: 02.05.20

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Engineer

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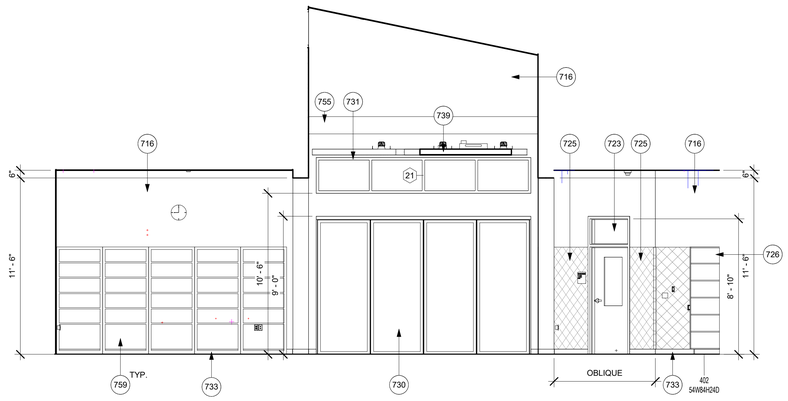
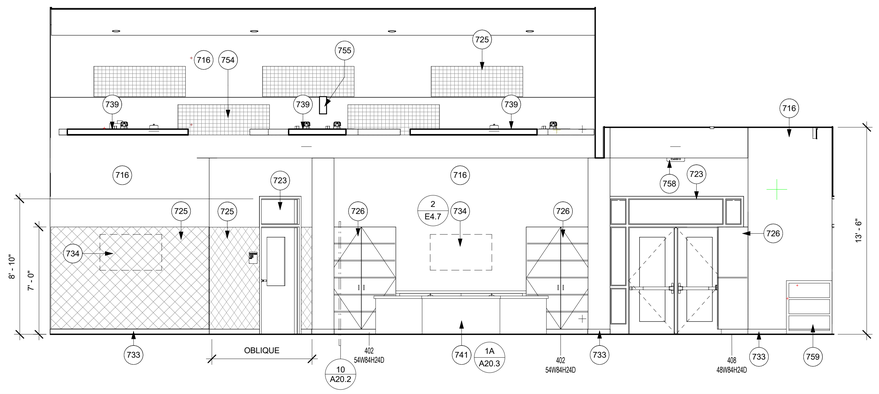
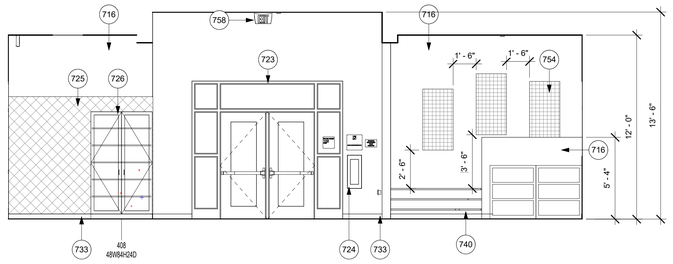


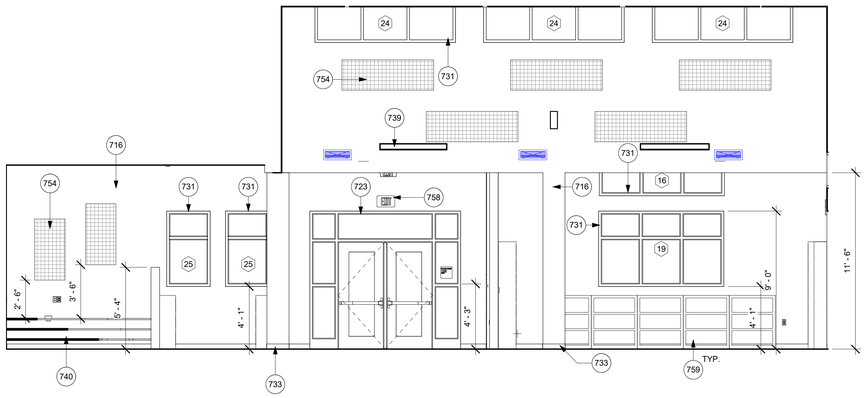
LRC- NORTH | 1/4" = 1'-0" | 1



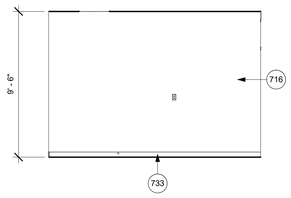
LRC- EAST | 1/4" = 1'-0" | 2



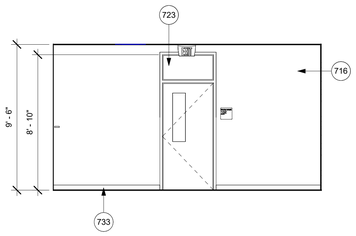
LRC- SOUTH | 1/4" = 1'-0" | 3



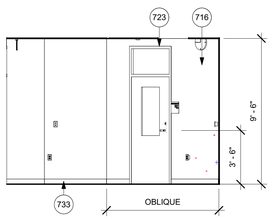
LRC- WEST | 1/4" = 1'-0" | 4



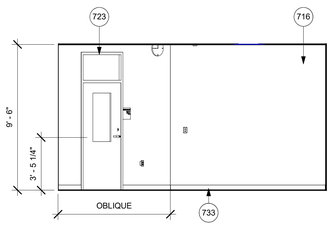
BOOKROOM- NORTH | 1/4" = 1'-0" | 5



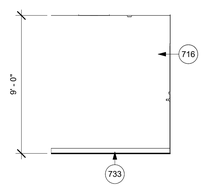
BOOKROOM- EAST | 1/4" = 1'-0" | 6



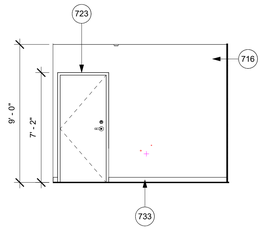
BOOKROOM- SOUTH | 1/4" = 1'-0" | 7



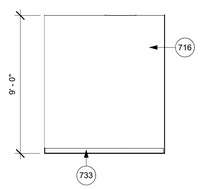
BOOKROOM- WEST | 1/4" = 1'-0" | 8



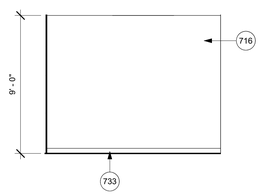
STORAGE- NORTH | 1/4" = 1'-0" | 9



STORAGE- EAST | 1/4" = 1'-0" | 10



STORAGE- SOUTH | 1/4" = 1'-0" | 11



STORAGE- WEST | 1/4" = 1'-0" | 12

INTERIOR ELEVATION LEGEND

- (X) WINDOW TAG, SEE SCHEDULE
- TACKABLE WALL COVERING
- ACOUSTICAL WALL PANEL

INTERIOR ELEVATION KEYNOTES

716	WALL TO RECEIVE TEXTURE AND PAINT
723	HOLLOW METAL DOOR FRAME, SEE DOOR/WINDOW SCHEDULES
724	FIRE EXTINGUISHER
725	TACKABLE WALL PANELS
726	CASEWORK
730	OPERABLE WALL, SEE DOOR/WINDOW SCHEDULES
731	HOLLOW METAL WINDOW FRAME, SEE DOOR/WINDOW SCHEDULES
733	WALL BASE- SEE FINISH SCHEDULE
734	FUTURE 55" TELEVISION. MAX. PROJECTION NOT TO EXCEED 4". PROVIDE POWER, DATA AND BACKING, PER DETAIL REFERENCED ON PLAN
739	FLOATING ACOUSTIC CEILING CLOUDS. PROVIDE HORIZONTAL SEISMIC CABLE BRACING
740	RAISED READING AREA
741	LIBRARY RECEPTION DESK, SEE ENLARGED PLAN
754	ACOUSTIC WALL PANEL- 2' X 6' < 20 LBS. MECHANICALLY FASTEN WITH Z-CLIP PER MANUFACTURER RECOMMENDATION
755	EXPOSED BEAMS- PREMIUM GRADE FINISH. PROVIDE STAIN AND SEALER.
758	PROVIDE LIGHTED EXIT SIGNAGE. SEE ELECTRICAL DRAWINGS
759	BOOKSHELVES, OFOI. PROVIDE BACKING

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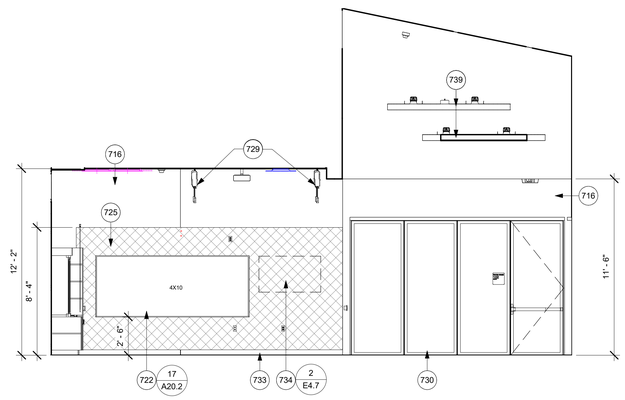
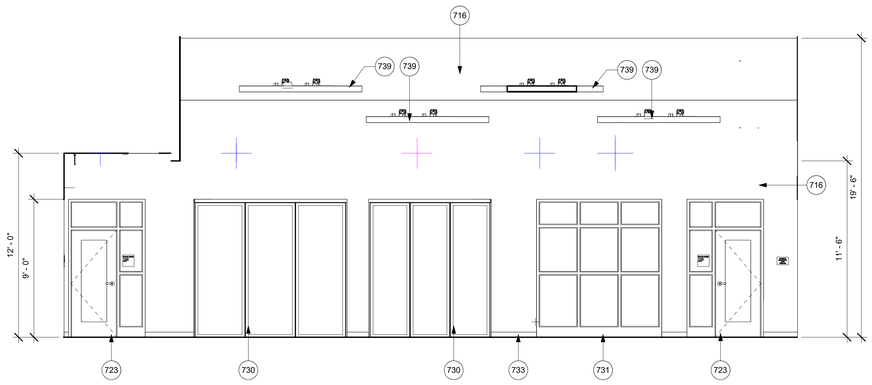
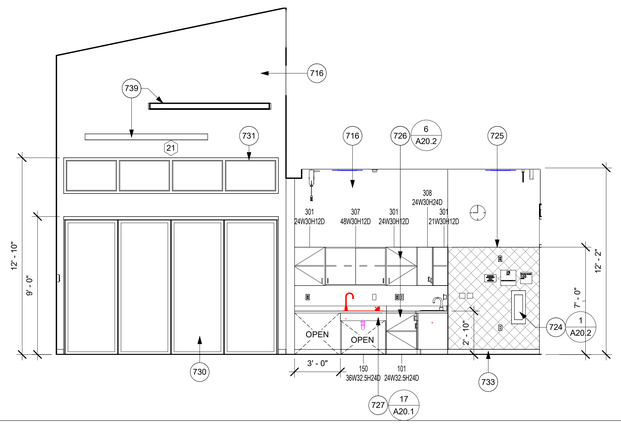


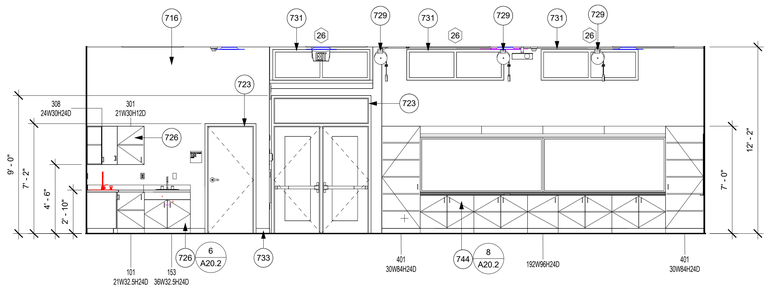
CLASSROOM- NORTH | 1/4" = 1'-0" | 1



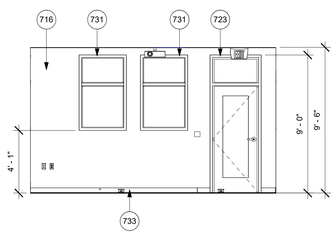
CLASSROOM- EAST | 1/4" = 1'-0" | 2



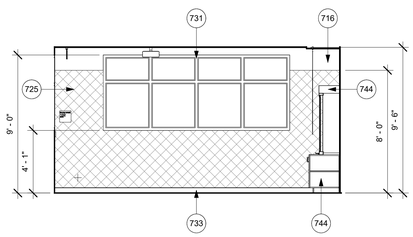
CLASSROOM- SOUTH | 1/4" = 1'-0" | 3



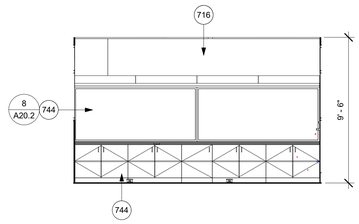
CLASSROOM- WEST | 1/4" = 1'-0" | 4



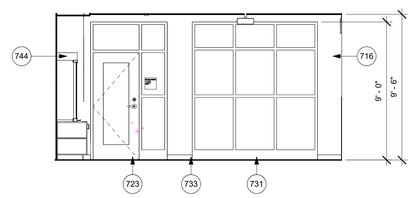
BREAK-OUT/COLLAB 4- NORTH | 1/4" = 1'-0" | 5



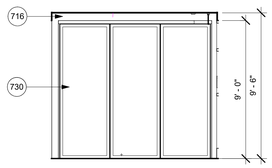
BREAK-OUT/COLLAB 4- EAST | 1/4" = 1'-0" | 6



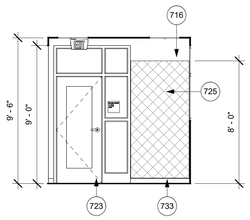
BREAK-OUT/COLLAB 4- SOUTH | 1/4" = 1'-0" | 7



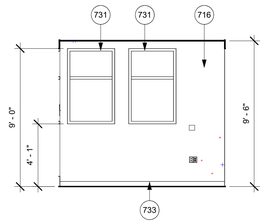
BREAK-OUT/COLLAB 4- WEST | 1/4" = 1'-0" | 8



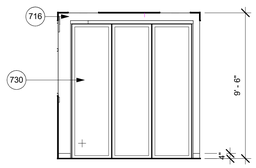
BREAK-OUT/COLLAB 5- NORTH | 1/4" = 1'-0" | 9



BREAK-OUT/COLLAB 5- EAST | 1/4" = 1'-0" | 10



BREAK-OUT/COLLAB 5- SOUTH | 1/4" = 1'-0" | 11



BREAK-OUT/COLLAB 5- WEST | 1/4" = 1'-0" | 12

INTERIOR ELEVATION KEYNOTES

716	WALL TO RECEIVE TEXTURE AND PAINT
722	MARKER BOARD
723	HOLLOW METAL DOOR FRAME, SEE DOOR/WINDOW SCHEDULES
724	FIRE EXTINGUISHER
725	TACKABLE WALL PANELS
726	CASEWORK
727	ACCESSIBLE SINK AND CASE WORK
729	CEILING MOUNTED POWER CHORD REEL- SEE ELECTRICAL DRAWINGS
730	OPERABLE WALL, SEE DOOR/WINDOW SCHEDULES
731	HOLLOW METAL WINDOW FRAME, SEE DOOR/WINDOW SCHEDULES
733	WALL BASE- SEE FINISH SCHEDULE
734	FUTURE 55" TELEVISION, MAX. PROJECTION NOT TO EXCEED 4". PROVIDE POWER, DATA AND BACKING, PER DETAIL REFERENCED ON PLAN
739	FLOATING ACOUSTIC CEILING CLOUDS. PROVIDE HORIZONTAL SEISMIC CABLE BRACING
744	FUTURE TEACHING WALL. OFOI

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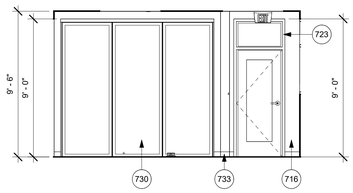
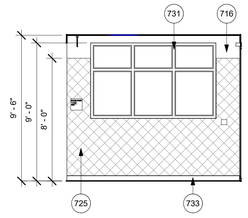
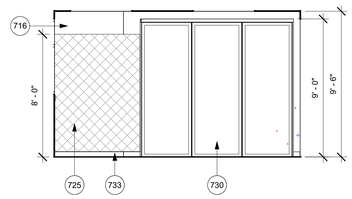


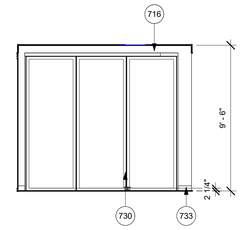
BREAK-OUT/COLLAB 6- NORTH | 1/4" = 1'-0" | 1



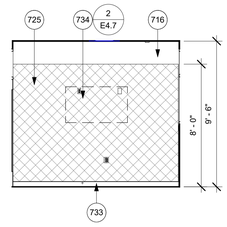
BREAK-OUT/COLLAB 6- EAST | 1/4" = 1'-0" | 2



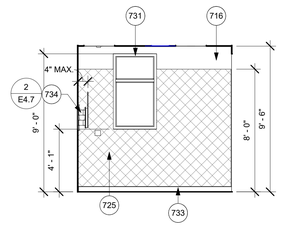
BREAK-OUT/COLLAB 6- SOUTH | 1/4" = 1'-0" | 3



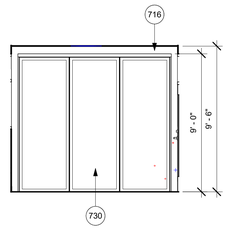
BREAK-OUT/COLLAB 6- WEST | 1/4" = 1'-0" | 4



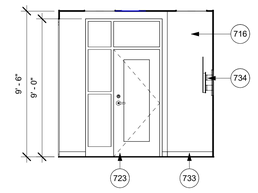
BREAK-OUT/COLLAB 7- NORTH | 1/4" = 1'-0" | 5



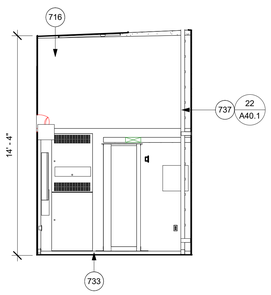
BREAK-OUT/COLLAB 7- EAST | 1/4" = 1'-0" | 6



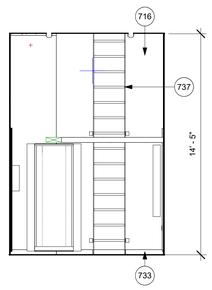
BREAK-OUT/COLLAB 7- SOUTH | 1/4" = 1'-0" | 7



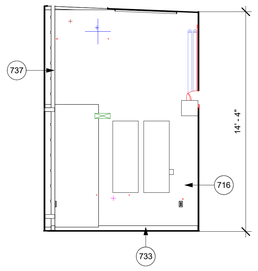
BREAK-OUT/COLLAB 7- WEST | 1/4" = 1'-0" | 8



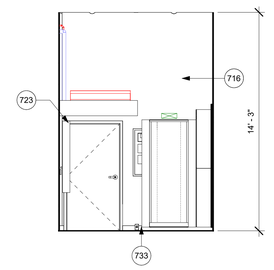
ELECTRICAL- NORTH | 1/4" = 1'-0" | 9



ELECTRICAL- EAST | 1/4" = 1'-0" | 10



ELECTRICAL- SOUTH | 1/4" = 1'-0" | 11



ELECTRICAL- WEST | 1/4" = 1'-0" | 12

INTERIOR ELEVATION KEYNOTES

716 WALL TO RECEIVE TEXTURE AND PAINT
723 HOLLOW METAL DOOR FRAME, SEE DOOR/WINDOW SCHEDULES
725 TACKABLE WALL PANELS
730 OPERABLE WALL, SEE DOOR/WINDOW SCHEDULES
731 HOLLOW METAL WINDOW FRAME, SEE DOOR/WINDOW SCHEDULES
733 WALL BASE- SEE FINISH SCHEDULE
734 FUTURE 65" TELEVISION, MAX. PROJECTION NOT TO EXCEED 4", PROVIDE POWER, DATA AND BACKING, PER DETAIL REFERENCED ON PLAN
737 WALL MOUNTED LADDER

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SANTEE SCHOOL DISTRICT

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A7.3

DOOR SCHEDULE

DOOR NO.	ROOM NAME	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR FINISH	DOOR CONSTRUCTION	DOOR GLASS TYPE	DOOR FIRE RATING	FRAME TYPE	FRAME FINISH	FRAME CONSTRUCTION	FRAME GLAZING TYPE	HARDWARE GROUP	HARDWARE PANIC HARDWARE	HARDWARE INSIDE LOCKABLE	HARDWARE THRESHOLD REDUCER	NOTES
1	TOILET	3' - 0"	7' - 0"	1 3/4"	2	PT	HM	--	--	F	PT	HM	--	RR-OS	No	No	Yes	
2	LIBRARY / LEARNING RESOURCE CENTER	6' - 0"	7' - 2"	1 3/4"	4	PT	HM	2, 3	--	B	PT	HM	2	HM-ED-OS	Yes	Yes	Yes	REMOVABLE CENTER MULLION
2B	LIBRARY / LEARNING RESOURCE CENTER	6' - 0"	7' - 2"	1 3/4"	4	PT	HM	2, 3	--	C	PT	HM	2	HM-ED-OS	Yes	Yes	Yes	REMOVABLE CENTER MULLION
2C	LIBRARY / LEARNING RESOURCE CENTER	6' - 0"	7' - 2"	1 3/4"	4	PT	HM	2, 3	--	B	PT	HM	2	HM-ED-OS	Yes	Yes	Yes	REMOVABLE CENTER MULLION
3	BOOKROOM	3' - 4"	7' - 0"	1 3/4"	1	PT	HM	2, 3	--	F	PT	HM	2,3	LV-EXT1	No	No	Yes	
3B	BOOKROOM	3' - 6"	7' - 0"	1 3/4"	1	PT	WD	1	--	E	PT	HM	1	CLS-IS	No	No	Yes	
4	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	4	PT	HM	2, 3	--	F	PT	HM	2,3	CLS-OS2	No	Yes	Yes	
4B	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	4	PT	WD	1	--	D	PT	HM	1	CLS-IS	No	Yes	Yes	
5	BREAK-OUT / COLLAB	3' - 0"	7' - 0"	1 3/4"	4	PT	HM	2, 3	--	D	PT	HM	2	CLS-OS2	No	No	Yes	
5B	BREAK-OUT / COLLAB	8' - 0"	9' - 0"	1 3/4"	5	--	GLASS	1	--	G	--	ALUM	--	FLD1	No	No	No	CUT SLAB FOR FLUSH SILL
6	BREAK-OUT / COLLAB	3' - 0"	7' - 0"	1 3/4"	4	PT	HM	2, 3	--	F	PT	HM	2,3	CLS-OS2	No	Yes	Yes	
6B	BREAK-OUT / COLLAB	10' - 0"	9' - 0"	1 3/4"	5	--	GLASS	1	--	G	--	ALUM	--	FLD1	No	No	No	CUT SLAB FOR FLUSH SILL
6C	BREAK-OUT / COLLAB	10' - 0"	9' - 0"	1 3/4"	5	--	GLASS	1	--	G	--	ALUM	--	FLD1	No	No	No	FOLD FLAT. CUT SLAB FOR FLUSH SILL
6D	BREAK-OUT / COLLAB	10' - 0"	9' - 0"	1 3/4"	5	--	GLASS	1	--	G	--	ALUM	--	FLD1	No	No	No	CUT SLAB FOR FLUSH SILL
7	BREAK-OUT / COLLAB	3' - 0"	7' - 0"	1 3/4"	4	PT	WD	1	--	D	PT	HM	1	CLS-IS	No	No	No	
8	ELECT.	3' - 6"	7' - 0"	1 3/4"	2	PT	HM	--	--	F	PT	HM	--	LV-EXT2	No	No	Yes	
9	STORAGE	3' - 0"	7' - 0"	1 3/4"	2	PT	WD	--	--	F	PT	HM	--	SR1	No	No	No	
10	CLASSROOM	6' - 0"	7' - 2"	1 3/4"	4	PT	HM	2, 3	--	A	PT	HM	2,3	HM-ED-OS	Yes	Yes	Yes	REMOVABLE CENTER MULLION
10B	CLASSROOM	14' - 0"	9' - 0"	1 3/4"	6	--	GLASS	2	--	G	--	ALUM	--	FLD2	Yes	No	No	CUT SLAB FOR FLUSH SILL
10C	CLASSROOM	14' - 0"	9' - 0"	1 3/4"	6	--	GLASS	1	--	G	--	ALUM	--	FLD1	No	No	No	CUT SLAB FOR FLUSH SILL

DOOR AND WINDOW GENERAL NOTES

1. FOR HARDWARE SETS, SEE SPECIFICATIONS SECTION 08 71 00
2. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT ANY SPECIAL EFFORT OR KNOWLEDGE.
3. ALL GLAZING IN THE OPERABLE PORTION OF DOORS SHALL BE TEMPERED
4. CONTRACTOR TO COORDINATE PLYWOOD SHEAR AND ADJUST WALL TYPE AND FRAME PROFILE SIZES AS REQUIRED
5. WHERE FLOOR STOPS OR FLOOR MOUNTED HOLD OPENS ARE SPECIFIED THEY SHALL BE LOCATED NO FURHTER THAN 4" FROM A WALL
6. REFER TO TITLE 24, CHAPTER 24, SECTION 2406, SAFETY GLAZING, OF THE CBC FOR REQUIREMENTS
7. O.H. INDICATES OPPOSITE HAND OF ELEVATION
8. SEE MECHANICAL DRAWINGS FOR SIZE OF LOUVERS AND UNDERCUTS
9. ALL EXTERIOR WINDOWS SHALL COMPLY WITH SFM STANDARD 12-7A-2

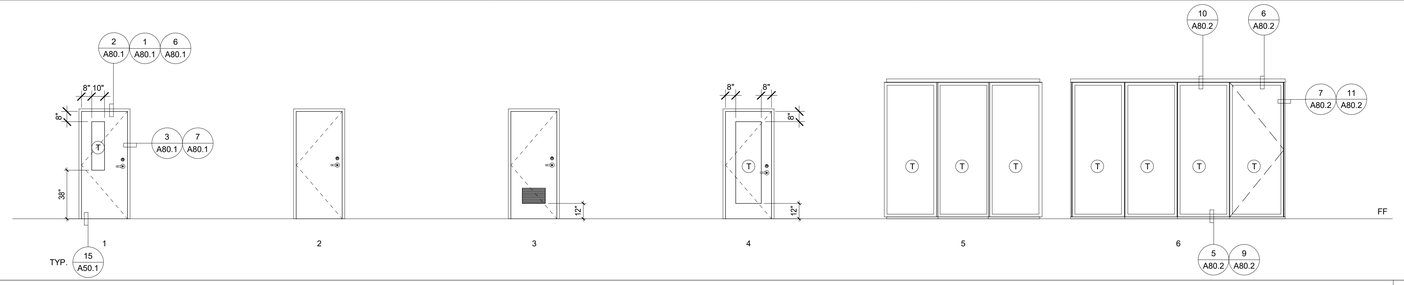
GLAZING NOTES

1. INTERIOR GLAZING: 1/4" TINTED FLOAT GLASS, PER SPECIFICATION 08 80 00, 2.01 A
2. EXTERIOR GLAZING: 1" DOUBLE PANE TINTED GLASS WITH A MINIMUM OF ONE TEMPERED PANE, PER 708A.2.1, PER SPECIFICATION 08 80 00, 2.01 B
3. 20 MIN. FIRE RATED GLAZING: PER SPECIFICATION 08 80 00, 2.01 C

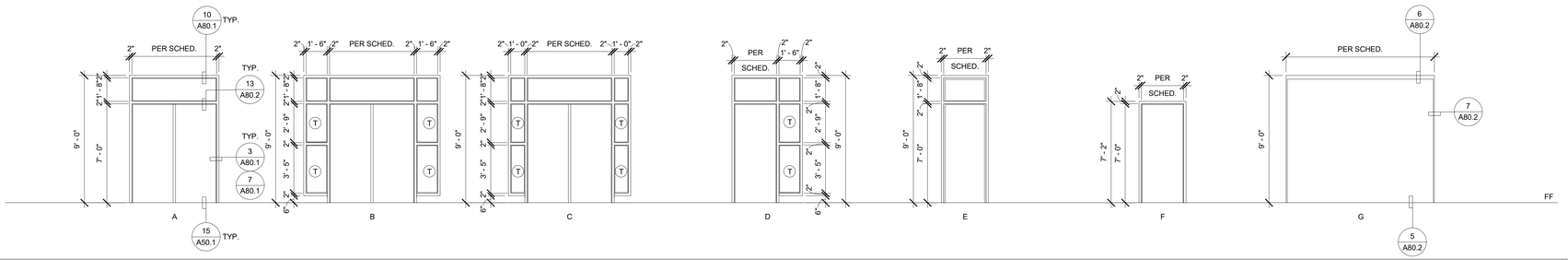
(T) TEMPERED GLASS PER CBC 2406

WINDOW SCHEDULE

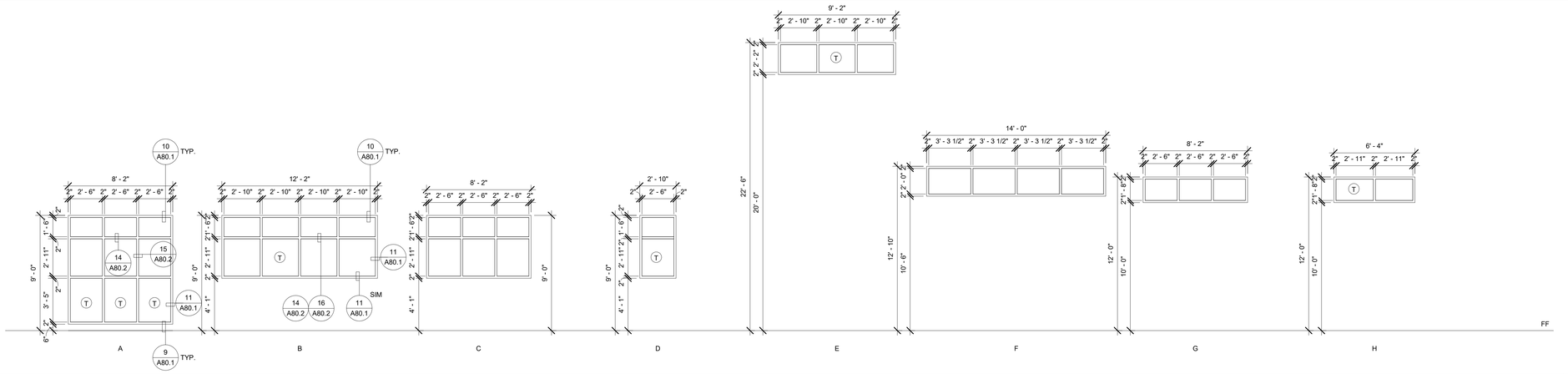
OPENING MARK	FIRE RATING	FRAME ELEVATION	FRAME MATERIAL	GLAZING TYPE	WINDOW SHADES
16	--	G	HM	2	Yes
17	--	A	HM	1	No
18	--	D	HM	1	Yes
18	--	D	HM	1	Yes
19	--	D	HM	2	Yes
19	--	C	HM	2	Yes
20	--	B	HM	2	Yes
21	--	F	HM	1	Yes
23	--	H	HM	2	Yes
23	--	H	HM	2	Yes
23	--	H	HM	2	Yes
24	--	E	HM	2	No
24	--	E	HM	2	No
24	--	E	HM	2	No
24	--	E	HM	2	No
24	--	E	HM	2	No
24	--	E	HM	2	No
25	--	D	HM	2	Yes
25	--	D	HM	2	Yes
25	--	D	HM	2	Yes



DOOR TYPES 1/4" = 1'-0"



DOOR FRAME ELEVATIONS 1/4" = 1'-0"



WINDOW FRAME ELEVATIONS 1/4" = 1'-0"

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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

DOOR AND OPENING SCHEDULES

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A8.1

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		WALL			CEILING				NOTES
		FLOOR FINISH	BASE FINISH	WALL MATERIAL	WALL FINISH	WAINSCOT MATERIAL	CEILING MATERIAL	CEILING FINISH	CEILING TYPE	CEILING MATERIAL B	
1	TOILET	CT	CT	GYP	PT	CT	GYP	PT			
2	LIBRARY / LEARNING RESOURCE CENTER	CPT	RB	GYP	PT	T.P.	GYP	PT		ACT	ACT - 2'X2' FLOATING CLOUD CEILING
3	BOOKROOM	RES	RB	GYP	PT		ACT				
4	CLASSROOM	CPT	RB	GYP	PT	T.P.	ACT				
5	BREAK-OUT / COLLAB	RES	RB	GYP	PT	T.P.	ACT				
6	BREAK-OUT / COLLAB	RES	RB	GYP	PT	T.P.	ACT				
7	BREAK-OUT / COLLAB	RES	RB	GYP	PT	T.P.	ACT				
8	ELECT.	CONC	CT	GYP	PT		GYP	PT			
9	STORAGE	RES	RB	GYP	PT		ACT				
10	CLASSROOM	RES	RB	GYP	PT	T.P.	ACT				

FLOOR FINISHES

CT - CERAMIC TILE
CONC - SEALED CONCRETE
CPT - CARPET
RES - RESILIENT FLOORING
RB - RUBBER BASE

WALL MATERIALS

GYP - GYPSUM WALL BOARD

WALL FINISHES

CT - CERAMIC TILE
PT - PAINT

WAINSCOT MATERIALS

CT - CERAMIC TILE
T.P. - TACKPANEL

CEILING MATERIALS

ACT - ACOUSTICAL TILE
GYP - GYPSUM WALLBOARD

CEILING FINISHES

PT - PAINT

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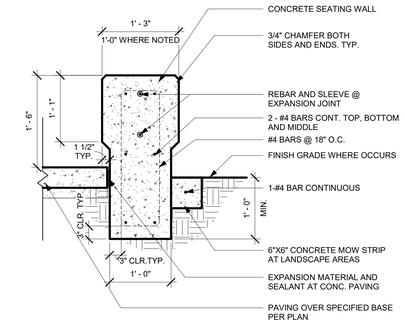
SANTEE SCHOOL DISTRICT

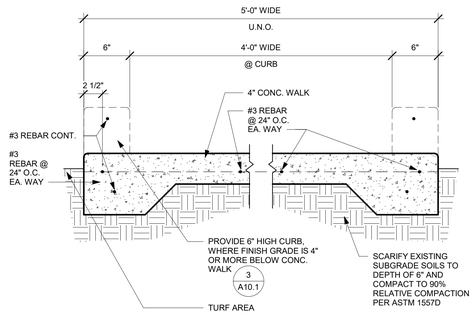
ROOM FINISH SCHEDULE

Drawn: Author
Checked: Checker
Date: OCT. 18, 2019
Job: SSD-SC-03

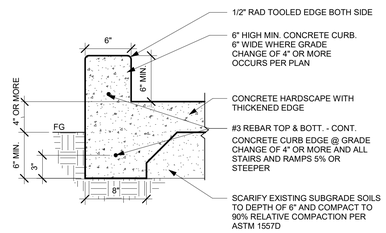
A9.1



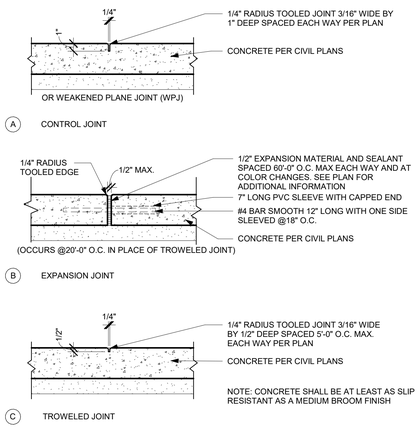
BENCH WALL | 1" = 1'-0" | 1



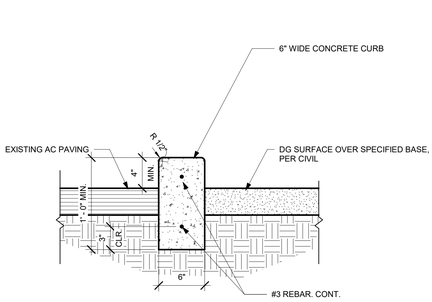
CONC. ACCESSIBLE WALK | 1 1/2" = 1'-0" | 2



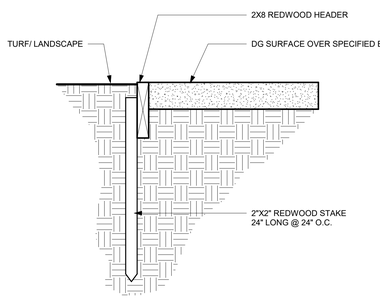
CONCRETE CURB EDGE | 1 1/2" = 1'-0" | 3



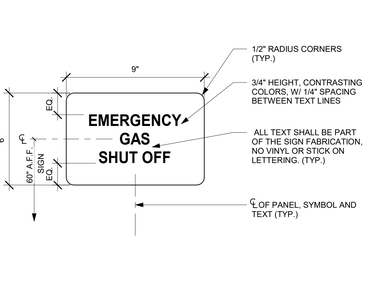
CONCRETE JOINTS | 1 1/2" = 1'-0" | 4



CONRETE TO AC PAVING | 1 1/2" = 1'-0" | 5

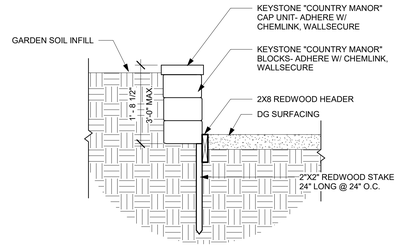


AC PAVING NEW TO EXIST | 1 1/2" = 1'-0" | 6

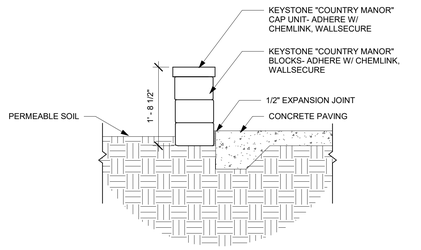


CONCRETE NEW TO EXIST. | 3/4" = 1'-0" | 7

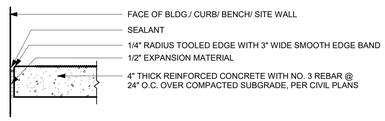
TYP. CONCRETE EDGE | 1 1/2" = 1'-0" | 8



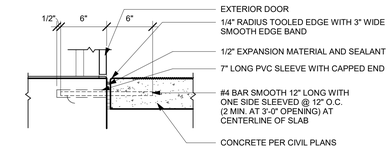
SITE - GARDEN WALL AT DG | 3/4" = 1'-0" | 10



SITE - GARDEN WALL AT TREE WELL | 3/4" = 1'-0" | 16



CONCRETE PAVING DETAILS | 1 1/2" = 1'-0" | 11



CONCRETE PAVING DETAILS 1 | 1 1/2" = 1'-0" | 12

AC PAVING EXIST TO NEW DG | 1 1/2" = 1'-0" | 13

REDWOOD HEADER @ DG | 1 1/2" = 1'-0" | 14

GAS SHUT OFF SIGNAGE | 3" = 1'-0" | 15

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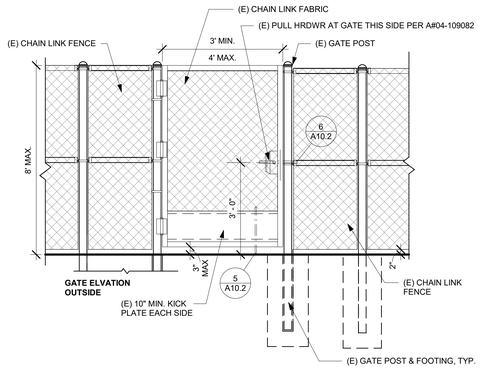
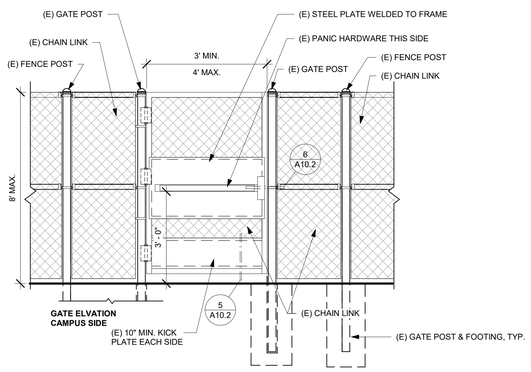
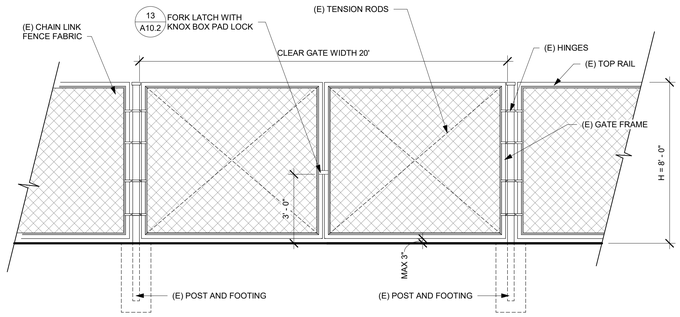
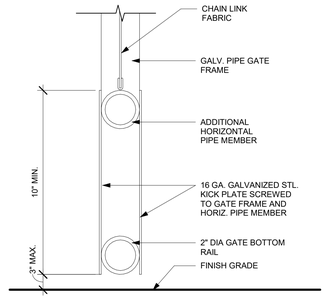




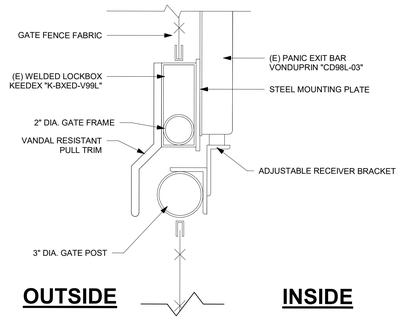
(E) CHAIN LINK GATE SINGLE PH | 1/2" = 1'-0" | 2



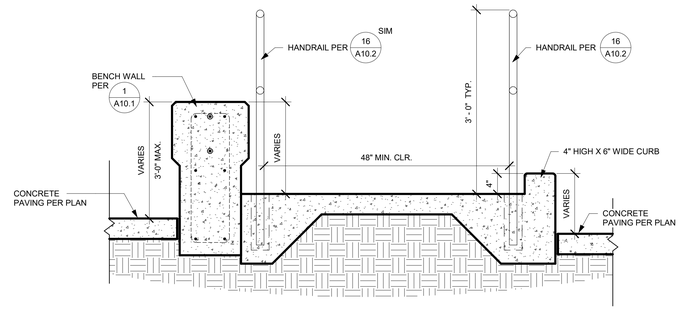
C.L. DOUBLE GATE | 3/8" = 1'-0" | 4



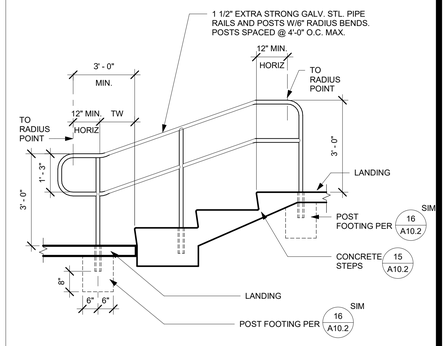
(E) C.L. FENCE KICK PLATE | 3" = 1'-0" | 5



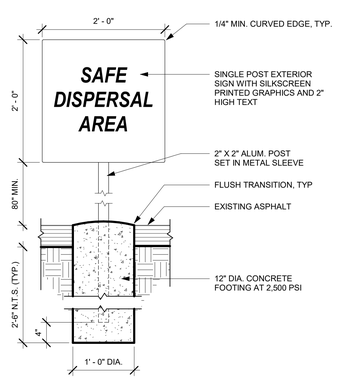
(E) C.L. GATE LATCH P.H. | 3" = 1'-0" | 6



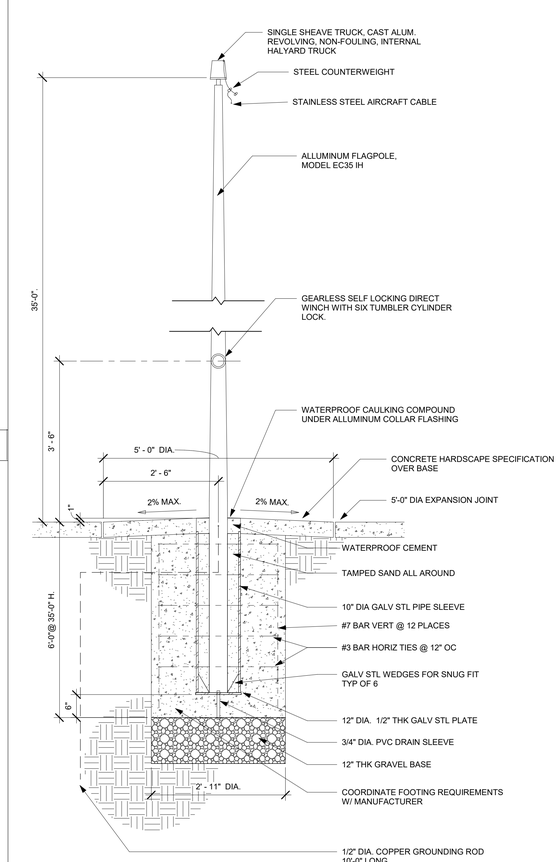
BENCH WALL AT RAMP | 1" = 1'-0" | 7



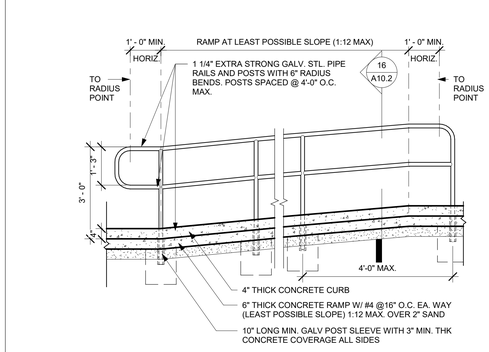
CONCRETE STEPS | 1/2" = 1'-0" | 8



SAFE DISPERSAL AREA SIGN | 1" = 1'-0" | 9

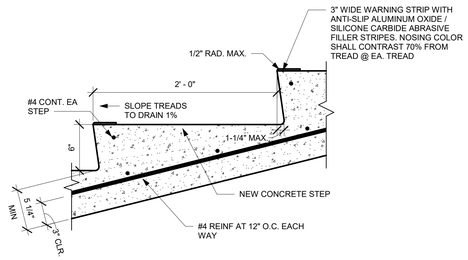


SITE - FLAGPOLE | 3/4" = 1'-0" | 14

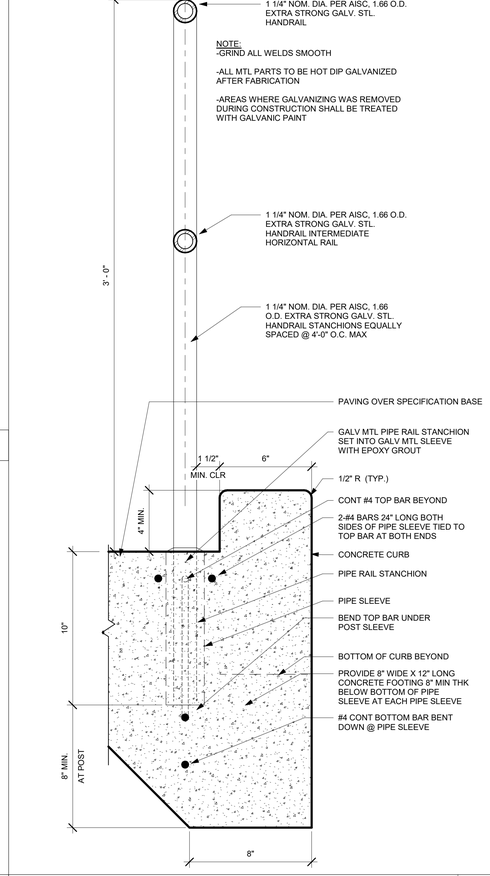


NOTE:
1. CONCRETE RAMP SURFACE SHALL BE AT LEAST AS SLIP RESISTANT AS A HEAVY BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL
2. HANDRAIL BOTH SIDES.

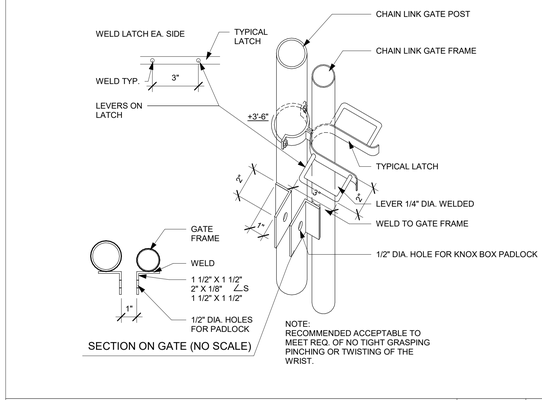
CONCRETE RAMP | 1/2" = 1'-0" | 11



CONCRETE STEPS | 1 1/2" = 1'-0" | 15



CURB @ HANDRAIL | 3" = 1'-0" | 16



C.L.GATE LATCH | 3" = 1'-0" | 13

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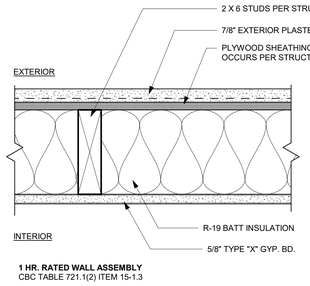
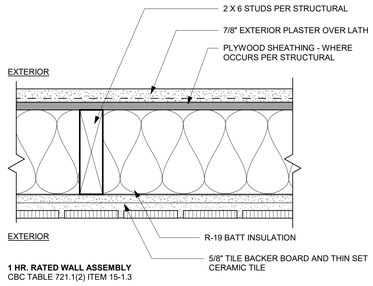
A10.2



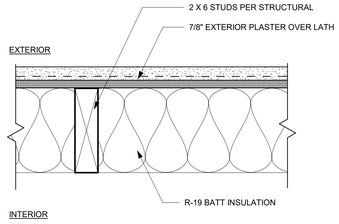
1 HR. RATED WALL ASSEMBLY
CBC TABLE 721.1(2) ITEM 15-1.3

WALL TYPE WT-1

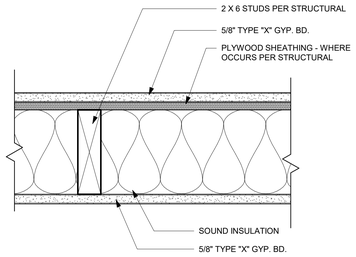


1 HR. RATED WALL ASSEMBLY
CBC TABLE 721.1(2) ITEM 15-1.3

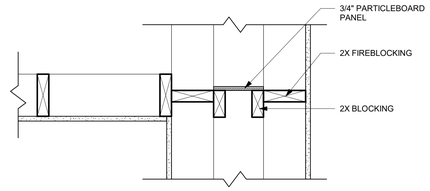
WALL TYPE WT-2



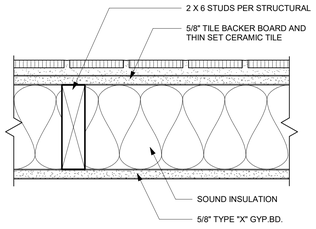
WALL TYPE WT-3



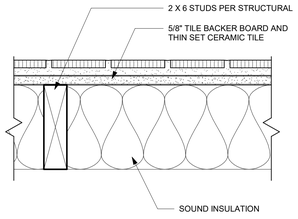
WALL TYPE WT-4



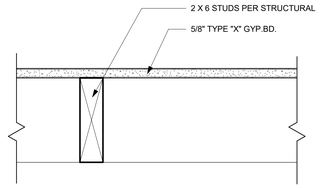
FIREBLOCKING DTL | 1 1/2" = 1'-0" | 3



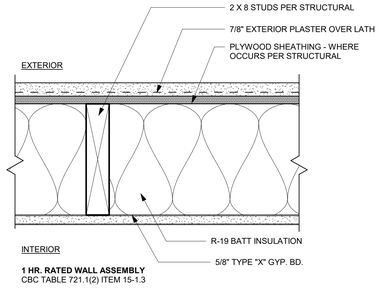
WALL TYPE WT-5



WALL TYPE WT-6

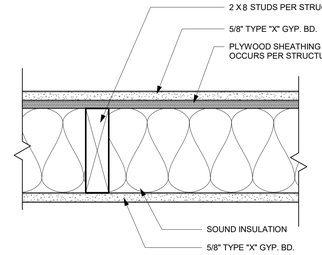


WALL TYPE WT-7



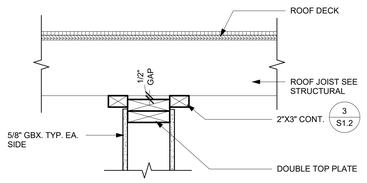
1 HR. RATED WALL ASSEMBLY
CBC TABLE 721.1(2) ITEM 15-1.3

WALL TYPE WT-8

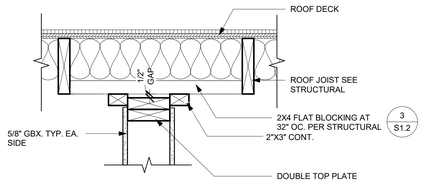


WALL TYPE WT-9

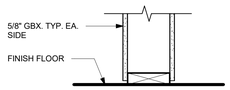
WALL TYPES | 3" = 1'-0" | 1



TOP OF WALL - JOISTS PERPENDICULAR TO WALL

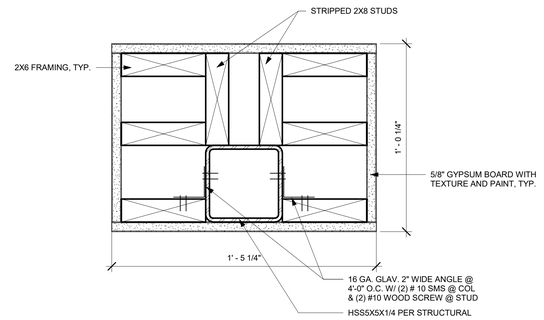


TOP OF WALL - JOISTS PARALLEL TO WALL



BOTTOM OF WALL

NON-RATED NON-BEARING WALL | 1 1/2" = 1'-0" | 2



STEEL COLUMN WRAP | 3" = 1'-0" | 11

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison	Date

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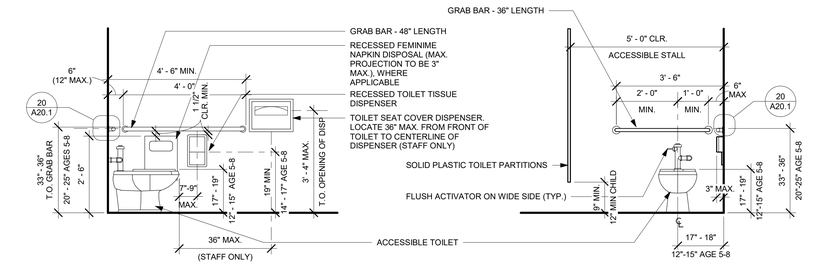
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

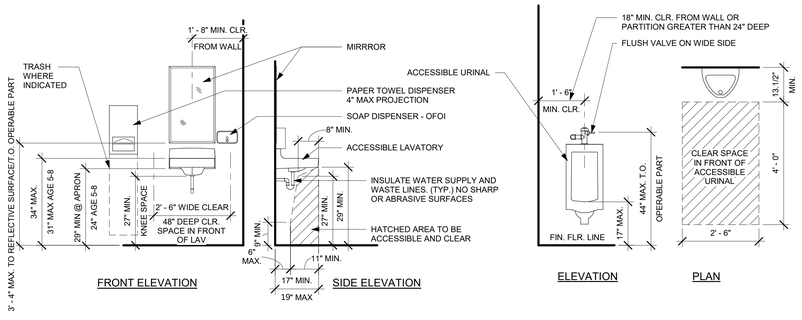
WALL TYPES AND DETAILS

Drawn: Author
Checked: Checker
Date: OCT. 18, 2019
Job: SSD-SC-03

A20.0



ACCESSIBLE TOILET



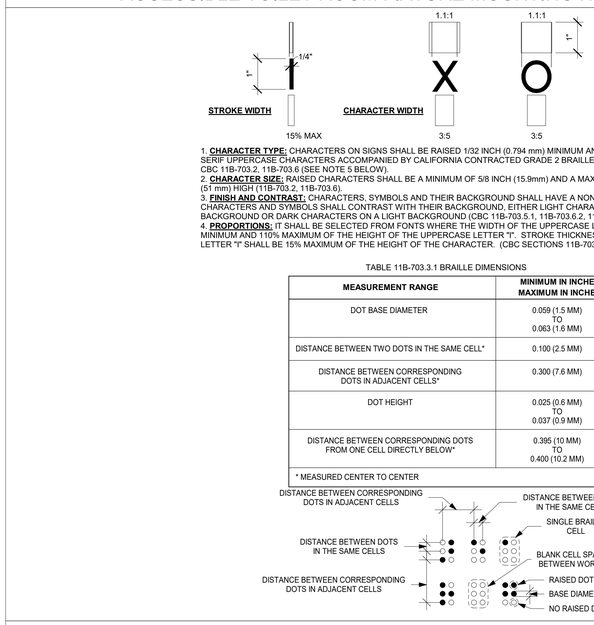
ACCESSIBLE LAVATORY

NOTE:
SEE FLOOR PLAN FOR ACTUAL LOCATIONS OF FIXTURES AND ACCESSORIES WITHIN THE ROOM.

ACCESSIBLE URINAL

NO FLUSH VALVE AT WATERLESS URINALS

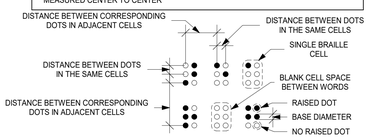
ACCESSIBLE TOILET ROOM FIXTURE MOUNTING HEIGHTS DETAIL | 1/2" = 1'-0" | 5



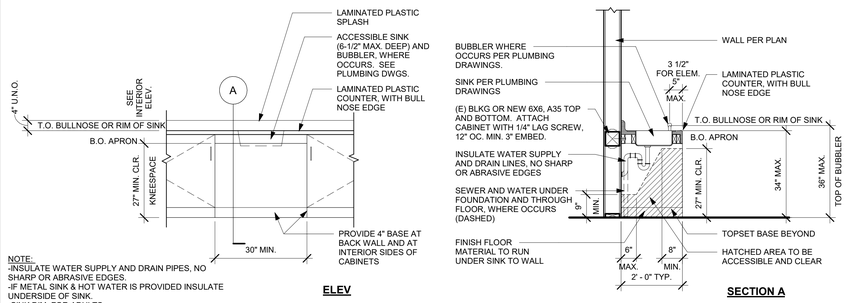
1. **CHARACTER TYPE:** CHARACTERS ON SIGNS SHALL BE RAISED 1/32 INCH (0.794 mm) MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CALIFORNIA CONTRACTED GRADE 2 BRAILLE COMPLYING WITH CBC 11B-703.2, 11B-703.6 (SEE NOTE 5 BELOW).
2. **CHARACTER SIZE:** RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH (15.9mm) AND A MAXIMUM OF 2 INCHES (51 mm) HIGH (11B-703.2, 11B-703.6).
3. **FINISH AND CONTRAST:** CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND (CBC 11B-703.5.1, 11B-703.6.2, 11B-703.7.1)
4. **PROPORTIONS:** IT SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF UPPERCASE LETTER "I" SHALL BE 15% MAXIMUM OF THE HEIGHT OF THE CHARACTER. (CBC SECTIONS 11B-703.2.4 & 11B-703.2.6)

TABLE 11B-703.3.1 BRAILLE DIMENSIONS

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

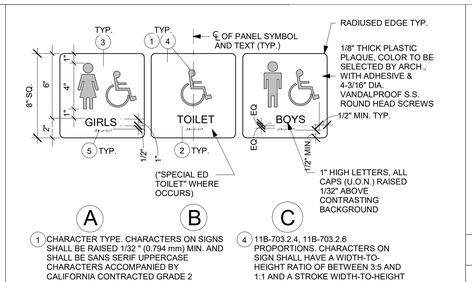


BRAILLE STYLE PROPORTION | 6" = 1'-0" | 13

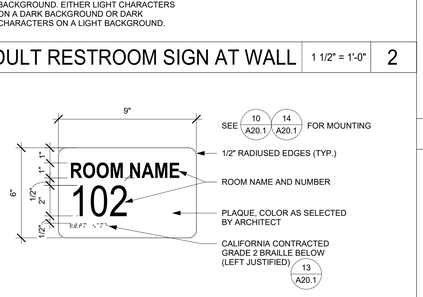


NOTE:
-INSULATE WATER SUPPLY AND DRAIN PIPES, NO SHARP OR ABRASIVE EDGES.
-IF METAL SINK & HOT WATER IS PROVIDED INSULATE UNDERSIDE OF SINK.
-SINK DIM. FOR ADULTS

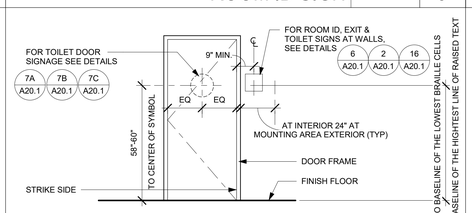
ACCESSIBLE SINK AT CASEWORK | 1/2" = 1'-0" | 17



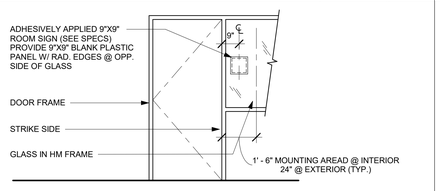
ADULT RESTROOM SIGN AT WALL | 1 1/2" = 1'-0" | 2



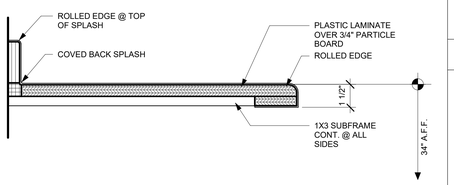
ROOM ID SIGN | 3" = 1'-0" | 6



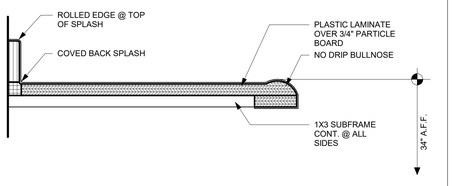
SIGNAGE LOCATION-WALL | 3/8" = 1'-0" | 10



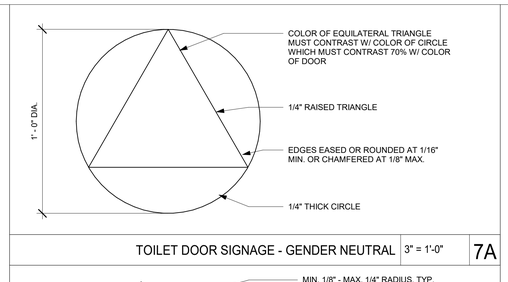
SIGNAGE LOCATION-GLASS | 3/8" = 1'-0" | 14



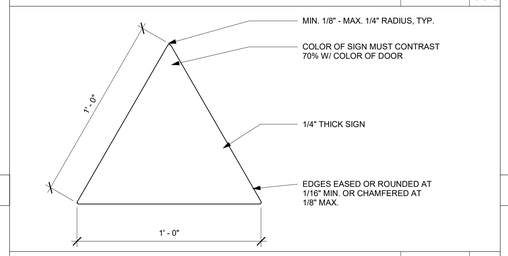
COUNTERTOP-ROLLED EDGE | 3" = 1'-0" | 18A



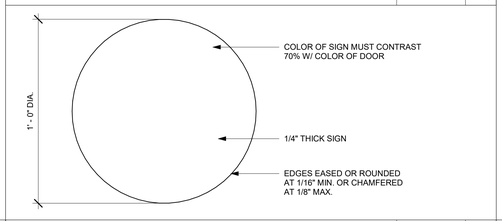
COUNTERTOP-FORMED EDGE | 3" = 1'-0" | 18B



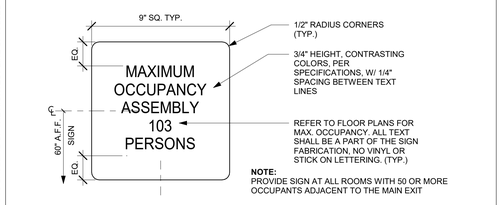
TOILET DOOR SIGNAGE - GENDER NEUTRAL | 3" = 1'-0" | 7A



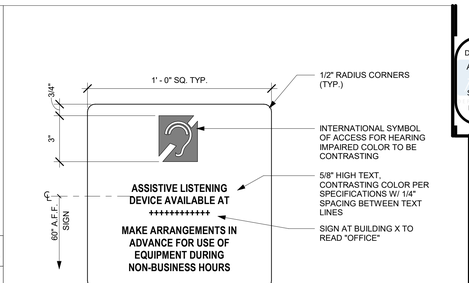
TOILET DOOR SIGNAGE-MEN | 3" = 1'-0" | 7B



TOILET DOOR SIGNAGE-WOMEN | 3" = 1'-0" | 7C

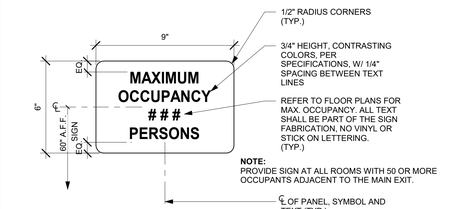


OCCUPANCY LOAD SIGN-ASSEMBLY | 3" = 1'-0" | 1

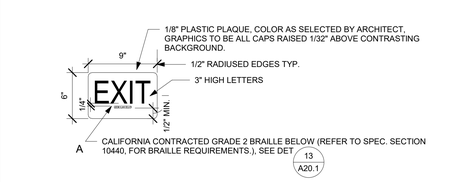


NOTE:
PORTABLE ASSISTIVE LISTENING DEVICE(S) SHALL BE SUPPLIED. SEE SPECS SECTION 27 41 19

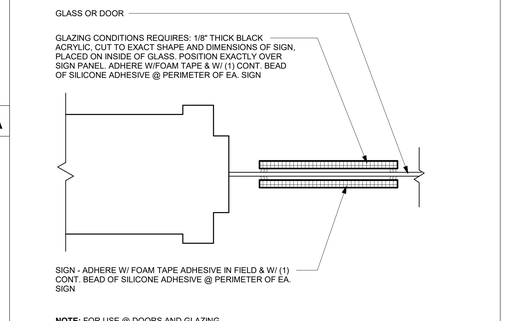
ASSISTIVE LISTENING SIGN | 3" = 1'-0" | 4



OCCUPANCY LOAD SIGN | 3" = 1'-0" | 8

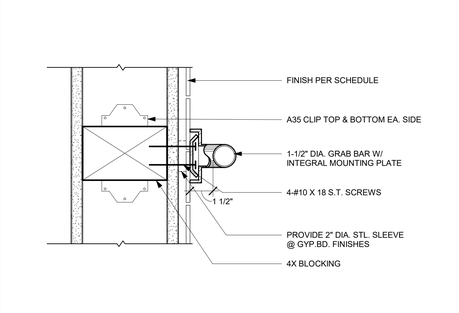


ROOM EXIT SIGN | 1 1/2" = 1'-0" | 16



NOTE: FOR USE @ DOORS AND GLAZING

SIGN ATTACHMENT | 6" = 1'-0" | 19



GRAB BAR ATTACHMENT | 3" = 1'-0" | 20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revision	Date

Consultant

Engineer

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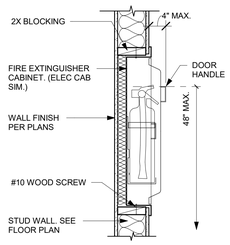
LICENSED ARCHITECT
ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

RR & SIGNAGE DETAILS

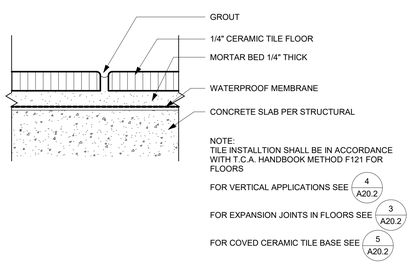
Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

A20.1



SEMI-RECESSED

FIRE EXTINGUISHER | 1" = 1'-0" | 1



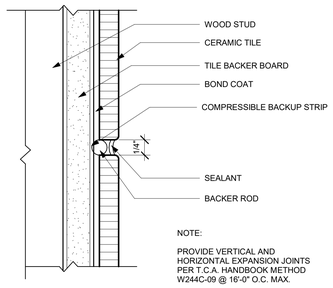
NOTE:
TILE INSTALLTION SHALL BE IN ACCORDANCE WITH T.C.A. HANDBOOK METHOD F121 FOR FLOORS

FOR VERTICAL APPLICATIONS SEE 4 / A20.2

FOR EXPANSION JOINTS IN FLOORS SEE 3 / A20.2

FOR COVED CERAMIC TILE BASE SEE 5 / A20.2

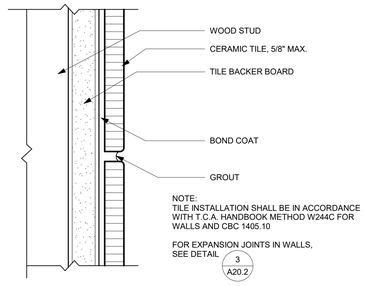
FLOOR TILE | 12" = 1'-0" | 2



NOTE:

PROVIDE VERTICAL AND HORIZONTAL EXPANSION JOINTS PER T.C.A. HANDBOOK METHOD W244C-09 @ 16'-0" O.C. MAX.

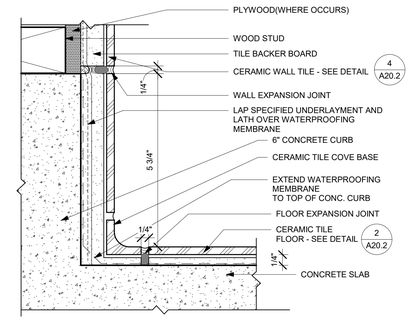
JOINT AT TILE WALL | 12" = 1'-0" | 3



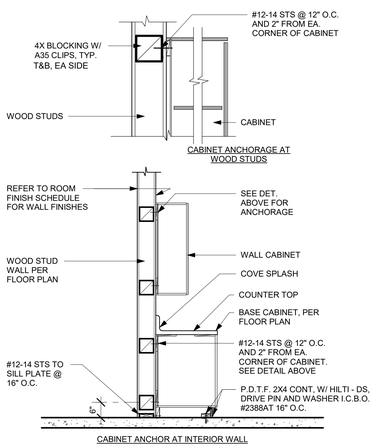
NOTE:
TILE INSTALLATION SHALL BE IN ACCORDANCE WITH T.C.A. HANDBOOK METHOD W244C FOR WALLS AND CBC 1405.10

FOR EXPANSION JOINTS IN WALLS, SEE DETAIL 3 / A20.2

TILE WALL | 12" = 1'-0" | 4

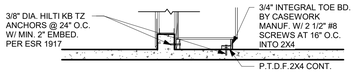


TILE COVE BASE | 6" = 1'-0" | 5



CABINET ANCHORAGE AT WOOD STUDS

CABINET ANCHOR AT INTERIOR WALL

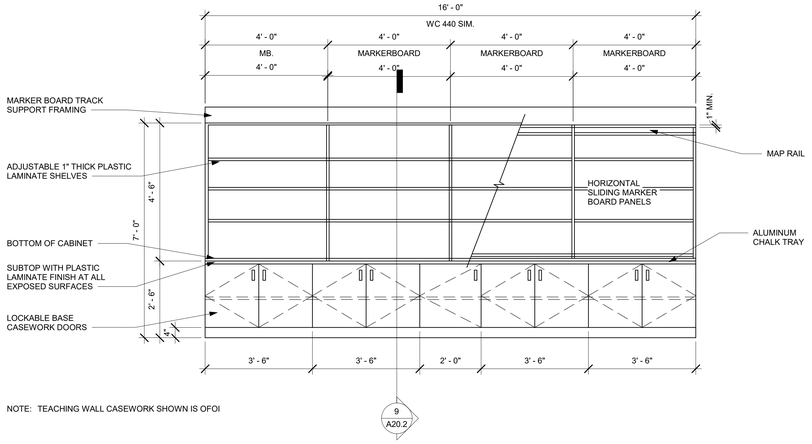


CABINET ANCHOR AT EXTERIOR WALL

CABINET ANCHORAGE	REFERENCE
VERTICAL LOAD REQ.	TABLE NO. 16 A&B
LATERAL FORCE REQ.	TABLE NO. 16 A&O

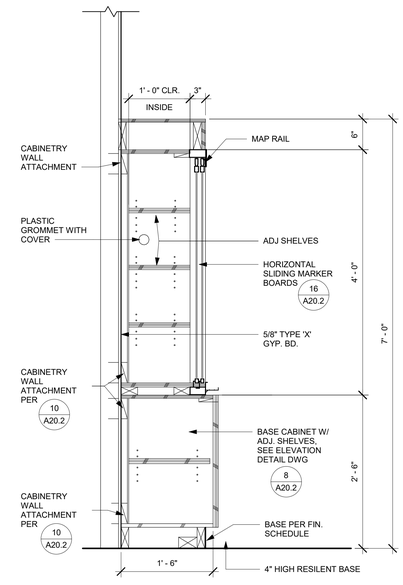
PROVIDE BRACING AND ANCHORAGE DETAILS FOR WALL HUNG CABINETS AND FLOOR SUPPORTED STORAGE RACKS, CABINETS AND BOOK STACKS OVER FIVE FEET IN HEIGHT. DESIGN SUPPORTING PARTITIONS AND WALLS TO RESIST FORCES APPLIED BY CABINET ANCHORAGES

CABINETRY WALL ATTACHMENT | 1/2" = 1'-0" | 6



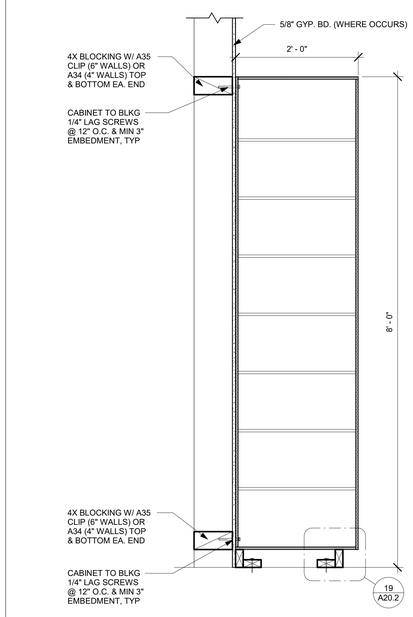
NOTE: TEACHING WALL CASEWORK SHOWN IS OFOI

TEACHING WALL ELEVATION | 1/2" = 1'-0" | 8

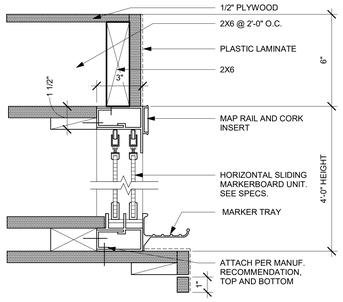


NOTE: TEACHING WALL CASEWORK SHOWN IS OFOI

TEACHING WALL SECTION | 1" = 1'-0" | 9

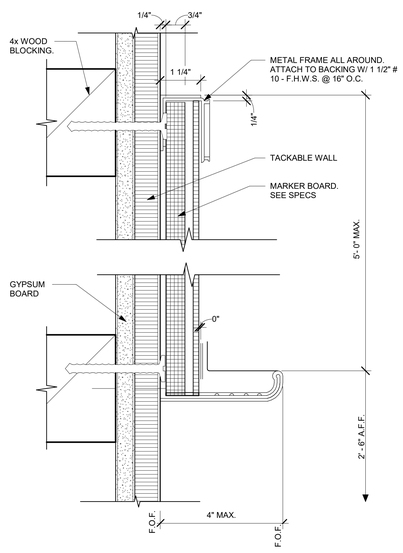


CABINET ANCHORAGE | 1" = 1'-0" | 10

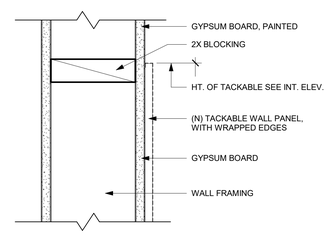


NOTE: TEACHING WALL MARKBOARDS SHOWN ARE OFOI

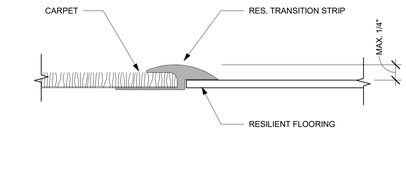
2 TRACK SLIDING MARKERBOARD | 3" = 1'-0" | 16



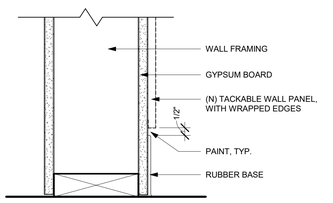
MARKERBOARD WALL MOUNTED | 6" = 1'-0" | 17



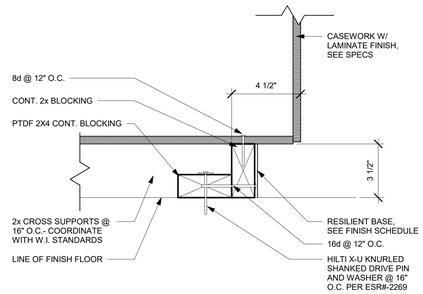
TACKABLE PANEL AT TOP | 3" = 1'-0" | 13



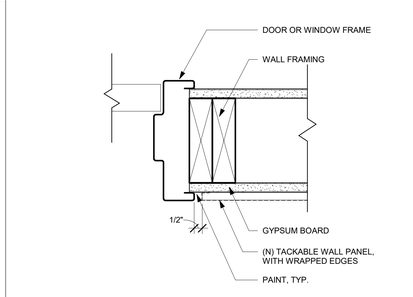
CARPET/RES. TRANSITION | 12" = 1'-0" | 14



TACKABLE PANEL AT BASE | 3" = 1'-0" | 18



BASE ANCHOR @ FRONT | 3" = 1'-0" | 19



TACKABLE PANEL AT FRAME | 3" = 1'-0" | 20

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DATE: 02.05.20

Revision	Date

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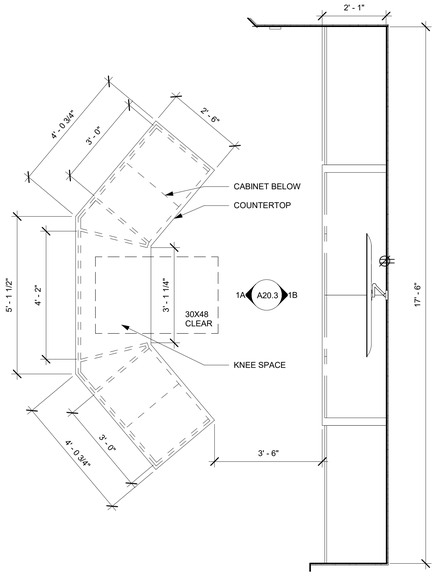
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

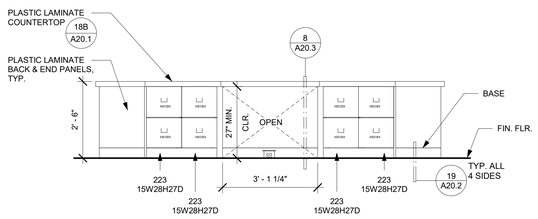
INTERIOR DETAILS

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

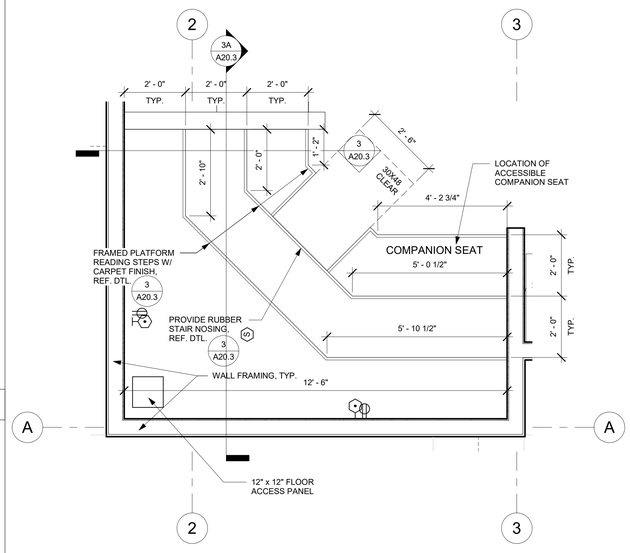
A20.2



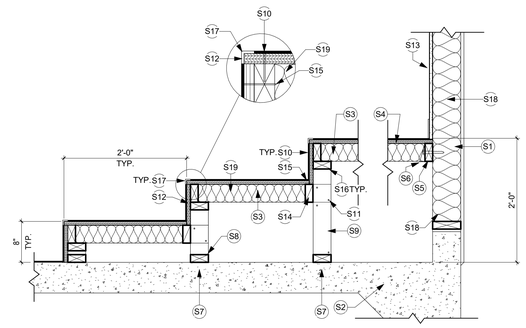
ENLARGED CIRCULATION DESK | 1/2" = 1'-0" | 1

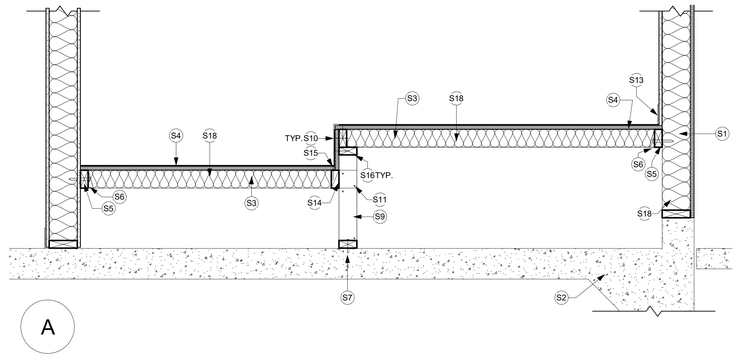


CIRCULATION DESK - NORTH VIEW | 1/2" = 1'-0" | 1A



ENLARGED RAISED READING AREA | 1/2" = 1'-0" | 2

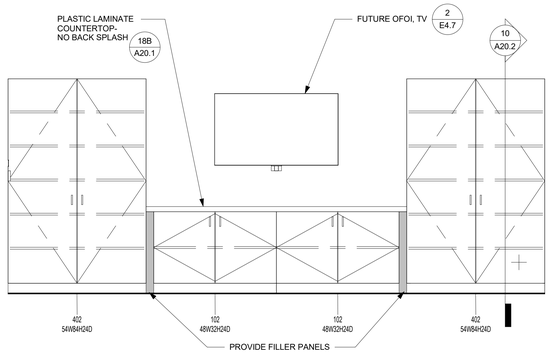




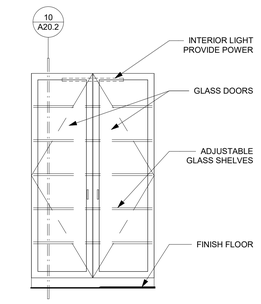
RAISED READING SEAT SECTION | 1" = 1'-0" | 3

SEAT KEYNOTES

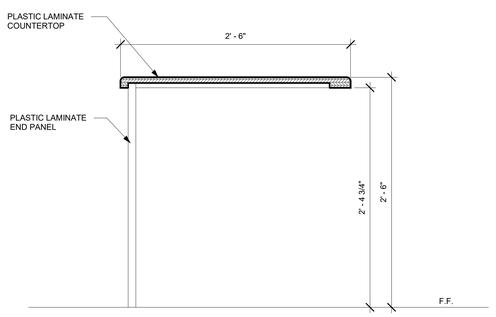
S1	2X6 WALL PER STR. PLANS AND WALL LEGEND
S2	CONCRETE FLOOR SLAB
S3	2X4 FRAMING AT 16" O.C., TYP.
S4	3/4" PWD. PROVIDE 3/4" RADIUSED FRONT CORNER EDGES TYP.
S5	2X4 LEDGER ANCHOR TO EA. WALL STUD W/ 1/2" X 4 1/2" L.B.
S6	SIMPSON U24 HANGERS EA. JST.
S7	HILTI 2 7/8" DS HD POWDER ACTUATED PINS @ 32" O.C.
S8	2X4 TREATED PLATES
S9	2X CRIPPLE LEDGER FROM PLATE TO FRAMING. ANCHOR TO VERT. MEMBER W/ 2 16D
S10	8D @ 16" O.C.
S11	2 - 16D @ EA. LAP
S12	CARPET
S13	RUBBER BASE
S14	2X BLOCKING
S15	8D EA. STUD
S16	2X4 PLATE
S17	BURKE-MERCER CARPET STAIR NOSING DOUBLE UNDERCUT #565 OR EQUAL
S18	BATT INSULATION WHERE APPLICABLE REFERENCE WALL LEGEND
S19	R=19 UNFACED INSULATION - TYP.



CIRCULATION DESK - SOUTH VIEW | 1/2" = 1'-0" | 1B



DISPLAY CABINET | 1/2" = 1'-0" | 7



CIRCULATION DESK SECTION | 1 1/2" = 1'-0" | 8

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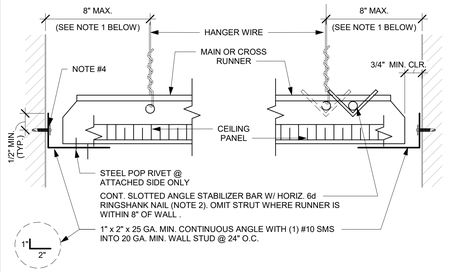
A20.3

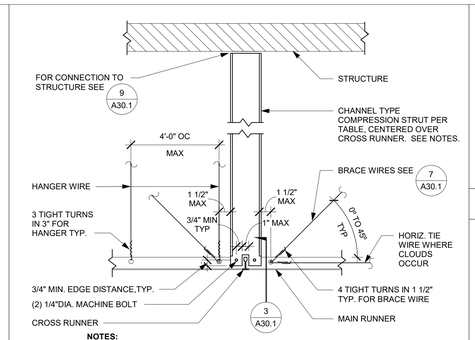


ATTACHED JOINT FREE JOINT

NOTES:

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 24" O.C.

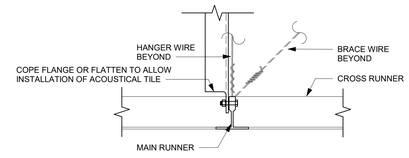
CEILING PERIMETER | 3" = 1'-0" | 1



NOTES:

NOT TO EXCEED THE ALLOWABLE LENGTH GIVEN IN THE TABLE FOR THE COMPRESSION STRUT SELECTED. SEE 4 A30.1

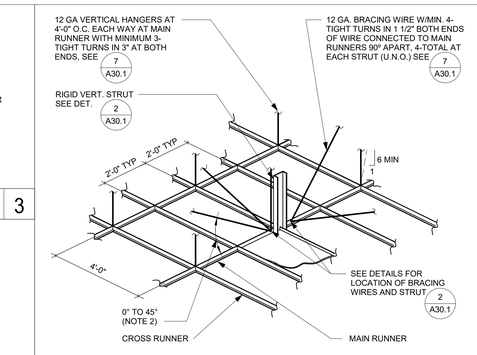
CHANNEL TYPE STRUT | 1 1/2" = 1'-0" | 2



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

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

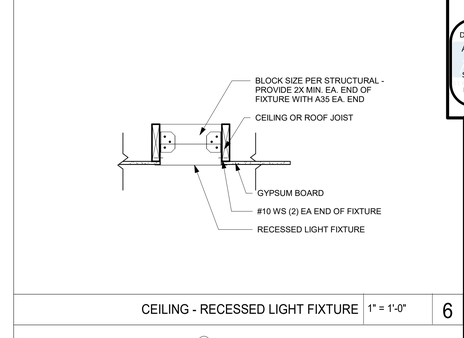
CHANNEL - COMPRESSION STRUT TABLE | 3" = 1'-0" | 4



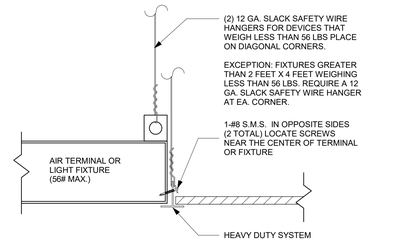
NOTES:

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

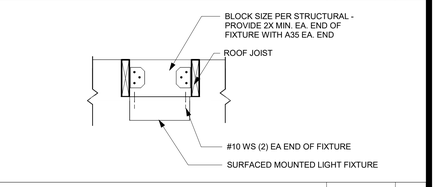
SUSPENSION AND BRACING ASSEMBLY | 3" = 1'-0" | 5



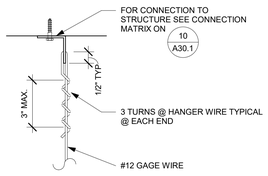
CEILING - RECESSED LIGHT FIXTURE | 1" = 1'-0" | 6



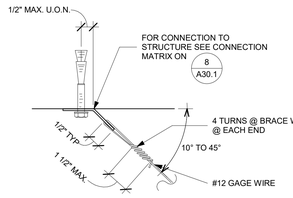
LIGHT FIXTURES/AIR TERMINAL SUPPORT | 3" = 1'-0" | 19A



CEILING - SURFACE MOUNTED LIGHT | 1" = 1'-0" | 19B

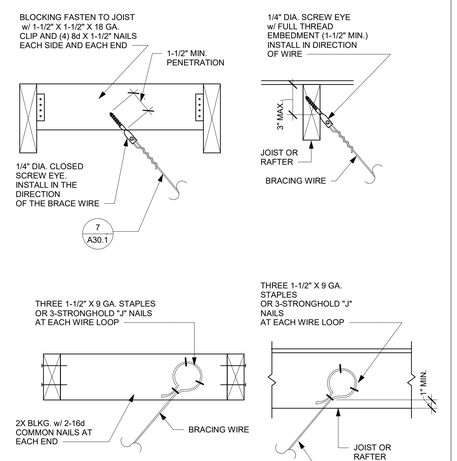


HANGER WIRE

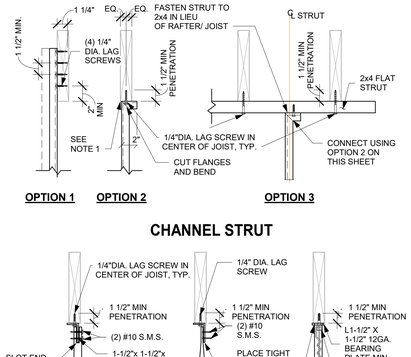


BRACING WIRE

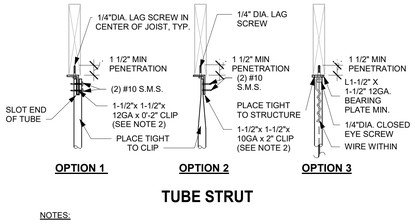
TYPICAL WIRE TURNS | 3" = 1'-0" | 7



BRACING WIRE CONNECTION TO SAWN TIMBER | 1 1/2" = 1'-0" | 8



CHANNEL STRUT

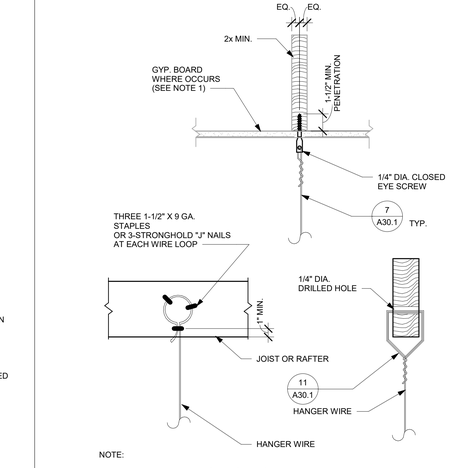


TUBE STRUT

NOTES:

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

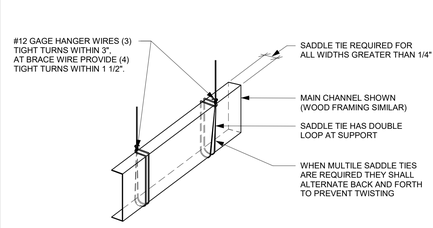
CHANNEL STRUT SECTION | 1 1/2" = 1'-0" | 9



NOTE:

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

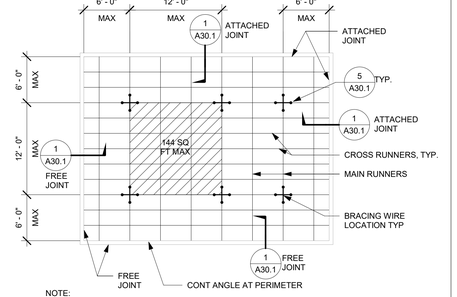
HANGER WIRE CONNECTION TO SAWN TIMBER | 1 1/2" = 1'-0" | 10



TYPICAL SADDLE TIE DETAIL

HANGER WIRE CONDITION SHOWN.
BRACE WIRE CONDITION SIMILAR

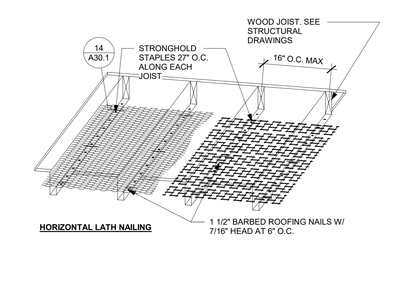
TYPICAL SADDLE TIE DETAIL | NTS | 11



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

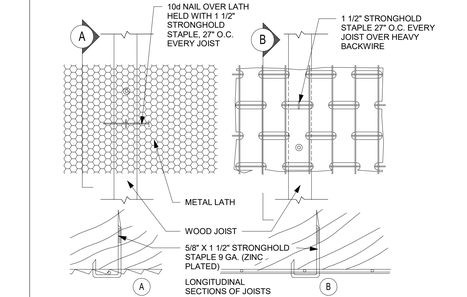
BASED ON SDS 0.994

ACOUSTICAL TILE CLG 12' X 12' BRACE ASSEMBLY SPACING | 1/8" = 1'-0" | 12

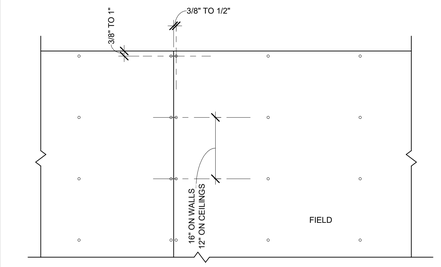


HORIZONTAL LATH NAILING

PLASTER CEILING DETAIL | 3" = 1'-0" | 13

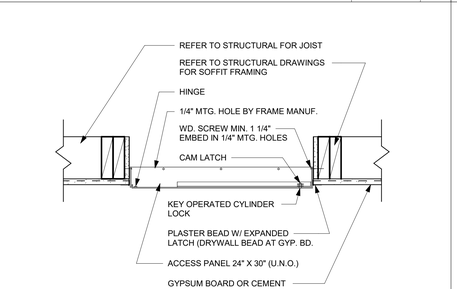


LATH ATTACHMENT DTL | 3" = 1'-0" | 14



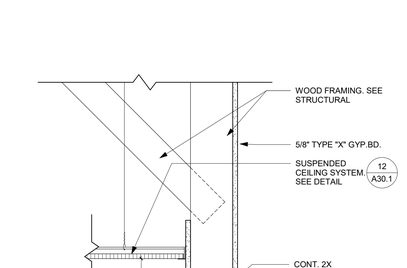
IN SINGLE SCREWED GYPSUM BOARD, 1 5/8" BUGLE HEAD #6 SCREWS ARE SPREAD 12" TO 16" APART ALONG SUPPORTS AND NOT LESS THAN 3/8" FROM THE EDGES AND ENDS. NAILS ARE FIRST DRIVEN IN THE MIDDLE AREA OF THE BOARD AND THEN OUT TOWARD THE EDGES AND ENDS

CEILINGS - GYPSUM BOARD NAILING SCHEDULE | 1" = 1'-0" | 15

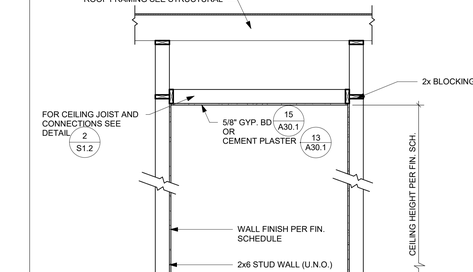


NOTES:
1. ACCESS HATCH INSTALL PER MANUFACTURE SPECS.
2. PAINT TO MATCH ADJACENT FINISH

ACCESS PANEL DETAIL | 1 1/2" = 1'-0" | 16



GYP.BD. SUSPENDED CEILING | 1 1/2" = 1'-0" | 17



GYP BD OR PLASTER CLG | 1/2" = 1'-0" | 18

1. CEILING SYSTEM GENERAL NOTES

1.01 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.
1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.
1.03 Ceiling systems - see specifications
1.04 Seismic Wall Clip - see specifications
1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.
1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide 3/4" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide 3/4" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.
1.07 Splices will not be permitted in any hanger wires

2. MATERIALS

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTMA641-09a. Wire shall be #12 gauge (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.
2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Deisgn of Cold Formed Steel Structural Members 2007, including supplement 2 dated 2010 (AISI S100-07/S2-10). Material 43 mil (18 gauge) and lighter shall have a minimum yield strength of 33 ksi. Material 54 mil (16 gauge) and heavier shall have a minimum yield strenght of 50 ksi.
2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 cabron steel with G90 galvanizing. EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

3. ATTACHMENT OF HANGAR AND BRACING WIRES:

3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.
3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.
3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.
3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.
3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)
3.06 Provide trapeze or other supplemental support members at obstructions to typical hanger spacing. Provide additional hangers, struts or braces as required at all ceiling breaks, soffits, or discountinuous areas. Hanger wires that are more than 1 in 6 out of plumb shall have counter - sloping wires.

4. FASTENERS AND WELDING

4.01 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-89 (R2005). Penetration of screws through joined materail shall not be less than three exposed threads.
4.02 Expansion anchor shall be per specification
4.03 Power-Actuated fasteners shall be per specification
4.04 If not otherwise specified in the evaluation report, power-actuated fasteners install in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.
4.05 Power-Actuated fasteners in concrete are not permitted for bracing wire.
4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.
4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes

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

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

6. LIGHT FIXTURES

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

7. SERVICES WITHIN THE CEILING

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

8. OTHER DEVICES WITHIN THE CEILING

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

GENERAL NOTES | 12" = 1'-0" | 20

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APP. 04-118743 INC:
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DATE: 02.05.20

Revison	Date

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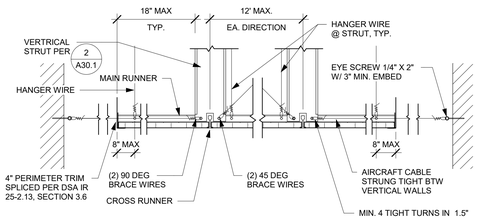
LICENSED ARCHITECT ROBERT D. WEBB M.A.A. RDWebb C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

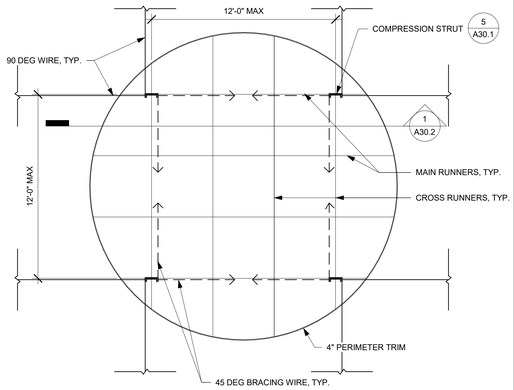
REFLECTED CEILING PLAN DETAILS

Drawn: RI / RQG
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

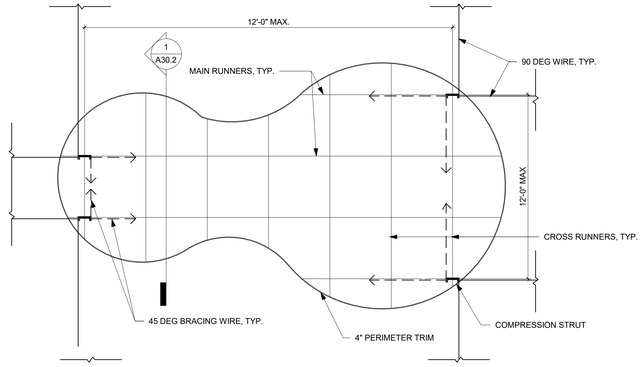
A30.1



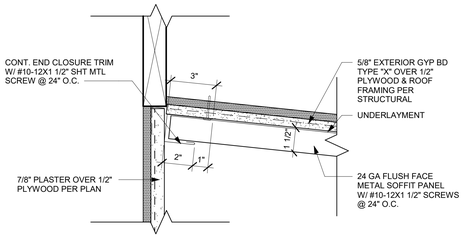
FLOATING CLG ATTACHMENT | 1 1/2" = 1'-0" | 1



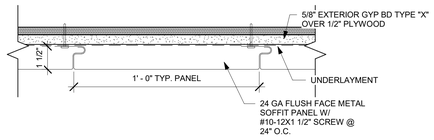
CEILING - FLOATING CEILING PLAN | 1/2" = 1'-0" | 2



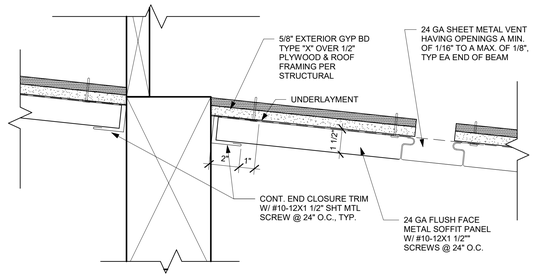
CEILING - FLOATNG CEILING PLAN 2 | 1/2" = 1'-0" | 2A



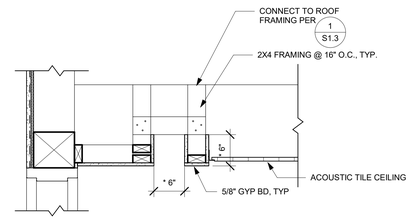
PANEL ATTACHMENT @ WALL | 3" = 1'-0" | 3



PANEL ATTACHMENT @ SOFFIT | 3" = 1'-0" | 4



PANEL ATTACHMENT @ BEAM | 3" = 1'-0" | 5



* VERIFY OPN'G SIZE WITH PROJECTOR CASE DIMENSIONS

PROJECTOR SOFFIT | 1" = 1'-0" | 6

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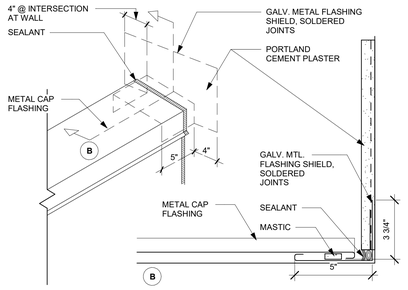
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

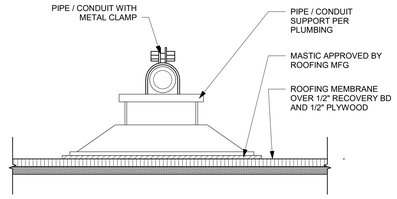
REFLECTED CEILING PLAN DETAILS

Drawn: Author
Checked: Checker
Date: OCT. 18, 2019
Job: SSD-SC-03

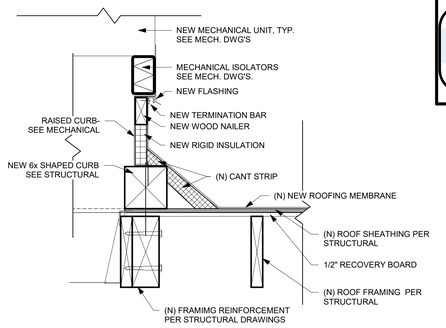
A30.2



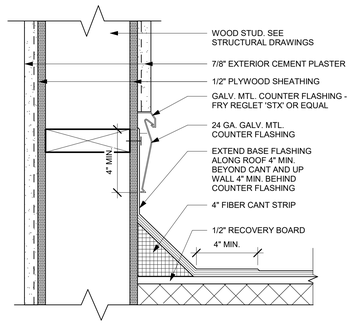
FLASHING AT WALL | 3" = 1'-0" | 1



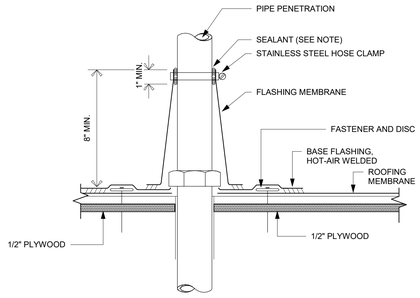
PIPE SUPPORT | 3" = 1'-0" | 3



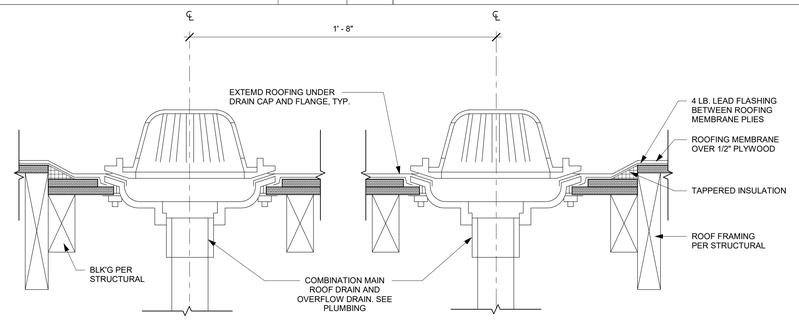
MECHANICAL CURB | 1 1/2" = 1'-0" | 5



PLASTER REGLET @ TPO ROOFING | 3" = 1'-0" | 6

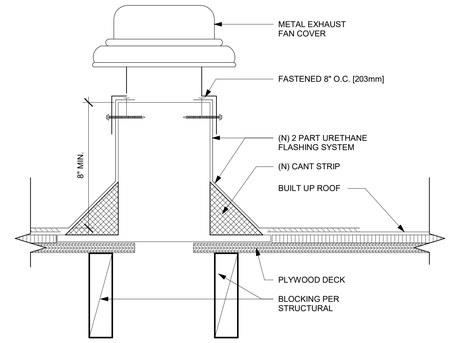


PIPE FLASHING | 3" = 1'-0" | 7

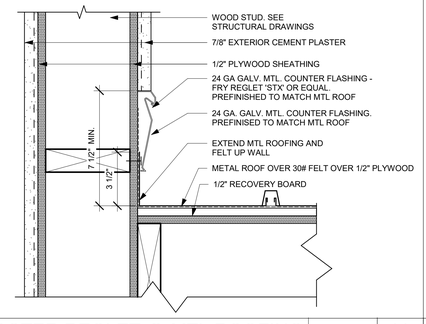


NOTES:
EXTEND LEAD FLASHING AND ROOFING MEMBRANE PLIES 1" MIN. INTO DRAIN UNDER CLAMPING RING

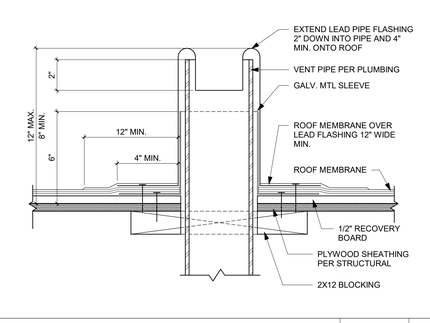
ROOF AND OVERFLOW DRAIN | 3" = 1'-0" | 8



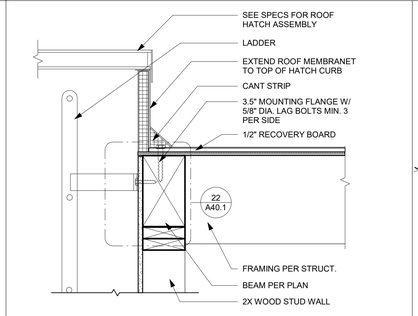
ROOF NEW EXHAUST/RELIEF FAN | 3" = 1'-0" | 10



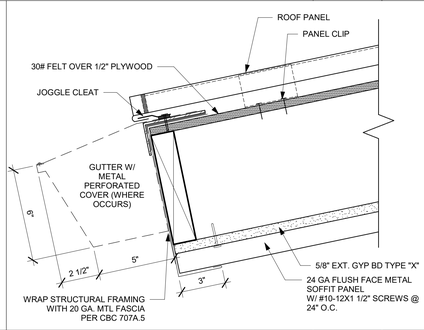
PLASTER REGLET @ MTL ROOFING | 3" = 1'-0" | 11



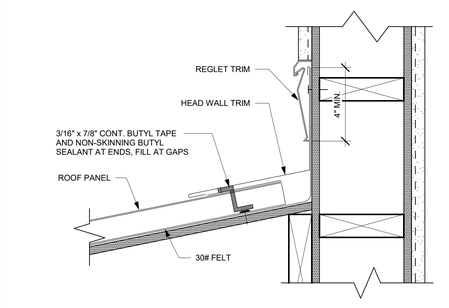
FLASHING AT VENT PIPE | 3" = 1'-0" | 12



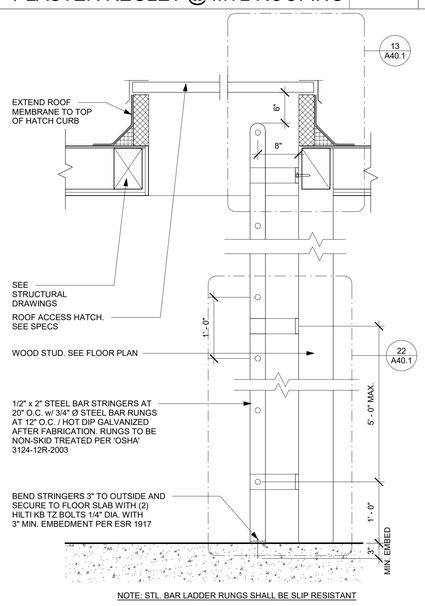
ROOF ACCESS HATCH | 1 1/2" = 1'-0" | 13



ROOF EAVE- LOW SIDE | 3" = 1'-0" | 15

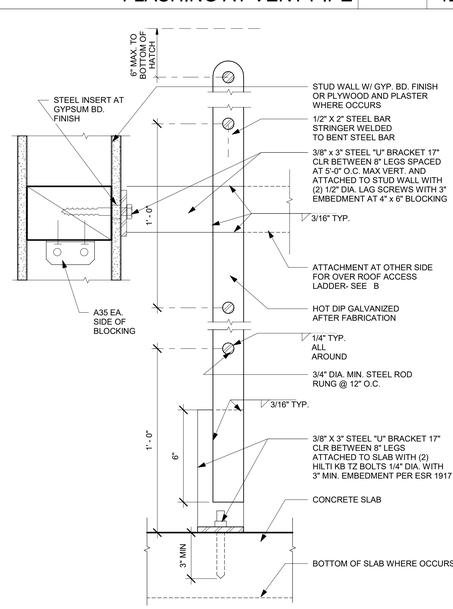


HEAD WALL DETAIL | 3" = 1'-0" | 18

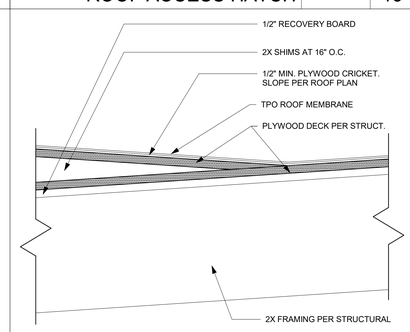


NOTE: STL. BAR LADDER RUNGS SHALL BE SLIP RESISTANT

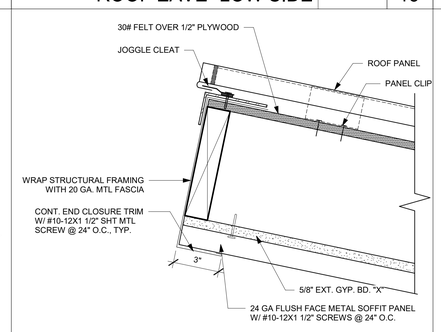
ROOF ACCESS LADDER | 1" = 1'-0" | 21



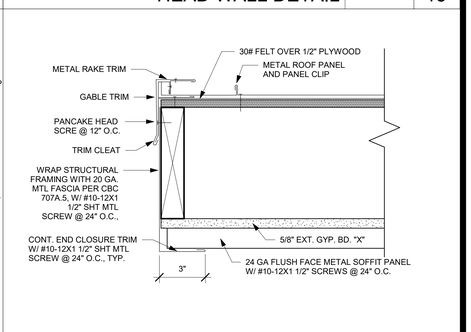
ROOF ACCESS LADDER ATTACHMENT | 3" = 1'-0" | 22



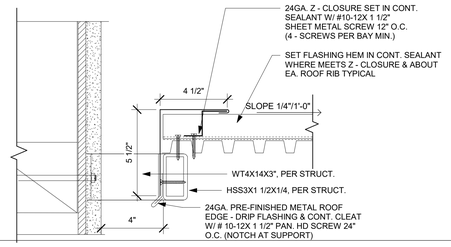
CRICKET | 3" = 1'-0" | 19

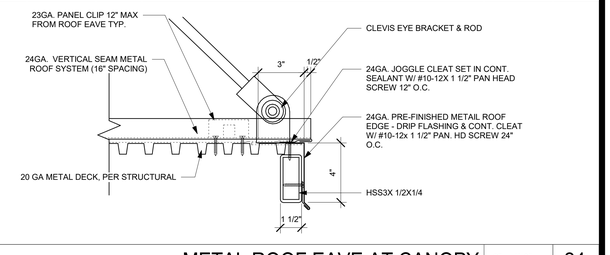


ROOF EAVE - HIGH SIDE | 3" = 1'-0" | 20



ROOF RAKE | 3" = 1'-0" | 23





METAL ROOF EAVE AT CANOPY | 3" = 1'-0" | 24

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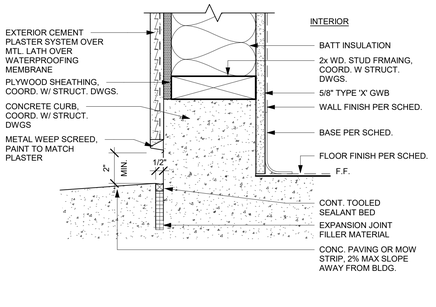
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

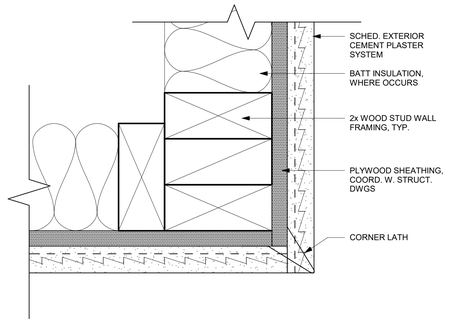
ROOFING DETAILS

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

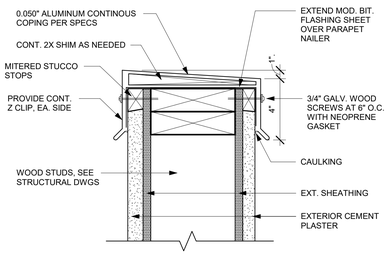
A40.1



EXTERIOR WALL @ CONCRETE CURB | 3" = 1'-0" | 1

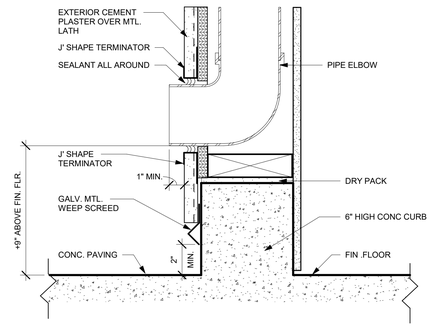


TYP. PLASTERED CORNER | 6" = 1'-0" | 2

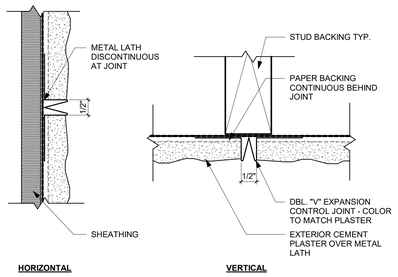


NOTE:
ALL METAL COPING SHALL OVERLAP A MINIMUM OF 2" IN ALL DIRECTIONS

PARAPET COPING | 3" = 1'-0" | 3

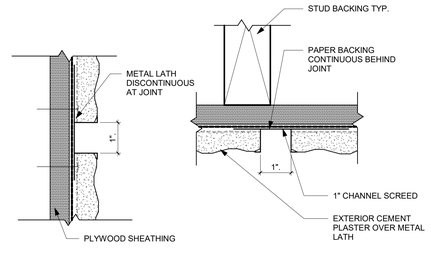


OVERFLOW AT WALL | 3" = 1'-0" | 4



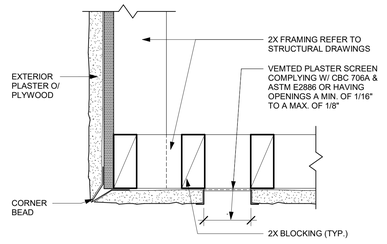
NOTE: TAPE SHALL NOT BE REMOVED UNTIL PAINTING IS COMPLETE.
CLEAN JOINT AFTER TAPE IS REMOVED, TYP. AT VERTICAL AND HORIZ.

CONTROL JOINT | 6" = 1'-0" | 5

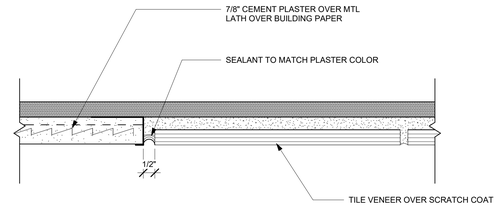


NOTE: TAPE SHALL NOT BE REMOVED UNTIL PAINTING IS COMPLETE.
CLEAN JOINT AFTER TAPE IS REMOVED, TYP. AT VERTICAL AND HORIZ.

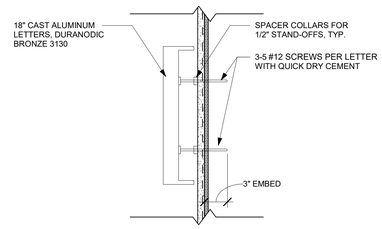
MTL PLASTER SCREED / REVEAL | 6" = 1'-0" | 6



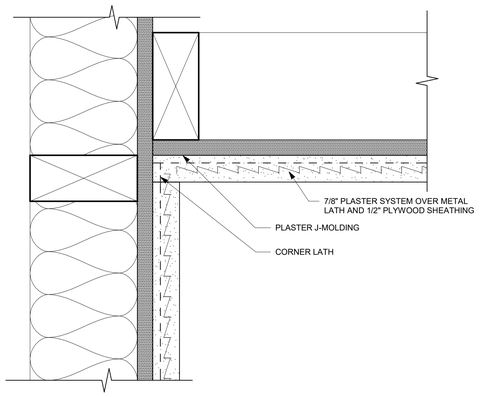
VENT SCREED | 3" = 1'-0" | 7



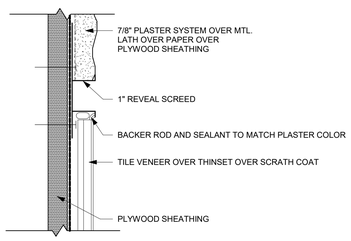
PLASTER/ TILE JOINT | 6" = 1'-0" | 8



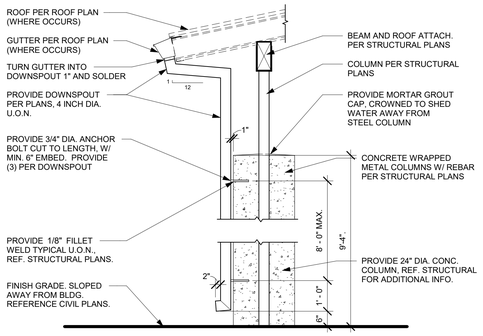
ALUMINUM LETTER ATTACHMENT | 1 1/2" = 1'-0" | 9



TYP. PLASTERED INSIDE CORNER | 6" = 1'-0" | 10

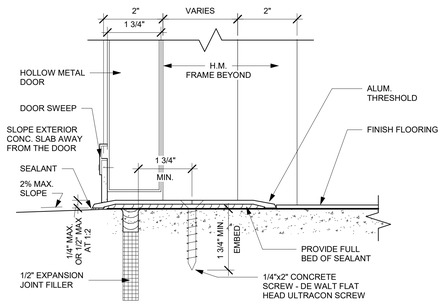


PLASTER TO TILE TRANSITION | 6" = 1'-0" | 11



GENERAL NOTES
1) PREP / CLEAN ALL GALV. METAL PRIOR TO PAINTING
2) ALL STEEL MATERIAL TO BE HOT DIPPED GALVANIZED
3) PAINT ALL STEEL COMPONENTS
4) REFERENCE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

CONC. COLUMN W/ DOWNSPOUT DETAIL | 1/2" = 1'-0" | 13



EXTERIOR DOOR THRESHOLD | 6" = 1'-0" | 15

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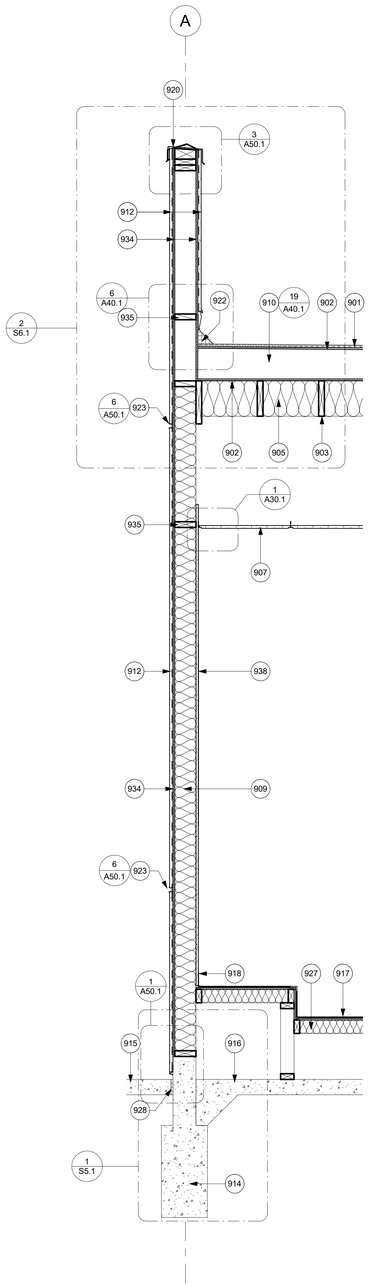
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

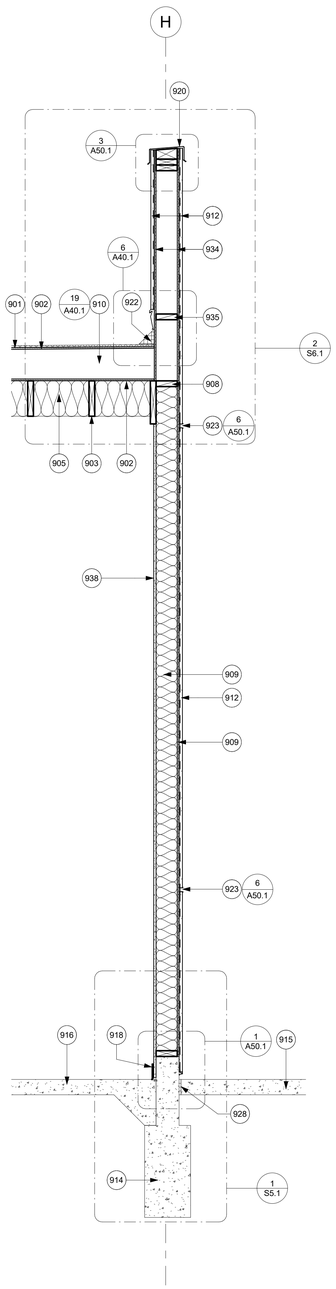
EXTERIOR BUILDING DETAILS

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

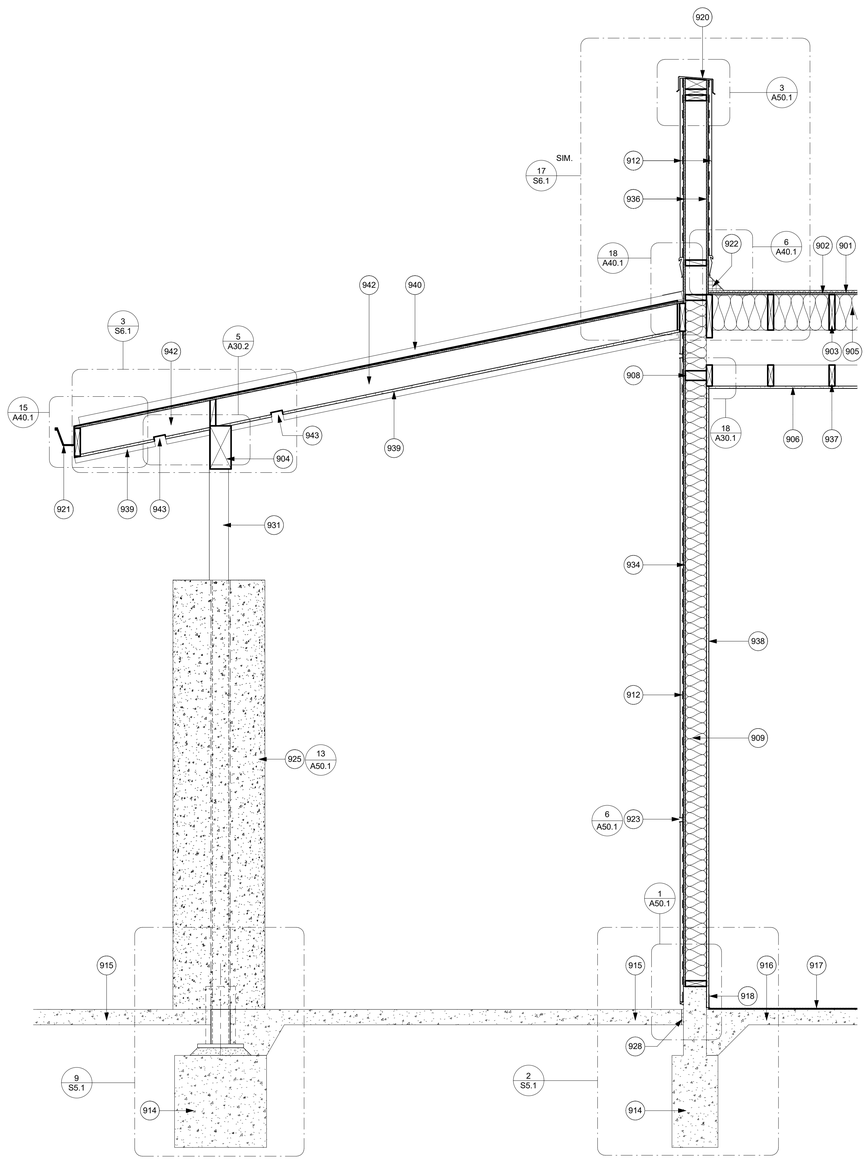
A50.1



WALL SECTION 1 | 3/4" = 1'-0" | 1



WALL SECTION 2 | 3/4" = 1'-0" | 2



WALL SECTION 3 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATION
902	PLYWOOD ROOF DECK PER STRUCTURAL
903	2X ROOF JOIST PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
921	GUTTER SYSTEM
922	CANT STRIP
923	PLASTER REVEAL
925	24" DIAMETER CONCRETE COLUMN SURROUND, SEE DETAIL REF'D ON PLAN
927	RAISED READING STEP
928	1/2" EXPANSION JOINT FILLER
931	STRUCTURAL COLUMNS, PAINTED
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
936	FLOATING CEILING CLOUD, SEE DETAIL REFERENCED ON SHEET
937	CEILING FRAMING. - SEE TYP. DTL. REF. ON PLAN
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION
942	ENCLOSED ROOF EAVES, NO INSULATION, NO CONTINUOUS BLOCKING
943	SHEET METAL SOFFIT VENT

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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APP. 04-118743 INC:
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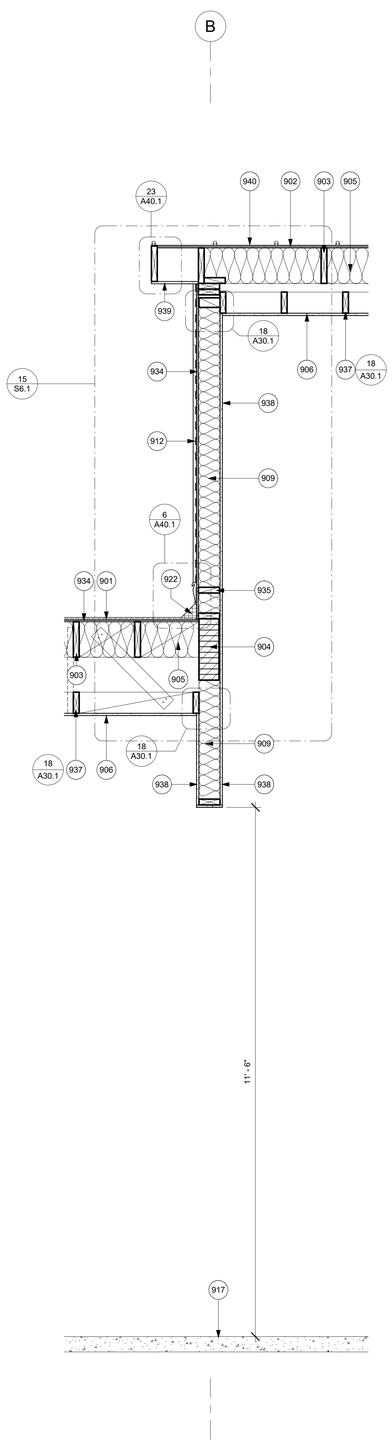
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

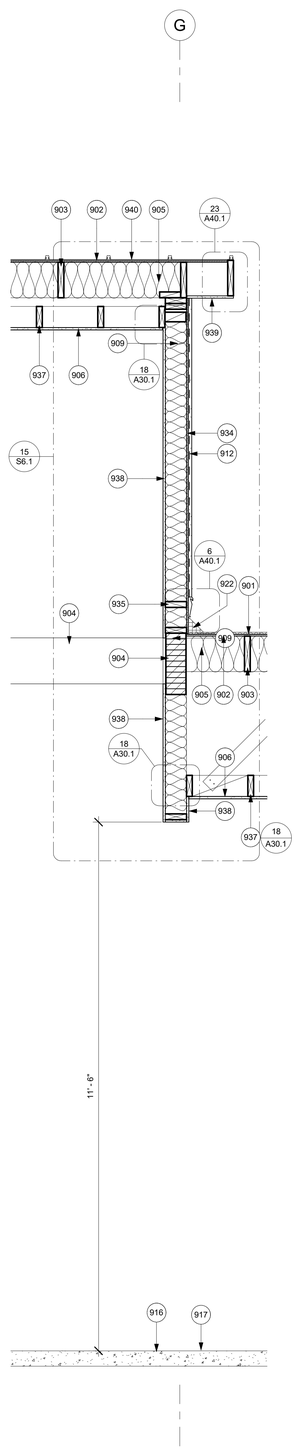
WALL SECTIONS

Drawn: RI
Checked: RDW
Date: OCT. 18, 2019
Job: SSD-SC-03

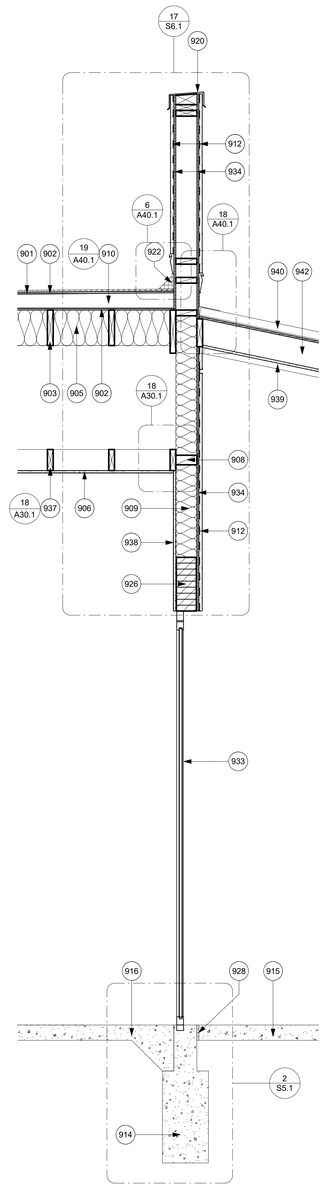
A60.1



WALL SECTION 4 | 3/4" = 1'-0" | 1



WALL SECTION 5 | 3/4" = 1'-0" | 2



WALL SECTION 6 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATION
902	PLYWOOD ROOF DECK PER STRUCTURAL
903	2X ROOF JOIST PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
922	CANT STRIP
926	HEADER PER STRUCTURAL
928	1/2" EXPANSION JOINT FILLER
933	OPERABLE WALL PER SCHEDULE
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
937	CEILING FRAMING. - SEE TYP. DTL. REF. ON PLAN
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION
942	ENCLOSED ROOF EAVES, NO INSULATION, NO CONTINUOUS BLOCKING

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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WALL SECTIONS

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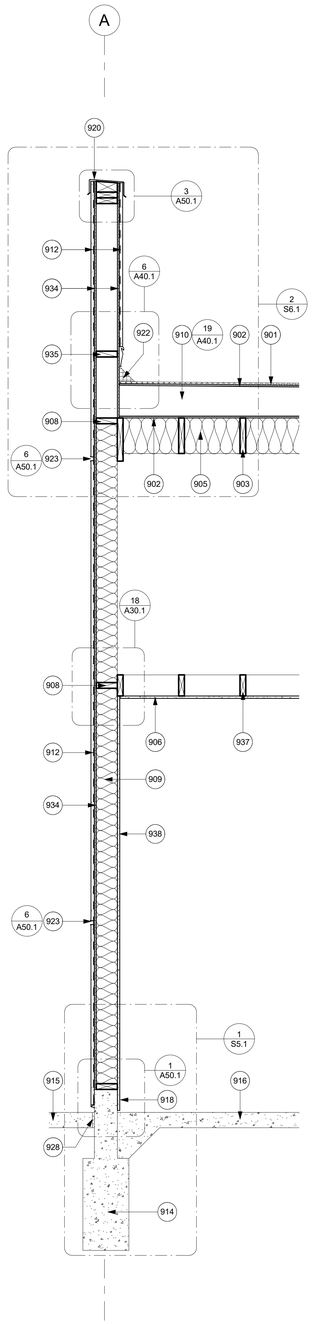
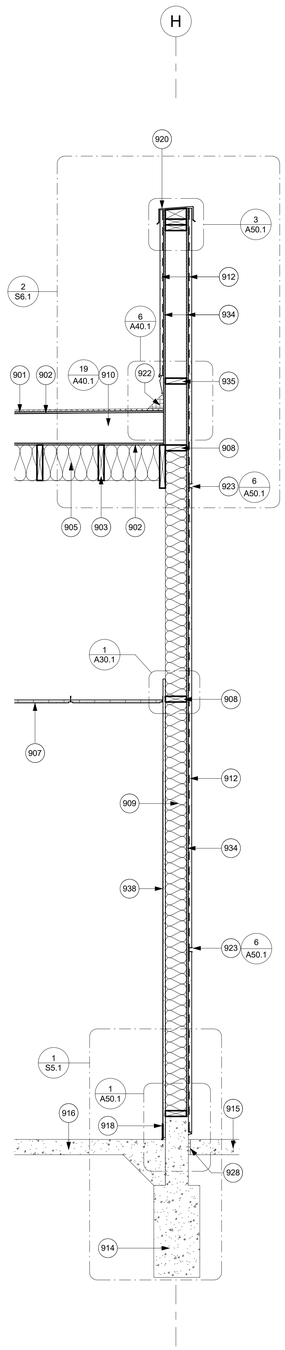
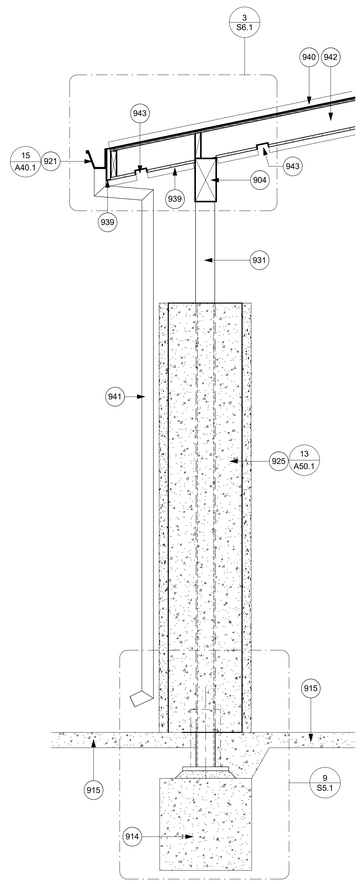
A60.2



WALL SECTION 7 | 3/4" = 1'-0" | 1



WALL SECTION 8 | 3/4" = 1'-0" | 2



WALL SECTION 9 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATIO
902	PLYWOOD ROOF DECK PER STRUCTURAL
903	2X ROOF JOIST PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
921	GUTTER SYSTEM
922	CANT STRIP
923	PLASTER REVEAL
925	24" DIAMETER CONCRETE COLUMN SURROUND, SEE DETAIL REF'D ON PLAN
928	1/2" EXPANSION JOINT FILLER
931	STRUCTURAL COLUMNS, PAINTED
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
937	CEILING FRAMING. - SEE TYP. DTL. REF. ON PLAN
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION
941	PAINTED METAL DOWNSPOUT
942	ENCLOSED ROOF EAVES, NO INSULATION, NO CONTINUOUS BLOCKING
943	SHEET METAL SOFFIT VENT

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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SANTEE SCHOOL DISTRICT

WALL SECTIONS

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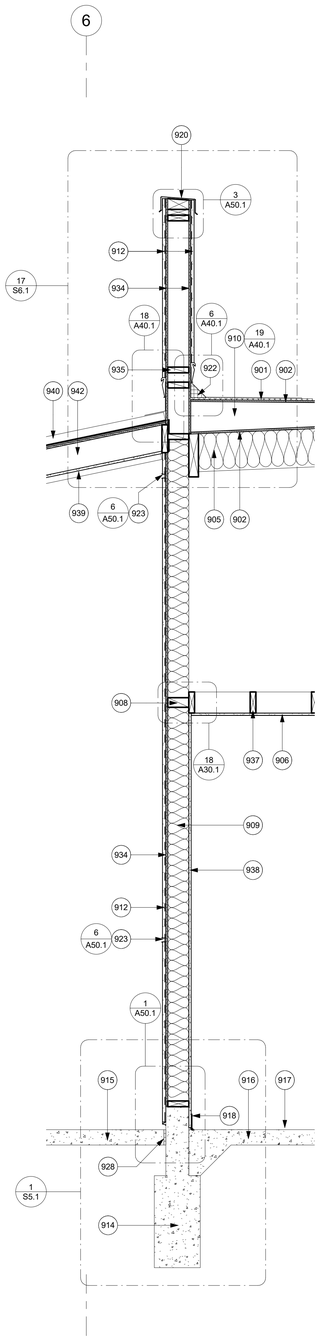
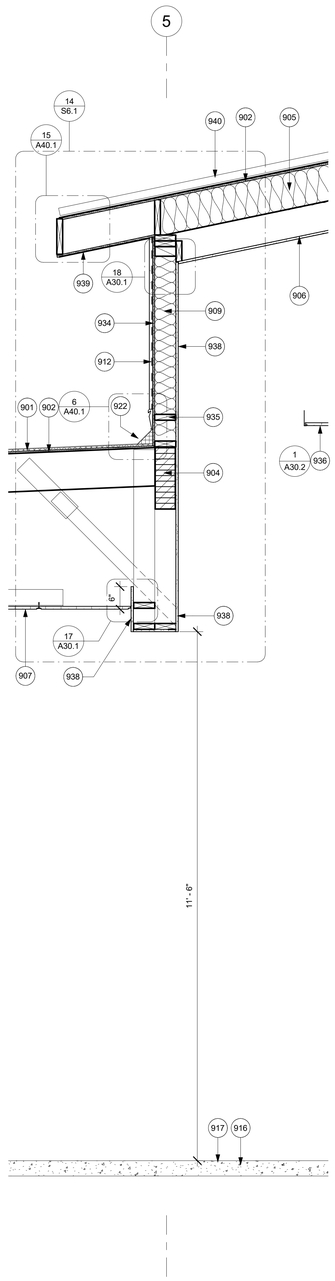
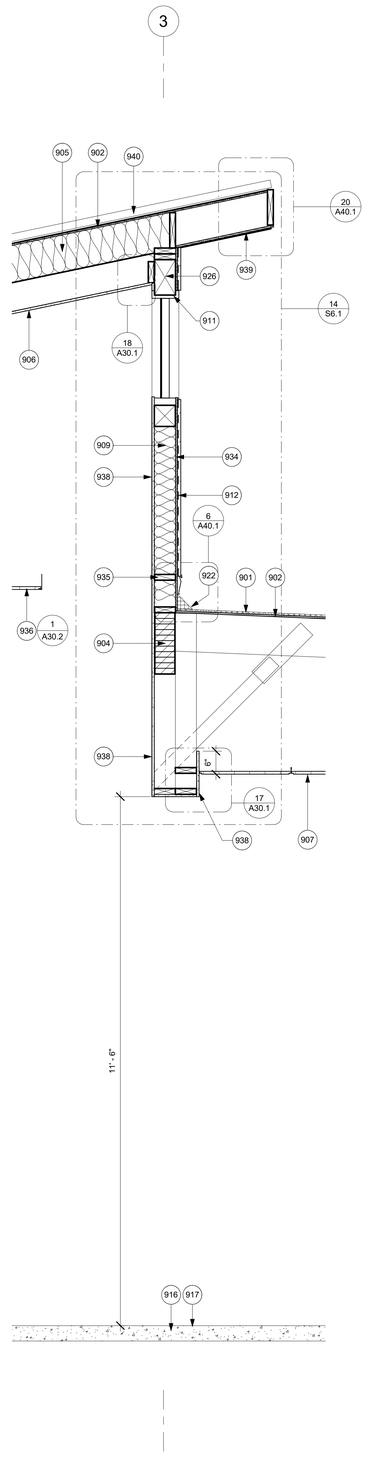
A60.3



WALL SECTION 10 | 3/4" = 1'-0" | 1



WALL SECTION 11 | 3/4" = 1'-0" | 2



WALL SECTION 12 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATIO
902	PLYWOOD ROOF DECK PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
911	HOLLOW METAL FRAME PER SCHEDULE
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
922	CANT STRIP
923	PLASTER REVEAL
926	HEADER PER STRUCTURAL
928	1/2" EXPANSION JOINT FILLER
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
936	FLOATING CEILING CLOUD, SEE DETAIL REFERENCED ON SHEET
937	CEILING FRAMING. - SEE TYP. DTL. REF. ON PLAN
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION
942	ENCLOSED ROOF EAVES, NO INSULATION, NO CONTINUOUS BLOCKING

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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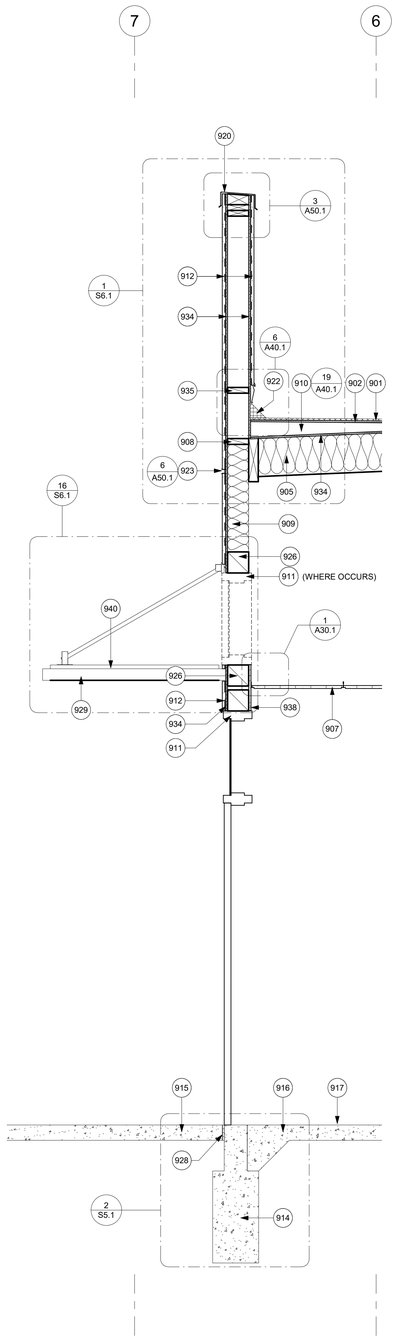
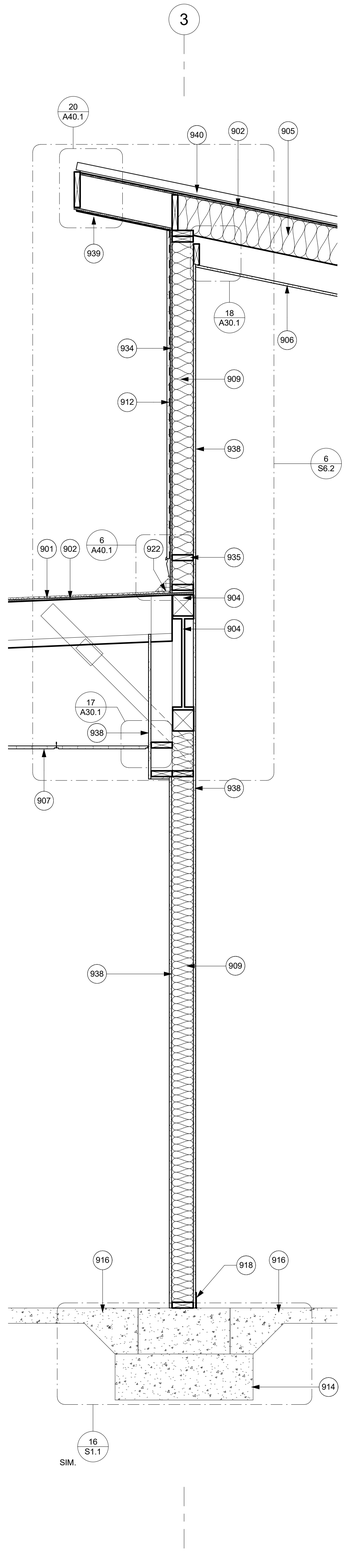
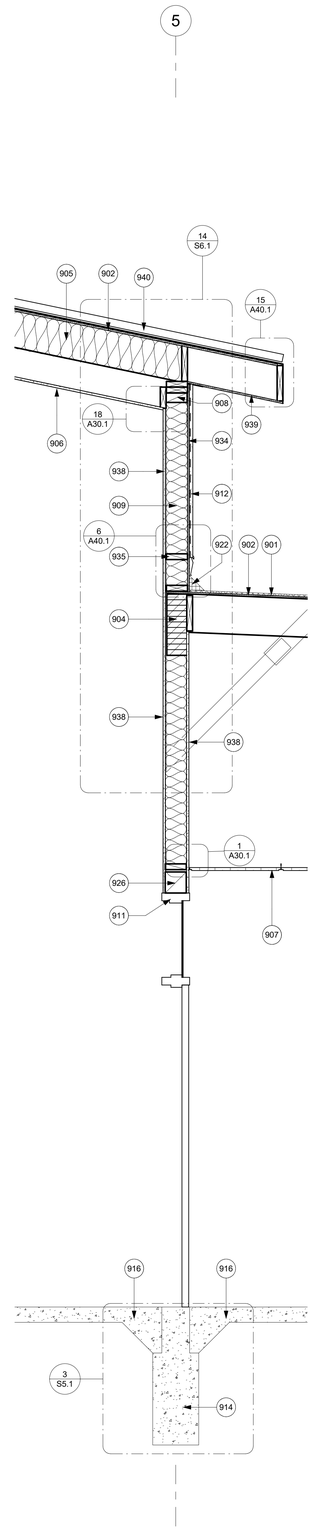
A60.4



WALL SECTION 13 | 3/4" = 1'-0" | 1



WALL SECTION 14 | 3/4" = 1'-0" | 2



WALL SECTION 15 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATIO
902	PLYWOOD ROOF DECK PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
911	HOLLOW METAL FRAME PER SCHEDULE
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
922	CANT STRIP
923	PLASTER REVEAL
926	HEADER PER STRUCTURAL
928	1/2" EXPANSION JOINT FILLER
929	CANOPY, SEE STRUCTURAL
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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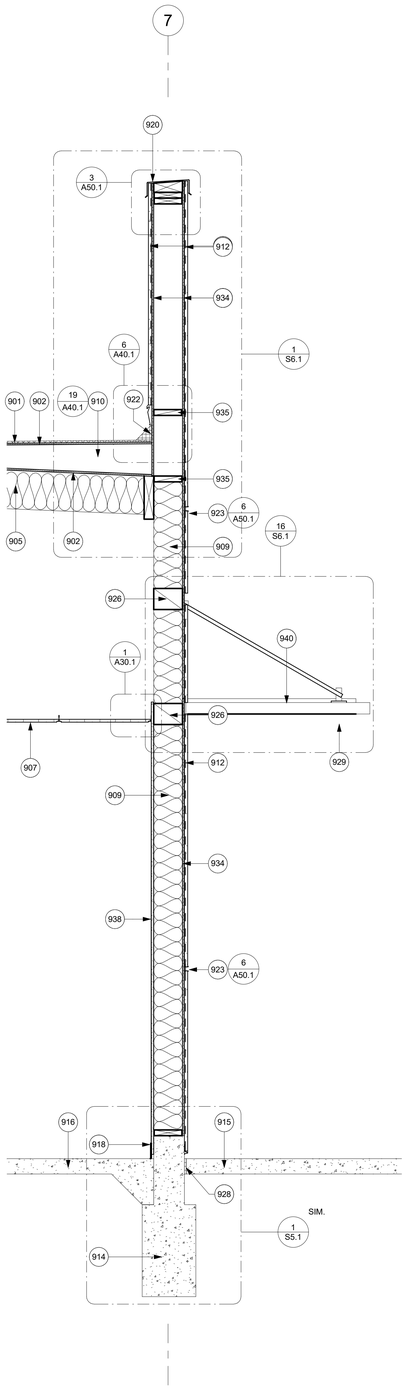
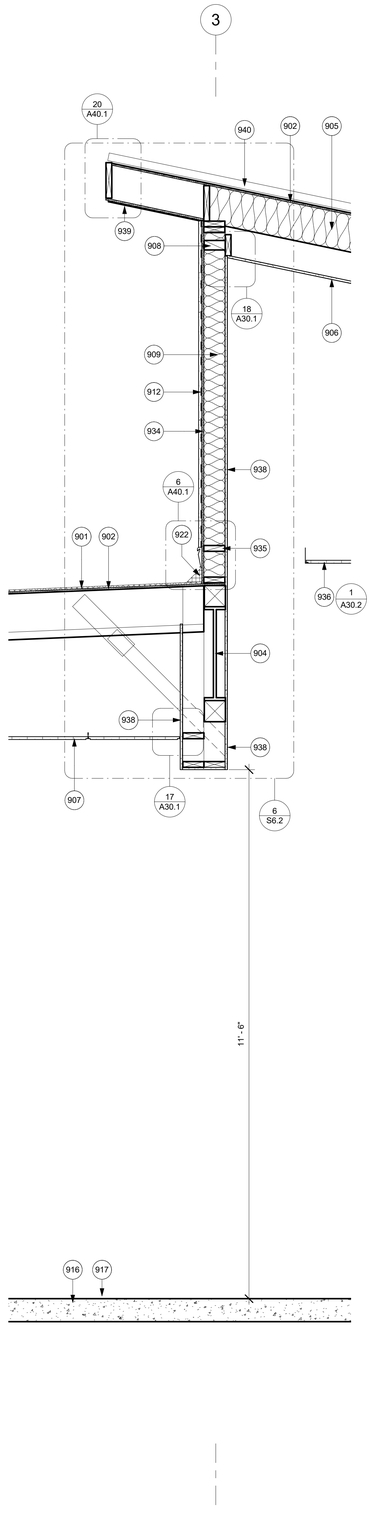
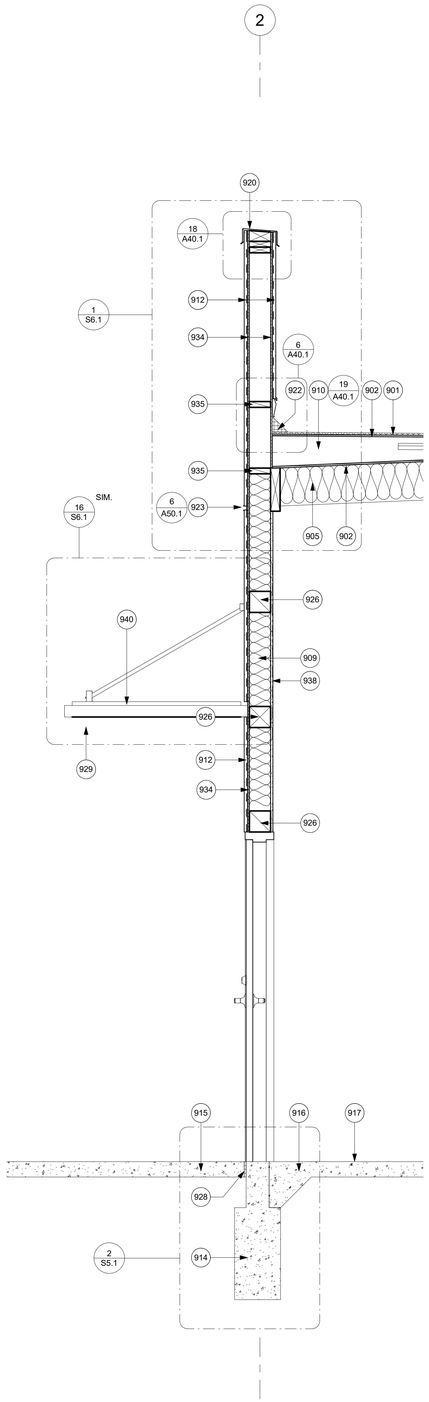
A60.5



WALL SECTION 16 | 3/4" = 1'-0" | 1



WALL SECTION 17 | 3/4" = 1'-0" | 2



WALL SECTION 18 | 3/4" = 1'-0" | 3

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATIONS
902	PLYWOOD ROOF DECK PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
910	ROOF CRICKET
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL, SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
922	CANT STRIP
923	PLASTER REVEAL
926	HEADER PER STRUCTURAL
928	1/2" EXPANSION JOINT FILLER
929	CANOPY, SEE STRUCTURAL
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
936	FLOATING CEILING CLOUD, SEE DETAIL REFERENCED ON SHEET
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION

WALL SECTION NOTES

1. GYPSUM WALL BOARD SHALL EXTEND TO UNDERSIDE OF ROOF JOISTS FOR ACOUSTIC PURPOSES WHERE SEPARATE ROOMS OCCUR ON EACH SIDE OF WALL. AT ALL OTHER INSTANCES, GYPSUM WALL BOARD SHALL EXTEND 6" ABOVE ACOUSTICAL CEILING OR TO BOTTOM OF CEILINGS JOISTS AT GYP. BD. CEILING.

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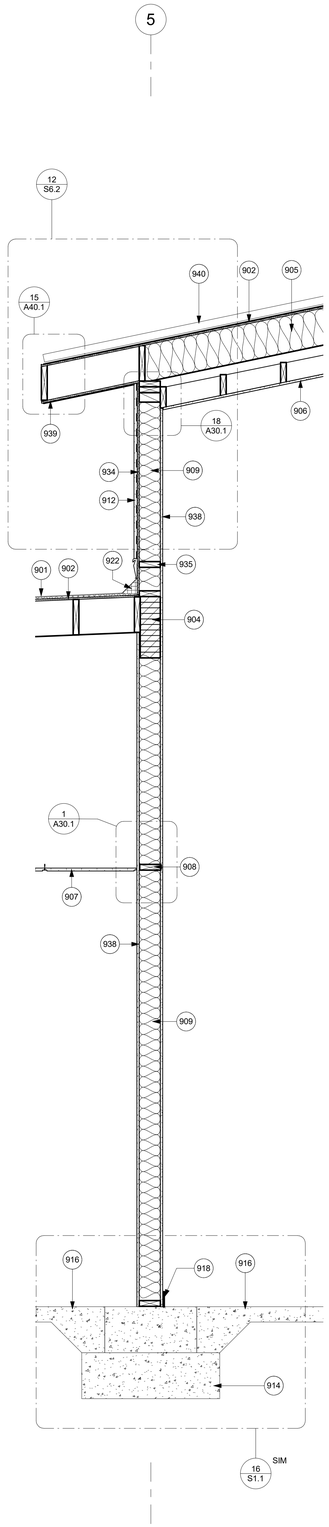
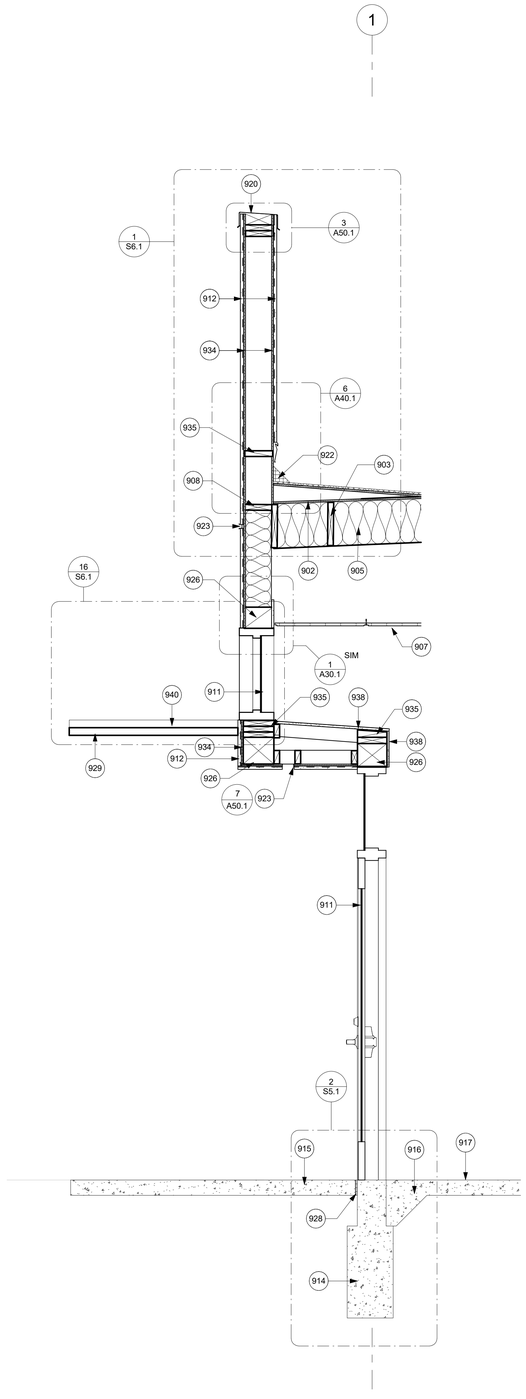
A60.6



WALL SECTION 19 | 3/4" = 1'-0" | 1



WALL SECTION 20 | 3/4" = 1'-0" | 2

KEYNOTES

901	TPO ROOFING MATERIAL OVER 1/2" RECOVERY BOARD PER SPECIFICATIONS
902	PLYWOOD ROOF DECK PER STRUCTURAL
903	2X ROOF JOIST PER STRUCTURAL
904	BEAM PER STRUCTURAL
905	R=30 BATT INSULATION- ROOF, TYP.
906	5/8" GYPSUM BOARD CEILING
907	SUSPENDED ACOUSTICAL CEILING SYSTEM
908	2X FIRE BLOCKING AT CEILING
909	R=19 BATT INSULATION- WALLS, TYP.
911	HOLLOW METAL FRAME PER SCHEDULE
912	7/8" LATH AND PLASTER OVER PLYWOOD SHEATHING- THICKNESS TO MATCH ADJACENT SHEAR WALL. SEE STRUCTURAL
914	CONCRETE FOUNDATION PER STRUCTURAL
915	CONCRETE HARDSCAPE PER CIVIL AND ARCH SITE PLANS
916	CONCRETE FLOOR SLAB PER STRUCTURAL
917	FINISH FLOOR MATERIAL PER SCHEDULE
918	4" BASE MATERIAL PER SCHEDULE
920	PREFINISHED METAL PARAPET CAP
922	CANT STRIP
923	PLASTER REVEAL
926	HEADER PER STRUCTURAL
928	1/2" EXPANSION JOINT FILLER
929	CANOPY, SEE STRUCTURAL
934	1/2" PLYWOOD SHEATHING
935	2X BLOCKING
938	5/8" GYPSUM BOARD
939	PREFINISHED METAL SOFFIT PANELING
940	STANDING SEAM METAL ROOF, SEE SPECS FOR ADDITIONAL INFORMATION

WALL SECTION NOTES

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DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison	Date

Consultant

Engineer

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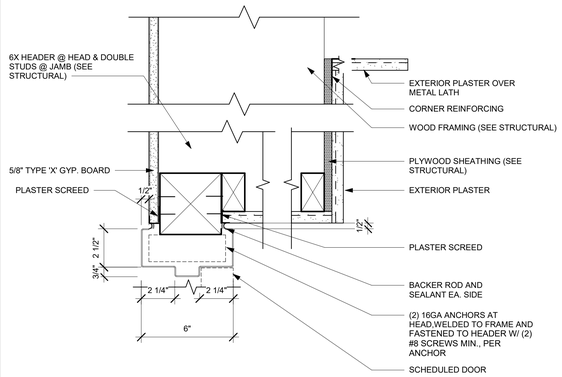
LICENSED ARCHITECT
ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEM. SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

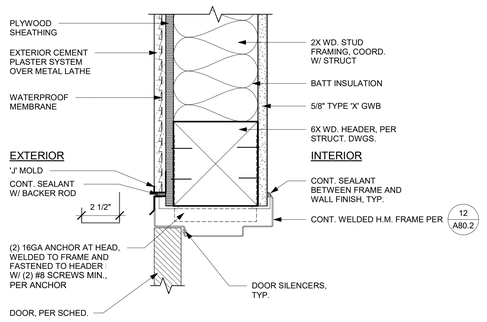
WALL SECTIONS

Drawn: Author
Checked: Checker
Date: OCT. 18, 2019
Job: SSD-SC-03

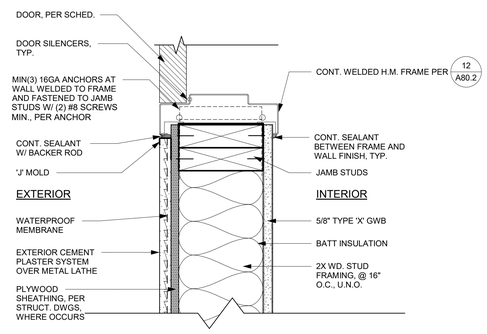
A60.7



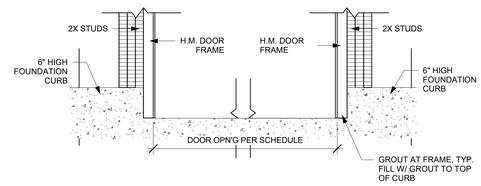
EXTERIOR DOOR HEAD @SOFFIT | 3" = 1'-0" | 1



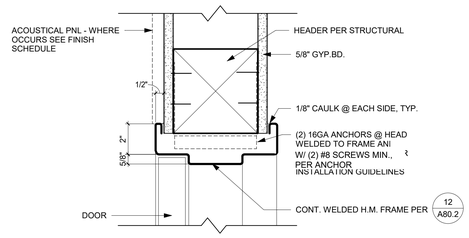
EXT. H.M. DOOR - HEAD | 3" = 1'-0" | 2



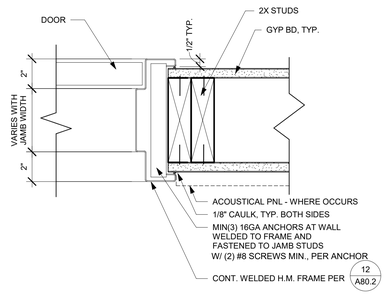
EXT. H.M. DOOR -JAMB | 3" = 1'-0" | 3



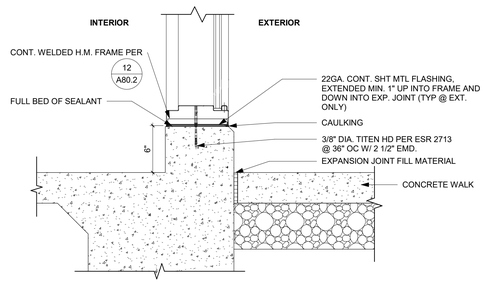
DOOR JAMB ELEVATION | 1" = 1'-0" | 4



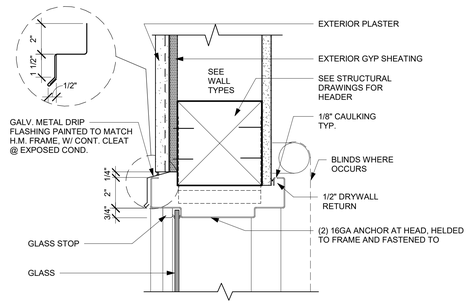
INTERIOR DOOR HEAD | 3" = 1'-0" | 6



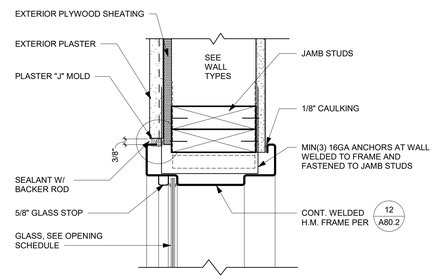
INT. DOOR JAMB | 3" = 1'-0" | 7



EXT. WINDOW SILL | 1 1/2" = 1'-0" | 9



EXTERIOR WINDOW HEAD | 3" = 1'-0" | 10



EXTERIOR WINDOW JAMB | 3" = 1'-0" | 11

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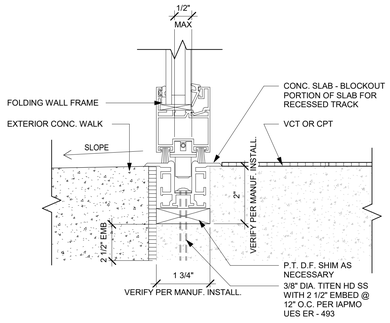
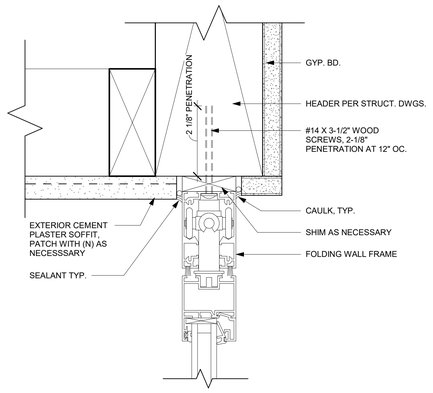
A80.1



FOLDING WALL - EXTERIOR SILL | 6" = 1'-0" | 5



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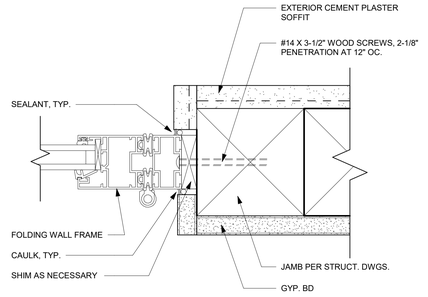

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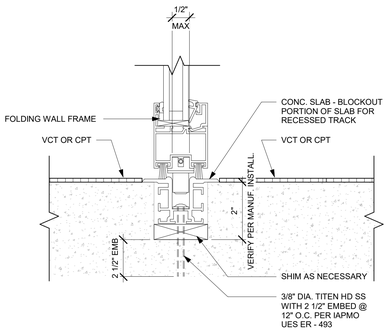
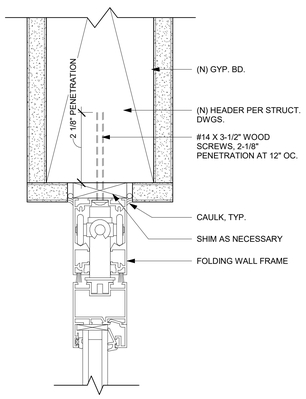
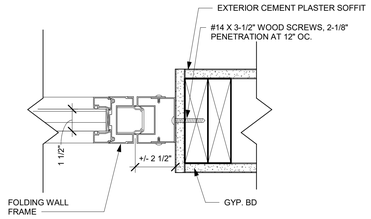


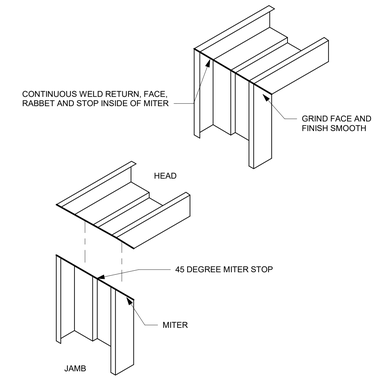
FOLDING WALL - INTERIOR SILL | 6" = 1'-0" | 9



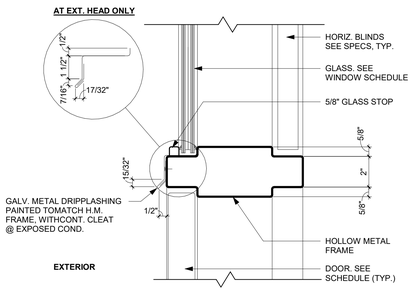
FOLDING WALL - HEAD | 6" = 1'-0" | 10



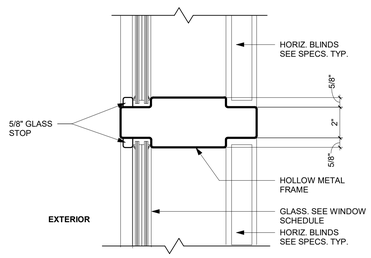
INTERIOR FOLDING WALL JAMB | 3" = 1'-0" | 11



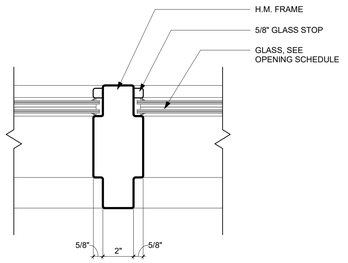
EXT. DOOR THRESHOLD | 3" = 1'-0" | 12



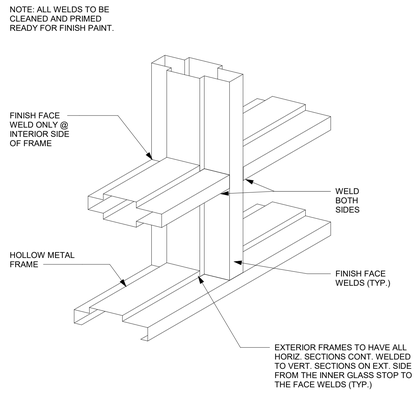
DOOR / WINDOW MULLION | 3" = 1'-0" | 13



WINDOW MULLION | 3" = 1'-0" | 14



MULLION | 3" = 1'-0" | 15



H.M. JOINT WELDING | 3" = 1'-0" | 16

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A80.2

EXPANSION OR EPOXY - TYPE ANCHORS CONT.

4. ALL EXPANSION BOLTS TO BE USED SHALL BE HILTI KB-TZ ANCHORS TYP PER ICC ESR-1917. ALL EPOXY BOLTS SHALL BE SIMPSON SET-XP EPOXY PER ICC ESR-2508. NO SUBSTITUTION SHALL BE MADE WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER.

HILTI KB TZ BOLT TESTING TABLE. FOR EPOXY BOLTS SEE SPECIFIC DETAIL FOR EMBEDMENT AND DIRECT PULL TESTING LOAD.

BOLT DIA.	MINIMUM DEPTH OF EMBEDMENT	REQUIRED INSTALLATION TORQUE FOR EXPANSION BOLT
3/8"	2"	25 FT-LBS
1/2"	3 1/4"	40 FT- LBS
5/8"	4"	60 FT- LBS
3/4"	4 3/4"	110 FT- LBS

TABLE NOTES:

A. TABULATED VALUES ARE BASED ONTHE ICC ESR REPORT #1917 AND SHALL BE INSTALLED WITH SPECIAL INSPECTION. THE TABULATED VALUES ARE FOR ANCHORS INSTALLED A MINIMUM OF 12 DIAMETERS ON CENTER AND A MINIMUM EDGE DISTANCE OF 12 DIAMETERS. SEE CBC 1910A.5.5 FOR ACCEPTANCE AND FAILURE CRITERIA.

B. WHEN THE EXPANSION-TYPE ANCHORS ARE TO BE USED FOR SILL PLATE BOLTING APPLICATIONS, 10% OF THE ANCHORS SHALL BE TORQUE TESTED. WHEN EXPANSION-TYPE ANCHORS ARE USED FOR OTHER STRUCTURAL APPLICATIONS, ALL SUCH EXPANSION ANCHORS SHALL BE TESTED. WHEN EXPANSION-TYPE ANCHORS ARE USED FOR NONSTRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE, 50% OR ALTERNATE BOLTS IN A GROUP SHALL BE TORQUE TESTED.

C. THE TESTING OF THE EXPANSION AND EPOXY ANCHORS SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO DSA ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TESTING REQUIREMENTS, DSA ENFORCEMENT AGENCY SHALL DETERMINE IF THE PROPOSED ADDITIONAL TESTING REQUIREMENTS ARE ACCEPTABLE.

ABBREVIATION

AB	ANCHOR BOLT	INFO	INFORMATION
ABV	ABOVE	INT	INTERIOR
ADD'L	ADDITIONAL		
ALT	ALTERNATE	KP	KING POST
ARCH	ARCHITECT,ARCHITECTURAL	KSI	KIPS PER SQ INCH
BTWN	BETWEEN	LBS	POUNDS
BLW	BELOW	LG	LONG
BLDG	BUILDING	LONG	LONGITUDINAL
BLKG	BLOCKING	LT WT	LIGHT WEIGHT
BM	BEAM		
BN	BOUNDARY NAILING	MAX	MAXIMUM
BOTT	BOTTOM	MB	MACHINE BOLT
BS	BOTH SIDES	MD	METAL DECK
BSMT	BASEMENT	MECH	MECHANICAL
		MFR	MANUFACTURER
CLR	CLEAR	MIN	MINIMUM
CLG	CEILING	MISC	MISCELLANEOUS
CMU	CONCRETE MASONRY UNITS		
COL	COLUMN	NS	NEAR SIDE
CONC	CONCRETE	NW	NORMAL WEIGHT
CONN	CONNECTION		
CONST	CONSTRUCTION	OC	ON CENTER
CONT	CONTINUOUS	OPP	OPPOSITE
CONTR	CONTRACTOR		
CF	CUBIC FOOT	PSF	POUNDS PER SQ FOOT
CJ	CONST JOINT	PSI	POUNDS PER SQ INCH
CVR	COVER		
		REINF	REINFORCEMENT
DIA	DIAMETER	REQ	REQUIRED
DIR	DIRECTION		
DWG	DRAWING	SCHED	SCHEDULE
		SF	SQUARE FOOT
EA	EACH	SHT	SHEET
EF	EACH FACE	SIM	SIMILAR
ELEC	ELECTRICAL	SPEC	SPECIFICATION
EL	ELEVATION	SQ	SQUARE
ENGR	ENGINEER	STD	STANDARD
EXP JT	EXPANSION JOINT	STL	STEEL
EQ	EQUAL	STRUCT	STRUCTURAL
EXT	EXTERIOR	SYM	SYMMETRICAL
		THK	THICK
FF	FINISHED FLOOR	T&B	TOP & BOTTOM
FG	FINISHED GRADE	TOF	TOP OF FOOTING
FL	FLOOR	TL	TOP OF LEDGER
FS	FAR SIDE	TOS	TOP OF STEEL, TOP OF SHEATHING
FDN	FOUNDATION	TRANSV	TRANSVERSE
FOC	FACE OF CONCRETE	TS	TUBE STEEL
FOS	FACE OF STUD	TYP	TYPICAL
FT	FOOT, FEET		
FOOTING	FTG	UNO	UNLESS NOTED OTHERWISE
GA	GAGE	VERT	VERTICAL
GALV	GALVANIZED		
GND	GROUND	WF	WIDE FLANGE BEAM
GR	GRADE	W/	WITH
		W/O	WITHOUT
HB	HEADED BOLT	WP	WATERPROOFING
HT	HEIGHT	WWF	WELDED WIRE FABRIC
HORIZ	HORIZONTAL	WT	WEIGHT
HS	HIGH STRENGTH	WP	WORKING POINT
		WS	WELDED STUD

POWDER DRIVEN SHOT PINS (LOW VELOCITY)

1. SHOT PINS MAY BE USED FOR SHEAR LOADS AND THEY MAY BE USED IN TENSION TO SUPPORT LOADS LESS THAN 100 POUNDS FOR MINOR LOADS LIKE ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT, ETC. ANY SHOT ANCHORS MUST HAVE ICC APPROVAL FOR USE ON CONCRETE CURBS.

2. THE ALLOWABLE LOADS SHALL BE 100 POUNDS OR 80 % OF ESR 1663 VALUES, WHICHEVER IS LESS. QUALIFICATIONS FOR USE OF ALL POWER ACTUATED TOOLS MUST MEET ANSI A10.3 STANDARD AS REQUIRED BY THE MANUFACTURER AND ALL OSHA REQUIREMENTS.

3. TESTING - THE OPERATOR, TOOL AND FASTENER SHALL BE PRE - QUALIFIED BY THE PROJECT INSPECTOR. THE INSPECTOR SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL - OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PIN. THEREAFTER, RANDOM TESTS UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS. IF ANY PIN FAILS TESTING, TEST ALL PINS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL (20) CONSECUTIVE PASS, THEN RESUME THE INITIAL TESTING FREQUENCY.

4. SHOT PINS SHALL BE HILTI. X - U (ESR 2269) AND CAN BE USED TO CONNECT METAL STUD TRACK OR WOOD SILL TO

- CONCRETE AND MASONRY — X - U 0.157 SHANK DIA.
  W/ 1-1/2" MIN.\ PENETRATION

WOOD

1. ALL WOOD MEMBERS SHALL BE DOUGLAS FIR LARCH #1 GRADE, EXCEPT BLOCKING MAY BE #2 GRADE, CONFORMING TO THE WCLIB GRADING RULES #16, OR AS SPECIFICALLY CALLED FOR ON THE DRAWINGS. EACH PIECE OF LUMBER SHALL BE GRADE MARKED. ALL MEMBERS TO HAVE MOISTURE CONTENT LESS THAN 19% AT TIME OF INSTALLATION.

2. ALL LUMBER WHICH COMES IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE DOUGLAS FIR NO. 2 OR BETTER, PRESSURE TREATED AND BEAR THE MARK INDICATING CONFORMANCE WITH THE REQUIREMENTS OF AWPA STANDARD U1 AND T1. THE LUMBER SHALL BE PRESSURE TREATED WITH THE CHEMICAL ACZA, BORATE OR EQUAL. WHERE SILLS ARE CUT, DRILLED OR NOTCHED THEY SHALL BE TREATED WITH A PRESERVATIVE THAT MEETS THE AWPA STANDARD U1 AND APPROVED BY THE ARCHITECT AND THE ENFORCEMENT AGENCY. ON ALL EXPOSED SURFACES FROM WHICH THE PRESERVATIVE TREATMENT HAS BEEN REMOVED. SILLS AT SHEAR WALLS AND BEARING WALLS SHALL BE FLAT AND UNIFORM ON CONCRETE SURFACE SO AS TO OBTAIN CONTINUOUS BEARING.

3. ALL PLYWOOD SHALL BE MANUFACTURED USING EXTERIOR GLUE AND SHALL CONFORM TO U.S. PRODUCT STANDARD PS-1, SECTION 7. PANELS SHALL CONFORM TO THE GRADES SPECIFIED ON THE DRAWINGS. PANELS EXPOSED TO WEATHER SHALL BE EXTERIOR GRADE. EACH PANEL SHALL BEAR MARKINGS IDENTIFYING THE QUALIFIED TESTING AND INSPECTION AGENCY, GRADE, NOMINAL THICKNESS, SPAN RATING, EXPOSURE DURABILITY CLASSIFICATION AND STANDARD TO WHICH IT IS CERTIFIED.

4. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL OF THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND THE ENFORCEMENT AGENCY. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING IS NOT ALLOWED FOR 5/16 INCH PLYWOOD. IF THE NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HELD HAMMER, OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOTE MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY AND MACHINE NAILING SHALL BE DISCONTINUED.

5. ALL BOLTED CONNECTIONS ARE TO BE RETIGHTENED PRIOR TO CLOSING IN.

6. NAILING SHALL BE WITH COMMON NAILS AND SHALL CONFORM TO THE CBC NAILING SCHEDULE TABLE 2304.10.1

7. SHEET METAL HANGERS, TIES, BRIDGING ANCHORS, ETC. SHALL BE BY THE SIMPSON COMPANY OR APPROVED EQUAL.

8. BLOCKING AND BRIDGING TO BE PROVIDED PER CBC 2308.4.6 AND 2308.7.8.

9. FOR 10d NAILS AT PLYWOOD SHEAR WALLS AND ROOF DIAPHRAGMS , PROVIDE 1½" MINIMUM PENETRATION INTO FRAMING PER AWS SDPWS (FORMERLY ANSI/AF & PA SDPWS)TALBES.

GLU LAM BEAMS

1. STRUCTURAL GLUED LAMINATED TIMBER SHALL BE DOUGLAS FIR FABRICATED TO CONFORM TO STANDARD SPECIFICATIONS FOR THE DESIGN AND FABRICATION OF STRUCTURAL GLUED LAMINATED TIMBER PER ANSI A190.1 AND AITC 117-2004 COMBINATION 24 F-V4 FOR SIMPLE SPAN & 24F-V8 FOR CANTILEVERED UNLESS NOTED OTHERWISE. GLULAM BEAMS ARE DESIGNED FOR DRY SERVICE CONDITION, U.N.O. SEE TYPICAL DETAIL 17/S1.3 FOR TENSION LAP SPLICE REQUIREMENTS OF GLULAMS. GLULAM BEAMS SHALL BE PROTECTED DURING SHIPPING AND FIELD HANDLING. PROVIDE SEALING AND WRAPPING IN ACCORDANCE WITH AITC 111. ALL GLUED LAMINATED TIMBER EXPOSED TO WEATHER SHALL BE ALASKAN CEDAR. (20F V12 - AC/AC)

COMPOSITE LUMBER

1. STRUCTURAL COMPOSITE LUMBER SHALL BE LAMINATED VENEER LUMBER (LVL) OR APPROVED EQUAL. ALL LVL SHALL BE 2.0E AND IN ACCORDANCE WITH ESR # 1387. REFER TO SHEET S300 OF PC 04-114896 FOR ADDITIONAL NOTES.

   G = 125,000 PSI
   E = 2.0 X 10 PSI
   F_b = 2900 PSI
   F_t = 1805 PSI
   $F_{c\perp}$ = 800 PSI
   $F_{c\parallel}$ = 2635 PSI
   F_v = 285 PSI
   S.G. = 0.50

2. STRUCTURAL COMPOSITE LUMBER NOTED ON PLAN SHALL BE MANUFACTURED BY BOISE CASCADE VERSA-LAM 2.0 3100, ALL PARALLEL STRANDED LUMBER (PSL) NOTED OR APPROVED EQUAL CAN BE SUBSTITUTED WITH VERSA-LAM 2.0 3100. ALL VERSA-LAM SHALL BE 2.0E AND IN ACCORDANCE WITH ESR # 1040

   G = 125,000 PSI
   E = 2.0 X 10 PSI
   F_b = 3100 PSI
   F_t = 2150 PSI
   $F_{c\perp}$ = 750 PSI
   $F_{c\parallel}$ = 3000 PSI
   F_v = 285 PSI
   S.G. = 0.50

EXPANSION OR EPOXY - TYPE ANCHORS

1. INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2016 CBC 1910A.5.

2. INSTALLATION SHALL BE CONTINUOUSLY INSPECTED IN ACCORDANCE WITH ICC EVALUATION .

3. LOAD TEST FOR VALUES SHOWN U.N.O. ARE IN ACCORDANCE WITH CBC, SECTION 1910A.5.4

REINFORCED CONCRETE (CAST-IN-PLACE)

1. STRUCTURAL CONCRETE AND CONCRETE PRACTICES SHALL CONFORM TO ACI 318 CURRENT EDITION AS WELL AS ALL APPLICABLE CODES STATED IN GENERAL NOTE.

2. ALL CONCRETE DETAILS SHALL BE IN ACCORDANCE WITH ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", UNLESS NOTED OTHERWISE.

3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS. ALL CONCRETE NORMAL WEIGHT U.N.O.

	STRENGTH (PSI)	CEMENT TYPE	W/C	WT (PCF)	MAX NOMINAL AGG:
SLAB ON GRADE	4500	V	0.45	145	1"
FOUNDATIONS	4500	V	0.45	145	1"

4. ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP NO GREATER THAN 4" EXCEPT FOR FOUNDATIONS WHICH MAY HAVE 5" MAX SLUMP.

5. MIX DESIGNS SHALL BE APPROVED BY STRUCTURAL ENGINEER PRIOR TO USE.

6. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.

REINFORCING STEEL

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 40 FOR#3 AND SMALL AND GRADE 60 FOR #4 AND LARGER. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.

2. WELDED WIRE FABRIC (WWF) SHALL COMPLY WITH ASTM A1064, AND SHALL BE LAPPED 1-1/2 SPACES (12" MIN).

3. ALL REINFORCING STEEL, DOWELS, ANCHOR BOLTS, ETC. SHALL BE WELL SECURED IN PLACE PRIOR TO PLACING CONCRETE.

4. ALL REINFORCING STEEL SHALL BE LAPPED AS SPECIFIED ON THE DETAIL. WHERE NOT SPECIFICALLY INDICATED ON THE DRAWING, ALL REINFORCING STEEL SHALL BE LAPPED USING THE TENSION SPLICE LENGTHS IN THE SCHEDULE ON DRAWING UNLESS NOTED OTHERWISE. TERMINATED CONTINUOUS BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.

5. DOWELS SHALL BE PROVIDED AT POUR AND CONSTRUCTION JOINTS AND SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCING SHOWN FOR THE SUBSEQUENT CONSTRUCTION.

6. REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM COVERS, U.N.O.

   CONCRETE AGAINST EARTH (NOT FORMED) ———— 3"
   CONCRETE AGAINST EARTH (FORMED AND TROWELED) ———— 2"
   WALL AND CURB ———— 1-1/2"
   SLAB ON GRADE ———— CENTER

7. WELDING OF REINFORCING STEEL SHALL COMPLY WITH AWS D1.4. ALL BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.

8. SUBMIT REINFORCING STEEL SHOP DRAWING TO ARCHITECT FOR APPROVAL.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A6 AND SHALL BE FABRICATED ACCORDING TO AISC PRACTICE AND SPECIFICATION FOR BUILDING.

2. MATERIALS: PROVIDE STRUCTURAL STEEL COMPLYING WITH ASTM STANDARD AS FOLLOWS, U.N.O.

   A. ALL WIDE FLANGES — ASTM A992, GRADE 50
   B. TUBES (HSS ROUNDS, HSS TUBES) — ASTM A500, GRADE B (46ksi)
   C. PIPES — ASTM A53, GRADE B (35ksi)
   D. CHANNELS, ANGLES, PLATES — ASTM A36 (U.O.N.)
   E. ANCHOR BOLTS — ASTM A307
   F. THREADED ROD — ASTM A36

3. BOLTS

   A. UUSE ASTM A307 BOLTS, NUTS AND WASHERS UNLESS NOTED OTHERWISE.
   B. STANDARD BOLT HOLE SHALL BE 1/16" LARGER IN DIAMETER THAN NORMAL BOLT DIAMETER, U.N.O.
   C. OVERSIZE BOLTS HOLES FOR ANCHOR BOLTS IN BASE PLATE MAY BE ALLOWED BY PROVIDING 3-1/2" SQUARE PLATE WASHERS UNDER NUT U.N.O. THICKNESS OF PLATE WASHER SHALL BE 0.5 TIMES THE DIAMETER OF ANCHOR BOLTS U.N.O. USE 5/16 INCH FILLET WELD AROUND PLATE WASHER U.N.O.

4. WELDING

   A. ALL WELDS SHALL BE DONE USING THE SHIELDED ELECTRIC ARC PROCESS BY AWS CERTIFIED WELDERS USING AWS D1.1 LOW - HYDROGEN E70XX ELECTRODES.
   B. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE SYSTEMS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CHARPY V - NOTCH TOUGHNESS OF 20FT-LBS AT MINUS 20 DEGREES F. AS DETERMINED BY AWS CLASSIFICATION.
   C. CONTINUOUS INSPECTION IS REQUIRED FOR ALL FIELD AND SHOP WELDING BY AN INSPECTOR APPROVED BY GOVERNING CODE - AUTHORITY (DSA FOR PUBLIC SCHOOLS)
   D. WELDERS SHALL BE QUALIFIED AND CERTIFIED BY THE GOVERNING CODE AUTHORITY. (DSA FOR PUBLIC SCHOOLS)

5. STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED U.N.O. (SEE ARCHITECTURAL DRAWINGS FOR OTHER CONDITION)

6. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.

GENERAL

1. ALL WORKS AND MATERIALS SHALL CONFORM TO THE 2016 CALIFORNIA BUILDING CODE AND ALL LOCAL CODES.

2. STRUCTURAL DRAWINGS ARE PARTS OF CONTRACT DOCUMENTS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND COORDINATE WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER CONSULTANTS, PROJECT SHOP DRAWINGS AND FIELD CONDITIONS, AND SHALL NOTIFY THE ARCHITECT AND ENGINEERS OF ANY DISCREPANCIES.

3. STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR SHALL PROVIDE MEANS AND METHODS AS REQUIRED. PROVIDE ADEQUATE BRACING, SHORING, TEMPORARY STRUCTURES AND PARTIALLY COMPLETED PORTIONS OF WORKS COMPLYING WITH NATIONAL, STATE AND ALL LOCAL SAFETY ORDINANCES.

4. TYPICAL DETAILS AND SCHEDULES MAY NOT BE REFERENCED ON DRAWINGS. CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH ALL TYPICAL DETAILS AND SCHEDULES PRIOR TO PROCEED WITH WORK.

5. CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGE.

6. THE CONTRACTOR SHALL NOT DEVIATE FROM THE TENDERED DOCUMENTS WITHOUT WRITTEN APPROVAL OF THE ARCHITECT AND ENGINEERS.

7. JOB SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

8. FOR ALL LOCATIONS OF DATUM ELEVATION 0.0; REFER TO ARCHITECTURAL AND SITE DRAWINGS. ALL ELEVATIONS INDICATED ON THE STRUCTURAL DRAWINGS ARE MEASURED WITH RESPECT TO THIS DATUM, UNLESS NOTED OTHERWISE.

DESIGN LOADS

1. WIND DESIGN LOADS

   ULTIMATE DESIGN WIND SPEED..............................115 MPH
   EXPOSURE.. C
   Kz = .85
   Kzt = 1.0
   Kd = .85
   INTERNAL WIND COEFFICIENT.................................+/- .18

COMPONENTS AND CLADDING (LRFD)

ASCE 7-10 DIRECTIONAL PROCEDURE, C&C - CHAPTER 30, PART 4
THIS PROCEDURE APPLIES TO WIND LOADS OF ENCLOSED BUILDINGS, AS DEFINED IN SECTION 26.2

C&C WALL AND ROOF PRESSURES (psf)

EFFECTIVE WIND AREA (sf)	ZONE 1		ZONE 2		ZONE 3		ZONE 4		ZONE 5	
	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2
10	-38.6	NA	-60.6	NA	-82.6	NA	-26.4	26.4	-48.4	26.4
500	-27.0	NA	-42.4	NA	-57.8	NA	-21.1	18.5	-29.0	18.5

C&C PARAPET PRESSURES (psf)

EFFECTIVE WIND AREA (sf)	WINDWARD PARAPET (LOAD CASE A)				LEEWARD PARAPET (LOAD CASE B)			
	WINDWARD FACE		LEEWARD FACE		WINDWARD FACE		LEEWARD FACE	
	@ ZONE 4	@ ZONE 5	@ZONE 2	@ZONE 3	@ZONE 4	@ZONE 5	@ZONE 4	@ZONE 5
10	28.3	28.3	-65.0	-88.5	28.3	28.3	-28.3	-51.9
500	19.8	19.8	-45.5	-61.9	19.8	19.8	-22.6	-31.1

C&C ROOF OVERHANG PRESSURES (psf)

EFFECTIVE WIND AREA (sf)	Povh				Ps			
	@ZONE 2		@ZONE 3		@ZONE 4		@ZONE 5	
	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2	LOAD CASE 1	LOAD CASE 2
10	-60.6	NA	-95.0	NA	-26.4	26.4	-48.4	26.4
500	-60.6	NA	-85.5	NA	-21.1	18.5	-29.0	18.5

2. SEISMIC DESIGN LOADS

   RISK CATEGORY..III
   SITE CLASS...D
   SEISMIC DESIGN CATEGORY.....................................D
   IMPORTANCE FACTOR...1.25
   S_S = 0.879 — Fa=1.148
   S_1 = 0.342 — Fv=1.716
   S_{DS} = 0.673
   S_{D1} = 0.391 — LATITUDE = 32.86289; LONGITUDE = -117.00539

BLDG	ANALYSIS PROCEDURE
ALL	EQUIVALENT LATERAL FORCE

BLDG	DIRECTION	SEISMIC FORCE RESISTING SYSTEM	R	RHO	Cd	OMEGA	Cs
LRC BUILDING	BOTH	LFWSW	6.5	1.0	4.0	2.5	0.129 (LRFD)

"LFWSW" - LIGHT FRAMED WOOD SHEAR WALL

VERTICAL IRREGULAR: 4/TABLE 12.3-2, IN-PLANE DISCONTINUITY IN VERTICAL LATERAL FORCE RESISTING ELEMENT.

3. ROOF LIVE LOAD = 20PSF

FOUNDATION

1. FOUNDATION DESIGN IS BASED ON ORIGINAL GEOTECHNICAL REPORT PREPARED BY:

   NINYO & MOORE
   PROJECT NUMBER 108773001, DATED MAY 30, 2019

2. ALLOWABLE DESIGN VALUE :

   BEARING PRESSURE — 3000 PSF
   PASSIVE PRESSURE — 300 PCF (LEVEL)
   FRICTION — 0.30
   SOIL WEIGHT — 120 PCF

3. FOOTING SHALL REST ON COMPACTED SOIL, SEE GEOTECHNICAL REPORT FOR OVEREXCAVATION AND RECOMPACTION REQUIREMENTS. AND 15/S1.1

4. NO BACKFILL SHALL BE DONE AGAINST FOUNDATION AND RETAINING WALL UNTIL CONCRETE HAS ATTAINED AT LEAST 75% OF ITS DESIGN STRENGTH. ADEQUATELY SHORE RETAINING WALLS DURING BACKFILL.

5. CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION SLOPES. WHERE NECESSARY, SHEETING AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIE BACKS AND BRACING.

6. METHOD EMPLOYED IN ALL SHEETING AND SHORING SHALL BE DESIGNED BY A LICENSED PROFESSIONAL CIVIL ENGINEER.

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DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison | Date

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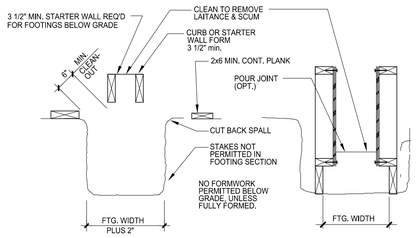
Architect

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

GENERAL NOTES

Drawn: MR
Checked: SW
Date: JANUARY 14, 2020
Job: SSD-SC-03

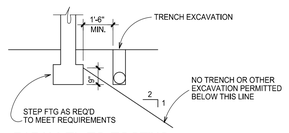
S0.1



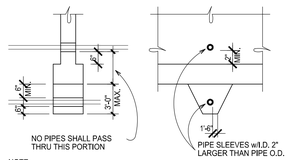
MIN. FORMWORK FULLY FORMED

NOTES:
1. UNFORMED FOOTING DETAIL MAY BE USED PROVIDED TRENCH IS STABLE & APPROVED BY STRUCTURAL ENGINEER.
2. SOLID FORM LUMBER MAY BE USED IN UNEXPOSED CONSTRUCTION IF IN GOOD SOUND CONDITION.
3. ALL ANCHOR BOLTS, REINFORCING, INSERTS, ETC. TO BE FIRMLY TIED IN PLACE PRIOR TO PLACING CONCRETE.

1 FORMS FOR FOUNDATION



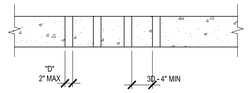
PARALLEL TO FOOTING



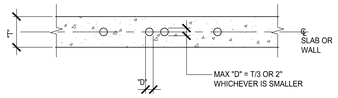
NOTE
FOR PIPE MORE THAN 3'-0" BELOW BOTTOM OF FOOTING USE COMPACTED FILL.

TRANSVERSE TO FOOTING

2 PIPES THROUGH FOOTING

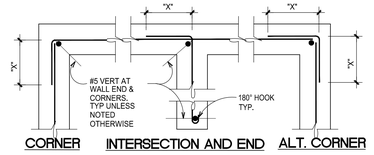


PIPING THRU SLAB OR WALL



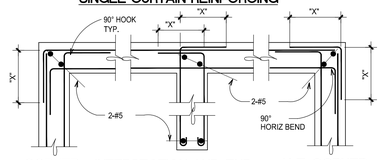
CONDUIT IN SLAB OR WALL

3 PIPES & CONDUIT IN WALLS AND SLAB



CORNER INTERSECTION AND END ALT. CORNER

SINGLE CURTAIN REINFORCING

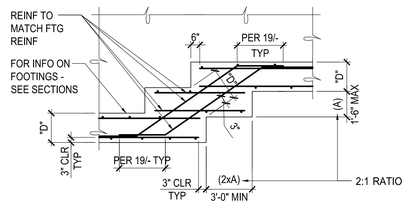


CORNER INTERSECTION AND END ALT. CORNER

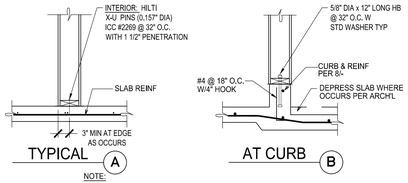
DOUBLE CURTAIN REINFORCING

NOTE: "X" = 19/S1.1 CLASS 'B' AT CONC UNLESS NOTED
"X" = 60 DIA AT MASONRY UNLESS NOTED

4 REINF @ WALL AND GRD BEAM INTERSECTION

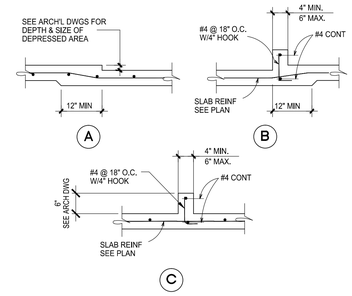


6 STEPPED FOOTING DETAIL

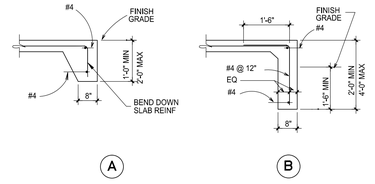


NOTE:
PROVIDE WASHER AT ALL ANCHOR PINS AND BOLTS.

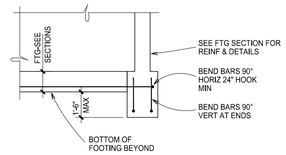
7 NON-BEARING SILL PLATE ANCHORAGE



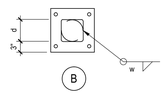
8 DEPRESSED SLAB AND CONC CURB

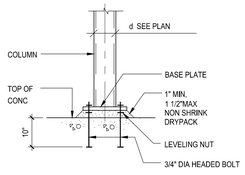


9 SLAB EDGE



10 STEPPED FOOTING @ CORNER



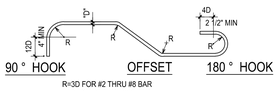


SCHEDULE		
MEMBER SIZE d	PLATE THICKNESS	WELD w
LESS THEN 4"	5/8"	1/4"
4-1/4" TO 6"	3/4"	1/4"
6-1/4" TO 8"	1"	5/16"
8-1/4" TO 12"	1-1/4"	5/16"
12-1/4" TO 24"	1-1/2"	3/8"

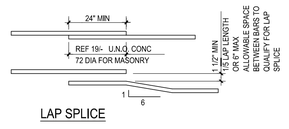
11 GRAVITY COLUMN BASE PLATE

135 ° BEND 90 ° BEND

COLUMN TIE OR BEAM STIRRUP

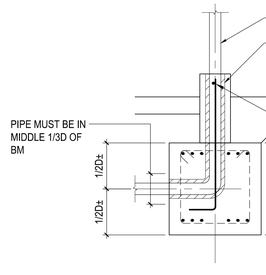


R=3D FOR #2 THRU #8 BAR
4D FOR #9 THRU #11 BAR
12D FOR #14 OR #18 BAR



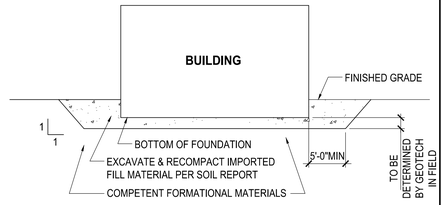
LAP SPLICE

13 REINFORCING STEEL DETAIL



NOTE:
PIPE SHALL BE MIN 2'-0" AWAY FROM HOLD DOWN TYP

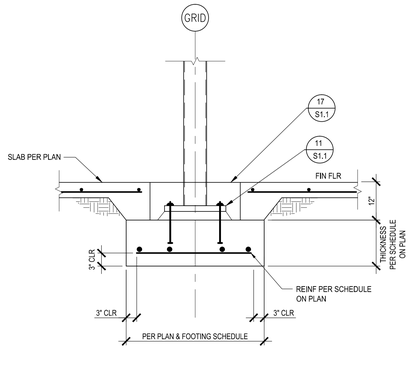
14 PIPE THRU FOOTING



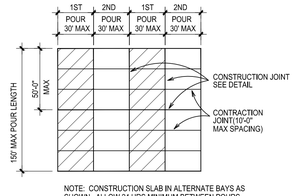
SOIL EXCAVATION AND RECOMPACTION

1. THE GRADING CONTRACTOR SHALL NOTIFY THE PROJECT GEOTECHNICAL ENGINEER NOT LESS THAN 72 HOURS IN ADVANCE OF THE LOCATION OF ANY SOILS PROPOSED FOR IMPORT. EACH PROPOSED IMPORT SOURCE SHALL BE SAMPLED, TESTED AND APPROVED PRIOR TO DELIVERY OF SOILS FOR USE ON THE SITE.
2. LOCAL AREAS MAY REQUIRE DEEPER EXCAVATION W/ THE EXACT DEPTH DETERMINED BY GEOTECHNICAL ENGINEER.

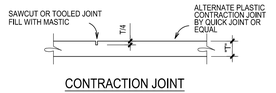
15 BUILIDNG OVER EXCAVATION



16 INTERIOR PAD DETAIL



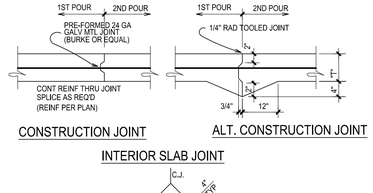
NOTE: CONSTRUCTION SLAB IN ALTERNATE BAYS AS SHOWN. ALLOW 24 HRS MINIMUM BETWEEN POURS. CONTRACTOR MAY POUR SLAB IN CHECKERBOARD PATTERN, IF DESIRED, WITH 30'-0" MAXIMUM DIMENSION EACH SIDE & CONTRACTION JOINTS AT 10'-0" EACH WAY.



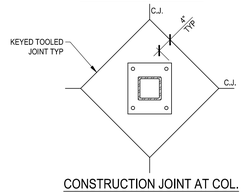
CONTRACTION JOINT

NOTES:
1. PROVIDE CONTRACTION OR CONSTRUCTION JOINTS AT CENTERLINE OF COLUMNS AND 10'-0" MAX O.C. UNO.

17 SLAB ON GRADE



INTERIOR SLAB JOINT



CONSTRUCTION JOINT AT COL.

18 CONSTRUCTION JOINTS

SCHEDULE									
CLASS A SPLICE (DEVELOPMENT) LENGTHS									
CONCRETE	BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
fc=4500	TOP BAR	24	30	35	51	59	66	73	80
HARD ROCK	OTHER BAR	18	23	27	40	45	51	56	62
CLASS B SPLICE LENGTHS									
CONCRETE	BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
fc=4500	TOP BAR	31	38	46	67	78	86	95	104
HARD ROCK	OTHER BAR	24	30	35	51	59	66	73	80

NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW THEM.
2. WALL BARS ARE NOT CONSIDERED TOP BARS.
3. USE CLASS B SPLICES TYPICALLY U.N.O.
4. ALL LENGTHS ARE IN INCHES.
5. REF. ACI 318 -14 CHAPTER 12 SECTION 25.5.

19 REINFORCING BAR SPLICE SCHEDULE IN CONCRETE

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DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revision	Date

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OCTOBER 31, 2021
STATE OF CALIFORNIA
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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TYPICAL CONCRETE DETAILS

Drawn: MR
Checked: SW
Date: JANUARY 14, 2020
Job: SSD-SC-03

S1.1

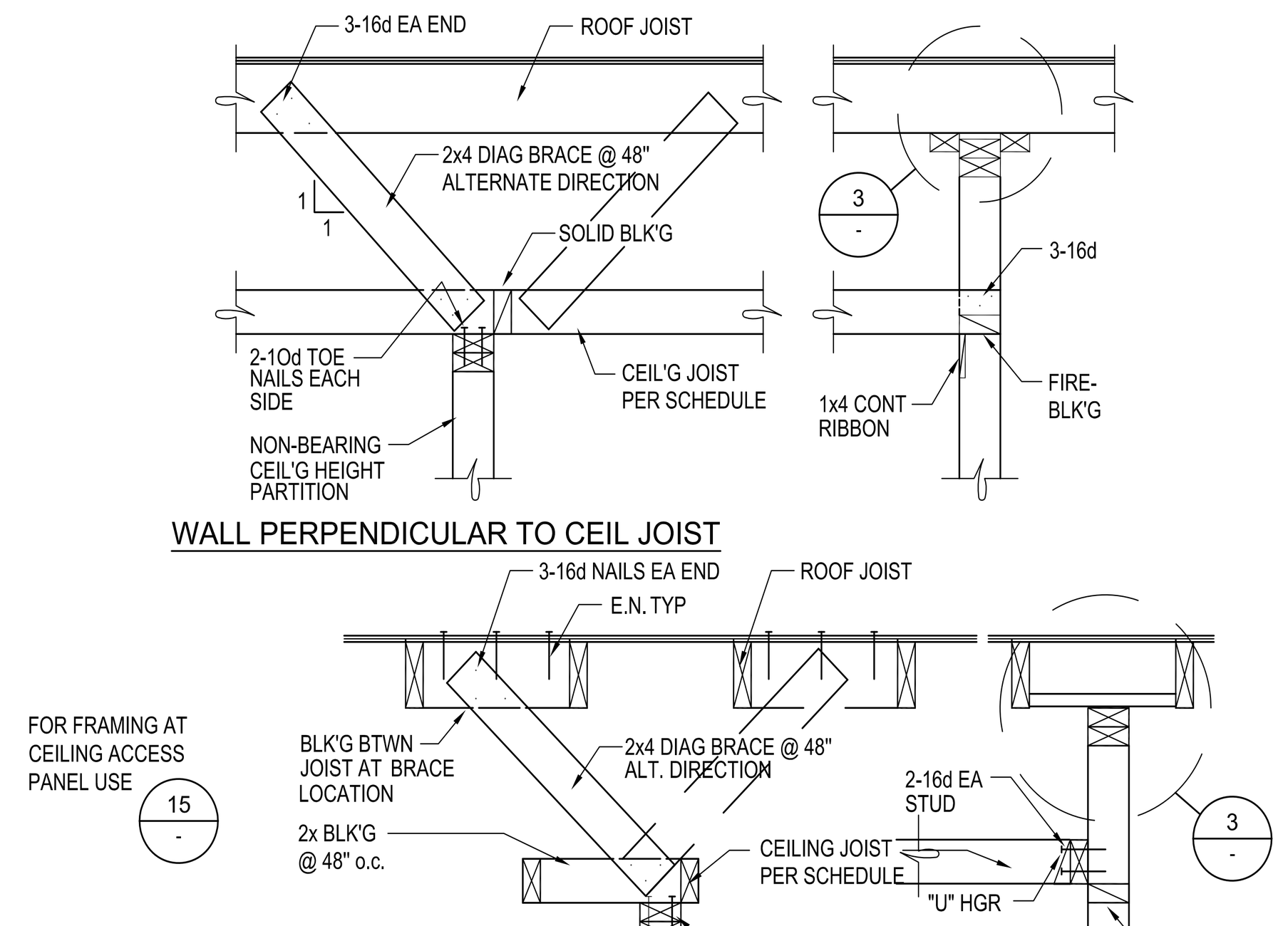
1 NAILING SCHEDULE

JOIST OR RAFTER TO SIDE OF STUD:
8" DEEP JOIST OR LESS .... 3 - 16d
EACH ADDITIONAL 4" OF DEPTH .... 1 - 16d
BRIDGING TO JOIST:
TOE NAIL EACH END .... 2 - 8d
BLOCKING BETWEEN JOISTS OR RAFTERS:
TOE NAIL EACH SIDE, EACH END .... 2 - 10d *
BLOCKING BETWEEN STUDS:
TOENAIL .... 4 - 8d
OR END NAIL .... 2 - 16d
1"x6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL .... 2 - 8d
WIDER THAN 1"x6" SUBFLOOR TO EA. JOIST, FACE NAIL .... 3 - 8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND & FACE NAIL .... 2 - 16d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL .... 16d @ 16"
SOLE PLATE TO JOIST OR BLK'G,
@ BRACED WALL PANELS .... 16d @ 16"
TOP PLATE TO STUD, END NAIL .... 2 - 16d
STUD TO SOLE PLATE:
TOENAIL .... 4 - 8d
OR END NAIL .... 2 - 16d
DOUBLE STUDS, FACE NAIL .... 16d @ 24"
DOUBLE TOP PLATES, FACE NAIL .... 16d @ 16"
DOUBLE TOP PLATES, LAP SPLICE .... 8 - 16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE:
TOENAIL .... 3 - 8d
RIM JOIST TO TOP PLATE:
TOENAIL .... 8d @ 6"
TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL .... 2 - 16d
CONTINUOUS HEADER, TWO PIECES - ALONG EA. EDGE .... 16d @ 16"
CEILING JOIST TO PLATE, TOENAIL .... 3 - 8d
CONTINUOUS HEADER TO STUD, TOENAIL .... 4 - 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL .... 3 - 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL .... 3 - 16d
JOIST OR RAFTER AT ALL BEARINGS:
TOE NAIL EACH SIDE .... 2 - 10d
1" BRACE TO EACH STUD & PLATE, FACE NAIL .... 2 - 8d
1"x8" SHEATHING OR LESS TO EA. BEARING, FACE NAIL .... 3 - 8d
WIDER THAN 1"x8" SHT'G TO EA BEARING, FACE NAIL .... 3 - 8d
BUILT UP CORNER STUDS .... 16d @ 24"
BUILT UP GIRDER AND BEAMS:
ALONG TOP AND BOTTOM OF BEAM OR JOIST .... 20d @ 32"
AT ENDS AND AT EACH SPLICE, STAGGER .... 2 - 20d
2" PLANKS, AT EA BEARING .... 2 - 16d
COLLAR TIES TO RAFTERS, FACE NAIL .... 3 - 10d

COMMON SHALL BE USED EXCEPT WHERE OTHERWISE STATED.

* WHEN POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS.

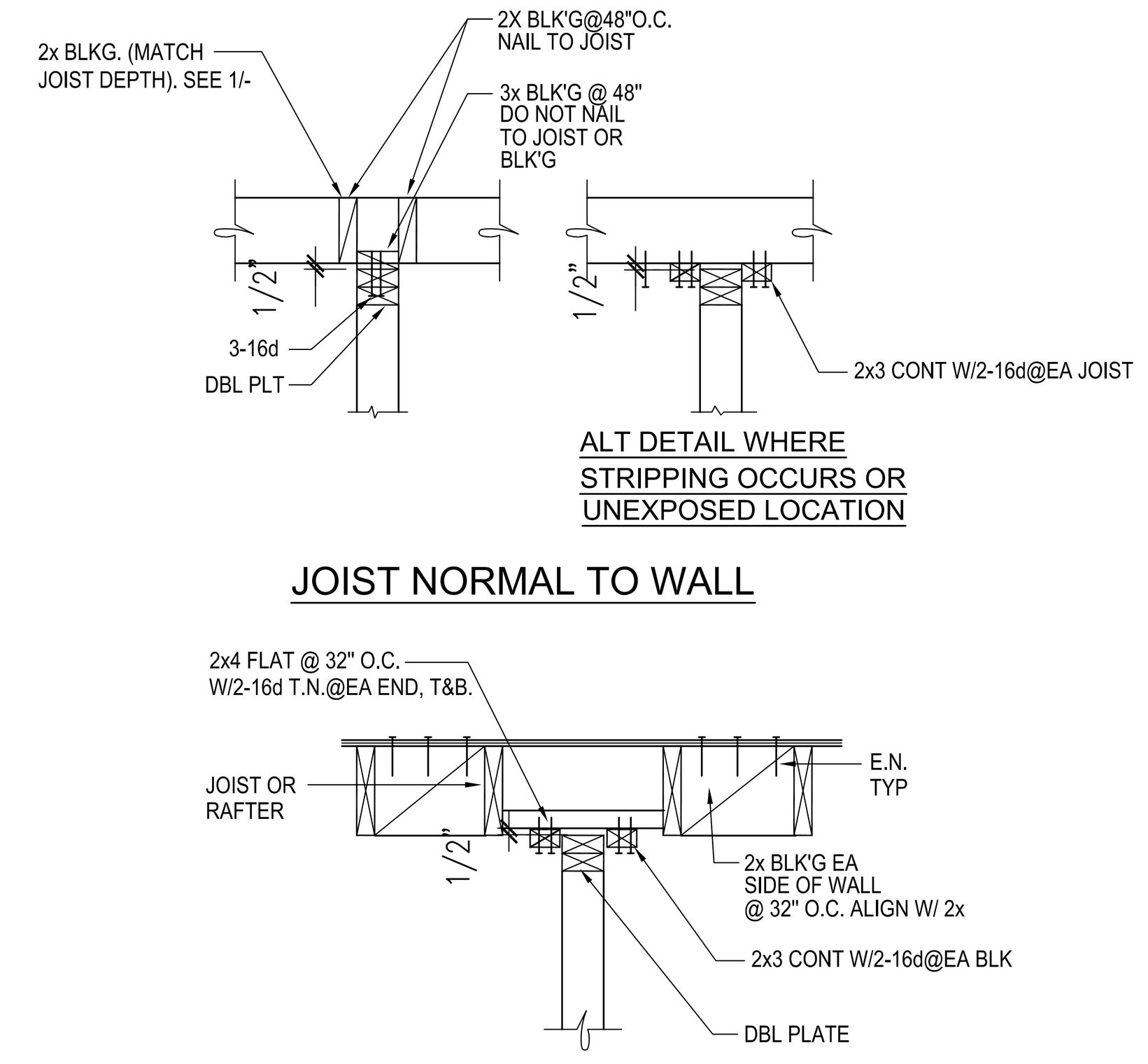
2 NON BEARING WALL BRACING



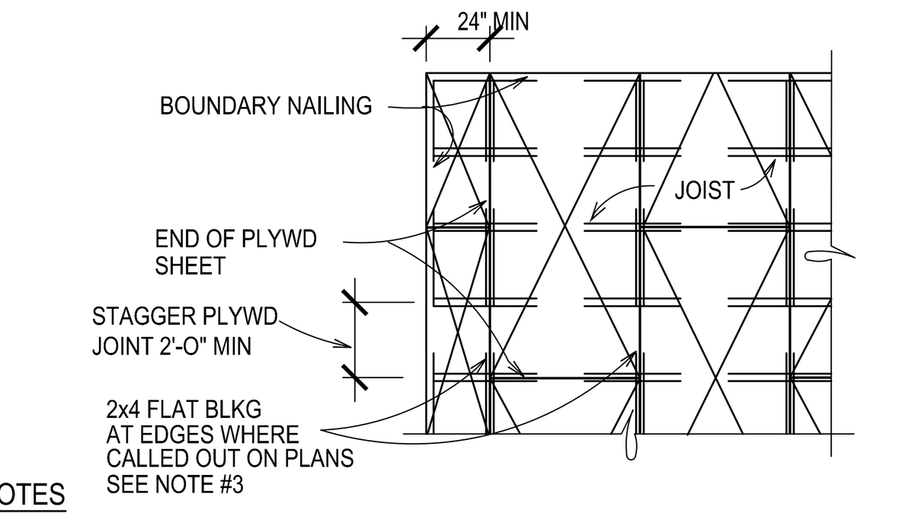
CEILING JOIST SCHEDULE	
SPAN	JOIST
≤ 8'-0"	2x4 @ 16"
8'-1" to 14'-0"	2x6 @ 16"
14'-1" to 18'-0"	2x8 @ 16"

WALL PARALLEL TO CEILING JOIST

3 NON BEARING WALL SUPPORT

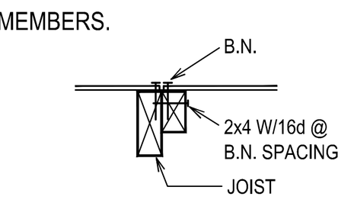


4 PLYWOOD ROOF DIAPHRAGM



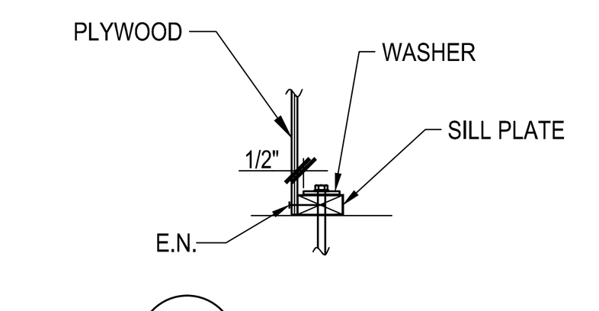
NOTES

1. RUN FACE GRAIN OF PLYWD PERPENDICULAR TO JOIST UNLESS NOTED OTHERWISE.
2. NAILS SHALL HAVE 3/8" MIN EDGE DISTANCE FROM EDGE OF PLYWD & FRAMING MEMBER. NAILS SHALL BE STAGGERED.
3. PROVIDE 3 x FRAMING WHERE NAIL SPACING IS LESS THAN 3" O.C. FOR 8d NAILS & 4" O.C. FOR 10d NAILS AT PLYWD JOINTS.
4. PROVIDE 3/4" NAIL EDGE DISTANCE AT 3 x MEMBERS.
5. WHERE JOIST LAP SPLICE OCCURS & PLYWD JOINT IS OFFSET, ADD 2x4 OR 3x4 NAILER AS SHOWN



6. BOUNDARY NAIL AT DIAPHRAM BOUNDARY, CHORDS, DRAG TIES, & WHERE CALLED OUT ON PLANS. DOUBLE ROW @ INTERIOR DRAG LINES
7. PLYWOOD JOINTS SHALL OCCUR AT THE CENTER OF FRAMING MEMBERS OR BLOCKING. THE MINIMUM EDGE DISTANCE FOR NAILS IN THE RECEIVING MEMBERS AND THE PLYWOOD SHALL BE 3/8" FOR 2-INCH NOMINAL RECEIVING MEMBERS AND 1/2" FOR 3-INCH NOMINAL RECEIVING MAMBERS. FLAT BLOCKING RECEIVING 10d NAILS SHALL BE 3-INCH BY 4-INCH NOMINAL OR LARGER.

5 WASHER SCHEDULE



BOLT SIZE	STEEL WASHERS		MALL IRON ROUND
	SQUARE	ROUND	
1/2"	3"x1/4"	3 1/2"x1/4"	3 1/2"x1/4"
5/8"	3"x1/4"	3 1/2"x1/4"	3 1/2"x5/16"
3/4"	3"x1/4"	3 1/2"x5/16"	3 1/2"x7/16"
7/8"	3 1/4"x5/16"	3 1/2"x3/8"	3 1/2"x7/16"
1"	4"x3/8"	4"x7/16"	4"x1/2"

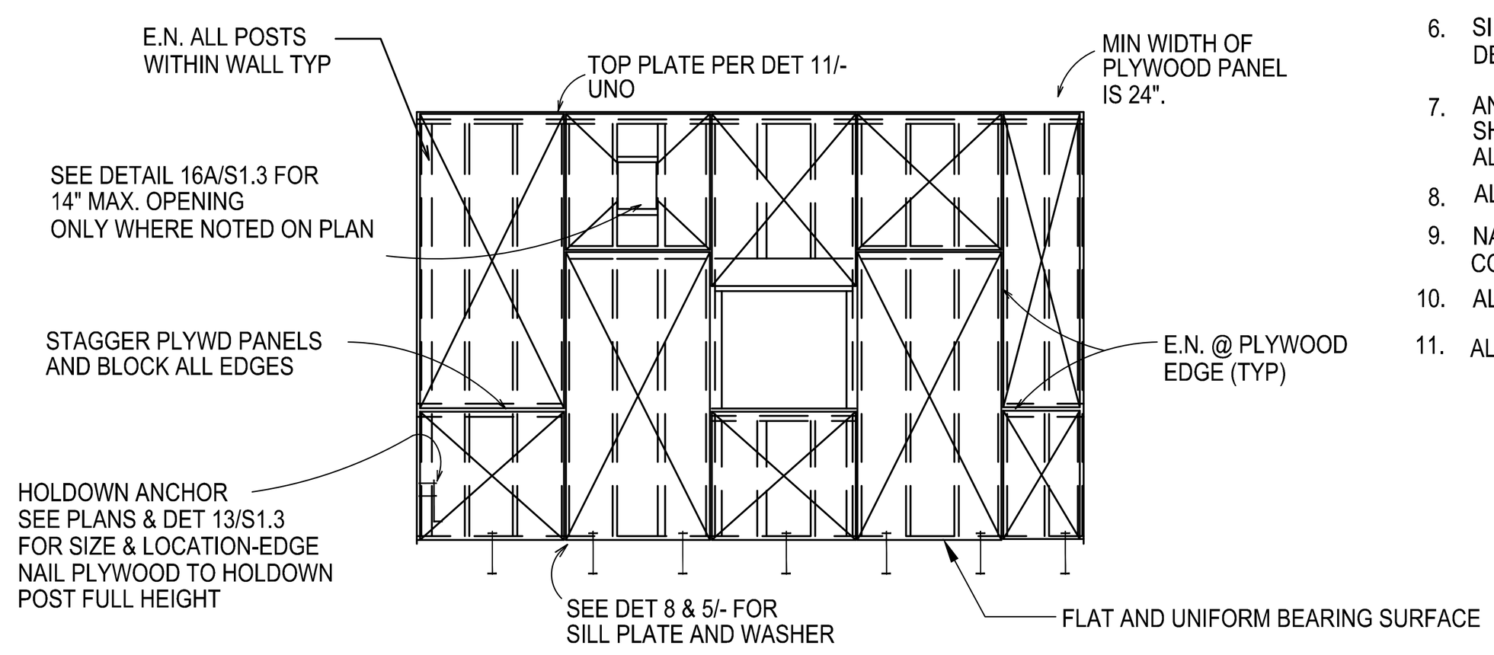
NOTES:

1. WASHERS SHALL BE USED UNDER ALL NUT & BOLT HEADS BEARING ON WOOD.
2. WASHER SCHEDULE ABOVE SHALL BE USED IN THE FOLLOWING LOCATIONS: ANCHOR BOLTS, WOOD TO STEEL & BOLTS IN TENSION AND SHEAR WALL A.B.
3. USE STANDARD CUT WASHERS AT ALL OTHER LOCATIONS.
4. WASHERS ABOVE ARE MIN. SIZES. SEE A/- FOR SHEAR WALL.

6 (NEW) SHEAR WALL SCHEDULE AND DETAIL

SHEAR WALL SCHEDULE

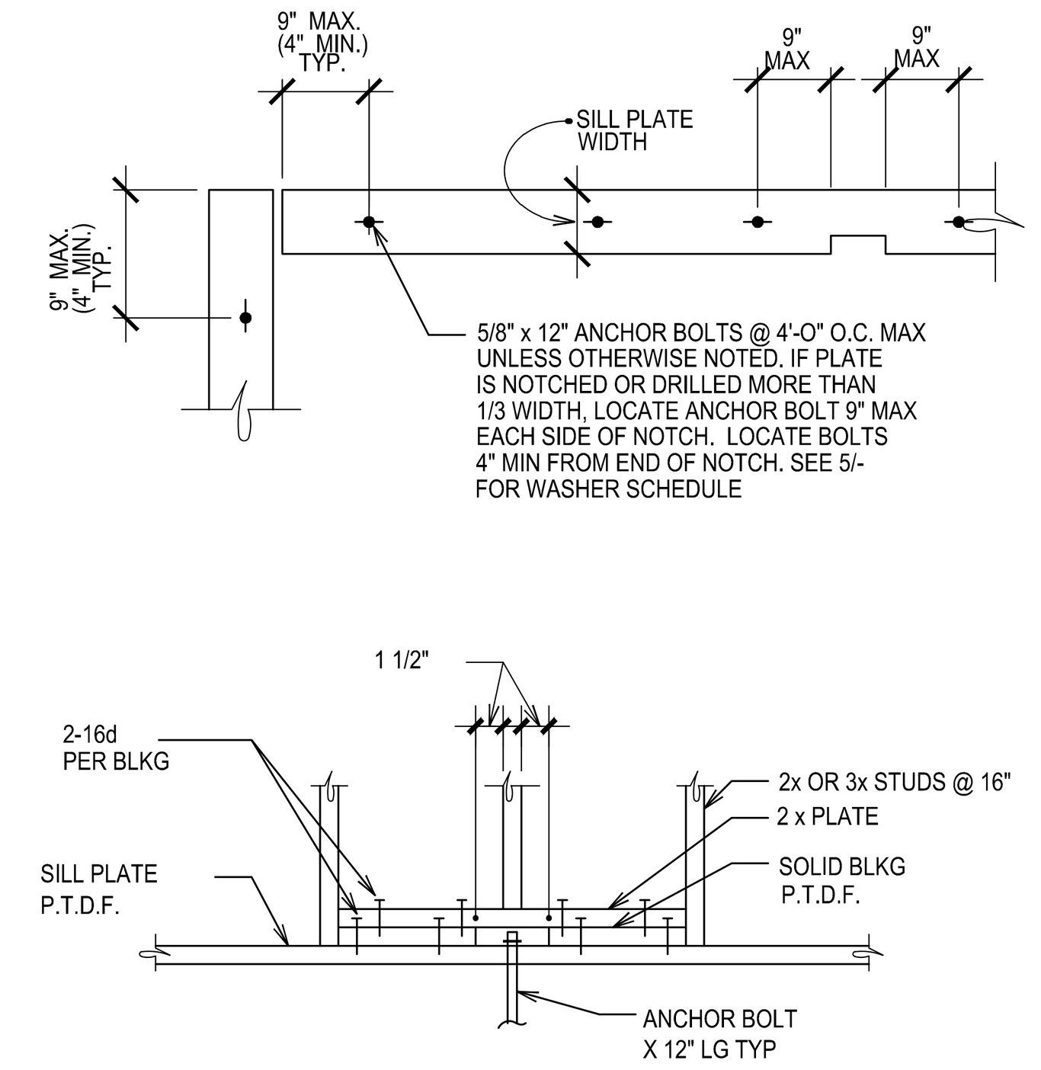
MARK	PLYWOOD	NAIL AND SPACING			EDGE STUD & BLK'G	SILL PLATE SEE NOTE #8			A35	SEISMIC SHEAR CAP. A.S.D.
		NAIL	E.N.	F.N.		CONNECTOR	SPAC'G	SILL PLATE		
A	15/32"	10d	6"	12"	2x	5/8"Øx12"H.B.	4'-0"	2x	@ 16"o.c.	340 #/ft
B	15/32"	10d	4"	12"	3x	5/8"Øx12"H.B.	2'-8"	3x	@ 16"o.c.	510 #/ft
C	15/32"	10d	3"	12"	3x	5/8"Øx12"H.B.	1'-4"	3x	@ 12"o.c.	665 #/ft
D	15/32"	10d	2"	12"	3x	5/8"Øx12"H.B.	1'-4"	3x	@ 8"o.c.	820 #/ft
E	3/8"	8d	6"	12"	2x	5/8"Øx12"H.B.	4'-0"	2x	@ 16"o.c.	280 #/ft



NOTES:

1. ALL PLYWOOD SHEATHING SHALL BE STRUCT I PLYWOOD.
2. ALL PLYWOOD EDGES SHALL BE BLOCKED WITH 2-INCH NOMINAL OR THICKER FRAMING. PLYWOOD MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY.
3. WHERE PLYWOOD PANELS ARE APPLIED ON BOTH FACES OF A WALL, PLYWOOD PANEL JOINTS SHALL OCCUR AT 3" NOMINAL OR THICKER FRAMING MEMBERS, INCLUDING BLOCKING, AND NAILS SHALL BE STAGGERED.
4. SHEARWALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE EITHER VERT OR HORIZ STAGGERED SPLICED JOINTS. AT CONT HORIZ JOINTS THE BLK'G SHALL BE 3" NOMINAL OR THICKER.
5. THE MINIMUM EDGE DISTANCE FOR NAILS IN THE RECEIVING MEMBERS AND THE PLYWOOD SHALL BE 3/8" FOR 2" NOMINAL RECEIVING MEMBERS AND 1/2" FOR 3" NOMINAL RECEIVING MEMBERS. BLK'G RECEIVING 10d NAILS SHALL BE 3" NOMINAL OR LARGER.
6. SILL PLATE SHALL BE PRESSURE TREATED D.F. AND CONFORM TO SILL PLATE DETAILS. PROVIDE MINIMUM OF 3 ANCHOR BOLTS IN ALL SHEARWALLS.
7. ANCHOR SPACING SHALL BE REDUCED TO HALF THE SPACING SHOWN WHERE SHEARWALL SHEATHING IS ON BOTH SIDES OF THE WALL (TWICE AS MANY A.B.). ALSO STAGGER NAILING @ JOINTS.
8. ALL DEFECTIVE NAILS SHALL BE REMOVED & REPLACED WITH SOUND NAILING.
9. NAILING WITH MACHINE NAILS SHALL CONFORM TO THE WOOD GENERAL NOTES ON COVER SHEET.
10. ALL ANCHOR BOLTS AT SHEAR WALL SHALL BE 12" LONG HEX BOLTS U.N.O.
11. ALL NAILS TO SILL PLATE (P.T.D.F.) SHALL BE GALVANIZED.

8 SILL PLATE DETAIL



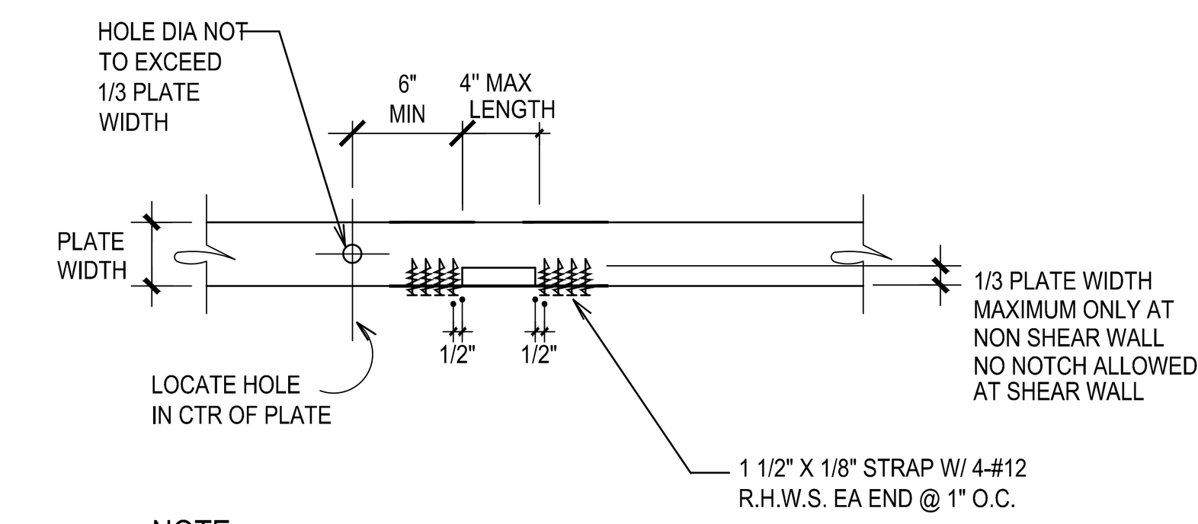
9 HEADER SCHEDULE

CLEAR OPNG WIDTH	HEADER SIZE	REMARKS
TO 4'-0"	6x6 OR 6x8	
4'-1" TO 6'-0"	6x6 OR 6x8	
6'-1" TO 8'-0"	6x8 OR 8x8	
8'-1" TO 10'-0"	6x10 OR 8x10	2-CRIPPLE STUDS AND 2 KING STUDS U.N.O.
10'-1" TO 12'-0"	6x12 OR 8x12	2-CRIPPLE STUDS AND 4 KING STUDS U.N.O.

NOTE:

USE ABOVE SCHEDULED SIZES ONLY WHERE SIZE IS NOT INDICATED ON PLANS & DETAILS

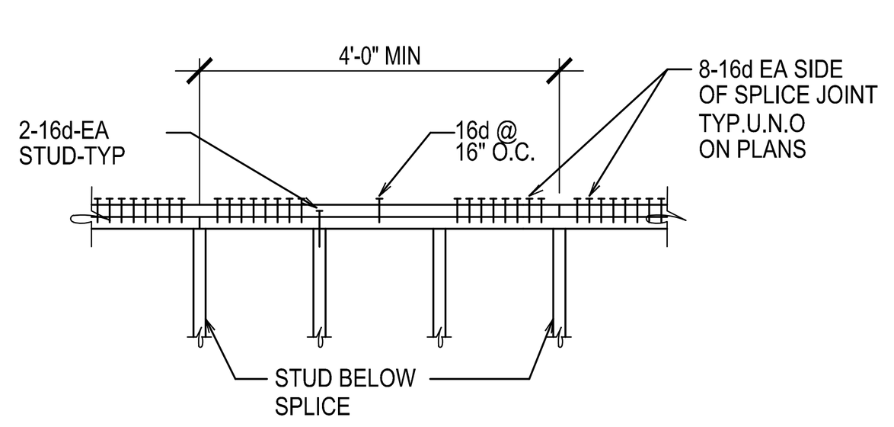
10 TOP PLATE NOTCH



NOTE:

NOTCHES NOT PERMITTED WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.

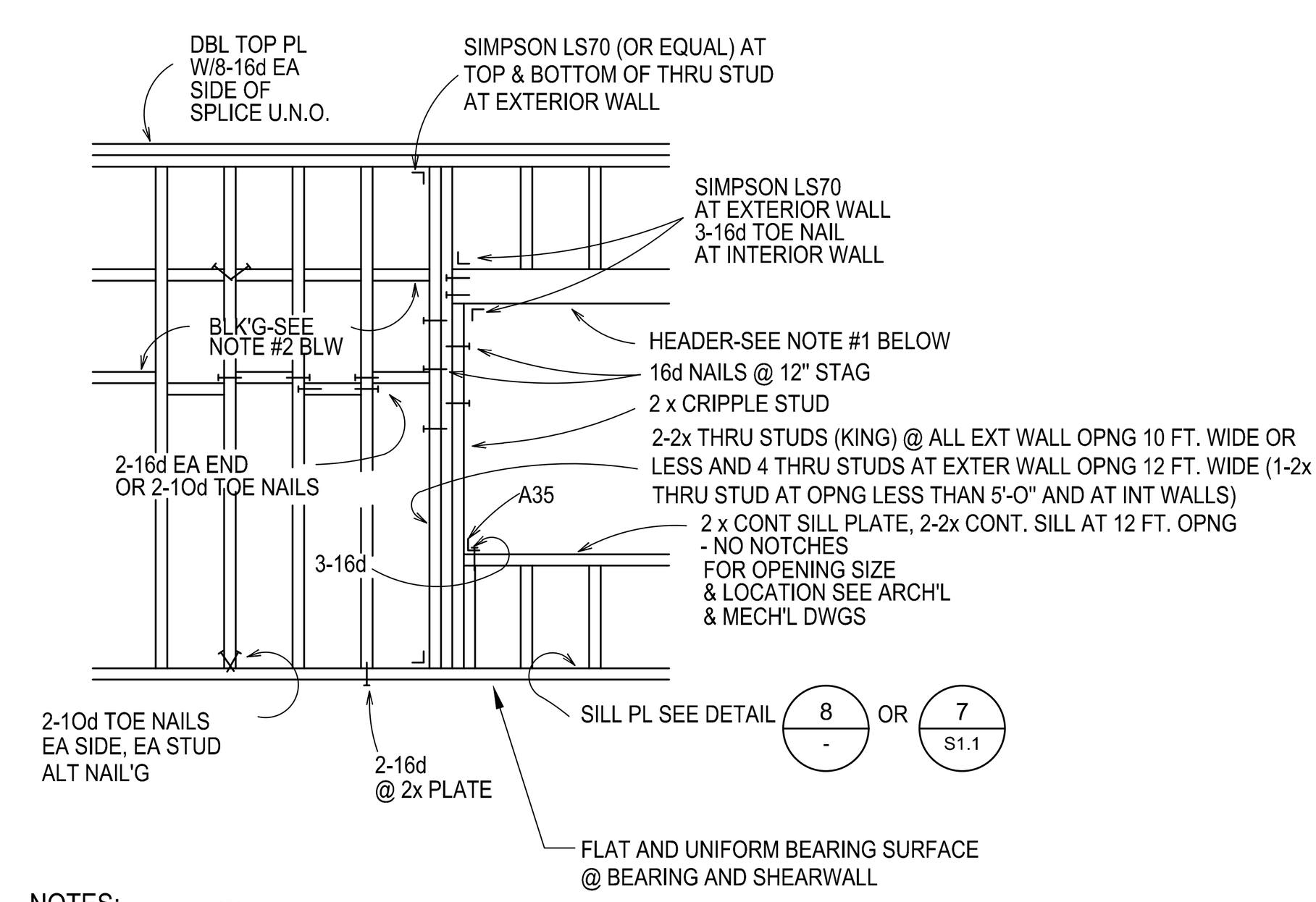
11 TOP PLATE SPLICE



NOTE:

PROVIDE SPLICE W/ 3-16d AT PLATE LAPS AT CORNERS & INTERSECTIONS.

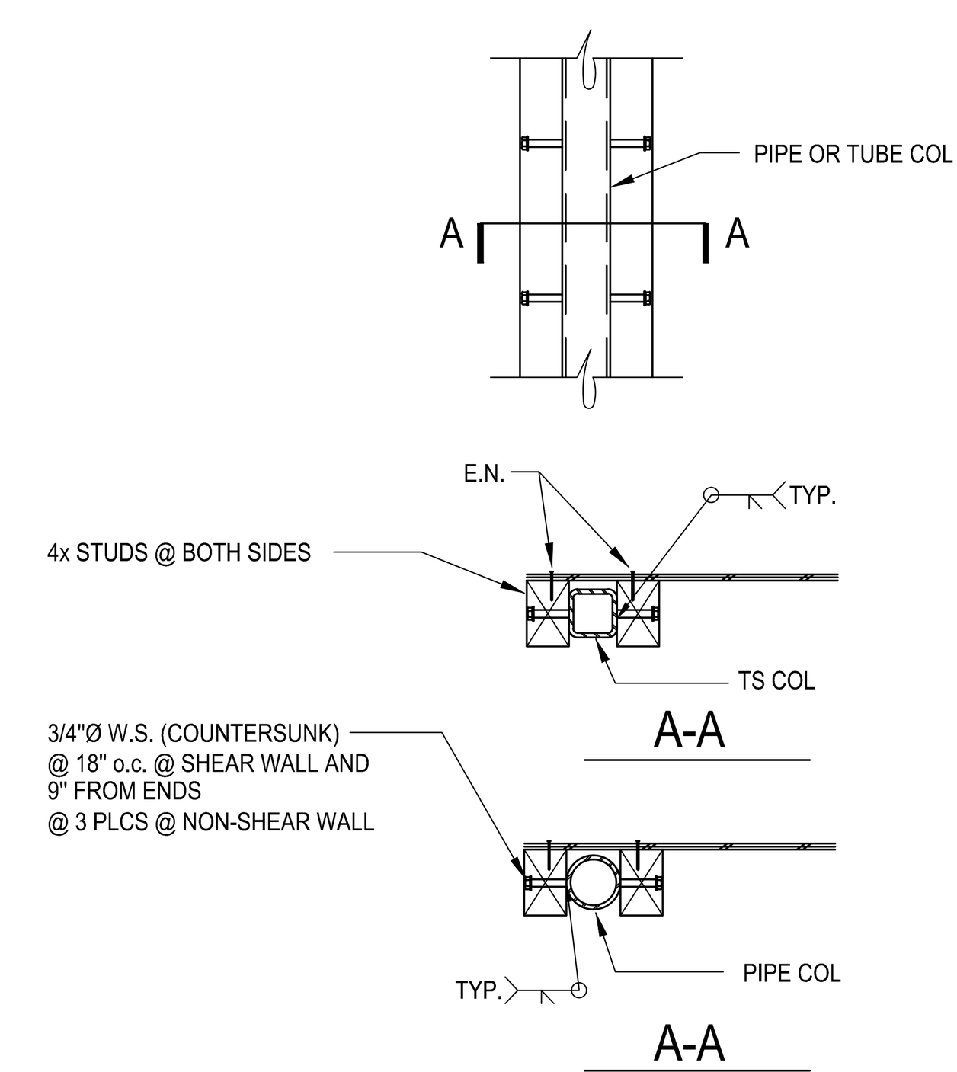
12 TYPICAL STUD WALL



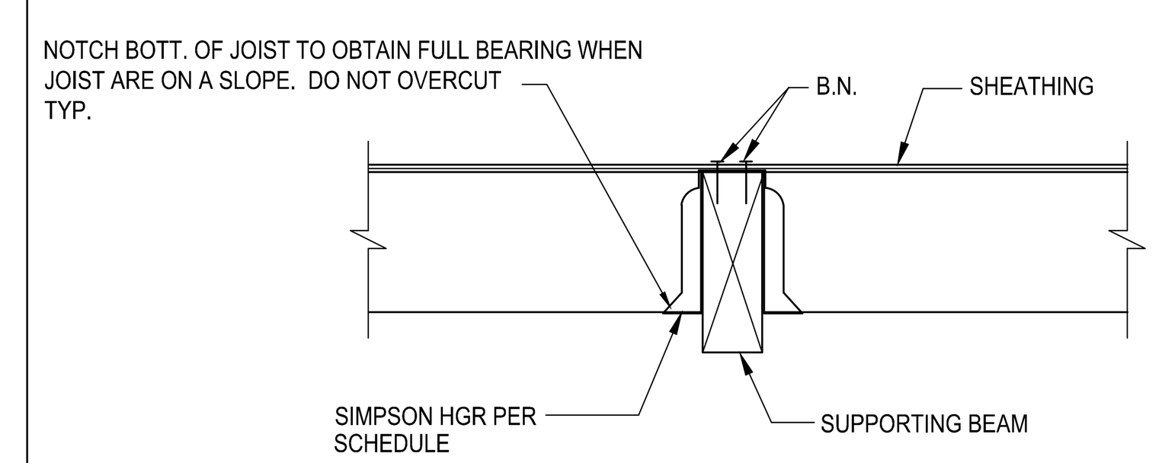
NOTES:
1. SEE DETAIL 9/- FOR TYPICAL HEADER

2. BLOCKING REQ'D AT CEILING LINE & 8'-0" o.c. MAX SPACING. 2 x STUD WIDTH SOLID BLOCKING REQ'D. SEE SHEAR WALL DETAILS & SECTIONS FOR ADDITIONAL BLOCKING REQ'D.

13 STEEL TUBE NAILER

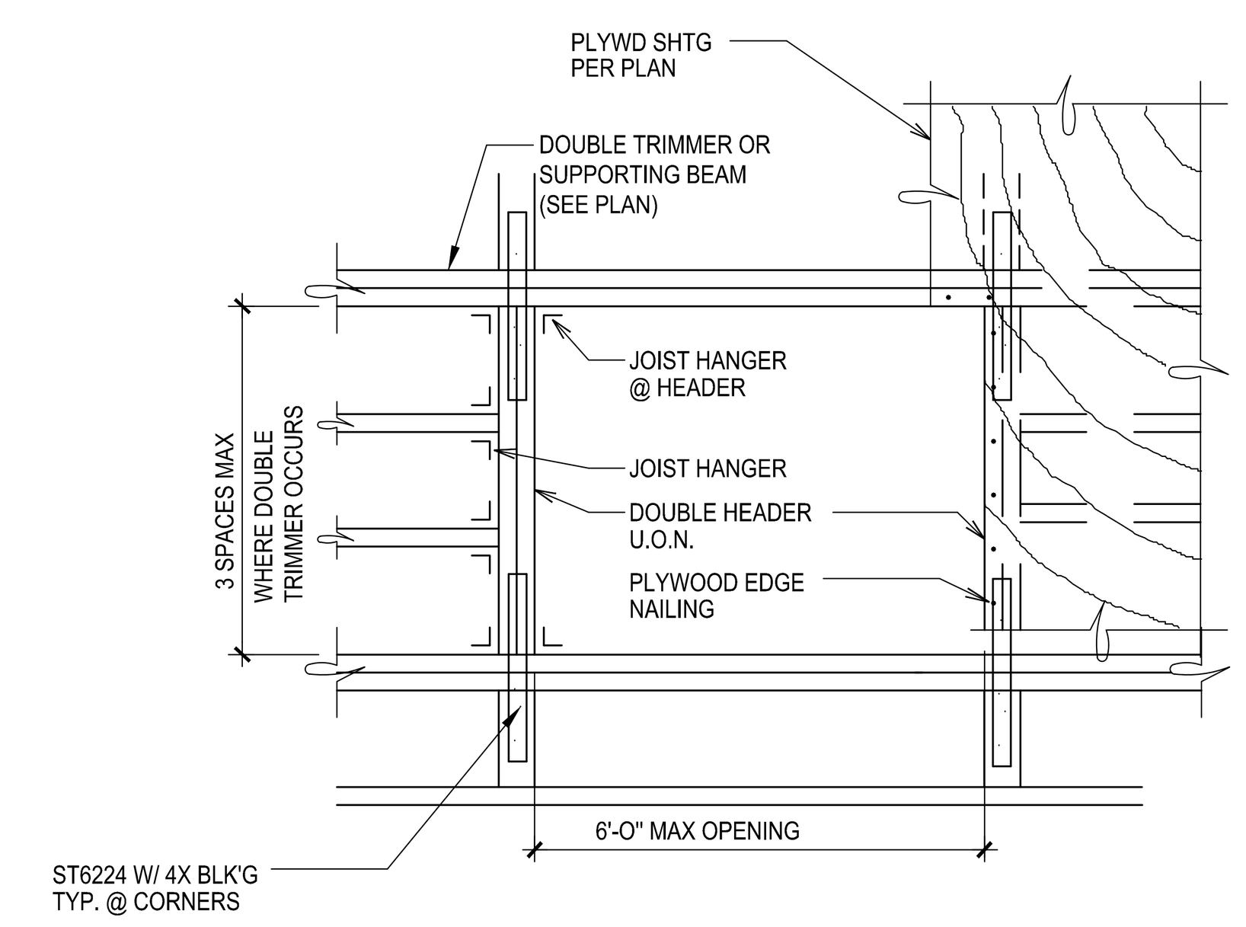


14 JOIST TO BEAM HANGER SCHEDULE



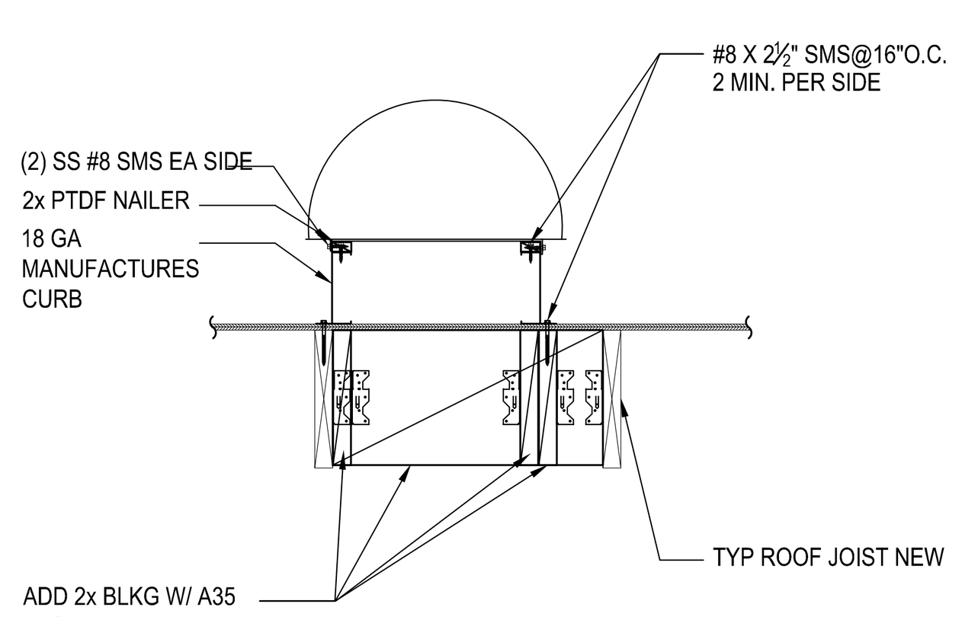
SUPPORTED FRAMING	HGR TYPE
2x	"U"
SKEWED 2x	"W"
MULTIPLE JOIST	"WNP"
3x AND LARGER	"WP"
GLB	"GLT"

15 TYPICAL ROOF OPENING

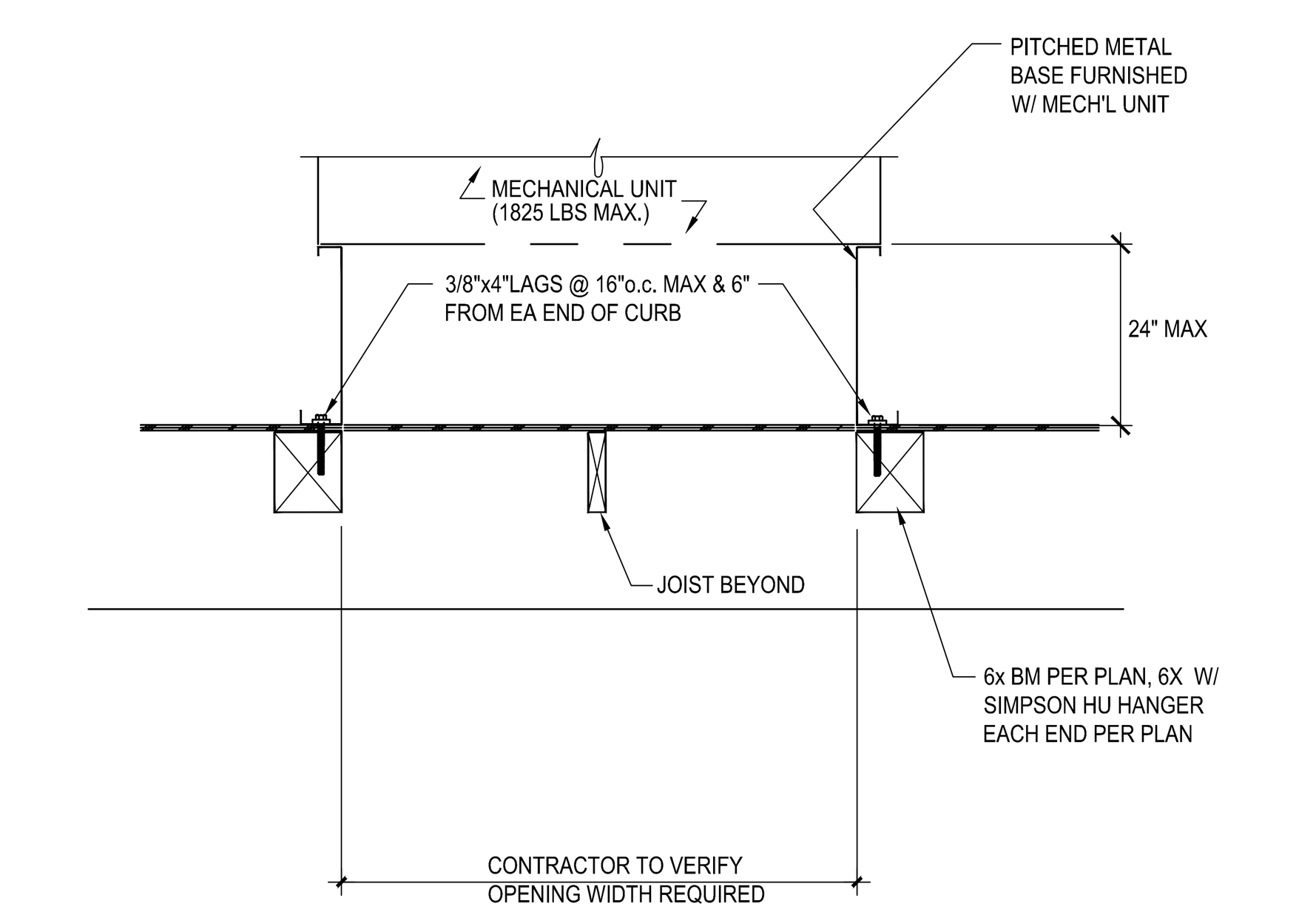


NOTE:
JOIST HGRS TO BE SIMPSON STD U JOIST HGRS. (OR EQUAL)

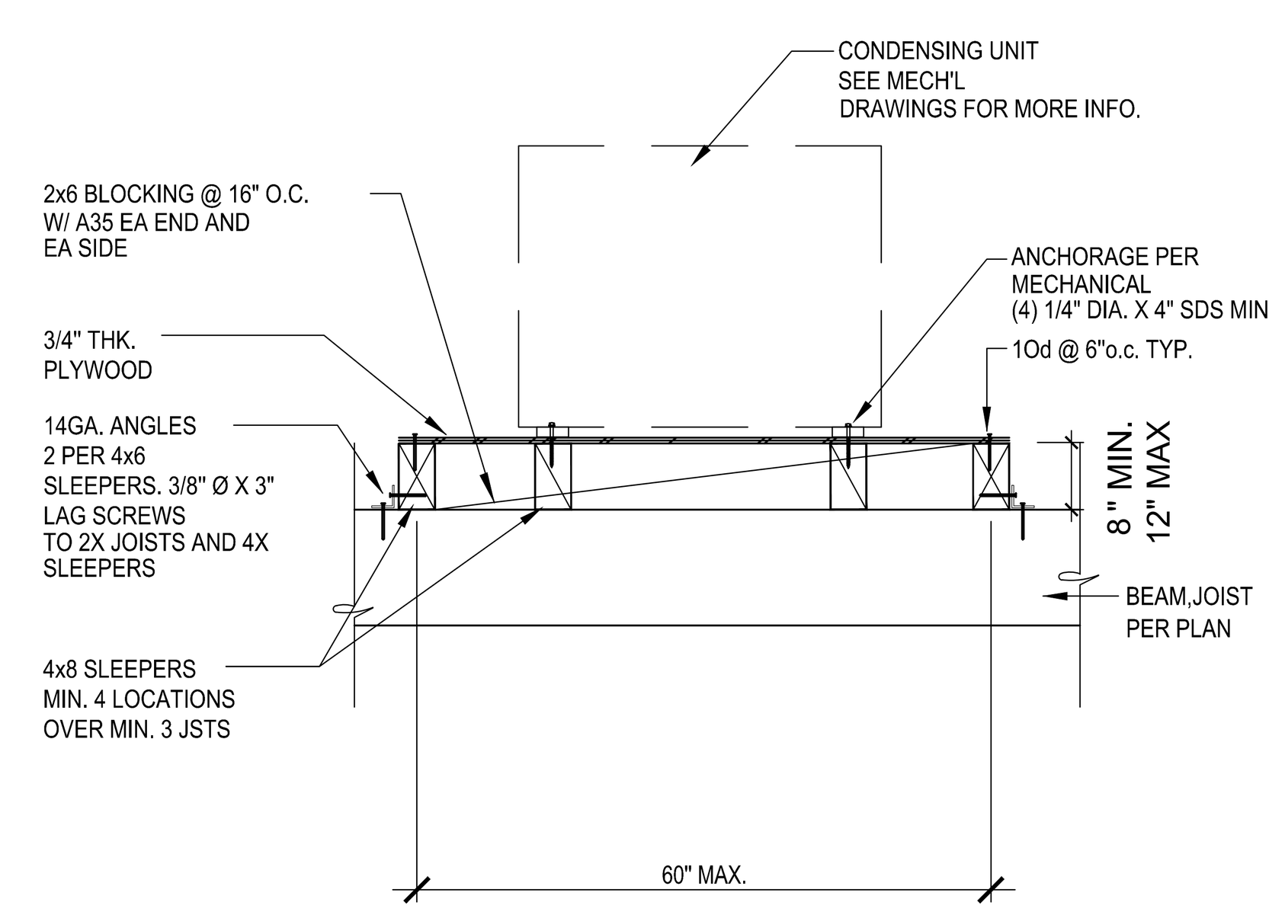
15A EXHAUST FAN SUPPORT



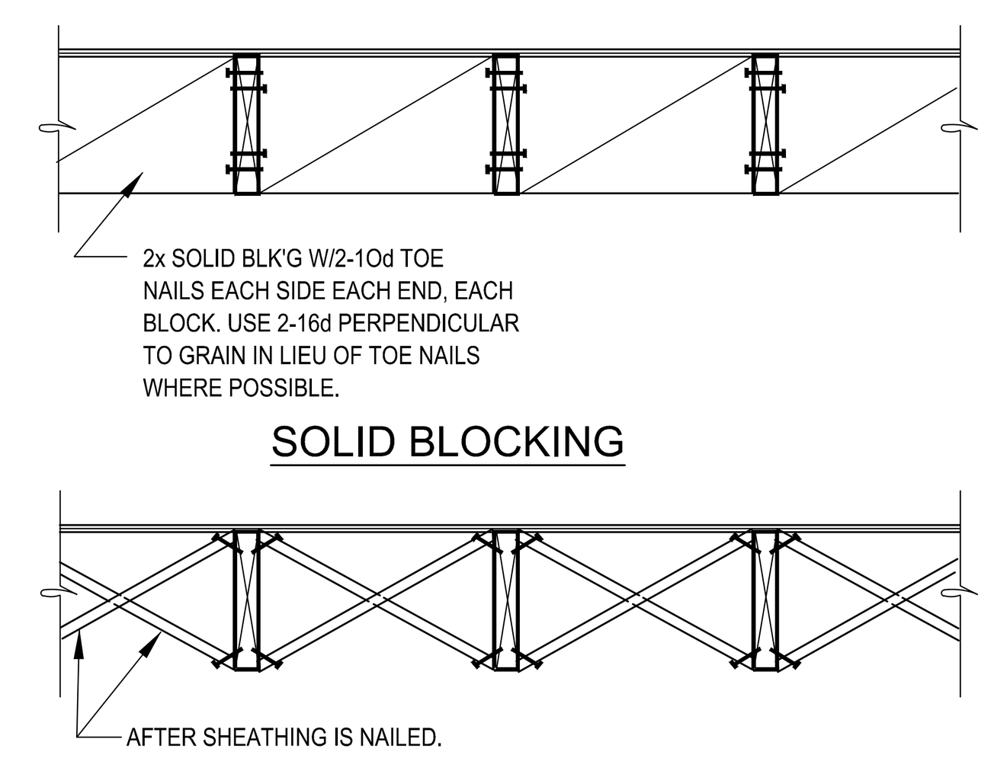
16 HVAC UNIT SUPPORT



17 CONDENSING UNIT SUPPORT



18 TYP. BLOCK'G OR CROSS BRIDGING

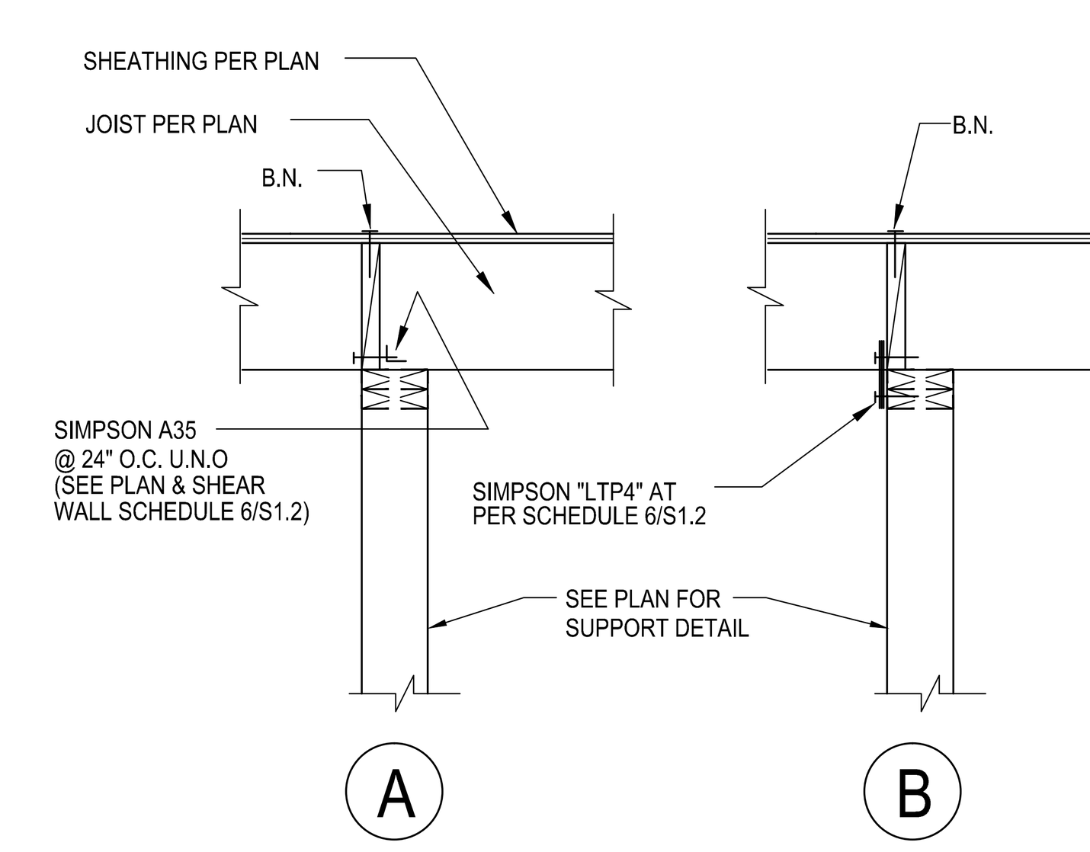


CROSS BRIDGING

NOTE: PROVIDE BLOCKING OR BRIDGING AT 8'-0" O.C. MAX AT ROOF JOISTS DEEPER THAN 8" AND AT ALL FLOOR JOISTS.

BLOCKING BETWEEN JOISTS TYPICAL AT ROOF & FLOOR

19 TYP. SHEAR WALL BLOCKING



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison | Date

WSI
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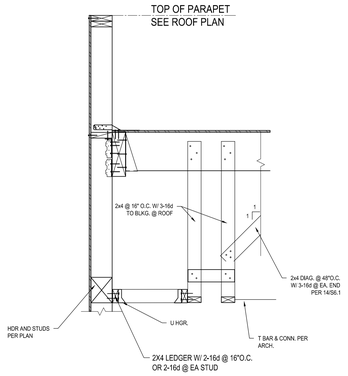
LICENSED ARCHITECT ROBERT D. WEBB AIA C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA
Architect

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

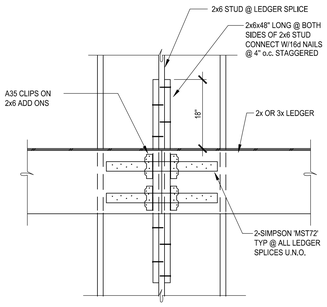
TYPICAL WOOD FRAMING DETAILS

Drawn: MR
Checked: SW
Date: JANUARY 14, 2020
Job: SSD-SC-03

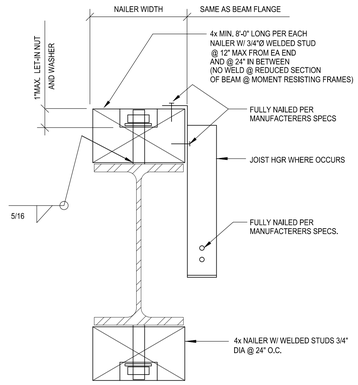
S1.2



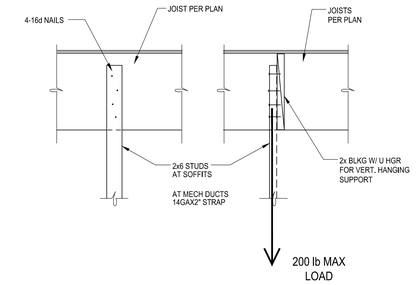
1 CEILING SOFFIT



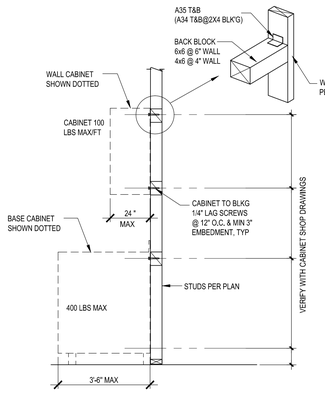
2 TYPICAL LEDGER SPLICE



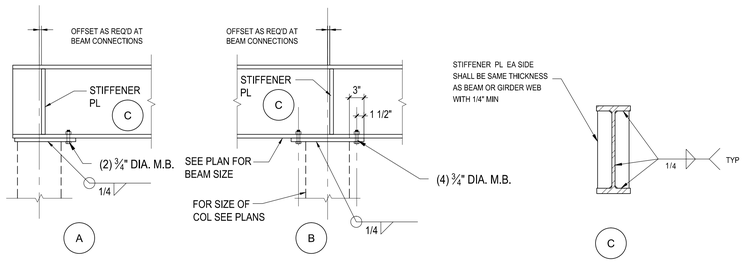
3 TYPICAL NAILER AT STEEL BEAM



4 TYPICAL SOFFITAND MECH. HANGER DETAIL

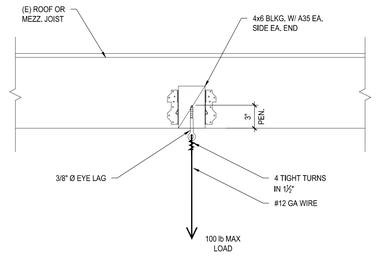


5 CABINET ANCHORAGE TO WALL



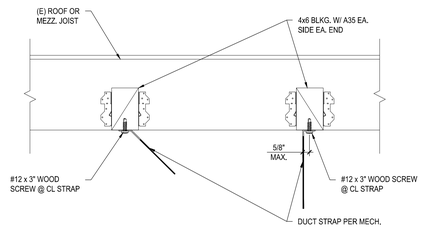
NOTE:
1. COLUMN CAP PLATE SHALL BE THE SAME WIDTH AS BEAM FLANGE OR COLUMN DIMENSION +1/2" (WHICHEVER IS GREATER). THICKNESS SAME AS BEAM FLANGE (1/2" MIN)
2. USE 5/8" DIA M.B. WHEN FLANGE = 4"

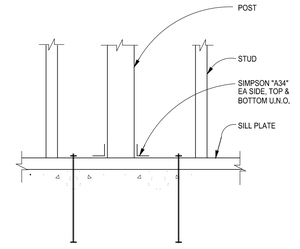
6 TYPICAL BEAM TO COLUMN



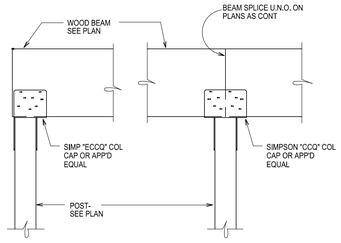
7 HANGER WIRE AND DUCT STRAPS TO FRAMING

1 1/2" = 1'-0"

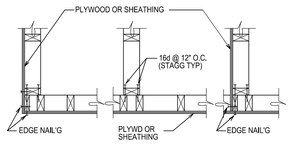




8 TYPICAL WOOD POST TO SILL PLATE



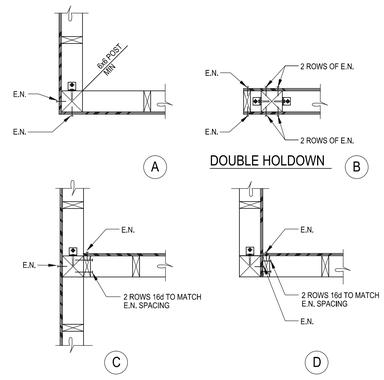
9 BEAM TO POST CONNECTION



NOTE:

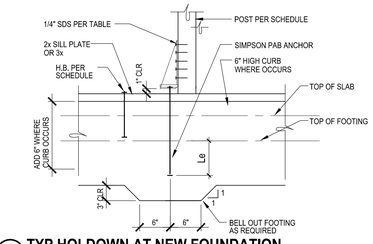
PROVIDE 3 x STUD OR POST AS REQ'D.

10 WALL INTERSECTIONS

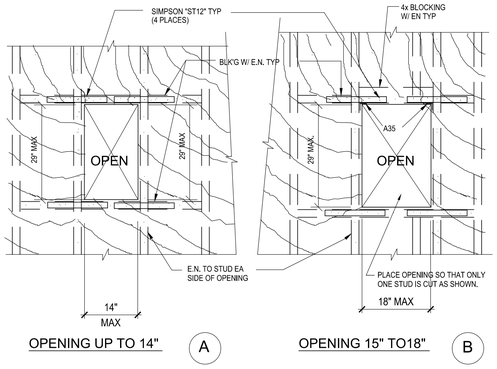


11 HOLDOWNS AT INTERSECTIONS

HOLDOWN OF	1/4x2.5 SDS @ POST	ANCHOR	CONC. MIN. STRENGTH (PSI)	MIN. EMBED. Le	POST SIZE U.N.O.	(ASD) MAX. CAP
HDU2	6	5/8"Ø PAB5	3000	6"	2-2X OR 4x	2460 LBS
HDU5	14	5/8"Ø PAB5	3000	6"	4x	4516 LBS
HDU8	20	7/8"Ø PAB7	3000	9"	6x	6300 LBS
HDU11	30	1"Ø PAB8	3000	10"	6x	8940 LBS
HDU14	38	1"Ø PAB8	3000	10"	6x	11560 LBS
HDU19	30	1 1/8"Ø	3000	12"	6x	13420 LBS

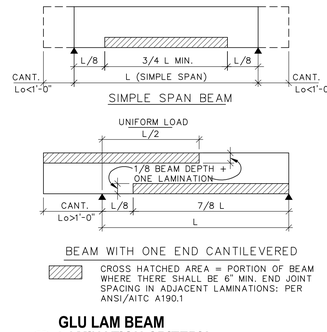


13 TYP HOLDOWN AT NEW FOUNDATION

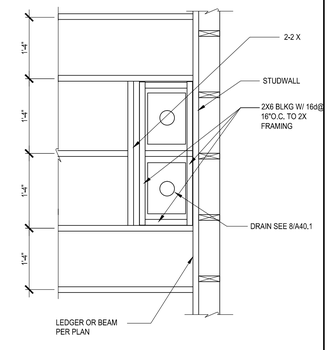


NOTES:
1. PLACE OPENINGS BETWEEN STUDS AS INDICATED ON DETAIL "A". WHEN WIDTH OF OPENING EXCEEDS 14 1/2" USE DETAIL "B".
2. NO MORE THAN ONE OPENING IS PERMITTED IN EVERY 20'-0".
3. PROVIDE E.N. TO STUD AND BLK'G AROUND OPENING.
4. NO OPENING SHALL BE PLACED IN SHEAR WALL LESS THAN 20'-0".

16 SMALL OPENING IN SHEAR WALL



17 GLU LAM BEAM LAMINATION CRITERIA



18 FRAMING AT ROOF DRAIN

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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TYPICAL DETAILS

Drawn: MR
Checked: SW
Date: JANUARY 14, 2020
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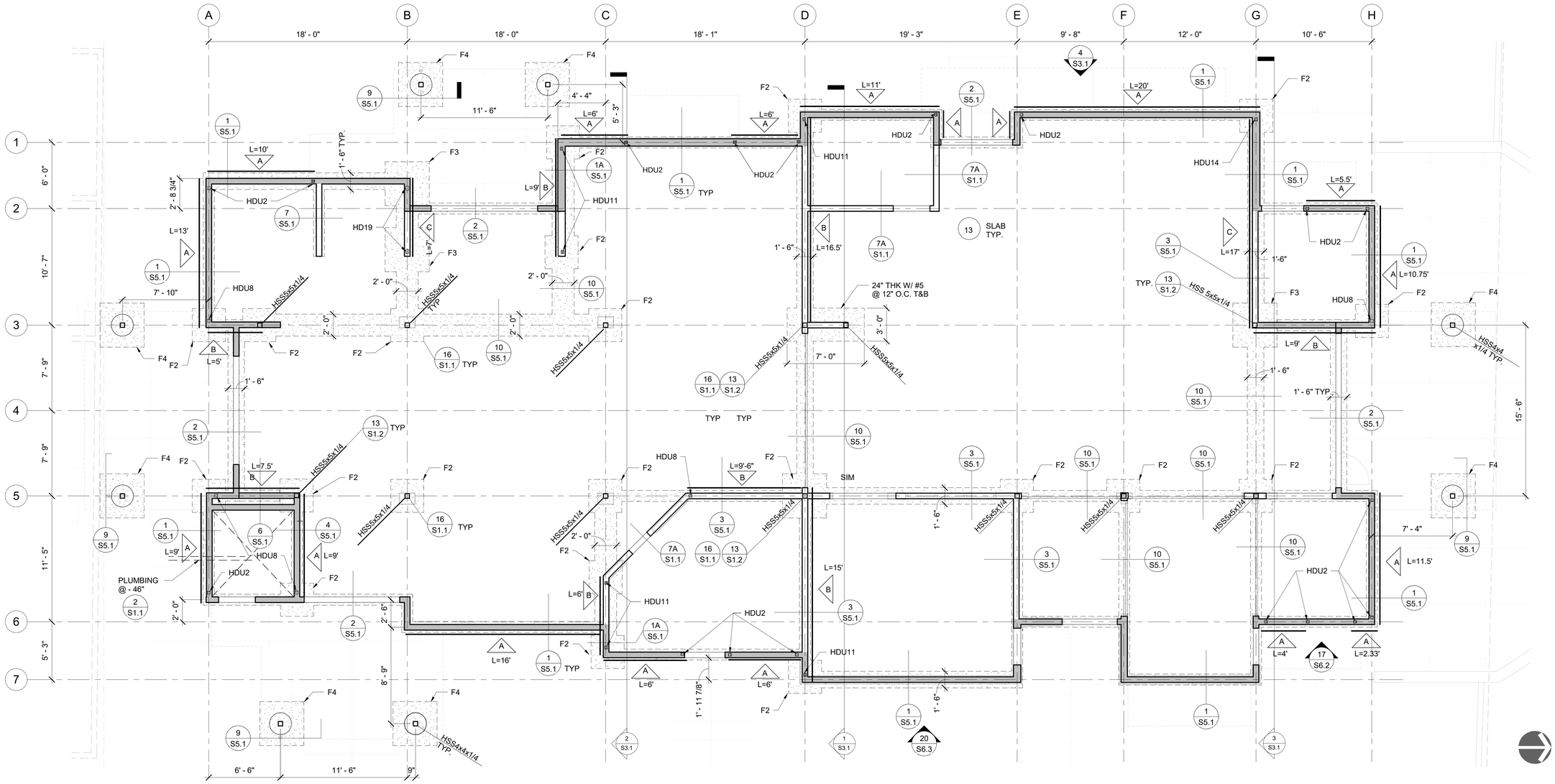
S1.3



FOOTING SCHEDULE

FTG.	SIZE *	REINF.	
F1	2'-0" SQ.x15"	#5 @ 12" O.C.	BOTT.
F2	3'-0" SQ.x15"	#5 @ 12" O.C.	BOTT.
F3	4'-0" SQ.x15"	#5 @ 12" O.C.	BOTT.
F4	5'-0" SQ.x1'-6"	#5 @ 12" O.C.	T&B

* FTG THK TO MATCH GRADE BEAM WHEN ADJACENT

STUD WALLS:

1. ALL EXTERIOR STUD WALLS W/ PARAPETS SHALL BE 2x8 @ 16" O.C. U.N.O.
2. ALL INTERIOR WALLS AND EXTERIOR WALLS WITH NO PARAPETS SHALL BE 2x6 @ 16" O.C. U.N.O.

FOUNDATION NOTES:

1. FOR STRUCTURAL NOTES AND TYPICAL DETAILS, REFER TO SHEET S0.1 THROUGH S1.3
2. INDICATES FINISH FLOOR ELEVATION
3. INDICATES CONTINUOUS FOOTING, SEE SECTION DETAIL FOR FOOTING THICKNESS AND REINFORCEMENT.
4. INDICATES 6" MIN. HIGH CONCRETE CURB
5. INDICATES BEARING AND/OR SHEAR WALL FTG.
6. INDICATES SHEAR WALL. SEE DETAIL 6/S1.2 FOR SHEAR WALL SCHEDULE
   L= INDICATES PLYWOOD PANEL LENGTH WHERE ACTUAL WALL IS LONGER THAN MINIMUM LENGTH SPECIFIED ON PLAN, EXTEND SHEAR PANEL & HOLDOWNS ACCORDINGLY TO EDGE OF WALL. REFER TO DETAIL 11/S1.3.
7. SEE DETAIL 13/S1.3 FOR TYPICAL HOLDOWN DETAIL (H.D. AS NOTED ON PLANS)
8. ALL HARDWARE TO BE SIMPSON STRONG TIE PRODUCT OR APPROVED EQUAL
9. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. COORDINATE ALL POST-COLUMN HOLDOWNS, ETC., BASED ON ARCHITECTURAL DRAWINGS UNLESS NOTED OTHERWISE.
10. SOILS ENGINEER SHALL INSPECT AND APPROVE BOTTOM OF ALL FOUNDATIONS PRIOR TO CONTRACTOR PLACING REINFORCEMENT OR CONCRETE.
11. ALL EXTERIOR STUD WALLS (INCLUDING NON-SHEAR WALLS) SHALL BE COVERED W/ MIN. 1/2" THICK STRUCT 1 PLYWOOD FOR ARCH'L FINISH. OUTSIDE FACE OF PLYWOOD SHALL BE FLUSH WITH OUTSIDE FACE OF CONCRETE CURB. USE 10d NAILS @ 6" O.C.(EDGE) & 12" O.C. (FIELD) FOR ALL PLYWOOD U.N.O.
12. NOT USED
13. ALL CONCRETE SLAB ON GRADE SHALL BE MIN. 4" THK. WITH #4 @ 18" O.C. EACH WAY OVER 4" MIN. SAND LAYER. PLACE MINIMUM 10 MIL VISQUEEN @ MID DEPTH SAND LAYER, OVER 4" FREE DRAINING GRAVEL LAYER COMPACTED TO 92%
14. S- - -S INDICATES STEPPED FOOTING, SEE DETAIL 6/S1.1
15. PIPES THROUGH FOOTINGS SEE 2/S1.1 14/S1.1
16. FOR FRAMING @ TYP. WALL OPENINGS SEE 12/S1.2

ENLARGED FOUNDATION PLAN | 1/4" = 1'-0" | 1

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ENLARGED FOUNDATION PLAN

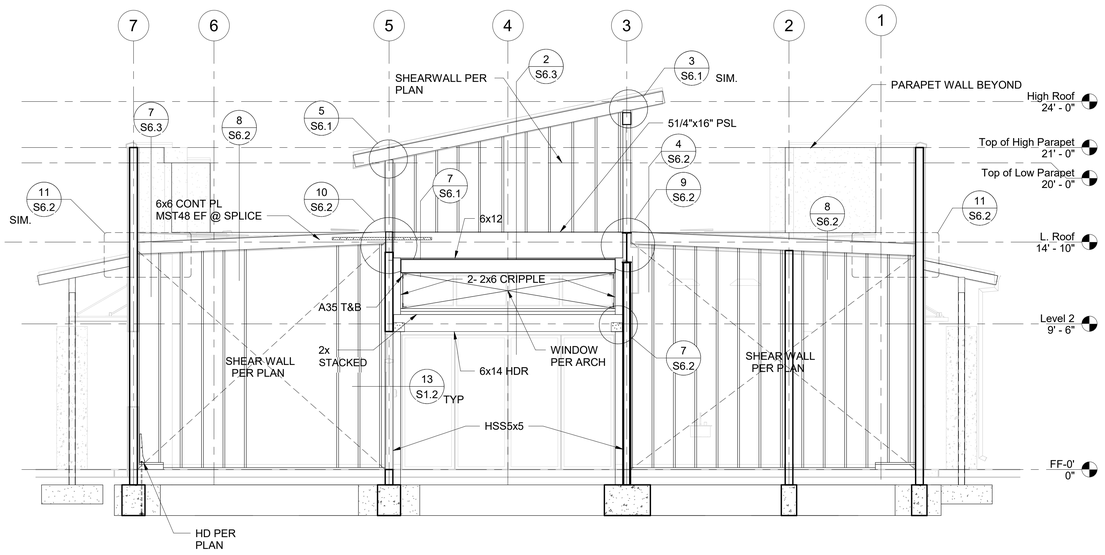
Author

Checker

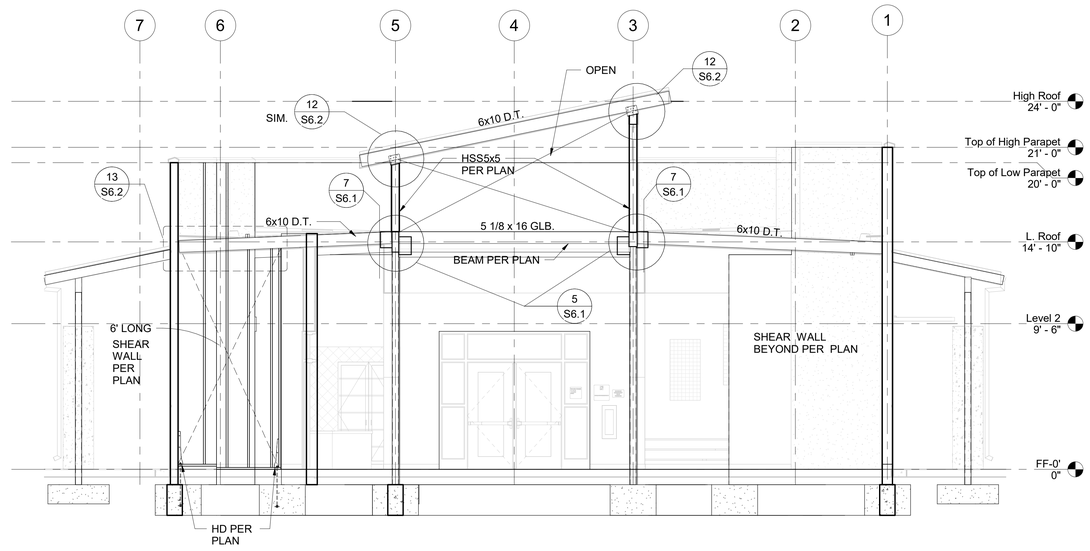
JANUARY 14, 2020

Job: 19030

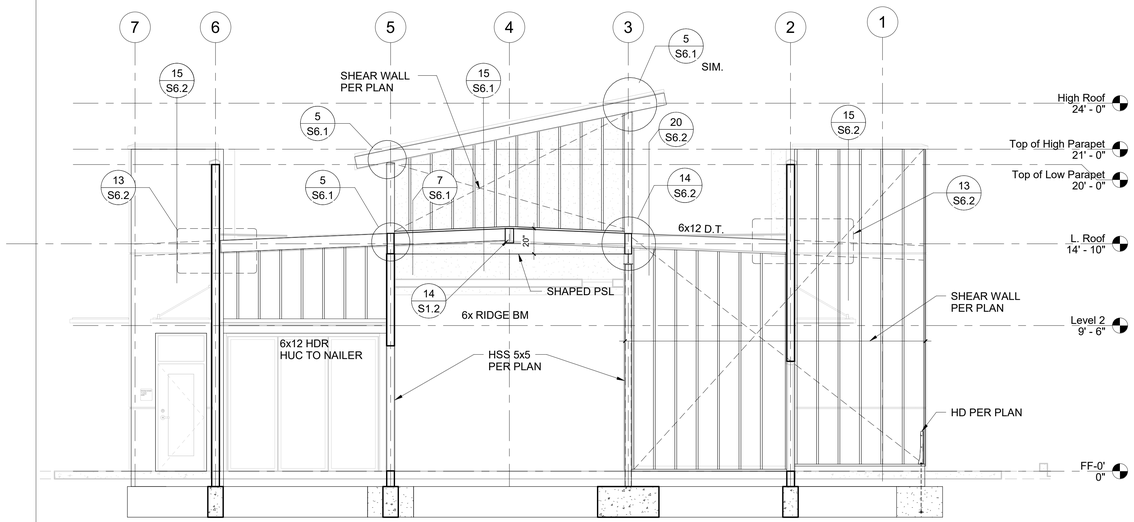
S2.0



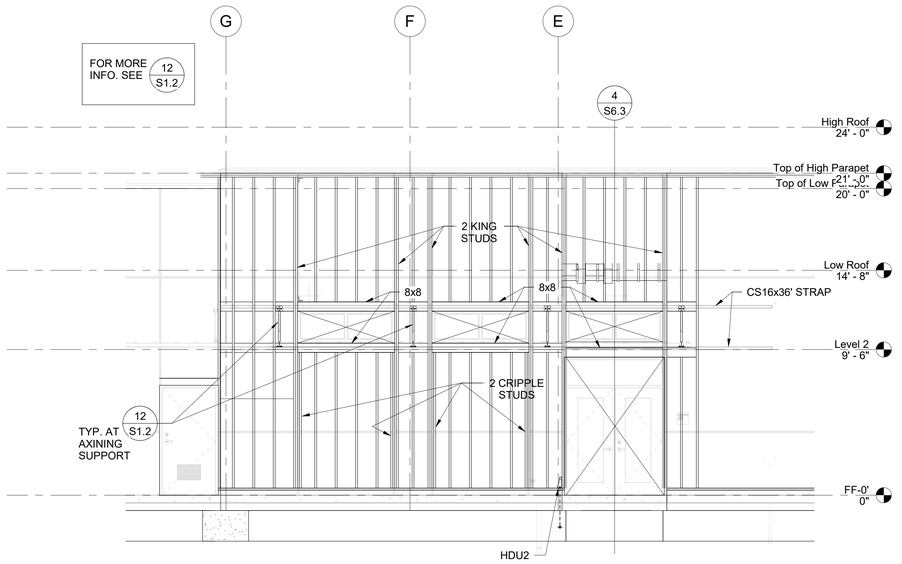
WALL ELEVATION LINE D | 1/4" = 1'-0" | 1



WALL ELEVATION LINE C | 1/4" = 1'-0" | 2



WALL ELEVATION LINE G | 1/4" = 1'-0" | 3



PARTIAL FRAMING WEST ELEV. | 1/4" = 1'-0" | 4

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ELEVATIONS

Author

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JANUARY 14, 2020

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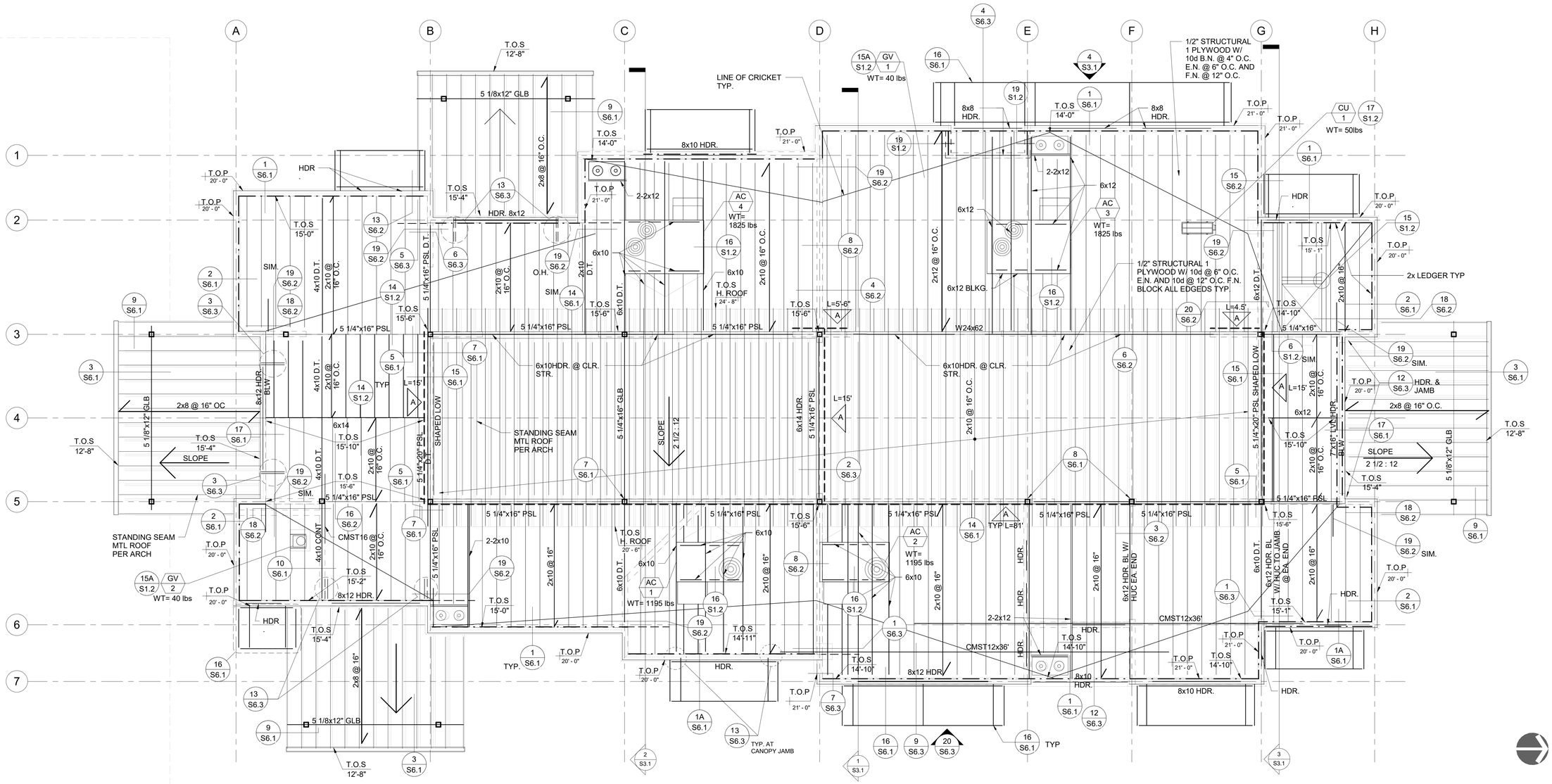
S3.1



ROOF FRAMING NOTES:

1. FOR STRUCTURAL GENERAL NOTES AND TYPICAL DETAILS, REFER TO SHEETS S0.1 THROUGH S1.3
2. SEE GENERAL NOTE ON SHEET S0.1 FOR DESIGN ROOF LIVE LOAD.
3. ○ ○ INDICATES ROOF DRAIN LOCATION. COORDINATE WITH ARCHITECTURAL ROOF PLAN. USE 2-JOIST @ HDR @ DRAIN/OVERFLOW PER 18/S1.3
4. SEE DETAIL 15/S1.2 FOR TYPICAL FRAMING AT ROOF OPENING UNLESS NOTED OTHERWISE.
5. SEE DETAIL 18/S1.2 FOR BLOCKING BETWEEN ROOF JOISTS.
   D.T.
6. DENOTES STRUT MEMBER, ALL STRUT LINES TO RECEIVE BOUNDARY NAILING
7. SEE 15, 15A, 16, & 17/S1.2 FOR FRAMING @ MECHANICAL UNITS
   C=
8. DENOTES CAMBER ON GLULAM BEAM
9. ALL PLYWOOD SHEATHING AT WALLS SHALL EXTEND TO ROOF SHEATHING AND/OR FRAMING
10. ALL HARDWARE TO BE "SIMPSON STRONG TIE" PRODUCT OR AN APPROVED EQUIVALENT
11. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. COORDINATE ALL POST-COLUMN BASED ON ARCHITECTURAL DRAWINGS UNLESS NOTED OTHERWISE
12. ROOF SHEATHING SHALL BE 1/2" THICK STRUCT 1 PLYWOOD AND NAIL WITH 10d NAILS @ 6" O.C.(E), 4" O.C. (B), AND 12" O.C.(F) UNLESS NOTED OTHERWISE. BLOCK ALL EDGES, SEE 4/S1.2
13. FOR NON-BEARING INT. WALL, SEE DETAIL 2/S1.2 AND 3/S1.2
14. SEE 9/S1.2 FOR HEADER SIZES NOT SHOWN. SEE 12 S1.2 FOR FRAMING DET.
15. △ INDICATES SHEAR WALL SEE DETAIL 6/S1.2 FOR SHEAR WALL SCHEDULE
    L= INDICATES PLYWOOD PANEL LENGTH WHERE ACTUAL WALL IS LONGER THAN MINIMUM LENGTH SPECIFIED ON PLAN. EXTEND SHEAR PANEL & HOLDOWNS ACCORDINGLY TO EDGE OF WALL. REFER TO DETAIL 11/S1.3
16. T.O.P. INDICATES TOP OF PARAPET
17. T.O.S. INDICATES TOP OF PLYWOOD SHEATHING
18. BEAM & JOIST HANGER NOT SHOWN SPECIFICALLY. SEE 14 S1.2

ROOF PLAN | 1/4" = 1'-0" | 1

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ROOF PLAN

Author

Checker

JANUARY 14, 2020

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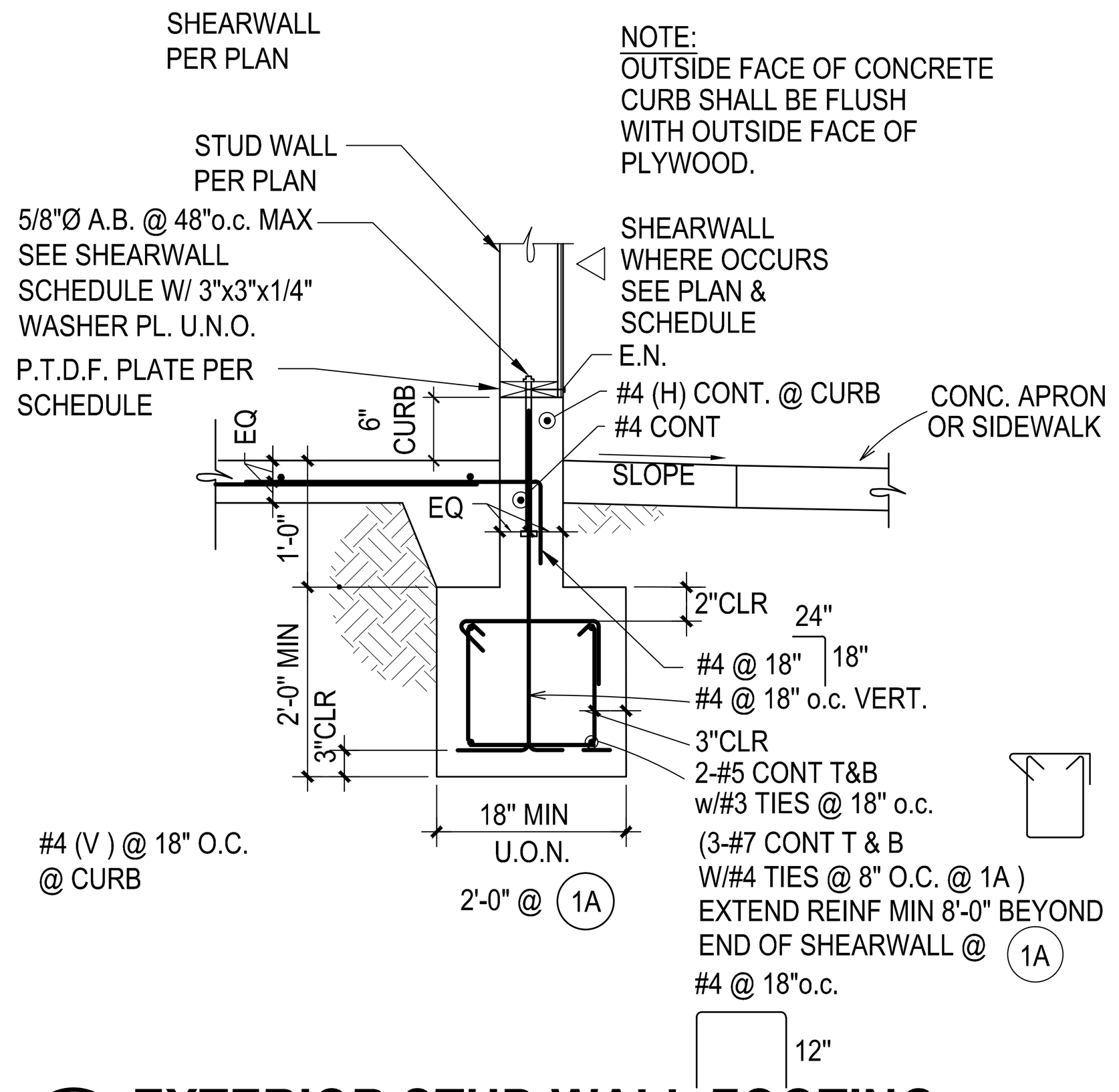
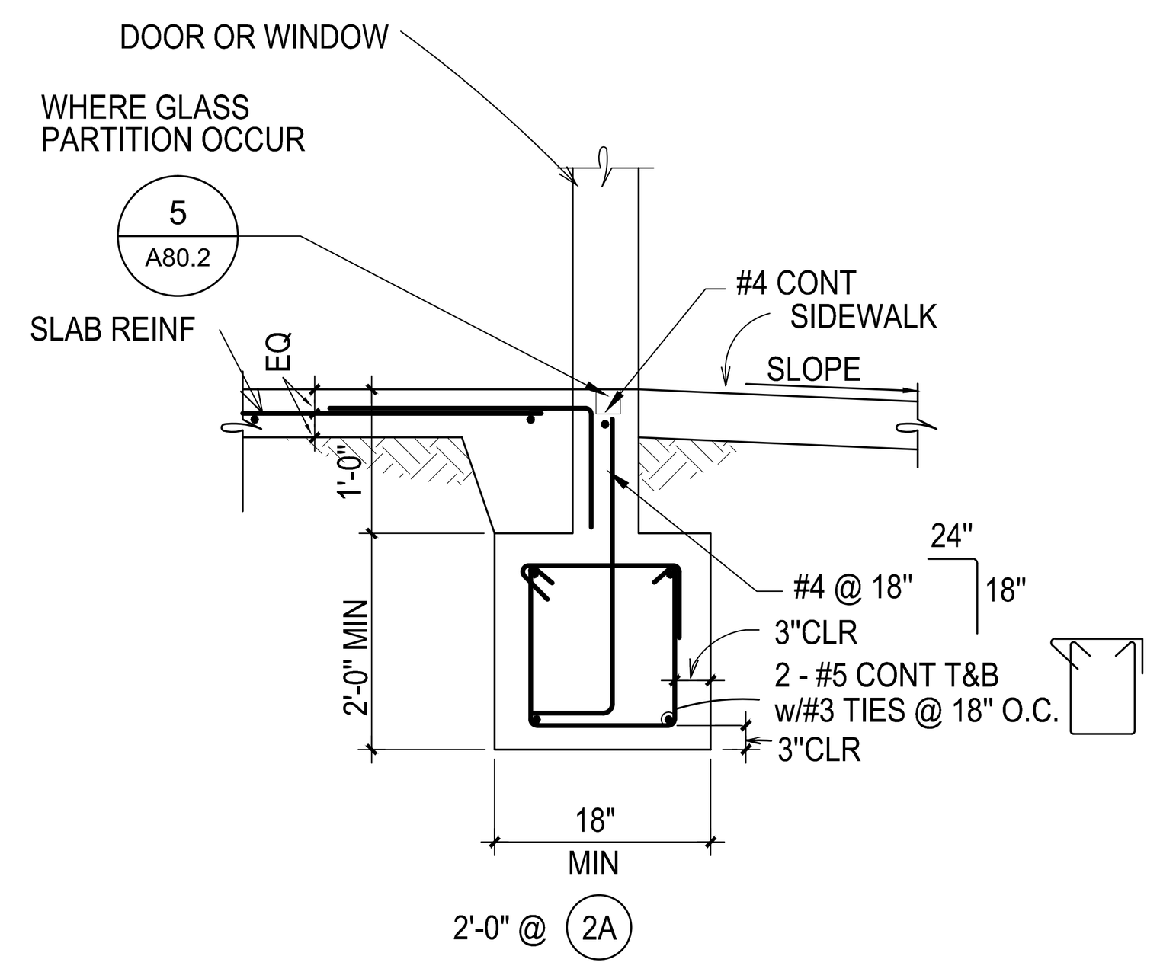
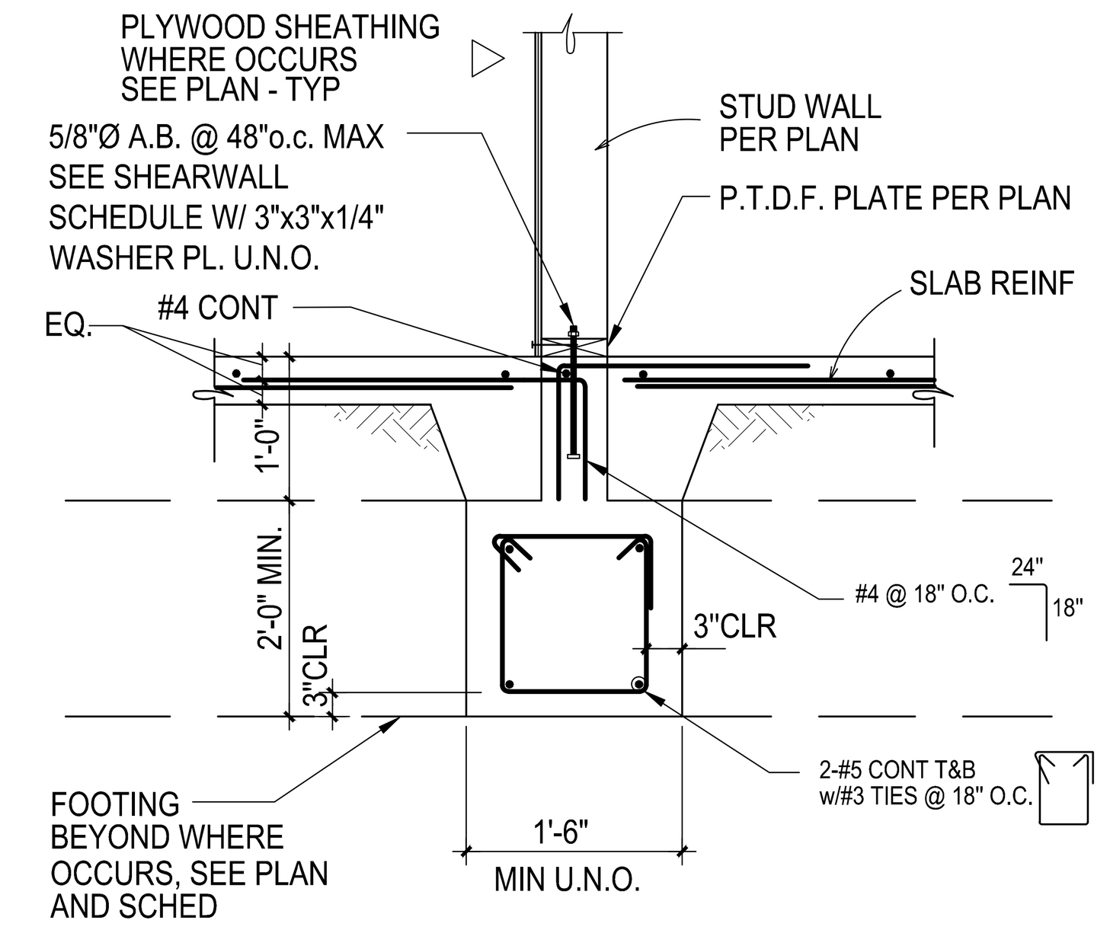
S4.0



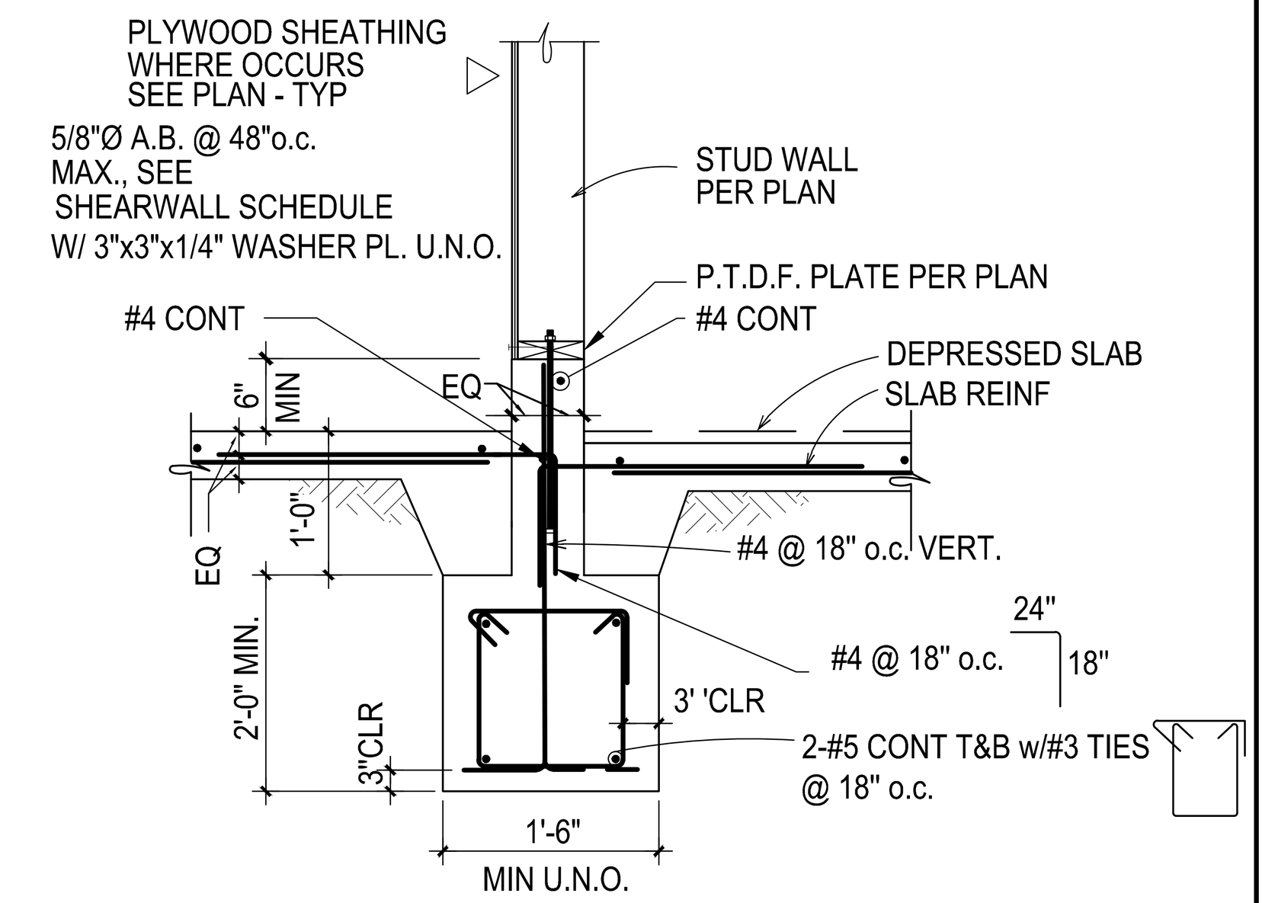
1 EXTERIOR STUD WALL FOOTING



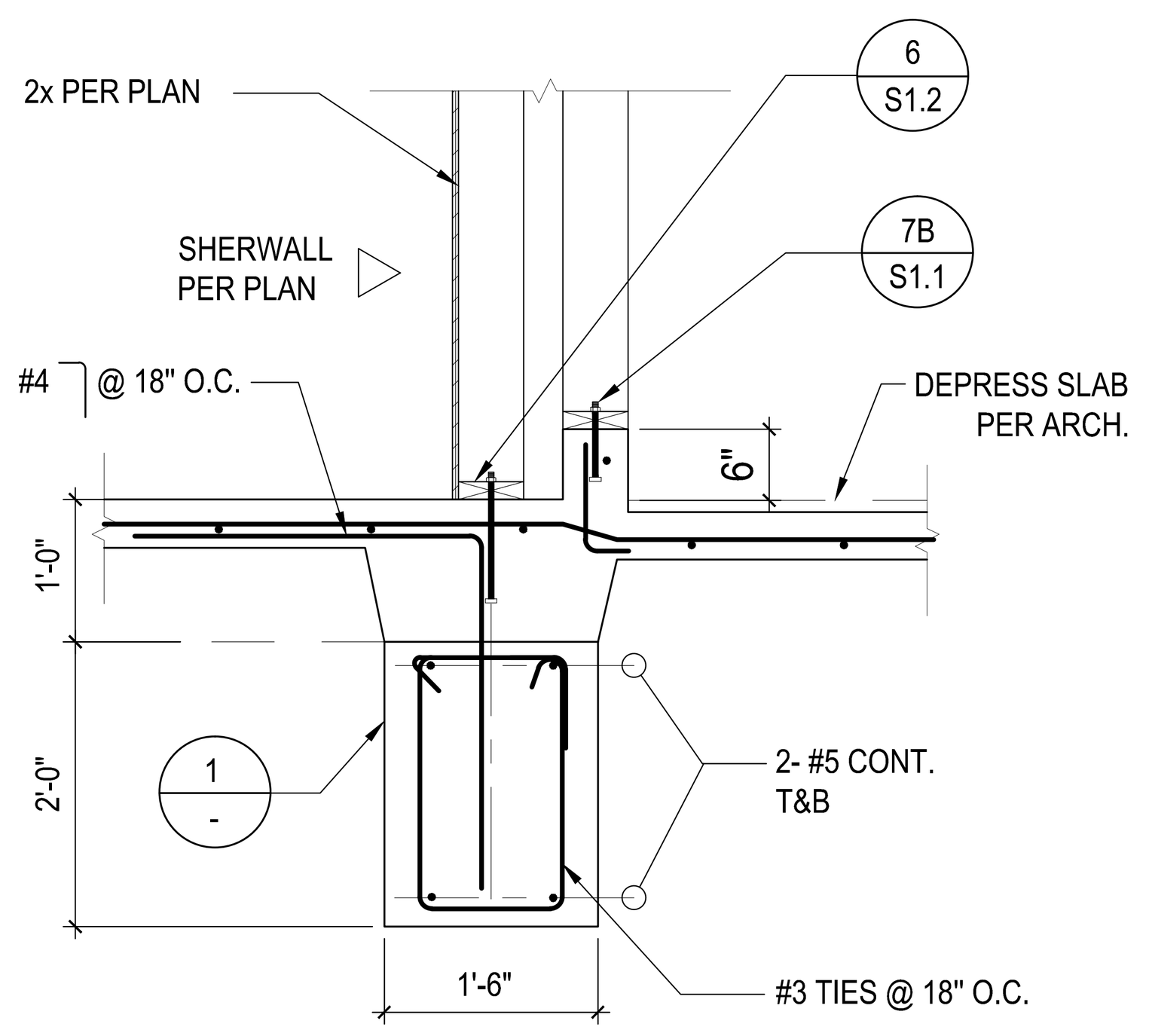
2 FOOTING @ DOOR OPENINGS



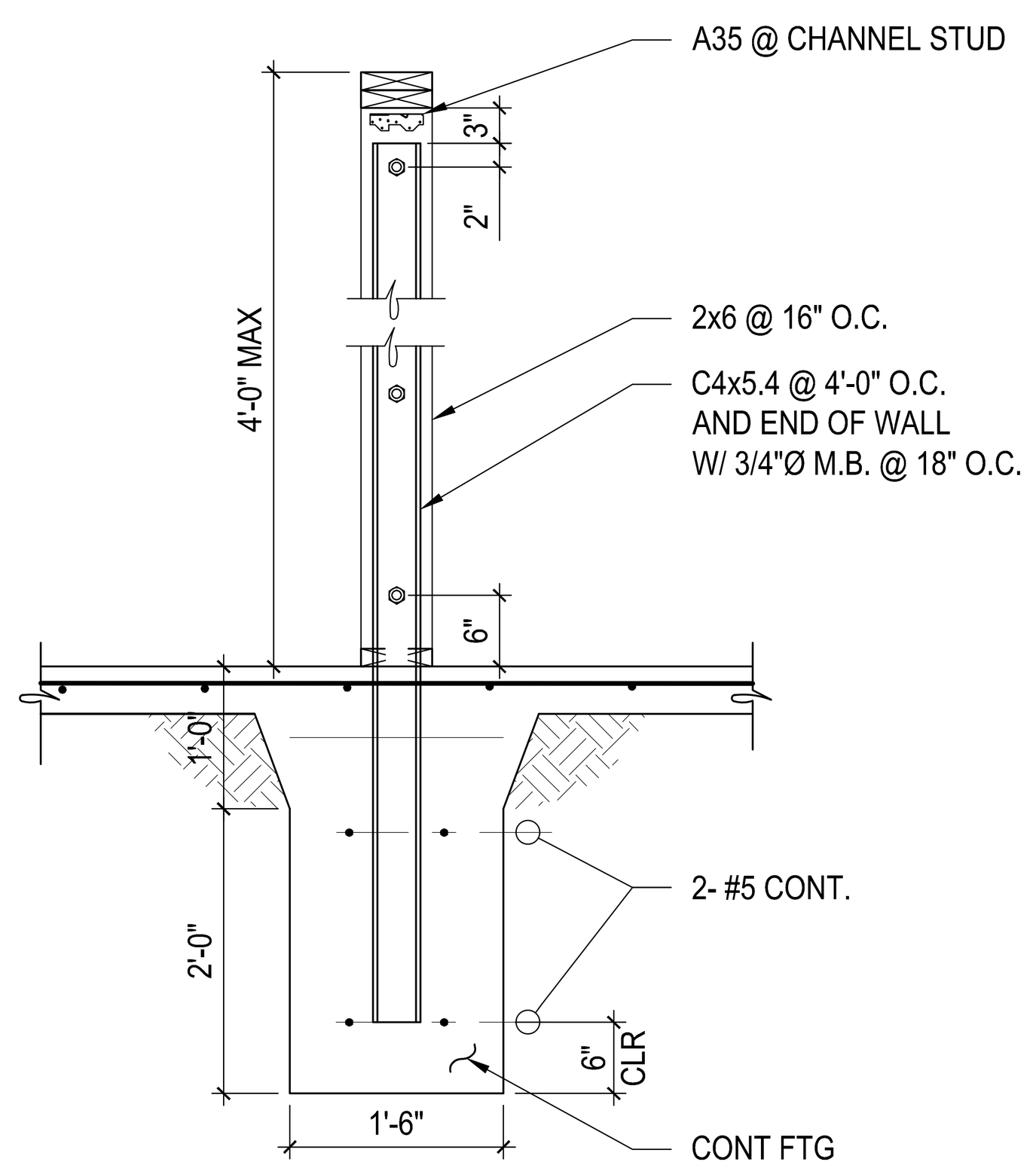
3 INTERIOR STUD WALL FTG



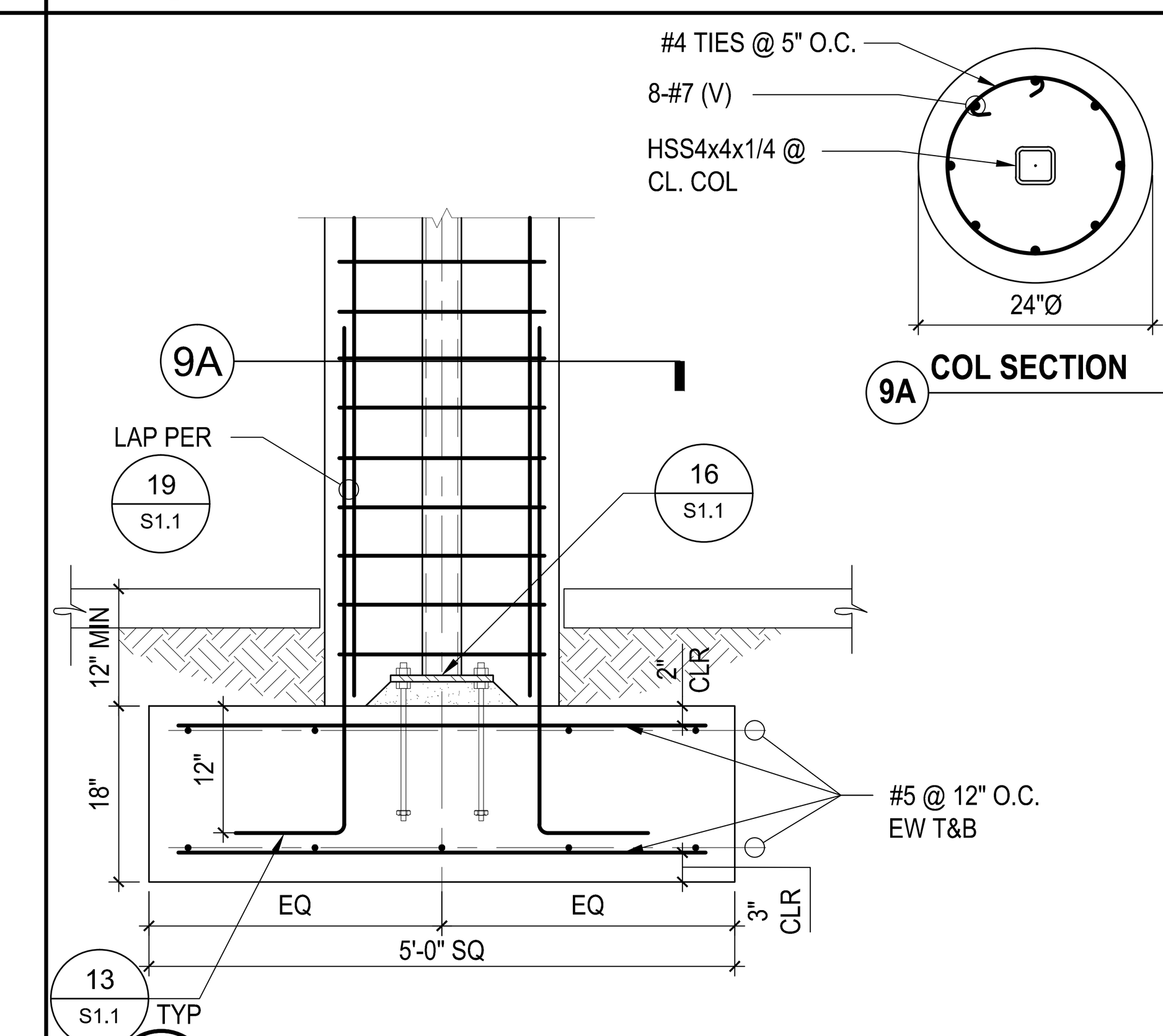
4 INTERIOR STUD WALL AT CURB



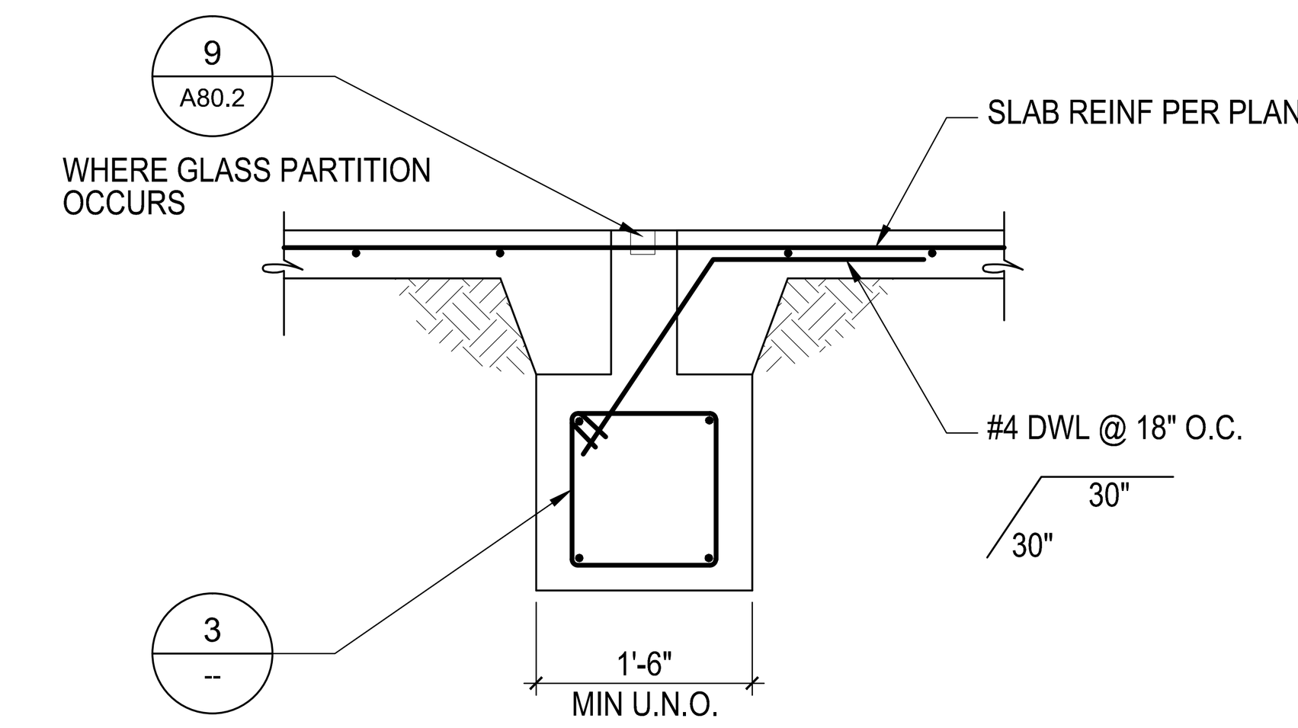
6 DETAIL



7 PARTIAL HEIGHT WALL



9 CANOPY COLUMN FOOTING



10 GRADE BEAM @ BLDG INTERIOR

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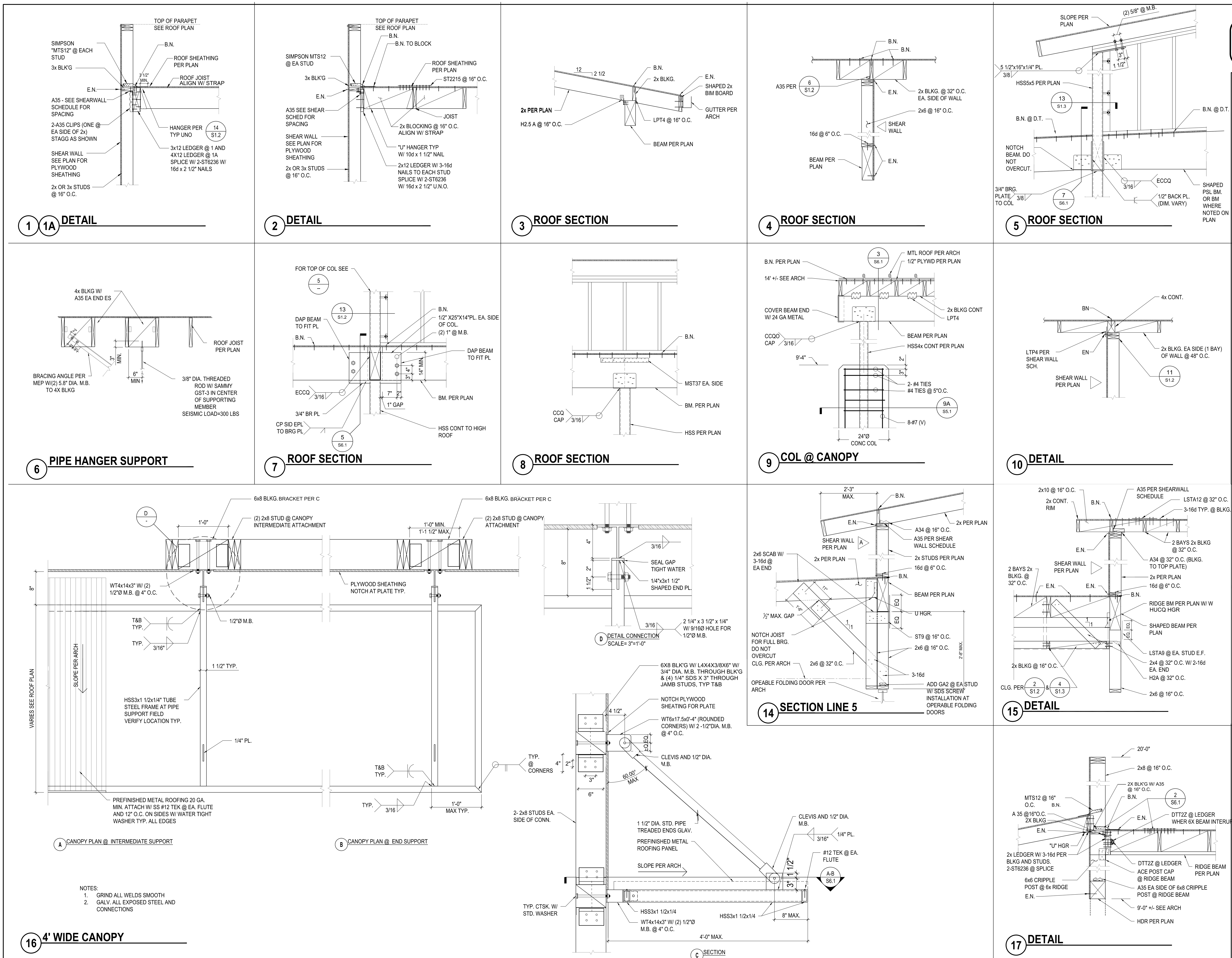

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Job: SSD-SC-03

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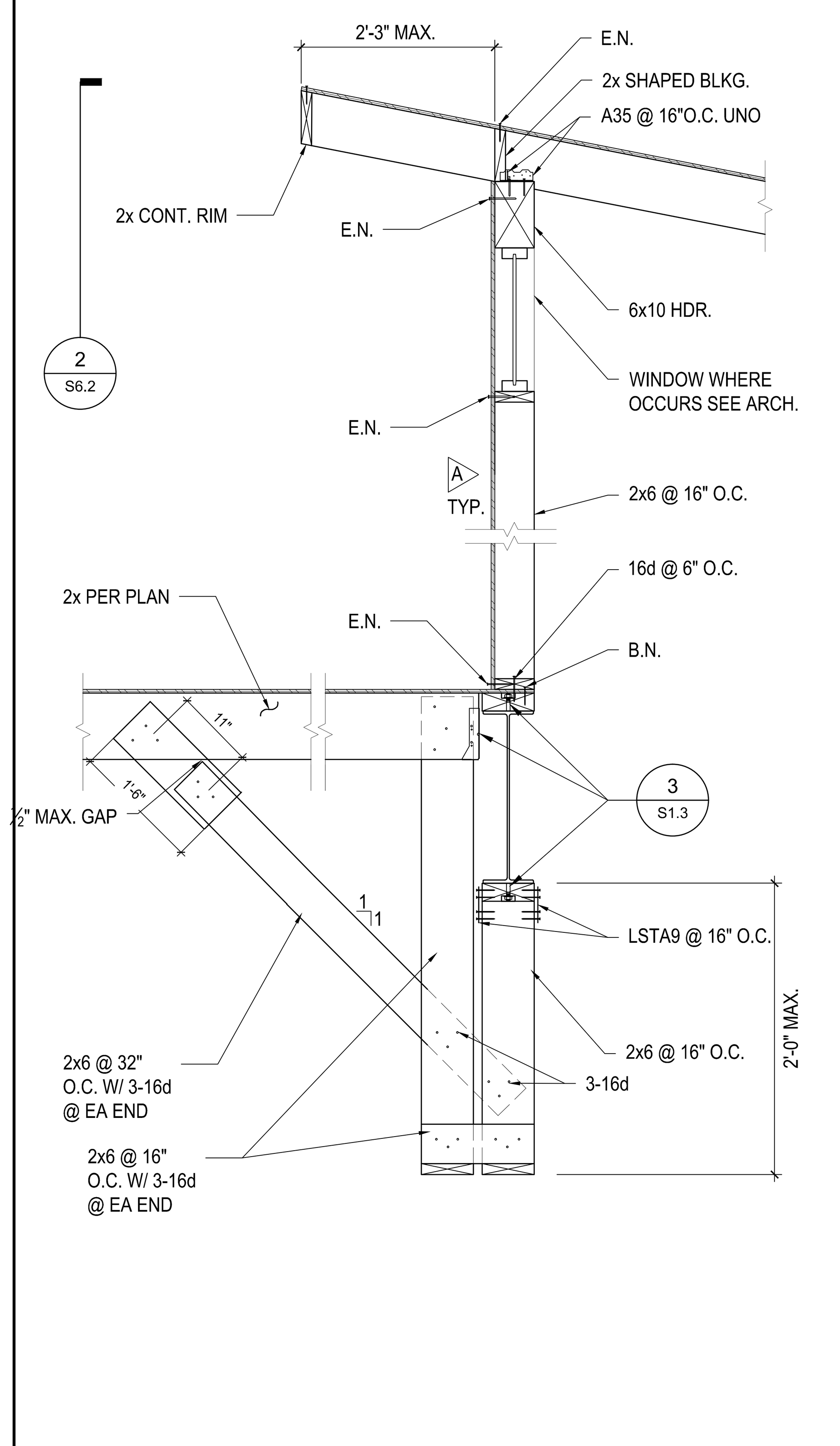
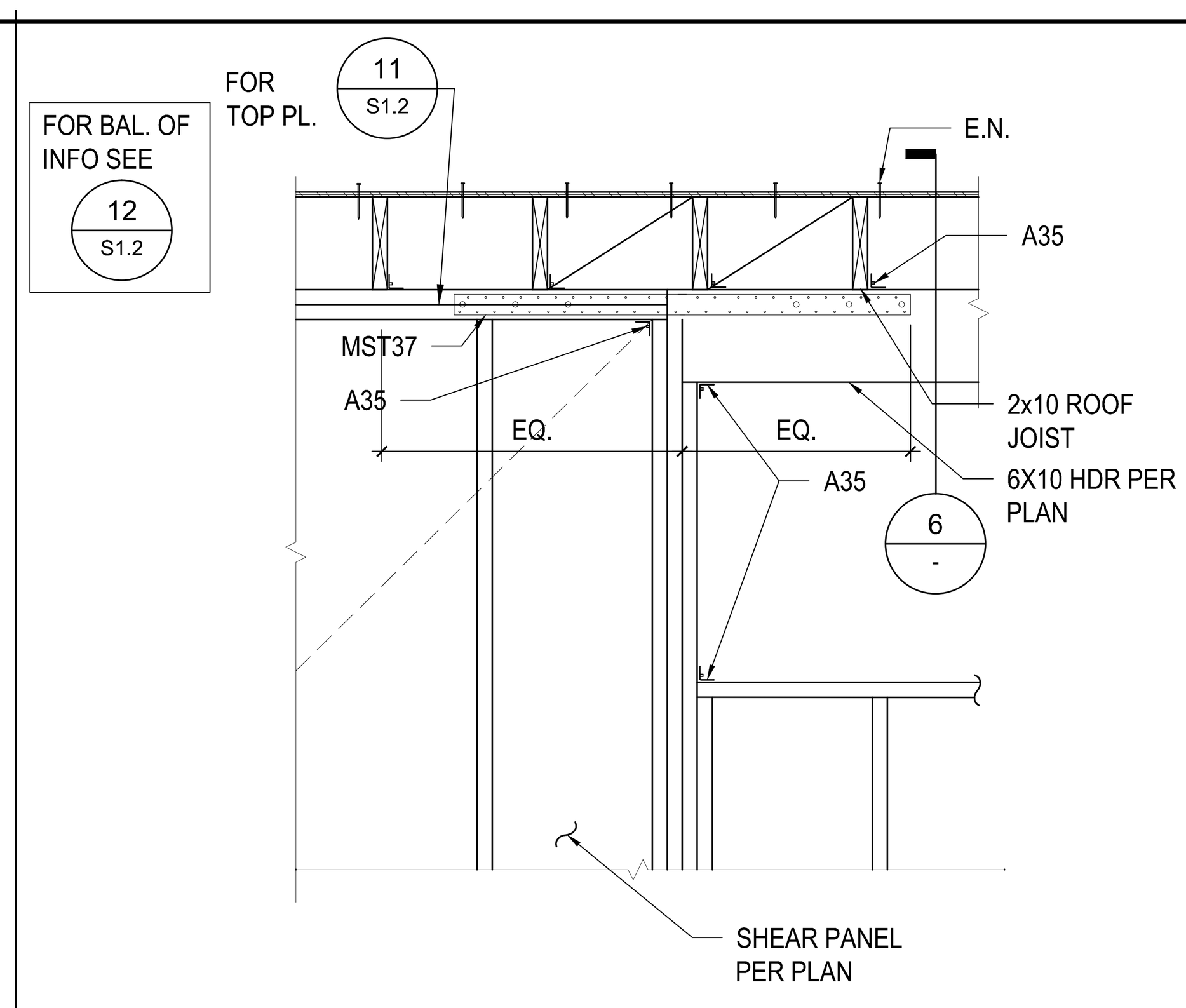
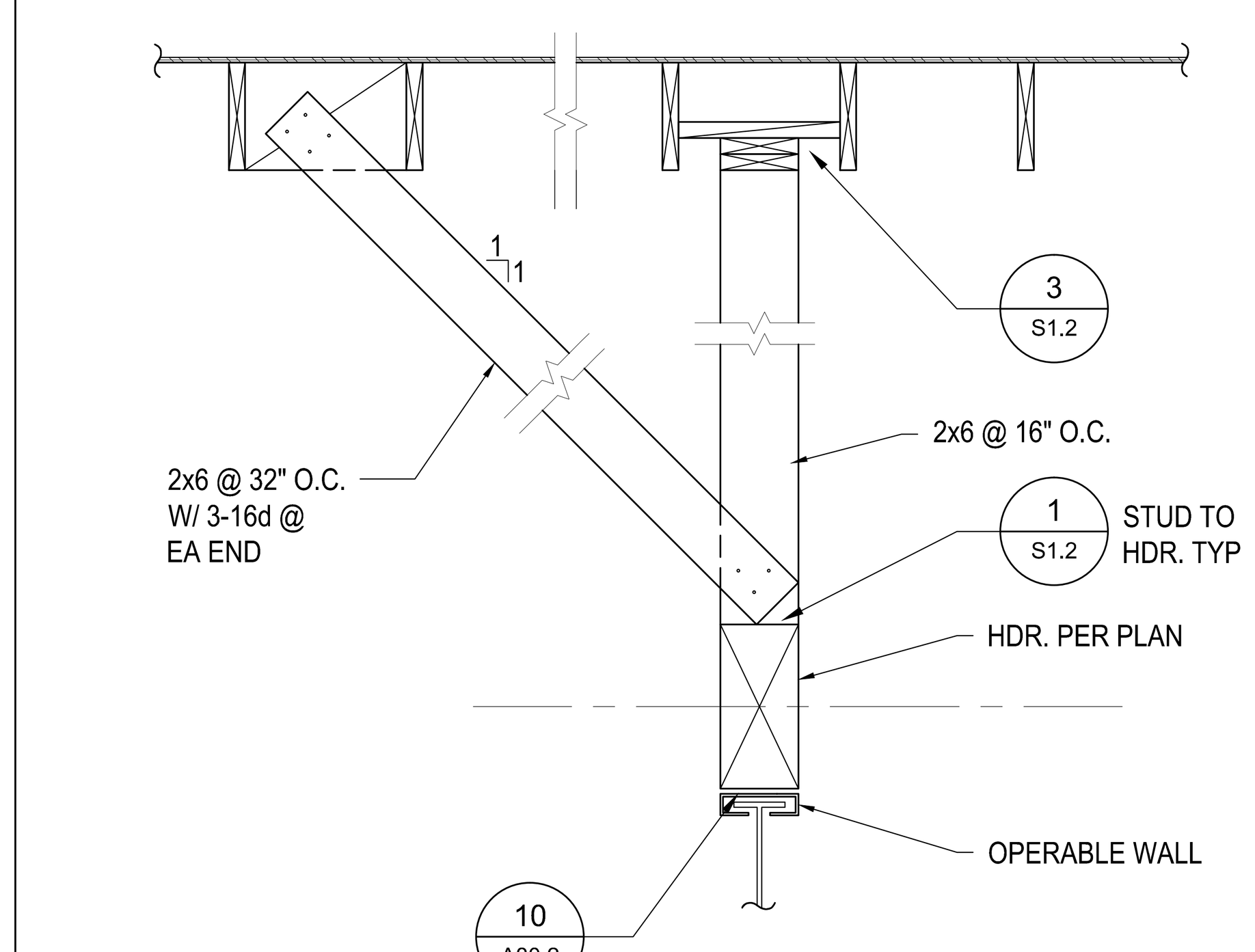


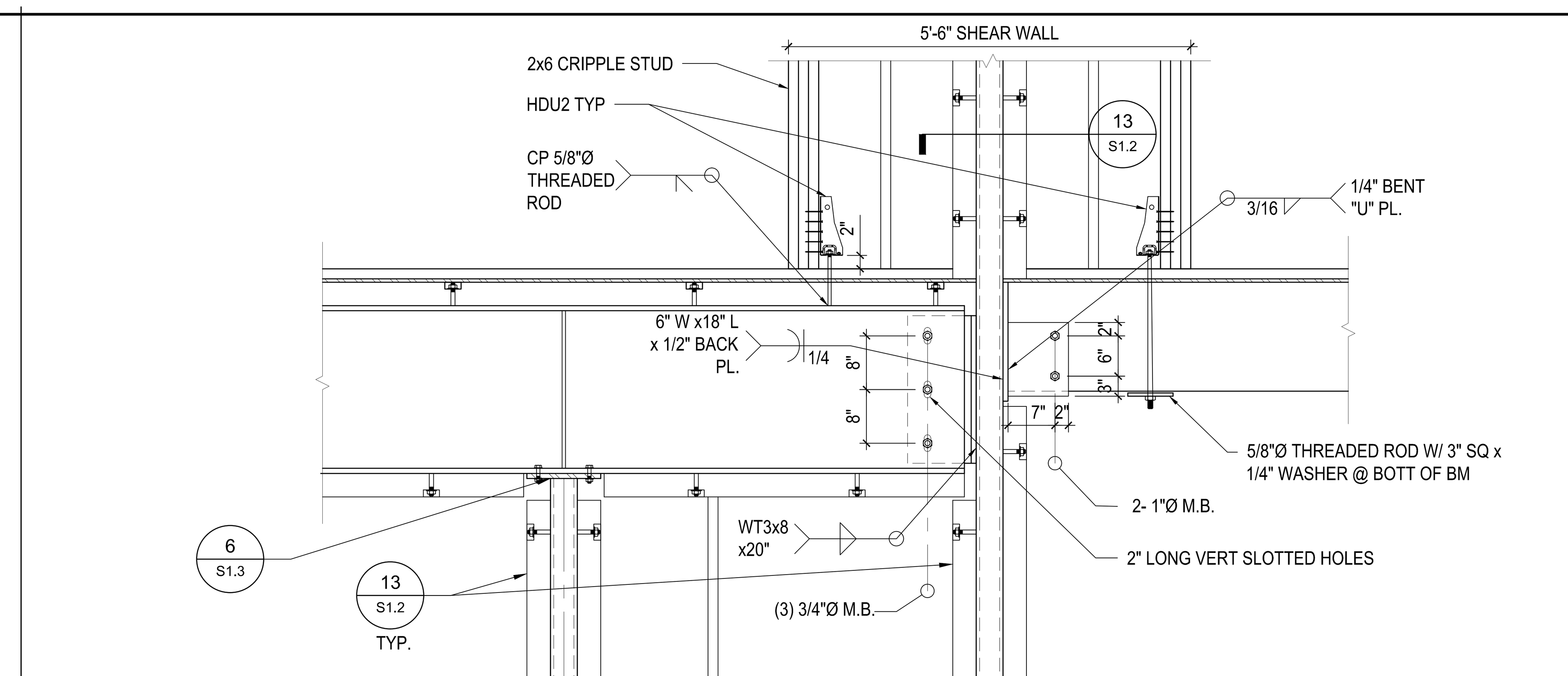
6 SECTION @ HIGH ROOF



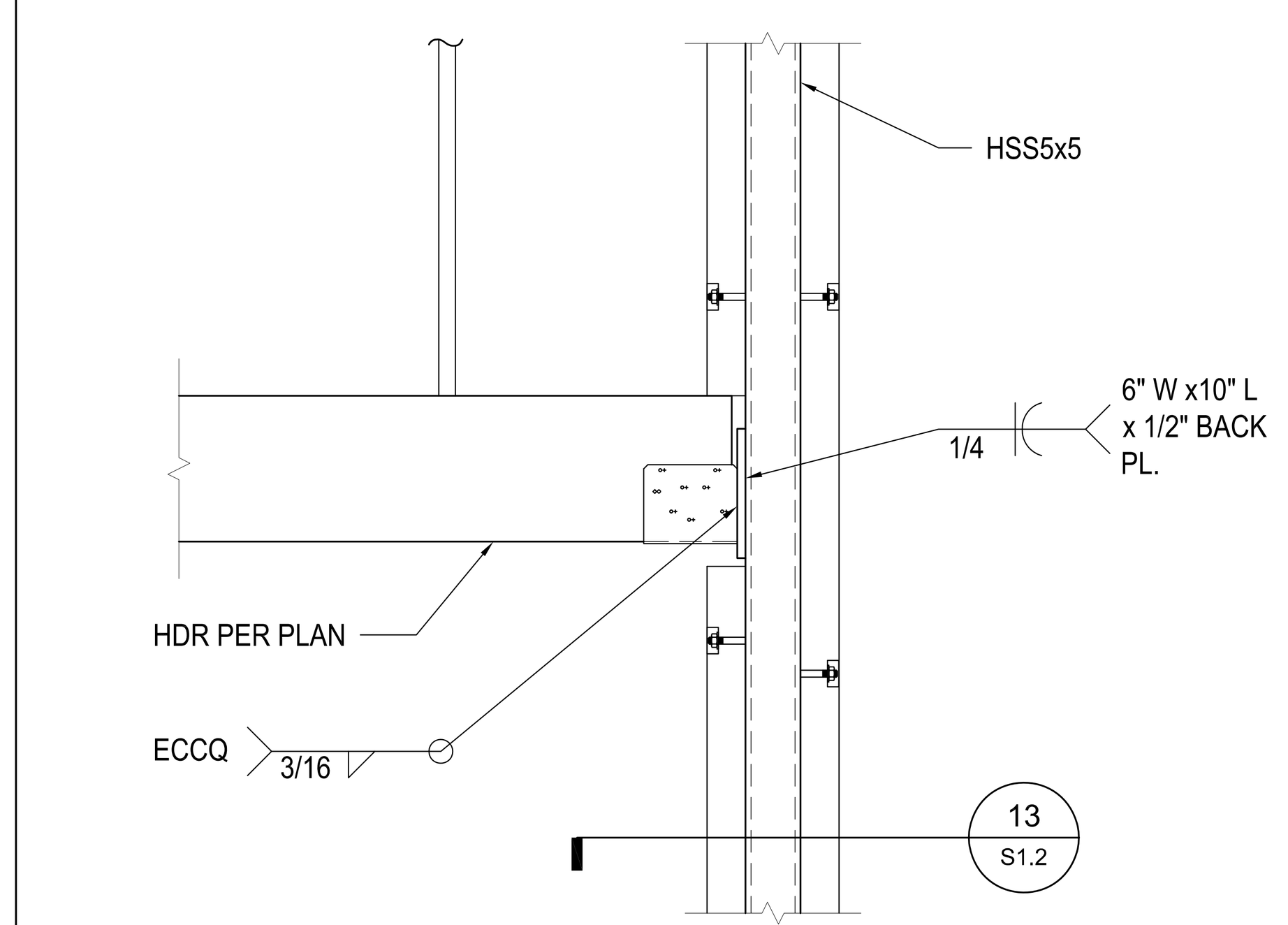
2 FRAMING ELEVATION



3 SECTION



4 SECTION



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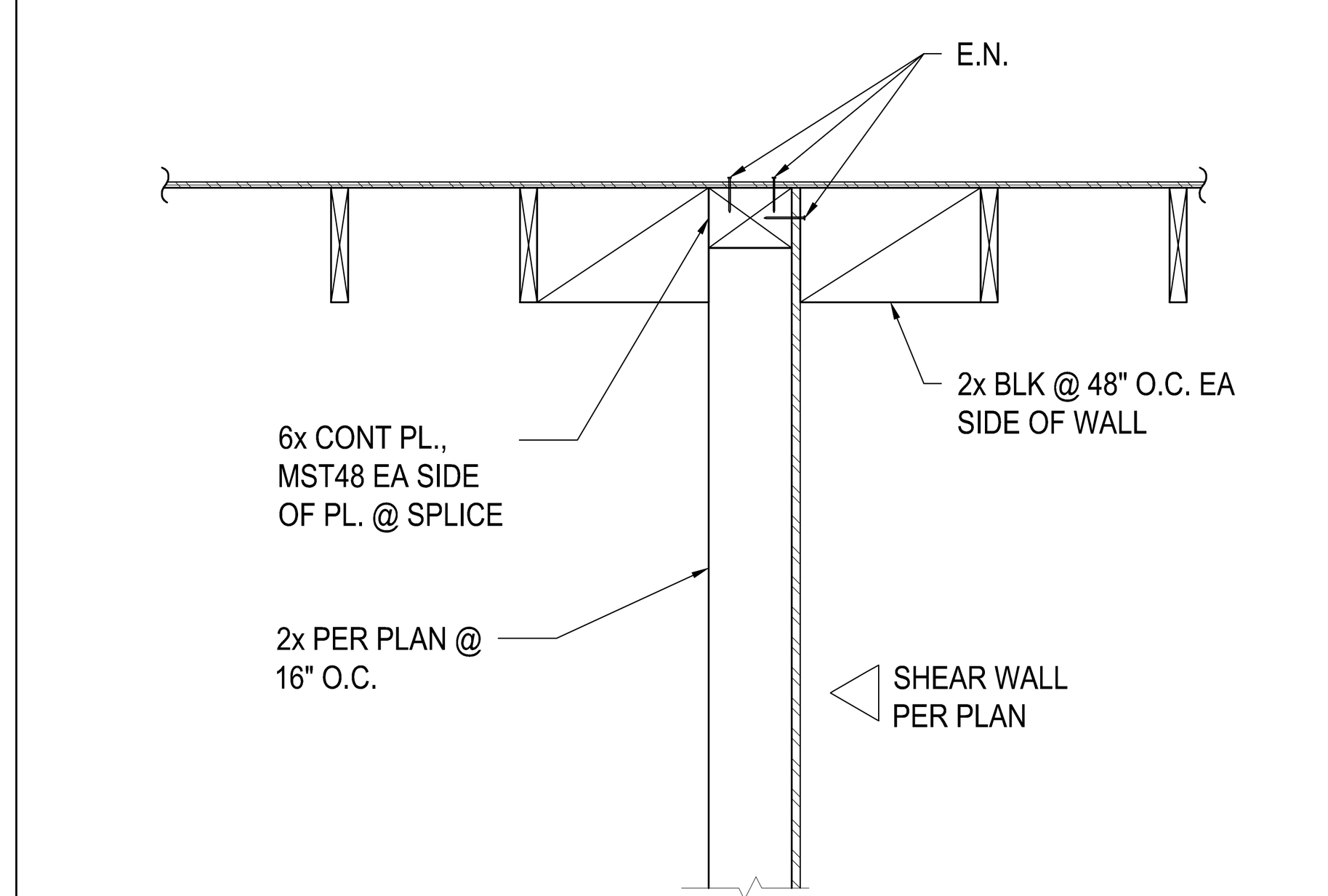

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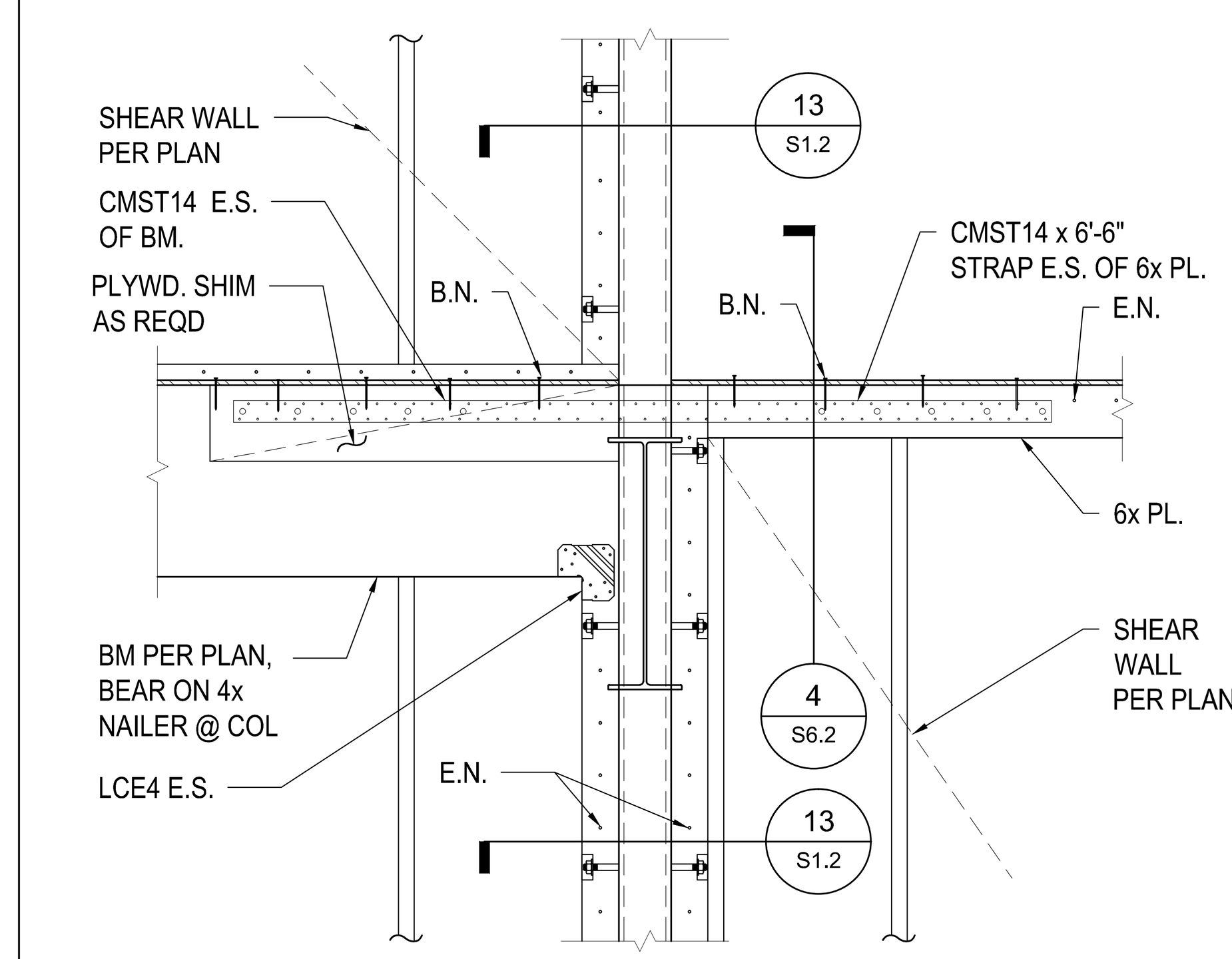
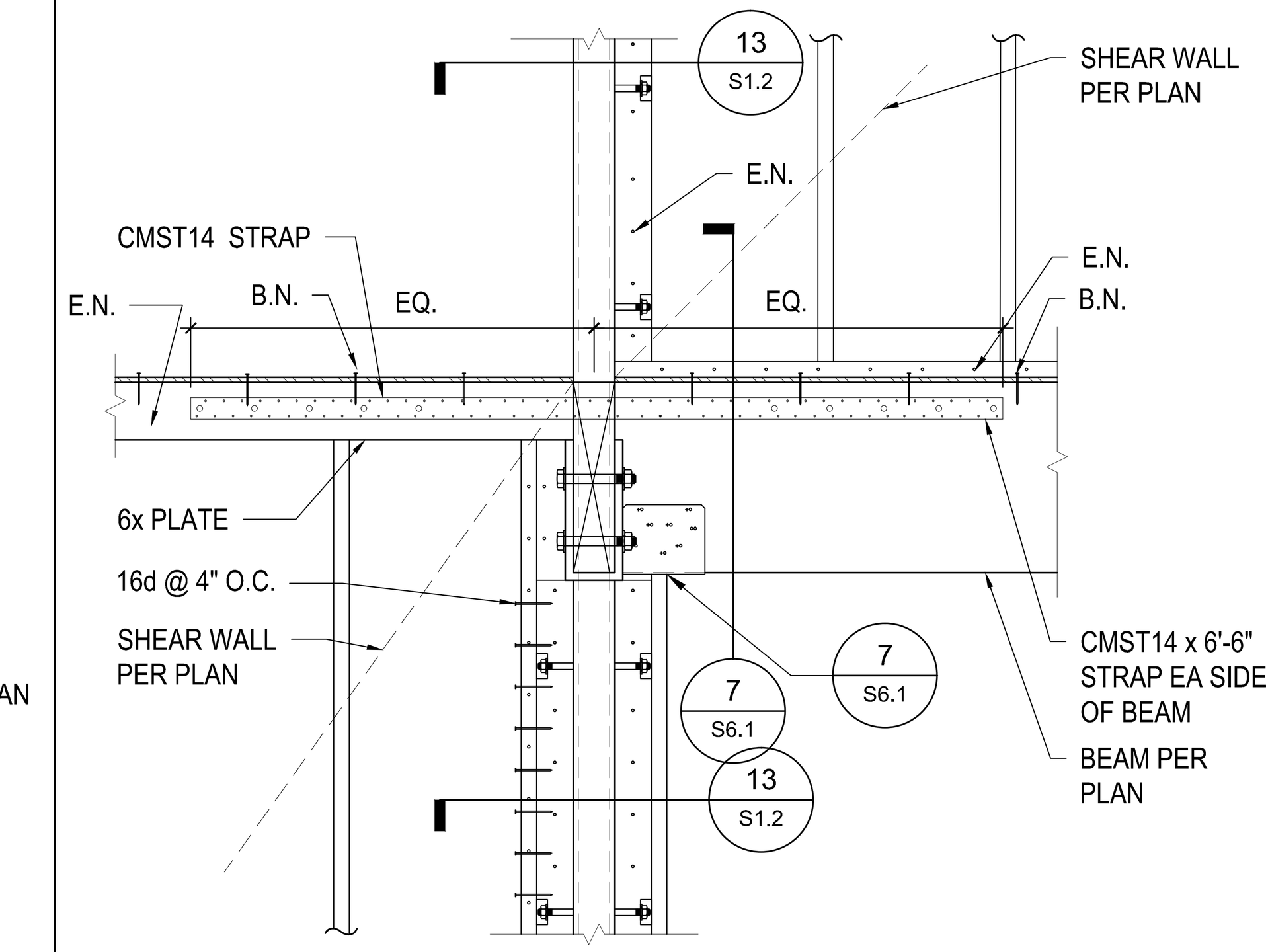
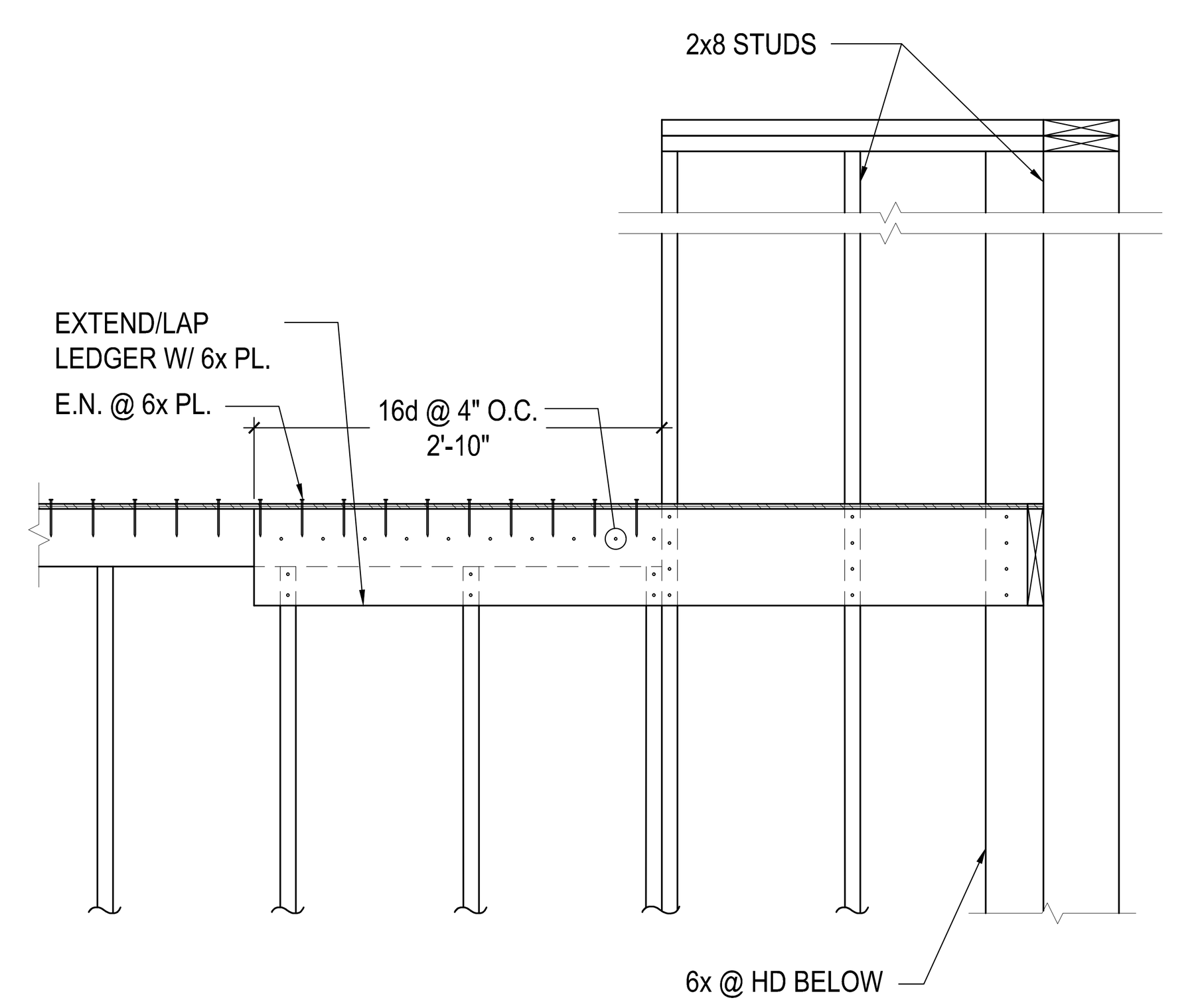


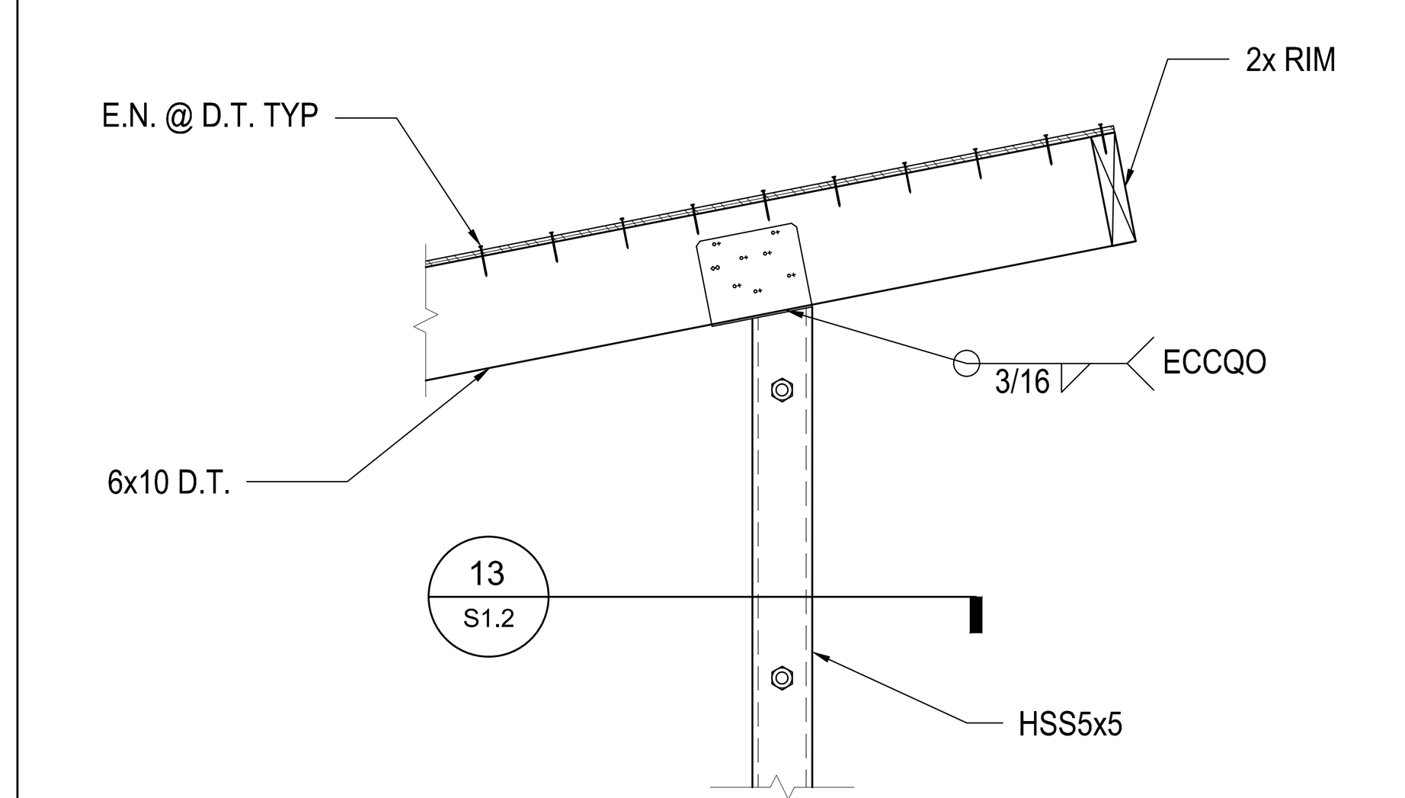
9 SECTION



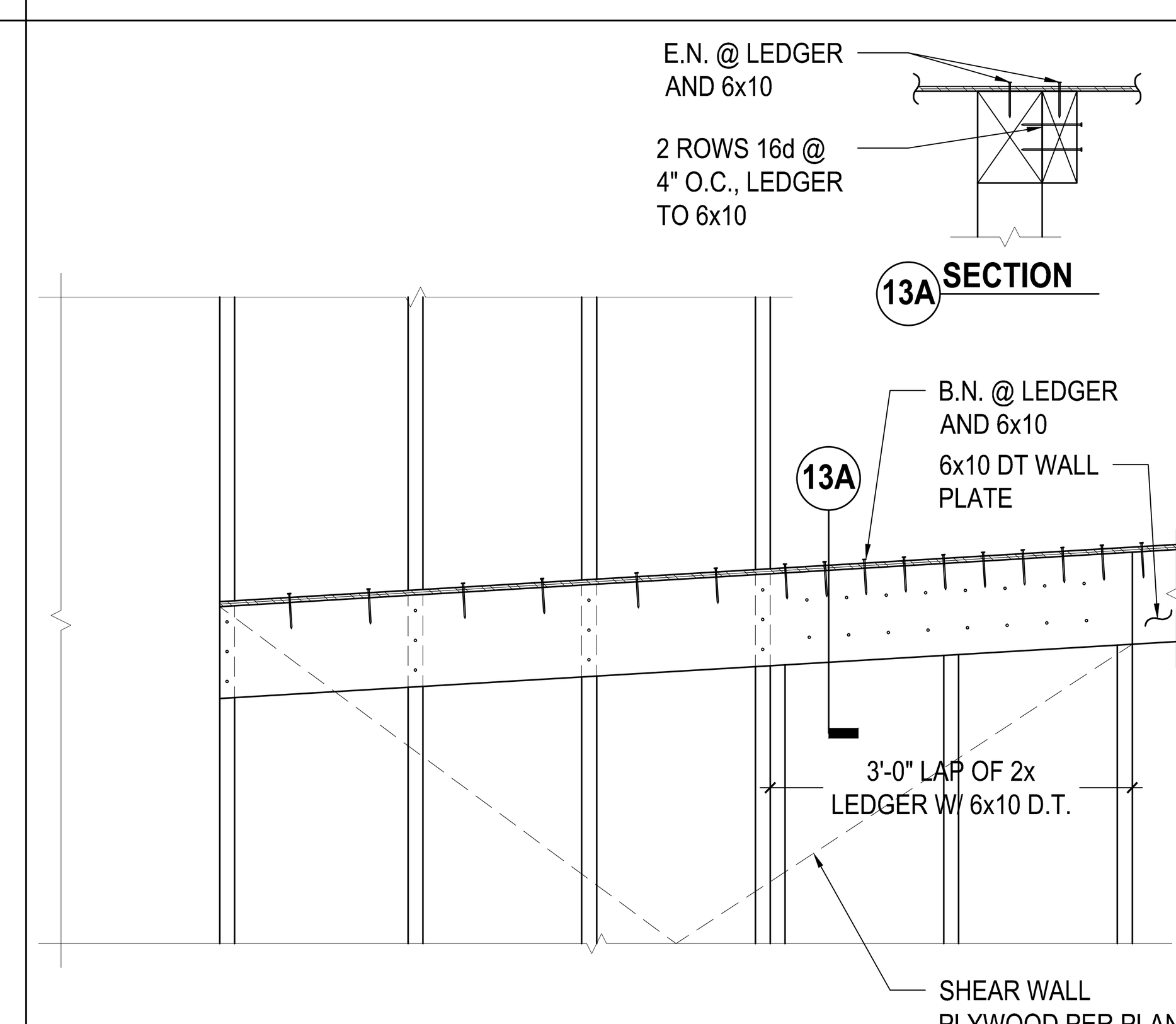
10 SECTION



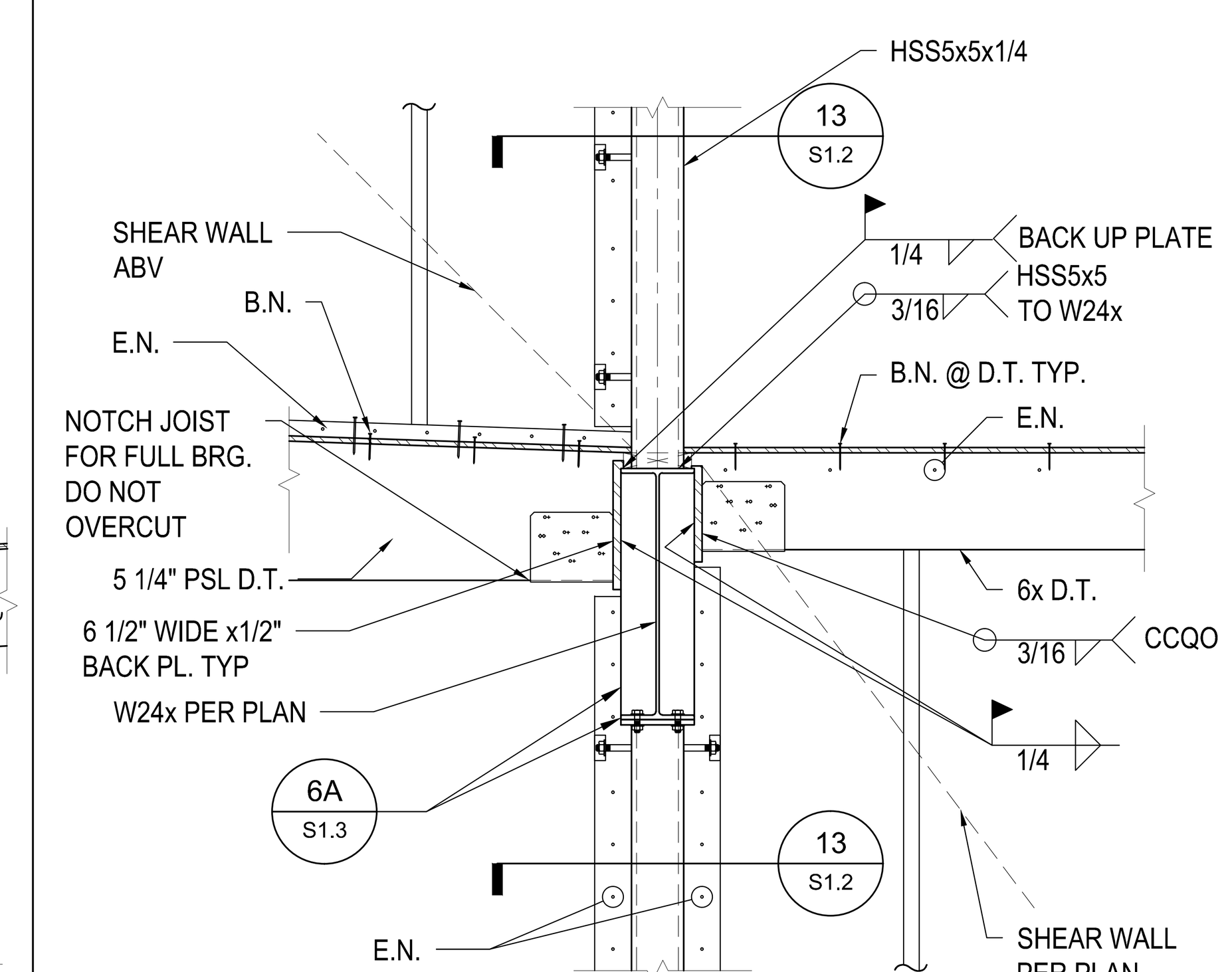
11 FRAMING ELEVATION



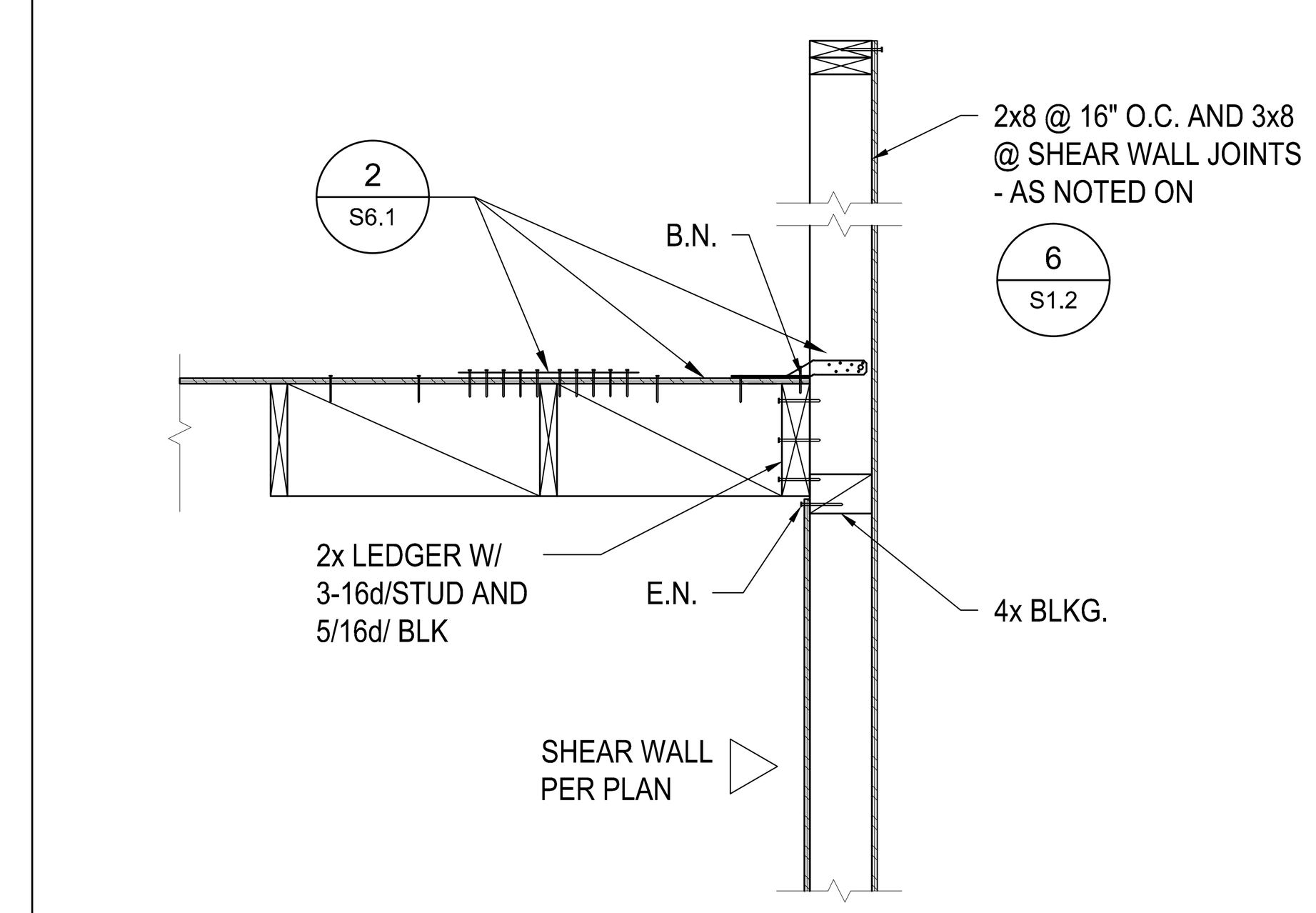
12 BEAM TO COL



13 PARTIAL WALL ELEVATION



14 DRAG TIE



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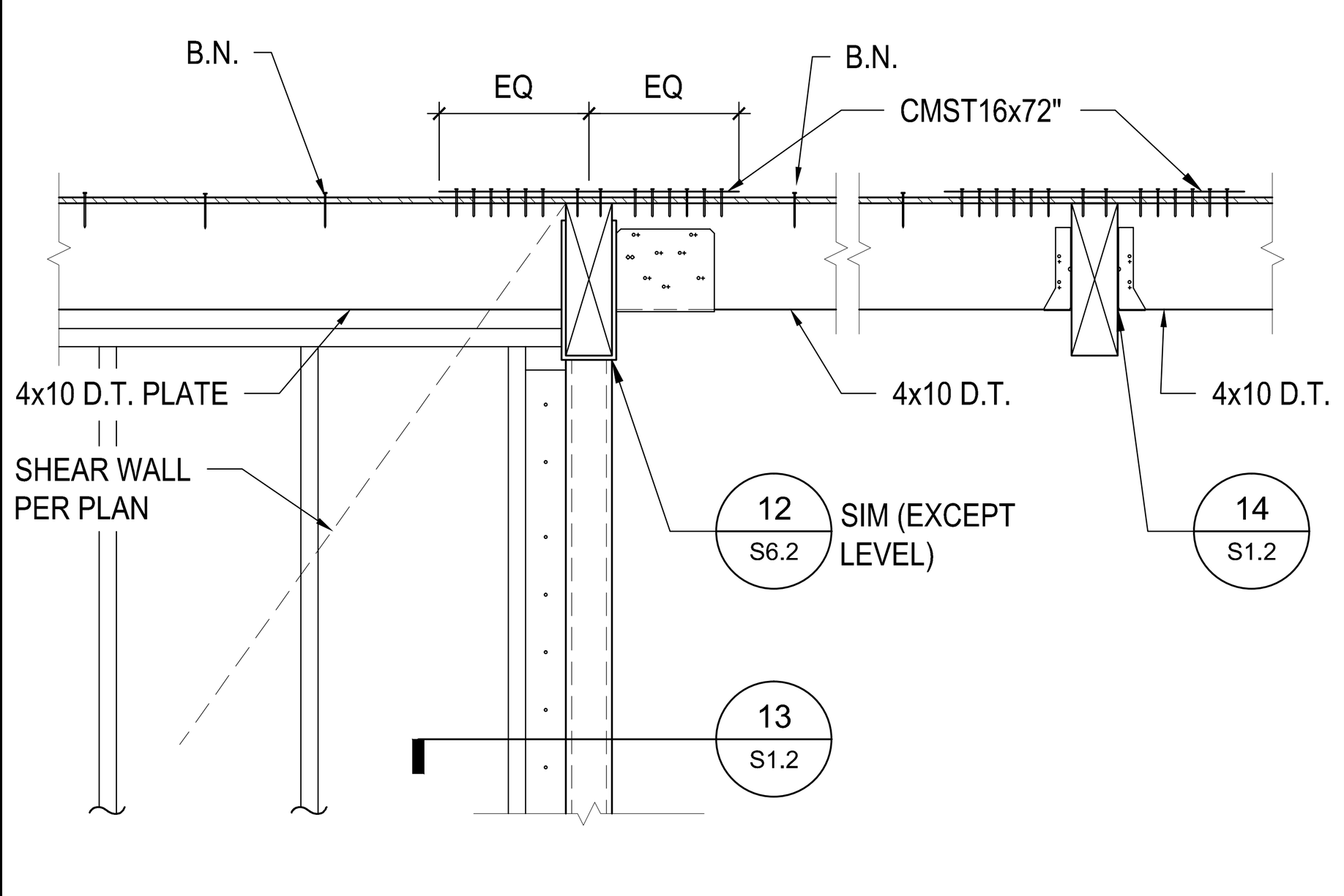
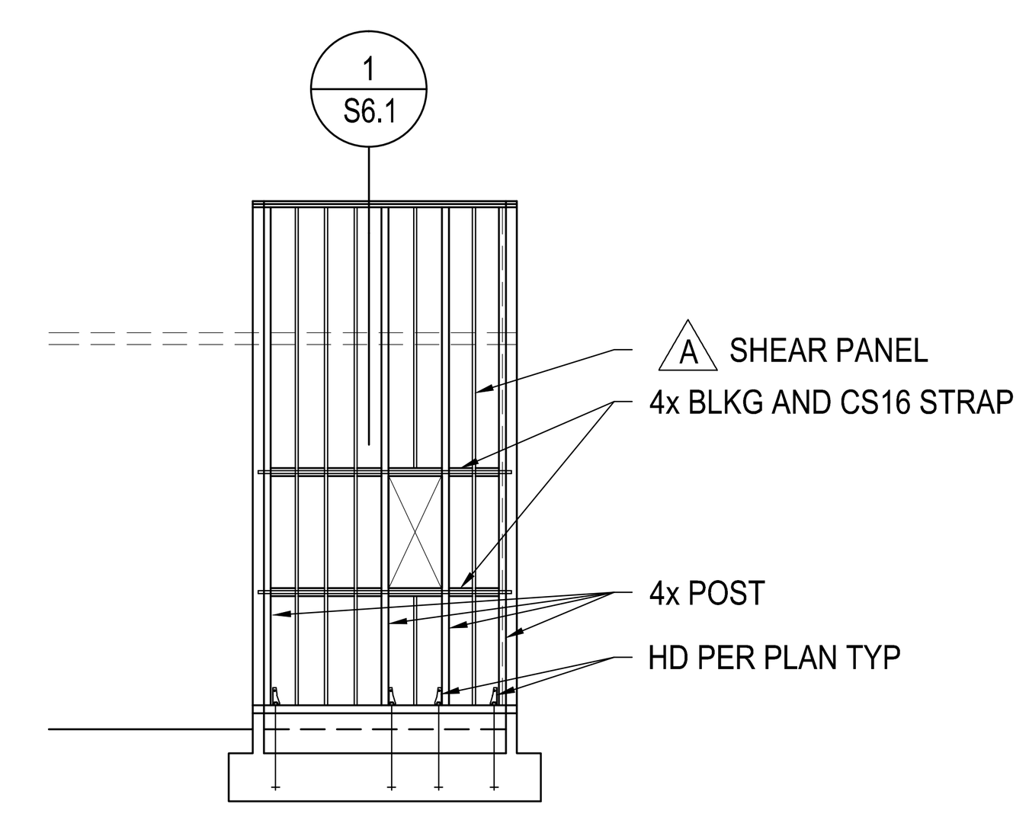
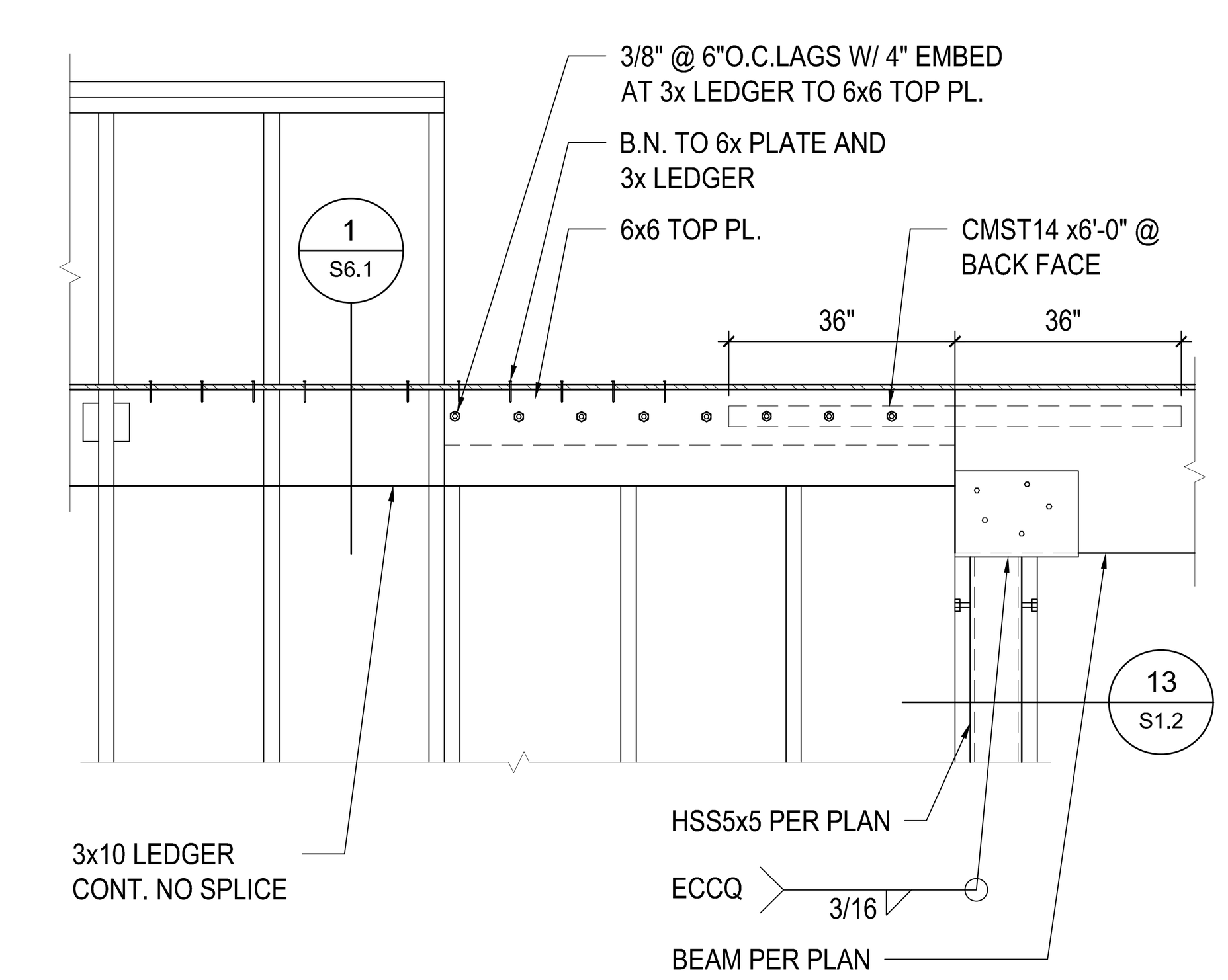


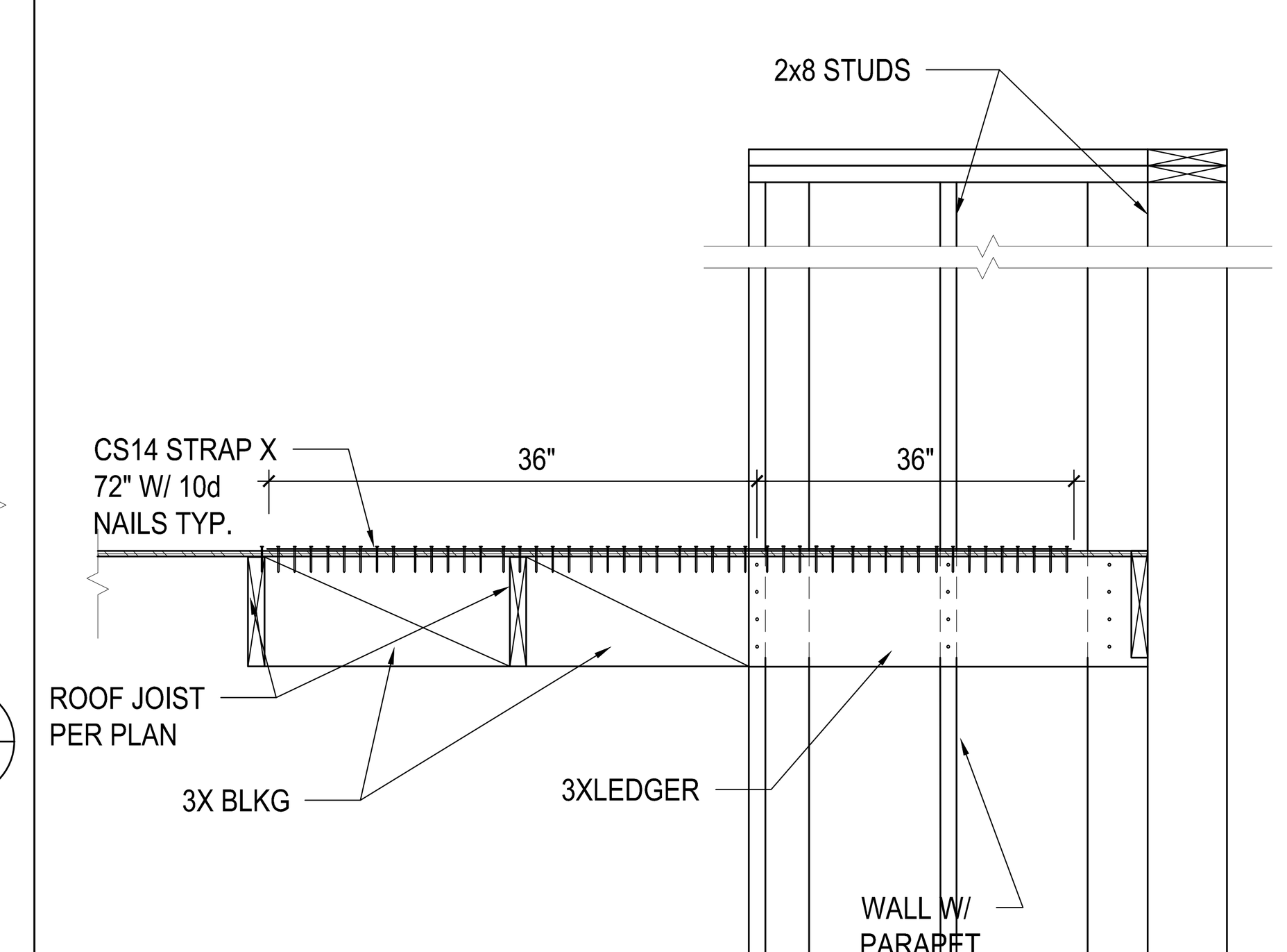
16 SECTION @ DRAG TIE



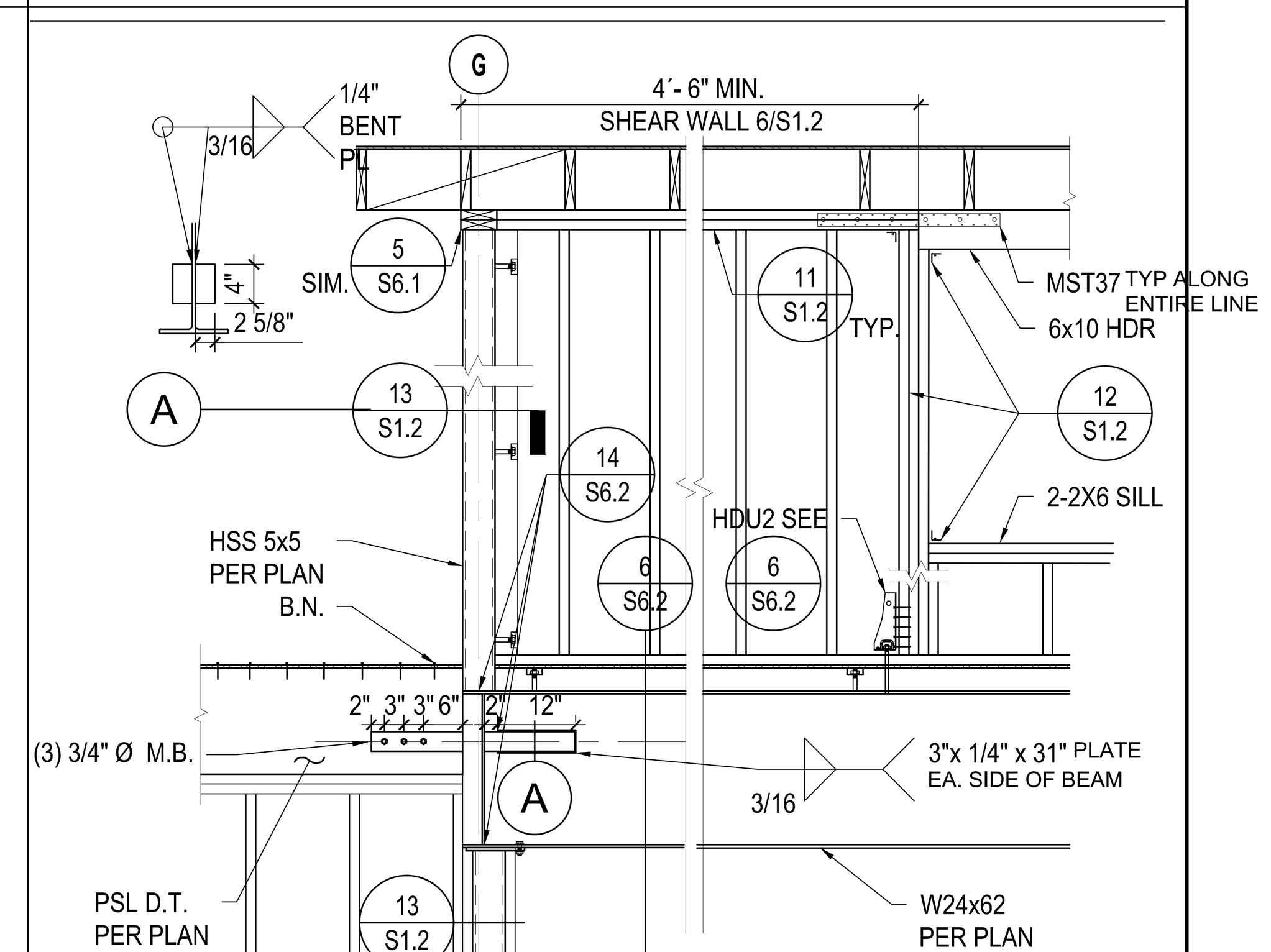
17 WALL ELEVATION LINE 6



18 DRAG TIE ROOF SECTION



19 RE-ENTRANT CORNER STRAP



20 UPPER SHEAR WALL ELEV.

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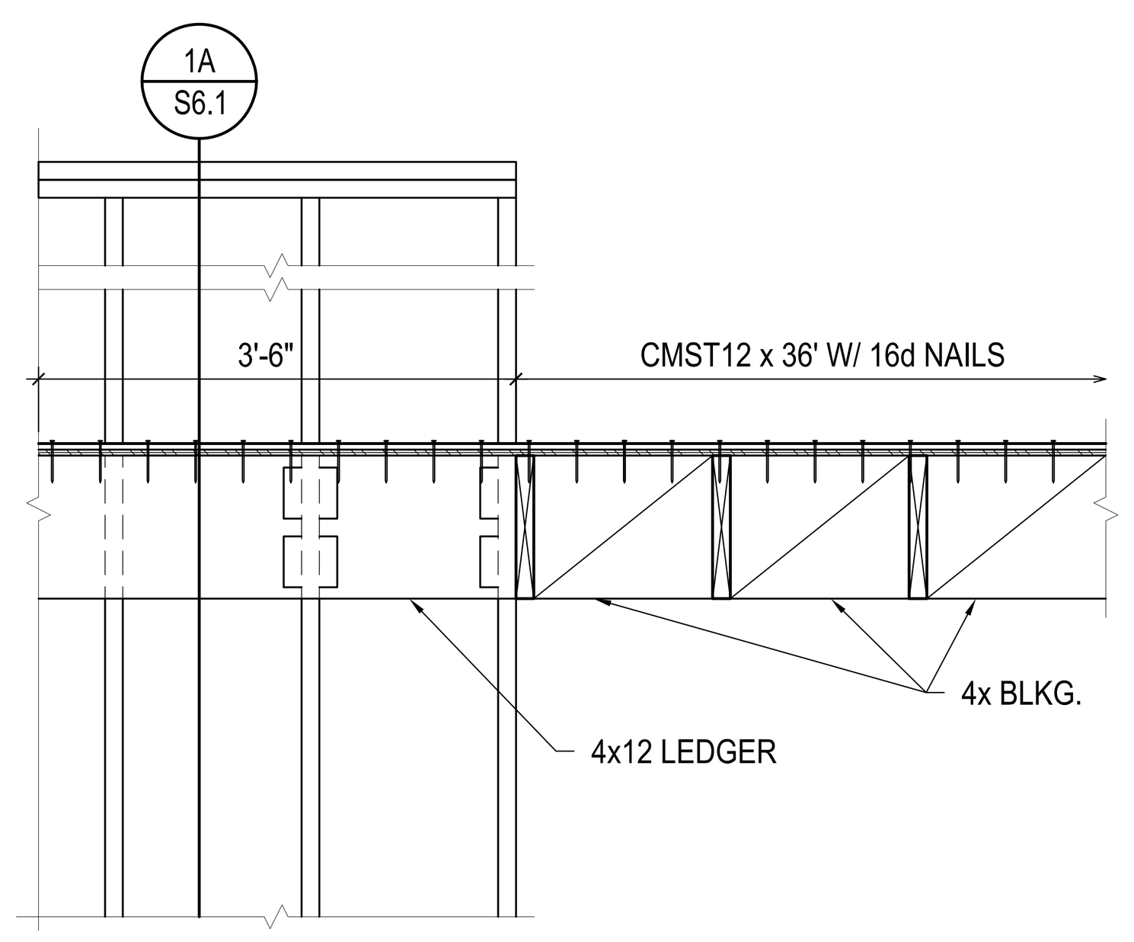
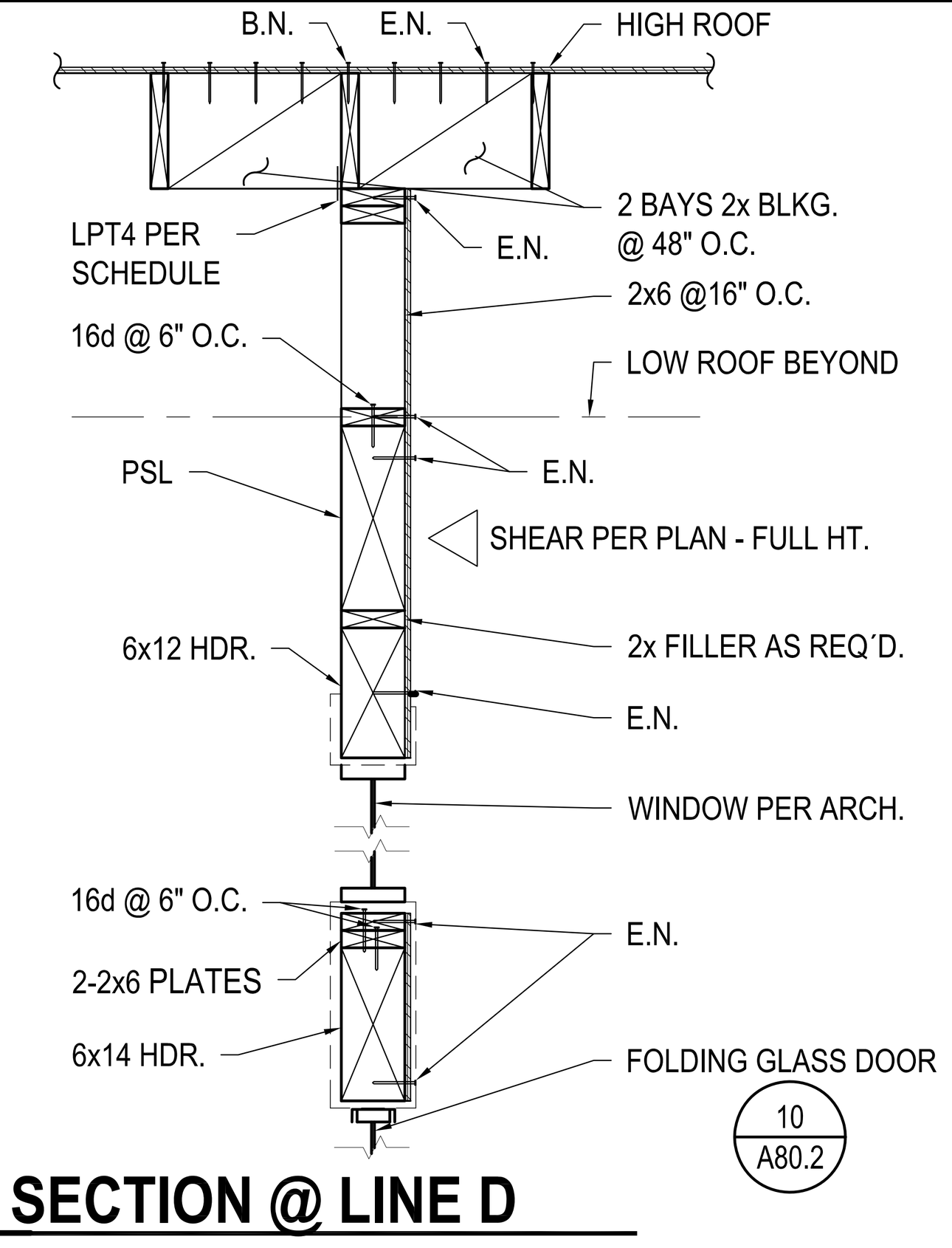
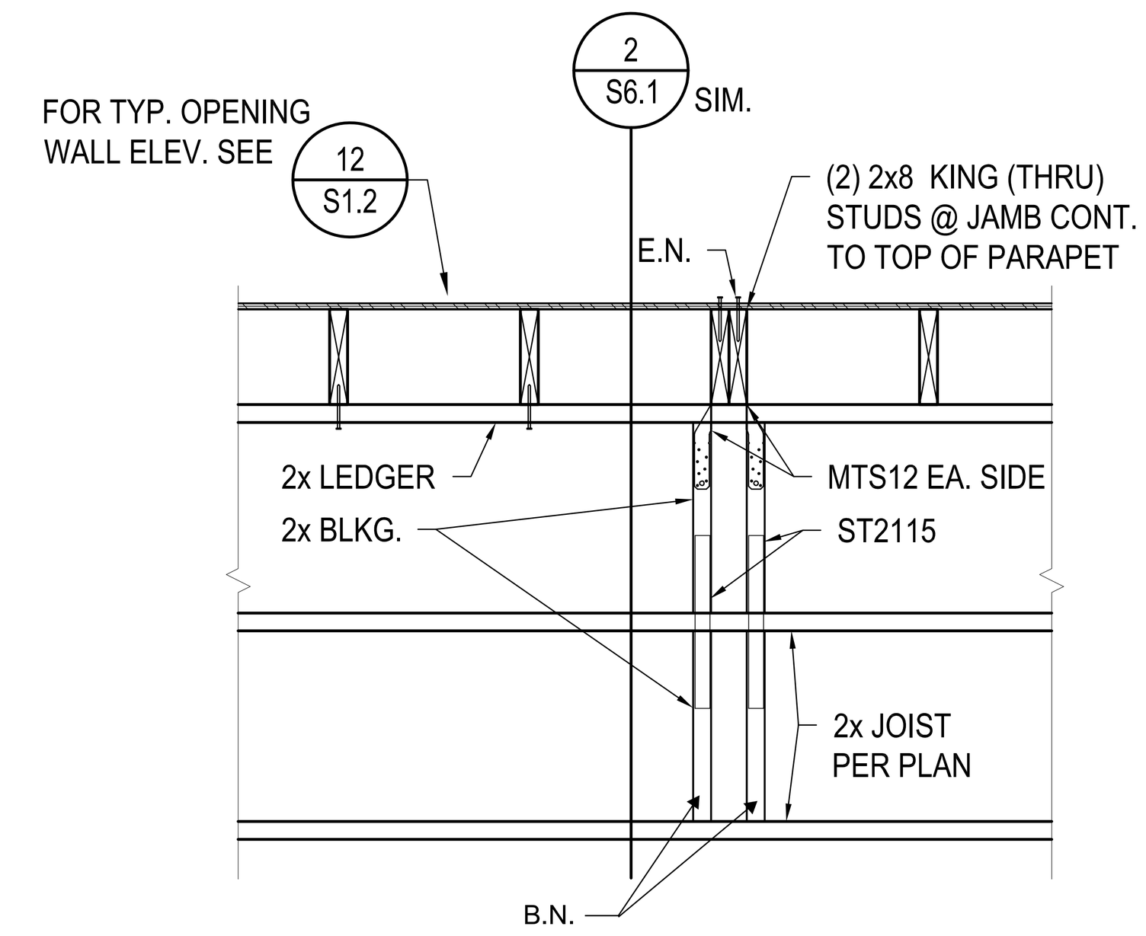


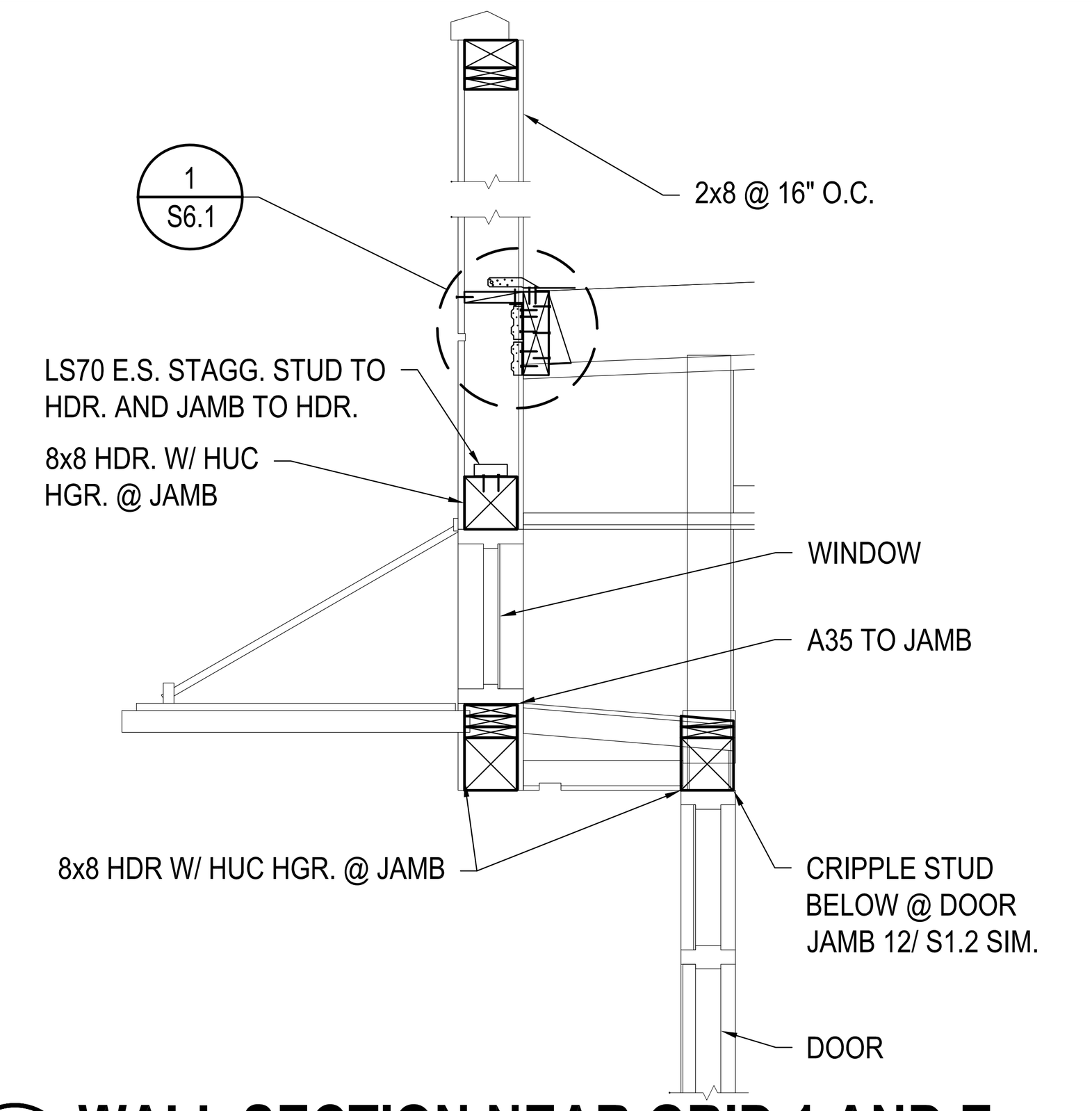
1 CMST 12 STRAP @ ROOF



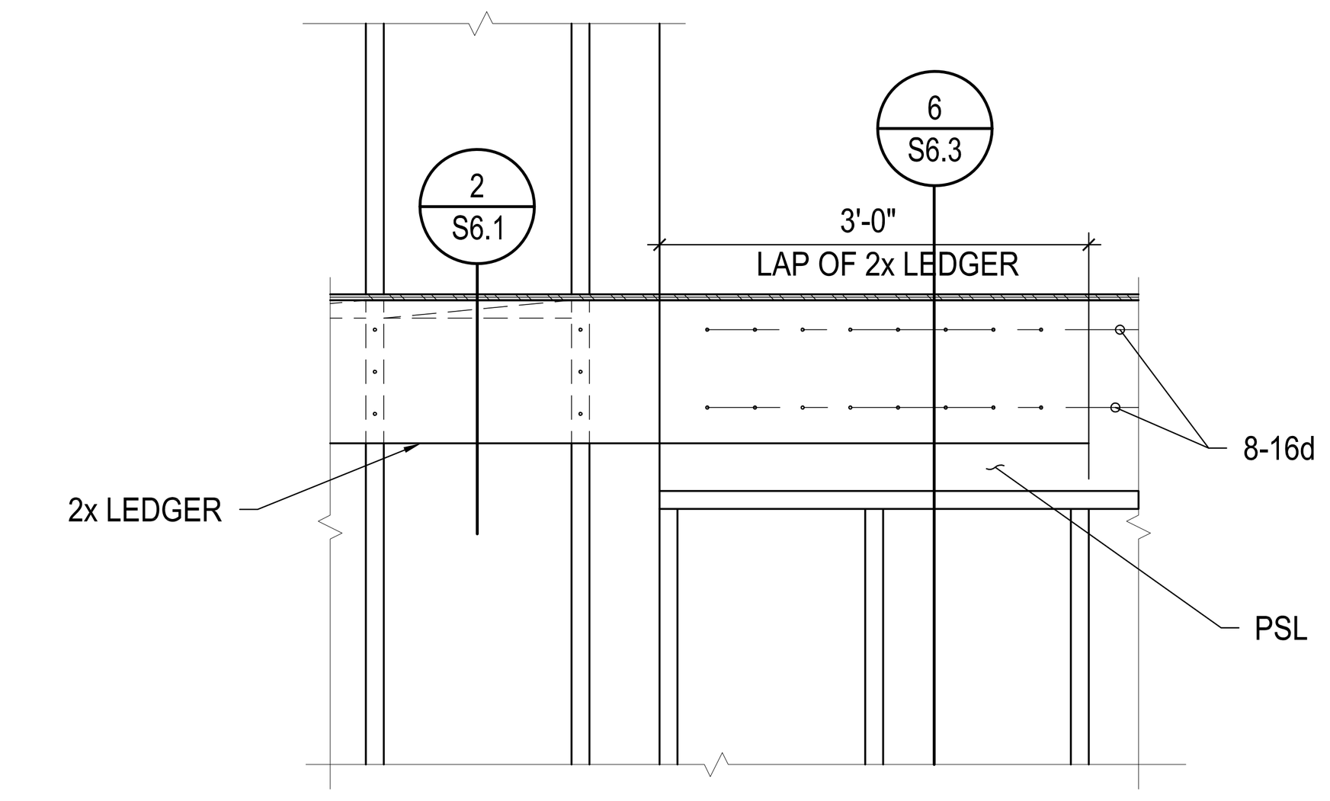
2 WALL SECTION @ LINE D



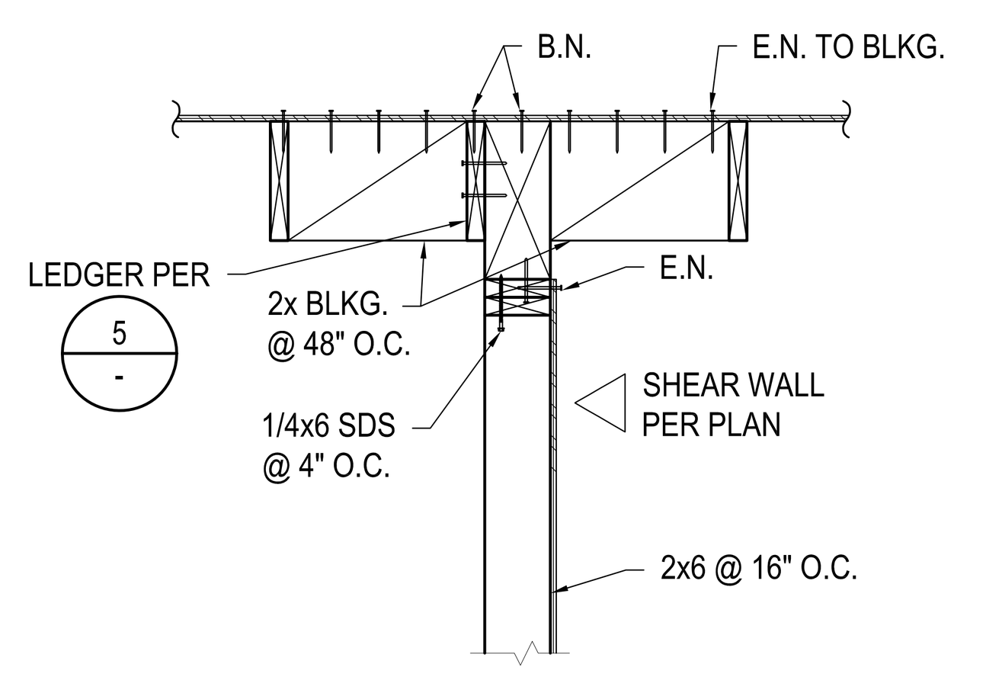
3 PLAN VIEW - JAMB STUD @ ROOF



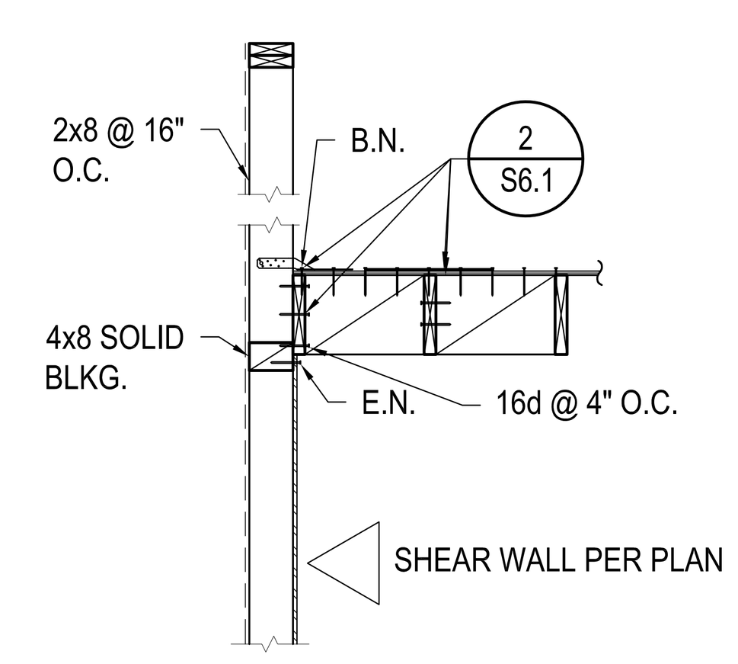
4 WALL SECTION NEAR GRID 1 AND E



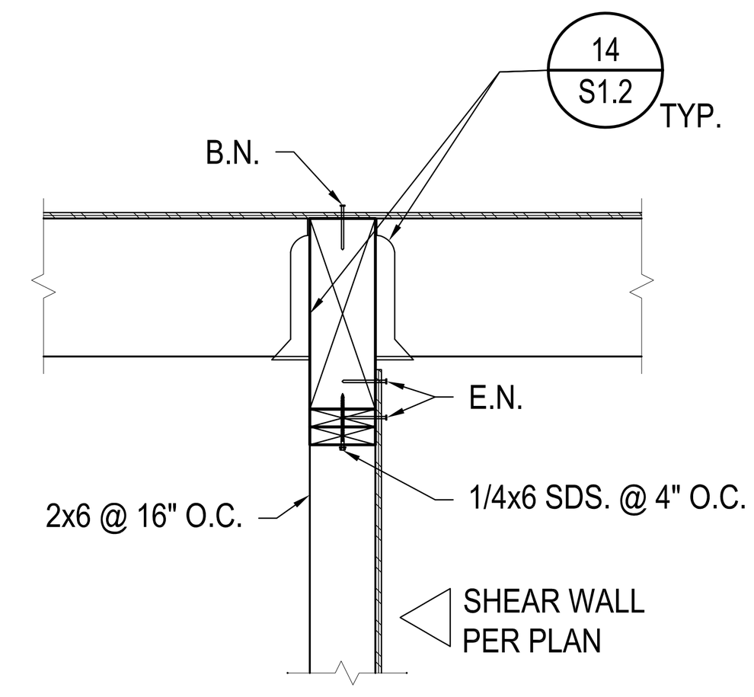
5 DRAG @ LINE B



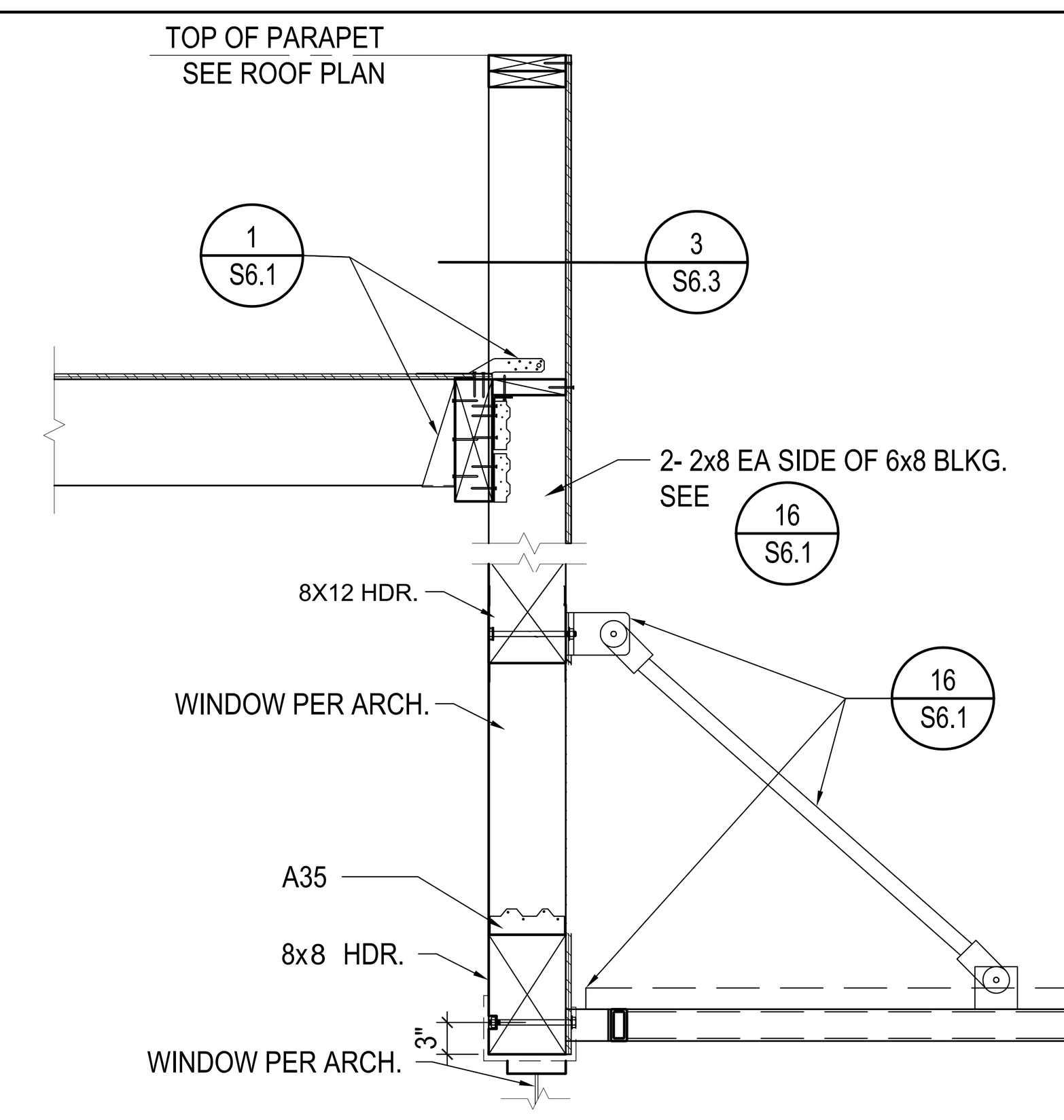
6 WALL SECTION



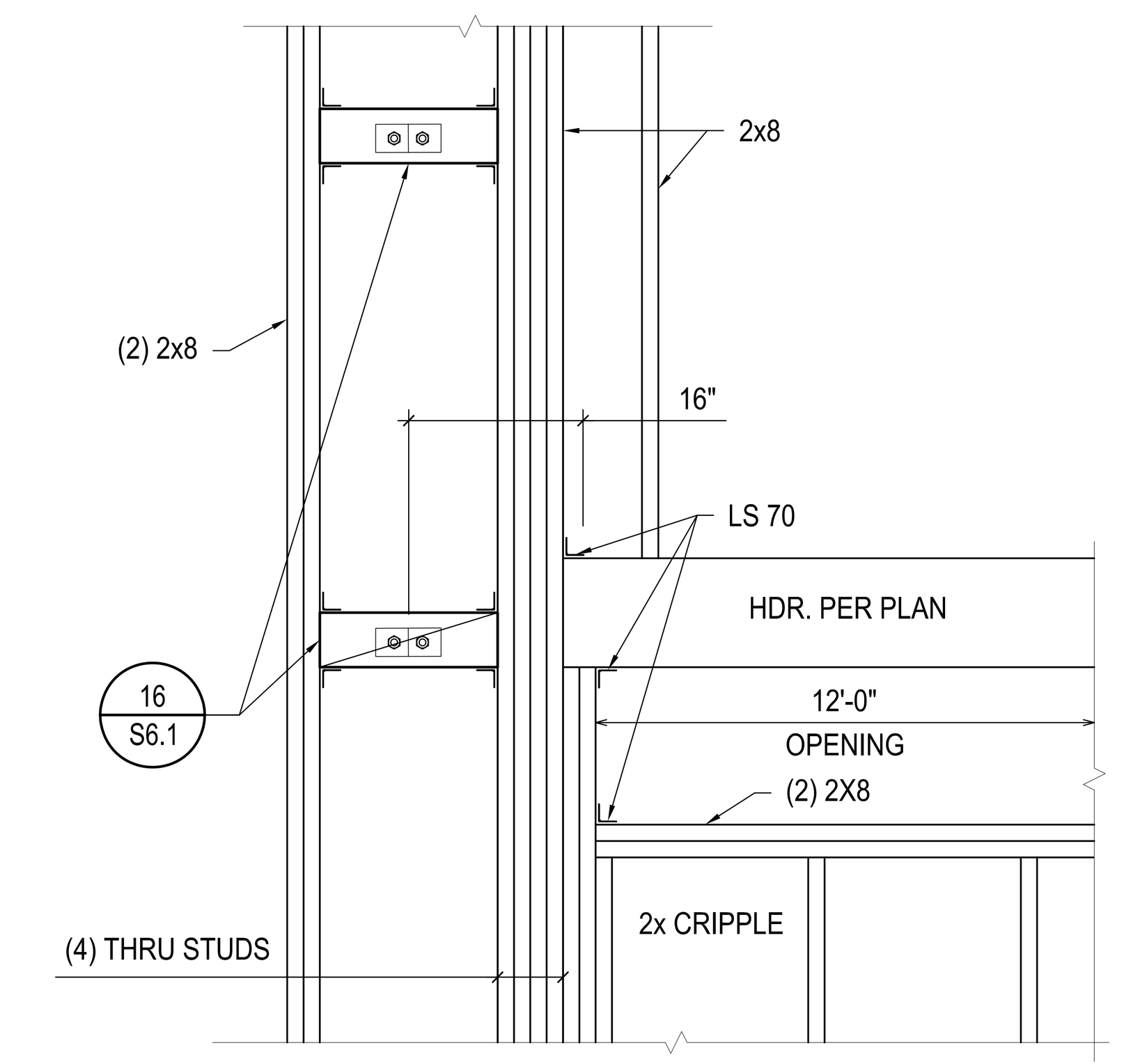
7 WALL SECTION



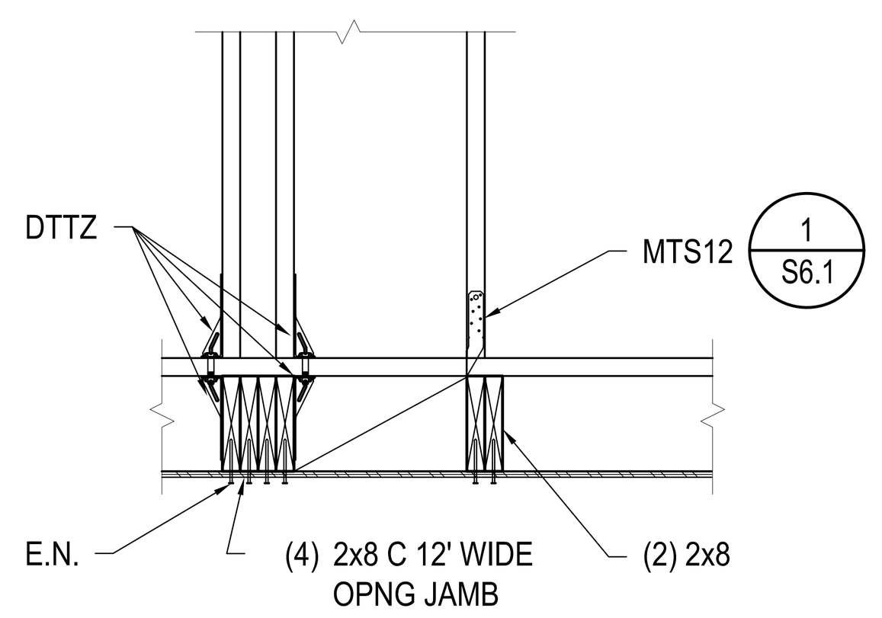
8 WALL SECTION



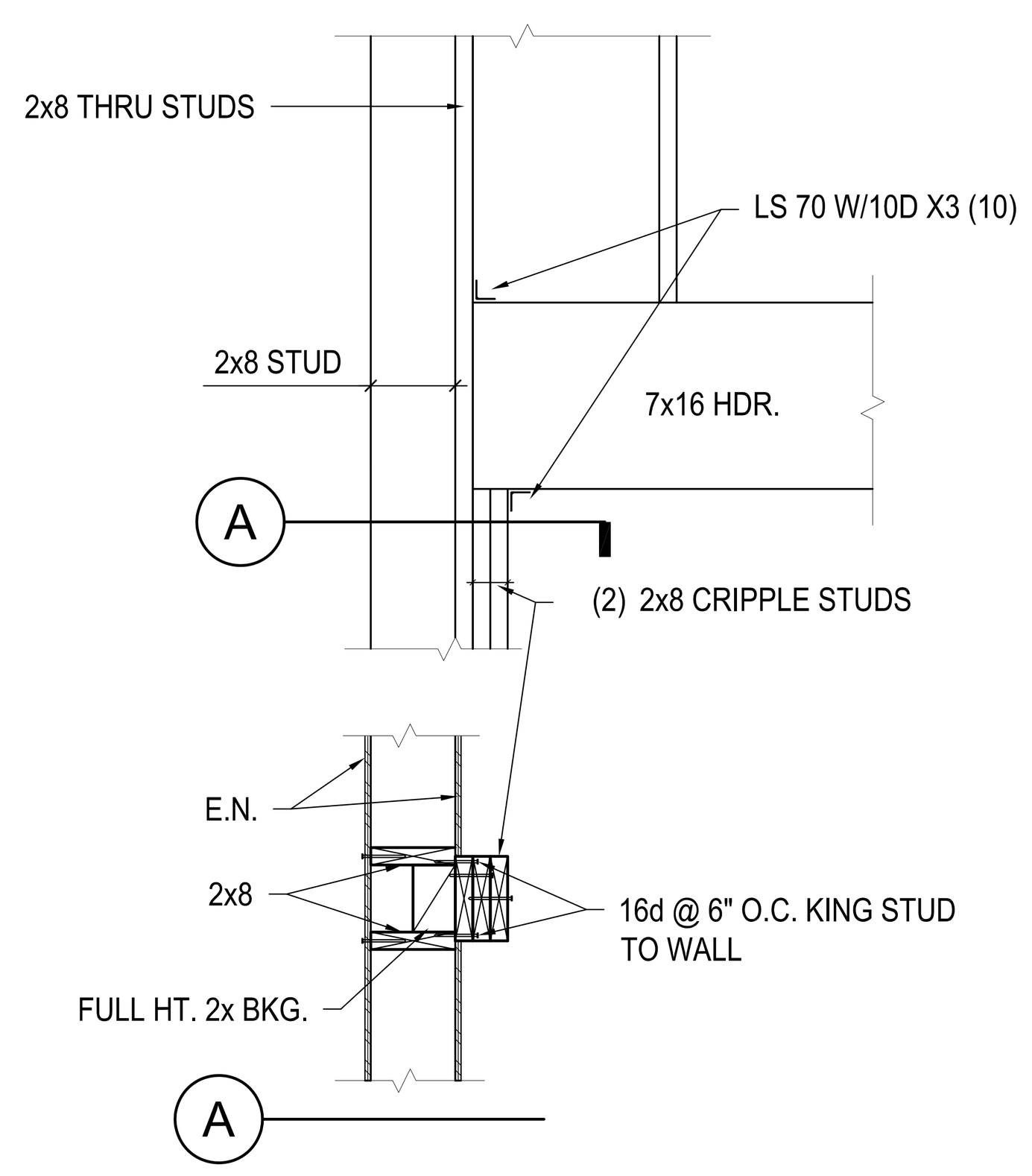
9 WALL SECTION @ LINE 7



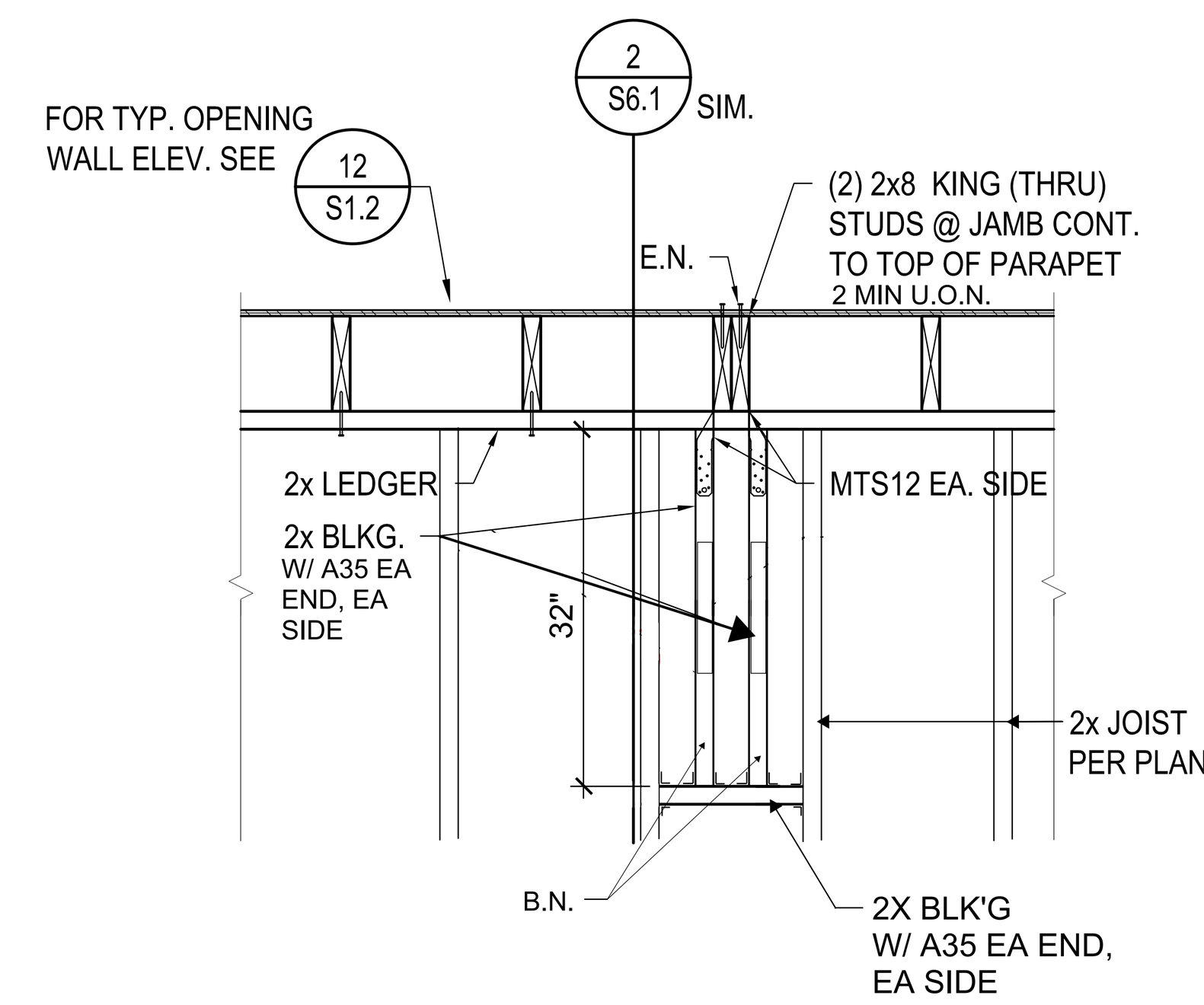
10 12" WIDE EXT. OPENING



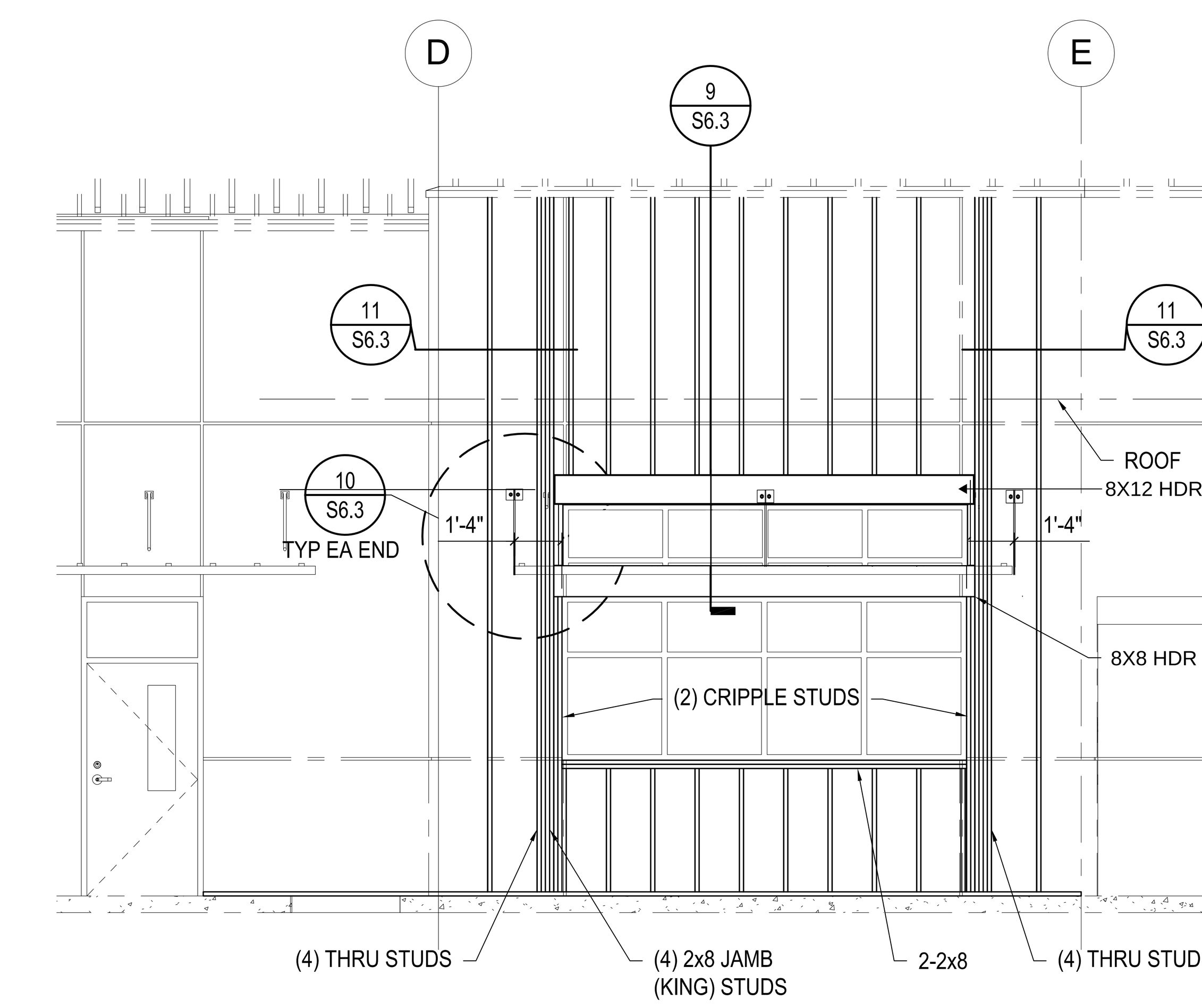
11 PLAN VIEW - JAMB CONN. @ ROOF LINE 7



12 LINE G.7 HDR JAMB



13 PLAN VIEW - JAMB STUD @ ROOF



20 PARTIAL WALL ELEV. @ LINE 7

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Date | Revison

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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

FRAMING DETAILS

Drawn: MR
Checked: SW
Date: JANUARY 14, 2020
Job: SSD-SC-03

S6.3

MECHANICAL GENERAL NOTES

1. REVIEW THESE PLANS AND SPECIFICATIONS INCLUDING PLANS AND SPECIFICATIONS OF OTHER TRADES PRIOR TO BID. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
2. VERIFY & COORDINATE EXACT LOCATION OF EXISTING EQUIPMENT. PENETRATIONS THROUGH ROOF, FLOOR AND WALLS WITH ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL PRIOR TO SHOP DRAWINGS AND CONSTRUCTION.
3. COORDINATE EXACT SIZE AND ROUTING OF DUCT WORK AND PIPING WITH ARCHITECTURAL STRUCTURAL, PLUMBING AND ELECTRICAL PRIOR TO SHOP DRAWING AND CONSTRUCTION.
4. PROVIDE A COMPLETE SET OF SHOP DRAWINGS AND DETAILS BASED ON ACTUAL FIELD MEASUREMENT AND EQUIPMENT PROCURED.
5. PROVIDE ACCESS AND CLEARANCES FOR EQUIPMENT MAINTENANCE AS RECOMMENDED BY APPLICABLE CODES AND EQUIPMENT MANUFACTURER. COORDINATE WITH OTHER TRADES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES, EQUIPMENT, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
7. FOR CONDITIONS THAT PIPE AND CONDUIT SUPPORT IS NOT PROVIDED, REFER TO SMACNA DETAILS.
8. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK.
9. ALL WORK SHALL COMPLY WITH THE LATEST EDITION, ALL APPLICABLE CODES, SPECIFICATIONS, REQUIREMENTS OF AGENCIES HAVING JURISDICTION AND INDUSTRY STANDARDS.
10. INSULATE PIPING IN ACCORDANCE WITH THE GOVERNING CODES. INSULATION SHALL COMPLY WITH STATE FIRE MARSHALL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSULATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED. REFRIGERATION PIPING INSULATION R-VALUE SHALL COMPLY WITH 2016 BUILDING ENERGY EFFICIENCY STANDARDS / TITLE 24, TABLE 120.3-A. PRIOR TO INSULATING THE PIPES CONFIRM REFRIGERATION PIPING TEMPERATURE WITH THE MANUFACTURER.
11. START-UP AND COMMISSION THE MECHANICAL SYSTEMS IN ACCORDANCE TO CALIFORNIA ENERGY CODE, ASHRAE AND NEBB STANDARDS.
12. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF PIPING OR DUCT WORK. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL COMPLY WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE SUBMITTED PRIOR TO INSTALLATION OF THE ITEMS CONCERNED.
13. SUBSTITUTION IS NOT ALLOWED WITHOUT APPROVAL OF OWNER AND ARCHITECT OF RECORD. SUBSTITUTION OF MECHANICAL EQUIPMENT WITH EFFICIENCIES LOWER THAN THOSE INDICATED ON THE PLANS MAY REQUIRE RECALCULATION OF TITLE 24 DOCUMENTS. IF THE CONTRACTOR CHOOSES TO UTILIZE SUCH EQUIPMENT, HE/SHE ASSUMES FULL RESPONSIBILITY FOR THE RECALCULATION AND JURISDICTIONAL APPROVAL OF TITLE 24 DOCUMENTS. SUBSTITUTION OF EQUIPMENT OR DEVIATION FROM EQUIPMENT BASES OF DESIGN WITH GREATER WEIGHT OR OF DIFFERENT DIMENSIONS AND CONFIGURATION WHICH AFFECTS STRUCTURAL DETAILS OR SUPPORTS MUST BE SUBMITTED TO DSA IN A CCD, PRIOR TO CONSTRUCTING THE WORK OR INSTALLING THE EQUIPMENT. IF THE CONTRACTOR CHOOSES TO DEVIATE FROM BASIS OF DESIGN HE/SHE ASSUMES FULL RESPONSIBILITY FOR THE DSA RE-SUBMITTAL. DESIGN CHANGES, RECALCULATION AND REVISION TO MOUNTING DETAIL IS NOT INCLUDED IN OUR SCOPE OF WORK.
14. IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST IS THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
15. SUBMITTALS: APPROVAL OF THE SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO FULLY COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
16. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED WHILE NORMAL OPERATIONS ARE BEING CONDUCTED IN ADJACENT SPACES. COORDINATE WITH GENERAL CONTRACTOR AND DISTRICT PROJECT MANAGER TO INSURE THAT WORK DOESN'T DISRUPT OPERATIONS IN ANY WAY.
17. INSTALL ALL WORK TO CLEAR NEW AND EXISTING ARCHITECTURAL AND STRUCTURAL MEMBERS AND EXISTING MECHANICAL SYSTEMS. ADJUST PIPING AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. NO ITEMS SUCH AS PIPE, DUCT, ETC., TO BE IN CONTACT WITH ANY EQUIPMENT. INSTALL ALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE OR AS SPECIFIED ON DRAWINGS TO MAINTAIN MAXIMUM ACCESSIBILITY.
18. RESTORE ALL DAMAGE RESULTING FROM YOUR WORK, AND LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK.
19. KEEP ONE SET OF PLANS AT THE JOB SITE TO RECORD ANY CHANGES IN DESIGN.
20. PROVIDE BALANCING AND TESTING REPORT FOR AIR AND REFRIGERATION SYSTEMS TO ACHIEVE AND CONFIRM COMPLIANCE WITH DRAWINGS AND SPECIFICATION. TESTING AND BALANCING SHALL BE PERFORMED BY AN AGENT CERTIFIED BY EITHER AABC OR NEBB. USE STANDARD FORMS FOR AABC'S "NATIONAL STANDARD FOR TESTING, ADJUSTING, AND BALANCING. FOR ENVIRONMENTAL SYSTEMS USE NEBB'S PROCEDURAL STANDARDS. ADJUST, SET AND BALANCE POWER EXHAUST TO INSURE THAT SPACES ARE NOT PRESSURIZED, (ARE SLIGHTLY POSITIVE, 0.05 INCHES WC), WHEN SYSTEMS ARE ON ECONOMIZER MODE. TAB REPORT SHALL INCLUDE WHEN SYSTEMS ARE ON ECONOMIZER MODE AND WHEN NOT ON ECONOMIZER MODE.
21. OBTAIN WRITTEN PERMISSION OF ARCHITECT OF RECORD BEFORE PROCEEDING WITH ANY CUTTING OR PATCHING OF STRUCTURAL SYSTEMS. IT SHALL BE REVIEWED BY AND APPROVED BY STRUCTURAL ENGINEER OF RECORD AND DSA.
22. NO MECHANICAL SYSTEM SHALL BE INSTALLED UNTIL ALL REQUIRED MECHANICAL PLAN CHECK PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM ALL REQUIRED AGENCIES.
23. COORDINATE AND SCHEDULE TIMING FOR UTILITY SERVICE CONNECTION.
24. ALL LINES BELOW SLAB ON GRADE TO BE LOCATED AWAY FROM ALL LOAD BEARING FOOTINGS.
25. ANY STRUCTURAL FIREPROOFING DAMAGED DURING INSTALLATION OF MECHANICAL EQUIPMENT, PIPING, ETC. SHALL BE REPAIRED AT NO COST TO THE OWNER. REPAIR SHALL BE DIRECTED BY THE ENGINEER OF RECORD.
26. CONTROLS CONTRACTOR, ELECTRICAL CONTRACTOR, AND MECHANICAL CONTRACTOR SHALL WORK AND COORDINATE TOGETHER TO MAINTAIN REQUIRED CLEARANCES FOR ALL EQUIPMENT AND CONTROL PANELS. IF THERE ARE ANY ISSUES TO PROVIDE REQUIRED CLEARANCE IT SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD PRIOR TO INSTALLATION.
27. ALL EXPOSED REFRIGERATION PIPING SHALL BE PROVIDED WITH ALUMINUM COVER.
28. PROVIDE SHOP DRAWINGS TO THE ARCHITECT OF RECORD FOR REVIEW. REFER TO "REQUIREMENTS FOR SHOP DRAWINGS" ON THIS SHEET FOR REQUIREMENTS.
29. FIRE ALARM SYSTEM SHALL PROVIDE AUTOMATIC SHUTOFF PER CMC SECTION 608 FOR SYSTEMS / SPACES EXCEEDING 2000 CFM. REFER TO SHEET M0.2, REMARK #22.
30. ALL DUCT SIZES NOTED ON DRAWINGS ARE INSIDE DIMENSIONS.
31. ALL SQUARE AND RECTANGULAR DUCTS SHALL BE LINED, EXCEPT EXHAUST DUCTWORK.

MECHANICAL GENERAL NOTES

32. MAXIMUM ALLOWABLE LENGTH OF FLEXIBLE DUCT IS 5'-0" AT THE DIFFUSERS. FLEXIBLE DUCTS SHALL HAVE THE FOLLOWING REQUIREMENTS:
    a. CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, 1-1/2" THICK FIBERGLASS INSULATION, ENCAPSULATED SPRING STEEL WIRE HELIX AND IMPERVIOUS, SMOOTH, NON-PERFORATED INTERIOR VINYL LINER. INDIVIDUAL LENGTHS OF FLEXIBLE DUCTS SHALL CONTAIN FACTORY-FABRICATED STEEL CONNECTION COLLARS.
    b. BE SUPPORTED AT OR NEAR MID LENGTH WITH 2" WIDE 28 GAUGE STEEL HANGER COLLAR ATTACHED TO THE STRUCTURE WITH AN APPROVED DUCT HANGER. INSULATION SHALL MINIMIZE SHARP RADIUS TURNS OR OFFSETS.
    c. THE MAXIMUM LENGTH SHALL BE SEVEN (5) FEET AND CAN BE USED AT THE TERMINAL ENDS ONLY.
    d. INSULATION AND FLEXIBLE DUCT SHALL COMPLY WITH STATE FIRE MARSHALL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50 PER ASTM-84, NFPA-233 AND UL 723.
33. ALL DUCT INSULATION R VALUE SHALL COMPLY WITH CALIFORNIA ENERGY STANDARDS YEAR 2016, TABLE 150.1-A OR SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
34. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HVAC EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER DEBRIS WHICH MAY ENTER THE SYSTEM.
35. REFRIGERATION PIPING INSULATION R-VALUE SHALL COMPLY WITH 2016 BUILDING ENERGY EFFICIENCY STANDARDS / TITLE 24, TABLE 120.3-A, PRIOR TO INSULATING THE PIPES CONFIRM REFRIGERATION PIPING TEMPERATURE WITH THE MANUFACTURER.
36. REGARDLESS OF THICKNESS, DUCTWORK INSULATION R-VALUE SHALL COMPLY WITH 2016 ENERGY CODE TABLE 150.1A.
37. SPECIAL ATTENTION SHALL BE MADE TO INSTALLATION OF THERMOSTATS. FOR EXACT LOCATION COORDINATE WITH ARCHITECT OF RECORD. PROVIDE INSULATED BACK PLATE TO AVOID SENSING TEMPERATURE OF AIR INSIDE THE WALLS AND TO AVOID SENSING WALL TEMPERATURE. SEAL THE WALL PENETRATIONS AIR TIGHT. AVOID INSTALLING NEAR WINDOWS. WHERE SUPPLY AIR MIGHT BLOW AT THE THERMOSTAT. ADJUST SUPPLY AIR DIFFUSER MODULES AS REQUIRED.
38. REFER TO ELECTRICAL DRAWINGS FOR CARBON MONOXIDE (CO) DETECTOR LOCATIONS AND REQUIREMENTS. SPACES SERVED BY GAS FIRED AIR-CONDITIONING UNITS SHALL BE EQUIPPED WITH CO SENSORS.

ANCHORAGE 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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.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 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 HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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 DISTRIBUTION 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 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

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

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

MP	MD	PP	E	
☒	☒	☐	☐	- OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
☐	☐	☐	☐	- OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED OPM#.
☐	☐	☐	☐	- OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL. OSHPD EDITION (2009), INCLUDE ANY ADDENDA, FASTENERS AND OTHER AMENDMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL "C" AND CONNECTION LEVEL "1" FOR THE PROJECT AND CONDITIONS.

HVAC ABBREVIATIONS & SYMBOLS

SYMBOLS	ABBREV.	DESCRIPTION
	(L)	LINE DUCTWORK (PLENUM)
UP		DUCT RISE IN DIRECTION OF FLOW
DN		DUCT DROP IN DIRECTION OF FLOW
		DUCT TRANSITION
		DUCT TRANSITION FROM SQUARE TO ROUND
		ROUND DUCT UP
		ROUND DUCT DOWN
	SA/OSA	SUPPLY AIR/OUTSIDE AIR DUCT UP
	SA/OSA	SUPPLY AIR/OUTSIDE AIR DUCT DOWN
	RA	RETURN AIR DUCT UP
	RA	RETURN AIR DUCT DOWN
	EA	EXHAUST AIR DUCT UP
	EA	EXHAUST AIR DUCT DOWN
	CD	CEILING DIFFUSER
	CR	CEILING RETURN
	CE	CEILING EXHAUST
18x10		DUCT WORK (1ST NUMBER INDICATES WIDTH SHOWN), NET INSIDE DIMENSION
	(L)	LINED DUCT
TV		SQUARE ELBOW WITH TURNING VANES
		RADIUS ELBOW
	FLEX	FLEXIBLE CONNECTION
	FLEX	FLEXIBLE DUCT CONNECTION
	MVD	MANUAL VOLUME DAMPER
	BDD	BACK DRAFT DAMPER
FSD	FSD	COMBINATION FIRE/SMOKE DAMPER
		DEMOLISH & REMOVE EXISTING DUCTWORK/EQUIPMENT/PIPE
		PIPE UP
		PIPE DOWN
UP		PIPE RISE OR DOWN
DN		DIRECTION OF FLOW PIPE
	POC	POINT OF CONNECTION
- -		SYMBOL, SEE EQUIPMENT SCHEDULE
T		THERMOSTAT / TEMPERATURE SENSOR
CO2		CARBON DIOXIDE SENSOR
		OCCUPANCY / MOTION SENSOR
		ANCHORED POINT
	FJ	FLEXIBLE JOINT
CD	CD	CONDENSATE DRAIN
C C	DN	DOWN OR DROP
O O	UP	RISE OR RISER
A		MOTORIZED DAMPER ACTUATOR

HVAC ABBREVIATIONS

ABBREV.	DESCRIPTION
AC	AIR CONDITIONING
AD/AP	ACCESS DOOR/ACCESS PANEL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALC	AUTOMATED LOGIC CONTROLS
APD	AIR PRESSURE DROP,INCH WATER COLUMN
BD	BYPASS DAMPER
BDD	BACKED DRAFT DAMPER
BF	BELOW FLOOR
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSE POWER
BTUH	BRITISH THERMAL UNIT(PER HOUR)
CD	CEILING DIFFUSER/CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSER
CONT	CONTINUATION
CR	CEILING RETURN
DB	DRY BULB (°F)
DIA	DIAMETER
DL	DOOR LOUVER
DN	DOWN
DWGS	DRAWINGS
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF	EFFICIENCY
EP	ELECTRICAL PANEL
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER
FF	FINISHED FLOOR
FLA	FULL LOAD AMPERES
FPM	FEET PER MINUTE
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HP	HORSE POWER
HTG	HEATING
HW	HOT WATER
IN	INCH
KWH	KILOWATT HOUR
KW	KILOWATTS
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LDB	LEAVING DRY BULB TEMPERATURE (°F)
LRA	LOCKED ROTOR AMPERES
LWB	LEAVING WET BULB TEMPERATURE (°F)
LWT	LEAVING WATER TEMPERATURE
MVD	MANUAL VOLUME DAMPER
MCC	MOTOR CONTROL CENTER
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MECH	MECHANICAL
MIN	MINIMUM
OSA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
RA	RETURN AIR
RLA	RUNNING LOAD AMPERES
RPM	REVOLUTIONS PER MINUTE
RG	RETURN GRILLE
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
SOV	SHUT OFF VALVE
SP	STATIC PRESSURE
SPD	STATIC PRESSURE DROP
TCV	TEMPERATURE CONTROL VALVE
TP	TOTAL PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
VTR	VENT THRU ROOF
VAV	VARIABLE AIR AND VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
BC	BC CONTROLLER
CU	CONDENSING UNIT

SHEET INDEX

REQUIREMENTS FOR SHOP DRAWINGS

PRIOR TO CONSTRUCTION PROVIDE ORIGINALLY PREPARED CONTRACTOR'S SHOP DRAWINGS IN ELECTRONIC FORMAT. IN ADDITION TO THE REQUIREMENTS SPECIFIED IN SPECIFICATIONS, THE SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING, AND NOT LIMITED TO:

1. DUCT, PIPE AND PLUMBING ELEVATIONS.
2. DOUBLE LINE DUCTWORK AND PIPING (6" AND LARGER).
3. ACTUAL SIZE OF PURCHASED EQUIPMENT, PER APPROVED CONTRACTOR'S SHOP DRAWINGS.
4. ACCESS PANELS, INCLUDING CEILING PANELS.
5. ACCESS CLEARANCES FOR EQUIPMENT.
6. ACTUAL LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND RETURN REGISTERS.
7. LOCATIONS OF STRUCTURAL MEMBERS SUCH AS BEAMS AND PLUMBING SYSTEMS.
8. ACTUAL LOCATIONS OF CONTROL PANELS AND POWER CONNECTIONS TO EQUIPMENT.
9. COLOR CODED DUCT AND PIPING BASED ON MATERIAL USED.
10. MINIMUM 1/4"-1'-0" SCALE DRAWINGS.
11. LABEL AND TAG SCHEDULE FOR EQUIPMENT
12. DUCT TRANSITIONS TO CLEAR BEAMS OR TIGHT AREAS.
13. ROOM TEMPERATURE SENSOR LOCATIONS, COORDINATED WITH ARCHITECT OF RECORD.
14. POINT OF CONNECTION TO UTILITIES OUTSIDE THE BUILDING, COORDINATED WITH CIVIL.
15. SECTIONS OR 3-D DRAWINGS OF CONGESTED AREAS.
16. GRID LINES.
17. UTILITY PROFILES FOR UNDERGROUND PIPING, COORDINATED WITH CIVIL AND PLUMBING.
18. DO NOT COMMENCE WITH ANY INSTALLATION, DEMOLITION OR ORDERING OF ANY EQUIPMENT OR MATERIAL FABRICATION WITHOUT AN APPROVED SHOP DRAWING SUBMITTAL.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
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Revision / Date

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OCTOBER 31, 2021
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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

MECHANICAL LEGEND, SYMBOLS & NOTES

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M0.1

PACKAGE GAS HEAT ELECTRIC COOL AIR CONDITIONING UNIT SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	AIR DISTRI-BUTION EXT. SP. (IN. WG.)	50% DIRTY FILTER PRESS. (IN. WG.)	TOTAL EXT. SP. (IN. WG.)	SA (CFM)	MIN. OSA (CFM)	COOLING						GAS HEATING				ELECTRICAL DATA							SEER (IEER)	UNIT WEIGHT WITH POWER EXHAUST (LBS)	ROOF CURB		TOTAL WEIGHT (LBS)	DETAILS	REMARKS
									TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	EVAPORATOR				INPUT (MBH)	OUTPUT (MBH)	EAT (°F)	LAT (°F)	COMPRESSOR		CONDENSER FAN		SUPPLY FAN	MAX. FUSE SIZE	MCA	V/PH/Hz			MANUFACTURER & MODEL NO.	WEIGHT (LBS)		
											EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)					QTY.	RLA (EACH)	QTY.	FLA (EACH)	BHP/HP									
AC 1	CARRIER 48LCL05	ROOF	LRNG RESRCE STAFF BOOKRM 2, 3	0.60	0.65	1.25	1,520	300	44.2	38.0	77	62	53.9	51.7	60	49	61	90.8	1	14	1	3.5	1.10/1.7	40	27	208/3/60	16.4	850	MICROMETL CRBK-SRT12FA-11	95	945	1/M5.2 4/M5.2	1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 22 23
AC 2	CARRIER 48LCL06	ROOF	LARGE OFFICE, SMALL OFFICE 4, 5, 6, 7	0.60	0.65	1.25	1,900	405	56.1	49.6	77	62	52.8	51.5	60	49	60	83.9	1	16.2	1	3.5	1.62/2.4	45	31	208/3/60	16.2	860	MICROMETL CRBK-SRT12FA-11	95	945	1/M5.2 4/M5.2	1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 23
AC 3	CARRIER 48LCL07	ROOF	ARTS/SCIENCE MAKER SPACE 10	0.60	0.65	1.25	2,280	405	69.2	58.2	77	63	53.4	52.5	50/72	41/59	62	86.0	2	8.3/13.2	2	1.8	1.33/1.7	45	35	208/3/60	(20.5)	1380	MICROMETL CRBK-SRT34FA-11	115	1495	1/M5.2 5/M5.2	1 2 3 4 5 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23
AC 4	CARRIER 48LCL07	ROOF	LEARNING RESOURCE 2	0.60	0.65	1.25	2,280	405	69.2	58.2	77	63	53.4	52.5	50/72	41/59	62	86.0	2	8.3/13.2	2	1.8	1.33/1.7	45	35	208/3/60	(20.5)	1380	MICROMETL CRBK-SRT34FA-11	115	1495	1/M5.2 5/M5.2	1 2 3 4 5 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23

1. REFRIGERANT SHALL BE R-410.
2. PROVIDE WITH 100% MODULATING POWER EXHAUST, SAME AIRFLOW AS SUPPLY AIR ECONOMIZER WITH DRY BULB TEMPERATURE CONTROL, CALIFORNIA TITLE 24 COMPLIANT FAULT DETECTION AND DIAGNOSTIC AND LOW LEAKAGE DAMPER. SUBMITTAL AND TAB REPORT SHALL CONFIRM THIS REQUIREMENT.
3. EQUIPPED WITH MERV 13 FILTERS. PRESSURE DROP OF 50% DIRTY FILTERS SHALL BE INCLUDED IN TOTAL EXTERNAL PRESSURE DROP. MERV RATING SHALL BE CLEARLY MARKED ON FILTER FROM FACTORY.
4. PROVIDE WITH FACTORY COIL GUARDS.
5. CONTROLS CONTRACTOR TO PROVIDE CARRIER I-VU OR EQUAL DDC CONTROLLER COMPATIBLE WITH THE SANTEE SCHOOLS EMS.
6. PROVIDE SEPARATE POWER FOR POWER EXHAUST FLA=2.7, MCA=3.4, MOCP=6.1, HP=0.5, 208V, 3PH. COORDINATE WITH ELECTRICAL. SUBMITTAL AND TAB REPORT SHALL CONFIRM THIS REQUIREMENT.
7. DAMPER ACTUATORS SHALL BE "BELIMO" AND COMPATIBLE WITH SCHOOL DISTRICT STANDARDS. COORDINATE WITH CONTROLS CONTRACTOR, SEE CONTROLS DRAWINGS.
8. PROVIDE WITH 11" TALL "MICROMETL" OR EQUAL STANDARD ROOF CURB.
9. PROVIDE WITH TWO STAGE COOLING AND SINGLE STAGE STAINLESS STEEL HEAT EXCHANGER.
10. PROVIDE WITH THREE STAGE COOLING AND TWO STAGE STAINLESS STEEL HEAT EXCHANGER.
11. PROVIDE WITH LOW NOX GAS HEAT, FLUE DISCHARGE DEFLECTOR AND LOW AMBIENT CONTROLS. FLUE DEFLECTOR TO EXTEND AND DISCHARGE ABOVE TOP OF AC UNIT.
12. IN ADDITION TO SEALED SPRING ISOLATING ROOF CURB SYSTEM, COMPLETELY SEAL AROUND ALL DUCT PENETRATIONS THROUGH THE ROOF ASSEMBLY.
13. AT COMPLETION OF CONSTRUCTION AND AFTER TESTING AND COMMISSIONING THE SYSTEM, REPLACE ALL FILTERS WITH NEW.
14. LUVATA ELECTRO-FINE COAT (OR EQUAL) ON CONDENSING COILS.
15. FOR ECONOMIZER OPERATION AND SET POINT REFER TO CONTROL DIAGRAMS SEQUENCE OF OPERATION.
16. PROVIDE FACTORY INSTALLED VFD ON SUPPLY FAN AND POWER EXHAUST. SF VFD SHALL BE ABB AND IT'S SPEED CONTROLLED BY AC UNIT CONTROLS. POWER EXHAUST FAN SHALL BE CONTROLLED BY THE EMS DDC CONTROLS.
17. COORDINATE WITH CONTROLS CONTRACTOR TO PROVIDE ALL REQUIRED COMPONENTS THAT SHALL BE FIELD INSTALLED.
18. EVAPORATOR FAN MOTORS SHALL BE BELT DRIVE.
19. PROVIDE EQUIPMENT ID TAG IN COMPLIANCE WITH SPECIFICATIONS.
20. UNIT SHALL BE EQUIPPED WITH CONVENTIONAL THERMOSTAT (ELECTRO / MECHANICAL) TERMINAL STRIP.
21. PROVIDE SEPARATE POWER FOR POWER EXHAUST FLA=5.1, MCA=6.4, MOCP=11.5, HP=1, 208V, 3PH. COORDINATE WITH ELECTRICAL.
22. FIRE ALARM SYSTEM SHALL PROVIDE UNIT AUTOMATIC SHUTOFF PER CMC SETION 608 BY FIRE / ALARM CONTRACTOR IN LIEU OF DUCT SMOKE DETECTOR. SEE 9/M5.2.
23. COORDINATE WITH ELECTRICAL AND CONTROLS CONTRACTOR TO AVOID INSTALLING DISCONNECT SWITCH AND CONTROL MODULE ON EQUIPMENT INFORMATION TAG. EQUIPMENT MANUFACTURER AND MODEL NUMBER SHALL BE VISIBLE.

VVT SCHEDULE

SYMBOL	UNIT NO.	MANUFACTURER & MODEL NO.	AREA SERVED	AC UNIT	MAX AIRFLOW (CFM)	MIN AIRFLOW SA (CFM)	INLET SIZE (IN)	WEIGHTS (LBS)	REMARKS
	Z 2.1	CARRIER / 35JN010	LARGE OFFICE (LAS) 4	AC 2	690	345	10	28	1 2 3 4 5 6 7
	Z 2.2	CARRIER / 35JN07	SM. OFC / BREAK-OUT 5	AC 2	395	200	7	23	1 2 3 4 5 6 7
	Z 2.3	CARRIER / 35JN07	SM. OFC / WORKROOM 6	AC 2	510	255	7	23	1 2 3 4 5 6 7
	Z 2.4	CARRIER / 35JN06	SM. OFC / BREAK-OUT 7	AC 2	305	155	6	21	1 2 3 4 5 6 7
	Z 2.5	CARRIER / PASO-10	-	AC 2	1900	-	16x10	21	1 2 3 4 5 6 7

1. CONTROLS CONTRACTOR TO PROVIDE COMPATIBLE CONTROLLER.
2. PROVIDE AIR FLOW SENSOR AND STATIC PRESSURE SENSOR.
3. PROVIDE A MINIMUM OF THREE TIMES THE DAMPER DIAMETER OF STRAIGHT DUCT AT INLET FOR PROPER FLOW READING.
4. CONTROLS CONTRACTOR SHALL PROVIDE CONTROLLERS FOR THE VVT BOXES WITH PRESSURE INDEPENDENT CONTROL, SUPPLY AIR TEMPERATURE SENSOR, PID CONTROL, REMOTE OCCUPANCY CONTACT INPUT, GLOBAL SET POINT AND OCCUPANCY SCHEDULE.
5. PROVIDE VELOCITY PORTS.
6. ACTUATOR, TRANSFORMER, LOW VOLTAGE WIRING, AND CONDUIT BY CONTROL CONTRACTOR.
7. PROVIDE EQUIPMENT ID TAG.

GRAVITY VENTILATOR SCHEDULE

SYMBOL	UNIT NO.	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	TYPE	AIR FLOW		WEIGHT (LBS)	DETAIL	REMARKS
						CFM	ESP			
	GV 1	LOREN COOK / PR-8	ROOF	TOILET 1	RELIEF	150	0.05	40	3/M5.2	1 2

1. PROVIDE PRE-MANUFACTURED ROOF CURB.
2. PROVIDE ALUMINUM BIRD SCREEN.

DUCTLESS SPLIT SYSTEM SCHEDULE (INDOOR UNIT)/COOLING ONLY

SYMBOL	MANUFACTURER & MODEL NO.	TYPE	AREA SERVED	SYSTEM / UNIT	FAN DATA				COMBINED CAPACITY COOLING		OPER. WEIGHT (LBS)	DETAIL	REMARKS
					AIR FLOW (CFM)	ELECTRICAL DATA MOCP	FLA	V/PH/Hz	TOTAL (MBH)	SENSIBLE (MBH)			
FC 1	LIEBERT DME020E-PCN	DUCTLESS WALL MOUNT	ELECT. 2	CU 1	870	15	1.4	208/1/60	17.4	17.2	240	7/M5.1 9/M5.1	1 2 3 4 5 6 7

1. R-407C REFRIGERANT
2. PROVIDE WITH WALL MOUNT KIT.
3. PROVIDE WITH MICROPROCESSOR CONTROL AND MONITOR.
4. PROVIDE WITH BACNET INTERFACE CARD FOR DISTRICT EMS SYSTEM, FOR ALARM SIGNALS, AND MONITORING.
5. PROVIDE WITH FACTORY CONDENSATE PUMP, WITH INTEGRAL FLOAT SWITCH, CHECK VALVE, RESEVOIR. MINIMUM 10 FEET HEAD.
6. PROVIDE EQUIPMENT ID TAG IN COMPLIANCE WITH SPECIFICATIONS.
7. PROVIDE AND INSTALL COMPLETE SYSTEM OF REFRIGERATION PIPING BETWEEN FAN COIL AND ASSOCIATED OUTDOOR UNIT. CONFIRM REQUIRED REFRIGERATION PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE CAPACITY AND DISTANCE BETWEEN FAN COILS AND CONDENSING UNITS. AS PART OF SUBMITTAL, PROVIDE DOCUMENTATION.

SPLIT SYSTEM SCHEDULE (OUTDOOR UNIT)/COOLING ONLY

SYMBOL	MANUFACTURER & MODEL NO.	SYSTEM / UNIT	NOMINAL COOLING CAPACITY (TONS)	ELECTRICAL			SCOP	WEIGHT (LBS)	DETAIL	REMARKS
				MOCP (AMPS)	FLA	V/PH/Hz				
CU 1	LIEBERT PFH020A-PLN	FC 1	1.5	25	12.1	208 / 1 / 60	2.12	200	8/M5.1	1 2 3 4 5 6 7 8 9 10

1. PROVIDE AND INSTALL COMPLETE SYSTEM OF REFRIGERATION PIPING BETWEEN FAN COIL AND ASSOCIATED OUTDOOR UNIT. CONFIRM REQUIRED REFRIGERATION PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE CAPACITY AND DISTANCE BETWEEN FAN COILS AND CONDENSING UNITS. AS PART OF SUBMITTAL, PROVIDE DOCUMENTATION.
2. EQUIPPED WITH LOW AMBIENT KIT.
3. PROVIDE WITH DISCONNECT SWITCH BY ELECTRICAL.
4. PROVIDE WITH NEOPRENE PAD VIBRATION ISOLATOR.
5. REGRIGERANT LINES SHALL BE INDIVIDUALLY INSULATED.
6. PROVIDE EQUIPMENT ID TAG IN COMPLIANCE WITH SPECIFICATIONS.
7. PROVIDE WITH R-407C REFRIGERANT.
8. EQUIPPED WITH SCROLL COMPRESSOR WITH HOT GAS BYPASS.
9. EQUIPPED WITH HIGH PRESSURE SWITCH.
10. COORDINATE WITH ELECTRICAL AND CONTROLS CONTRACTOR TO AVOID INSTALLING DISCONNECT SWITCH AND CONTROL MODULE ON EQUIPMENT INFORMATION TAG.

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	FAN TYPE	DRIVE	CFM	SP IN.WG.	FAN RPM	SOUND RATING (SONES)	ELECTRICAL		WEIGHT (LBS)	DETAIL	REMARKS
										HP/(WATTS)	V/PH/HZ			
EF 1	LOREN COOK GC-186	CEILING	TOILET 1	CEILING	DIRECT	150	0.25	814	2.5	(66)	115/1/60	25	2/M5.2	1 2 3 4 5

1. PROVIDE BACK DRAFT DAMPER.
2. PROVIDE PRE-MANUFACTURED GRAVITY VENTILATOR.
3. INTERLOCK WITH LIGHT SWTICH. REFER TO ELECTRICAL PLANS.
4. PROVIDE WITH DISCONNECT SWITCH BY ELECTRICAL.
5. PROVIDE EQUIPMENT IDENTIFICATION TAG IN COMPLIANCE WITH SPECIFICATIONS.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	NECK SIZE	FRAME STYLE	FRAME SIZE	OBD (YES / NO)	THROW	DESCRIPTION	DETAILS	REMARKS
CD-1	TITUS MCD	SEE PLANS	T-BAR	SEE PLANS	YES	SEE PLAN	MODULAR CORE CEILING DIFFUSER WITH SQUARE TO ROUND ADAPTER	3/M5.1	1 2 3
CD-2	TITUS MCD	SEE PLANS	SURFACE	SEE PLANS	YES	SEE PLAN	MODULAR CORE CEILING DIFFUSER WITH SQUARE TO ROUND ADAPTER	3/M5.1	1 2 3
SW-1	TITUS 300RL	SEE PLANS	WALL	SEE PLANS	YES	SEE PLAN	DOUBLE DEFLECTION, INDIVIDUALLY ADJUSTABLE BLADES SUPPLY AIR DIFFUSER	7/M5.2	1 2
CR-1	TITUS 50F	SEE PLANS	T-BAR	SEE PLANS	NO	RETURN	EGG CRATE SQUARE CEILING RETURN GRILLE	3/M5.1	1 2
CE-1	TITUS 50F	SEE PLANS	T-BAR	24 x 24	NO	EXHAUST	EGG CRATE SQUARE CEILING EXHAUST GRILLE	3/M5.1	1 2
TG-1	TITUS 50F	SEE PLANS	T-BAR	SEE PLANS	NO	TRANSFER	EGG CRATE SQUARE CEILING TRANSFER GRILLE	3/M5.1	1 2
TG-2	TITUS 50F	SEE PLANS	SURFACE	SEE PLANS	NO	TRANSFER	EGG CRATE SQUARE CEILING TRANSFER GRILLE	3/M5.1	1 2

1. COORDINATE WITH ARCHITECT FOR FINISH COLOR.
2. ALTERNATIVE MANUFACTURER:"KRUEGER", "METAL AIR", "PRICE".
3. ALL CEILING DIFFUSERS SHALL BE 4-WAY UNLESS THROW DIRECTION IS SHOWN ON FLOOR PLAN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revision / Date

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LICENSED ARCHITECT
ROBERT D. WEBB KAA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

MECHANICAL EQUIPMENT SCHEDULES

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M0.2

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Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	Sycamore Canyon LRC.cibd16x

A. PROJECT GENERAL INFORMATION

1.	Project Location (city)	Santee	8.	Standards Version	Compliance2016
2.	CA Zip Code	92071	9.	Compliance Software (version)	EnergyPro 7.2
3.	Climate Zone	10	10.	Weather File	SAN-DIEGO-GILLESPIE_722907_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	4,030 ft²	11.	Building Orientation (deg)	(N) 0 deg
5.	Total Unconditioned Floor Area	0 ft²	12.	Permitted Scope of Work	NewEnvelopeAndMechanical
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	11.14	10.62	0.52	4.7%
Space Cooling	105.88	103.19	2.69	2.5%
Indoor Fans	145.18	20.70	124.48	85.7%
Heat Rejection	--	--	--	--
Pumps & Misc.	--	--	--	--
Domestic Hot Water	9.87	9.87	--	0.0%
Indoor Lighting	58.15	58.15	--	0.0%
COMPLIANCE TOTAL	**330.22**	**202.53**	**127.69**	**38.7%**
Receptacle	108.90	108.90	0.0	0.0%
Process	65.60	65.60	0.0	0.0%
Other Ltg	--	--	--	--
Process Motors	--	--	--	--
TOTAL	**504.72**	**377.03**	**127.7**	**25.3%**

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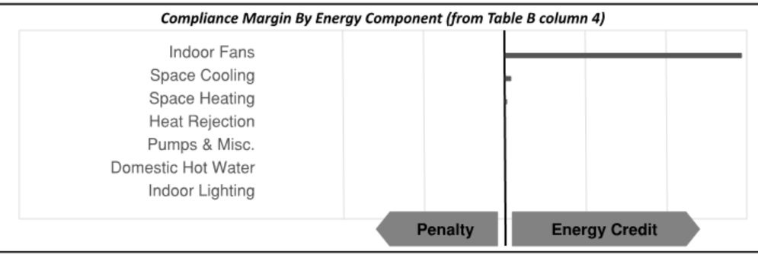
C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

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

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



D. EXCEPTIONAL CONDITIONS

This project includes partial performance compliance scope options. The building must show compliance with all other applicable compliance scope options (performance or prescriptively) before occupying.

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

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

None Provided

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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)	
	☐ Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
	☐ NA		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	
	☐ 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)	
	☒ Prescriptive	NRCC-PLB-01-E	
	☐ NA		
Lighting (Indoor Conditioned)	☐ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	
	☒ 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/ 09-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.				*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 Unconditioned) §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 (Sign) §140.8	NRCC-LTS-01-E	☐	☒	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
☐	☒	Solar Thermal Water Heating: §140.5	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 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-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-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)

1.	Total Conditioned Floor Area	4,030 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	675 ft²	90 ft²	13.3%	☐	☐
East Wall	1,983 ft²	401 ft²	20.2%	☐	☐
South Wall	810 ft²	194 ft²	24.0%	☐	☐
West Wall	1,855 ft²	274 ft²	14.8%	☐	☐
Total	**5,323 ft²**	**959 ft²**	**18.0%**	☐	☐
Roof	4,030 ft²	0 ft²	00.0%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY § 110.6

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type / Product Type / Frame Type	3. Certification Method[1]	4. Assembly Method	5. Area ft²	6. Overall U-factor	7. Overall SHGC	8. Overall VT	9. Status[2]	Pass	Fail
Double Metal Tinted	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	959	0.71	0.60	0.77	N	☐	☐

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A – Altered, E – Existing

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

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
Slab On Grade4	UndergroundFloor	4030	NA	0	NA	F-Factor: 0.730	N	☐	☐
R-19 Wall6	ExteriorWall	5323	Wood	19	NA	U-Factor: 0.072	N	☐	☐
R-30 Roof Attic9	Roof	4030	Wood	30	NA	U-Factor: 0.038	N	☐	☐

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

L. ROOFING PRODUCT SUMMARY § 140.3

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
R-30 Roof Attic9	5.813	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)

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	SZVAVAC (Packaged3Phase)	Complex	1	49	No	0	47	SEER-16.40 / EER-13.00	AFUE-82.0	Yes	N	☐	☐
AC-2	SZVAVAC (Packaged3Phase)	Complex	1	49	No	0	59	SEER-16.20 / EER-12.90	AFUE-82.0	Yes	N	☐	☐
AC-3	SZVAVAC (Packaged3Phase)	Complex	1	72	No	0	69	EER-13.0	AFUE-82.0	Yes	N	☐	☐
AC-4	SZVAVAC (Packaged3Phase)	Complex	1	72	No	0	69	EER-13.0	AFUE-82.0	Yes	N	☐	☐

[1] Dry System Equipment includes furnaces, air handling units, heat pumps, etc.
[2] Simple Systems must complete NRCC-CXR-03-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
[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

1. Equip Name	2. Outside Air CFM	3. Supply Fan CFM	HP	BHP	TSP (inch WC)	Control	4. Return Fan CFM	HP	BHP	TSP (inch WC)	Control	5. Economizer Type (if present)	Pass	Fail
AC-1	300	1520	0.700	0.700	1.46	VariableSpeedDrive	NA	NA	NA	NA	NA	DifferentialEnthalpy	☐	☐

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

1. Equip Name	2. Outside Air CFM	3. Supply Fan CFM	HP	BHP	TSP (inch WC)	Control	4. Return Fan CFM	HP	BHP	TSP (inch WC)	Control	5. Economizer Type (if present)	Pass	Fail
AC-2	405	1905	0.750	0.750	1.25	VariableSpeedDrive	NA	NA	NA	NA	NA	DifferentialEnthalpy	☐	☐
AC-3	405	2400	1.000	1.000	1.59	VariableSpeedDrive	NA	NA	NA	NA	NA	DifferentialEnthalpy	☐	☐
AC-4	405	2400	1.000	1.000	1.59	VariableSpeedDrive	NA	NA	NA	NA	NA	DifferentialEnthalpy	☐	☐

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

O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Pass	Fail
AC-1	SZVAVAC	1 Zones With CO2Sensor Vent. Control Differential Enthalpy Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐
AC-2	SZVAVAC	4 Zones With CO2Sensor Vent. Control Differential Enthalpy Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐
AC-3	SZVAVAC	No DCV Controls Differential Enthalpy Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery	☐	☐

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O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Pass	Fail
AC-4	SZVAVAC	No DCV Controls Differential Enthalpy 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 NA1 and NA2	5. Ducts Insulation R-Value	5. Ducts Location	6. Status[1]	Pass	Fail
AC-1	SZVAVAC	No	No	8.0	Other	N	☐	☐
AC-2	SZVAVAC	No	No	8.0	Other	N	☐	☐
AC-3	SZVAVAC	No	No	8.0	Other	N	☐	☐
AC-4	SZVAVAC	No	No	8.0	Other	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)

This Section Does Not Apply

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

This Section Does Not Apply

[1] If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.

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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
3-Z-2.2	150	411.5	150	183.5
5-Z-2.4	150	123.5	150	940.75

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	--	--	--	27.0	25.5	1.5
Space Cooling	11.1	10.6	0.5	--	--	--
Indoor Fans	26.7	2.7	24.0	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	27.6	27.6	0.0
Indoor Lighting	9.4	9.4	0.0	--	--	--
COMPLIANCE TOTAL	**47.2**	**22.7**	**24.5**	**54.6**	**53.1**	**1.5**
Receptacle	17.3	17.3	0.0	--	--	--
Process	10.7	10.7	0.0	--	--	--

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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)
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	75.2	50.7	24.5	54.6	53.1	1.5

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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: Max Pajouhesh	Signature:
Company: PMPE Consultants, INC.	
Address: 5755 Oberlin Drive, Suite 102	Signature Date: 5/20/2019
City/State/Zip: San Diego CA 92121	CEA Identification (If applicable): M27488
Phone: (858) 642-0800	

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: Robert D. Webb	**Signature:**	
Company: Studio WC		
Address: 515 Encinitas Blvd. Suite 201	Date Signed:	
City/State/Zip: Encinitas CA 92024	Declaration Statement Type:	
Phone: (760) 753-6800	Title:	License #: C28036
Responsible Lighting Designer Name:	**Signature: NOT IN SCOPE**	
Company:		
Address:	Date Signed:	
City/State/Zip:	Declaration Statement Type:	
Phone:	Title:	License #:
Responsible Mechanical Designer Name: Max Pajouhesh	**Signature:**	
Company: PMPE Consultants		
Address: 5755 Oberlin Drive, Suite 102	Date Signed: 5/20/2019	
City/State/Zip: San Diego CA 92121	Declaration Statement Type:	
Phone: (858) 642-0800	Title: Principal, P.E.	License #: M27488

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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	Pass	Fail
Slab On Grade4	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0		☐	☐
R-19 Wall6	ExteriorWall	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 5.5in., R-19 Gypsum Board - 1/2 in.		☐	☐
R-30 Roof Attic9	Roof	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-30 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]	Pass	Fail
Wood Door13	WoodGreaterThanOrEqualTo1.75inThickDoor	DefaultPerformance	Swinging	21	0.500	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)*

1. DESIGN AIR FLOWS / 2. VENTILATION (§ 120.1)

CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fail
1-AC-1	AC-1	1,520	525	0.35	NA	NA	N	AC-1	527	NA	20.00	15.00	300	300	NA	Y	NA	☐	☐
2-Z-2.1	AC-2	830	185	0.22	NA	NA	N	AC-2	306	NA	9.00	15.00	135	135	NA	Y	NA	☐	☐
3-Z-2.2	AC-2	277	62	0.22	NA	NA	N	AC-2	102	NA	5.00	15.00	75	75	NA	Y	NA	☐	☐
4-Z-2.3	AC-2	502	112	0.22	NA	NA	N	AC-2	185	NA	8.00	15.00	120	120	NA	Y	NA	☐	☐
5-Z-2.4	AC-2	296	66	0.22	NA	NA	N	AC-2	109	NA	5.00	15.00	75	75	NA	Y	NA	☐	☐
6-AC-3	AC-3	2,400	550	0.23	NA	NA	N	AC-3	1,369	NA	27.00	15.00	405	405	NA	N	NA	☐	☐
7-AC-4	AC-4	2,400	550	0.23	NA	NA	N	AC-4	1,432	NA	27.00	15.00	405	405	NA	N	NA	☐	☐
								TOTAL	4,030		101.00		1,515	1,515	NA			☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1. System ID	2. System Type	3. Qty	4. Rated Capacity (kBtuh) Heating	Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm) Design	Min.	Min. Ratio	8. Fan BHP	Cycles	ECM Motor	Pass	Fail
1-AC-1-Trm	VAVNoReheatBox	1	NA	NA	NA	1-AC-1	1520	525	0.35	NA	NA	☐	☐	☐
5-Z-2.4-Trm	VAVNoReheatBox	1	NA	NA	NA	5-Z-2.4	296	66	0.22	NA	NA	☐	☐	☐
4-Z-2.3-Trm	VAVNoReheatBox	1	NA	NA	NA	4-Z-2.3	502	112	0.22	NA	NA	☐	☐	☐

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B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1. System ID	2. System Type	3. Qty	4. Rated Capacity (kBtuh) Heating	Cooling	5. Economizer	6. Zone Name	7. Airflow (cfm) Design	Min.	Min. Ratio	8. Fan BHP	Cycles	ECM Motor	Pass	Fail
3-Z-2.2-Trm	VAVNoReheatBox	1	NA	NA	NA	3-Z-2.2	277	62	0.22	NA	NA	☐	☐	☐
2-Z-2.1-Trm	VAVNoReheatBox	1	NA	NA	NA	2-Z-2.1	830	185	0.22	NA	NA	☐	☐	☐
6-AC-3-Trm	VAVNoReheatBox	1	NA	NA	NA	6-AC-3	2400	550	0.23	NA	NA	☐	☐	☐
7-AC-4-Trm	VAVNoReheatBox	1	NA	NA	NA	7-AC-4	2400	550	0.23	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

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

This Section Does Not Apply

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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).

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 Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
AC-1	1	X	--	--	X	X	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
AC-2	1	X	--	--	X	X	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
AC-3	1	X	--	--	X	--	--	--	--	--	--	X	--	--	--	--	--	--	☐	☐
AC-4	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

This Section Does Not Apply

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

This Section Does Not Apply

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

This Section Does Not Apply

Project Name:	Sycamore Canyon LRC	NRCC-PRF-01-E	Page 19 of 19
Project Address:	10201 Settle Rd Santee 92071	Calculation Date/Time:	16:22, Thu, Apr 25, 2019
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	Sycamore Canyon LRC.cibd16x

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

This Section Does Not Apply

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

This Section Does Not Apply

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)

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

This Section Does Not Apply

ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL — ENV-MM

Project Name: *Sycamore Canyon LRC* — Date: *5/20/2019*

DESCRIPTION

Building Envelope Measures:

§110.8(a):	Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3.
§110.8(c):	All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2.
§110.8(g):	Heated slab floors shall be insulated according to the requirements in Table 110.8-A.
§110.7(a):	All Exterior Joints and openings in the building that are observable sources of air leakage shall be caulked, gasketed, weatherstripped or otherwise sealed.
§110.6(a):	Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft.² of window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging).
§110.6(a):	Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor.
§110.6(a) :	Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC.
§110.6(b):	Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors).
§120.7(a):	The opaque portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-Factor requirements as follows: **Metal Building-** The weighted average U-factor of the roof assembly shall not exceed 0.098. **Wood Framed and Others-** The weighted average U-factor of the roof assembly shall not exceed 0.075.
§120.7(b):	The opaque portions of walls that separate conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-factor as follows: **Metal Building-** The weighted average U-factor of the wall assembly shall not exceed 0.113. **Metal Framed-** The weighted average U-factor of the wall assembly shall not exceed 0.151. **Light Mass Walls-** A 6 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor not to exceed 0.440. **Heavy Mass Walls-** An 8 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor not to exceed 0.690. **Wood Framed and Others-** The weighted average U-factor of the wall assembly shall not exceed 0.110. **Spandrel Panels and Opaque Curtain Wall-** The weighted average U-factor of the spandrel panels and opaque curtain wall assembly shall not exceed 0.280. **Demising Walls-**. The opaque portions of framed demising walls shall meet the requirements of Item A or B below: A. Wood framed walls shall be insulated to meet a U-factor not greater than 0.099. B. Metal Framed walls shall be insulated to meet a U-factor not greater than 0.151.
§120.7(c):	The opaque portions of floors and soffits that separate conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-Factor requirements as follows: **Raised Mass Floors-** Shall have a minimum of 3 inches of lightweight concrete over a metal deck or the weighted average U-factor of the floor assembly shall not exceed 0.269. **Other Floors-**The weighted average U-factor of the floor assembly shall not exceed 0.071.

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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TITLE 24

Drawn: MM

Checked: MP

Date:

Job: SSD-SC-03

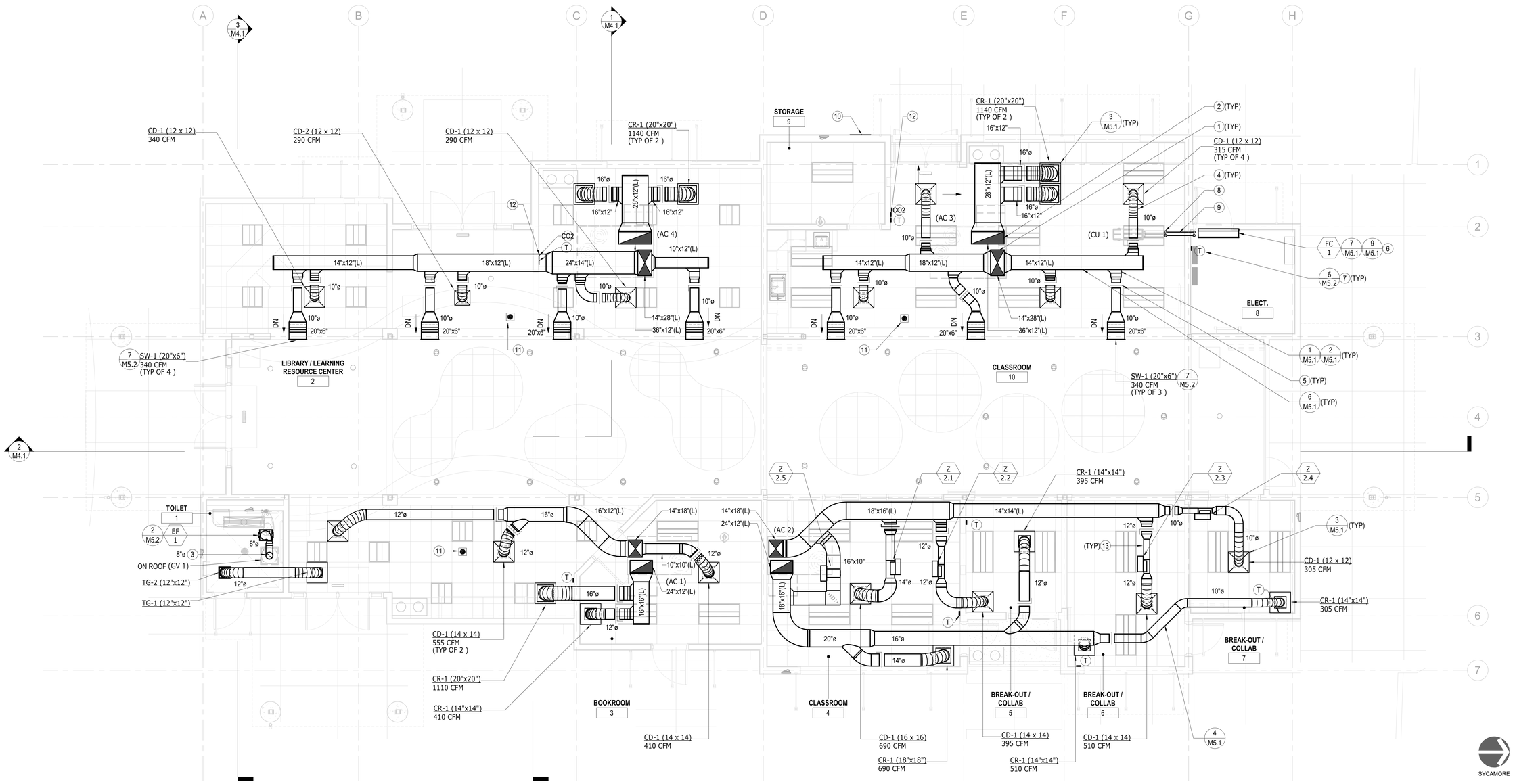
M0.3

GENERAL NOTES

1. FOR EXACT LOCATION OF DIFFUSERS AND GRILLES REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
2. PRIOR TO INSTALLATION, COORDINATE EXACT LOCATION OF ROOM TEMPERATURE SENSORS / THERMOSTATS WITH THE ARCHITECT. ACCESS TO THERMOSTATS SHALL COMPLY WITH DETAIL 6/M5.2. FOR ALL THERMOSTATS PROVIDE INSULATED BACKPLATE.
3. ALL SA AND RA SQUARE AND RECTANGULAR DUCTWORK SHALL BE LINED REGARDLESS IF SHOWN OR NOT.
4. PROVIDE DUCT HANGERS AND SUPPORTS IN COMPLIANCE WITH DETAILS ON M5.1. PROVIDE SEISMIC BRACING AT ALL ELBOWS AND END OF THE DUCT RUNS AND BOTTOM OF RISERS. IF ADDITIONAL DETAILS ARE REQUIRED COMPLY WITH "SMACNA" GUIDELINE.
5. COORDINATE ALL WORK WITH STRUCTURAL, ELECTRICAL AND PLUMBING. PROVIDE SHOP DRAWINGS FOR REVIEW AND COMMENTS.
6. PROVIDE CEILING ACCESS PANEL AT HARD LID CEILING TO ACCESS MANUAL VOLUME DAMPERS.
7. FOR REQUIRED OPERABLE DOOR SENSORS, REFER TO CONTROL DIAGRAMS AND ARCHITECTURAL PLANS.
8. FOR TAB REQUIREMENTS REFER TO M0.1 GENERAL NOTE #20, AND SPECIFICATIONS.

KEYNOTES

1. LINED SA DUCT UP THRU ROOF. EXTEND AND TRANSITION TO CONNECT TO AC UNIT WITH FLEX CONNECTION, FOR CONTINUATION SEE ROOF PLAN.
2. LINED RA DUCT UP THRU ROOF. EXTEND AND TRANSITION TO CONNECT TO AC UNIT WITH FLEX CONNECTION, FOR CONTINUATION SEE ROOF PLAN.
3. EA DUCT UP THRU ROOF. PROVIDE PRE-MANUFACTURED GRAVITY VENTILATOR.
4. FLEXIBLE DUCT MAXIMUM 5 FEET LONG.
5. PROVIDE MVD AT ALL BRANCHES REGARDLESS IF SHOWN OR NOT.
6. PROVIDE WALL MOUNTED FAN COIL. RUN REFRIGERANT PIPES TO ASSOCIATED OUTDOOR UNIT, SIZE PER MANUFACTURER RECOMMENDATION.
7. PROVIDE ROOM TEMPERATURE SENSOR / THERMOSTAT. COORDINATE EXACT LOCATION WITH THE ARCHITECT. PROVIDE WITH INSULATED BACK PLATE. SEAL WALL AND BACK PLATE PENETRATIONS AIR TIGHT.
8. REFRIGERANT PIPES UP THRU ROOF.
9. INSTALL ALL REFRIGERATION PIPES ABOVE CEILING IN CPVC SLEEVE.
10. PROVIDE (2) WALL LOUVERS, (1) HIGH AND (1) LOW WITH (2) SQUARE FEET OF 50% FREE AREA, EACH. COORDINATE WITH THE ARCHITECT REGARDING COLOR AND MATERIAL.
11. PROVIDE OCCUPANCY SENSOR, "PERFECTSENSE" MODEL# PS-HC24-R AT THE CEILING TO ACTIVEATE AC UNIT. CONFIRM THE MODEL NUMBER WITH THE MANUFACTURER FOR THE ROOM SIZE AND LOCATION TO INSTALL.
12. PROVIDE CARBON DIOXIDE (CO2) SENSOR.
13. STRAIGHT DUCT SHALL BE A MINIMUM OF THREE TIMES THE DAMPER DIAMETER.



MECHANICAL FLOOR PLAN | 1/4" = 1'-0" | 1

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STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

MECHANICAL FLOOR PLAN

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

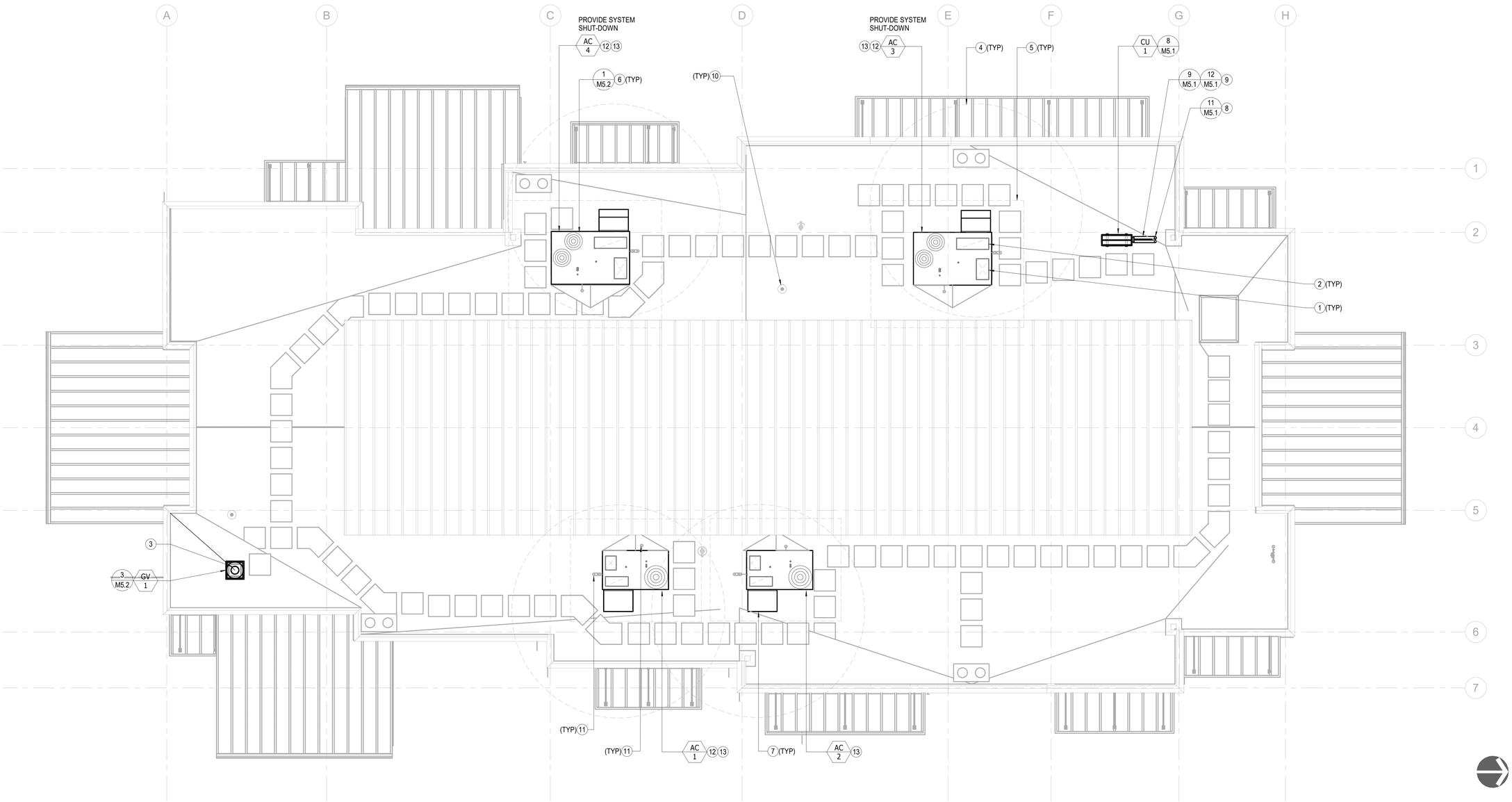
M2.0

GENERAL NOTES

1. MAINTAIN A MINIMUM OF 10 FEET BETWEEN AC UNITS OUTSIDE AIR INTAKE AND PLUMBING VENTS AND EXHAUST AIR DISCHARGE.
2. PRIOR TO CONSTRUCTION COORDINATE EXACT LOCATION OF AC UNITS, EXHAUST FANS AND DUCTS THRU ROOF WITH STRUCTURAL AND ARCHITECTURAL.
3. PRIOR TO CONSTRUCTION COORDINATE WITH PLUMBING FOR VENTS THRU ROOF LOCATIONS, AND GAS AND CONDENSATE DRAIN PIPING. COORDINATE WITH ELECTRICAL.
4. TAG ALL EQUIPMENT TO CORRESPOND WITH EQUIPMENT SCHEDULE OR AS DIRECTED BY THE OWNER. COORDINATE WITH OWNER FOR NUMBERING SYSTEM.
5. FOR ROOF MOUNTED PIPING PROVIDE ADJUSTABLE PIPE SUPPORT WITH MAXIMUM SPACING OF 6 FEET ON CENTER. FOR PIPE SUPPORT DETAIL ON ROOF SEE PLUMBING DETAIL
6. COORDINATE ALL WORK WITH ARCHITECT, STRUCTURAL, ELECTRICAL, PLUMBING, AND CONTROLS.
7. COORDINATE CONDENSATE DRAIN AND GAS PIPE WITH PLUMBING.
8. COORDINATE ALL DUCTS THRU ROOF WITH STRUCTURAL.
9. COORDINATE WITH ELECTRICAL AND CONTROLS CONTRACTORS TO AVOID INSTALLING DISCONNECT SWITCH AND CONTROL MODULES ON EQUIPMENT TAGS, ACCESS DOORS AND REMOVABLE PANELS.

KEYNOTES

1. LINED SA DUCT DOWN THRU THE ROOF. PROVIDE FLEX CONNECTION AT DUCT CONNECTING TO UNIT.
2. LINED RA DUCT DOWN THRU THE ROOF. PROVIDE FLEX CONNECTION AT DUCT CONNECTING TO UNIT.
3. EA DUCT DOWN THRU THE ROOF.
4. THE CIRCLE SHOWS REQUIRED 10 FEET DISTANCE BETWEEN OSA INTAKE AND PLUMBING VENTS AND EXHAUST DISCHARGE.
5. AC UNIT REQUIRED SERVICE CLEARANCE, VERIFY WITH EQUIPMENT MANUFACTURER.
6. PROVIDE PRE-MANUFACTURED ROOF CURB FOR AC UNITS. SEE EQUIPMENT SCHEDULE. FOR ANCHORAGE TO ROOF STRUCTURE REFER TO STRUCTURAL DRAWINGS.
7. MAINTAIN A MINIMUM 10 FEET BETWEEN ECONOMIZER OUTSIDE AIR INTAKE AND PLUMBING VENTS AND EXHAUST DISCHARGE.
8. REFRIGERANT PIPES DOWN THRU ROOF. EXTEND AND CONNECT TO ASSOCIATED FAN COIL UNIT.
9. PROVIDE ALUMINUM COVER / SLEEVE FOR ALL EXPOSED REFRIGERATION PIPES.
10. COORDINATE EXACT LOCATION OF PLUMBING VENTS WITH PLUMBING TO MAINTAIN A MINIMUM OF 10 FEET AWAY FROM AC UNIT'S OUTSIDE AIR INTAKE.
11. COORDINATE EXACT LOCATION OF GAS AND CONDENSATE DRAIN PIPES THRU ROOF WITH PLUMBING.
12. FIRE ALARM SHALL PROVIDE UNIT AUTOMATIC SHUTOFF PER CMC SECTION 608 BY FIRE / ALARM CONTRACTOR IN LIEU OF DUCT SMOKE DETECTOR. SEE 9/M5.2.
13. PROVIDE SPACE PRESSURE SENSOR TO SET ECONOMIZER AIR FLOW RATE APPROXIMATLY EQUAL TO SUPPLY AIR WHEN SYSTEM IS ON ECONOMIZER CYCLE. FOR ADDITIONAL REQUIREMENTS REFER TO M0.1 GENERAL NOTE #20.



MECHANICAL ROOF PLAN | 1/4" = 1'-0" | 1

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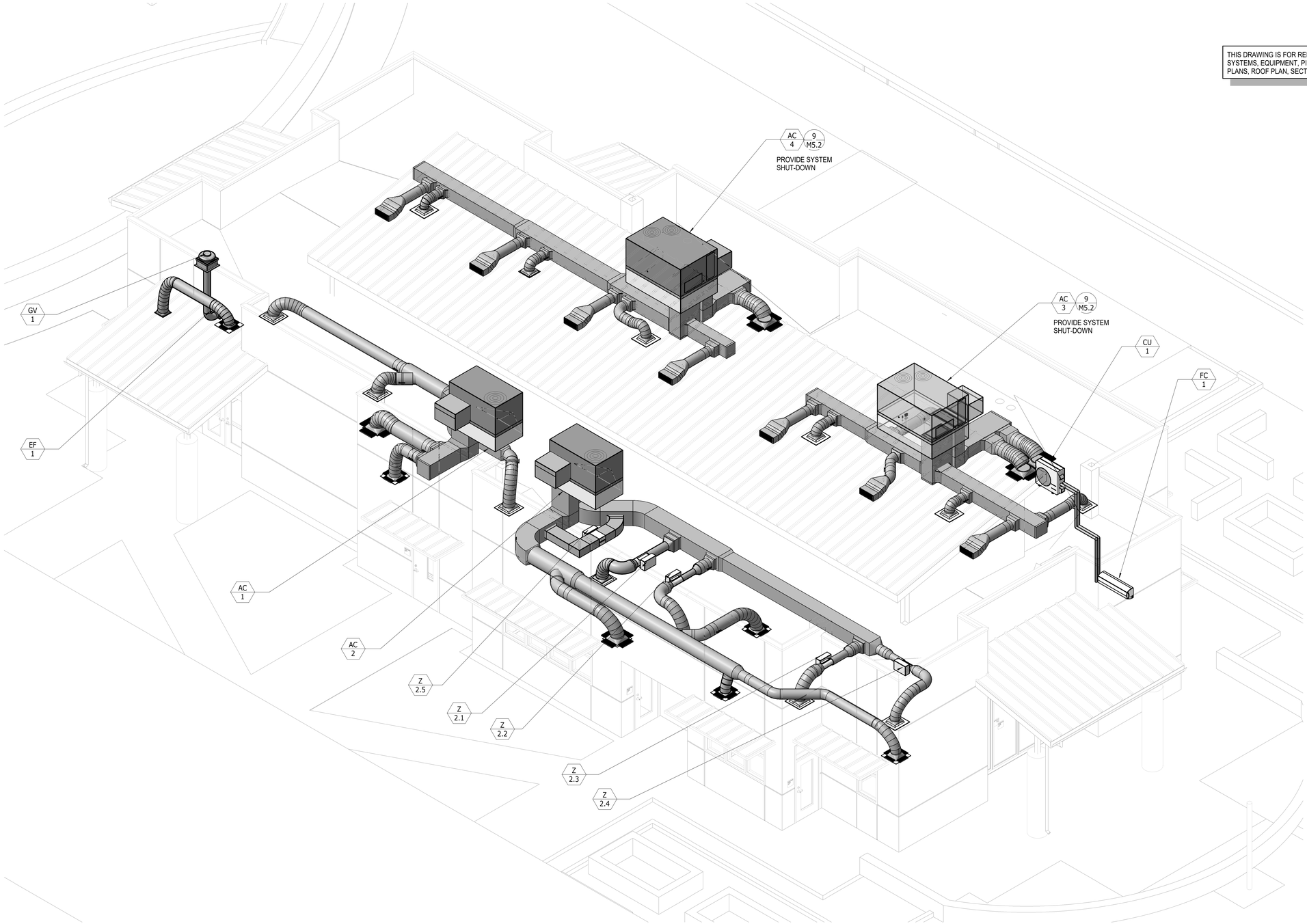
SANTEE SCHOOL DISTRICT

MECHANICAL ROOF PLAN

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M3.0

THIS DRAWING IS FOR REFERENCE ONLY AND DOES NOT SHOW ALL SYSTEMS, EQUIPMENT, PIPING, DUCTWORK AND ACCESSORIES. FLOOR PLANS, ROOF PLAN, SECTIONS AND DETAILS SUPERCEDE THIS DRAWING.



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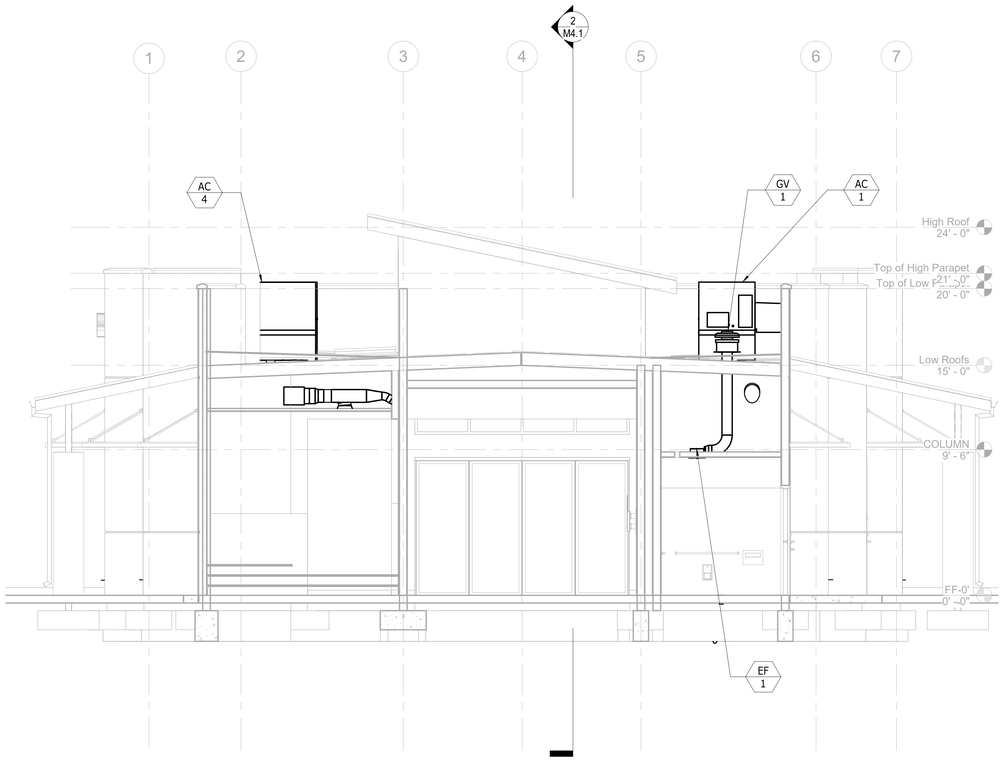
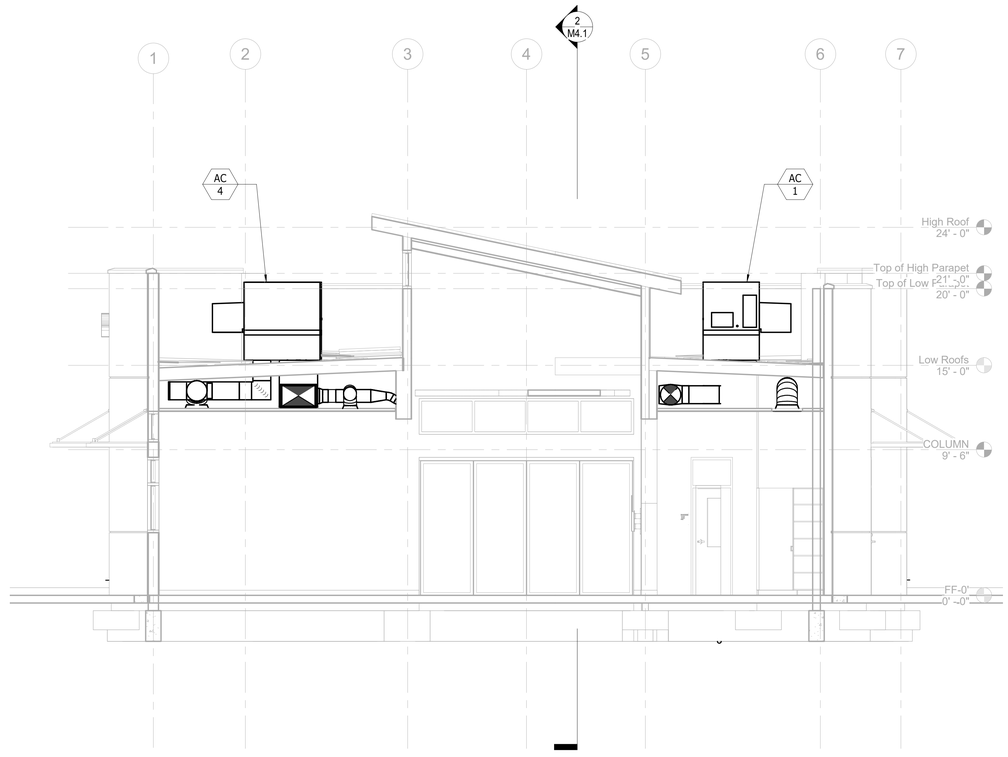
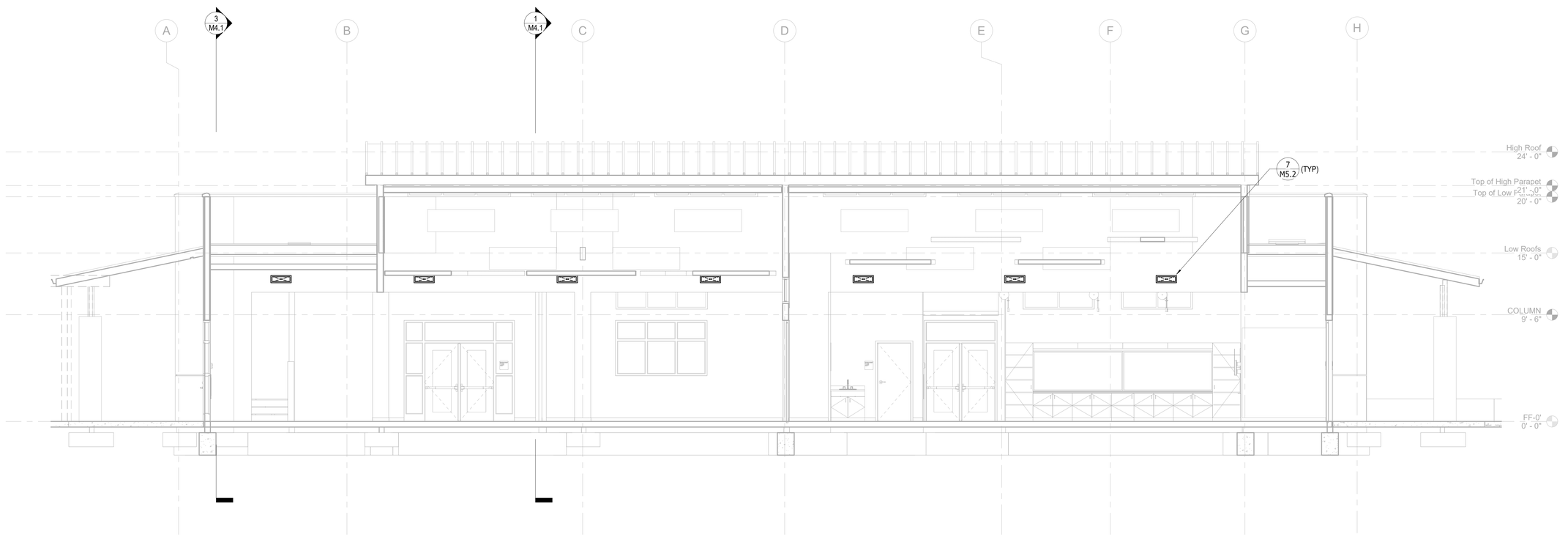
M4.0



MECHANICAL SECTION WEST | 1/4" = 1'-0" | 3



MECHANICAL SECTION WEST | 1/4" = 1'-0" | 1



MECHANICAL SECTION SOUTH | 1/4" = 1'-0" | 2

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SANTEE SCHOOL DISTRICT

MECHANICAL SECTIONS

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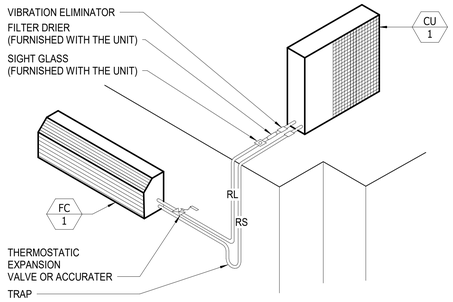
M4.1

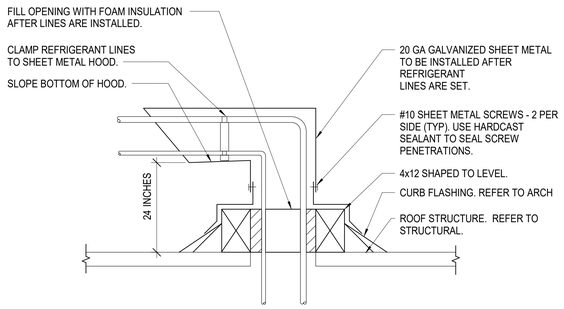


NOTES:

1. CONFIRM REQUIRED REFRIGERANT PIPE SIZES WITH MANUFACTURER FOR THE DISTANCE BETWEEN CU'S AND FC'S. PROVIDE DOCUMENTATION WITH SUBMITTAL.
2. REFRIGERANT PIPE INSULATION R VALUE SHALL COMPLY WITH CALIFORNIA ENERGY STANDARD YEAR 2016, TABLE 120.3-A FOR THE FLUID TEMPERATURE RANGE. THIS REQUIREMENT SUPERSEDES SPECIFICATION.

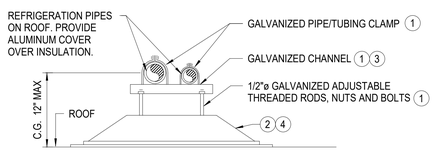
9 M5.1 REFRIGERATION PIPING

SCALE: NTS



11 M5.1 REFRIGERANT PIPING ROOF PENETRATION

SCALE: NTS

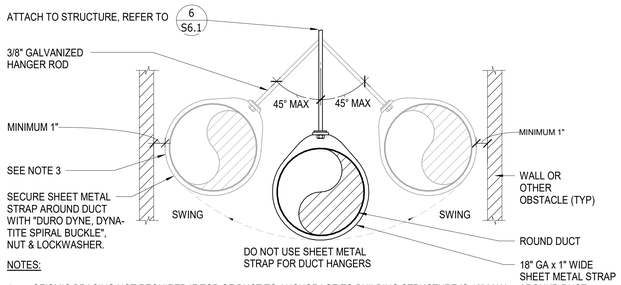


NOTES:

1. UNISTRUT, 12 GA (OR EQUAL). TOUCH UP ALL FIELD CUT WITH ZINC RICH PAINT.
2. SUPPORT ASSEMBLY SHALL BE PP10-C WITH FLEXCOM DOUBLE SIDED ADHESIVE TAPE INSTALL PER MANUFACTURER'S GUIDELINES.
3. ADJUSTABLE SUPPORT.
4. PROVIDE SUPPORTS AT 72" ON CENTER AND AT ELBOWS AND FITTINGS.

12 M5.1 ROOF REFRIGERATION PIPE SUPPORT

SCALE: NTS



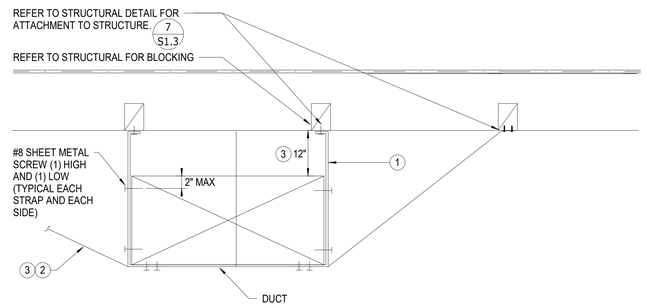
NOTES:

1. SEISMIC BRACING NOT REQUIRED IF TOP OF DUCT TO ANCHORAGE TO BUILDING STRUCTURE IS 12" MAX.
2. HANGER SPACING MAX 10'.
3. ALLOW FOR DUCT SWING AND KEEP MIN 1" BETWEEN EDGE OF THE SWINGING DUCT AND ANY OBSTACLE (DUCT, WALL, EQUIPMENT, ETC.,)
4. REGARDLESS OF LENGTH OF HANGER ROD, PROVIDE TRANSVERSE BRACE AT ALL ELBOWS AND THE END OF EACH DUCT RUN TO ATTACH TO STRUCTURE AS SHOWN FOR HANGER RODS MORE THAN 12" IN LENGTH.

FOR DUCT ADJACENT TO WALL AND HANGER RODS 12" OR LESS IN LENGTH

5 M5.1

SCALE: NTS

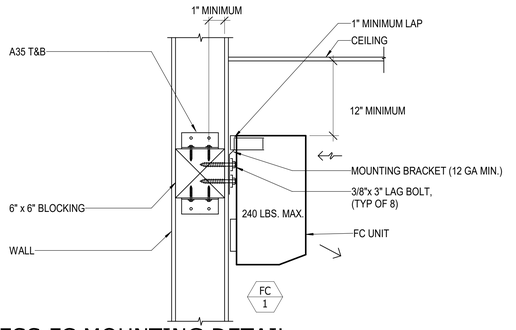


NOTES:

1. 1"X18 GA SHEET METAL HANGER AT MAXIMUM 10 FEET ON CENTER. IN ADDITIION PROVIDE AT THE ELBOWS, TEES, END OF RUNS AND BOTTOM OF RISERS.
2. 1"X18 GA SHEET METAL SEISMIC BRACING. PROVIDE TRANSVERSE BRACING AT MAXIMUM 30 FEET ON CENTER, AND PROVIDE LONGITUDINAL BRACING AT MAXIMUM 60 FEET ON CENTER. IN ADDITION PROVIDE AT ELBOWS, TEES, AND BOTTOM OF RISERS.
3. PROVIDE 1"X18 GA SHEET METAL VERTICAL HANGERS AND SEISMIC BRACING IF TOP OF DUCT IS MORE THAN 12" FROM ATTACHMENT TO STRUCTURE.

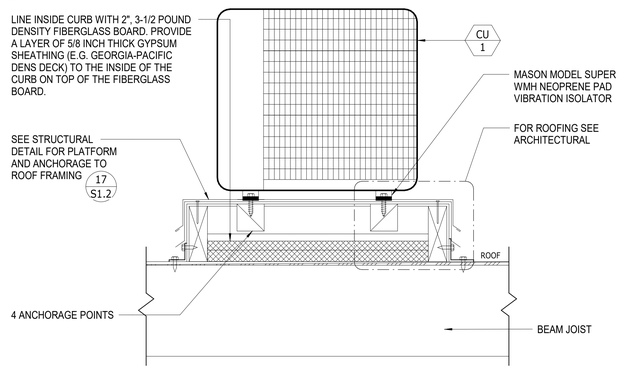
6 M5.1 SQUARE / RECTANGULAR DUCT SUPPORT DETAIL

SCALE: NTS



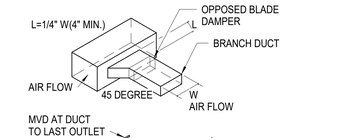
7 M5.1 DUCTLESS FC MOUNTING DETAIL

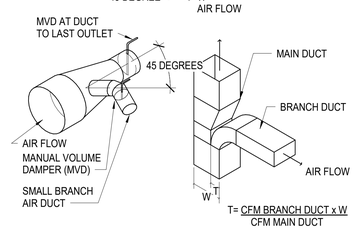
SCALE: NTS



8 M5.1 CONDENSING UNIT MOUNTING

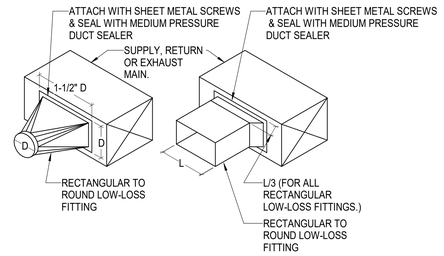
SCALE: NTS





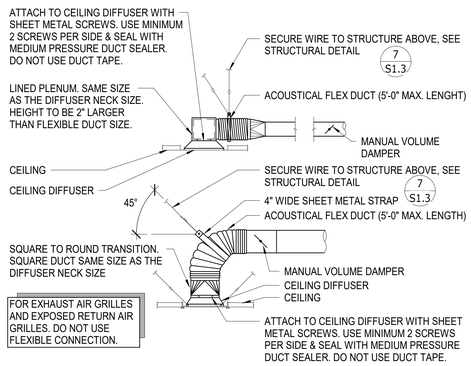
1 M5.1 BRANCH DUCT TAKE-OFF

SCALE: NTS



2 M5.1 LOW-LOSS FITTING

SCALE: NTS

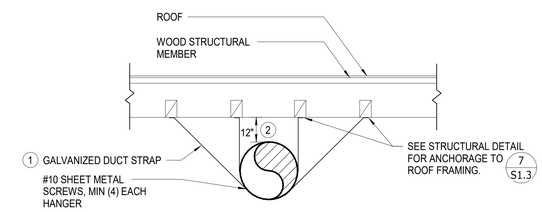


NOTE:

1. FLEXIBLE DUCT SHALL COMPLY WITH STATE FIRE MARSHALL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSULATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED.
2. SUPPLY AIR DIFFUSERS SHALL BE LOCATED A MINIMUM OF 3'-0" FROM SMOKE DETECTORS. PRIOR TO INSTALLATION COORDINATE EXACT LOCATION.

3 M5.1 CEILING DIFFUSER CONNECTION

SCALE: NTS



NOTES:

1. 1"X18 GA SHEET METAL HANGER AT MAXIMUM 10 FEET ON CENTER. IN ADDITIION PROVIDE AT THE ELBOWS, TEES, END OF RUNS AND BOTTOM OF RISERS.
2. IF TOP OF DUCT IS MORE THAN 12" FROM ATTACHMENT TO STRUCTURE, PROVIDE 1"X18 GA SHEET METAL VERTICAL AND SEISMIC BRACING. PROVIDE TRANSVERSE BRACING AT MAXIMUM 30 FEET ON CENTER, AND LONGITUDINAL AT 60 FEET ON CENTER. IN ADDITION PROVIDE VERTICAL AND SEISMIC BRACING AT ELBOWS, TEES, END OF RUNS, AND BOTTOM OF RISERS.

4 M5.1 ROUND DUCT SUPPORT CONCEALED

SCALE: NTS

IDENTIFICATION STAMP
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APP. 04-118743 INC:
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Revision	Date

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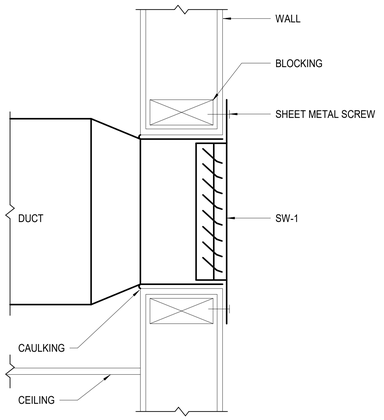
LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

MECHANICAL DETAILS

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M5.1



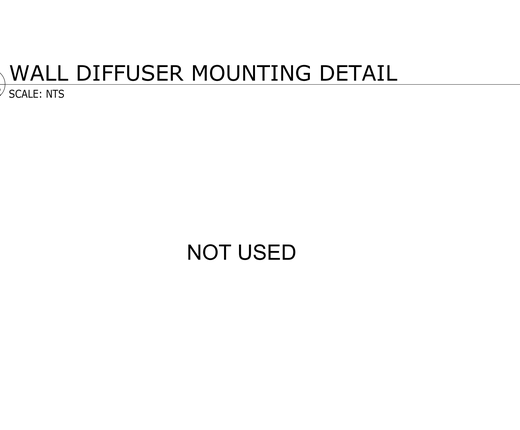
7 M5.2 WALL DIFFUSER MOUNTING DETAIL

SCALE: NTS

NOT USED

8 M5.2 NOT USED

SCALE: NTS

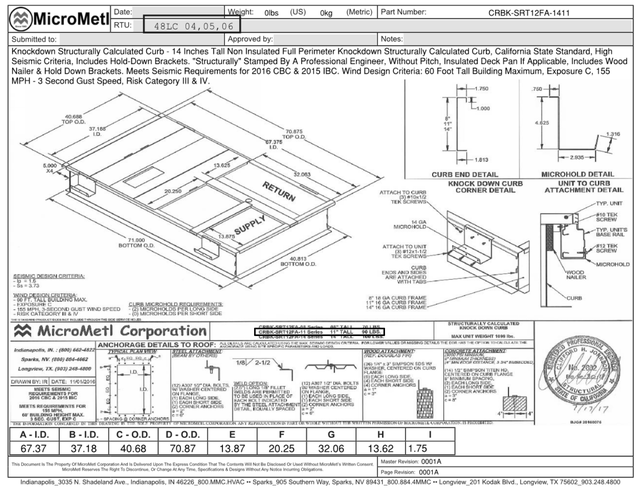


NOTE:

UNIT SHUTDOWN SHALL BE ACCOMPLISHED THROUGH THE UTILIZATION OF AREA/SPACE SMOKE DETECTORS. DIVISION 26 AND 28 SHALL PROVIDE ALL REQUIRED CONTROL MODULES AND WIRING FOR UNIT SHUT-DOWN.

9 M5.2 AREA DETECTION AND UNIT SHUT DOWN

SCALE: NTS

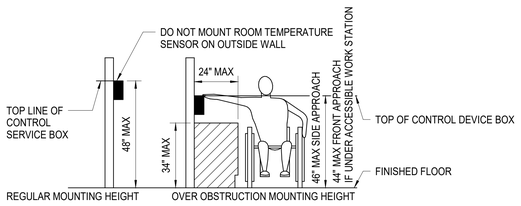


4 M5.2 ROOFTOP AC UNIT CURB CUT-SHEET (TYPICAL OF AC-1 AND AC-2)

SCALE: NTS

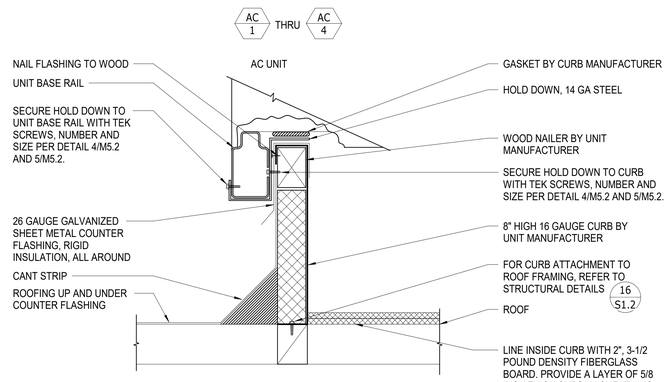
5 M5.2 ROOFTOP AC UNIT CURB CUT-SHEET (TYPICAL OF AC-3 AND AC-4)

SCALE: NTS



6 M5.2 MOUNTING HEIGHT OVER OBSTRUCTION

SCALE: NTS

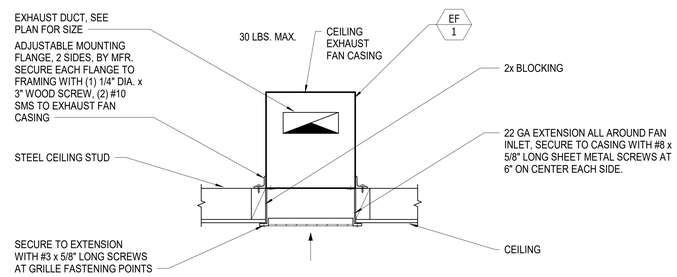


NOTES:

1. PROVIDE DUCT HANGERS WITH SEISMIC BRACING AT THE BOTTOM OF ALL DUCT RISERS.
2. IN ADDITION TO THE SEALED CURB SYSTEM, COMPLETELY SEAL AROUND ALL DUCT PENETRATIONS THROUGH ROOF ASSEMBLY.
3. PROVIDE LINED DUCT AND LAG/WRAP SUPPLY AND RETURN DUCT DROPS THRU ROOF. PROVIDE "KINETICS" KNM-100ALQ OR EQUAL.

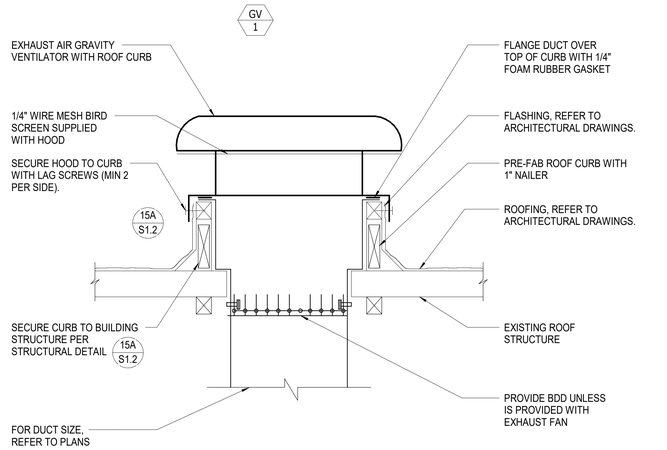
1 M5.2 ROOFTOP AC UNIT MOUNTING - (TYPICAL)

SCALE: NTS



2 M5.2 CEILING EXHAUST FAN MOUNTING

SCALE: NTS



NOTE:

FOR CEILING MOUNTED AND IN-LINE EXHAUST FANS.

3 M5.2 EXHAUST DUCT THRU ROOF

SCALE: NTS

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LICENSED ARCHITECT ROBERT D. WEBB R.A. C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

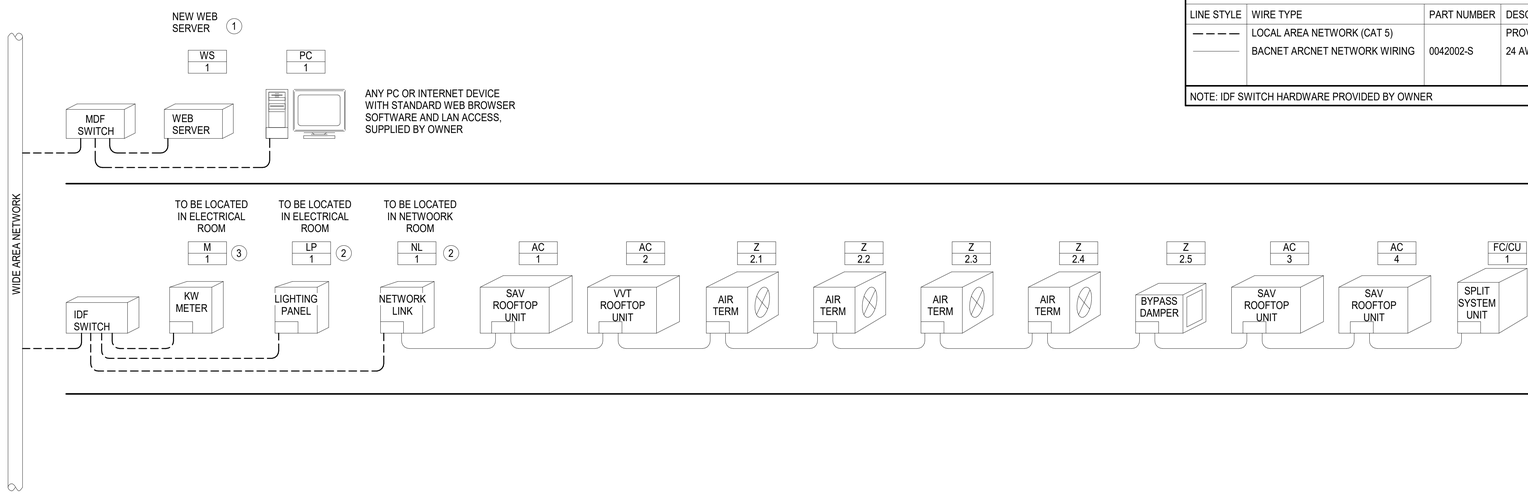
MECHANICAL DETAILS

Drawn:	MM
Checked:	MP
Date:	
Job:	SSD-SC-03

M5.2

KEYNOTES

1. SOFTWARE TO INCLUDE ADR SIGNAL SOFTWARE TO RECEIVE SIGNAL FROM LOCAL UTILITY.
2. POWER FOR NETWORK PANEL FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. ELECTRICAL METER TO BE FURNISHED BY THE CONTROLS CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.



WIRE LEGEND			
LINE STYLE	WIRE TYPE	PART NUMBER	DESCRIPTION
– – – –	LOCAL AREA NETWORK (CAT 5)		PROVIDED AND INSTALLED BY OTHERS
———	BACNET ARCNET NETWORK WIRING	0042002-S	24 AWG 2 COND SHIELDED, PLENUM, ORG
NOTE: IDF SWITCH HARDWARE PROVIDED BY OWNER			

1 M6.1 OVERALL CONTROL DIAGRAM
SCALE: NTS

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

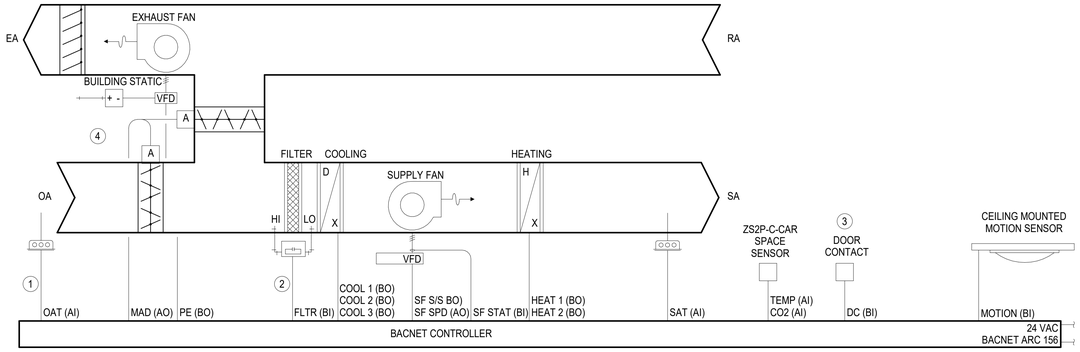
OVERALL CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.1

KEYNOTES

1. TWO OUTDOOR AIR TEMPERATURE SENSORS PER SITE.
2. DIFFERENTIAL PRESSURE SWITCH ON ONE OF THE AC UNITS ONLY.
3. ALL DOORS OPENING TO OUTSIDE SHALL BE EQUIPPED WITH SENSOR TO SHUT-DOWN THE AC UNIT. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND QUANTITY.
4. PROVIDE ONE SPACE PRESSURE SENSOR PER AC UNIT.



	Hardware Points				Software Points						
Point Name	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show On Graphic**
Space Temp					x				x	x	x
Space Setpoint Adjust					x				x		x
Space Unoccupied Override					x				x		
Space CO2 PPM					x				x	x	x
Supply Air Temp	x								x	x	x
Mixed Air Dampers		x							x	x	x
Supply Fan Status (Current Switch)			x						x	x	x
Filter Status Switch			x						x	x	x
Occupancy Contact			x						x		x
Door Contact			x						x		x
Cooling Stage 1				x					x		x
Cooling Stage 2				x					x		x
Cooling Stage 3				x					x		x
Heating Stage 1				x					x		x
Heating Stage 2				x					x		x
Powered Exhaust Enable/Disable				x					x		
Supply Fan Start/Stop				x					x		x
Outside Air Temp	x				x				x		x
Schedule								x	x		
Cooling Setpoint									x		x
Heating Setpoint									x		x
Compressor Runtime Exceeded										x	
KW Demand Limit					x				x		x

SEQUENCE OF OPERATION

OCCUPANCY
THE UNIT WILL FOLLOW A USER DEFINED BACNET SCHEDULE CONFIGURATION FROM THE I-VU SERVER ALONG WITH A LOCAL PASSIVE INFRARED (PIR) MOTION SENSOR. DURING SCHEDULE OCCUPIED PERIODS, WHEN MOTION IS DETECTED IN THE OCCUPIED SPACE BY THE PIR, THE UNIT WILL OPERATE IN THE OCCUPIED MODE. IF DURING OCCUPIED PERIODS, MOTION HAS NOT BEEN DETECTED FOR 30 MINS. (ADJ.) THE UNIT SHALL SET BACK THE OCCUPIED HEATING & COOING SETPOINTS BY 3°F (ADJ.) AND THE FAN WILL OPERATE WHEN THE SPACE TEMPERATURE EXCEEDS THE STANDBY SETPOINTS.

UNOCCUPIED MODE
THE UNIT WILL MAINTAIN AN UNOCCUPIED COOLING SETPOINT OF 95°F AND AN UNOCCUPIED HEATING SETPOINT OF 45°F. DURING THE UNOCCUPIED TIME, EACH PRESS OF THE OVERRIDE BUTTON LOCATED ON THE ROOM SPACE SENSOR WILL ADD 30 MINS (ADJ.) OF OCCUPIED TIME FOR UP TO 4 HOURS (ADJ.). AFTER THE TIME HAS EXPIRED THE UNIT WILL RETURN TO THE UNOCCUPIED MODE.

INDOOR FAN - VARIABLE SPEED
DURING OCCUPIED PERIODS, THE FAN SHALL OPERATE CONTINUOUSLY. DURING UNOCCUPIED PERIODS, THE FAN SHALL OPERATE WHEN THE SPACE TEMPERATURE EXCEEDS THE UNOCCUPIED HEATING OR COOLING SETPOINTS. THE FAN OPERATES AT A VARIABLE SPEED TO MEET THE LOAD CONDITIONS AND SAT SAFETY REQUIREMENTS. FAN SPEED IS NOT CONTROLLED TO MAINTAIN DUCT STATIC PRESSURE.

HEATING MODE
WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT OF 68°F (ADJ.), UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH STAGE OF HEATING HAS A FIXED 1 MINUTE MINIMUM ON-TIME, AND 1 MINUTE OFF TIME

COOLING MODE
WHEN SPACE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT OF 76°F (ADJ.), UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE MECHANICAL COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH COMPRESSOR OUTPUT HAS A FIXED 3 MINUTE MINIMUM ON-TIME, AND 5 MINUTE OFF TIME

DOOR SWITCH INTERLOCK
UPON OPENING ANY EXTERIOR DOOR FOR A DURATION OF 5 MINUTES (ADJ.). THE MECHANICAL HEATING AND COOLING WILL BE DISABLED. ECONOMIZER COOLING, IF AVAILABLE, WILL CONTINUE TO OPERATE.

ECONOMIZER
ECONOMIZER SHALL CLOSE WHEN FAN IS OFF OR DURING A LOSS OF POWER. DURING OCCUPIED HOURS WHEN FAN IS ENERGIZED IN LOW SPEED THE ECONOMIZER SHALL OPEN TO ITS LOW FAN MINIMUM POSITION OF 33% (ADJ.). WHEN THE FAN IS RUNNING IN HIGH SPEED THE ECONOMIZER SHALL RESET TO ITS HIGH SPEED MINIMUM POSITION OF 20% (ADJ.). DAMPER MINIMUM POSITIONS TO BE DETERMINED BY AIR BALANCER.

WHEN OUTSIDE AIR TEMPERATURE IS BELOW THE HIGH LIMIT OF 73°F (ADJ.), BELOW SPACE TEMPERATURE, AND OCCUPIED SPACE REQUIRES COOLING, ECONOMIZER SHALL OPEN. IF ECONOMIZER AIR IS NOT SUFFICIENT TO MEET THE DEMAND IN THE OCCUPIED SPACE, UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.
THE FOLLOWING FAULT DETECTION AND DIAGNOSTIC (FDD) ALARMS SHALL BE SENT THROUGH THE SERVER
A. AIR TEMPERATURE SENSOR FAILURE
B. FAILS TO CLOSE
C. FAILS TO OPEN
D. STUCK FULLY OPEN
E. FAILS TO FULLY OPEN

CO2 CONTROL - DEMAND CONTROLLED VENTILATION
UNIT SHALL MONITOR SPACE CO2 WHEN THE SUPPLY FAN IS ENERGIZED. WHEN THE SPACE CO2 PPM EXCEEDS THE SETPOINT OF 650 PPM (ADJ.) ABOVE OUTDOOR CO2 LEVEL, THE OUTDOOR AIR DAMPER SHALL MODULATE OPEN TOWARDS A MAXIMUM CO2 POSITION OF 50% (ADJ.). IF NO OUTDOOR AIR CO2 SENSOR IS PRESENT, A VALUE OF 400 PPM IS USED. DAMPER POSITION SETPOINTS TO BE DETERMINED BY AIR BALANCER.

POWER EXHAUST
THE EXHAUST FAN SHALL BE ENABLED ANYTIME THE SUPPLY FAN IS RUNNING AND THE OUTDOOR AIR DAMPER OPENS MORE THAN 30% (ADJUSTABLE). THE POWER EXHAUST VFD WILL MODULATE BASED ON ITS OWN CONTROLS TO MAINTAIN THE ROOM PRESSURE SETPOINT (AS DETERMINED BY AIR BALANCER). PRESSURE SETPOINT AND VFD SPEED NOT CONTROLLED THROUGH EMS.

FILTER STATUS
WHEN THE PRESSURE ACROSS THE FILTER BANK EXCEEDS THE SETPOINT OF THE DIFFERENTIAL PRESSURE SWITCH, AN ALARM INDICATES A DIRTY FILTER.

UNIT OPTIMAL START
THE UNIT WILL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM WILL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

DEMAND LIMITING
THE RTU OPEN MAY EMPLOY A DEMAND LIMIT STRATEGY. DEMAND LIMITING IN THE RTU OPEN WORKS THOUGH SETPOINT EXPANSION. THE CONTROLLER'S HEATING AND COOLING SETPOINT ARE EXPANDED IN STEPS OR LEVELS. THE DEGREE TO WHICH THE SETPOINT ARE EXPANDED IS DEFINED BY THE DEMAND LEVEL SETPOINT. EACH DEMAND LEVEL (1 THROUGH 3) ADJUST THE HEATING AND COOLING SETPOINT OUTWARDS. BY DEFAULT, DEMAND 1 YIELDS A 1°F EXPANSION, DEMAND 2 YIELDS A 2°F EXPANSION, AND DEMAND 3 YIELDS A 4°F EXPANSION. THE BACNET DEMAND LIMITING VARIABLE SETS THE ADJUSTABLE DESIRED LEVEL OF SETPOINT EXPANSION IN THE RECEIVING CONTROLLER. LEVEL 0 LEAVES THE STANDARD OCCUPIED AND UNOCCUPIED HEATING AND COOLING SETPOINT IN EFFECT. LEVEL 1 THOUGH 3 EXPANDS OCCUPIED HEATING AND COOLING SETPOINT. THE DEMAND LIMIT KW SETPOINTS ARE SET IN THE KW METER CONTROL PROGRAM AND DETERMINED BY THE DISTRICT.

SYSTEM SHUT-DOWN
FIRE ALARM SHALL PROVIDE UNIT AUTOMATIC SHUTOFF PER CMC SECTION 608 BY FIRE / ALARM CONTRACTOR IN LIEU OF DUCT SMOKE DETECTOR. SEE 9/M5.2.

1 M6.2 PACKAGE ROOFTOP UNIT WITH DEMAND CONTROLLED VENTILATION CONTROL DIAGRAM (TYPICAL FOR AC-3 AND AC-4)
SCALE: NTS

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C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

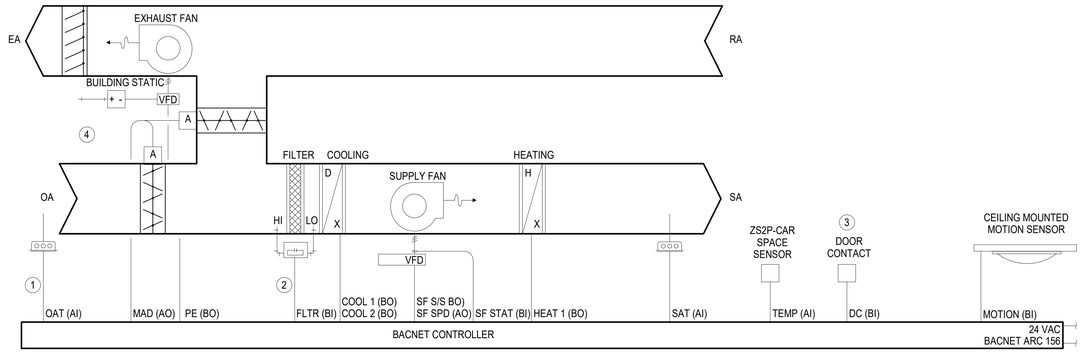
PACKAGE UNIT CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.2

KEYNOTES

1. TWO OUTDOOR AIR TEMPERATURE SENSORS PER SITE.
2. DIFFERENTIAL PRESSURE SWITCH ON ONE OF THE AC UNITS ONLY.
3. ALL DOORS OPENING TO OUTSIDE SHALL BE EQUIPPED WITH SENSOR TO SHUT-DOWN THE AC UNIT. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND QUANTITY.
4. PROVIDE ONE SPACE PRESSURE SENSOR PER AC UNIT.



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Space Temp					x				x	x	x
Space Setpoint Adjust					x				x		x
Space Unoccupied Override					x				x		
Supply Air Temp	x								x	x	x
Mixed Air Dampers		x							x	x	x
Supply Fan Status (Current Switch)			x						x	x	x
Filter Status Switch			x						x	x	x
Occupancy Contact			x						x		x
Door Contact			x						x		x
Cooling Stage 1				x					x		x
Cooling Stage 2				x					x		x
Heating Stage 1				x					x		x
Powered Exhaust Enable/Disable				x					x		
Supply Fan Start/Stop				x					x		x
Outside Air Temp	x				x				x		x
Schedule								x	x		
Cooling Setpoint					x				x		x
Heating Setpoint					x				x		x
Compressor Runtime Exceeded										x	
KW Demand Limit					x				x		x

SEQUENCE OF OPERATION

OCCUPANCY
THE UNIT WILL FOLLOW A USER DEFINED BACNET SCHEDULE CONFIGURATION FROM THE I-VU SERVER ALONG WITH A LOCAL PASSIVE INFRARED (PIR) MOTION SENSOR. DURING SCHEDULE OCCUPIED PERIODS, WHEN MOTION IS DETECTED IN THE OCCUPIED SPACE BY THE PIR, THE UNIT WILL OPERATE IN THE OCCUPIED MODE. IF DURING OCCUPIED PERIODS, MOTION HAS NOT BEEN DETECTED FOR 30 MINS. (ADJ.) THE UNIT SHALL SET BACK THE OCCUPIED HEATING & COOING SETPOINTS BY 3°F (ADJ.) AND THE FAN WILL OPERATE WHEN THE SPACE TEMPERATURE EXCEEDS THE STANDBY SETPOINTS.

UNOCCUPIED MODE
THE UNIT WILL MAINTAIN AN UNOCCUPIED COOLING SETPOINT OF 95°F AND AN UNOCCUPIED HEATING SETPOINT OF 45°F. DURING THE UNOCCUPIED TIME, EACH PRESS OF THE OVERRIDE BUTTON LOCATED ON THE ROOM SPACE SENSOR WILL ADD 30 MINS (ADJ.) OF OCCUPIED TIME FOR UP TO 4 HOURS (ADJ.). AFTER THE TIME HAS EXPIRED THE UNIT WILL RETURN TO THE UNOCCUPIED MODE.

INDOOR FAN - TWO SPEED
DURING OCCUPIED PERIODS, THE FAN SHALL OPERATE CONTINUOUSLY. DURING UNOCCUPIED PERIODS, THE FAN SHALL OPERATE WHEN THE SPACE TEMPERATURE EXCEEDS THE UNOCCUPIED HEATING OR COOLING SETPOINTS. THE FAN OPERATES AT 1 OF 2 SPEEDS DEPENDING ON THE MODE OF OPERATION AND LOAD CONDITIONS. DURING VENT ONLY MODE AND LOW LOAD CONDITIONS, THE FAN OPERATES AT LOW SPEED. IF LOAD CONDITIONS INCREASE OR IF THERE IS A CALL FOR HEATING, THE FAN OPERATES AT HIGH SPEED.

HEATING MODE
WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT OF 68°F (ADJ.), UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH STAGE OF HEATING HAS A FIXED 1 MINUTE MINIMUM ON-TIME, AND 1 MINUTE OFF TIME

COOLING MODE
WHEN SPACE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT OF 76°F (ADJ.), UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE MECHANICAL COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH COMPRESSOR OUTPUT HAS A FIXED 3 MINUTE MINIMUM ON-TIME, AND 5 MINUTE OFF TIME

DOOR SWITCH INTERLOCK
UPON OPENING ANY EXTERIOR DOOR FOR A DURATION OF 5 MINUTES (ADJ.), THE MECHANICAL HEATING AND COOLING WILL BE DISABLED. ECONOMIZER COOLING, IF AVAILABLE, WILL CONTINUE TO OPERATE.

ECONOMIZER
ECONOMIZER SHALL CLOSE WHEN FAN IS OFF OR DURING A LOSS OF POWER. DURING OCCUPIED HOURS WHEN FAN IS ENERGIZED IN LOW SPEED THE ECONOMIZER SHALL OPEN TO ITS LOW FAN MINIMUM POSITION OF 33% (ADJ.), WHEN THE FAN IS RUNNING IN HIGH SPEED THE ECONOMIZER SHALL RESET TO ITS HIGH SPEED MINIMUM POSITION OF 20% (ADJ.). DAMPER MINIMUM POSITIONS TO BE DETERMINED BY AIR BALANCER.

WHEN OUTSIDE AIR TEMPERATURE IS BELOW THE HIGH LIMIT OF 73°F (ADJ.), BELOW SPACE TEMPERATURE, AND OCCUPIED SPACE REQUIRES COOLING, ECONOMIZER SHALL OPEN. IF ECONOMIZER AIR IS NOT SUFFICIENT TO MEET THE DEMAND IN THE OCCUPIED SPACE, UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.
THE FOLLOWING FAULT DETECTION AND DIAGNOSTIC (FDD) ALARMS SHALL BE SENT THROUGH THE SERVER
A. AIR TEMPERATURE SENSOR FAILURE
B. FAILS TO CLOSE
C. FAILS TO OPEN
D. STUCK FULLY OPEN
E. FAILS TO FULLY OPEN

POWER EXHAUST
THE EXHAUST FAN SHALL BE ENABLED ANYTIME THE SUPPLY FAN IS RUNNING AND THE OUTDOOR AIR DAMPER OPENS MORE THAN 30% (ADJUSTABLE). THE POWER EXHAUST VFD WILL MODULATE BASED ON ITS OWN CONTROLS TO MAINTAIN THE ROOM PRESSURE SETPOINT (AS DETERMINED BY AIR BALANCER). PRESSURE SETPOINT AND VFD SPEED NOT CONTROLLED THROUGH EMS.

FILTER STATUS
WHEN THE PRESSURE ACROSS THE FILTER BANK EXCEEDS THE SETPOINT OF THE DIFFERENTIAL PRESSURE SWITCH, AN ALARM INDICATES A DIRTY FILTER.

UNIT OPTIMAL START
THE UNIT WILL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM WILL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

DEMAND LIMITING
THE RTU OPEN MAY EMPLOY A DEMAND LIMIT STRATEGY. DEMAND LIMITING IN THE RTU OPEN WORKS THOUGH SETPOINT EXPANSION. THE CONTROLLER'S HEATING AND COOLING SETPOINT ARE EXPANDED IN STEPS OR LEVELS. THE DEGREE TO WHICH THE SETPOINT ARE EXPANDED IS DEFINED BY THE DEMAND LEVEL SETPOINT. EACH DEMAND LEVEL (1 THROUGH 3) ADJUST THE HEATING AND COOLING SETPOINT OUTWARDS. BY DEFAULT, DEMAND 1 YIELDS A 1°F EXPANSION, DEMAND 2 YIELDS A 2°F EXPANSION, AND DEMAND 3 YIELDS A 4°F EXPANSION. THE BACNET DEMAND LIMITING VARIABLE SETS THE ADJUSTABLE DESIRED LEVEL OF SETPOINT EXPANSION IN THE RECEIVING CONTROLLER. LEVEL 0 LEAVES THE STANDARD OCCUPIED AND UNOCCUPIED HEATING AND COOLING SETPOINT IN EFFECT. LEVEL 1 THOUGH 3 EXPANDS OCCUPIED HEATING AND COOLING SETPOINT. THE DEMAND LIMIT KW SETPOINTS ARE SET IN THE KW METER CONTROL PROGRAM AND DETERMINED BY THE DISTRICT.

SYSTEM SHUT-DOWN
FIRE ALARM SHALL PROVIDE UNIT AUTOMATIC SHUTOFF PER CMC SECTION 608 BY FIRE / ALARM CONTRACTOR IN LIEU OF DUCT SMOKE DETECTOR. SEE 9/M5.2.

1 M6.3 PACKAGE ROOFTOP UNIT CONTROL DIAGRAM (AC-1)
SCALE: NTS

IDENTIFICATION STAMP
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APP. 04-118743 INC:
REVIEWED FOR
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DATE: 02.05.20

Revision | Date

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OCTOBER 31, 2021
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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PACKAGE UNIT CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.3

KEYNOTES

1. TWO OUTDOOR AIR TEMPERATURE SENSORS PER SITE.
2. DIFFERENTIAL PRESSURE SWITCH ON ONE OF THE AC UNITS ONLY.
3. PROVIDE ONE SPACE PRESSURE SENSOR PER AC UNIT.

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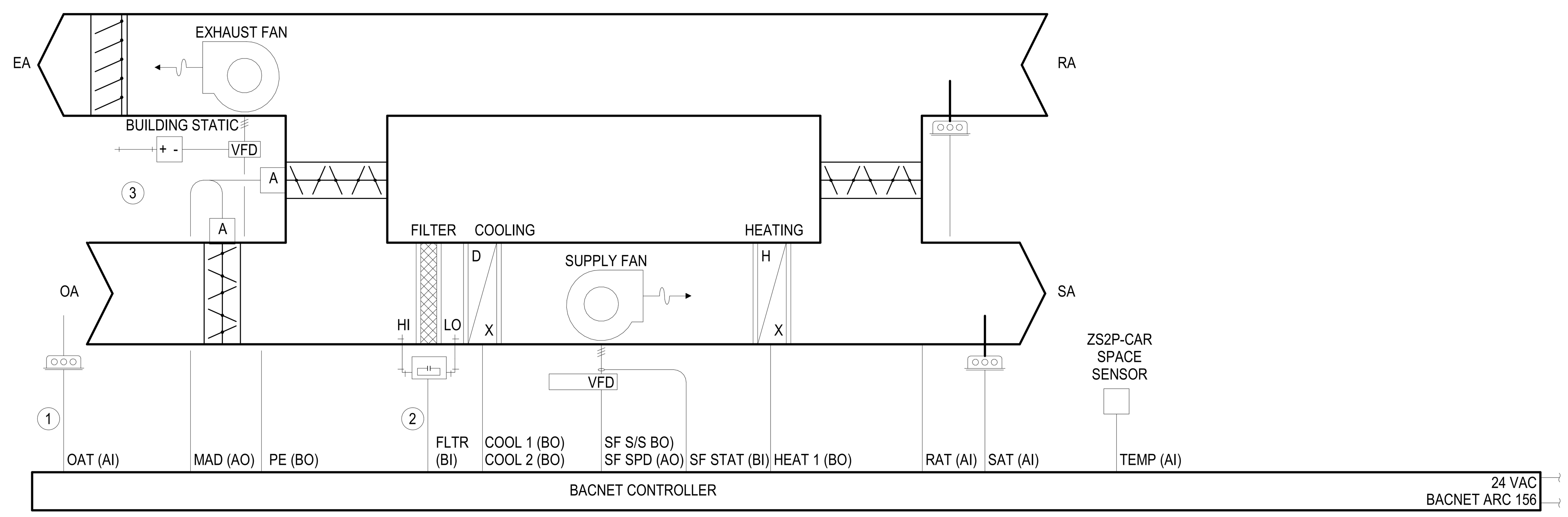

Point Name	Hardware Points				Software Points						
	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm	Show On Graphic
Reference Zone Temp					x				x	x	x
Reference Zone Setpoint Adjust					x				x		x
Reference Zone Unoccupied Over-ride					x				x		
Supply Air Temp	x								x	x	x
Return Air Temp	x								x		x
Mixed Air Dampers		x							x	x	x
Supply Fan Status (Current Switch)			x						x	x	x
Filter Status Switch			x						x	x	x
Occupancy Status						x			x		x
Cooling Stage 1				x					x		x
Cooling Stage 2				x					x		x
Heating Stage 1				x					x		x
Powered Exhaust Enable/Disable				x					x		
Supply Fan Start/Stop				x					x		x
Outside Air Temp	x				x				x		x
Schedule								x	x		
Cooling Setpoint					x				x		x
Heating Setpoint					x				x		x
Compressor Runtime Exceeded										x	
KW Demand Limit					x				x		x

SEQUENCE OF OPERATION

LINKAGE
THE CONTROL SYSTEM USES LINKAGE TO EXCHANGE DATA BETWEEN THE ZONE TERMINALS AND THEIR AIR SOURCE TO FORM A COORDINATED HVAC SYSTEM. THE SYSTEM'S AIR SOURCE CONTROLLER, ZONE CONTROLLERS, AND BYPASS CONTROLLER ARE LINKED SO THAT THEIR DATA EXCHANGE CAN BE MANAGED BY ONE ZONE CONTROLLER CONFIGURED AS THE VVT MASTER. THE VVT MASTER GATHERS THE FOLLOWING INFORMATION FROM THE SLAVE ZONE CONTROLLERS: OCCUPANCY STATUS, SETPOINTS, ZONE TEMPERATURE, RELATIVE HUMIDITY, DAMPER POSITION, AND OPTIMAL START DATA (ALL IF APPLICABLE).

OCCUPANCY
THE UNIT WILL RUN VIA A LINKAGE OCCUPANCY STATUS UNLESS A SHUTDOWN ON SAFETIES OCCURS.

UNOCCUPIED MODE
THE UNIT WILL MAINTAIN A REFERENCE ZONE UNOCCUPIED COOLING SETPOINT OF 95°F AND A REFERENCE ZONE UNOCCUPIED HEATING SETPOINT OF 45°F.

INDOOR FAN - TWO SPEED
DURING OCCUPIED PERIODS, THE FAN SHALL OPERATE CONTINUOUSLY. DURING UNOCCUPIED PERIODS, THE FAN SHALL OPERATE WHEN THE REFERENCE ZONE TEMPERATURE EXCEEDS THE UNOCCUPIED HEATING OR COOLING SETPOINTS. THE FAN OPERATES AT 1 OF 2 SPEEDS DEPENDING ON THE MODE OF OPERATION AND LOAD CONDITIONS. DURING VENT ONLY MODE AND LOW LOAD CONDITIONS, THE FAN OPERATES AT LOW SPEED. IF LOAD CONDITIONS INCREASE OR IF THERE IS A CALL FOR HEATING, THE FAN OPERATES AT HIGH SPEED.

HEATING MODE
WHEN THE REFERENCE ZONE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT OF 68°F (ADJ.), UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH STAGE OF HEATING HAS A FIXED 1 MINUTE MINIMUM ON-TIME, AND 1 MINUTE OFF TIME

COOLING MODE
WHEN THE REFERENCE ZONE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT OF 76°F (ADJ.), UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE MECHANICAL COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH COMPRESSOR OUTPUT HAS A FIXED 3 MINUTE MINIMUM ON-TIME, AND 5 MINUTE OFF TIME

ECONOMIZER
ECONOMIZER SHALL CLOSE WHEN FAN IS OFF OR DURING A LOSS OF POWER. DURING OCCUPIED HOURS WHEN FAN IS ENERGIZED IN LOW SPEED THE ECONOMIZER SHALL OPEN TO ITS LOW FAN MINIMUM POSITION OF 33% (ADJ.). WHEN THE FAN IS RUNNING IN HIGH SPEED THE ECONOMIZER SHALL RESET TO ITS HIGH SPEED MINIMUM POSITION OF 20% (ADJ.). DAMPER MINIMUM POSITIONS TO BE DETERMINED BY AIR BALANCER.

WHEN OUTSIDE AIR TEMPERATURE IS BELOW THE HIGH LIMIT OF 73°F (ADJ.), BELOW SPACE TEMPERATURE, AND OCCUPIED SPACE REQUIRES COOLING, ECONOMIZER SHALL OPEN. IF ECONOMIZER AIR IS NOT SUFFICIENT TO MEET THE DEMAND IN THE OCCUPIED SPACE, UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.
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POWER EXHAUST
THE EXHAUST FAN SHALL BE ENABLED ANYTIME THE SUPPLY FAN IS RUNNING AND THE OUTDOOR AIR DAMPER OPENS MORE THAN 30% (ADJUSTABLE). THE POWER EXHAUST VFD WILL MODULATE BASED ON ITS OWN CONTROLS TO MAINTAIN THE ROOM PRESSURE SETPOINT (AS DETERMINED BY AIR BALANCER). PRESSURE SETPOINT AND VFD SPEED NOT CONTROLLED THROUGH EMS.

FILTER STATUS
WHEN THE PRESSURE ACROSS THE FILTER BANK EXCEEDS THE SETPOINT OF THE DIFFERENTIAL PRESSURE SWITCH, AN ALARM INDICATES A DIRTY FILTER.

UNIT OPTIMAL START
THE UNIT WILL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM WILL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED LINKAGE OCCUPIED PERIOD.

DEMAND LIMITING
THE RTU OPEN MAY EMPLOY A DEMAND LIMIT STRATEGY. DEMAND LIMITING IN THE RTU OPEN WORKS THOUGH SETPOINT EXPANSION. THE CONTROLLER'S HEATING AND COOLING SETPOINT ARE EXPANDED IN STEPS OR LEVELS. THE DEGREE TO WHICH THE SETPOINT ARE EXPANDED IS DEFINED BY THE DEMAND LEVEL SETPOINT. EACH DEMAND LEVEL (1 THROUGH 3) ADJUST THE HEATING AND COOLING SETPOINT OUTWARDS. BY DEFAULT, DEMAND 1 YIELDS A 1°F EXPANSION, DEMAND 2 YIELDS A 2°F EXPANSION, AND DEMAND 3 YIELDS A 4°F EXPANSION. THE BACNET DEMAND LIMITING VARIABLE SETS THE ADJUSTABLE DESIRED LEVEL OF SETPOINT EXPANSION IN THE RECEIVING CONTROLLER. LEVEL 0 LEAVES THE STANDARD OCCUPIED AND UNOCCUPIED HEATING AND COOLING SETPOINT IN EFFECT. LEVEL 1 THOUGH 3 EXPANDS OCCUPIED HEATING AND COOLING SETPOINT. THE DEMAND LIMIT KW SETPOINTS ARE SET IN THE KW METER CONTROL PROGRAM AND DETERMINED BY THE DISTRICT.

1 / M6.4 PACKAGE ROOFTOP UNIT WITH VVT CONTROL DIAGRAM (AC-2)
SCALE: NTS

Revison | Date

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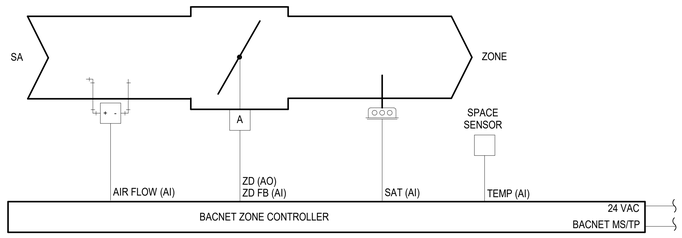
SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PACKAGE UNIT WITH VVT CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.4



Point Name	Hardware Points					Software Points					Show On Graphic
	AI	AO	BI	BO	RNET	AV	BV	Sched	Trend	Alarm	
Terminal Airflow	x								x	x	x
Zone Damper Signal	x								x		x
Zone Damper Position Feedback	x										
Space Temp					x				x	x	x
Space Setpoint Adjust					x						x
Space Unoccupied Override					x				x		
Supply Air Temp	x								x	x	x
Outside Air Temp						x			x		x
Schedule								x	x		
Cooling Setpoint									x		x
Heating Setpoint									x		x
Air Source Linkage Mode						x				x	
KW Demand Level						x			x		

SEQUENCE OF OPERATION

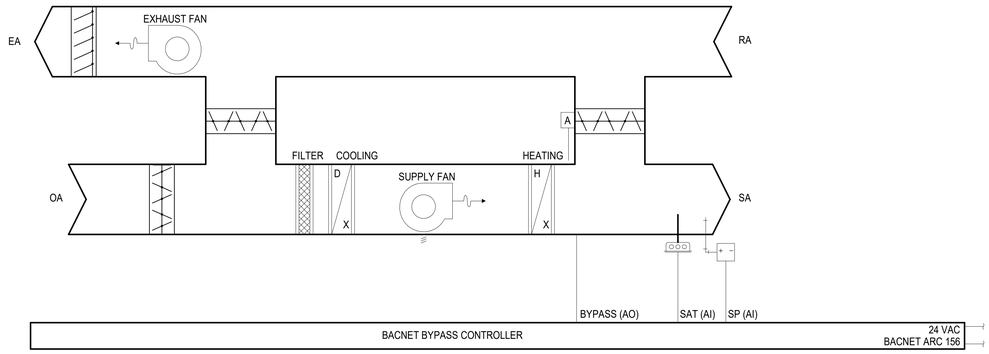
PRESSURE INDEPENDENT VVT ZONE CONTROLLER
PROVIDES PRESSURE-INDEPENDENT ZONE TEMPERATURE CONTROL BY MODULATING ITS BUILT-IN DAMPER ACTUATOR TO CONTROL THE FLOW OF PRIMARY AIR INTO THE ZONE. THE DAMPER MODULATES THE AIRFLOW SETPOINT BETWEEN THE MODE'S CONFIGURABLE MINIMUM AND MAXIMUM AIRFLOW BASED ON THE OCCUPANCY STATUS OF THE ZONE AND OCCUPIED HEATING SETPOINT OF 68°F AND COOLING SETPOINT OF 76°F. THIS MINIMUM INSURES SUFFICIENT MINIMUM AIRFLOW AT THE AIR SOURCE AND SUFFICIENT VENTILATION TO THE ZONE DURING OCCUPIED PERIODS. WHEN THE ZONE IS UNOCCUPIED, THE UNOCCUPIED MINIMUM AIRFLOW SETPOINT PROVIDES THE BASE VENTILATION AS REQUIRED (ADJ.) AND WILL MAINTAIN THE ZONES UNOCCUPIED COOLING SETPOINT OF 85°F (ADJ.) AND UNOCCUPIED HEATING SETPOINT OF 45°F (ADJ.).

OCCUPANCY OVERRIDE
THE ZONE WILL ENTER A 2 HOUR (ADJ.) TIMED OVERRIDE UPON ACTIVATION OF THE PUSHBUTTON OVERRIDE ON THE SPACE SENSOR. A COMMAND WILL BE SENT TO THE AIR SOURCE VIA LINKAGE TO START THE SYSTEM.

UNIT OPTIMAL START
THE UNIT WILL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM WILL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

DEMAND LIMITING
THE VAV CONTROLLER WILL EMPLOY A DEMAND LIMIT STRATEGY. DEMAND LIMITING IN THE VAV WORKS THOUGH SETPOINT EXPANSION. THE CONTROLLER'S HEATING AND COOLING SETPOINT ARE EXPANDED IN STEPS OR LEVELS. THE DEGREE TO WHICH THE SETPOINT ARE EXPANDED IS DEFINED BY THE DEMAND LEVEL SETPOINT. EACH DEMAND LEVEL (1 THROUGH 3) ADJUST THE HEATING AND COOLING SETPOINT OUTWARDS. BY DEFAULT, DEMAND 1 YIELDS A 1°F EXPANSION, DEMAND 2 YIELDS A 2°F EXPANSION, AND DEMAND 3 YIELDS A 4°F EXPANSION. THE BACNET DEMAND LIMITING VARIABLE SETS THE ADJUSTABLE DESIRED LEVEL OF SETPOINT EXPANSION IN THE RECEIVING CONTROLLER. LEVEL 0 LEAVES THE STANDARD OCCUPIED AND UNOCCUPIED HEATING AND COOLING SETPOINT IN EFFECT. LEVEL 1 THOUGH 3 EXPANDS OCCUPIED HEATING AND COOLING SETPOINT. THE DEMAND LIMIT KW SETPOINTS ARE SET IN THE KW METER CONTROL PROGRAM AND DETERMINED BY THE DISTRICT.

2 M6.5 VVT ZONE AIR TERMINAL CONTROL DAIGRAM (TYPICAL FOR Z-2.1 THRU Z-2.4)
SCALE: NTS



Point Name	Hardware Points					Software Points					Show On Graphic
	AI	AO	BI	BO	RNET	AV	BV	Sched	Trend	Alarm	
Bypass Damper Signal	x								x		x
Bypass Damper Position Feedback	x										
Supply Air Temp	x								x	x	x
Supply Air Duct Static Pressure	x								x	x	x
Air Source Linkage Mode						x				x	

SEQUENCE OF OPERATION

VVT BYPASS DAMPER
WHILE THE INDOOR FAN RUNS, THE BYPASS SHALL MODULATE TO MAINTAIN DUCT PRESSURE AT A CONFIGURABLE SETPOINT. IF THE STATIC PRESSURE IS BELOW THE STATIC PRESSURE SETPOINT THE BYPASS DAMPER WILL MODULATE CLOSE TO BUILD DUCT STATIC PRESSURE UNTIL THE STATIC PRESSURE IS AT SETPOINT. IF THE STATIC PRESSURE IS ABOVE THE STATIC PRESSURE SETPOINT THE BYPASS DAMPER WILL MODULATE OPEN TO RELIEVE DUCT STATIC PRESSURE UNTIL THE STATIC PRESSURE IS AT SETPOINT.

1 M6.5 VVT BYPASS AIR TERMINAL CONTROL DIAGRAM (Z-2.5)
SCALE: NTS

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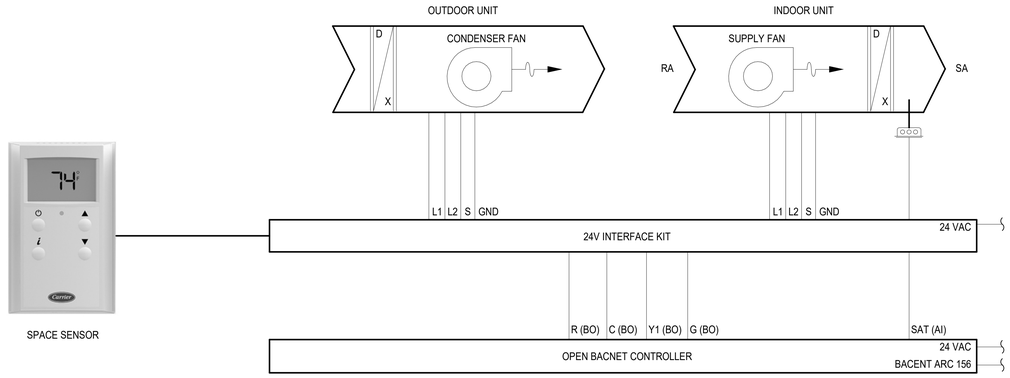
SANTEE SCHOOL DISTRICT

VVT AIR TERMINAL CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.5



SEQUENCE OF OPERATION

INDOOR FAN
THE UNIT SHALL BE CONTINUOUSLY OCCUPIED. DURING OCCUPIED PERIODS, FAN SHALL OPERATE CONTINUOUSLY. THE FAN OPERATES AT ONE SPEED ONLY AND PROVIDES ON/OFF OPERATION

COOLING MODE
WHEN SPACE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT OF 76°F (ADJ.), UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE MECHANICAL COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE. EACH COMPRESSOR OUTPUT HAS A FIXED 3 MINUTE MINIMUM ON-TIME, AND 5 MINUTE OFF TIME

	Hardware Points				Software Points						
Point Name	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm	Show On Graphic
Space Temp	x								x	x	x
Supply Air Temp	x								x	x	x
Cooling Stage				x					x		x
Supply Fan Start/Stop				x					x		x
Cooling Setpoint					x				x		x
Compressor Runtime Exceeded										x	

1 M6.6 DUCTLESS SPLIT SYSTEM CONTROL DIAGRAM (FC/CU-1)
SCALE: NTS

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SYCAMORE CANYON ELEMENTARY SCHOOL
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SANTEE SCHOOL DISTRICT

DUCTLESS SPLIT SYSTEM CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.6

KEYNOTES

1. POWER FOR PANEL MOUNTED TRANSFORMER TO BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
2. BACNET POINTS LIST TO BE PROVIDED BY EQUIPMENT MANUFACTURER.
3. LIGHT SWITCH AND LINE VOLTAGE WIRING FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. DRAWINGS SHOWN IS FOR DIAGRAMMATIC PURPOSES ONLY.

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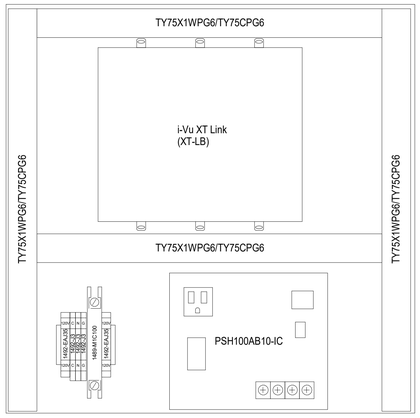
16"x16"x6" CONTROL PANEL PHYSICAL LAYOUT

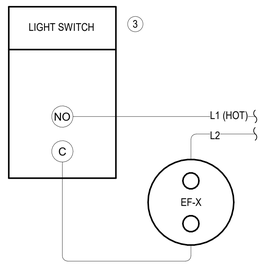


1

POWER METER BACNET POINTS LIST					
DESCRIPTION	INPUTS		OUTPUTS		REMARKS
	ANALOG	BINARY	ANALOG	BINARY	
SYSTEM CURRENT AVERAGE	x				
SYSTEM MAXIMUM PEAK DEMAND	x				
SYSTEM AVERAGE POWER DEMAND	x				
SYSTEM TOTAL TRUE POWER	x				
SYSTEM NET POWER	x				
SYSTEM TOTAL TRUE ENERGY	x				

3 M6.7 I-VU NETWORK LINK (NL-1)
SCALE: NTS

1 M6.7 POWER METER BACNET INTEGRATION (M-1)
SCALE: NTS



2

EXTERIOR LIGHTING BACNET POINTS LIST					
DESCRIPTION	INPUTS		OUTPUTS		REMARKS
	ANALOG	BINARY	ANALOG	BINARY	
SCHEDULE		x			
LIGHTING ON/OFF				x	
PHOTO CELL		x			

SEQUENCE OF OPERATION

SYSTEM OPERATION
EXTERIOR LIGHTING CIRCUIT SHALL BE ENABLED WHEN SCHEDULED OCCUPIED AND WHEN THE PHOTO CELL DOES NOT SENSE LIGHT.

4 M6.7 LIGHT SWITCH EXHAUST FAN DETAIL (EF-1)
SCALE: NTS

2 M6.7 LIGHTING PANEL BACNET INTEGRATION (LP-1)
SCALE: NTS

Revison | Date

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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

LIGHTING / METER AND LINK CONTROL DIAGRAM

Drawn: MM
Checked: MP
Date:
Job: SSD-SC-03

M6.7

PLUMBING GENERAL NOTES

1. REVIEW THESE PLANS AND SPECIFICATIONS INCLUDING PLANS AND SPECIFICATIONS OF OTHER TRADES PRIOR TO BID. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
2. VERIFY & COORDINATE EXACT LOCATION OF EQUIPMENT, PENETRATIONS THROUGH ROOF, FLOOR AND WALLS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PRIOR TO SHOP DRAWINGS AND CONSTRUCTION.
3. COORDINATE EXACT SIZE AND ROUTING OF PIPING WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL PRIOR TO SHOP DRAWING AND CONSTRUCTION.
4. PROVIDE A COMPLETE SET OF SHOP DRAWINGS AND DETAILS BASED ON ACTUAL FIELD MEASUREMENT AND EQUIPMENT PROCURED.
5. PROVIDE ACCESS AND CLEARANCES FOR EQUIPMENT MAINTENANCE AS RECOMMENDED BY APPLICABLE CODES AND EQUIPMENT MANUFACTURER. COORDINATE WITH OTHER TRADES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES, EQUIPMENT, AREAS & PROPERTY THAT MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
7. FOR CONDITIONS THAT PIPE AND CONDUIT SUPPORT IS NOT PROVIDED, REFER TO SMACNA DETAILS.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION AND INDUSTRY STANDARDS.
9. VERIFY EXACT LOCATION OF PLUMBING FIXTURES AND FLOOR DRAINS WITH THE ARCHITECT.
10. TERMINATE VENTS THRU ROOF A MINIMUM OF 18 INCHES ABOVE ROOF AND MINIMUM 10 FEET HORIZONTAL AWAY FROM OUTSIDE AIR INTAKES.
11. FOR EXACT LOCATION OF ALL PLUMBING FIXTURES AND PIPE CHASES REFER TO ARCHITECTURAL DRAWINGS.
12. COORDINATE EXACT LOCATION AND SIZES FOR PIPE SLEEVES THRU CONCRETE WALL OMINIMUM R FLOOR WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
13. PRIOR TO INSTALLATION VERIFY EXACT LOCATION, INVERT ELEVATION, PIPE SIZES AND POINT OF CONNECTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
14. LOCATE ALL VALVES WHERE THEY ARE READILY ACCESSIBLE. WHERE VALVES ARE INSTALLED WITHIN OR BEHIND WALLS OR ABOVE A CEILING, PROVIDE ACCESS PANEL.
15. ALL PIPES THRU FIRE RATED WALL SHALL BE INSTALLED WITH AN APPROVED FIRE STOP SYSTEM.
16. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENING AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL COMPLY WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE SUBMITTED PRIOR TO INSTALLATION OF THE ITEMS CONCERNED.
17. SUBSTITUTION IS NOT ALLOWED WITHOUT APPROVAL OF OWNER AND ARCHITECT OF THE RECORD. SUBSTITUTION OF MECHANICAL EQUIPMENT WITH EFFICIENCIES LOWER THAN THOSE INDICATED ON THE PLANS MAY REQUIRE RECALCULATION OF TITLE 24 DOCUMENTS. IF THE CONTRACTOR CHOOSES TO UTILIZE SUCH EQUIPMENT, HE/SHE ASSUMES FULL RESPONSIBILITY FOR THE RECALCULATION AND JURISDICTIONAL APPROVAL OF TITLE 24 DOCUMENTS. A SUBSTITUTION OF EQUIPMENT OF A GREATER WEIGHT OR OF DIFFERENT DIMENSIONS WHICH AFFECTS STRUCTURAL DETAILS OR SUPPORTS MUST BE APPROVED BY DSA IN A CCD, PRIOR TO CONSTRUCTING THE WORK OR INSTALLING THE EQUIPMENT. CONTRACTORS ARE RESPONSIBLE TO PROVIDE ALL REQUIRED DOCUMENTATION FOR DSA REVIEW AND APPROVAL DESIGN CHANGES, AND REVISIONS TO MOUNTING DETAILS IS NOT INCLUDES IN OUR SCOPE OF WORK.
18. IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIAL, EQUIPMENT OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST IS THE RESPONSIBILITY OF THE CONTRACTOR INITIALING THE SUBSTITUTION.
19. SUBMITTALS: APPROVAL OF THE SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO FULLY COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
20. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.
21. ALL HOSE BIBBS SHALL BE EQUIPPED WITH VACUUM BREAKER.
22. VERIFY SIZE, LOCATIONS, DEPTH AND WATER PRESSURE OF BLDG. PLUMBING UTILITIES WITH CIVIL ENGINEER.
23. DOMESTIC WATER HEATER SHALL BE SEISMICALLY SECURED TO BLDG. STRUCTURE WITH ADEQUATE STRUCTURAL SUPPORT AND ANCHOR BOLTS TO WITHSTAND 0.2g LATERAL AND VERTICAL LOAD.
24. ALL CONDENSATE DRAIN PIPING FROM EQUIPMENT WITHIN BLDG. SHALL BE COPPER AND INSULATED INCLUDING ELBOWS, TEES AND OTHER FITTINGS. INSULATION SHALL BE CONTINUOUS THROUGH ROOF , STUDS AND ANY OHTER BLDG. STRUCTURAL MEMBERS.
25. NO PLUMBING SHALL BE INSTALLED UNTIL ALL REQUIRED PLUMBING PLAN CHECK PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM ALL REQUIRED AGENCIES.
26. PROVIDE ALL TAILPIECES, TRAPS AND SUPPLY PIPING TO LAVATORIES DESIGNED AS ACCESSIBLE WITH PREFORMED INSULATION JACKET.
27. COORDINATE AND SCHEDULE TIMING WITH SCHOOL DISTRICT FOR UTILITY SERVICE DISCONNECTION AND CONNECTION.
28. ALL LINES BELOW SLAB ON GRADE TO BE LOCATED AWAY FROM ALL LOAD BEARING FOOTINGS.
29. ANY STRUCTURAL FIREPROOFING DAMAGED DURING INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. SHALL BE REPAIRED AT NO COST TO THE OWNER. REPAIR SHALL BE DIRECTED BY THE ARCHITECT.
30. PRIOR TO INSTALLATION OF TRAP PRIMERS, WATER HAMMERS AND SHUT-OFF VALVES ABOVE CEILING COORDINATE EXACT LOCATION OF REQUIRED ACCESS DOORS WITH ARCHITECT OF RECORD.
31. PAINT ALL EXPOSED COPPER PIPE, VERIFY COLOR WITH ARCHITECT OF RECORD.
32. PAINT ALL EXPOSED GAS PIPE. VERIFY COLOR WITH ARCHITECT OF RECORD.
33. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT AND ARRANGE TO ALLOW SERVICES. MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
34. ALL DHW AND DHWR PIPING INCLUDING PIPING INSIDE THE WALL SHALL BE INSULATED.
35. DCW PIPE WITHIN 5 FEET OF WATER HEATER SHALL BE INSULATED.

PLUMBING SYMBOLS & ABBREVIATIONS

SYMBOLS	ABBREV.	DESCRIPTION
	DCW	DOMESTIC COLD WATER PIPING
	S/W	SOIL / WASTE PIPE
	V	VENT PIPING
CD	CD	CONDENSATE DRAIN
G	G	LOW PRESSURE GAS
MPG	MPG	MEDIUM PRESSURE GAS
P&T	P&T	PRESSURE & TEMPERATURE RELIEF PIPING
SD	SD	STORM DRAIN PIPING
	POC	POINT OF CONNECTION
		REMOVE EXISTING EQUIPMENT OR PIPING
	CKV	CHECK VALVE
	BLV	BALANCING VALVE
	PRV	PRESSURE REDUCING VALVE
	BV	BALL VALVE
	ANV	ANGLE VALVE
	P & T	PRESSURE AND TEMPERATURE RELIEF VALVE
	BFP	BACK FLOW PREVENTER
	GCK	GAS COCK
		VALVE ON RISE OR DROP
	STR	STRAINER
	CL	CAPPED LINE
	DN	DOWN OR DROP
	UP	RISE OR RISER
	PG	PRESSURE GAUGE WITH BALL VALVE
	FC	FLEXIBLE CONNECTION (PIPE)
	TI	THERMOMETER
	U	UNION
	HB	HOSE BIBB
	WHA	WATER HAMMER ARRESTOR
WCO	WCO	WALL CLEAN OUT
CO	CO	CLEAN OUT
FCO	FCO	FLOOR CLEAN OUT
		SYMBOL, SEE EQUIPMENT SCHEDULE
	POD	POINT OF DISCONNECT
	FD	FLOOR DRAIN
		PIPING OR EQUIPMENT TO BE DEMOLISH
	SOV	SHUT-OFF VALVE
		GAS PRESSURE REGULATOR

ANCHORAGE 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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.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 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 HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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 DISTRIBUTION 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 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

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

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

MP	MD	PP	E	
☐	☐	☒	☐	- OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
☐	☐	☐	☐	- OPTION 2:SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED OPM#.
☐	☐	☐	☐	- OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDE ANY ADDENDA, FASTENERS AND OTHER AMENDMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION ARE DETAILED ON THE APPROVED DAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL "C" AND CONNECTION LEVEL "1" FOR THE PROJECT AND CONDITIONS.

PLUMBING ABBREVIATIONS

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ARCH.	ARCHITECTURAL
B/F	BELOW FLOOR
B/G	BELOW GRADE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT (PER HOUR)
CFH	CUBIC FEET (PER HOUR)
CLG	CEILING
CONC	CONCRETE
CONN	CONNECT
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
CD	CONDENSATE DRAIN
DWGS.	DRAWINGS
ELECT	ELECTRICAL
ELEV	ELEVATION
EXIST.(E)	EXISTING
°F	DEGREES FAHRENHEIT
FS	FLOOR SINK
FT	FEET OR FOOT
FU	FIXTURE UNIT
FV	FLUSH VALVE
GA.	GAUGE
GALV	GALVANIZED
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
HB	HOSE BIBB
HR	HOUR
IE	INVERT ELEVATION
IW	INDIRECT WASTE
LBS	POUNDS
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
(N)	NEW
NTS	NOT TO SCALE
OF	OVER FLOW DRAIN
ORD	OVER FLOW ROOF DRAIN
POD	POINT OF DISCONNECT
QTY.	QUANTITY
RD	ROOF DRAIN
REF	REFERENCE
SOV	SHUT OFF VALVE
SPEC.	SPECIFICATION
STRUCT	STRUCTURAL
TEMP.	TEMPERATURE
TYP	TYPICAL
V/PH/HZ	VOLTS/PHASE/HERTZ
V	VENT
VR	VENT RISER
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET

REQUIREMENTS FOR SHOP DRAWINGS

PRIOR TO CONSTRUCTION PROVIDE ORIGINALLY PREPARED CONTRACTOR'S SHOP DRAWINGS IN ELECTRONIC FORMAT. IN ADDITION TO THE REQUIREMENTS SPECIFIED IN SPECIFICATIONS, THE SHOP DRAWINGS SHALL INCLUDE AND NOT LIMITED TO THE FOLLOWING:

1. DUCT, PIPE AND PLUMBING ELEVATIONS.
2. ACTUAL SIZE OF PURCHASED EQUIPMENT AND FIXTURES, PER APPROVED CONTRACTOR'S SHOP DRAWINGS.
3. ACCESS PANELS, INCLUDING CEILING PANELS, COORDINATED WITH ARCHITECT OF RECORD.
4. ACCESS CLEARANCES FOR EQUIPMENT AND FIXTURES.
5. ACTUAL LOCATIONS OF SHUT-OFF VALVES, WITH ACCESS COORDINATED WITH ARCHITECT OF RECORD.
6. LOCATIONS OF STRUCTURAL MEMBERS SUCH AS BEAMS IN RELATION TO ALL PLUMBING SYSTEMS AND HVAC SYSTEMS.
7. COLOR CODED PIPING BASED ON MATERIAL USED, SHOW OTHER SYSTEMS SUCH AS HVAC AND ELECTRICAL TO INSURE THER ARE NO CONFLICT.
8. MINIMUM 1/4"-1'-0" SCALE DRAWINGS.
9. LABEL AND TAG SCHEDULE FOR EQUIPMENT
10. PIPE LOCATION TO CLEAR BEAMS OR TIGHT AREAS.
11. POINT OF CONNECTION TO UTILITIES OUTSIDE THE BUILDING, WITH INVERT ELEVATION COORDINATED WITH CIVIL.
12. SECTIONS OR 3-D DRAWINGS OF CONGESTED AREAS.
13. GRID LINES.
14. UTILITY PROFILES FOR UNDERGROUND PIPING, COORDINATE WITH CIVIL.
15. DO NOT COMMENCE WITH ANY INSTALLATION, DEMOLITION OR ORDERING OF ANY EQUIPMENT OR MATERIAL FABRICATION WITHOUT AN APPROVED SHOP DRAWING SUBMITTAL.

PLUMBING SYSTEMS T-24 COMPLIANCE

1. WATER CLOSETS SHALL NOT CONSUME MORE THAN 1.28 GALLONS PER FLUSH. URINALS SHALL NOT CONSUME MORE THAN 0.125 GALLON PER FLUSH. BOTH FIXTURES SHALL BE LISTED ON THE WATER AUTHORITY "LIST OF APPROVED LOW CONSUMPTION FIXTURES".
2. ALL LAVATORY FAUCETS SHALL DISCHARGE A MAXIMUM OF 0.5 GPM/ 0.2 GPC FOR METERING FAUCET
3. ALL SINK FAUCETS SHALL DISCHARGE A MAXIMUM OF 1.8 GPM.
4. ALL WATER HEATERS SHALL COMPLY WITH 2016 CPC SECTION 608.5
5. PLUMBING PIPING SYSTEM SHALL BE INSULATED PER BUILDING ENERGY EFFICIENCY STANDARDS SECTION 120.3
6. DOMESTIC HOT WATER HEATERS SHALL COMPLY WITH THE 2016 BUILDING ENERGY STANDARD CODE SECTION 100.1, 150.0 AND 150.1.

SHEET INDEX

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 02.05.20

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING LEGEND & GENERAL NOTES

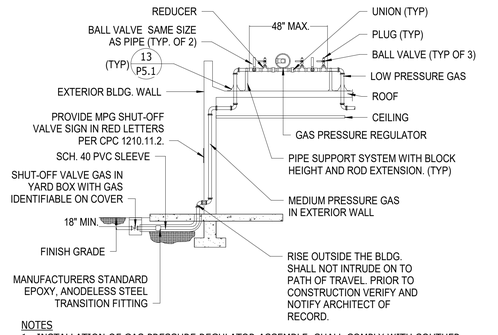
Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

P0.1

PLUMBING FIXTURE CONNECTION SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING	MIN. CONNECTION SIZE				REMARKS
			WASTE	VENT	DCW	DHW	
WC 1	WATER CLOSET: ADA COMPLIANT- KOHLER "HIGHCLIFF ULTRA" MODEL # K-96057-SSL, ELONGATED BOWL, VITREOUS CHINA, ANTIMICROBIAL FINISH WITH 1-1/2" TOP SPUD. PROVIDE DUAL FLUSH FLUSHOMETER SLOAN MODEL #WES-111 DIAPHRAGM TYPE, CHROME PLATED. LIFT HANDLE 1.1 GPF AND PUSHING HANDLE DOWN 1.6 GPF. SEAT SHOULD BE 5/8" RING THICKNESS, ELONGATED OPEN FRONT LESS COVER, EXTRA HEAVY WEIGHT AND INJECTION MOLDED OF SOLID PLASTIC, OLSONITE #95CT, OR EQUAL. RIM MOUNTING HEIGHT 16-5/8" AFF.	WALL	4"	2"	1"	--	1 5 6 7
LAV 1	LAVATORY: ADA COMPLIANT - KOHLER "HUDSON" MODEL # 2805, WALL HUNG LAVATORY. PROVIDE WITH CHICAGO FAUCET #807-E2805-665PSHAB DECK MOUNTED SINGLE HOLE INLET METERING SINK FAUCET. 0.5 GPM, VANDAL PROOF, COLD WATER ONLY, NON-AERATING SPRAY, METERING PUSH BUTTON AND LEAD FREE. SET METERING FAUCET TO DISCHARGE 0.2 GPC FOR WATER FLOW.	WALL	2"	1-1/2"	1/2"	--	1 2 3 4 5 7
S 1	SINK: ADA COMPLIANT -JUST MANUFACTURING MODEL # SL-ADA-17519-A-GR. 18 GAUGE TYPE 304 STAILESS STEEL, LEDGE TYPE-SINGLE BOWL, SINGLE HOLE CENTER WITH CHICAGO FAUCET MODEL # 350-E35VP317XKABCP SINGLE HOLE SWING GOOSENECK SPOUT, 1.5 GPM AERATOR, 4" VANDAL PROOF WRISTBLADE HANDLE AND LEAD FREE.	COUNTER	2"	1-1/2"	1/2"	--	1 2 3 4 5 7 9
S 2	SINK: ADA COMPLIANT -JUST MANUFACTURING MODEL # C12AF-ADA-1931-A-GR-VRL-CT. TYPE 304, 18-8 STAILESS STEEL, SELF RIMMING TOP MOUNT WITH 300 SERIES STAINLESS STEEL MOUNTING CHANNELS AND INTEGRA-FLOW SYSTEM WITH VANDAL RESISTANT JSFUR-5 FAUCET, JSB-10UR BUBBLER AND J-ADA-35-SSR-UR DRAIN SYSTEM.	COUNTER	2"	1-1/2"	1/2"	--	1 2 3 4 5 7 9
HB 1	HOSE BIBB: ACORN MODEL # 8151-SSLF, STAINLESS STEEL RECESSED HOSE BOX WITH WALL FLANGE, DOOR, REMOVABLE WHEEL HANDLE AND VACUUM BREAKER. INLET IS 3/4" NPT FEMALE OUTLET IS 3/4" MALE HOSE THREAD.	WALL	--	--	3/4"	--	1 3 7
HB 2	HOSE BIBB: ZURN MODEL # Z1388XL-VB. NON-FREEZE ROOF DYDRANT WITH DURA COTED CAST IRON HEAD AND LIFT HANGDLE WITH LOCK OPTION. 1/8" TAPPED DRAIN PORT ON HOUSING, DURA COATED CAST IRON ROOF SUPPORT SLEEVE, WIDE AHCHORING FLANGE AND CLAMP COLLAR. 3/4" HOSE CONNECTION WITH BACKFLOW PREVENTER, LEAD FREE AND VACUUM BREAKER .	ROOF	--	--	3/4"	--	1 3 7
FD 1	FLOOR DRAIN: ZURN MODEL # Z415B-113, CAST IRON BODY WITH BOTTOM OUTLET, POLISHED NICKEL BRONZE STRAINER. 1/4" MAX. GRATE OPENING PER CBC 11B-608.9.	FLOOR	3"	1-1/2"	--	--	1 7
RD 1	ROOF DRAIN: "JAY R. SMITH" MODEL # 1800. DUCO CAST IRON BODY WITH DOUBLE DECK PLATE WITH SECURING HOLES, COMBINED FLASHING CLAMP AND GRAVEL STOP FOR ROOF DRAIN AND EXTERNAL 2" WATER DAM FOR OVERFLOW DRAIN AND CAST IRON DOME. FOR PIPE SIZE CONNECTION, SEE FLOOR PLANS.	ROOF	--	--	--	--	1 7 8
ORD 1	OVERFLOW ROOF DRAIN DOWNSPOUT : "J.R. SMITH" MODEL #1770 WITH CAST BRONZE NOZZLE AND FLANGED .	WALL	--	--	--	--	1 7 8
WHA 1	WATER HAMMER ARRESTOR: WATTS SERIES LF15M2 WATER HAMMER ARRESTOR, COPPER BODY AND LEAD FREE.	--	--	--	--	--	1 3 7
TP 1	TRAP PRIMER: WATTS SERIES LFTP300 WITH BUILT IN VACCUM BREAKER LEAD FREE. MOUNT INSIDE THE WALL AND PROVIDE ACCESS DOOR PANEL AT HEIGHT PER MANUFACTURER'S GUIDE LINES. COORDINATION WITH ARCHITECT.	--	--	--	--	1/2"	--	1 3 7

1. PROVIDE REQUIRED MOUNTING HARDWARE AND DRAIN FOR COMPLETE INSTALLATION PER MANUFACTURED INSTALLATION GUIDE LINE.
2. PROVIDE THREADED FITTING STOP VALVE.
3. PLUMBING FIXTURES SHALL COMPLY WITH LEAD LAW (AB1953)
4. DRAIN, AND ALL WATER SUPPLY PIPES ACCESSIBLE UNDER FIXTURES SHALL BE INSULATED OR COVERED AND THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER FIXTURES PER CBC 11B.606.5
5. MOUNT PLUMBING FIXTURES AT ACCESSIBLE HEIGHT. SEE ARCHITECTURAL DRAWINGS.
6. WATER CLOSET WITH FLUSH HANDLE SHOULD BE IN THE WIDE SIDE OF THE ROOM. VERIFY AND PROVIDE AS REQUIRED. CONTRACTOR SHALL VERIFY AND ORDER ACCORDINGLY. MAKE ADJUSTMENT TO ROUGH-IN AS REQUIRED.
7. CONTRACTOR TO VERIFY AND INSTALL PLUMBING FIXTURES AS NOTED OR APPROVED EQUAL.
8. FOR ROOF DRAIN AND OVERFLOW PIPE SIZE, SEE FLOOR PLANS.
9. PRIOR TO PURCHASING SINKS, VERIFY SINK AND COUNTER TOP DIMENTIONS FOR PROPER FITTING.



NOTES

1. INSTALLATION OF GAS PRESSURE REGULATOR ASSEMBLE, SHALL COMPLY WITH SOUTHER CALIFORNIA GAS CO. "POUND DELIVERY SYSTEM STEP DOWN REGULATOR MINIFOLD".
2. MANIFOLD MUST BE INSTALLED NO HIGHER THAN APPROXIMATELY 48".
3. HEIGHT OF GAS PIPE FROM ROOF LINE SHALL NOT EXCEED 12 INCHES.
4. PROVIDE MPG SHUT-OFF VALVE SIGN REQUIRED PER CPC 1210.11.2. FOR EXACT LOCATION REFER TO ARCHITECTURAL DRAWINGS.

1 P0.2 GAS PRESSURE REGULATOR DETAIL

SCALE: NTS

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APP. 04-118743 INC:
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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING FIXTURE SCHEDULE

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

P0.2

MPG PIPE SIZING

PER CPC 2016 TABLE 12-11

TOTAL DEVELOP LENGHT	PIPE SIZE	GAS CAPACITY (MBH)
700'-0"	3/4"	669
700'-0"	1"	1,260
700'-0"	1-1/4"	2,590
700'-0"	1-1/2"	3,880

GAS DEMAD

BUILDING	(E) GAS LOAD MBH	(N) GAS LOAD (MBH)
(E) BLDG. A	459	- -
(E) BLDG. B	448	- -
(E) BLDG. C	437	- -
(E) BLDG. D	150	- -
(E) BLDG. G	837	- -
(N) BLDG.	- -	264
TOTAL	2331	264

GRAND TOTAL SCHOOL CAMPUS NEW GAS LOAD = 2595MBH

GAS INFORMATION

MEDIUM PRESSURE GAS
TDL: 700
NEW BDLG. GAS LOAD: 264 MBH
GAS PIPE REQ: 3/4"

LEGEND AND ABBREVIATIONS

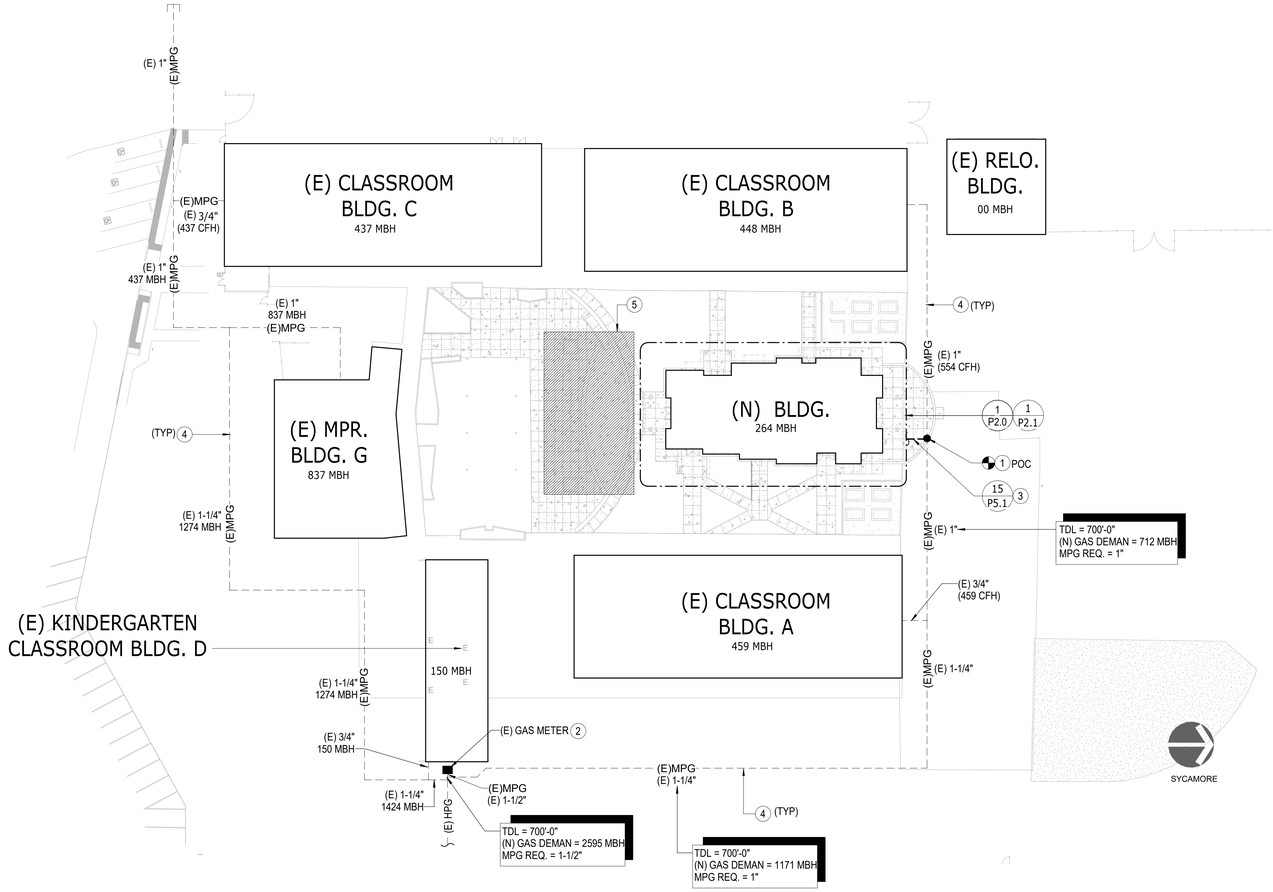
(E) MPG	EXISTING MEDIUM PRESSURE GAS
MPG	MEDIUM PRESSURE GAS
MBH	1000 BTU (PER HOUR).
BTU	BRITISH THERMAL UNITS (PER HOUR)
TDL	TOTAL DEVELOPMENT LENGTH
- - - -	(E) GAS PIPE BELOW GROUND
————	(N) GAS PIPE BELOW GROUND

GENERAL NOTES

1. FIELD VERIFY EXACT POINT OF CONNECTION.
2. EXISTING METER, GAS PRESSURE REGULATORS, MPG PIPE / FITTINGS AND EXISTING GAS BLDG. GAS LOADS ARE EXISTING AND PER AS-BUILT DRAWINGS.
3. EXISTING SYSTEMS SHALL REMAIN OPERATIONAL IN BLDGS. AND RELOCATABLES THAT WILL REMAIN IN PLACE.
4. PRIOR TO RENOVATION/TRENCHING, FIELD SURVEY UNDERGROUND UTILITY DETECTOR/LOCATOR AND LOCATE ALL EXISTING UNDERGROUND UTILITIES ALONG THE NEW UNDERGROUND PIPING. EMPLOY "CPL" OR SIMILAR COMPANY. REPORTS SHALL INCLUDE TYPE OF UTILITIES AND INVERT ELEVATIONS.
5. FIELD VERIFY EXACT LOCATION O OF EXISTING MPG PIPE BELOW AND GROUND AND SIZE PRIOR TO START OF RENOVATION WORK.
6. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
7. PRIOR TO SHUTTING OFF GAS SUPPLY TO ANY BUILDING COORDINATE AND NOTIFY AND SCHEDULE WITH THE DISTRICT PROJECT MANAGER AND SCHOOL PRINCIPAL.

KEYNOTES

1. 1" MEDIUM PRESSURE GAS PIPE POINT OF CONNECTION TO EXISTING GAS PIPE BELOW THE GROUND. FIELD VERIFY EXACT POINT OF CONNECTION AND EXISTING MPG PIPE SIZE. SEE GENERAL NOTE #4 ON THIS SHEET.
2. EXISTING METER SHALL REMAIN IN PLACE AND OPERATING.
3. 1" MEDIUM PRESSURE GAS PIPE BELOW THE GROUND.
4. EXISTING MPG PIPE BELOW THE GROUND SHALL REMAIN IN PLACE AND PROTECTED.
5. EXISTING BUILDING SHALL BE DEMOLISHED PER SCOPE OF WORK, REFER TO ARCHITECTURAL DRAWINGS.



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DATE: 02.05.20

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LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING SITE PLAN

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

P1.1

PLUMBING SITE PLAN | 1" = 30'-0" | 1

DCW DEMAND

(2016 CPC, TABLE A-103.1)

FIXTURE	QUANTITY	F.U.	TOTAL F.U.
WATER CLOSET	1	5	5
LAVATORY SYSTEM	1	1	1
SINKS	2	2	4
HOSE BIBB	1	2.5	2.5
HOSE BIBB each additional	6	1	6
TOTAL			18.5

FROM APPENDIX "A" CHART A-3 : 18.5 F.U. = 34 GPM
FROM CHART A-5 AT 4 PSI FRICTION LOSS / 100 FOOT LENGTH,
PIPE SIZE REQUIRED: 1-1/2".

GENERAL NOTES

1. FIELD VERIFY EXACT POINT OF CONNECTION. POINT OF CONNECTION SHALL BE BETWEEN PLUMBING AND CIVIL. PRIOR TO CONSTRUCTION COORDINATE AND CONFIRM ALL UTILITIES POC AND INVERT ELEVATIONS WITH CIVIL. PROVIDE SHOP DRAWING THAT SHALL INCLUDE, VERIFICATION AND COORDINATION WITH CIVIL.
2. FOR PIPE SIZES AND PLUMBING FIXTURES REFER TO PLUMBING SCHEDULE, SHEET P0.2.
3. PROVIDE AND INSTALL P-TRAP COVERS FOR ALL LAVATORIES AND SINKS WITH BURNING CHARACTERISTICS IN COMPLIANCE WITH ASTM D633 "PROFLOW" MODEL #PF202WH OR EQUAL.
4. ALL WATER SUPPLY PIPES ACCESSIBLE UNDER FIXTURES SHALL BE INSULATED OR COVERED PER 2016 CBC 11B-606.5.
5. COORDINATE WITH THE ARCHITECT OF RECORD FOR EXACT LOCATION AND ELEVATION OF HOSE BIBS, TRAP PRIMERS, AND WATER HAMMER ARRESTOR. PROVIDE SHOP DRAWINGS.
6. COORDINATE EXACT LOCATION OF ALL GAS PIPE RISERS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PROCURED.
7. ENSURE THAT THERE IS NOT ANY EXPOSE PIPES IN THE SPACE. PRIOR TO INSTALLATION. PROVIDE SHOP DRAWINGS FOR CONFIRMATION.
8. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID DOCUMENTS.
9. FOR GAS , DCW, WASTE AND VENT PIPE ISOMETRIC DIAGRAM, SEE 1/P4.0 AND 2/P4.0.

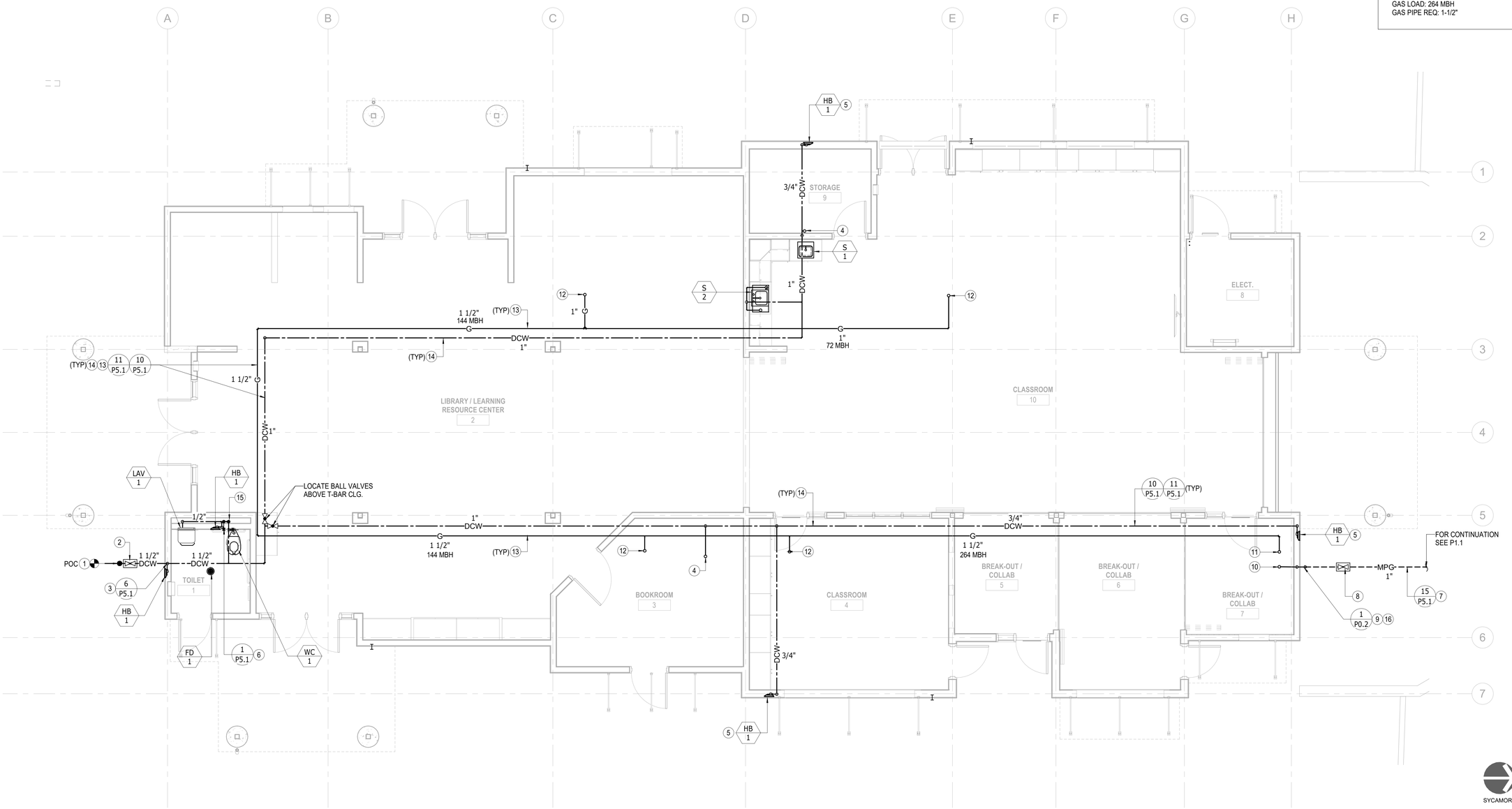
KEYNOTES

1. 1-1/2" DCW POINT OF CONNECTION BETWEEN CIVIL AND PLUMBING. FIELD VERIFY EXACT POINT OF CONNECTION.
2. PROVIDE DCW SHUT-OFF VALVE AND PRESSURE REGULATOR ASSEMBLY BELOW GROUND IN A YARD BOX.
3. 1-1/2" DCW UP IN WALL AND BRANCH 3/4" DCW TO SERVE RECESSED HOSE BIBB.
4. 3/4" DCW UP THRU ROOF TO CONNECT TO HOSE BIBB. FOR CONTINUATION SEE P3.0.
5. 3/4" DCW DOWN IN WALL TO CONNECT TO HOSE BIBB.
6. PROVIDE ACCESS DOOR FOR WATER HAMMER. COORDINATE WITH ARCHITECT OF RECORD FOR EXACT LOCATION.
7. 1" MEDIUM PRESSURE GAS PIPE BELOW THE GROUND. FOR CONTINUATION SEE P1.1 SITE PLAN.
8. PROVIDE MEDIUM PRESSURE SHUT-OFF VALVE BELOW THE GROUND IN A YARD BOX. FIELD VERIFY EXACT LOCATION.
9. 1" MPG GAS FROM BELOW GROUND RISE UP OUT SIDE THE BLDG TO MISS BLDG. FOOTING AND THEN IN WALL TO ABOVE CEILING.
10. 1" MPG GAS ABOVE CEILING AND UP THRU ROOF. FOR CONTINUATION SEE P3.0.
11. 1-1/2" GAS DOWN THRU ROOF FROM GAS PRESSURE REGULATOR. FOR CONTINUATION SEE P3.0.
12. GAS PIPE UP THRU ROOF TO CONNECT TO AC UNITS ON THE ROOF. FOR CONTINUATION SEE P3.0.
13. GAS PIPE ABOVE THE CEILING. PIPE SHALL BE SUPPORTED AND SEISMICALLY BRACED PER DETAIL 10&11/P5.1.
14. DCW ABOVE THE CEILING.
15. 1-1/4" DOWN IN PLUMBING CHASE TO CONNECT TO PLUMBING FIXTURES. PROVIDE SHUT-OFF VALVE IN PIPE RISER WITH ACCESS DOOR PANEL. COORDINATE WITH ARCHITECT FOR EXACT LOCATION OF ACCESS DOOR PANEL.
16. PROVIDE "SHUT-OFF VALVE SIGN ON THE WALL PER CPC 1210.11.2. REFER TO ARCHITECTURAL DRAWING 15/A10.1 FOR EXACT LOCATION.

GAS INFORMATION

LOW PRESSURE GAS

TDL: 200-0"
GAS LOAD: 264 MBH
GAS PIPE REQ: 1-1/2"



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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING FLOOR PLAN (WATER & GAS)

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

P2.0

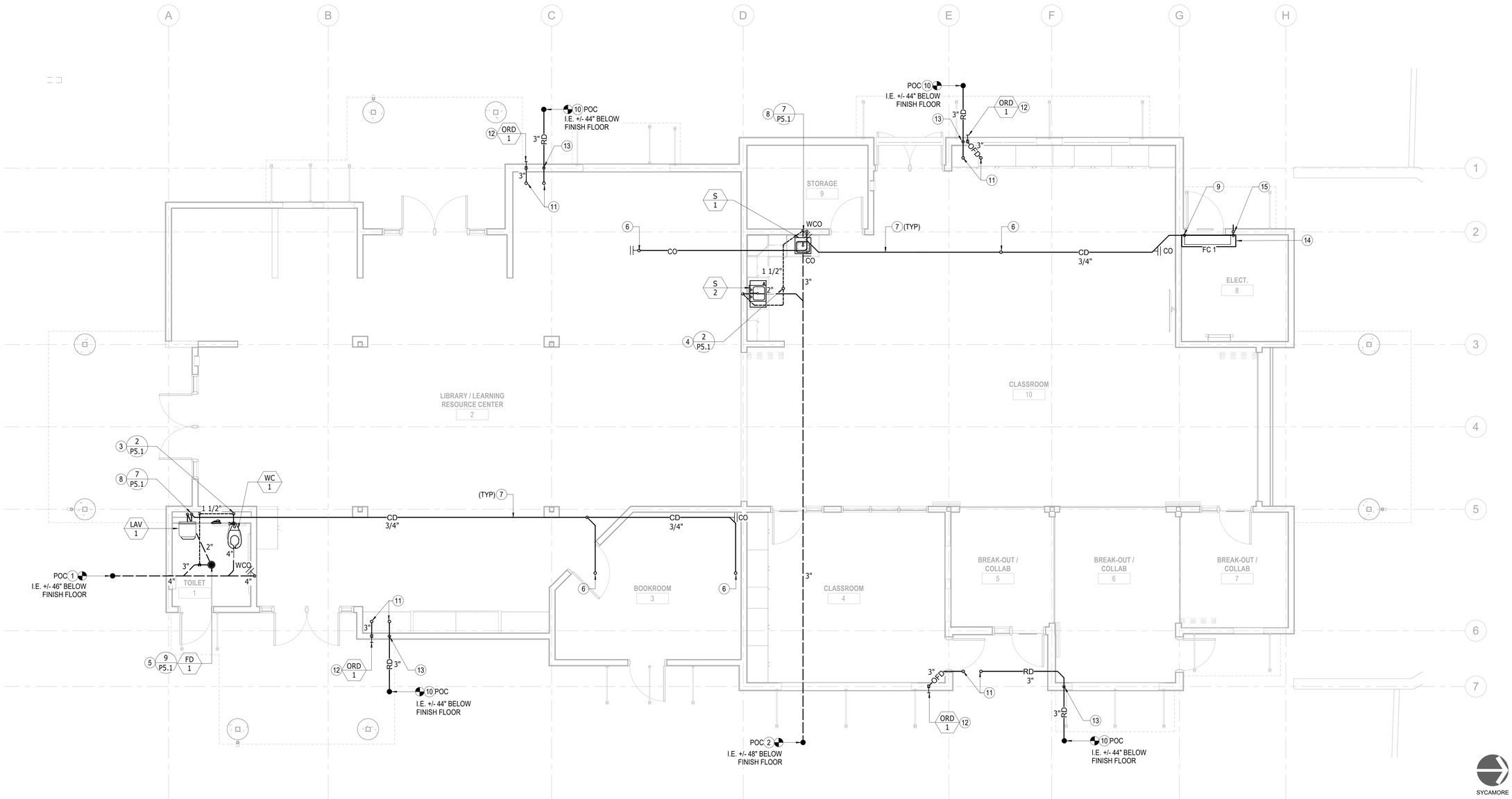
PLUMBING FLOOR PLAN (WATER & GAS) | 1/4" = 1'-0" | 1

GENERAL NOTES

1. FIELD VERIFY EXACT POINT OF CONNECTION AND COORDINATE WITH CIVIL. PRIOR TO CONSTRUCTION, COORDINATE AND CONFIRM ALL UTILITIES POINT OF CONNECTIONS AND INVERT ELEVATIONS WITH CIVIL. SHOP DRAWINGS SHALL INCLUDE VERIFICATION AND COORDINATION WITH CIVIL.
2. FOR PIPE SIZES AND PLUMBING FIXTURES REFER TO PLUMBING SCHEDULE, SHEET P0.2.
3. WASTE PIPE SHALL SLOPE AT MINIMUM 1/4" PER LINEAR FOOT.
4. MAINTAIN A MINIMUM OF 10 FEET BETWEEN AC UNITS OUTSIDE AIR INTAKE AND PLUMBING VENTS. COORDINATE WITH MECHANICAL CONTRACTOR. ADJUST LOCATION OF VTRS AS REQUIRED.
5. COORDINATE EXACT LOCATION OF ALL CD PIPE RISERS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PROCURED.
6. ALL CONDENSATE DRAIN PIPING INSIDE THE BUILDING SHALL BE COPPER AND INSULATED. SLOPE PIPE A MINIMUM OF 1/4" PER LINEAR FOOT. INSULATION SHALL BE CONTINUOUSLY THRU THE ROOF, THRU WALLS, INSIDE THE WALL'S AND CHASES.
7. CONDENSATE DRAIN ABOVE THE CEILING SHALL NOT BE ROUTED ABOVE THE LIGHT FIXTURES.
8. ENSURE THAT ROOF DRAIN PIPES AND VENT PIPE WOULD NOT BE EXPOSED IN THE SPACE. PRIOR TO INSTALLATION PROVIDE SHOP DRAWINGS FOR CONFIRMATION.
9. PROVIDE P-TRAP COVERS FOR ALL LAVATORIES AND SINKS WITH BURNING CHARACTERISTICS AIN COMPLIANCE WITH ASTM D633 "PROFLOW" MODEL #PF202WH OR EQUAL.
10. ROOF DRAIN AND OVERFLOW DRAIN SHALL SLOPE AT 1/4" PER LINEAR FOOT. PROVIDE A CLEAN OUT AT EVERY 135 DEGREE TURN REGARDLES IF IS SHOWN OR NOT.
11. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID DOCUMENTS.
12. FOR WASTE AND VENT ISOMETRIC DIAGRAMS SEE 3/P4.0.

KEYNOTES

1. 4" WASTE POINT OF CONNECTION BETWEEN PLUMBING AND CIVIL ENGINEER. FIELD VERIFY EXACT POINT OF CONNECTION.
2. 3" WASTE POINT OF CONNECTION BETWEEN PLUMBING AND CIVIL ENGINEER. FIELD VERIFY EXACT POINT OF CONNECTION.
3. 2" VTR. SHALL BE A MINIMUM OF 10 FEET A-WAY FROM AC UNITS OUTSIDE AIR INTAKE. COORDINATE EXACT LOCATION WITH MECHANICAL. ADJUST LOCATION AS NECESSARY.
4. 1-1/2" VTR. SHALL BE A MINIMUM OF 10 FEET A-WAY FROM AC UNITS OUTSIDE AIR INTAKE. COORDINATE EXACT LOCATION WITH MECHANICAL. ADJUST LOCATION AS NECESSARY.
5. INDIRECT DRAIN. FLOOR DRAIN SHALL BE PRIMED BY LAVATORY.
6. 3/4" CONDENSATE DRAIN UP THRU ROOF. FOR CONTINUATION SEE P3.0.
7. CONDENSATE DRAIN ABOVE THE CEILING. CD PIPE SHALL BE INSULATED AND SLOPE AT 1/4" PER LINEAR FOOT.
8. 3/4" CONDENSATE DRAIN DOWN IN WALL TO CONNECT TO THE P-TRAP OF SINK/LAVATORY.
9. 3/4" INSULATED CONDENSATE DRAIN FROM FAN COIL UNIT. RISE UP PIPE AS HIGH AS POSSIBLE WITH CONDENSATE PUMP. ROUTE CD PIPE TO ABOVE THE CEILING. FOR CD PUMP INFROMATION, SEE MECHANICAL DRAWINGS.
10. 3" ROOF DRAIN POINT OF CONNECTION BETWEEN PLUMBING AND CIVIL. PROVIDE 2-WAY CLEAN OUT AT POC. FIELD VERIFY EXACT POINT OF CONNECTION AND INVERT ELEVATION.
11. 3" ROOF DRAIN AND OVERFLOW DRAIN UP THRU ROOF. FOR CONTINUATION SEE ROOF PLAN P3.0.
12. 3" OVER FLOW DRAIN DOWN IN WALL. STUB OUT 18" ABOVE FINISH FLOOR.
13. 3" ROOF DRAIN DOWN IN WALL TO BELOW THE GROUND. PROVIDE SLEEVE THRU FOOTING. REFER TO STRUCTURAL DETAIL 14/S1.1 FOR PIPE THRU FOOTING.
14. PROVIDE SHEET METAL DRAIN PAN UNDER THE FC/CONDENSATE DRAIN PIPE AND SLOPE AT MINIMUM 1/2" PER LINEAR FOOT TOWARD DRAIN PIPE.
15. 3/4" DRAIN PIPE DOWN IN WALL AND STUB OUT THE WALL AT 6 INCHES ABOVE GROUND AND ELBOW DOWN.



PLUMBING FLOOR PLAN (WASTE & VENT) | 1/4" = 1'-0" | 1

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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING FLOOR PLAN (WASTE & VENT)

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

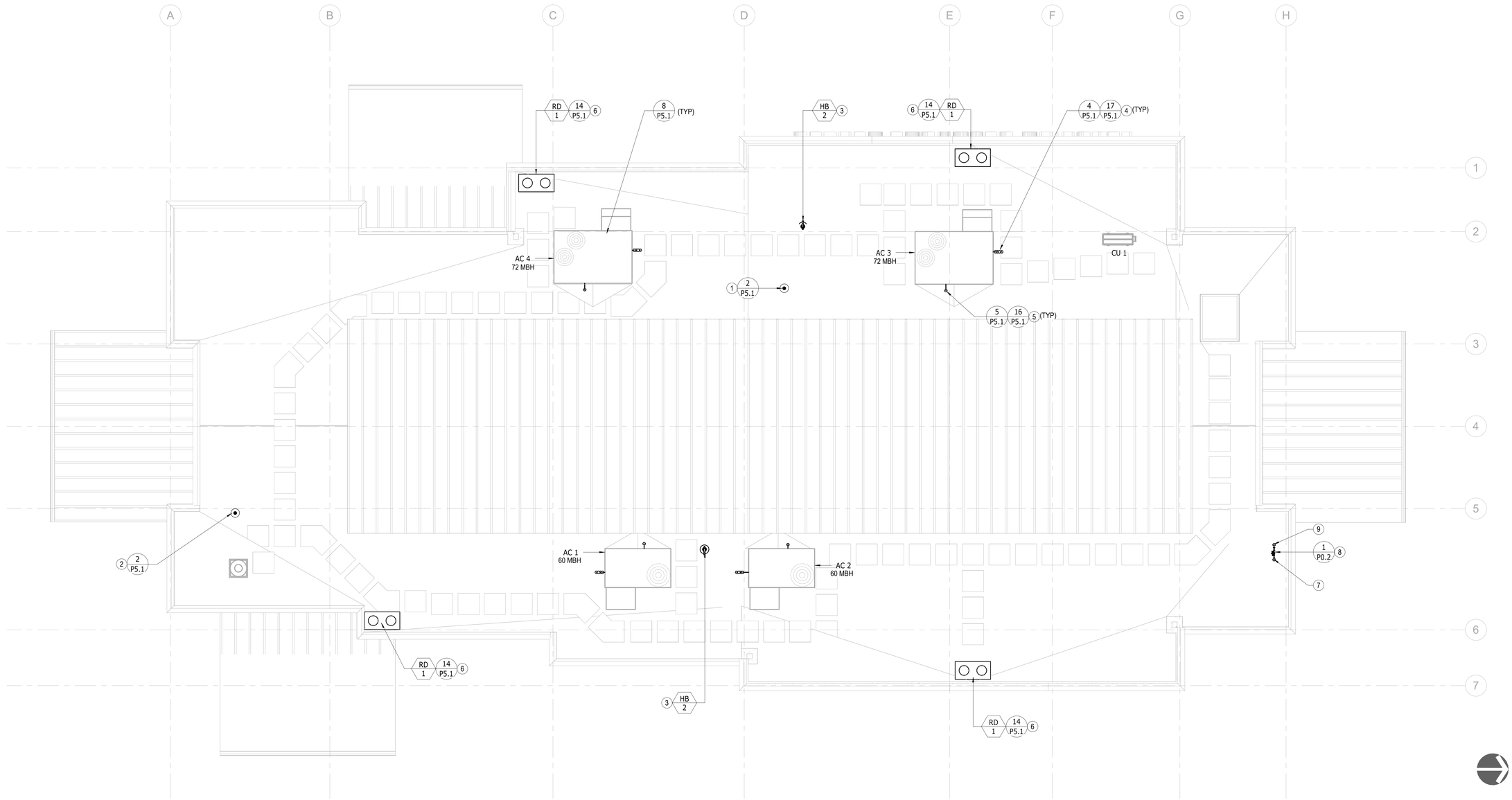
P2.1

GENERAL NOTES

1. MAINTAIN A MINIMUM OF 10 FEET BETWEEN AC UNITS OUTSIDE AIR INTAKE AND PLUMBING VENTS. COORDINATE WITH MECHANICAL CONTRACT. ADJUST VTR LOCATIONS AS REQUIRED.
2. ALL EXPOSED CONDENSATE DRAIN PIPING SHALL BE TYPE K COPPER AND PAINTED. SLOPE CONDENSATE DRAIN LINE AT A MINIMUM OF 1/4" PER LINEAR FOOT. INSULATION SHALL BE CONTINUOUSLY THRU THE ROOF, THRU WALLS, INSIDE THE WALLS AND CHASES.
3. COORDINATE EXACT LOCATION OF ALL GAS AND CD PIPE RISERS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PROCURED.
4. SEE PLUMBING GAS DIAGRAM 1/P4.0 FOR BRANCH PIPE SIZES TO AC UNITS.
5. ALL EXPOSED PIPING SHALL BE PAINTED. COORDINATE COLOR WITH ARCHITECT OF RECORD. COMPLY WITH SPECS.
6. PROVIDE PIPE SUPPORT SYSTEM WITH BLOCK HEIGHT AND ROD EXTENSION FOR ALL PIPING ON THE ROOF. IF PIPE EXCEEDS 12" IN HEIGHT, PIPE SUPPORT MUST BE ANCHORED TO THE ROOF STRUCTURE. SEE 13/P5.1.
7. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID DOCUMENTS.

KEYNOTES

1. 1-1/2" VENT THRU ROOF. MAINTAIN A MINIMUM OF 10 FEET BETWEEN AC UNITS OUTSIDE AIR INTAKE AND PLUMBING VENTS. COORDINATE WITH MECHANICAL CONTRACT. ADJUST VTR LOCATIONS AS REQUIRED
2. 2" VENT THRU ROOF. MAINTAIN A MINIMUM OF 10 FEET BETWEEN AC UNITS OUTSIDE AIR INTAKE AND PLUMBING VENTS. COORDINATE WITH MECHANICAL CONTRACT. ADJUST VTR LOCATIONS AS REQUIRED
3. 3/4" DCW FROM BELOW THE ROOF AND TO CONNECT TO HOSE BIBB. SEE 1/P2.0 FOR CONTINUATION.
4. 3/4" CONDENSATE DRAIN DOWN THRU ROOF. FOR CONTINUATION SEE 1/P2.1.
5. GAS PIPE DOWN THRU THRU ROOF. FOR CONTINUATION, SEE 1/P2.0.
6. 3" ROOF DRAIN AND OVERFLOW DRAIN DOWN THRU ROOF. FOR CONTINUATION SEE 1/P2.1.
7. 1" MEDIUM PRESSURE GAS DOWN THRU ROOF FOR CONTINUATION SEE 1/P2.0.
8. PROVIDE GAS PRESSURE REGULATOR AND SHUT-OFF VALVE ABOVE ROOF. SIZE PRESSURE REGULATOR PER BLDG. GAS LOAD. VERIFY GAS PRESSURE UPSTREAM THE REGULATOR (BEFORE THE REGULATOR) AND PROVIDE THE INFORMATION TO THE MANUFACTURER INCLUDING GAS DEMAND TO VERIFY ORIFICE VALVE AND PRESSURE SPRING MODEL NUMBER.
9. 1-1/2" GAS PIPE DOWN THRU ROOF. FOR CONTINUATION SEE 1/P2.0.



PLUMBING ROOF PLAN | 1/4" = 1'-0" | 1

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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING ROOF PLAN

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

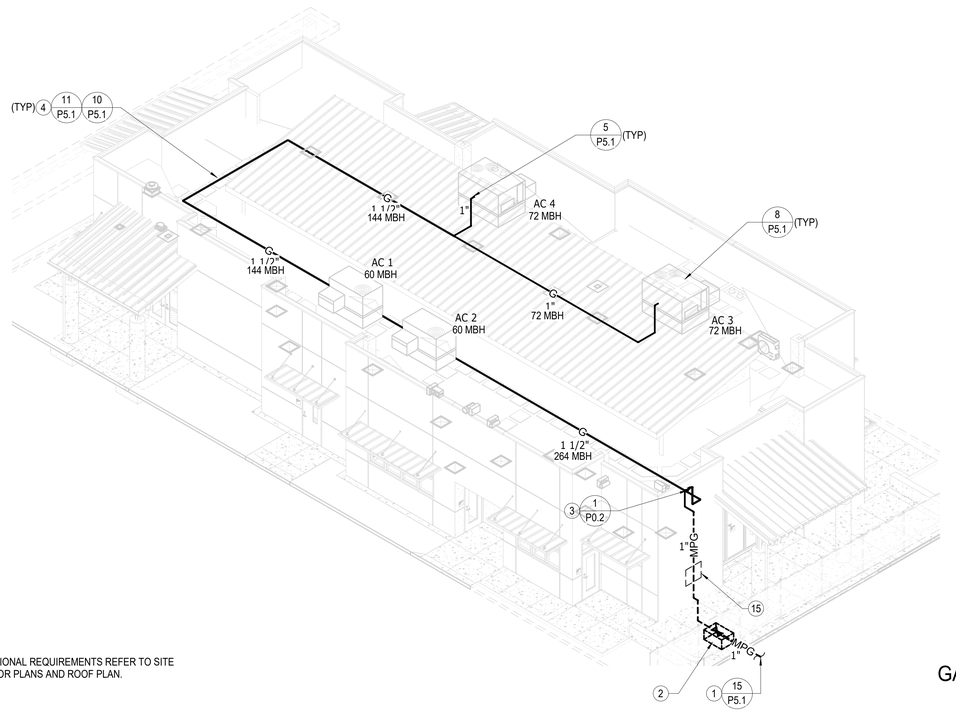
P3.0

KEYNOTES

1. 3/4" MEDIUM PRESSURE GAS PIPE BELOW THE GROUND. FOR CONTINUATION SEE P1.1.
2. PROVIDE MPG SHUT-OFF VALVE BELOW THE GROUND IN A YARD BOX. FIELD VERIFY EXACT LOCATION.
3. PROVIDE GAS PRESSURE REGULATOR AND SHUT-OFF VALVES. SIZE PRESSURE REGULATOR PER BLDG. GAS LOAD. VERIFY GAS PRESSURE UPSTREAM THE REGULATOR (BEFORE THE REGULATOR) AND PROVIDE THE INFORMATION TO THE MANUFACTURER INCLUDING GAS DEMAND TO VERIFY ORIFICE VALVE AND PRESSURE SPRING MODEL NUMBER.
4. GAS PIPE ABOVE THE CEILING. PIPE SHALL BE SUPPORTED AND SEISMICALLY BRACED PER DETAIL 10&11/P5.1.
5. 1-1/2" DCW POINT OF CONNECTION BETWEEN CIVIL AND PLUMBING. FIELD VERIFY EXACT POC.
6. PROVIDE DCW SHUT-OFF VALVE AND PRESSURE REGULATOR ASSEMBLY BELOW GROUND IN A YARD BOX.
7. 1-1/2" DCW UP IN WALL AND BRANCH 3/4" DCW TO SERVE RECESSED HOSE BIBB.
8. 4" WASTE POINT OF CONNECTION BETWEEN PLUMBING AND CIVIL ENGINEER. FIELD VERIFY EXACT POC.
9. 3" WASTE POINT OF CONNECTION BETWEEN PLUMBING AND CIVIL ENGINEER. FIELD VERIFY EXACT POC.
10. 1-1/2" VENT THRU ROOF.
11. 2" VENT THRU ROOF.
12. CONDENSATE DRAIN ABOVE THE CEILING. CD PIPE SHALL BE INSULATED AND SLOPE AT 1/4" PER LINEAR FOOT.
13. 3/4" CONDENSATE DRAIN DOWN IN WALL TO CONNECT TO THE P-TRAP OF SINK/LAVATORY.
14. 3/4" CONDENSATE DRAIN FROM FAN COIL UNIT. RISE UP PIPE AS HIGH AS POSSIBEL WITH CONDENSATE PUMP, ROUTE CD PIPE TO ABOVE THE CEILING. FOR CD PUMP INFROMATION, SEE MECHANICAL DRAWINGS.
15. PROVIDE MPG SHUT-OFF VALVE SIGN ON THE WALL PER CPC 1210.11.2. REFER TO DETAIL 1/P0.2 AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.

GENERAL NOTES

1. FOR GENERAL NOTES REFER TO P2.0, P2.1 AND P3.1.

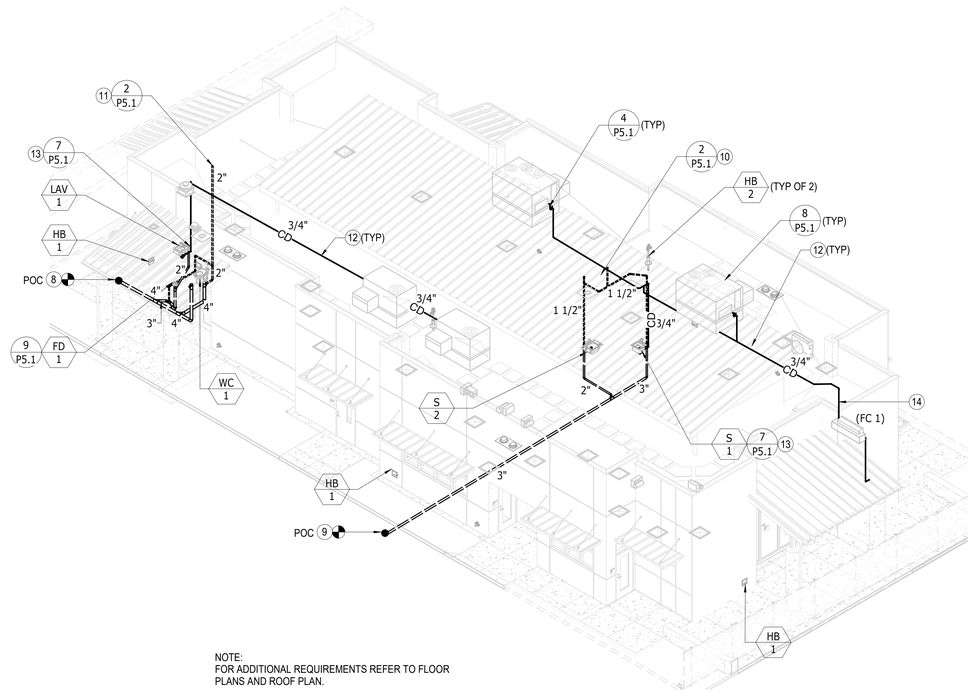


NOTE:
FOR ADDITIONAL REQUIREMENTS REFER TO SITE PLAN, FLOOR PLANS AND ROOF PLAN.

GAS INFORMATION

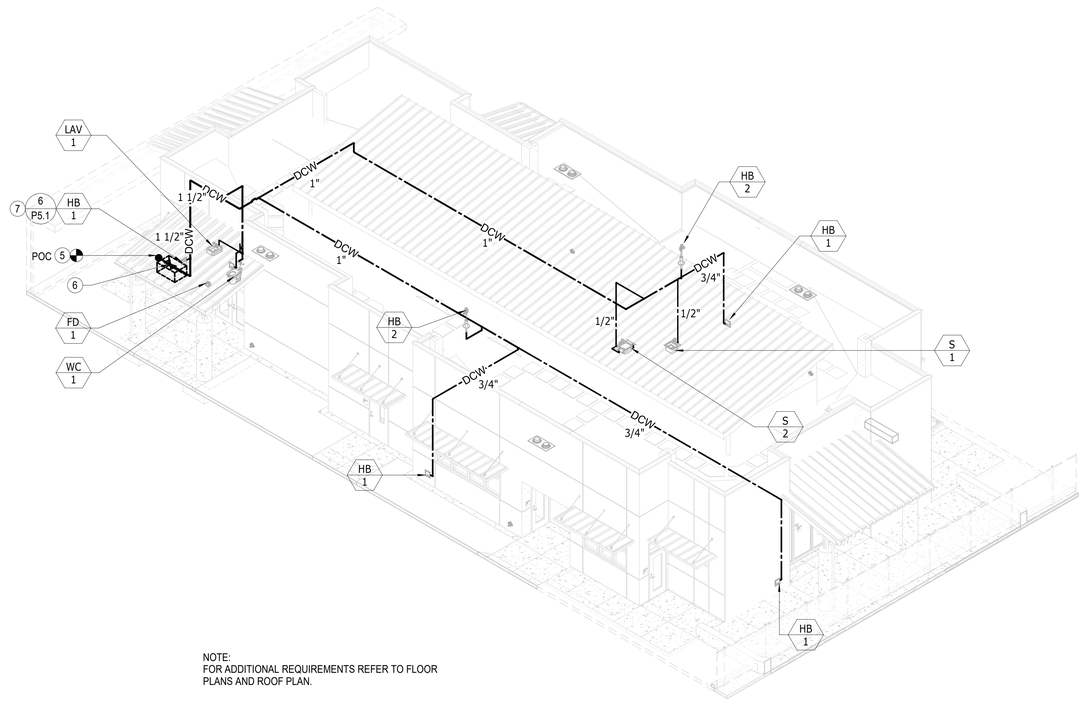
LOW PRESSURE GAS
TDL: 200-0"
GAS LOAD: 264 MBH
GAS PIPE REQ: 1-1/2"

GAS ISOMETRIC DIAGRAM | 1



NOTE:
FOR ADDITIONAL REQUIREMENTS REFER TO FLOOR PLANS AND ROOF PLAN.

WASTE & VENT ISOMETRIC DIAGRAM | 3



NOTE:
FOR ADDITIONAL REQUIREMENTS REFER TO FLOOR PLANS AND ROOF PLAN.

DOMESTIC WATER ISOMETRIC DIAGRAM | 2

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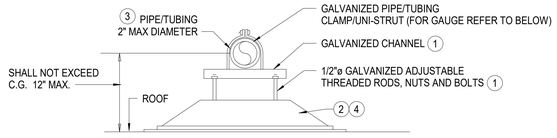


NOTES:

1. UNI STRUT, 12 GA. (OR EQUAL).
2. SUPPORT ASSEMBLY SHALL BE PHP SYSTEM # PP10-C WITH FLEXCOM DOUBLE SIDED ADHESIVE TAPE. INSTALL PER MANUFACTURER'S GUIDELINES.
3. ADJUST SUPPORTS TO PROVIDE 1/8" PER FOOT SLOPE FOR CONDENSATE DRAIN PIPING.
4. PROVIDE SUPPORTS AT 72" O.C. FOR CONDENSATE DRAIN PIPING, 72" O.C. FOR GAS PIPING.

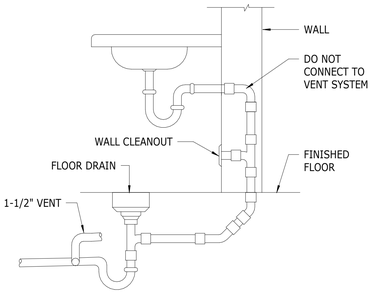
PIPE WEIGHTS:
GAS: 2" = 3.65 LBS PER LINEAR FOOT;
1 1/2" = 2.7 LBS PER LINEAR FOOT;
1 1/4" = 2.3 LBS PER LINEAR FOOT;
1 " = 1.7 LBS PER LINEAR FOOT
CONDENSATE DRAIN: 3/4" = 0.33 LBS PER LINEAR FOOT

GAS PIPE SEISMIC BRACING:
- FOR PIPES 1 INCH AND SMALLER, IF CENTER OF GRAVITY OF PIPE AND SUPPORT IS LESS THAN 12 INCHES FROM ROOF LINE SEISMIC BRACING IS NOT REQUIRED.
- FOR ANY SIZE PIPE, IF CENTER OF GRAVITY OF PIPE AND SUPPORT IS MORE THAN 12 INCHES FROM ROOF LINE SEISMIC BRACING IS REQUIRED.

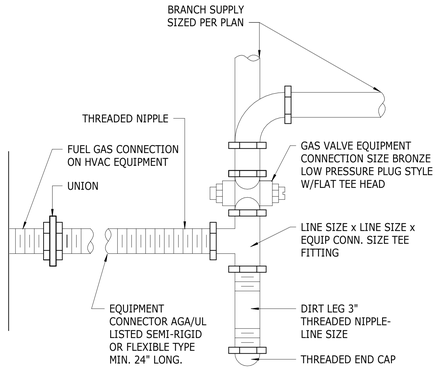
CONDENSATE DRAIN AND WATER PIPE SEISMIC BRACING:
- FOR ANY SIZE PIPE, IF CENTER OF GRAVITY OF PIPE AND SUPPORT IS MORE THAN 12 INCHES FROM ROOF LINE SEISMIC BRACING IS REQUIRED, OTHERWISE NOT REQUIRED.

CLAMP GAUGE:
- UP TO 7/8"ø PIPE DIAMETER 16 G.A.
- 1" THRU 1-5/8" PIPE DIAMETER 14 G.A.
- 1-3/4" THRU 2-1/2" PIPE DIAMETER 12 G.A.

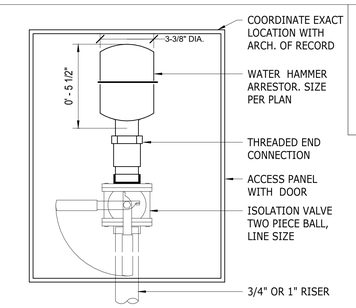
13 P5.1 ROOF PIPE SUPPORT DETAIL
SCALE: NTS



9 P5.1 INDIRECT WASTE CONNECTION AT FLOOR SINK TAILPIECE
SCALE: NTS



5 P5.1 NAT. GAS CONNECT. AT EQUIP.
SCALE: NTS

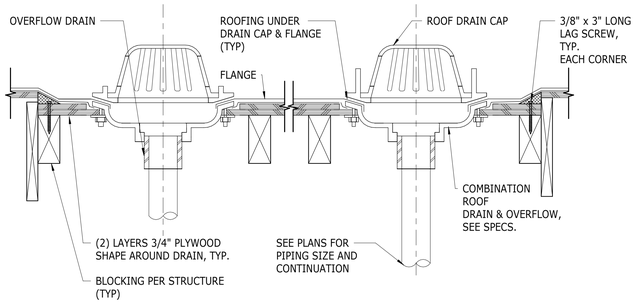


NOTE:
1. INTALLATION SHALL COMPLY W/P.D.I. STANDARD WH201. UNITS NOT SIZED ON PLAN SHALL BE SIZED ACCORDINGLY.

2. INSTALL WATER HAMMER ARRESTOR AT THE END OF THE BRACH BETWEEN THE LAST TWO FIXTURES.

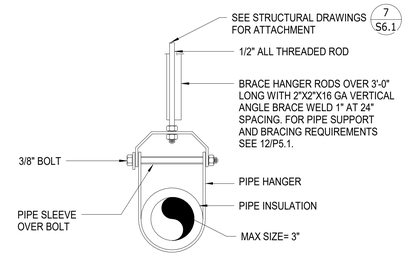
3. IF BRANCH LINE EXCEEDS 20 FEET INSTALL ASECOND WATER HAMMER ARRESTOR IN BETWEEN THE FIRST AND SECOND TO THE LAS FIXTURE.

1 P5.1 WATER HAMMER ARRESTOR
SCALE: NTS



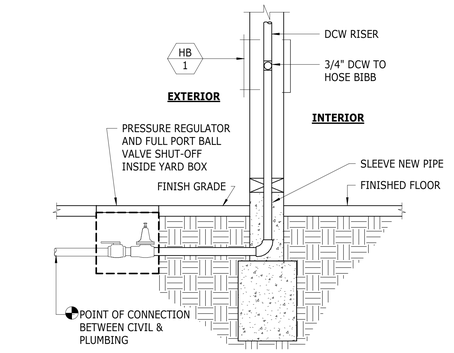
NOTE: FOR ADDITIONAL INFORMATION REFER TO ARCHITECTURAL DETAIL 9/A40.1.

14 P5.1 ROOF DRAIN AND OVERFLOW DETAIL
SCALE: NTS

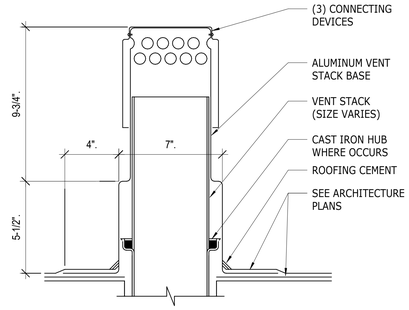


NOTE: REFER TO DETAIL 12/P-5.1 FOR SUPPORT SPACING REQUIREMENTS.

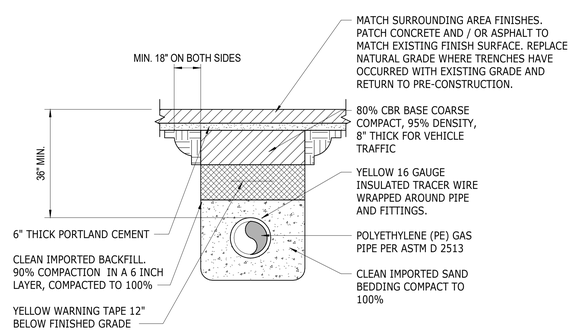
10 P5.1 TYPICAL PIPE HANGER SUPPORT
SCALE: NTS



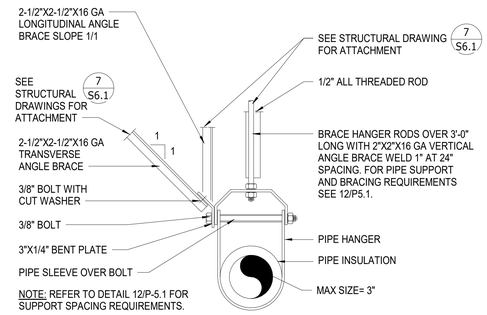
6 P5.1 WATER SERVICE ENTRANCE
SCALE: NTS



2 P5.1 HIGH SECURITY VENT THOUGH ROOF
SCALE: NTS

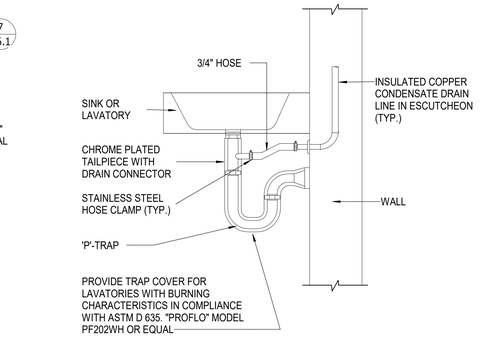


15 P5.1 GAS PIPING TRENCH
SCALE: NTS



NOTE: REFER TO DETAIL 12/P-5.1 FOR SUPPORT SPACING REQUIREMENTS.

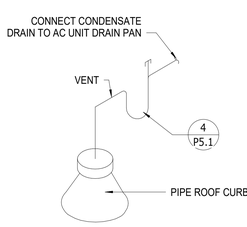
11 P5.1 TYPICAL PIPE SEISMIC BRACING
SCALE: NTS



7 P5.1 CONDENSATE DRAIN AT LAV. TAIPIECE
SCALE: NTS

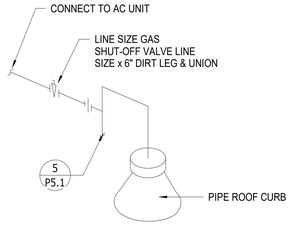
NOT USED

3 P5.1 NOT USED
SCALE: NTS



NOTE:
SEE ARCHITECTURAL DETAIL 7/A40.1

17 P5.1 AC UNIT CD PIPING DETAIL
SCALE: NTS



NOTE:
SEE ARCHITECTURAL DETAIL 7/A40.1

16 P5.1 AC UNIT GAS PIPING DETAIL
SCALE: NTS

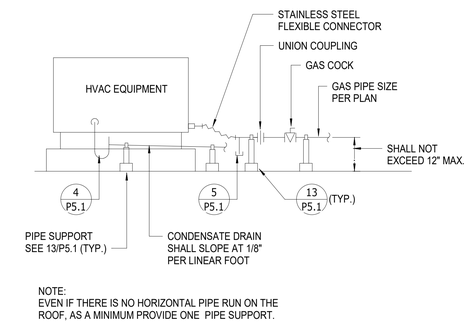
MAX. GAS PIPE SUPPORT SPACING PER 2016 CPC TABLE 1310.5.4(1)	
PIPE SIZE (INCH)	HANGER SPACING (FEET)
1/4	5
3/8	6
1/2	6
3/4	7
1	8
1-1/4	9
1-1/2	10
VERTICAL RISERS, ALL SIZES, EVERY FLOOR BUT NO TO EXCEED: 15'-0"	

REQUIRED SEISMIC BRACING SPACING FOR ALL OTHER PIPE IN ACCORDANCE WITH SMACNA SEISMIC RESTRAINT MANUAL: TRANSVERSE = 40' LONGITUDINAL = 80'

GENERAL PIPING SUPPORT PER 2016 CPC TABLE 1210.2.4.1	
STEEL PIPE NOMINAL SIZE OF PIPE (INCH.)	SPACING OF SUPPORTS (FEET)
1/2	6
3/4 OR 1	8
1-1/4" OR LARGER (HORIZONTAL)	10
1-1/4" OR LARGER (VERTICAL)	EVERY FLOOR LEVEL

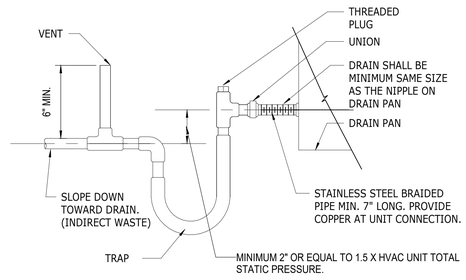
REQUIRED SEISMIC BRACING SPACING FOR ALL OTHER PIPE IN ACCORDANCE WITH SMACNA SEISMIC RESTRAINT MANUAL: TRANSVERSE = 40' LONGITUDINAL = 80'

12 P5.1 PIPE SUPPORT SPACING PER 2016 CPC
SCALE: NTS



NOTE:
EVEN IF THERE IS NO HORIZONTAL PIPE RUN ON THE ROOF, AS A MINIMUM PROVIDE ONE PIPE SUPPORT.

8 P5.1 HVAC UNIT PIPING DETAIL
SCALE: NTS



4 P5.1 CONDENSATE DRAIN TRAP
SCALE: NTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison | Date

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LICENSED ARCHITECT
ROBERT D. WEBB
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PLUMBING DETAILS

Drawn: RA
Checked: MP
Date:
Job: SSD-SC-03

P5.1

ABBREVIATIONS

A	AMPERE (AMPS)
AC	ALTERNATING CURRENT
AF	AMPS-FRAME (RATING)
AIC	AMP INTERRUPTING CURRENT
AM	AMMETER
AS	AMP SWITCH (FUSED SWITCH RATING)
AT	AMPS-TRIP (RATING)
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DWG	DRAWING
EX	EXISTING
FLA	FULL LOAD AMPS
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GFI	GROUND FAULT INTERRUPTER
GRD/GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ	HERTZ
KW	KILOWATT
LCL	LONG CONTINUOUS LOAD
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
MCC	MOTOR CONTROL CENTER
MCM (KCM)	THOUSAND CIRCULAR MILS
MECH	MECHANICAL
NC	NORMALLY CLOSED
NF	NON-FUSED
NO	NORMALLY OPEN/NUMBER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
P	POLE
PH	PHASE
POC	POINT OF CONNECTION
PRS	PVC COATED RIGID STEEL (CONDUIT)
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE DUCT
SWBD	SWITCHBOARD
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLTAMPERES
VM	VOLTMETER
VL	VERIFY LOCATION
W	WIRE/WATTS
WP	WEATHERPROOF (NEMA TYPE 3R)
WT	WATERTIGHT
XP	EXPLOSION PROOF (RATED FOR AREA HAZARD)

ELECTRICAL SYMBOL LEGEND

LIGHTING

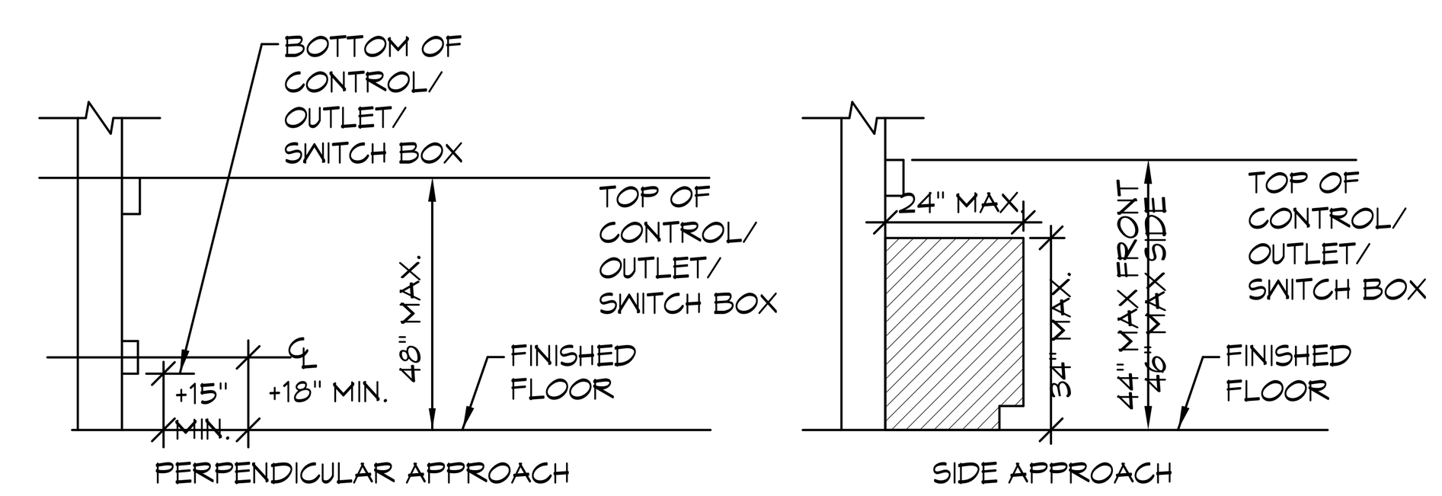
A	LIGHTING FIXTURE DESIGNATION
	LIGHTING FIXTURE, CEILING OR WALL MOUNTED AS SHOWN.
	FLUORESCENT LIGHT FIXTURE
	LIGHTING FIXTURE ON EMERGENCY CIRCUIT (LIFE SAFETY BRANCH OR BATTERY PACK).
	EXIT SIGN WITH DIRECTION ARROWS AS INDICATED. SHADED QUADRANT INDICATES FACE.
b b	EMERGENCY LIGHTING UNIT. WALL MOUNTED 12" BELOW CEILING (U.O.N.) LETTER INDICATES CIRCUIT CONTROLLED.
	FLUORESCENT STRIP LIGHT
Sa	SINGLE POLE SWITCH, SUBSCRIPT WHEN SHOWN INDICATES FIXTURES CONTROLLED +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0. WHERE USED IN CONJUCTION WITH OCCUPANCY SENSORS FOR SWITCH TYPE
S3	THREE-WAY SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
S4	FOUR-WAY SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
SP	SWITCH WITH PILOT LIGHT +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
S2	DOUBLE POLE SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
SWP	WEATHER PROOF SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
SK	KEY OPERATED SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
	SURFACE MOUNTED TRACK LIGHTING FIXTURES
	EXTERIOR SITE LIGHTING FIXTURE AND POLE
	EXTERIOR DECORATIVE SITE LIGHTING FIXTURE AND POLE
	LANDSCAPE LIGHTING FIXTURE
	SPORTSLIGHTING FIXTURES AND POLES
S ab	WALL MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
S ab	CEILING MOUNTED (CORNER OF THE ROOM) OCCUPANCY SENSOR LIGHTING CONTROL
S	CEILING MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL
S LV	LOW VOLTAGE LIGHT SWITCH. HEIGHT PER DETAILS #1/E1.0
A	DIGITAL LIGHTING CONTROL TYPICAL ROOM REQUIREMENTS.
1	NUMBERED DEVICES ARE ADDITIONAL ITEMS SHOWN ON FLOOR PLAN IN ADDITION TO WHAT IS REQUIRED FOR THE TYPICAL ROOM REQUIREMENTS.
——PZ——	PRIMARY DAYLIGHT ZONE
——SZ——	SECONDARY DAYLIGHT ZONE

DISTRIBUTION EQUIPMENT

	DRAW OUT TYPE EQUIPMENT
	VACUUM CIRCUIT BREAKER, RATING AS NOTED.
	AIR INTERRUPTER SWITCH AND FUSE
	AIR INTERRUPTER
	FUSE
	POWER TRANSFORMER, RATING AS NOTED
	POWER CIRCUIT BREAKER DRAWOUT
	AUTOMATIC TRANSFER SWITCH. SEE SCHEDULE
A	AMMETER
V	VOLTMETER
	CIRCUIT BREAKER
200AF	200AMP FRAME
200AT	200AMP TRIP
3P	3 POLE
10,000AIC	10,000 AMPS INTERRUPTING CURRENT
	FUSED SWITCH
200AS	200AMP SWITCH
200AF	200AMP FUSE
3P	3 POLE
M	UTILITY COMPANY METER

POWER CONTINUED

	DUPLEX RECEPTACLE, FLOOR MOUNTED
	DUPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.)
HORZ.	RECEPTACLE, WALL MOUNTED HORIZONTALLY, +18" A.F.F. (U.O.N.)
	FOURPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.)
	RECEPTACLE MOUNTED +6" ABOVE COUNTER BACKSPLASH SEE ARCHITECTURAL PLANS FOR REQUIRED MOUNTING HEIGHT PRIOR TO ROUGH-IN.
LCD	PROVIDE (2) DUPLEX RECEPTACLE CEILING MOUNTED LOCATE ADJACENT TO PROJECTOR. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
FP	PROVIDE WALL MOUNTED DUPLEX RECEPTACLE FOR FLAT PANEL, MOUNTING HEIGHT PER ARCHITECTURAL DRAWINGS. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN
	SINGLE RECEPTACLE, WALL MOUNTED +18" A.F.F. (U.O.N.)
C	SINGLE RECEPTACLE (CLOCK HANGER TYPE) WALL MOUNTED +7'-0" A.F.F. (U.O.N.)
	SWITCH CONTROLLED DUPLEX RECEPTACLE +18" U.O.N.
GFI	DUPLEX GROUND FAULT INTERRUPTING RECEPTACLE +18" A.F.F. (U.O.N.)
	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT +18" A.F.F. (U.O.N.)
WP	DUPLEX RECEPTACLE IN WEATHERPROOF ENCLOSURE +18" A.F.F. (U.O.N.)
WP/L	DUPLEX RECEPTACLE IN WEATHERPROOF "LOCKING" ENCLOSURE +18" A.F.F. (U.O.N.) (SEE TYPICAL DETAILS E3 SERIES SHEETS AND SPECIFICATIONS FOR REQUIRED TYPE).
IG	DUPLEX RECEPTACLE (ORANGE) ISOLATED GROUND WALL MOUNTED +18" A.F.F. (U.O.N.)
IG	FOURPLEX RECEPTACLE (ORANGE) ISOLATED GROUND WALL MOUNTED +18" A.F.F. (U.O.N.)
a	CONTROLLED FOURPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.) (1) DUPLEX, (1) CONTROLLED DUPLEX. SEE LIGHTING CONTROL DIAGRAMS
TP	DUPLEX RECEPTACLE SAFETY TYPE / TAMPER PROOF WALL MOUNTED +18" A.F.F. (U.O.N.)
	DUPLEX COMPUTER RECEPTACLE (GREY), WALL MOUNTED +18" A.F.F. (U.O.N.)
	DUPLEX COMPUTER RECEPTACLE (BLUE) ISOLATED GROUND, SURGE SUPPRESSION, WALL MOUNTED +18" A.F.F. (U.O.N.)
A	SINGLE RECEPTACLE 30 AMP, 250V, 4W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
B	SINGLE RECEPTACLE 50 AMP, 250V, 4W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
C	SINGLE RECEPTACLE 50 AMP, 250V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
E	SINGLE RECEPTACLE 30 AMP, 125V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
F	SINGLE RECEPTACLE 30 AMP, 250V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
G	SINGLE RECEPTACLE 30 AMP, 250V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
H	SINGLE RECEPTACLE 30 AMP, 480V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
J	SINGLE RECEPTACLE 20 AMP, 250V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
K	SPECIAL PURPOSES KITCHEN EQUIPMENT RECEPTACLE. SEE KITCHEN PLANS FOR EXACT TYPE. FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING. SEE KITCHEN PLANS FOR EXACT MOUNTING HEIGHT.
FP	DUPLEX RECEPTACLE, WALL MOUNTED ADJACENT TO FLAT PANEL OUTLET, SEE SIGNAL PLAN FOR EXACT LOCATION.
	MULTI-OUTLET ASSEMBLY, "WIREMOLD" G-3000 SERIES WITH 20AMP DUPLEX RECEPTACLES ON 18" CENTERS, RECEPTACLES TO BE ALTERNATELY WIRED AND INSULATED GROUNDING CONDUCTOR PROVIDED TO EACH
J	JUNCTION BOX, FLOOR MOUNTED
J J	JUNCTION BOX, CEILING OR WALL MOUNTED
HD	HAND DRYER CONNECTION, SEE ARCHITECTURAL FOR MOUTNING HEIGHT.
	FUSED DISCONNECT SWITCH, WHERE SHOWN NF = NON-FUSED.
S M	MANUAL MOTOR STARTER +48" A.F.F. OR ON EQUIPMENT (U.O.N.)
1	MOTOR CONNECTION, NUMERAL INDICATES HORSEPOWER.
AC 1	MECHANICAL EQUIPMENT TAG (SEE MECHANICAL DRAWINGS FOR DESCRIPTION)
	CONDUIT AND WIRE, CONCEALED IN CEILING OR WALL
	CONDUIT AND WIRE, CONCEALED IN OR UNDER FINISHED FLOOR OR UNDER FINISHED GRADE.
	FLEXIBLE CONDUIT CONNECTION
	BRANCH CIRCUIT HOMERUN TO PANEL. SLASHES INDICATE NUMBER OF CONDUCTORS. EQUIPMENT GROUND WIRE NOT INDICATED U.O.N. #12 CONDUCTORS ARE MINIMUM, NO HASH MARKS = MIN (2) #12
	3/4" CONDUIT STUBBED FROM DEVICE TO ABOVE ACCESSIBLE CEILING
#8	BRANCH CIRCUIT HOMERUN, NUMBER INDICATES INCREASED CONDUCTOR SIZE, CONDUCTORS SHALL REMAIN AS INDICATED FOR SIZE THROUGHOUT THE ENTIRE CIRCUIT.
	PANELBOARD, SURFACE MOUNTED.
	PANELBOARD, RECESSED
T	STEP-DOWN TRANSFORMER
	DISTRIBUTION SWITCHBOARD
—SR—	SURFACE MOUNTED RACEWAY SINGLE SECTION SERIES, NON METALLIC (WHITE)
—SR— 2	SURFACE MOUNTED RACEWAY TWO SECTION SERIES, NON METALLIC (WHITE)
—SR— 3	SURFACE MOUNTED RACEWAY THREE SECTION SERIES, NON METALLIC (WHITE)



NOTE: MAINTAIN MINIMUM 30"X48" CLEAR FLOOR SPACE AT EACH APPROACH.

MOUNTING HEIGHT OVER OBSTRUCTION — 1 / E1.0

NO SCALE

GENERAL PROJECT NOTES:

1. UNLESS WHERE OTHERWISE NOTED, ALL WORK INDICATED ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK.
2. UNLESS WHERE OTHERWISE NOTED, ALL DIMENSIONS ARE TO BE CENTERLINE OF THE DEVICE.
3. "GENERAL NOTES" SHOWN ON AN INDIVIDUAL DRAWING APPLY TO ALL WORK SHOWN ON THAT SHEET. "KEY NOTES" ONLY APPLY TO SPECIFIC ITEMS WHERE ANNOTATED AT SPECIFIC LOCATIONS. SOME KEY NOTES MAY NOT APPLY TO ANY SPECIFIC ITEMS.
4. FOR TWO STORY BUILDING CONSTRUCTION, NO CONDUITS SHALL BE ROUTED HORIZONTALLY WITHIN THE FLOOR SLAB OF THE SECOND FLOOR.
5. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

GENERAL DEMOLITION NOTES:

1. ALL ELECTRICAL EQUIPMENT, EXPOSED RACEWAY AND CONDUIT, OUTLET BOXES AND RINGS, AND DEVICES ARE TO BE REMOVED, EXCEPT WHERE SHOWN TO REMAIN. EXISTING WIRING, WHETHER EXPOSED, IN CONDUIT OR RACEWAY IS TO BE REMOVED TO THE GREATEST EXTENT POSSIBLE.
2. THE ELECTRICAL CONTRACTOR IS TO DIRECT THE REMOVAL OF THE ABOVE LISTED WORK.

MEP COMPONENT ANCHORAGE NOTE:

ALL 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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.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 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 HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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 DISTRIBUTION 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 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24 AND 1616A.1.25 AND 1616A.1.26.

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

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

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

MP☐ MD☐ PP☐ E☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM#) #

MP☐ MD☐ PP☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009). INCLUDING ANY ADDENDA, FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPACIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

FIRE RATED ASSEMBLIES NOTE:

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DESCRIPTION AND DETAIL OF ALL FIRE RATED ASSEMBLIES.

REGISTERED PROFESSIONAL ENGINEER — MONICA GOESE-HANSEN — NO.E 14781 — Exp. 6-30-2021 — ELECTRICAL — STATE OF CALIFORNIA

JOHNSON CONSULTING ENGINEERS, INC.
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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison	Date

Consultant

Engineer

studioWC ARCHITECTURE + ENGINEERING
515 Encinitas Blvd. Ste. 201, Encinitas, California 92024
Telephone: (760)753-6800 Fax: (760)452-7541

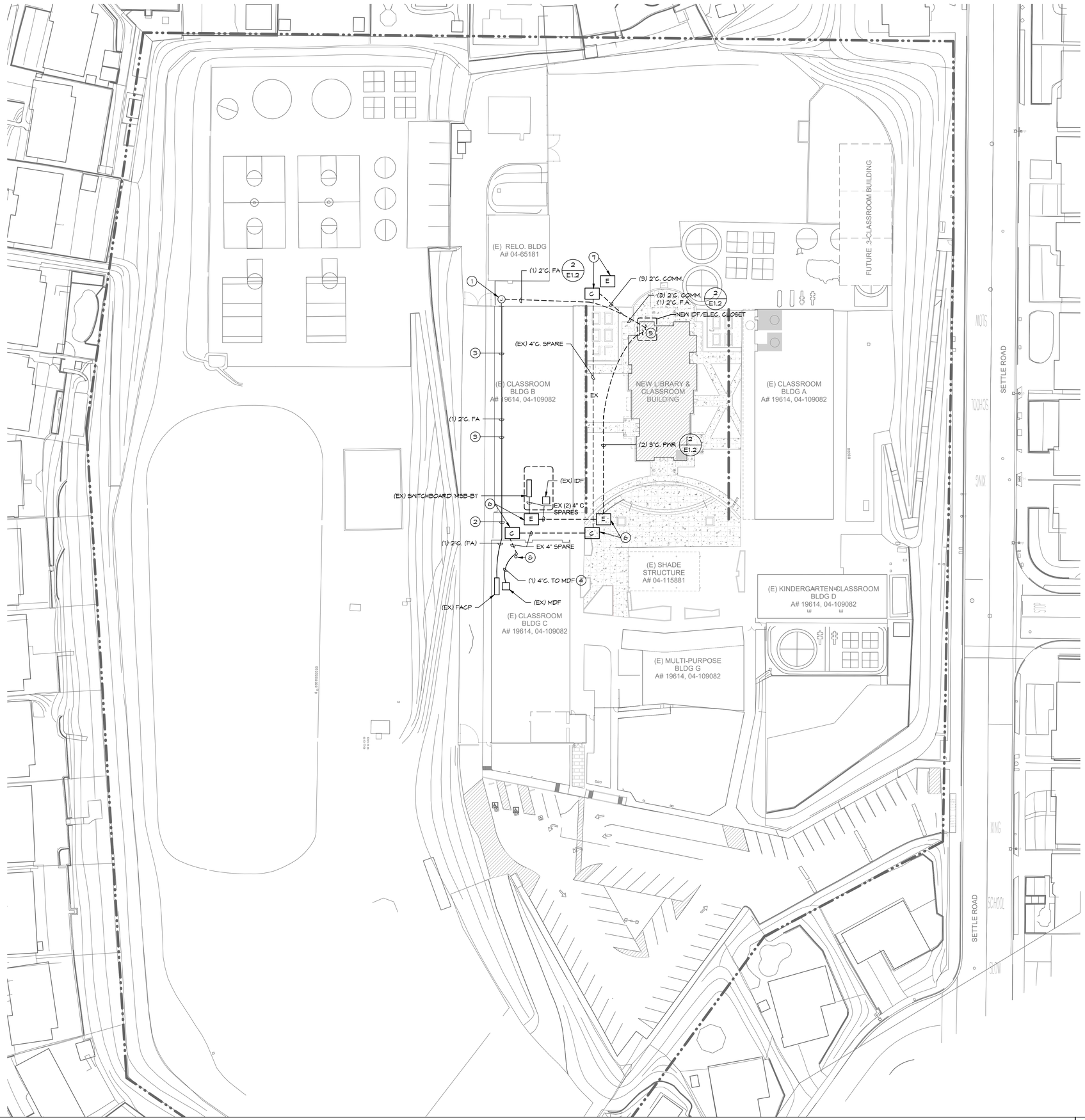
LICENSED ARCHITECT — ROBERT D. WEBB A.I.A. — C-28036 — OCTOBER 31, 2021 — STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

ELECTRICAL SYMBOLS AND NOTES

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E1.0



OVERALL SITE PLAN | 1" = 30'-0" | 1

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GENERAL NOTES:
1. SEE ET.1 FOR CONDUCTOR SIZES AND QUANTITIES.
2. REFERENCE SHEETS E1.2 AND E8.1 FOR TYPICAL DETAILS.
3. LOCATIONS/ROUTING OF EXISTING/NEW EQUIPMENT IS APPROXIMATE ONLY. CONTRACTOR TO VERIFY ALL LOCATIONS AND UNDERGROUND UTILITIES PRIOR TO TRENCHING.

KEY NOTES:
1. PROVIDE WALL MOUNTED J-BOX THEN ROUTE CONDUIT DOWN EXTERIOR WALL TO UNDERGROUND.
2. ROUTE IN SOFFIT.
3. ROUTE CONDUIT ABOVE CEILING THROUGH BUILDING (TYPICAL).
4. PROVIDE FIBER OPTIC FEED CABLE (DATA) AND OTHER LOW VOLTAGE FEED CABLES AS SHOWN IN THE RISER DIAGRAM AND SPECIFICATIONS FROM THE NEW IDF CLOSET IN BLDG. 'H' TO THE EXISTING MDF ROOM IN BLDG. 'C'.
5. SEE E3.1 FOR EQUIPMENT LOCATIONS
6. EXISTING 4'x6' UNDERGROUND PULLBOX.
7. EXISTING 2'x3' UNDERGROUND PULLBOX.
8. EXISTING 4"C. SPARE STUBBED INTO MDF ROOM.

Revison	Date

Consultant

Engineer

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LICENSED ARCHITECT
ROBERT D. WEBB JR.
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

OVERALL SITE PLAN

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E1.1

JOHNSON
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www.jce-inc.com

REGISTERED PROFESSIONAL ENGINEER
MICHAEL ROSE-HANSEN
NO.E 14781
Exp. 6-30-2021
ELECTRICAL
STATE OF CALIFORNIA

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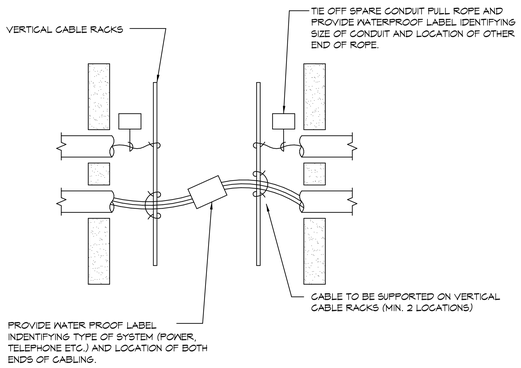
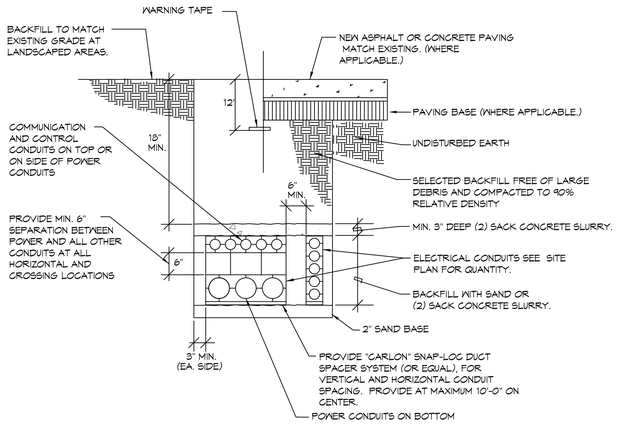


TYPICAL UNDERGROUND PULLBOX LABELING/SUPPORT DETAIL

NO SCALE

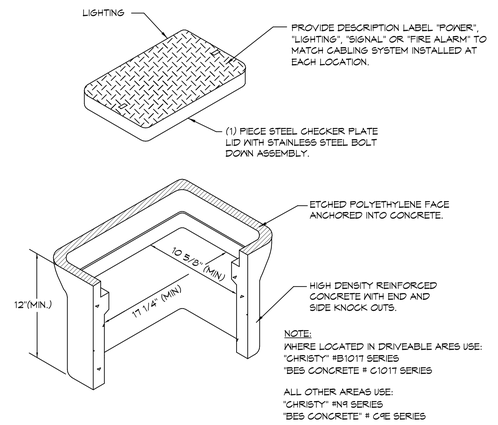
1 E1.2



TYPICAL TRENCH DETAIL

NO SCALE

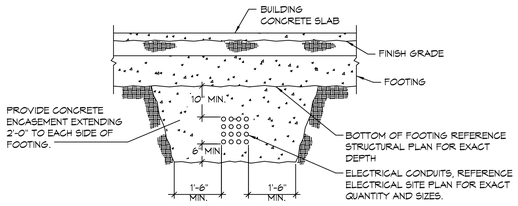
2 E1.2

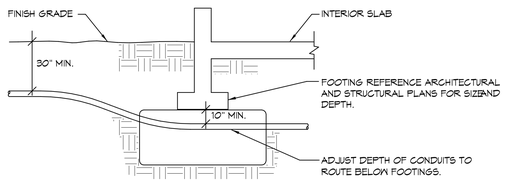


UNDERGROUND PULLBOX STYLE 'A'

NO SCALE

3 E1.2

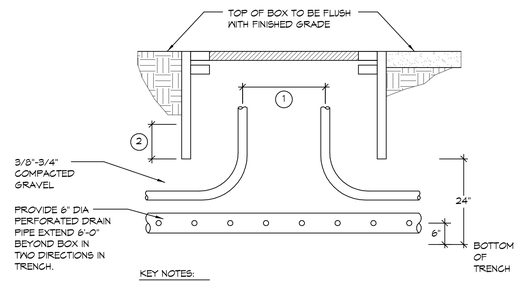




UNDERGROUND CONDUIT - INSTALLATION AT BUILDING FOOTING

NO SCALE

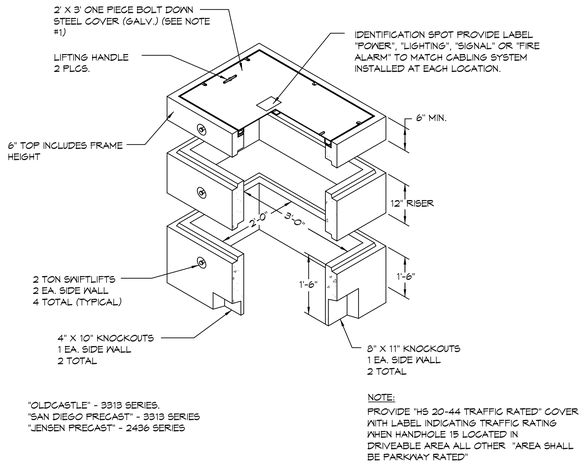
4 E1.2



UNDERGROUND PULLBOX STYLE 'A' OR 'B' TYP. INSTALLATION

NO SCALE

5 E1.2



UNDERGROUND PULLBOX STYLE 'B'

NO SCALE

6 E1.2

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Consultant

Engineer

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LICENSED ARCHITECT
ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

SITE ELECTRICAL DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E1.2

REGISTERED PROFESSIONAL ENGINEER
MICHAEL GEESE-HANCOCK
NO.E 14781
Exp. 6-30-2021
ELECTRICAL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 1 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

A. General Information

Climate Zone: 10		Conditioned Floor Area: 4322					
		Unconditioned Floor Area: 0					
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: 10201 SETTLE ROAD, SANTEE, CA 92071							

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 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 2 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

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	+	4675.3	**Installed** Lighting NRCC-LTI-01-E, Table H, page 5	+	
02	Portable Only for Offices NRCC-LTI-01-E, Table G, page 4	+	0			
03	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	
04	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	=	4675.3	Adjusted **Installed** Lighting Power (row 1 minus row 3)	=	0
	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		4751	**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-06, page 2		

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	Form/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 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

E. Declaration of Required Certificates of Acceptance

Declare by selecting yes for all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	FORM/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).	

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
CEC-NRCC-LTI-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

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.

Office Portable Luminaire Schedule	Office Installed Portable Luminaire W/ft²							Office Location	Field Inspector	
01	02	03	04	05	06	07	08	09	10	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (G02 x G03)	Square feet of this office	Watts per square foot (G04 / G05)	If G06 ≤ 0.3, enter zero; If G06 > 0.3, (G06-0.3)	(G05 x G07)	Identify Office area in which these portable luminaires are installed	Pass	Fail
			0				0		○	○
			0				0		○	○
			0				0		○	○
			0				0		○	○
			0				0		○	○
Total installed portable luminaire watts that are greater than 0.3 W/ft² per office:								Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 5 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

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

Luminaire Schedule		Installed Watts					Location	Field Inspector [1]	
01	02	03	04		05	06	07	08	
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: CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total Installed Watts in this area (H03 xH05)	Primary Function area in which these luminaires are installed	Pass	Fail
A1	2' X 4' 39.1W LED Volumetric Troffer	39.1	☐	☑	24	938.4	Classroom/Library	○	○
A2	2' X 2' 39.1W LED Volumetric Troffer	39.1	☐	☑	17	664.7	Library	○	○
B1	6" Dia. 41W LED Open Downlight	41	☐	☑	20	820	Classroom/Library	○	○
B2	6" Dia. 69W LED Open Downlight	69	☐	☑	19	1311	Classroom/Library	○	○
B3	4" Dia. 26.6W LED Open Downlight	26.6	☐	☑	32	851.2	Restroom	○	○
D1	4 ft. LED Surface Strip	25	☐	☑	2	50	Electrical	○	○
F1	4 ft. LED Recessed Linear	40	☐	☑	1	40	Restroom	○	○
			☐	☐		0		○	○
			☐	☐		0		○	○
INSTALLED WATTS PAGE TOTAL:						4675.3	Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 6 of 6)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Monica Hansen	Documentation Author Signature: [signature]
Company: Johnson Consulting Engineers, Inc.	Signature Date: 11/05/2019
Address: 12875 Brookprinter Pl, Suite #300	CEA Certification Identification (if applicable):
City/State/Zip: Poway, CA 92064	Phone: 858-679-4030

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: Monica Hansen	Responsible Designer Signature: [signature]
Company : Johnson Consulting Engineers, Inc.	Date Signed: 11/05/2019
Address: 12875 Brookprinter Pl, Suite #300	License: E14781
City/State/Zip: Poway, CA 92064	Phone: 858-679-4030

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 1 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

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 110.9 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 manual 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 0.5 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.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 2 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

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

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or leave empty if Exempted)							PAF Credit Calculation [2]: Watts of Controlled Lighting	PAF	Control Credit (11 x 12)	✓ if Acceptance Test Required	Field Inspector	
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc…)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
STORAGE	OCCUPANCY SENSOR		◆	◆	◆							0	☐	○	○
OFFICE	OCCUPANCY SENSOR		◆	◆	◆							0	☐	○	○
CLASSROOM	OCCUPANCY SENSOR		◆	◆	◆							0	☐	○	○
RESTROOM	OCCUPANCY SENSOR		◆	◆	◆							0	☐	○	○
LRC	OCCUPANCY SENSOR		◆	◆	◆							0	☐	○	○
												0	☐	○	○
												0	☐	○	○
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):															
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit 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 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 3 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC	Date Prepared: 11/05/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Monica Hansen	Documentation Author Signature: [signature]
Company: Johnson Consulting Engineers, Inc.	Signature Date: 11/05/2019
Address: 12875 Brookprinter Pl, Suite #300	CEA Certification Identification (if applicable):
City/State/Zip: Poway, CA 92064	Phone: 858-679-4030

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: Monica Hansen	Responsible Designer Signature: [signature]
Company : Johnson Consulting Engineers, Inc.	Date Signed: 11/05/2019
Address: 12875 Brookprinter Pl, Suite #300	License: E14781
City/State/Zip: Poway, CA 92064	Phone: 858-679-4030

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Date | Revison | Consultant | Engineer

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LICENSED ARCHITECT — ROBERT D. WEBB, A.I.A. — C-28036 — OCTOBER 31, 2021 — STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TITLE 24 - INDOOR

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E2.0.0

REGISTERED PROFESSIONAL ENGINEER — MONICA GOESE-HANSEN — NO.E 14781 — Exp. 6-30-2021 — ELECTRICAL — STATE OF CALIFORNIA

JOHNSON
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STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-01-E
Outdoor Lighting	(Page 1 of 4)
Project Name: SYCAMORE CANYON - NEW LRC	Date Prepared: 11/05/2019

A. General Information

Project Address: 10201 SETTLE ROAD, SANTEE, CA 92071 — 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 1. Alterations with NO increase of connected lighting load may instead use the allowed wattage from NRCC-LTO-04, page 2.	309
	Complies ONLY if **Installed** (Box 02) ≤ **Allowed** (Box 01)	
02	**Sum Total INSTALLED** Outdoor Lighting Wattage from NRCC-LTO-01-E, page 3.	231

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	02
Name or Symbol	Description of exempt luminaire in accordance with the exemptions

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E — Outdoor Lighting (Page 2 of 4)
Project Name: SYCAMORE CANYON - NEW LRC — Date Prepared: 11/05/2019

G. Schedule of Luminaires Exempt from the Cutoff Requirements in §130.2(b)	
01	02
Name or Symbol	Description of exempt luminaire in accordance with the exemptions
S1	FACADE LIGHTING

H. Schedule of Luminaires Exempt from the Outdoor Lighting Control Requirements in §130.2(c)	
01	02
Name or Symbol	Description of exempt luminaire in accordance with the exemptions
S1	NON-POLE LUMINAIRE MAX 30 WATT
S2	NON-POLE LUMINAIRE MAX 30 WATT

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 04/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E — Outdoor Lighting (Page 3 of 4)
Project Name: SYCAMORE CANYON - NEW LRC — Date Prepared: 11/05/2019

I. Outdoor Lighting Schedule and Field Inspection Energy Checklist

01 Name or Item Tag	02 Complete Luminaire Description	03 Watts per Luminaire	04 CEC Default from NA8	04 According to §130.0(c)	05 Number of Luminaires	06 Total Installed Watts in this area (03 x 05)	07 Primary Function area in which these luminaires are installed (Outdoor Lighting Zone)	08 Cutoff BUG Rating	09 Field Inspector Pass	09 Field Inspector Fail
S1	ARCHITECTURAL WALL PACK	26	☐	☑	8	208	BUILDING FACADE BUILDING ENTRY	UH: UL: FVH: BVH: FH: BH:	○	○
S2	DOWNLIGHT	23	☐	☐	1	23	ENTRY	UH: UL: FVH: BVH: FH: BH:	○	○
			☐	☐		0		UH: UL: FVH: BVH: FH: BH:	○	○
					INSTALLED WATTS PAGE TOTAL:	231	Enter sum total of all pages (**Sum Total INSTALLED** Outdoor lighting wattage) into NRCC-LTO-01-E; Page 1		231	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CERTIFICATE OF COMPLIANCE — NRCC-LTO-01-E — Outdoor Lighting (Page 4 of 4)
Project Name: SYCAMORE CANYON - NEW LRC — Date Prepared: 11/05/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
Documentation Author Name: Monica Hansen — Company: Johnson Consulting Engineers — Signature Date: 11/05/2019
Address: 12875 Brookprinter Place, Suite 300 — City/State/Zip: Poway, CA 92064 — Phone: 858-679-4030

RESPONSIBLE PERSON'S DECLARATION STATEMENT
Responsible Designer Name: Monica Hansen — Company: Johnson Consulting Engineers — Date Signed: 11/05/2019
Address: 12875 Brookprinter Place, Suite 300 — License: E14781 — City/State/Zip: Poway, CA 92064 — Phone: 858-679-4030

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-02-E — Outdoor Lighting Controls (Page 1 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC — Date Prepared: 11/05/2019

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 §110.9(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, determined in accordance with Section 130.0(c), 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 circuited and 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 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.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — August 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTO-02-E — Outdoor Lighting Controls (Page 2 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC — Date Prepared: 11/05/2019

B. Mandatory Outdoor Lighting Control Schedule and Field Inspection Checklist

Outdoor Lighting Control Schedule; Standards Complying With (✓ all that apply, or leave empty if Exempted)

01 Location and Application of Luminaires Being Controlled	02 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)	03 # of Units	04 §130.2(a)	05 §130.2(c)1	06 §130.2(c)2	07 §130.2(c)3	08 §130.2(c)4	09 §130.2(c)5	10 ✓ if Acceptance Test Required	11 Field Inspector Pass	11 Field Inspector Fail
BUILDING FACADE/ENTRIES	AUTOMATIC SCHEDULING CONTROL/PHOTOCELL			◆	◆				☐	○	○
				◆	◆				☐	○	○

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — August 2016

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CERTIFICATE OF COMPLIANCE — NRCC-LTO-02-E — Outdoor Lighting Controls (Page 3 of 3)
Project Name: SYCAMORE CANYON ES - NEW LRC — Date Prepared: 11/05/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
Documentation Author Name: Monica Hansen — Company: Johnson Consulting Engineers — Signature Date: 11/05/2019
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RESPONSIBLE PERSON'S DECLARATION STATEMENT
Responsible Designer Name: Monica Hansen — Company: Johnson Consulting Engineers — Date Signed: 11/05/2019
Address: 12875 Brookprinter Place, Suite 300 — License: E14781 — City/State/Zip: Poway, CA 92064 — Phone: 858-679-4030

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — August 2016

STATE OF CALIFORNIA
Electrical Power Distribution
CEC-NRCC-ELC-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-ELC-01-E — Electrical Power Distribution — Page 1 of 4
Project Name: SYCAMORE CANYON ES - NEW LRC — Date Prepared: 11/05/2019

General Information

Project Address: 10201 SETTLE ROAD, SANTEE, CA 92071 — Climate Zone: 10 — Conditioned Floor Area: 4322 — Unconditioned Floor Area:

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel ☒ Schools ☐ Relocatable Public Schools ☐ Conditioned Spaces ☐ Unconditioned Spaces

Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration

In the table below identify all applicable construction documents that specify the requirements for the scope of responsibility reported by this certificate. Use additional pages as needed to list all construction documents related to compliance of Section 130.5.

Document Number	Document Title/Descriptions (include description information for Table or Schedule if it contains compliance information)	Document Sheet # or Page #	Indicate which subsection of Section 130.5 is related to the document (e.g. 130.5(a) for service electrical metering)
E7.1/9.1	ONE-LINE DIAGRAM PANEL SCHEDULES		

Add Row | Remove Last

A. Service Electrical Metering

Check one of the three boxes below if the electrical power distribution system is in compliance with Section 130.5(a).

- ☐ For newly installed electrical service in newly constructed buildings, Service Electrical Metering is required according to Section 130.5(a). *Fill out Column 1 through 6 of table below.*
- ☐ For new or replacement electrical service equipment in existing buildings, Service Electrical Metering is required according to Section 141.0(b)2Pi. *Fill out Column 1 through 6 of table below.*
- ☐ EXCEPTION to Electrical Service Metering: Service or feeder for which the utility company provides a metering system that indicates instantaneous kW demand and kWh for a utility-defined period. *Fill out Column 1, 2 and 6 of table below with the compliance information.*

Fill out a separate line for each electrical service that is connected to the building.

Electrical Service Schedule	Electrical Service Rating	Metering Capabilities (check all that are present)				Exception to 130.5 (a)	Field Inspector
01	02	03	04	05	06	07	08
Electrical Service Designation/ Location/Description	kVA	Instantaneous (at the time) kW	Historical peak (kW)	Tracking kWh for a user-definable period	kWh per rate period	Utility metering system	Check that the metering complies
MAIN SWITCHBOARD-EXIST.		☐	☐	☐	☐	☐	☐

Add Row | Remove Last

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
Electrical Power Distribution
CEC-NRCC-ELC-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-ELC-01-E — Electrical Power Distribution — Page 2 of 4
Project Name: — Date Prepared: 11/05/2019

B. Separation of Electrical Circuits for Electrical Energy Monitoring

Check all boxes below if the electrical power distribution system is in compliance with Section 130.5(b).

- ☒ The electrical power distribution system meets the separation of electrical circuits for electrical energy monitoring requirement of Section 130.5(b). The electrical power distribution systems is designed so that measurement devices can monitor the electrical energy usage of load types according to TABLE 130.5-B.
- ☐ Describe the electrical power distribution system installed and the compliance method chosen in meeting the requirement of Section 130.5(b). Use the space below to include the information. Examples of compliance methods are detailed in Nonresidential Compliance Manual Chapter 8.

Fill out Column 1 thru 3 with the compliance information.

General Information	Electrical Power Distribution System information and Method of compliance	Electrical Service Rating	Enforcement Agency
01	02	03	04
Electrical Service Designation/Location/Description	Describe the electrical power distribution system installed and the compliance method used	kVA	Check that the system complies
PANEL L1	MECHANICAL AND LIGHTING ON SEPARATE PANEL METHOD 1	145	
PANEL L2	PLUG LOADS ON SEPARATE PANEL METHOD 1	72	☐

Field Inspector Notes:

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
Electrical Power Distribution
CEC-NRCC-ELC-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-ELC-01-E — Electrical Power Distribution — Page 3 of 4
Project Name: — Date Prepared: 11/05/2019

C. Voltage Drop

Check all boxes below if he electrical power distribution system is in compliance with Section 130.5(c). — Enforcement Agency: Check that the system complies

- ☒ The electrical power distribution system meets the voltage drop requirement of Section 130.5(c). The maximum combined voltage drop on feeder conductors and branch circuit conductors to the farthest connected load or outlet, do not exceed 5%. — ☐
- ☐ Voltage drop calculation documents showing compliance to Section 130.5(c) are submitted as part of the compliance document submittal. — ☐

D. Circuit Controls for 120-Volt Receptacles and Controlled Receptacles

Check one or more boxes below for applicable requirements of Section 130.5(d) for the electrical power distribution system. — Field Inspector: Check that the system complies

- ☒ The control is capable of automatically shutting OFF the controlled receptacles when the space is typically unoccupied, either at the receptacle or circuit level. For the automatic time switch control, it incorporates an override control that allows the controlled receptacle to remain ON for no more than 2 hours when an override is initiated and an automatic holiday "shut-OFF" feature that turns OFF all loads for at least 24 hours and then resumes the normally scheduled operation. Countdown timer switches are not be used to comply with the automatic time switch control requirements. The controls meet the requirement of Section 130.5(d)1. — ☐
- ☐ There is at least one controlled receptacle within 6 ft from each uncontrolled receptacle. Where receptacles are installed in modular furniture in open office area, at least one controlled receptacle is installed at each workstation. The receptacles meet the requirement of Section 130.5(d)2. — ☐
- ☒ There are installed split wired receptacles with at least one controlled and one uncontrolled receptacle. Where receptacles are installed in modular furniture in open office area, at least one controlled receptacle is installed at each workstation. The receptacles meet the requirement of Section 130.5(d)2. — ☐
- ☒ Permanent and durable marking for controlled receptacles or circuits to differentiate them from uncontrolled receptacles or circuits is provided. The markings meet the requirement of Section 130.5(d)3. — ☐
- ☐ For hotel and motel guest rooms, there are controlled receptacles for at least one-half of the 120-volt receptacles in each guest room. Electric circuits serving controlled receptacles in guestrooms are installed to have captive key controls, occupancy sensing controls, or automatic controls so the power is switched off no longer than 30 minutes after the guest room has been vacated. The receptacles meet the requirement of Section 130.5(d)4. — ☐
- ☒ Receptacles that are only for the following purposes are excepted from Section 130.5(d): — ☐
  - Receptacles specifically for refrigerators and water dispensers in kitchen areas.
  - Receptacles located a minimum of six ft above the floor that are specifically for clocks.
  - Receptacles for network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms.
  - Receptacles on circuits rated more than 20 amperes.
  - Receptacles connected to an uninterruptible power supply (UPS) that are intended to be in continuous use, 24 hours per day/365 days per year, and are marked to differentiate them from other uncontrolled receptacles or circuits.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
Electrical Power Distribution
CERTIFICATE OF COMPLIANCE — NRCC-ELC-01-E — Electrical Power Distribution — Page 4 of 4
Project Name: SYCAMORE CANYON ES - NEW LRC — Date Prepared: 11/05/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
Documentation Author Name: Monica Hansen — Company: Johnson Consulting Engineers, Inc. — Signature Date: 11/05/2019
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RESPONSIBLE PERSON'S DECLARATION STATEMENT
Responsible Designer Name: Monica Hansen — Company: Johnson Consulting Engineers, Inc. — Date Signed: 11/05/2019
Address: 12875 Brookprinter Pl, Suite #300 — License: E14781 — City/State/Zip: Poway, CA 92064 — Phone: 858-679-4030

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison | Date
Consultant
Engineer

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LICENSED ARCHITECT — ROBERT D. WEBB A.I.A. — C-28036 — OCTOBER 31, 2021 — STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

TITLE 24 - OUTDOOR & POWER DIST.

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E2.0.1

REGISTERED PROFESSIONAL ENGINEER — MONICA GOESE-HANSEN — NO.E 14781 — Exp. 6-30-2021 — ELECTRICAL — STATE OF CALIFORNIA

JOHNSON CONSULTING ENGINEERS, INC.
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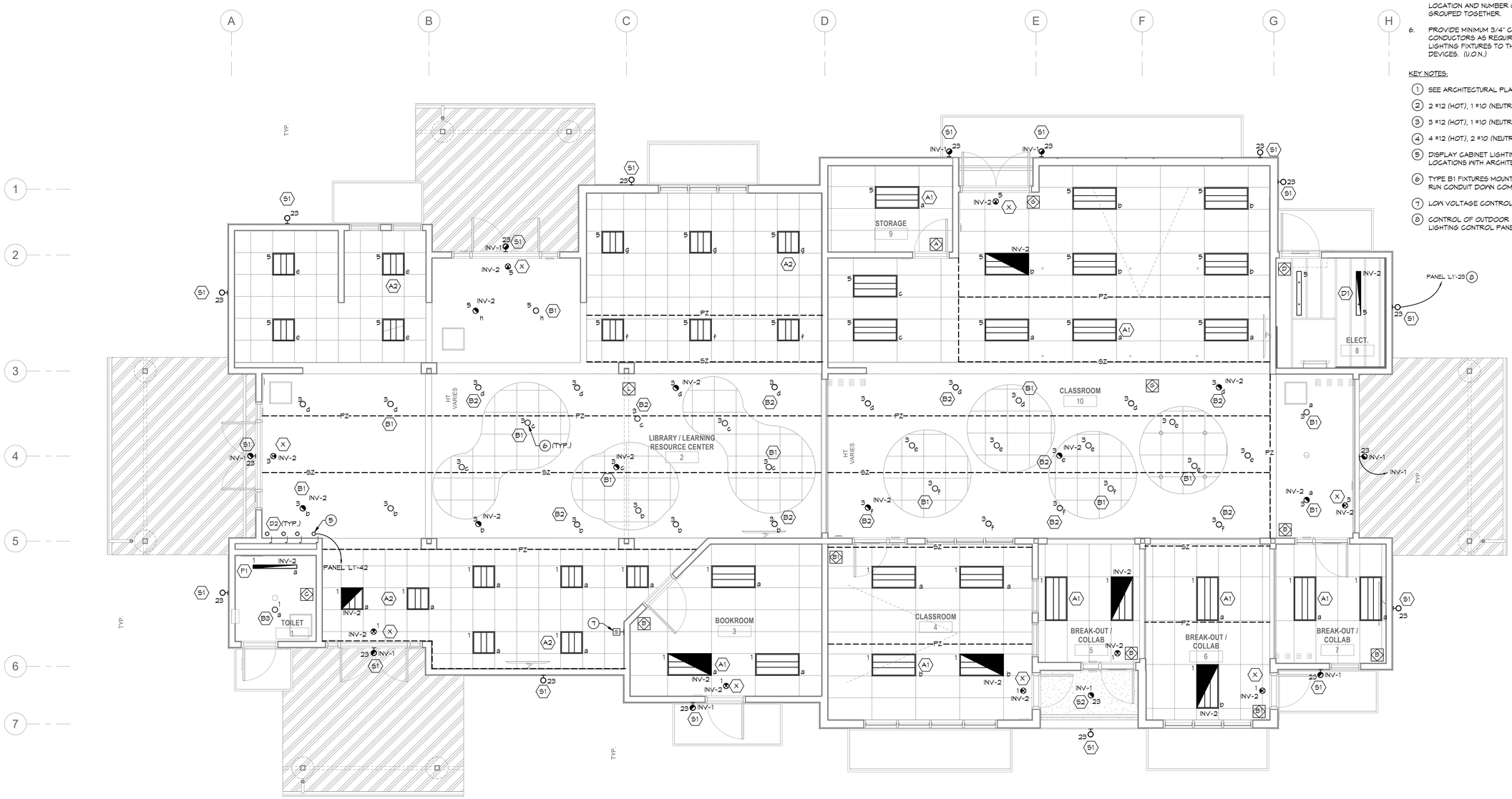
GENERAL NOTES:

1. REFERENCE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. REFERENCE E2 SERIES SHEETS FOR ALL FIXTURE TYPES AND FOR TYPICAL DETAILS.
3. REFERENCE E8 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
4. LETTERS IN OR ADJACENT TO EACH FIXTURE OR FIXTURE ROW INDICATES SWITCH AND OR OCCUPANCY SENSOR WHICH CONTROLS THE LIGHTING FIXTURE.
5. CIRCUIT HOMERUNS ARE INDICATED TO SHOW THE LOCATION AND NUMBER OF CIRCUITS TO BE GROUPED TOGETHER.
6. PROVIDE MINIMUM 3/4" CONDUIT AND #12 CIRCUIT CONDUCTORS AS REQUIRED TO CONNECT EACH LIGHTING FIXTURES TO THEIR INDICATED CONTROL DEVICES. (U.O.N.)

KEY NOTES:

1. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
2. 2 #12 (HOT), 1 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
3. 3 #12 (HOT), 1 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
4. 4 #12 (HOT), 2 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
5. DISPLAY CABINET LIGHTING. COORDINATE LOCATIONS WITH ARCHITECTURAL MILLWORK.
6. TYPE B1 FIXTURES MOUNTED IN CLOUDS TYPICAL. RUN CONDUIT DOWN COMP. STRUTS.
7. LOW VOLTAGE CONTROL SWITCHBANK. SEE 7/E2.3.
8. CONTROL OF OUTDOOR LIGHTING VIA TIMECLOCK IN LIGHTING CONTROL PANEL 'LCP-A'



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LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

LEVEL 1 FLOOR PLAN - LIGHTING

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E2.1

REGISTERED PROFESSIONAL ENGINEER
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LEVEL 1 FLOOR PLAN - LIGHTING | 1/4" = 1'-0" | 1

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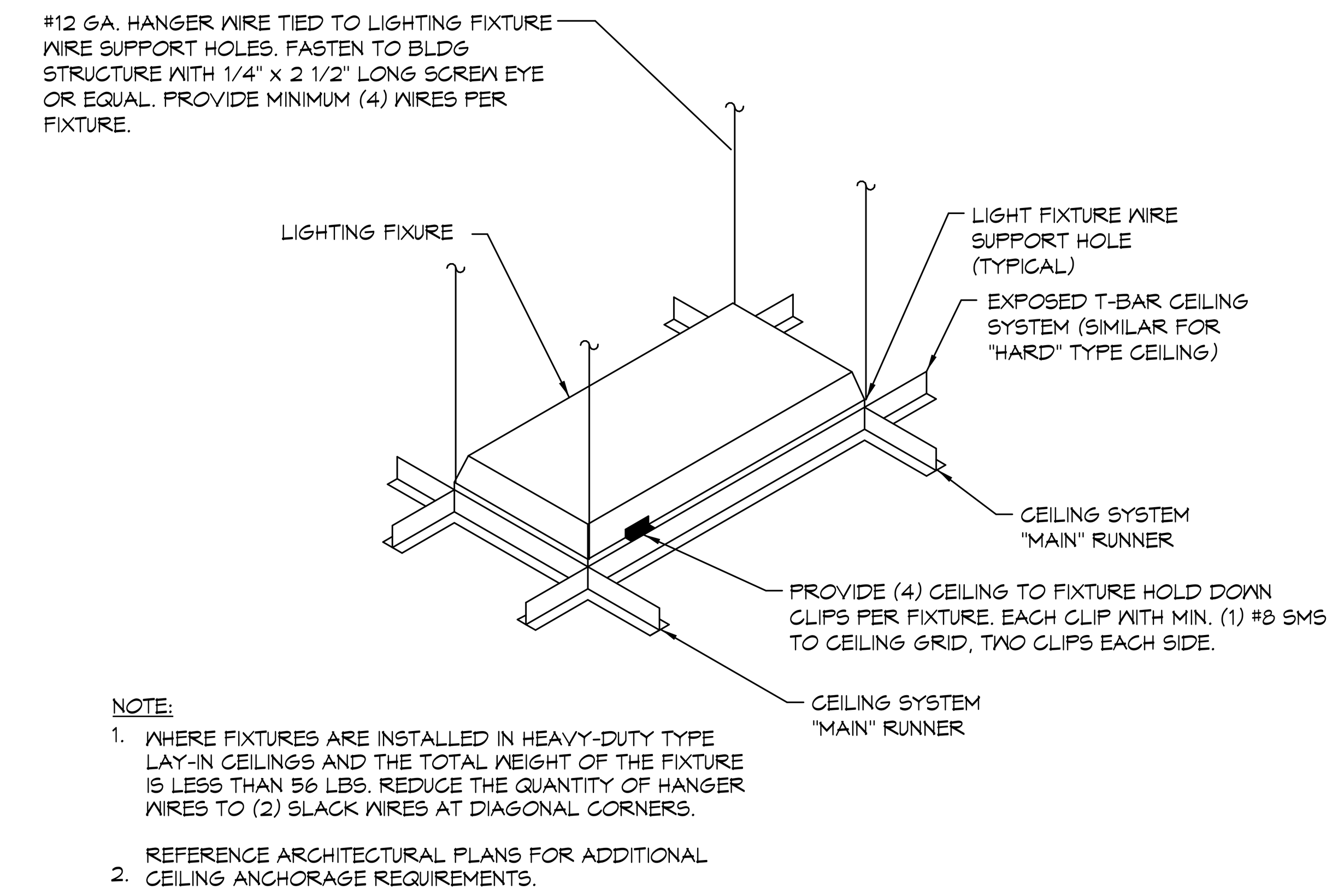
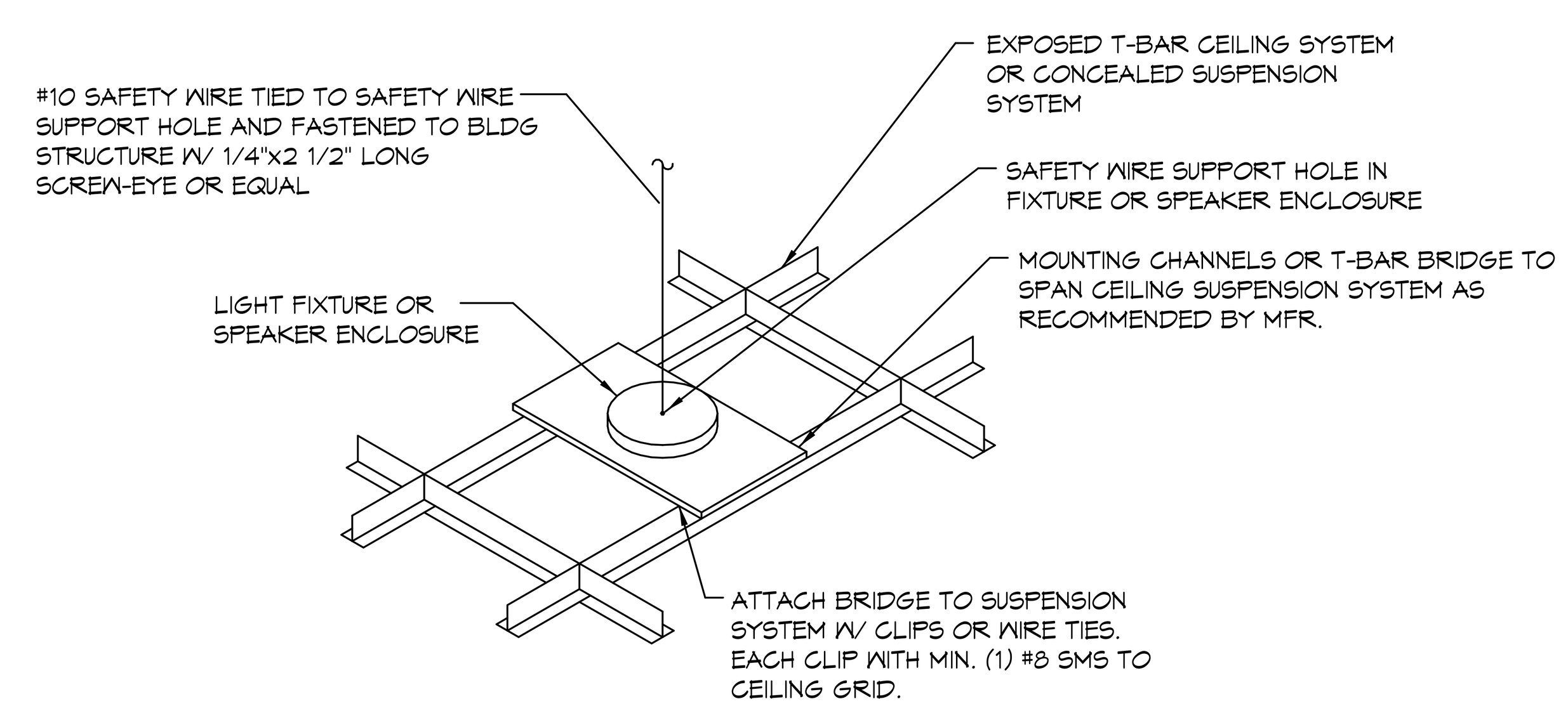


NOTE:
1. WHERE FIXTURES ARE INSTALLED IN HEAVY-DUTY TYPE LAY-IN CEILINGS AND THE TOTAL WEIGHT OF THE FIXTURE IS LESS THAN 56 LBS. REDUCE THE QUANTITY OF HANGER WIRES TO (2) SLACK WIRES AT DIAGONAL CORNERS.
2. REFERENCE ARCHITECTURAL PLANS FOR ADDITIONAL CEILING ANCHORAGE REQUIREMENTS.

LUMINAIRE FIXTURE SEISMIC RESTRAINT DETAIL (1/E2.2)
NO SCALE



LUMINAIRE AND SPEAKER ENCLOSURE SEISMIC RESTRAINT DETAIL (2/E2.2)
NO SCALE

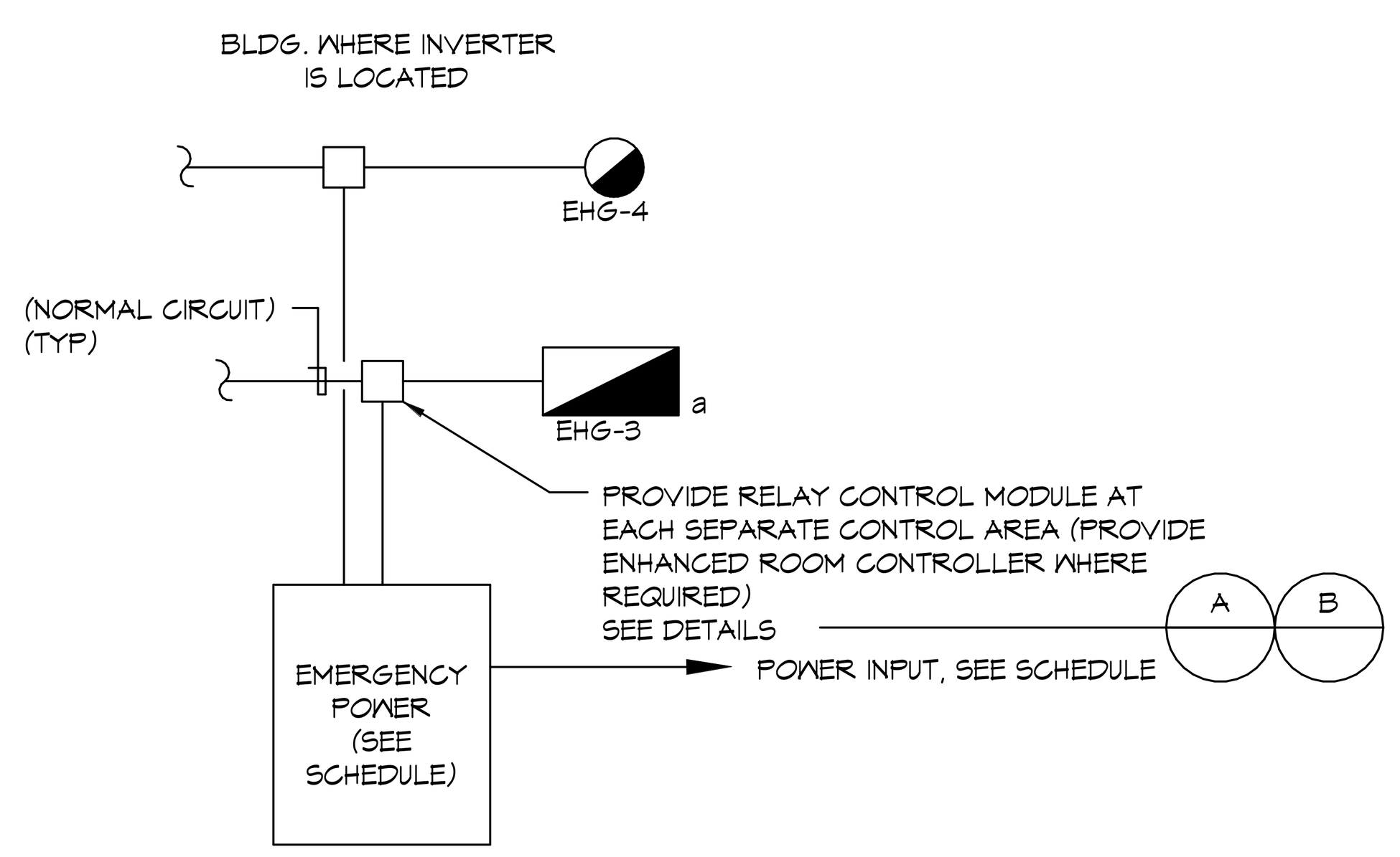
INVERTER SCHEDULE

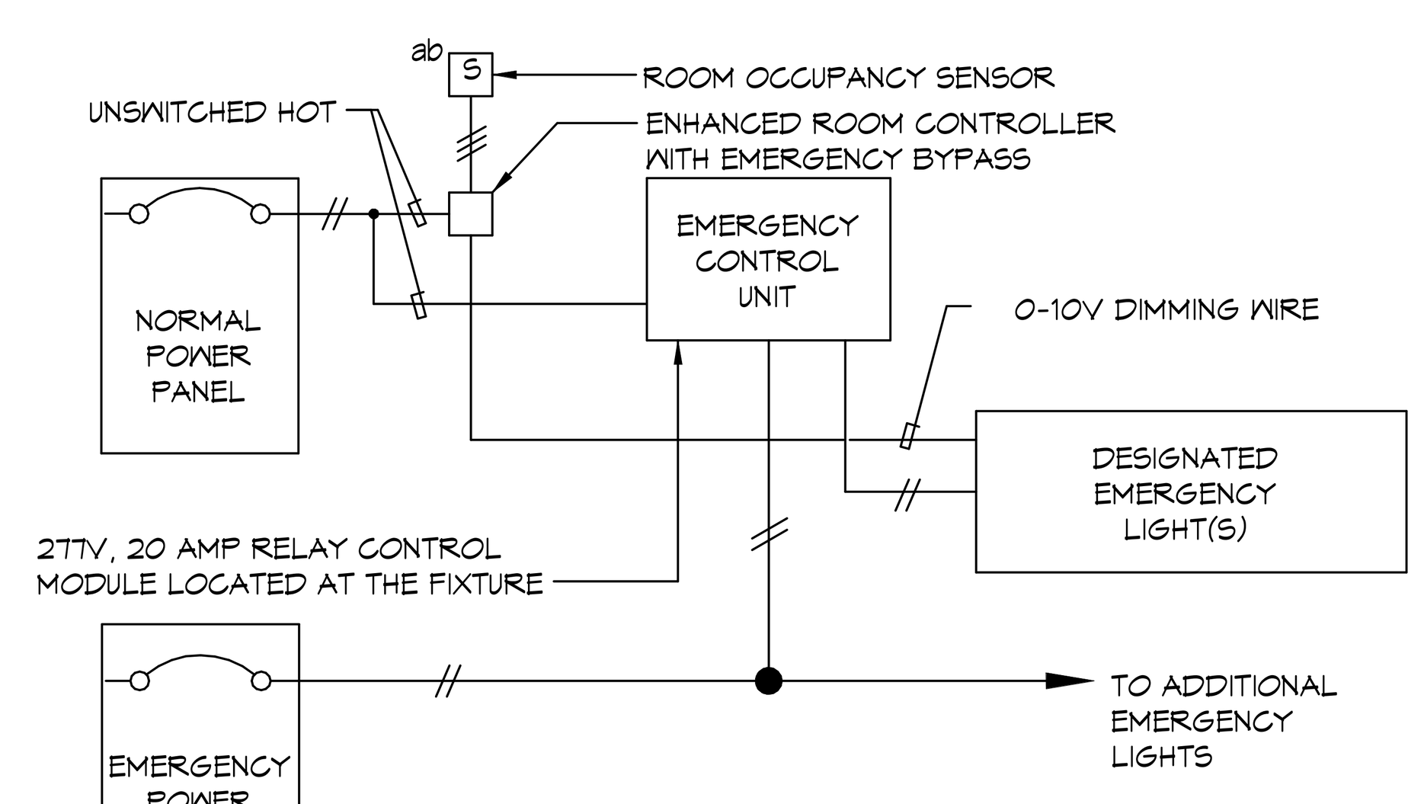
CENTRAL INVERTER LOCATION	INVERTER I.D.	INVERTER TYPE I.D. (SEE SCHEDULE BELOW)	OUTPUT CIRCUITS	REMARKS
LRC	'INV'	'INV20'	INV-1, INV-2	

INVERTER TYPE SCHEDULE

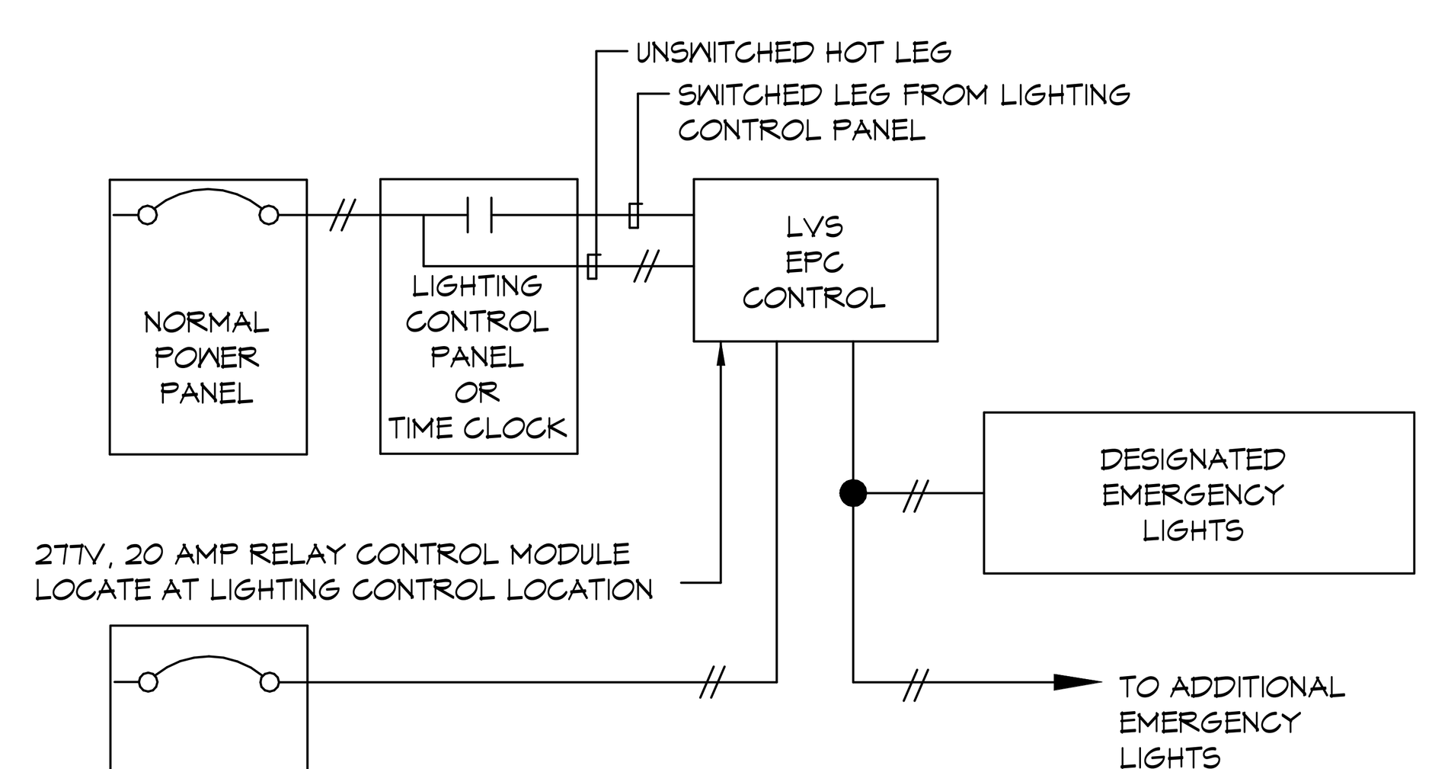
I.D.	MINIMUM KVA RATING:	*INPUT BREAKER: (VOLTAGE/POLES)	*OUTPUT BREAKER: (REFERENCE PLANS FOR QTY. REQUIRED)	**MAXIMUM ENCLOSURE SIZE: WIDTH x HEIGHT x DEPTH (WEIGHT)	NOTES:
'INV20'	2.0	25A (120/1) / 15A (277/1)	(4) 20 AMP / 1 POLE (MAX.)	FLOOR MOUNTED (1) 26"W x 10"H x 10"D - CONTROL (4) 26"W x 10"H x 10"D - BATTERY	*VALUES SHOWN ON SCHEDULE ARE BASED ON MYERS PRODUCTS, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING INPUT/OUTPUT REQUIREMENTS WHEN NON-MYERS PRODUCTS ARE USED. **MAXIMUM DIMENSIONS AND WEIGHTS BASED ON APPROVED MANUFACTIRERS PRODUCTS. SEE SPECIFICATIONS.

EMERGENCY LIGHTING CONTROL DIAGRAM (3/E2.2)
NO SCALE





FIXTURE WIRING DIAGRAM (ROOM SENSOR AND/OR LOCAL SWITCH) (A)



FIXTURE WIRING DIAGRAM (LOW VOLTAGE CONTROL SYSTEM) (B)

EMERGENCY POWER CONFIGURATION DIAGRAM (4/E2.2)
NO SCALE

LIGHTING FIXTURE SCHEDULE

Mounting columns: Recessed / Ceiling, Surface / Ceiling, Wall, Recessed / Wall, Pendant, Surface / Wall, Pole.

Mark	Approved Manufacturer's (See Key Note No. 1)	Catalog Series Type (See Key Note No. 2)	FIXTURE: OTHER	FIXTURE: LED	Driver	Fixture Watts	MOUNTING	Description	Provide Emergency Ballast Type 'EM'	Provide Custom Color Finish, to be selected at time submittal	See Detail
A1	LITHONIA DAY-BRITE	2VTL SERIES FLUX GRID 2X4	□	■	■ 120/277v ■ 0-10v Dim □ □	39.1w	■□□□□□□	2'X4' VOLUMETRIC T-GRID WITH ACRYLIC LINEAR PRISMATIC DIFFUSER. MINIMUM 4800 LUMEN AT 5000K. DRIVER VOLTAGE UNIVERSAL	□	□	■ 1/E2.2
A2	LITHONIA DAY-BRITE	2VTL2 SERIES FLUX GRID 2X4	□	■	■ 120/277v ■ 0-10v Dim □ □	39.1w	■□□□□□□	2'X2' VOLUMETRIC T-GRID WITH ACRYLIC LINEAR PRISMATIC DIFFUSER. MINIMUM 4800 LUMEN AT 5000K. DRIVER VOLTAGE UNIVERSAL	□	□	■ 1/E2.2
B1	GOTHAM INTENSE	EVO 6" GRAVITY	□	■	■ 120/277v ■ 0-10v Dim □ □	41w	■□□□□□□	6" DIAMETER OPEN DOWNLIGHT 5000 LUMEN AT 5000K SEMI SPECULAR DIFFUSER	□	□	□
B2	GOTHAM INTENSE	EVO 6" GRAVITY	□	■	■ 120/277v ■ 0-10v Dim □ □	69w	■□□□□□□	SAME AS TYPE 'B1' EXCEPT 6000 LUMEN AT 5000K	□	□	□
B3	LITHONIA INTENSE	LDN4 6" GRAVITY	□	■	■ 120/277v ■ 0-10v Dim □ □	26.6w	■□□□□□□	4" DIAMETER OPEN DOWNLIGHT 2000 LUMEN AT 5000K	□	□	□
D1	LITHONIA DAYBRITE	CLX SERIES FLUXSTREAM	□	■	■ 120/277v ■ 0-10v Dim □ □	25w	□■□□□□□	48" SURFACE STRIP, CEILING MOUNTED. FLAT DIFFUSER LENS. MINIMUM 4000 LUMEN AT 5000K	□	□	□
D2	MP LIGHTING	L52 SERIES	□	■	■ 120/277v ■ 0-10v Dim □ □	1w	□■□□□□□	4100K DISPLAY LIGHT. MATTE CLEAR ANODIZED FINISH 30 DEG BEAM, 78 LUMENS. PROVIDE LOW VOLTAGE TRANSFORMER AS REQUIRED.	□	□	□
F1	MARK BIRCHWOOD	SLOT 4 LED JAKE	□	■	■ 120/277v ■ 0-10v Dim □ □	40w	■□□□□□□	48"L X 4"W RECESSED LINEAR FLUSH LENS. MINIMUM 4000 LUMEN AT 5000K	□	□	□
S1	NLS LIGHTING	TRAC WALL MOUNT SLOPE	□	■	■ 120/277v ■ 0-10v Dim □ □	26w	□□□□□■□	ARCHITECTURAL WALL SCONCE TYPE 3 DISTRIBUTION MIN. 3500 LUMENS AT 5000K. WET LOCATION LISTED. BRONZE FINISH.	□	□	□
S2	GOTHAM COVENTRY PHILLIPS LIGHTOLIER	6" EVO SERIES 6LB79VWL SERIES CALCULITE GEN3	□	■	■ 120/277v ■ 0-10v Dim □ □	23w	■□□□□□□	6" DIA. MINIMUM 3000 LUMEN AT 5000K. WET LOCATION LISTED. VANDAL RESISTANT PRISMATIC POLYCARBONATE LENS.	□	□	□
X	COOPER EXITTRONIX	APX SERIES ILLUMINEX SERIES	□	■	■ 120/277v □ 0-10v Dim □ □	1w	□■□□□□□	SURFACE MOUNT WHITE THERMOPLASTIC LED EXIT SIGN. GREEN LETTERING	□	□	□

LIGHTING FIXTURE SCHEDULE KEY NOTES:

1. ALTERNATE MANUFACTURER'S TO THOSE SPECIFIED MAY BE SUBMITTED FOR APPROVAL. ALTERNATE MANUFACTURER'S MUST MEET THE MINIMUM CRITERIA INDICATED IN THE DESCRIPTION AND OPTIONS COLUMNS OF THIS SCHEDULE, AND MUST BE EQUAL TO THE SPECIFIED FIXTURE AS DETERMINED BY THE SPECIFYING ENGINEER. (ALTERNATE FIXTURES MUST BE APPROVED PRIOR TO BID, ALLOW 72 HOURS FOR ENGINEER REVIEW AND APPROVED). WHERE 'NO KNOWN EQUAL' IS INDICATED THE FIXTURE DOES NOT HAVE AN EQUAL TO MEET THE PROJECT REQUIREMENTS, AND ALTERNATE SELECTIONS WILL NOT BE ACCEPTED.

2. COMPLETE CATALOG NUMBERS HAVE NOT BEEN PROVIDED, REFERENCE THE DESCRIPTION AND OPTIONS COLUMNS OF THIS SCHEDULE FOR COMPLETE FIXTURE REQUIREMENTS.

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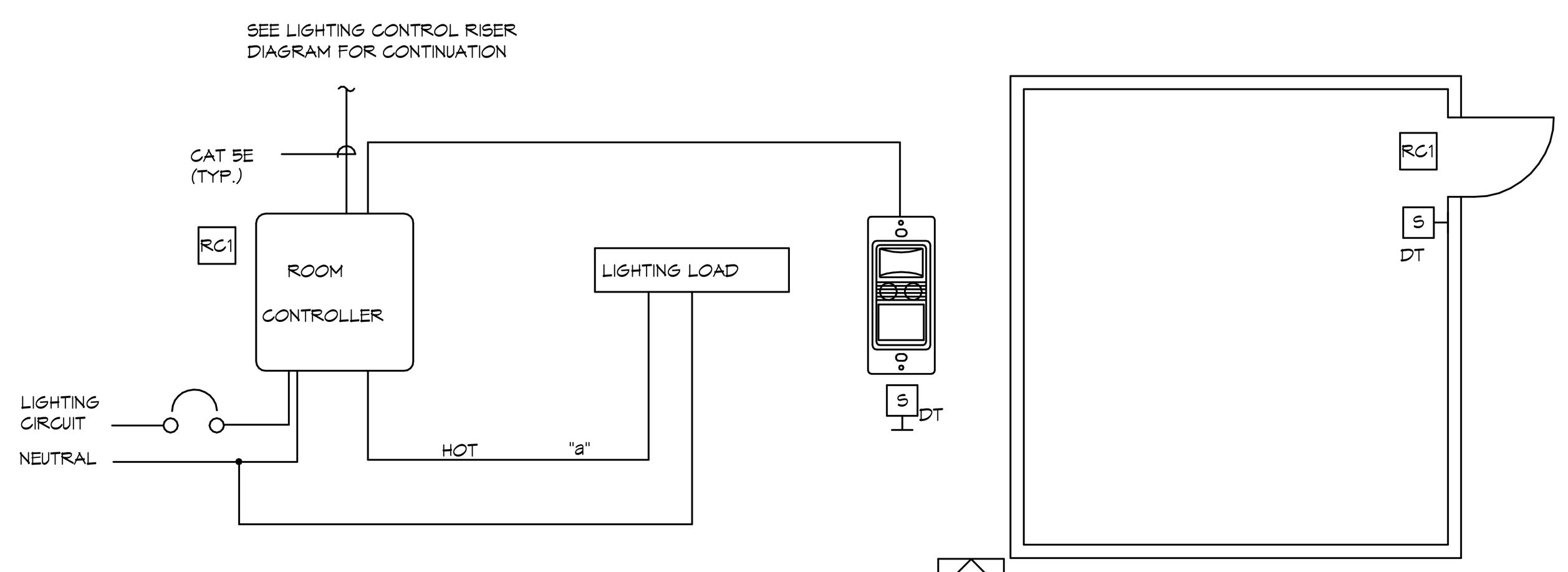
LIGHTING SCHEDULE & DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

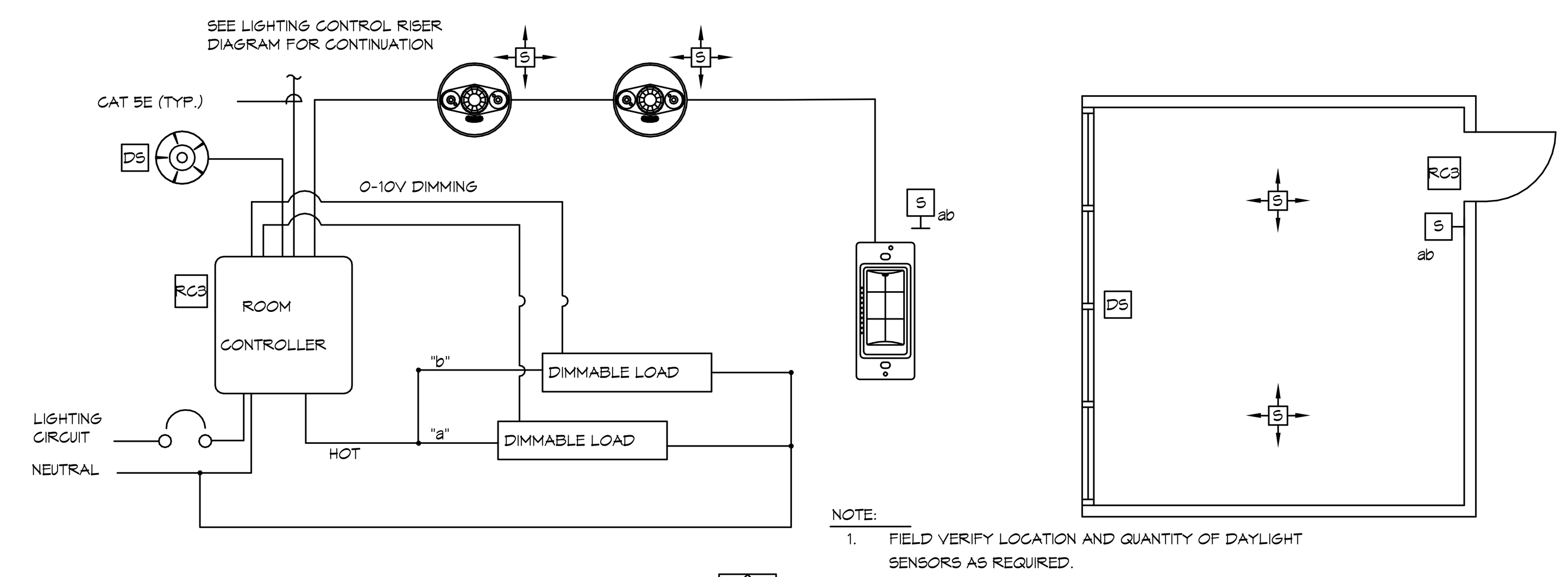
E2.2



TYPICAL ROOM TYPE - STORAGE/RESTROOM (A)

NO SCALE

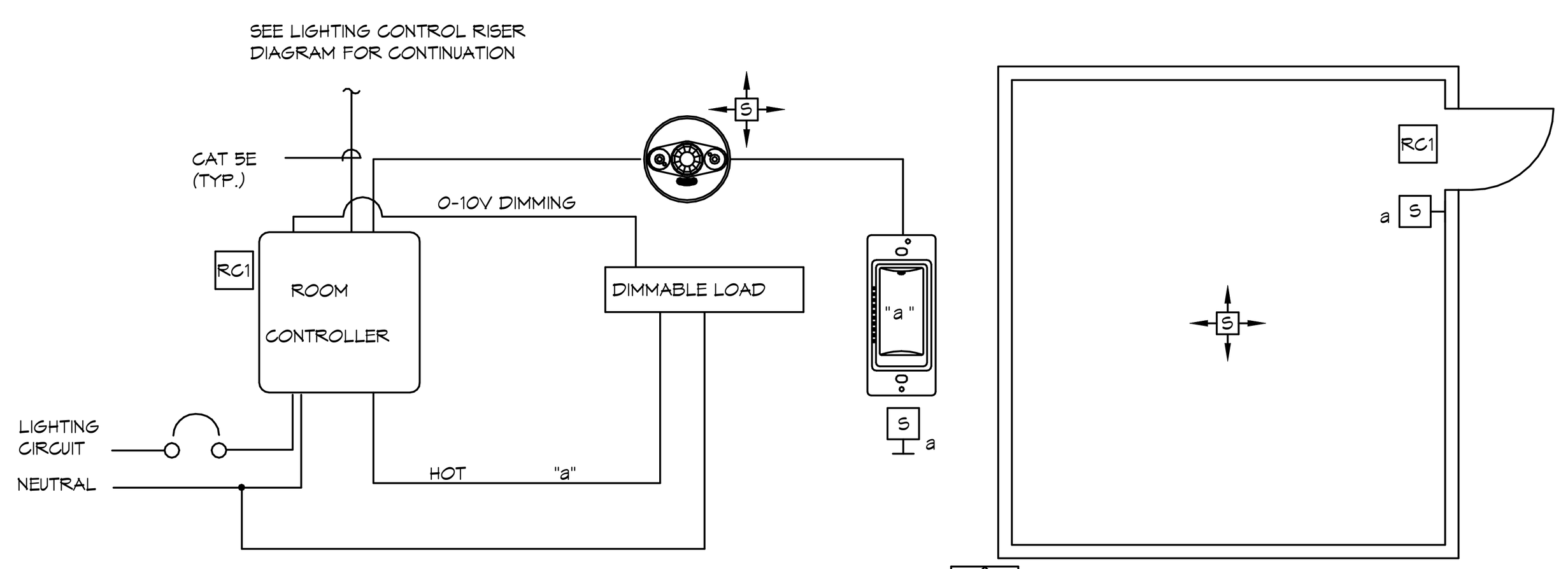
1 / E2.3



TYPICAL ROOM TYPE WITH DAYLIGHT ZONE (B1)

NO SCALE

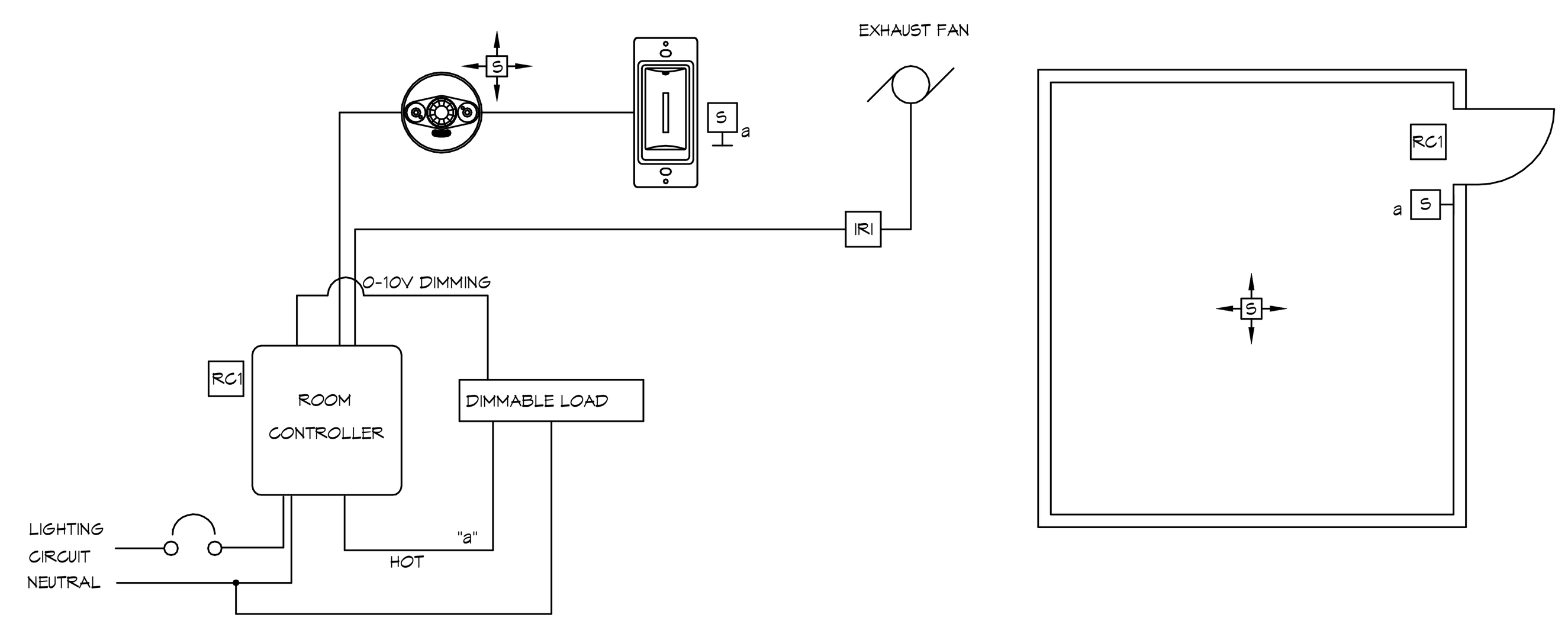
5 / E2.3



TYPICAL ROOM TYPE W/O DAYLIGHT ZONE (B)

NO SCALE

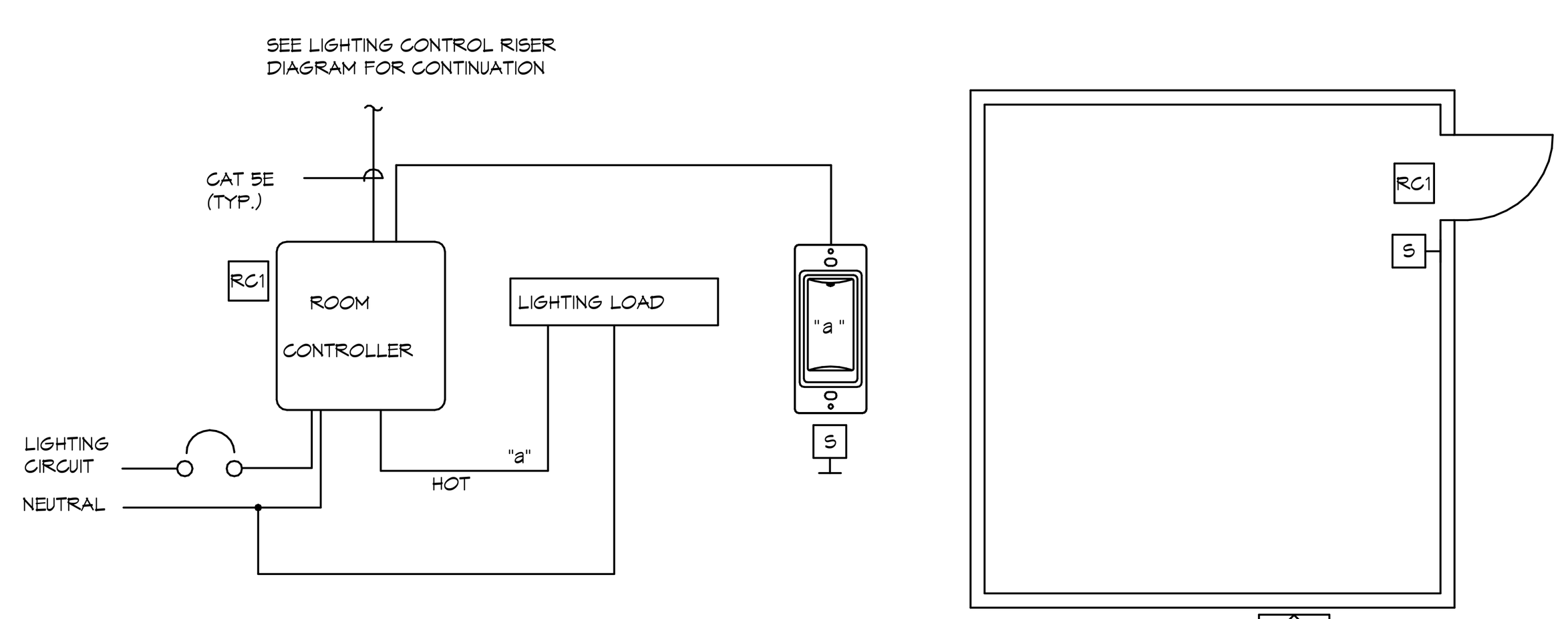
2 / E2.3



TYPICAL ROOM TYPE - RESTROOM (C)

NO SCALE

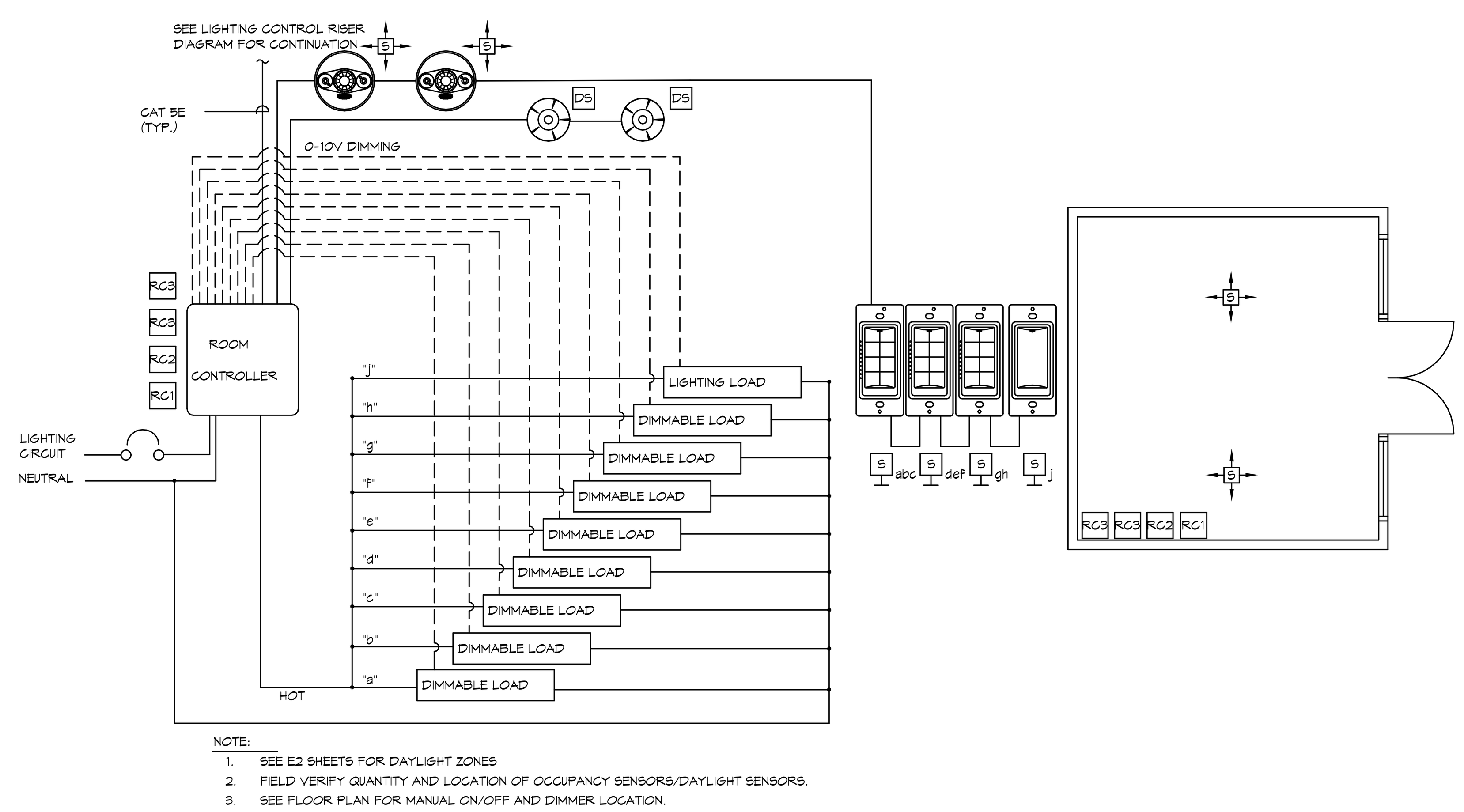
6 / E2.3



TYPICAL ROOM TYPE - ELECTRICAL/EQUIPMENT ROOM (D)

NO SCALE

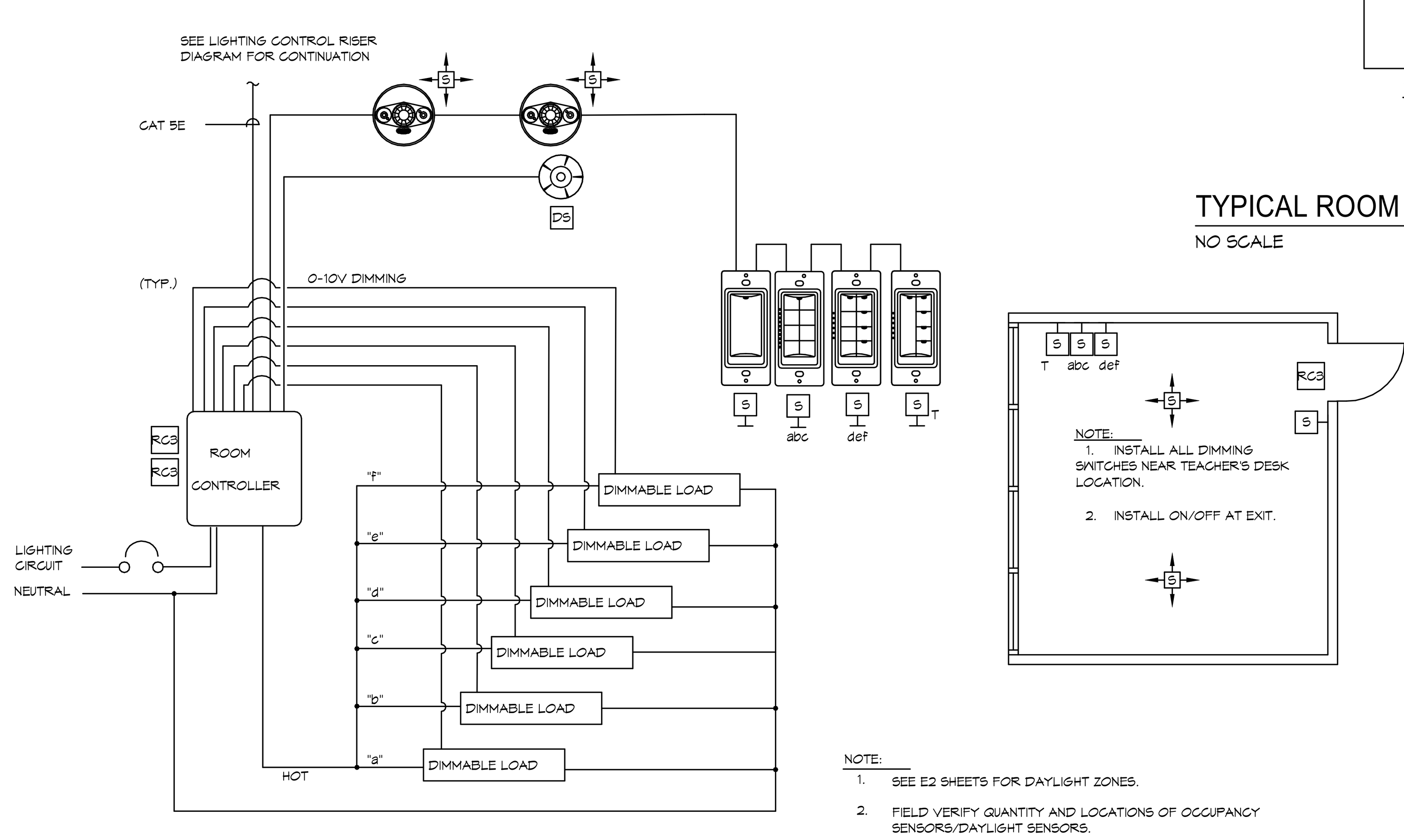
3 / E2.3



TYPICAL ROOM TYPE - LIBRARY (L)

NO SCALE

7 / E2.3



TYPICAL ROOM TYPE - CLASSROOM (G)

NO SCALE

4 / E2.3

SYMBOL LEGEND

S	WALL MOUNTED MANUAL ON AND OFF SWITCH +48" U.O.N.
S DT	WALL MOUNTED DUAL TECH MOTION SENSOR WITH MANUAL ON AND OFF 48" U.O.N.
S (ceiling)	CEILING MOUNTED MOTION SENSOR (DUAL TECHNOLOGY)
S	WALL MOUNTED MOTION SENSOR (DUAL TECH) +84" U.O.N.
RC1	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH ONE DIMMING ZONE.
RC2	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH TWO DIMMING ZONES.
RC3	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH THREE DIMMING ZONES.
PL	PLUG LOAD CONTROLLER
DS	DAYLIGHT SENSOR
IRI	ISOLATED RELAY INTERFACE
S 4S	4 SCENE DIMMING CONTROL STATION
S K	MANUAL ON AND OFF KEY SWITCH
S a	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'
S ab	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'&"b"
S abc	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'&'b'&'c'
S D abc	MAIN ENTRY MANUAL DIMMERS FOR ZONE 'a', 'b' & 'c'

GENERAL NOTES

1. REFERENCE SPECIFICATION SECTION 260923 DIGITAL LIGHTING CONTROL SYSTEM FOR ADDITIONAL SCOPE OF WORK.
2. ITEMS RC1 RC2 RC3 PL TO BE WALL MOUNTED ABOVE THE ROOM ENTRY DOOR, ABOVE THE CEILING IN ALL ROOMS WITH T-BAR CEILINGS.
3. ITEMS RC1 RC2 RC3 PL TO BE LOCATED WITHIN A 24" x 24" RECESSED ENCLOSURE WITH HINGED LOCKING COVER LOCATED ABOVE THE ROOM ENTRY DOOR IN ALL ROOMS WITH INACCESSIBLE CEILINGS.
4. ALL 0-10V WIRING AND CAT 5E WIRING MAY BE INSTALLED AS OPEN WIRE WHERE ABOVE ACCESSIBLE CEILINGS. WHERE ABOVE INACCESSIBLE OR EXPOSED CEILINGS IT SHALL BE INSTALLED IN CONDUIT.
5. S WHERE CEILING HEIGHT EXCEED 11'-0" OR ROOM HAS EXPOSED S CEILING PROVIDE TYPE SENSOR MOUNTED ON WALL IN PLACE OF CEILING SENSOR.
6. REFERENCE FOR LIGHTING ON EMERGENCY SYSTEM.
7. LIGHTING IN CORRIDORS AND STAIRWELLS SHALL BE REDUCED BY AT LEAST 50% WHEN THE AREA IS UNOCCUPIED.

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DATE: 02.05.20

Date | Revison | Consultant | Engineer

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OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

LIGHTING CONTROL DIAGRAMS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E2.3

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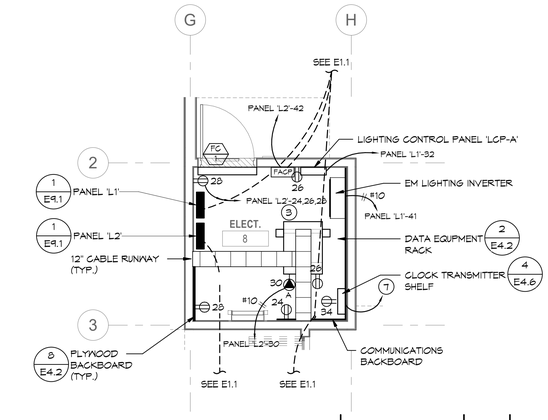
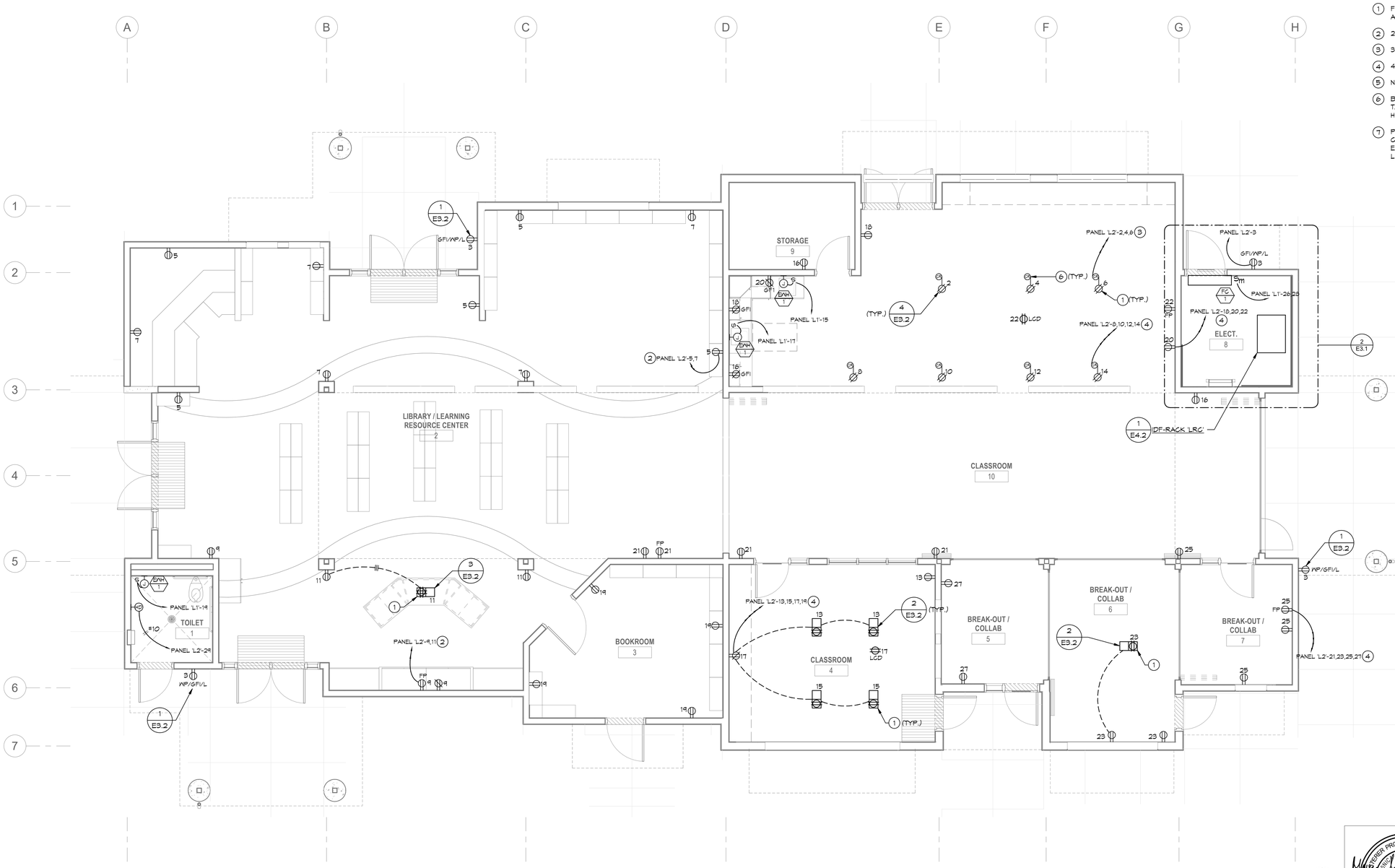


LEVEL 1 - ENLARGED ROOM PLAN | 1/4" = 1'-0" | 2



LEVEL 1 FLOOR PLAN - POWER | 1/4" = 1'-0" | 1

GENERAL NOTES:

1. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATION OF ALL WALL MOUNTED POWER DEVICES WHERE INDICATED AT MOUNTING HEIGHTS OTHER THAN +18".
2. REFERENCE SHEET E6 SERIES SHEETS FOR MECHANICAL EQUIPMENT SCHEDULE.
3. REFERENCE E3 AND E6 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
4. NUMBERS ADJACENT TO EACH POWER DEVICE INDICATES THE CIRCUIT NUMBER TO WHICH THE DEVICE IS TO BE CONNECTED.
5. CIRCUIT HOMERUNS ARE INDICATED TO SHOW THE LOCATION AND NUMBER OF CIRCUITS TO BE GROUPED TOGETHER.
6. PROVIDE MINIMUM 3/4" CONDUIT AND #12 CIRCUIT CONDUCTORS AS REQUIRED TO CONNECT EACH POWER DEVICE TO THEIR INDICATED CIRCUIT (U.O.N.).
7. FIELD VERIFY EXACT ROUTING LOCATION FOR CONCEALED CONDUITS AND RECEPTACLES PRIOR TO ROUGH-IN.

KEY NOTES:

1. FIELD VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
2. 2 #12 (HOT), 1 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
3. 3 #12 (HOT), 1 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
4. 4 #12 (HOT), 2 #10 (NEUTRAL), 1 #12 (GND), 3/4"C.
5. NOT USED.
6. BLACK CEILING MOUNTED CORD REEL WITH TRIPLE TAP OUTLET AS MANUFACTURERD BY HUBBELL HBLC 40123TT
7. PROVIDE 1-1/4"C. RIGID CONDUIT TO ROOF FOR CLOCK TRANSMITTER GPS RECEIVER AND ANTENNA. EXTEND CONDUIT A MINIMUM OF 36" ABOVE ROOF LINE. PROVIDE WEATHERHEAD FOR CONDUIT.

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LEVEL 1 FLOOR PLAN - POWER

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E3.1

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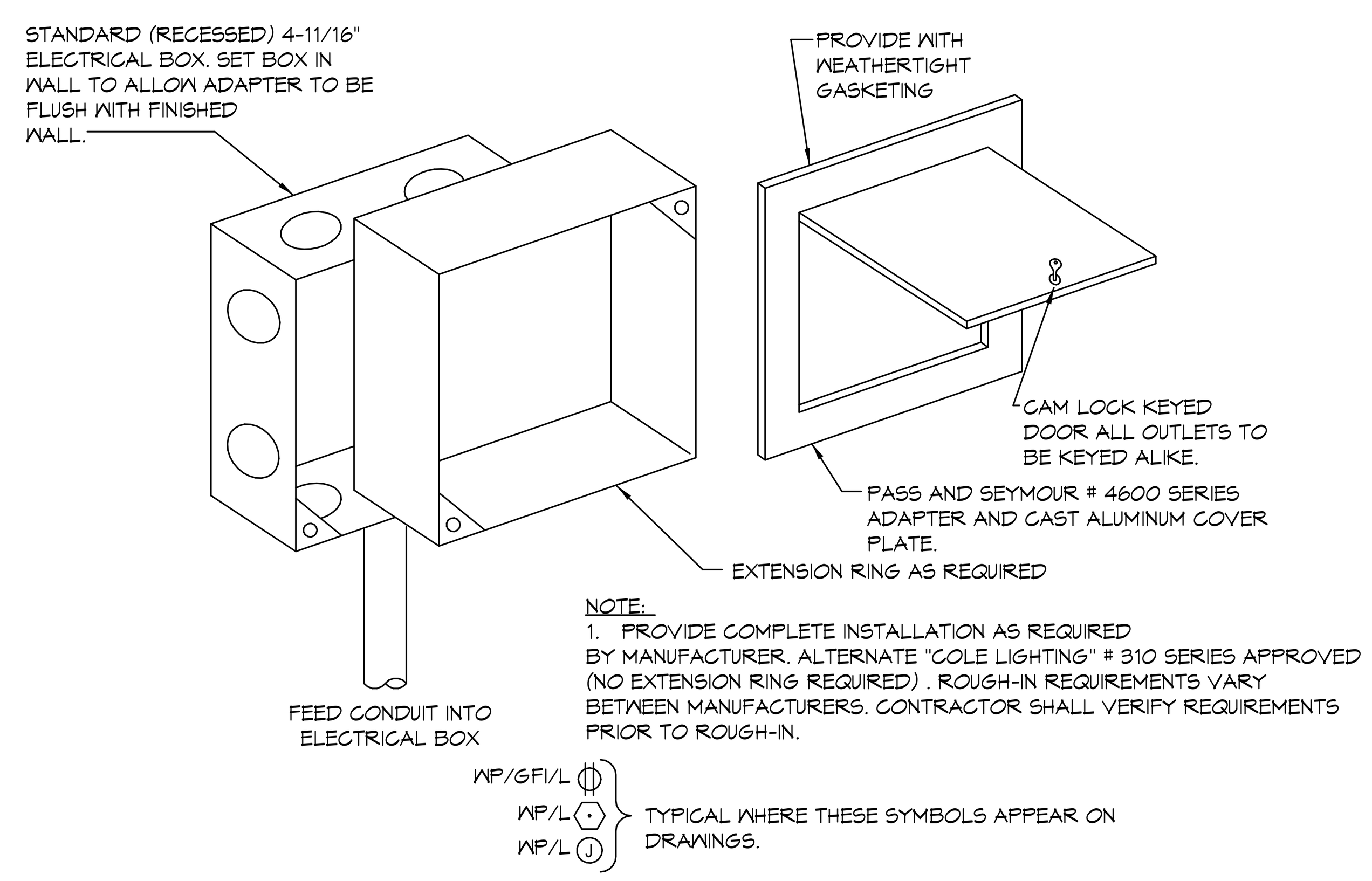
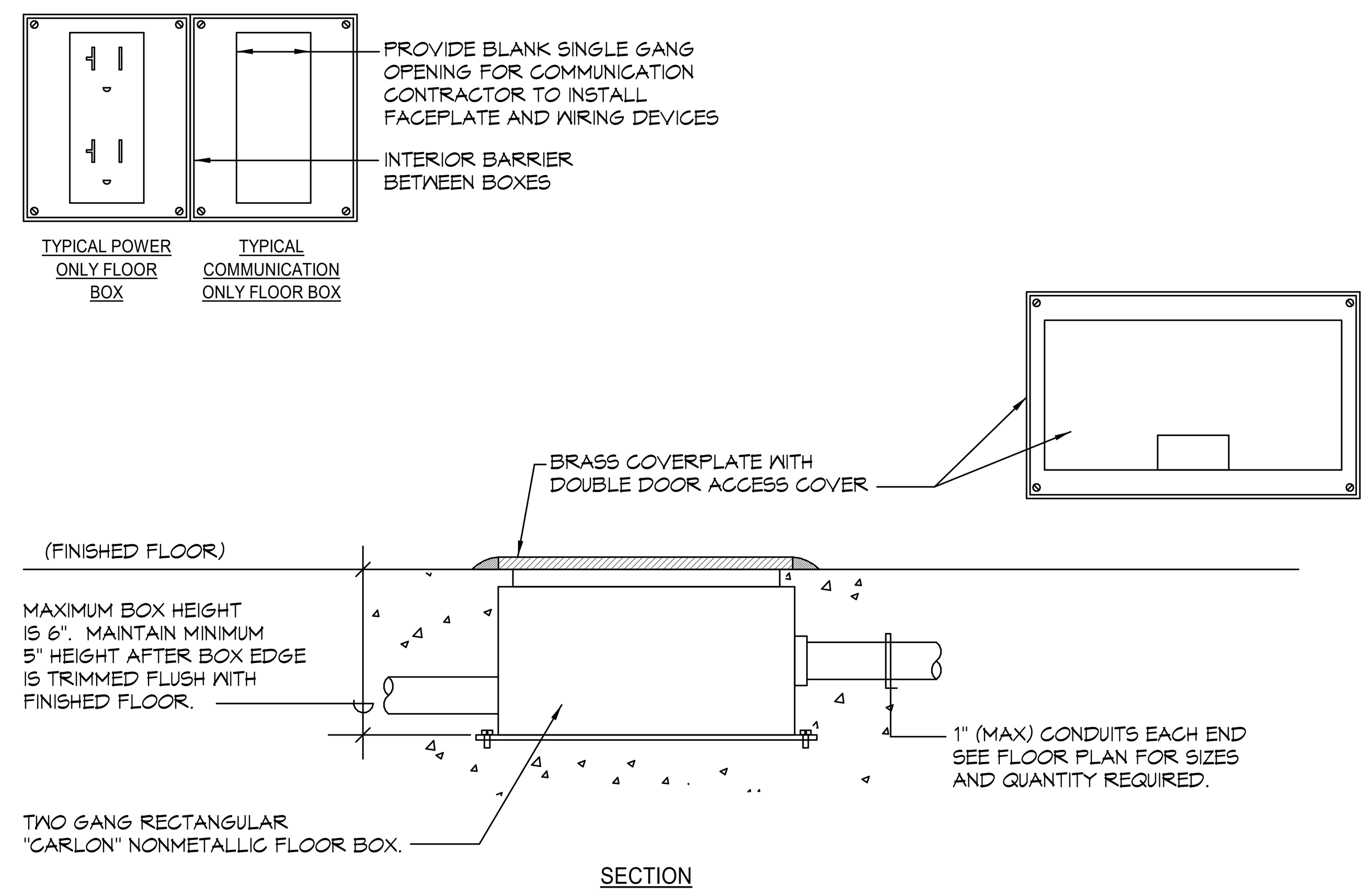


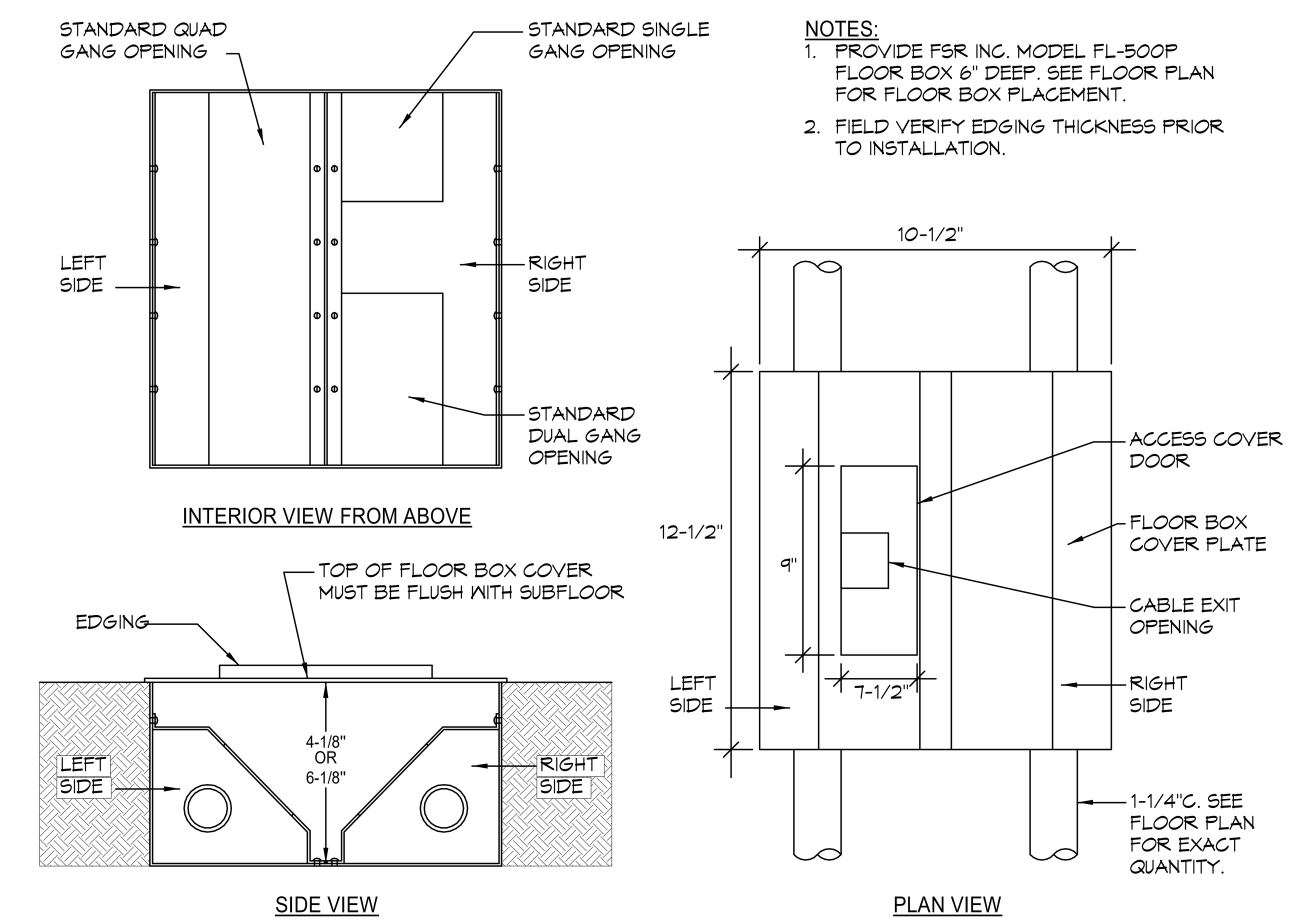
TYPICAL WEATHERPROOF/LOCKING RECEPTACLE COVER 1 E3.2

NO SCALE



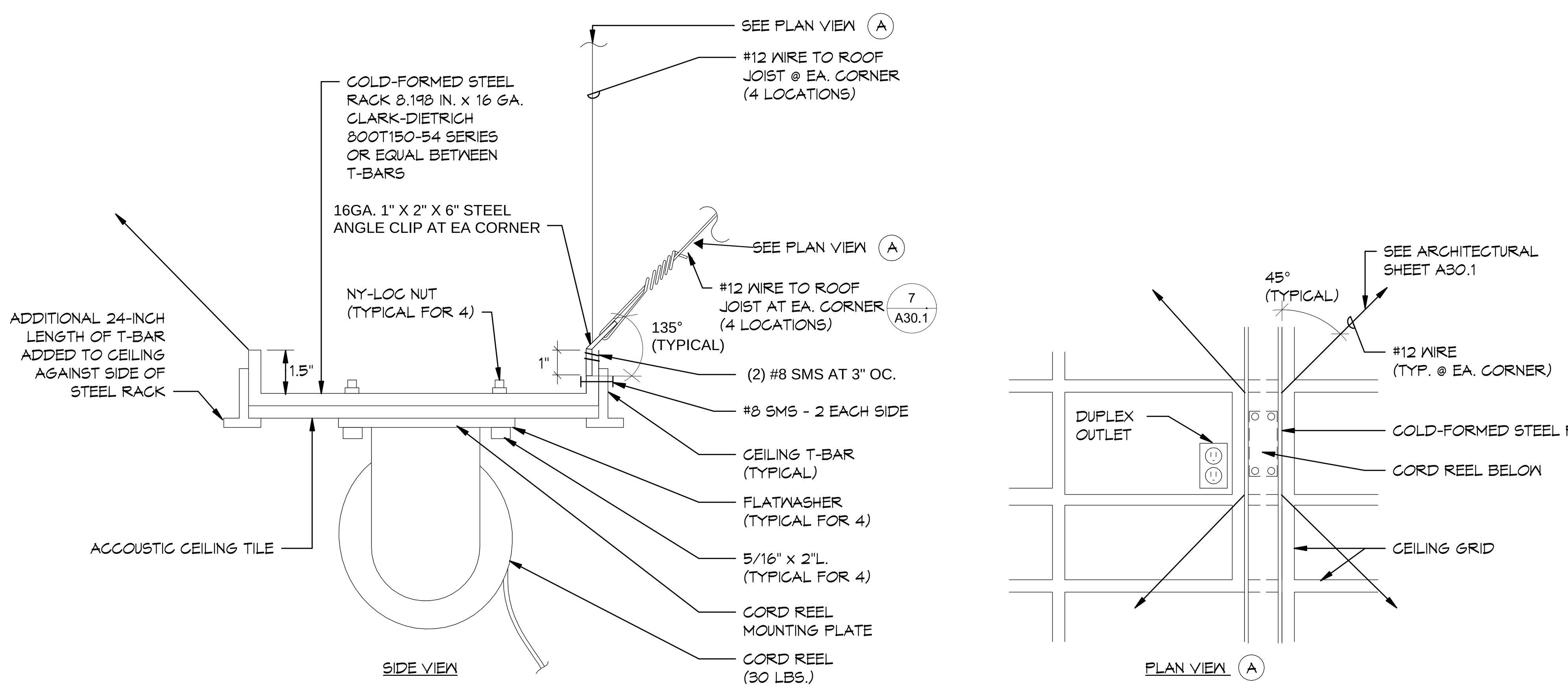
TYPICAL TWO GANG FLOOR BOX INSTALLATION 2 E3.2

NO SCALE



TYPICAL FLOOR BOX DETAIL 3 E3.2

NO SCALE



CORD REEL ANCHORAGE DETAIL 4 E3.2

NO SCALE

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POWER DETAILS

Drawn: Author
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Date: APRIL 24, 2019
Job: SSD-SC-03

E3.2

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BACKBOX AND RING LEGEND

TYPE	DESCRIPTION
'B1'	4 11/16" square 2 1/8" deep box with single gang ring.
'B2'	4 11/16" square 2 1/8" deep box with dual gang ring.
'B3'	4" square 1 1/2" deep box with single gang ring.
'B4'	Single gang box, 2 1/8" deep.
'B5'	4-11/16" Square 3" deep box with dual gang ring.

'C1'	Provided by 27 10 00 contractor.
'C2'	Provided by 27 21 00 contractor.
'C3'	Provided by 27 20 00 contractor.
'C4'	Provided by 27 51 16 contractor.
'C5'	Provided by 28 13 00 contractor.
'C6'	Provided by 28 23 00 contractor.
'CT'	Provided by xx xx xx contractor.

FACEPLATE LEGEND

TYPE	DESCRIPTION
'AR'	As required to accommodate the number of ports designated.
'BP'	Blank faceplate.

'C1'	Provided by 27 10 00 contractor.
'C2'	Provided by 27 21 00 contractor.
'C3'	Provided by 27 20 00 contractor.
'C4'	Provided by 27 51 16 contractor.
'C5'	Provided by 28 13 00 contractor.
'C6'	Provided by 28 23 00 contractor.
'CT'	Provided by xx xx xx contractor.

CONDUIT / RACEWAY LEGEND

TYPE	DESCRIPTION
'3/4-S'	3/4" conduit stubbed from box into accessible ceiling space, unless detailed otherwise on drawings.
'1-S'	1" conduit stubbed from box into accessible ceiling space, unless detailed otherwise on drawings.
'11/4-S'	1 1/4" conduit stubbed from box into accessible ceiling space, unless detailed otherwise on drawings.

TECHNOLOGY SYMBOL LEGEND

SYMBOL	DESCRIPTION	BACKBOX & RING	FACE PLATE	CONDUIT / RACEWAY
	Single port data outlet, +18" A.F.F. (U.O.N.)	Type 'B1'	Type 'AR'	Type '1-S'
2P	Dual port data outlet, +18" A.F.F. (U.O.N.)	Type 'B1'	Type 'AR'	Type '1-S'
3P	Triple port data outlet, +18" A.F.F. (U.O.N.)	Type 'B1'	Type 'AR'	Type '1-S'
4P	Quad port data outlet, +18" A.F.F. (U.O.N.)	Type 'B1'	Type 'AR'	Type '1-S'
1V	Single port data outlet with single port voice outlet, +18" A.F.F. (U.O.N.)	Type 'B1'	Type 'AR'	Type '1-S'
2P	Local Origination with Dual Port Data, +18" AFF (U.O.N.)	Type 'B1' (D) Type 'B5' (LO) Side by Side (1)	Type 'AR' (D) Type 'C3' (LO)	Type '1-S' (D) Type '1 1/4-S' (LO)
	Same device as required on legend, mounted +6" above backsplash (U.O.N.)	Same as required for device indicated on legend.	Same as required for device indicated on legend.	Same as required for device indicated on legend.
S	Same device as required on legend, except surface mounted box.	Same as required for device indicated on legend.	Same as required for device indicated on legend.	Same as required for device indicated on legend.
	Same device as required on legend, except in floor box.	Floorbox per E3 series drawings.	Same as required for device indicated on legend.	Same as required for device indicated on legend.
AR 4P AV	Quad port data outlet for Wireless Access Point and AV Equipment Mounted in Ceiling AV Enclosure.	Type 'B1' Provide Box with Ceiling Grid Hangar.	Type 'C1'	Type '1-S'
AR 4P AV	Quad port data outlet for Wireless Access Point and AV Equipment Mounted in Wall AV Enclosure @9'-0" AFF.	Type 'B1'	Type 'C1'	Type '1-S'
LCD	Ceiling Mounted Projector Location.	Type 'B1' Provide Box with Ceiling Grid Hangar.	Type 'C3' (2 E4.5)	Type '1-S' Not require in accessible ceiling.
S	Ceiling Mounted Audio-Visual System Speaker.	Type 'C3'	Type 'C3'	
AR 2P	Dual port data outlet at wireless access point location mounted in accessible ceiling (U.O.N.)	See detail (2 E4.4)	Type 'C1'	Not required in accessible ceiling.
AR 2P	Dual port data outlet at wireless access point wall mounted @+8'-0" AFF (U.O.N.)	See detail (2 E4.4)	Type 'C1'	Type '1-S'
2P AR WP (2)	Dual port data outlet for exterior WAP Location @10'-0" AFF (U.O.N.) WP = Weatherproof	See Details (1 E4.4)	See Details (1 E4.4) (2)	Type '1-S' Not required in accessible ceiling.
FP	Dual port data outlet for Flat Panel Location with Audio-Visual Connections. Height per details.	Type 'B1' (Data) Type 'B2' (A/V) (2 E4.7) (3 E4.7)	Type 'C1' (Data) Type 'C3' (A/V) (2 E4.7) (3 E4.7)	Type '1-S' (Data) Type '1-1/4-S' (A/V)
AV	Ceiling Mounted Audio-Visual Enclosure.	Not required in accessible ceiling.	Type 'C3'	Not required in accessible ceiling.

COMMUNICATION / SECURITY SYMBOL LEGEND

SYMBOL	DESCRIPTION	BACKBOX & RING	FACE PLATE	CONDUIT / RACEWAY
M	Telephone outlet with staff type phone, +18" A.F.F. (U.O.N.) (M indicates wall mount at +48" A.F.F.) Height per detail 1/E1.0	Type 'B3'	Type 'C1'	Type '3/4-S'
M	Telephone outlet with classroom type phone, +18" A.F.F. (U.O.N.) (M indicates wall mount at +48" A.F.F.) Height per detail 1/E1.0	Type 'B3'	Type 'C1'	Type '3/4-S'
S	IP-Based Intercom Speaker recessed in ceiling.	Type 'C1'	Type 'C1'	Type '3/4-S'
S	IP-Based Intercom Speaker, recessed in wall, +8'-0" A.F.F (U.O.N.)	Type 'C1', installed by electrical contractor.	Type 'C1'	Type '3/4-S'
S	IP-Based Intercom Speaker, surface mount on interior wall, +8'-0" A.F.F (U.O.N.)	Type 'B3' (3)	Type 'C1' (3)	Type '3/4-S'
S	IP-Based Intercom Horn recessed in exterior wall @ +8'-0" AFF (U.O.N.)	Type 'C1', installed by electrical contractor. (4)	Type 'C1'	Type '3/4-S'
V	Volume control for intercom system, mounted at +48" A.F.F. (U.O.N.) Height per detail 1/E1.0	Type 'B3'	Type 'C1' (3)	Type '3/4-S'
CWG	Clock wall mounted at, +8'-0" A.F.F (U.O.N.). (WG indicates wireguard)	Not required. (4)	Not required.	Not required.
K	Security keypad wall mounted at +48" A.F.F (U.O.N.) Height per detail 1/E1.0	Type 'B2'	Type 'C5'	Type '3/4-S'
	Security motion sensor ceiling mounted.	Type 'B3'	Type 'C5'	Type '3/4-S'
	Security motion sensor wall mounted at 6" below ceiling, or +10'-0" A.F.F. (U.O.N. whichever is lower.	Type 'B3'	Type 'C5'	Type '3/4-S'
	Security door contact.	Type 'B3'	Type 'C5'	Type '3/4-S'
5 C	Surveillance camera, exterior type. Height as shown on floor plans	Type 'B1'	Type 'C6' (Weathertight.)	Type '1-S'
5 C	Surveillance camera, interior type mounted 6" below ceiling or +10'-0" whichever is lower (U.O.N.)	Type 'B1'	Type 'C6'	Type '1-S'
5 C	Surveillance camera, interior type mounted in ceiling.	Type 'B2'	Type 'C6'	Type '1-S'
J	J-Box for Future Low-Voltage Devices @+18" AFF (U.O.N.)	Type 'B1'	Blank Plate Color to Match	Type '1-S'
	Conduit sleeve through wall, above accessible ceiling.	Not required. (3 E4.4)	Not required.	(1) 3"C. for open low voltage wiring.
2"C.	Conduit sleeve through wall, above accessible ceiling.	Not required. (3 E4.4)	Not required.	(1) Conduit for open low voltage wiring, size as indicated.
(2) 2"C.	Conduit sleeve through wall, above accessible ceiling.	Not required. (3 E4.4)	Not required.	Multiple Conduits for open low voltage wiring, size and quantity as indicated.
	Conduit stubbed above accessible ceiling.	Not required.	Not required.	Conduit for open low voltage wiring. Refer to legend for size.
1 1/2"C.	Conduit stubbed above accessible ceiling.	Not required.	Not required.	(1) conduit for open low voltage wiring. size as indicated.
(2) 1"C.	Conduit stubbed above accessible ceiling.	Not required.	Not required.	Conduit for open low voltage wiring. size and quantity as indicated.

GENERAL NOTES:

1. ALL CONDUITS WHICH ARE REQUIRED AS A PART OF SYSTEMS SPECIFIED FOR COMMUNICATIONS, TELEPHONE, INTERCOM, CLOCK FIRE ALARM, SECURITY, SOUND SYSTEMS, DATA NETWORKING, OR AUDIO-VISUAL SYSTEMS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT REQUIREMENTS WITH EACH SYSTEM SUPPLIER PRIOR TO BID TO DETERMINE SPECIAL CONDUIT SYSTEM REQUIREMENTS.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES FOR ALL OPEN CABLE INSTALLATIONS THROUGH RATED WALLS, BLOCK WALLS AND WHERE SHOWN ON THE DRAWINGS. PROVIDE CONDUIT FROM EACH BUILDING MAIN TERMINATION CABINET OR BACKBOARD TO THE NEAREST ACCESSIBLE CEILING FOR ACCESS INTO ALL ELECTRICAL OR COMMUNICATIONS ROOMS.
4. ALL CONDUIT, BOXES, AND RINGS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
5. ALL BLANK PLATES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. (UNLESS OTHERWISE NOTED)
6. ALL CONDUITS SHALL BE FURNISHED WITH PULL STRINGS BY ELECTRICAL CONTRACTOR. COMMUNICATION CONTRACTOR TO PROVIDE POLYARIMID PULL TAPE WITH NEW CABLING INTO ALL CONDUITS BETWEEN BUILDINGS. SEE SPECIFICATIONS FOR REQUIREMENTS.
7. CONTRACTOR TO REVIEW ARCHITECTURAL CEILING PLANS TO DETERMINE LOCATIONS OF ACCESSIBLE CEILINGS PRIOR TO BID.
8. (271000) NUMBERS INDICATE MATCHING SPECIFICATION SECTION RESPONSIBLE FOR THIS WORK.
9. IN ADDITION TO THE ABOVE REQUIREMENTS, THE FOLLOWING REQUIREMENTS SHALL APPLY TO ALL DATA,VOICE, PAGING, AUDIO-VISUAL, SECURITY AND CLOCK CONDUITS:
10. FLEXIBLE METAL CONDUIT MAY BE USED ONLY WHERE REQUIRED AT BUILDING SEISMIC AND/OR EXPANSION JOINTS.
11. ALL UNDERGROUND CONDUITS SHALL BE PROVIDED WITH MINIMUM 24" RADIUS ELBOWS.
12. NO LENGTH OF CONDUIT SHALL BE INSTALLED TO EXCEED 150 FEET BETWEEN PULL BOXES, OR POINTS OF CONNECTION, UNLESS WHERE SPECIFICALLY DETAILED ON THE DRAWINGS.
13. NO LENGTH OF CONDUIT SHALL BE INSTALLED TO EXCEED TWO 90 DEGREE BENDS BETWEEN PULL BOXES, OR POINTS OF CONNECTION, UNLESS WHERE SPECIFICALLY DETAILED ON THE DRAWINGS.

KEY NOTES:

1. JUNCTION BOXES FOR DATA AND AUDIO-VISUAL CONNECTIONS MUST BE SEPARATE. AUDIO-VISUAL JUNCTION BOX OR BOXES SHALL BE FURNISHED AS SHOWN IN THE DRAWING DETAILS.
2. DATA CABLING AND FACEPLATE FOR SYMBOL FURNISHED AND INSTALLED BY 271000 CONTRACTOR.
3. IP ADDRESSABLE SPEAKER BACKBOX AND DEVICE TO BE FURNISHED AND INSTALLED BY 271000 CONTRACTOR.
4. IP ADDRESSABLE SPEAKER OR HORN BACKBOX AND DEVICE TO BE FURNISHED BY 271000 CONTRACTOR. BACKBOX TO BE INSTALLED BY THE DIVISION 26 CONTRACTOR.
5. IP DIGITAL CAMERA LOCATIONS SHALL BE FURNISHED WITH (2) DATA CABLES TERMINATED ON SURFACE MOUNT JACK INSTALLED IN JUNCTION BOX. DATA CONNECTIONS FURNISHED AND INSTALLED BY 271000 CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. FUTURE CAMERAS FURNISHED AND INSTALLED BY THE DISTRICT.

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DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison | Date

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LICENSED ARCHITECT ROBERT D. WEBB R.A. C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

COMMUNICATION LEGEND & NOTES

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.0

REGISTERED PROFESSIONAL ENGINEER ROBERT D. GEESE-HANCOCK NO.E 14781 Exp. 6-30-2021 ELECTRICAL STATE OF CALIFORNIA

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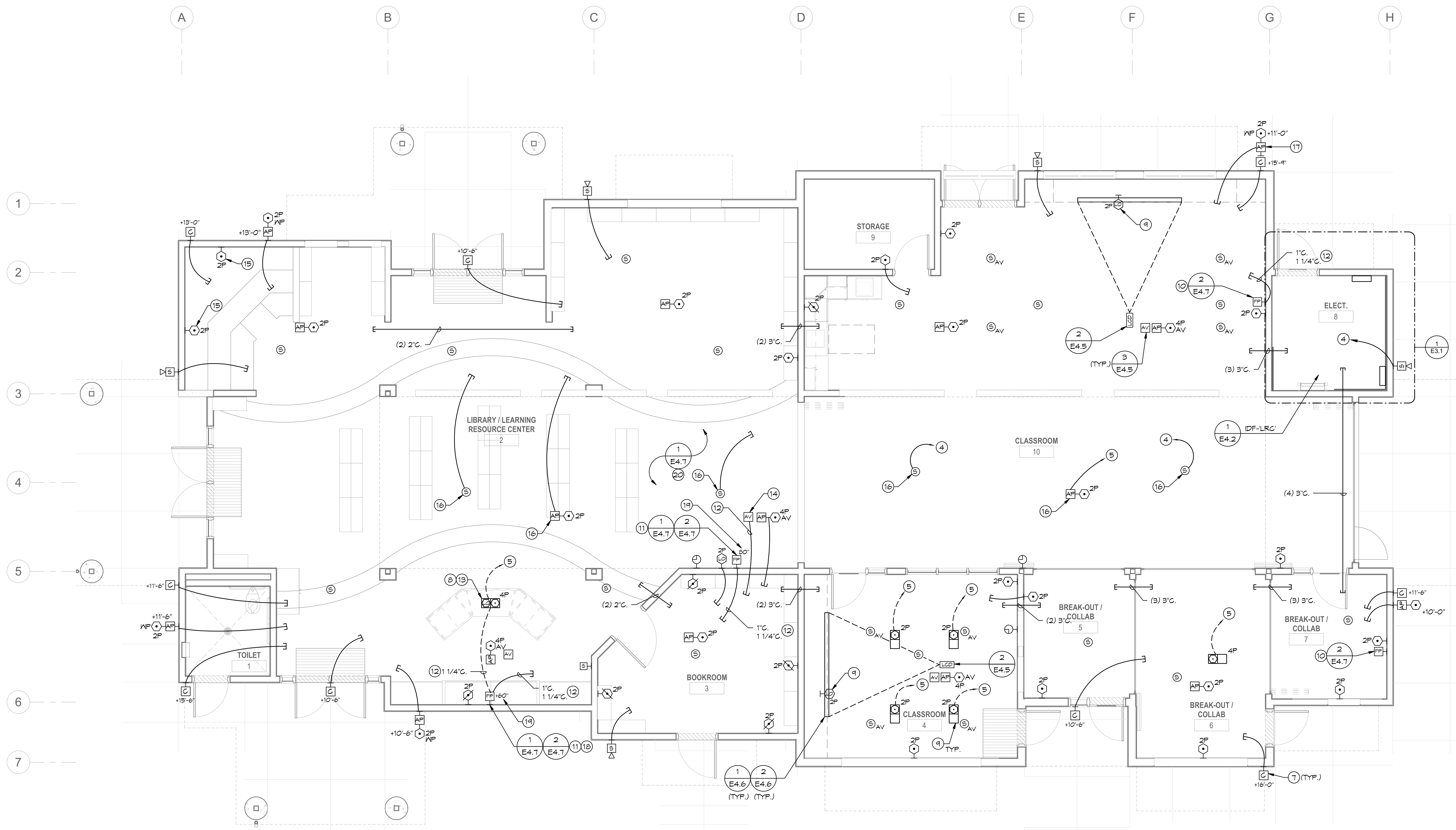
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

GENERAL NOTES:

1. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES.
2. REFERENCE E4 AND E8 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
3. REFERENCE E4 SERIES SHEETS FOR TYPICAL COMMUNICATION SYSTEMS RISER DIAGRAM.
4. REFERENCE RISER DIAGRAMS FOR TYPICAL CONDUIT SIZES AND ROUTINGS.
5. LOCATION OF PROJECTOR AND OTHER AUDIO-VISUAL EQUIPMENT IS DIAGRAMMATICAL. EXACT LOCATION OF EQUIPMENT TO BE FIELD VERIFIED PRIOR TO INSTALLATION. LOCATION OF PROJECTOR AND PROJECTOR MOUNT TO BE COORDINATED WITH LOCATION OF SCREEN.
6. REFER TO AUDIO-VISUAL SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS, FOR JUNCTION BOX LOCATIONS, TYPES AND SIZES.

KEY NOTES:

1. 3/4"C. TO BUILDING COMMUNICATIONS BACKBOARD.
2. 1"C. TO BUILDING COMMUNICATIONS BACKBOARD.
3. 1 1/4"C. TO BUILDING COMMUNICATIONS BACKBOARD.
4. 3/4"C. TO BUILDING 'IDF' LOCATION.
5. 1"C. TO BUILDING 'IDF' LOCATION.
6. 1 1/4"C. TO BUILDING 'IDF' LOCATION.
7. FUTURE CAMERA LOCATION, FURNISH JUNCTION BOXES WITH WEATHERPROOF BLANK COVER WITH GASKETS (BY 27 10 00 CONTRACTOR).
8. SEE SHEET E3.1 FOR FLOOR BOX TYPE AND REQUIREMENTS.
9. PROVIDE 2-PORT DATA OUTLET AND AUDIO-VISUAL INPUT WALL PLATE ON TEACHING WALL @+26" AFF. COORDINATE LOCATION WITH POWER OUTLET. DATA AND AUDIO-VISUAL WALLPLATES SHALL BE FURNISHED WITH SEPARATE JUNCTION BOXES PER LEGEND. COORDINATE WITH DISTRICT PROJECT MANAGER.
10. FUTURE FLAT PANEL LOCATION. SEE DETAIL DRAWINGS FOR HEIGHT OF DATA OUTLET, AV J-BOX, POWER AND BACKING IN WALL. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. NO FLAT PANEL MOUNT IS REQUIRED.
11. LARGE FLAT PANEL AV SYSTEM IN LIBRARY. SYSTEM SHALL BE FURNISHED WITH SOUND BAR FOR AUDIO SUPPORT AND MICRO PC COMPUTER FOR NETWORK ACCESS OPERATION. SEE DRAWING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. PROVIDE 1 1/4" CONDUIT FOR CLASSROOM AUDIO-VISUAL SYSTEM CABLING. STUB CONDUIT INTO ACCESSIBLE CEILING UNLESS OTHERWISE NOTED.
13. PROVIDE 4-PORT DATA OUTLET AND AUDIO-VISUAL INPUT WALLPLATE AT RESOURCE DESK IN FLOOR BOX. COORDINATE LOCATION WITH POWER. DATA AND AUDIO-VISUAL WALLPLATES SHALL BE FURNISHED WITH SEPARATE J-BOXES PER LEGEND.
14. AUDIO-VISUAL ENCLOSURE FOR FLAT PANEL AV SYSTEM INSTALLED IN ACCESSIBLE CEILING CLOUD. COORDINATE EXACT LOCATION WITH OTHER TRADES AND ARCHITECTURAL DRAWINGS.
15. DATA OUTLET @ 18" ABOVE TOP TIER OF SEATING RISER.
16. DEVICE LOCATED IN ACCESSIBLE CEILING ARCHITECTURAL CLOUD. COORDINATE EXACT PLACEMENT WITH OTHER TRADES.
17. MOUNT WAP DIRECTLY BELOW CAMERA AT HEIGHT SHOWN.
18. INSTALL FLAT PANEL MOUNT @+64" AFF TO CENTER OF MOUNT. MOUNT MUST BE CENTERED BETWEEN TALL CABINETS ON EACH SIDE. REFER TO ARCHITECTURAL DRAWINGS, ELEVATIONS AND CABINET DETAILS.
19. SIZE OF FLAT PANEL, NOT MOUNTING HEIGHT.
20. PROVIDE LIBRARY WITH (2) FULLY FUNCTIONAL FLAT PANEL AUDIO-VISUAL SYSTEMS AS INDICATED IN LIBRARY AUDIO-VISUAL SYSTEM DIAGRAM. REFER TO DETAIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



LEVEL 1 FLOOR PLAN - COMMUNICATIONS | 1/4" = 1'-0" | 1

Revison | Date

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SANTEE SCHOOL DISTRICT

LEVEL 1 FLOOR PLAN - COMMUNICATIONS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.1

REGISTERED PROFESSIONAL ENGINEER NO.E 14781 Exp. 6-30-2021 ELECTRICAL STATE OF CALIFORNIA

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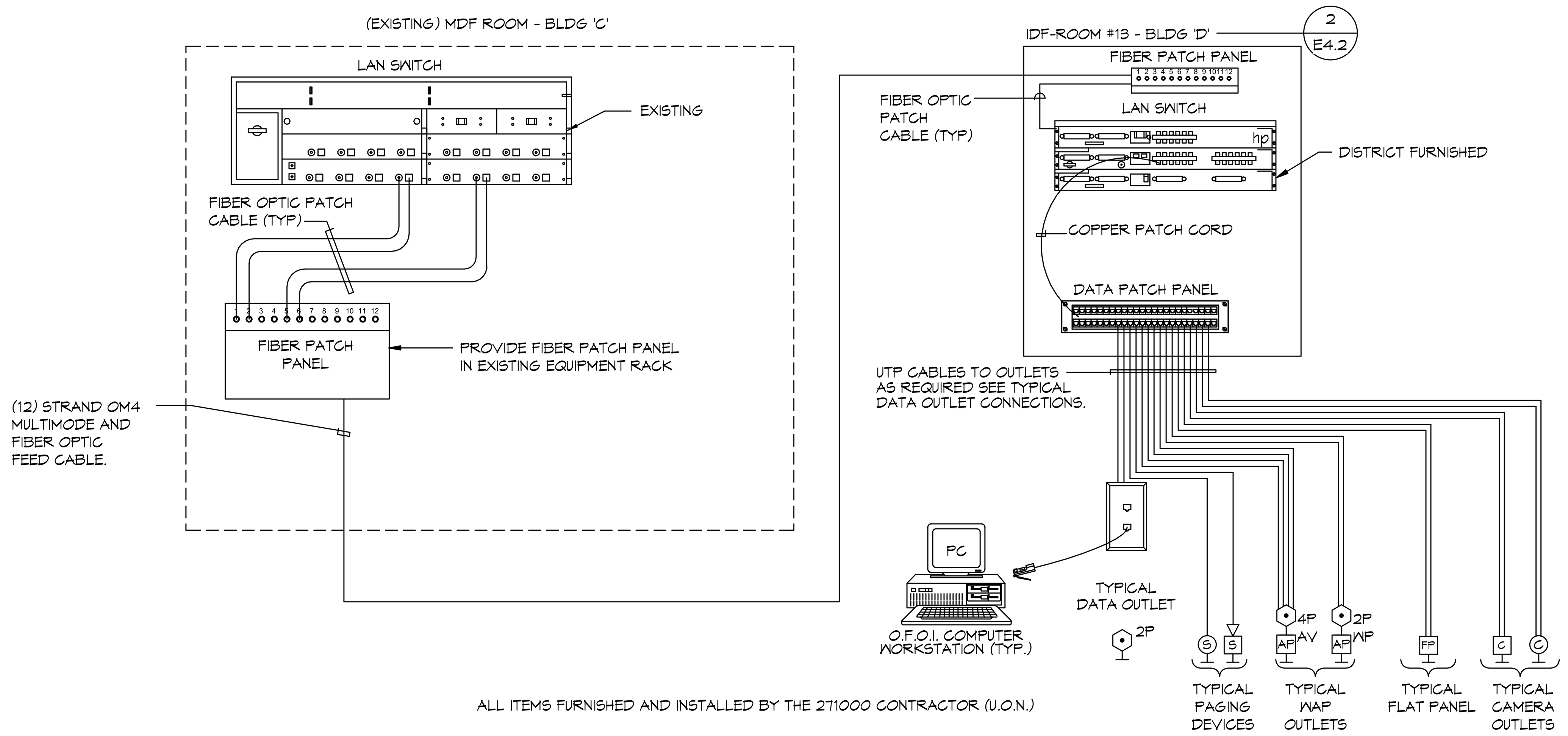
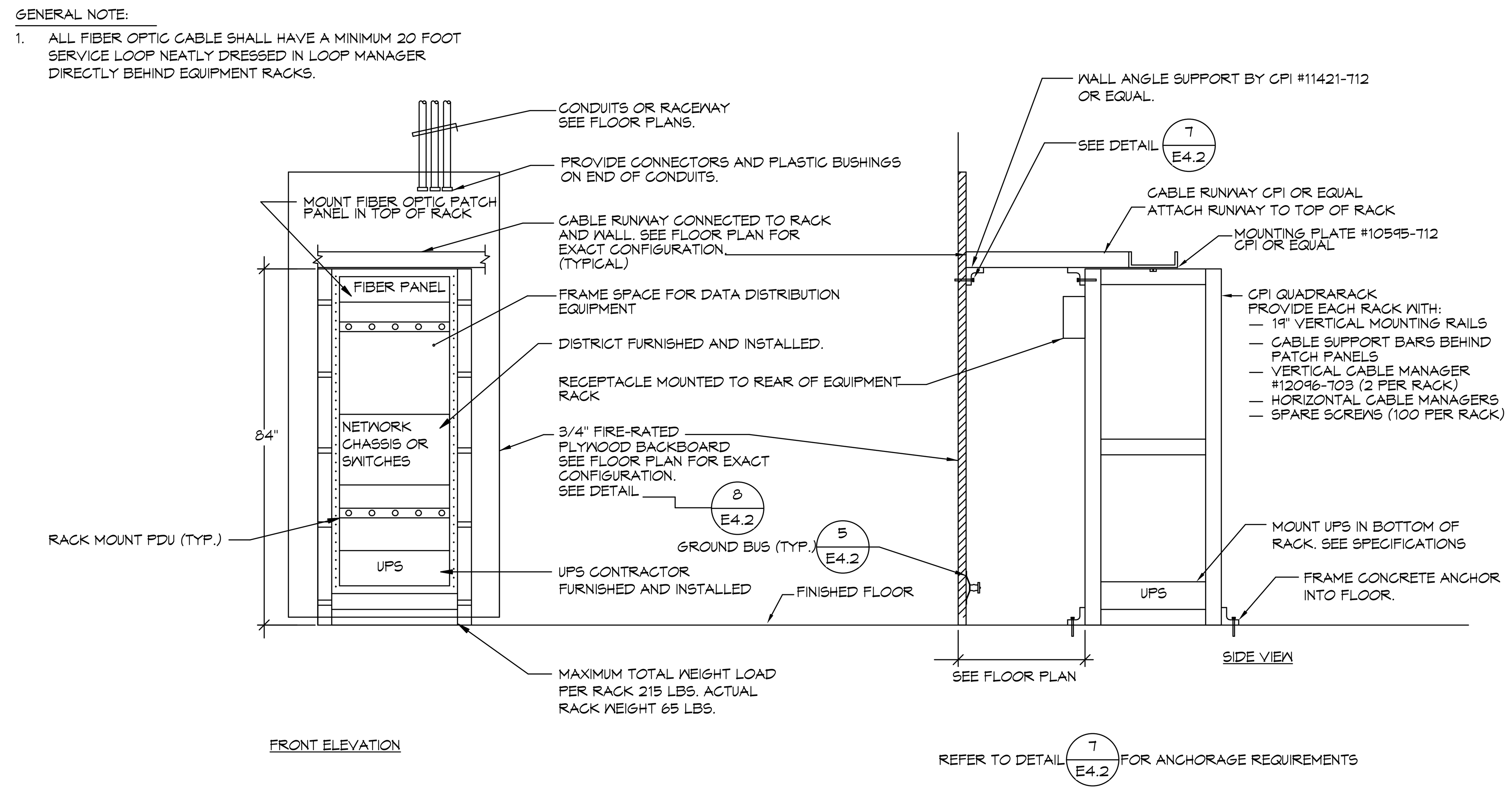
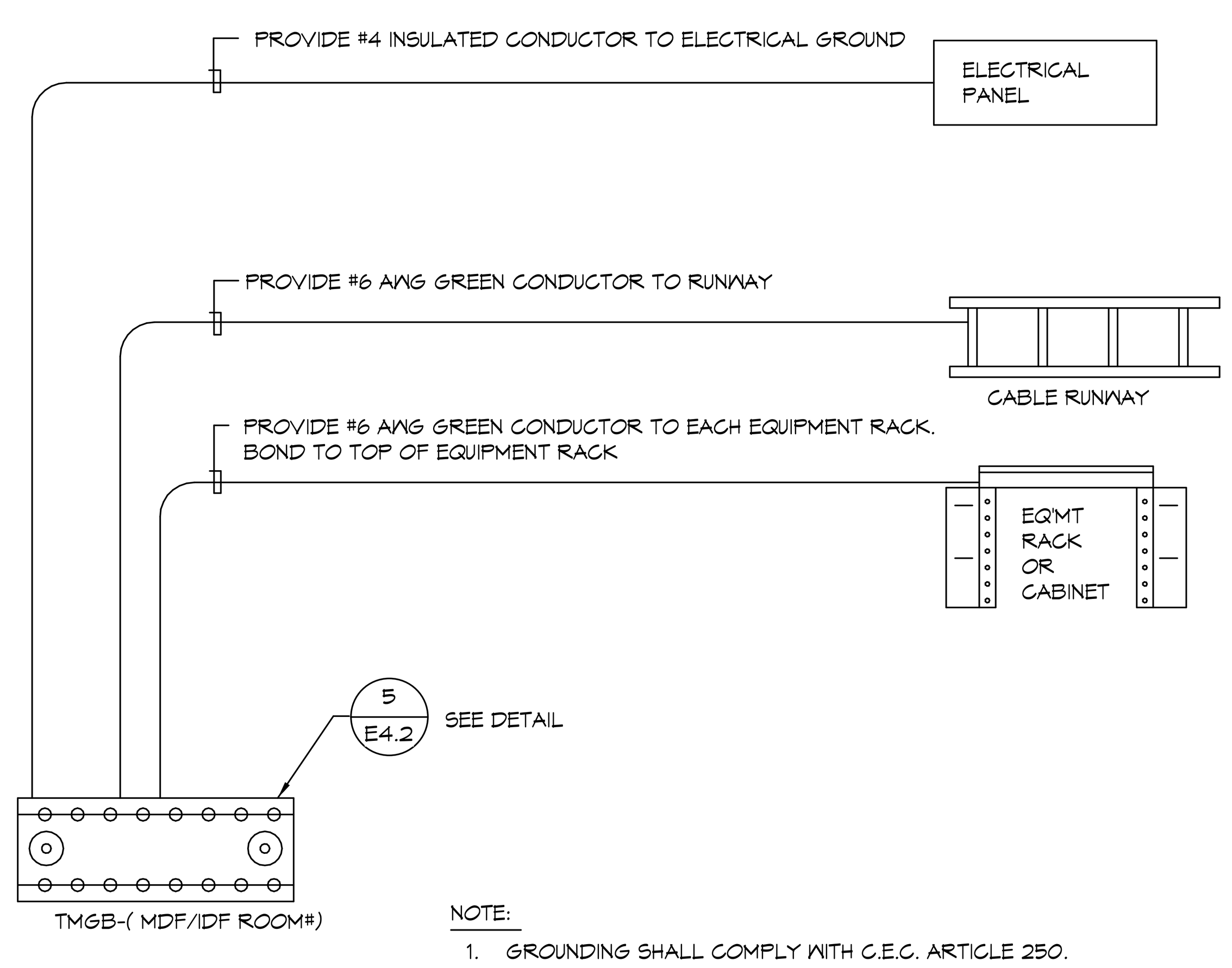


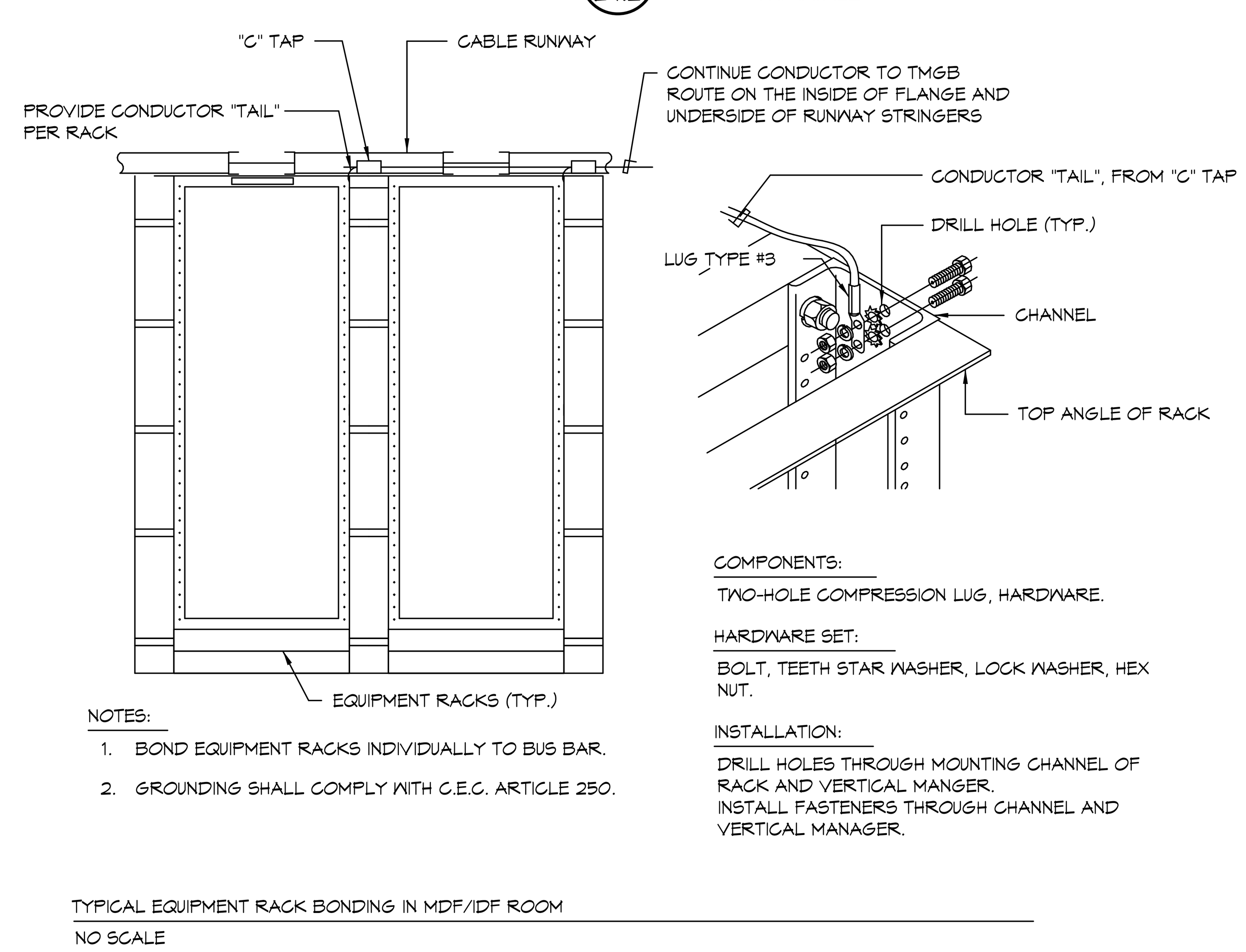
TYPICAL RISER DIAGRAM
NO SCALE
1
E4.2



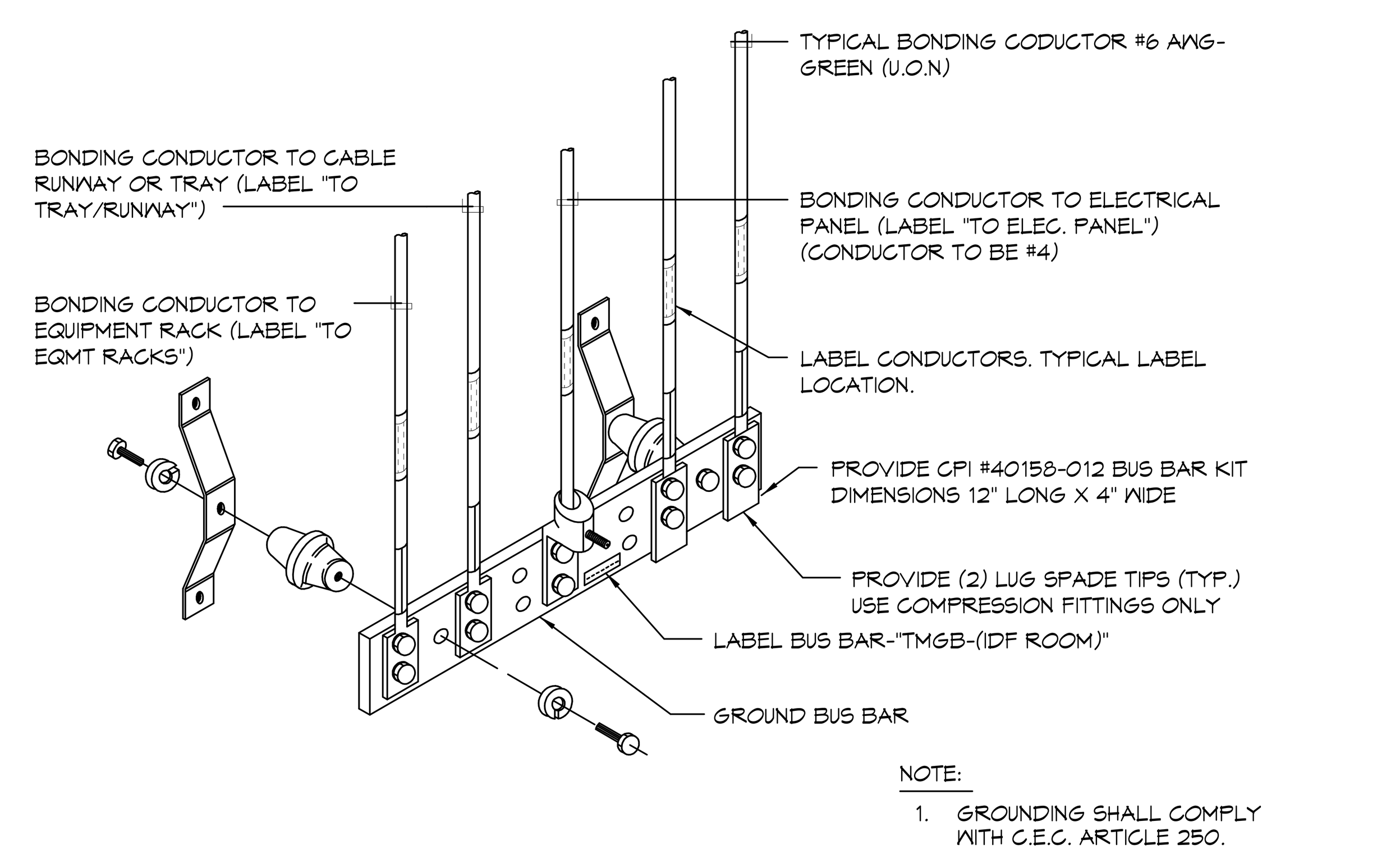
DATA DISTRIBUTION FRAME DETAIL - IDF RACK DETAIL 4-PORT RACK
NO SCALE
2
E4.2



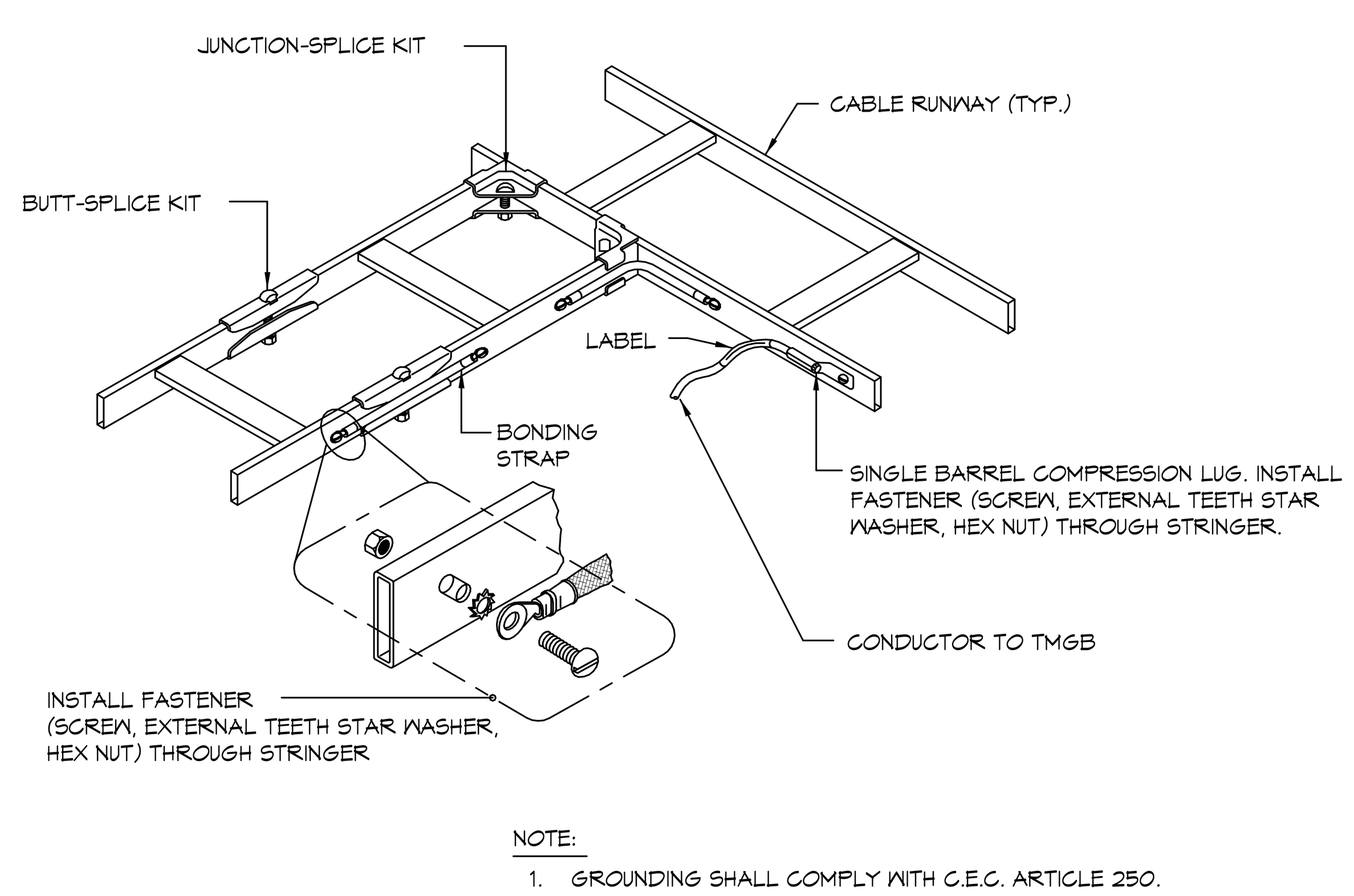
TYPICAL MDF/IDF ROOM GROUNDING DETAIL
NO SCALE
3
E4.2



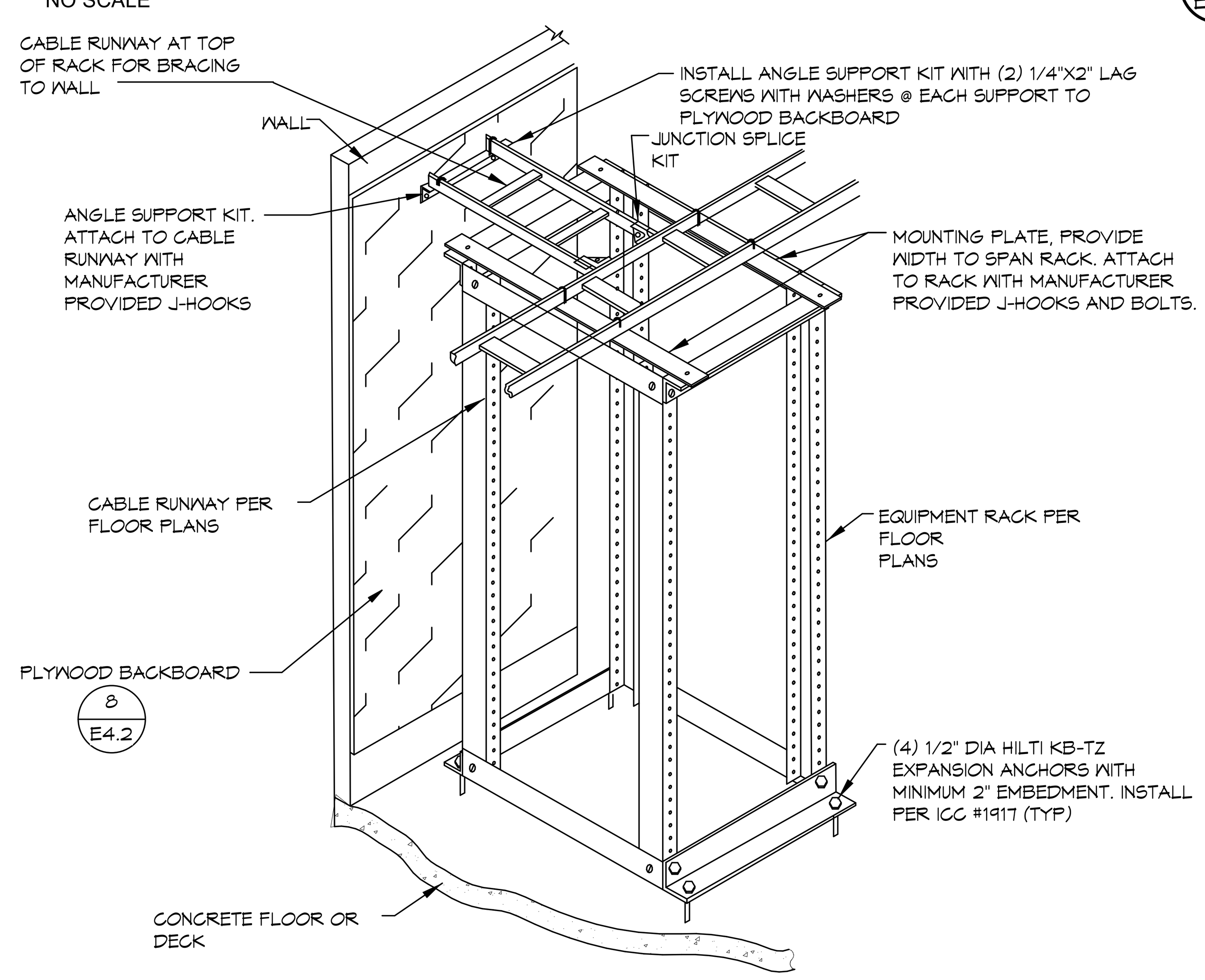
TYPICAL EQUIPMENT RACK BONDING IN MDF/IDF ROOM
NO SCALE
4
E4.2



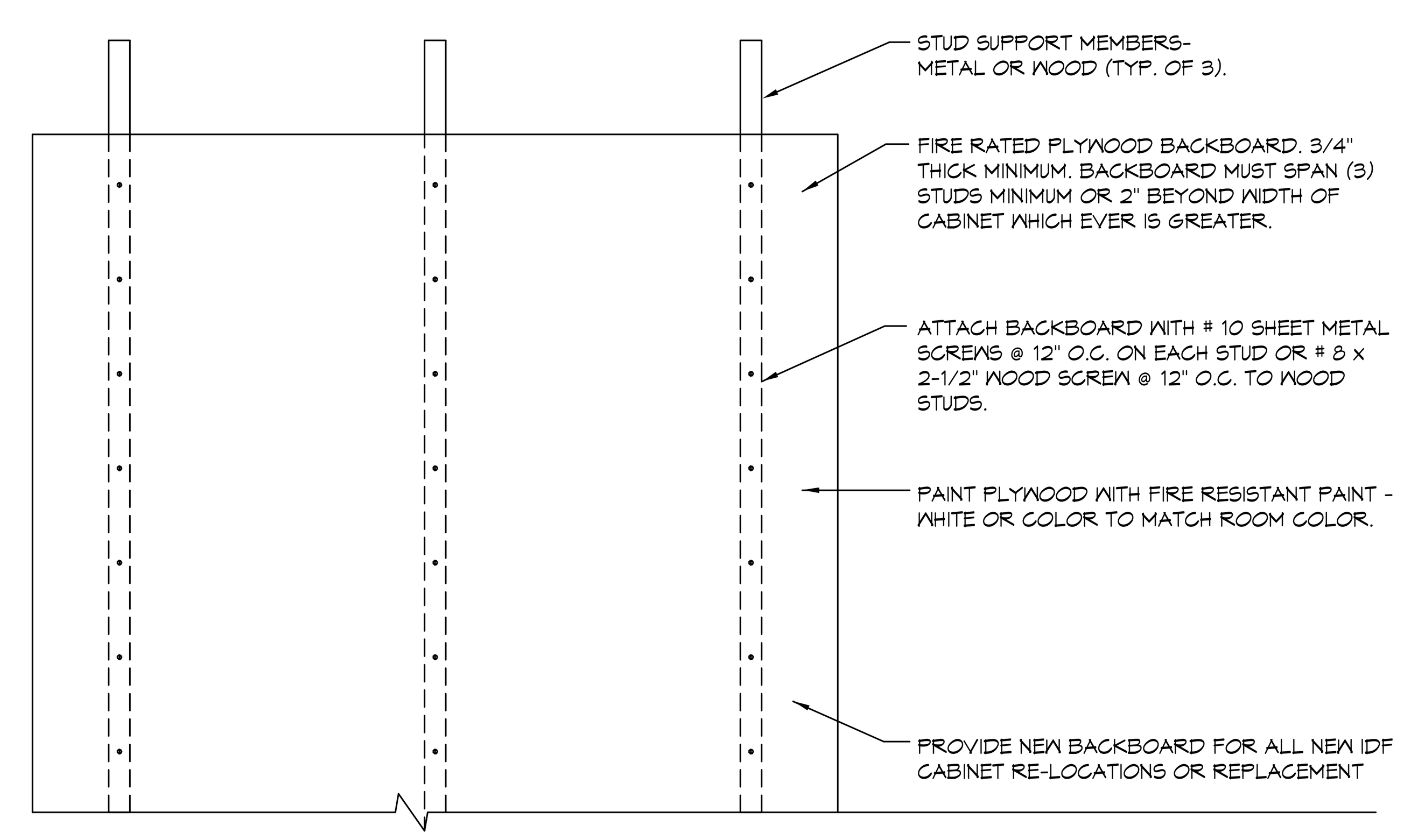
DATA/COMMUNICATIONS GROUNDING DETAIL MDF/IDF ROOM
NO SCALE
5
E4.2



TYPICAL CABLE RUNWAY BONDING IN MDF/IDF ROOM
NO SCALE
6
E4.2



4 POST EQUIPMENT RACK ANCHORAGE
NO SCALE
7
E4.2



TYPICAL BACKBOARD DETAIL
NO SCALE
8
E4.2

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OCTOBER 31, 2021
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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

COMMUNICATION RISER DIAGRAM AND DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.2

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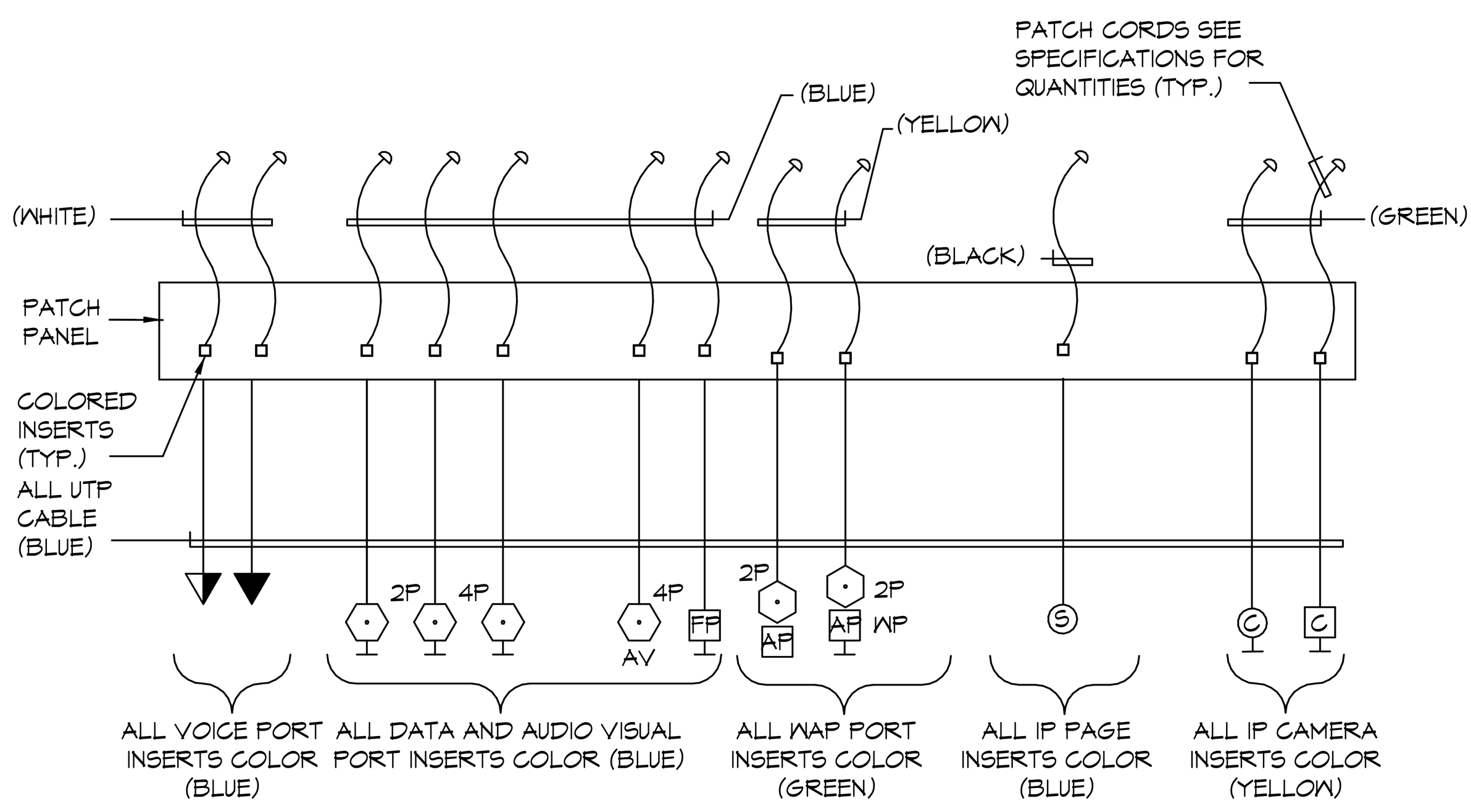
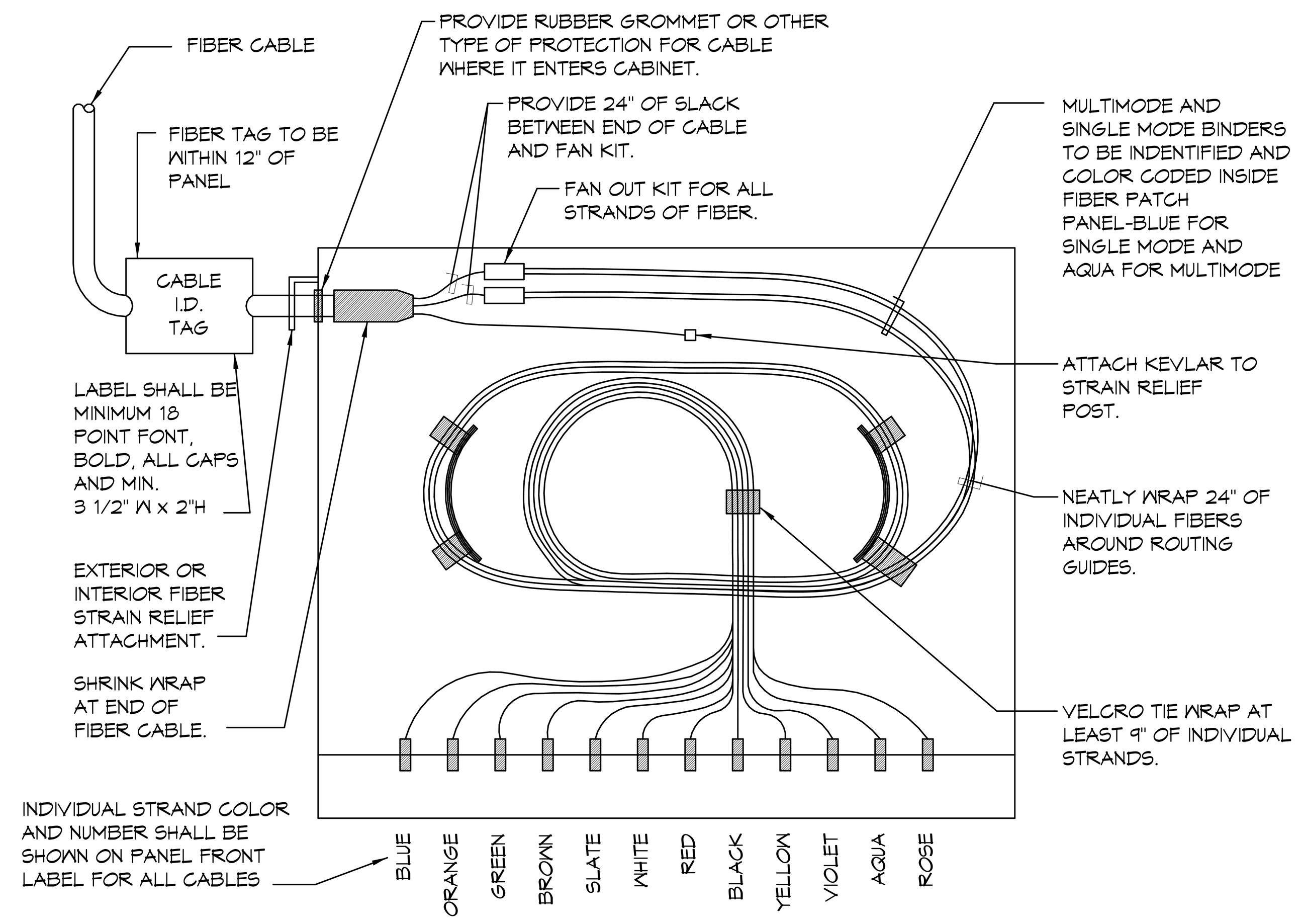


NOTE: CONFIRM ALL COLOR REQUIREMENTS WITH DISTRICT IT DEPARTMENT PRIOR TO ORDERING OR INSTALLATION.

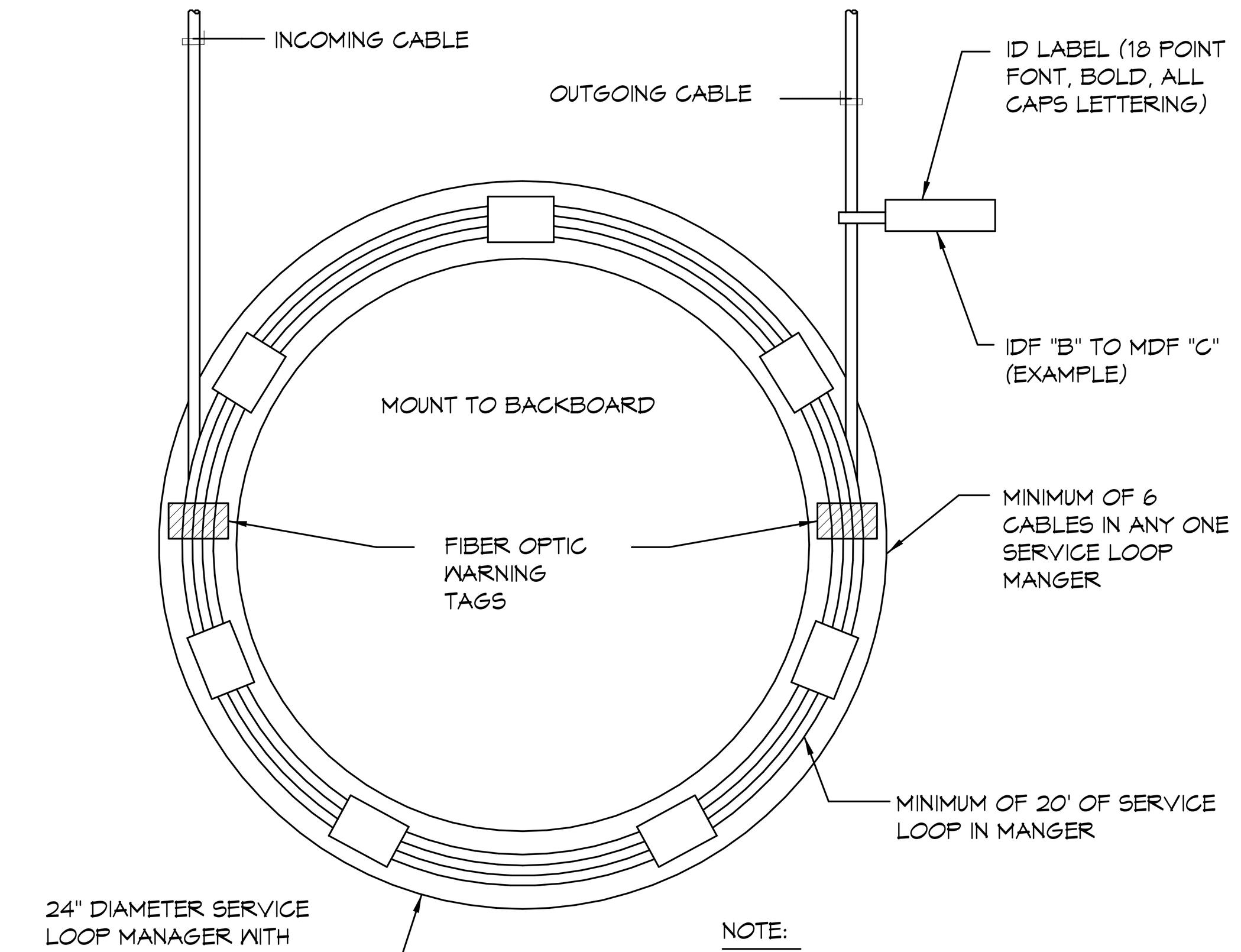
TYPICAL CABLE/INSERT COLOR SCHEME DETAIL

NO SCALE (1 / E4.3)



TYPICAL FIBER TERMINATION DETAIL

NO SCALE (2 / E4.3)

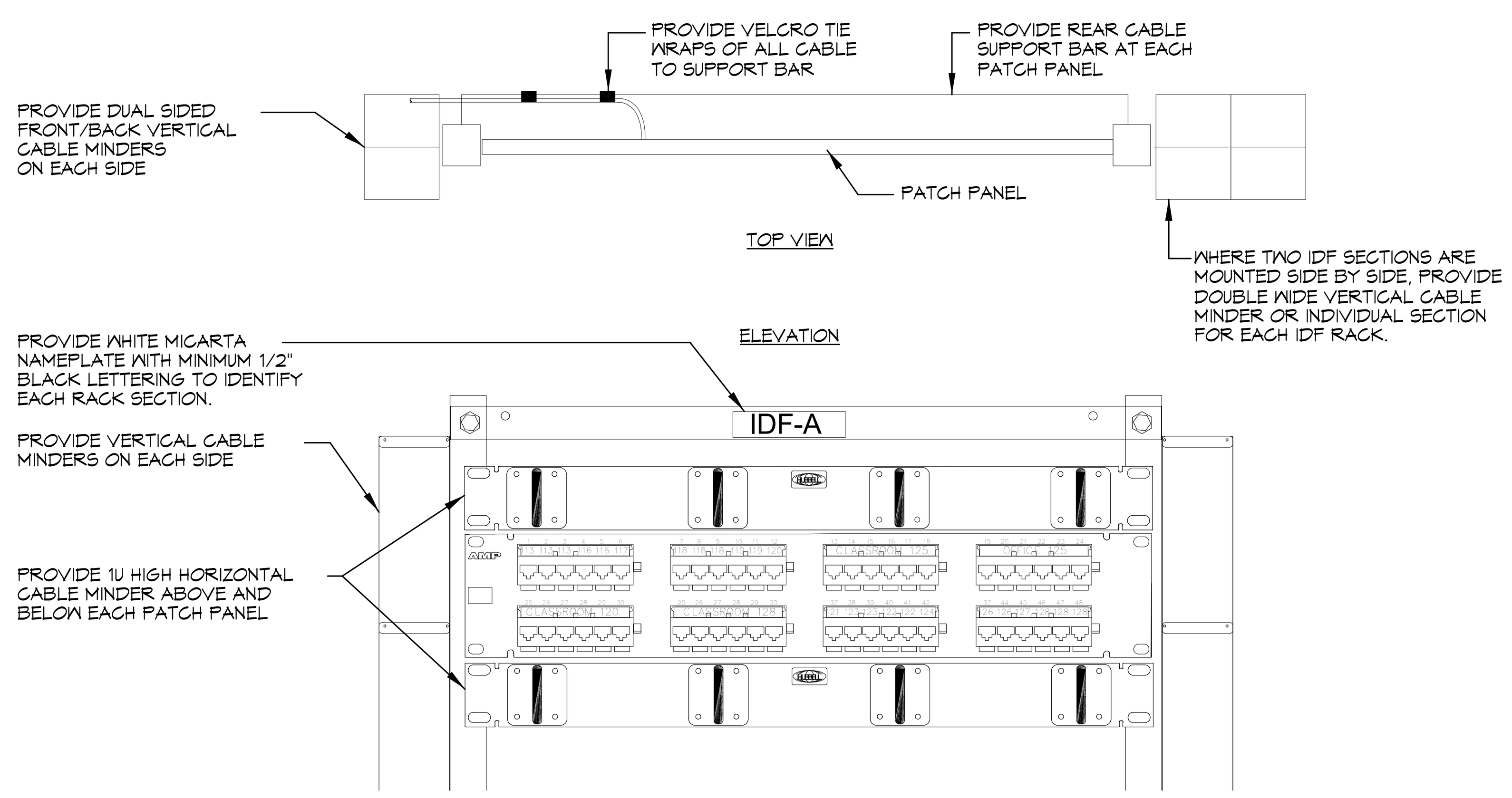


NOTE:

PROVIDE FIBER SERVICE LOOP MANAGER IN ALL MDF ROOMS AND IDF CLOSETS. MANAGER NOT REQUIRED AT SMALL WALL MOUNT IDF CABINET.

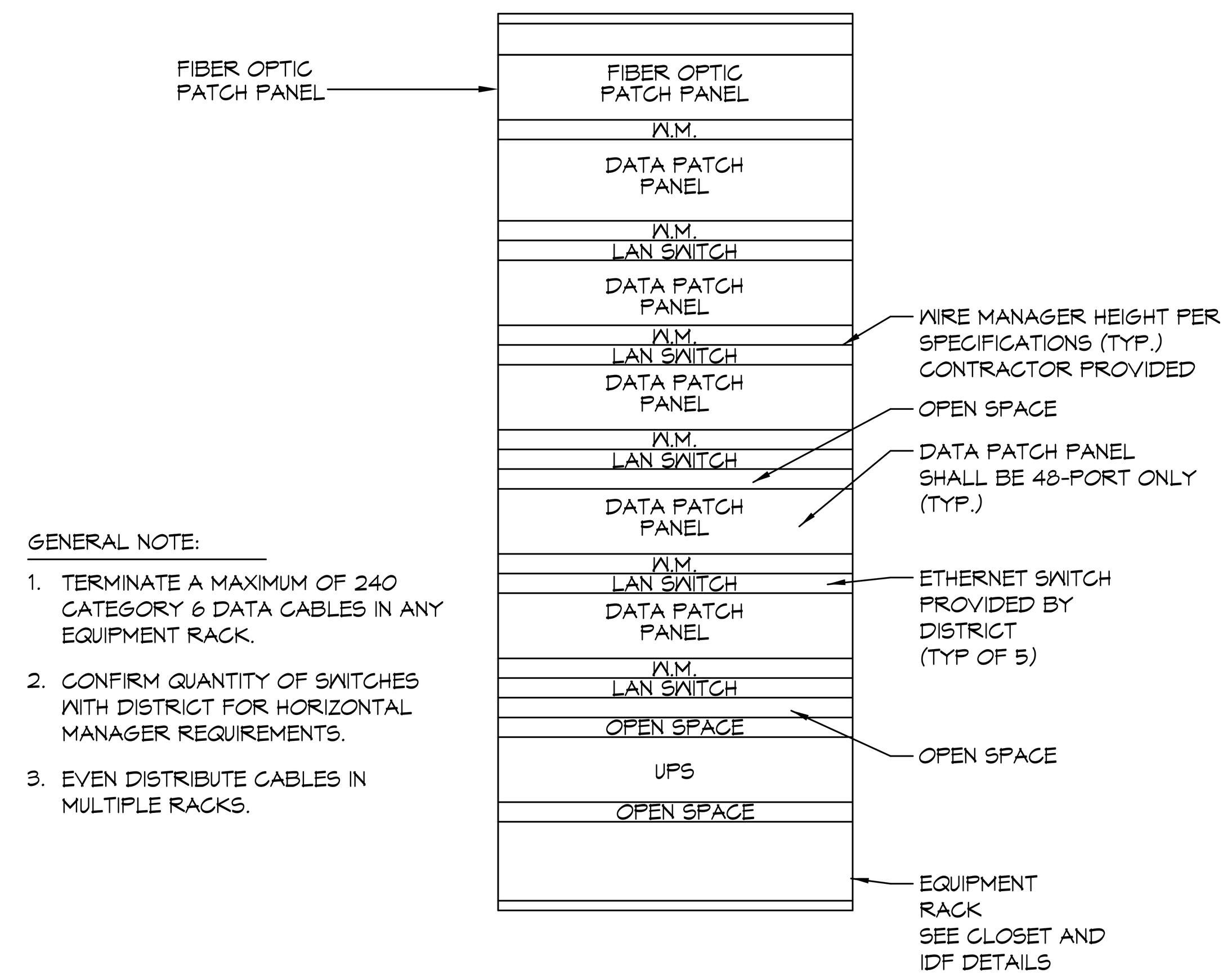
TYPICAL FIBER OTIC FEED SERVICE LOOP DETAIL

NO SCALE (3 / E4.3)



TYPICAL IDF/MDF LABELING AND CABLE SUPPOT DETAIL

NO SCALE (4 / E4.3)

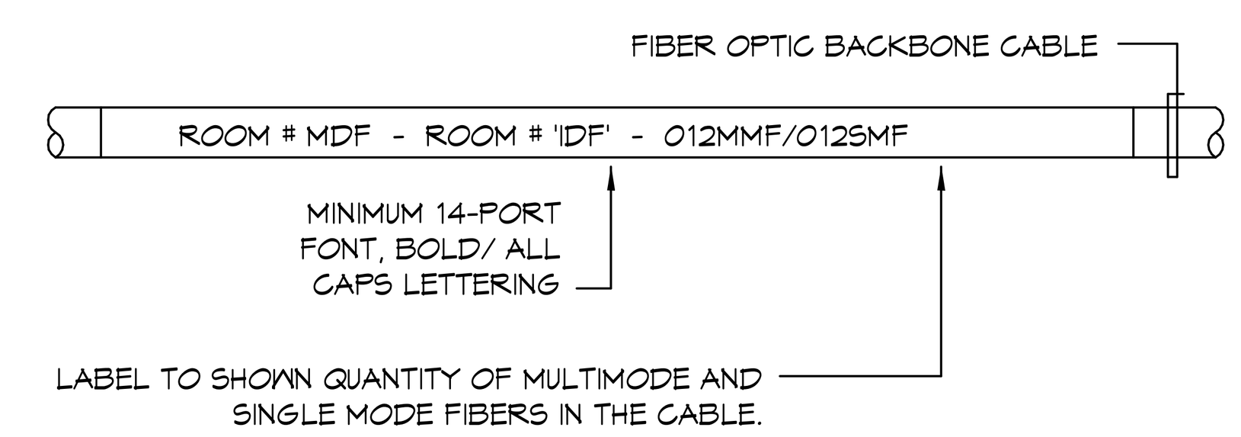


GENERAL NOTE:

1. TERMINATE A MAXIMUM OF 240 CATEGORY 6 DATA CABLES IN ANY EQUIPMENT RACK.
2. CONFIRM QUANTITY OF SWITCHES WITH DISTRICT FOR HORIZONTAL MANAGER REQUIREMENTS.
3. EVEN DISTRIBUTE CABLES IN MULTIPLE RACKS.

MAXIMUM EQUIPMENT RACK POPULATON DETAIL

NO SCALE (5 / E4.3)

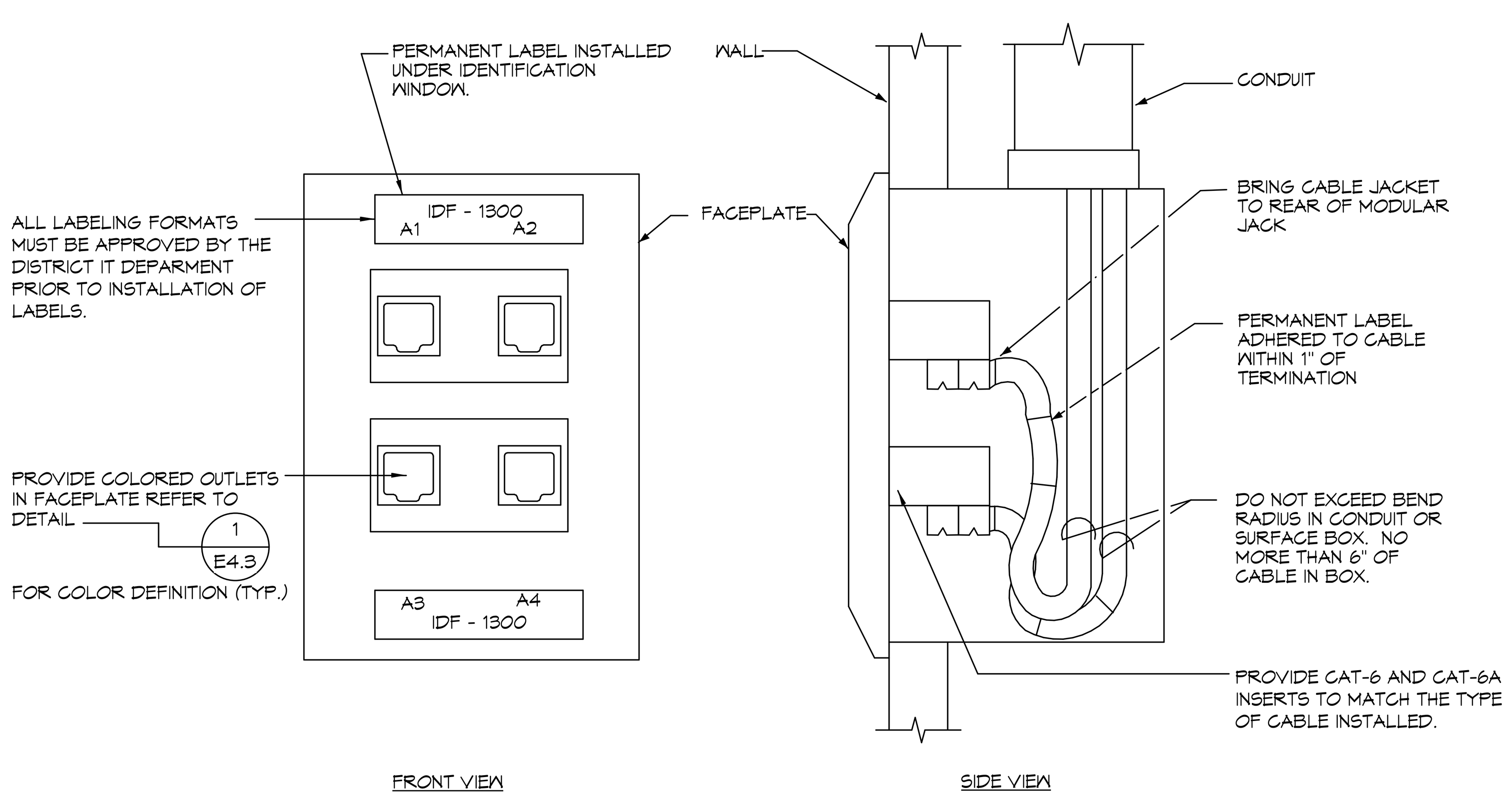


NOTES:

1. LABEL BOTH ENDS OF BACKBONE CABLES AND IN EACH ROOM IN WHICH THE CABLE ROUTES THROUGH.
2. ROOM DESIGNATIONS SHOWN IN DETAIL ARE AN EXAMPLE AND MAY NOT REFLECT ACTUAL ROOM INFORMATION.

TYPICAL BACKBONE LABELING DETAIL

NO SCALE (6 / E4.3)



TYPICAL FACEPLATE LABELING DETAIL

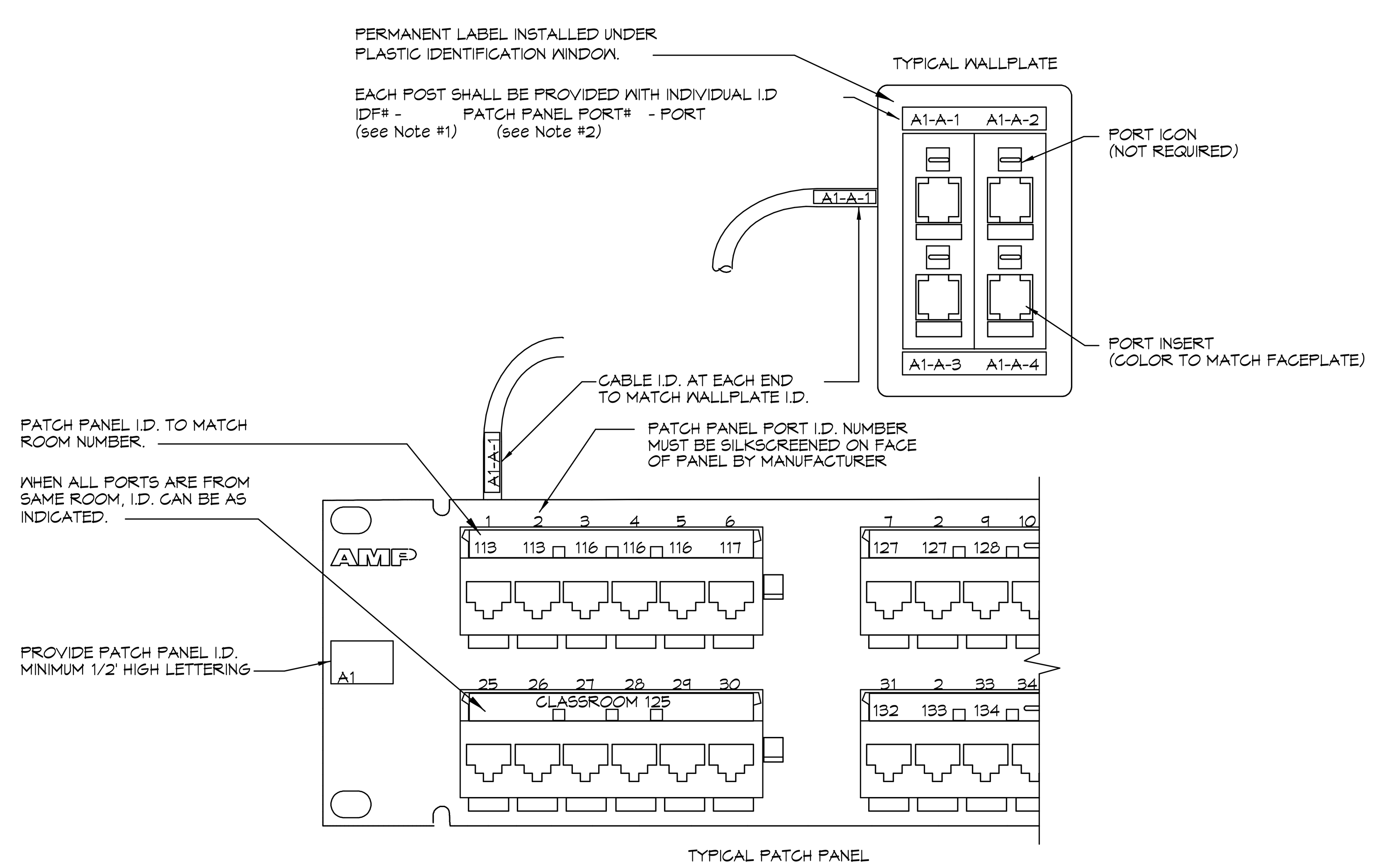
NO SCALE (7 / E4.3)

NOTE:

1. EACH IDF SHALL BE NUMBERED TO MATCH THE BUILDING NAME (IDF-A or IDF-100, FOR BUILDINGS WITH MULTIPLE IDF'S (IDF-A1, A2 or IDF-100A, 100B)
2. NUMBER TO MATCH MANUFACTURER'S PREPRINTED NUMBERS 1-48 ON PATCH PANEL
3. BOTH ROOM NUMBER AND PATCH PANEL PORT ASSIGNMENT MUST BE SHOWN ON PATCH PANEL.

GENERAL NOTES:

1. ALL IDENTIFICATIONS SHALL BE MACHINE MADE, NO HAND WRITTEN LABELS, SEE SPECIFICATIONS, VERIFY IN WRITING ALL ROOM IDENTIFICATIONS WITH ARCHITECT PRIOR TO MAKING ANY LABELS.
2. ALL LABELING FORMATS ARE SUBJECT TO APPROVAL BY THE DISTRICT IT DEPARTMENT. CONTRACTOR MUST CONFIRM ALL LABELING FORMATS PRIOR TO INSTALLATION OF ANY LABELS AND MUST HAVE WRITTEN APROVAL.



TYPICAL DATA NETWORKING LABELING REQUIREMENT

NO SCALE (8 / E4.3)

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Date | Revison | Consultant | Engineer

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LICENSED ARCHITECT ROBERT D. WEBB A.I.A. C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

COMMUNICATION DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.3

REGISTERED PROFESSIONAL ENGINEER NO.E 14781 Exp. 6-30-2021 ELECTRICAL STATE OF CALIFORNIA

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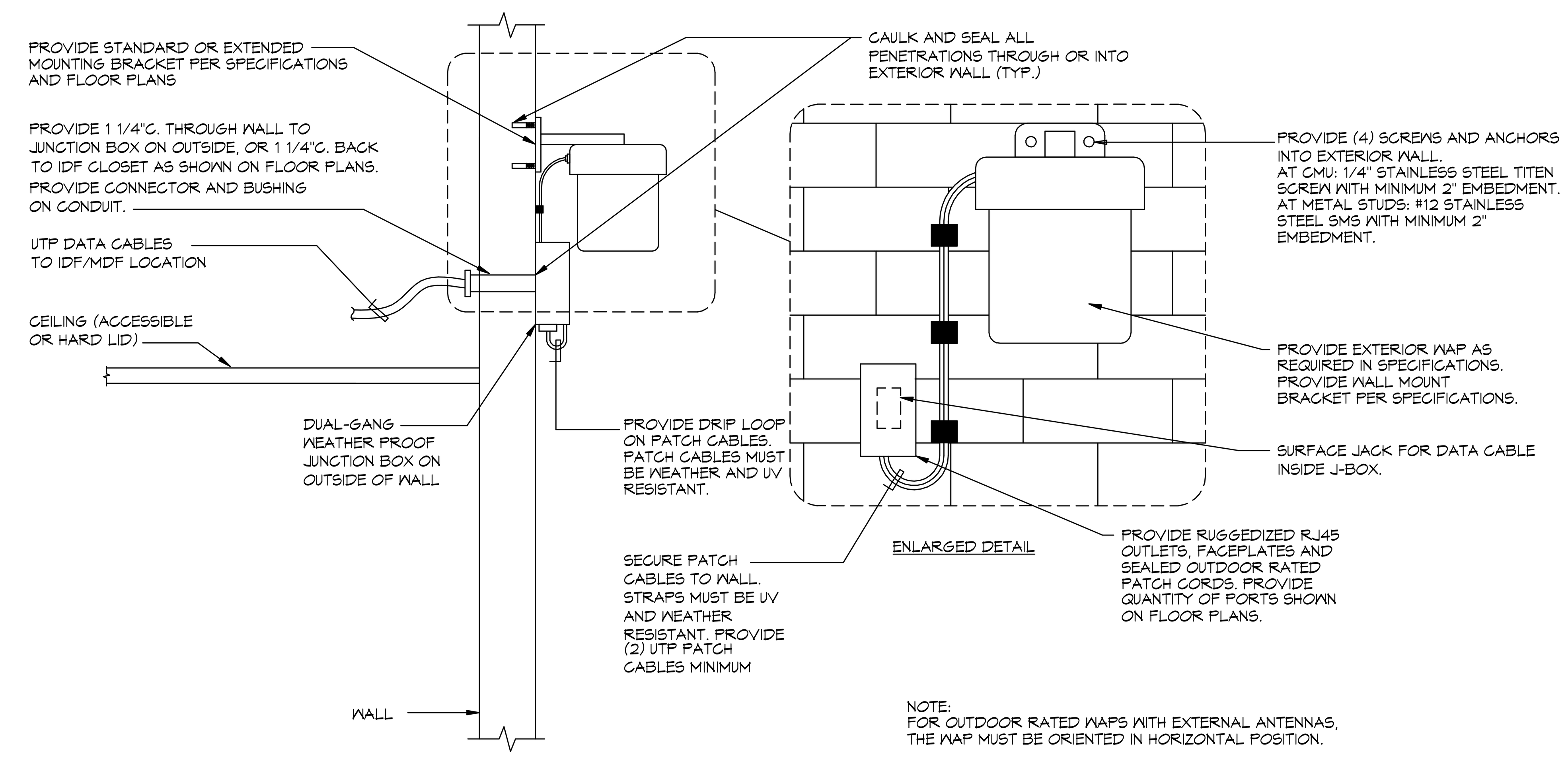
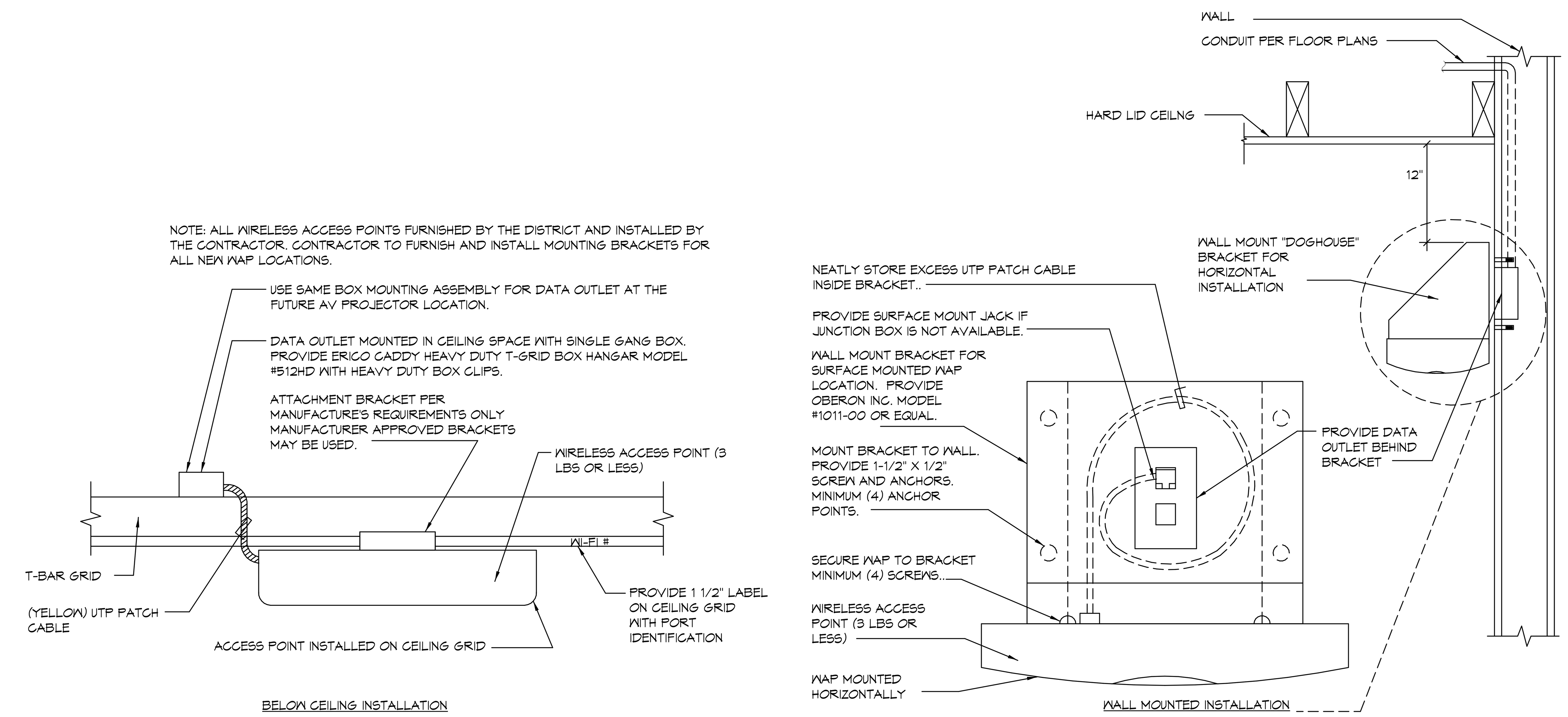


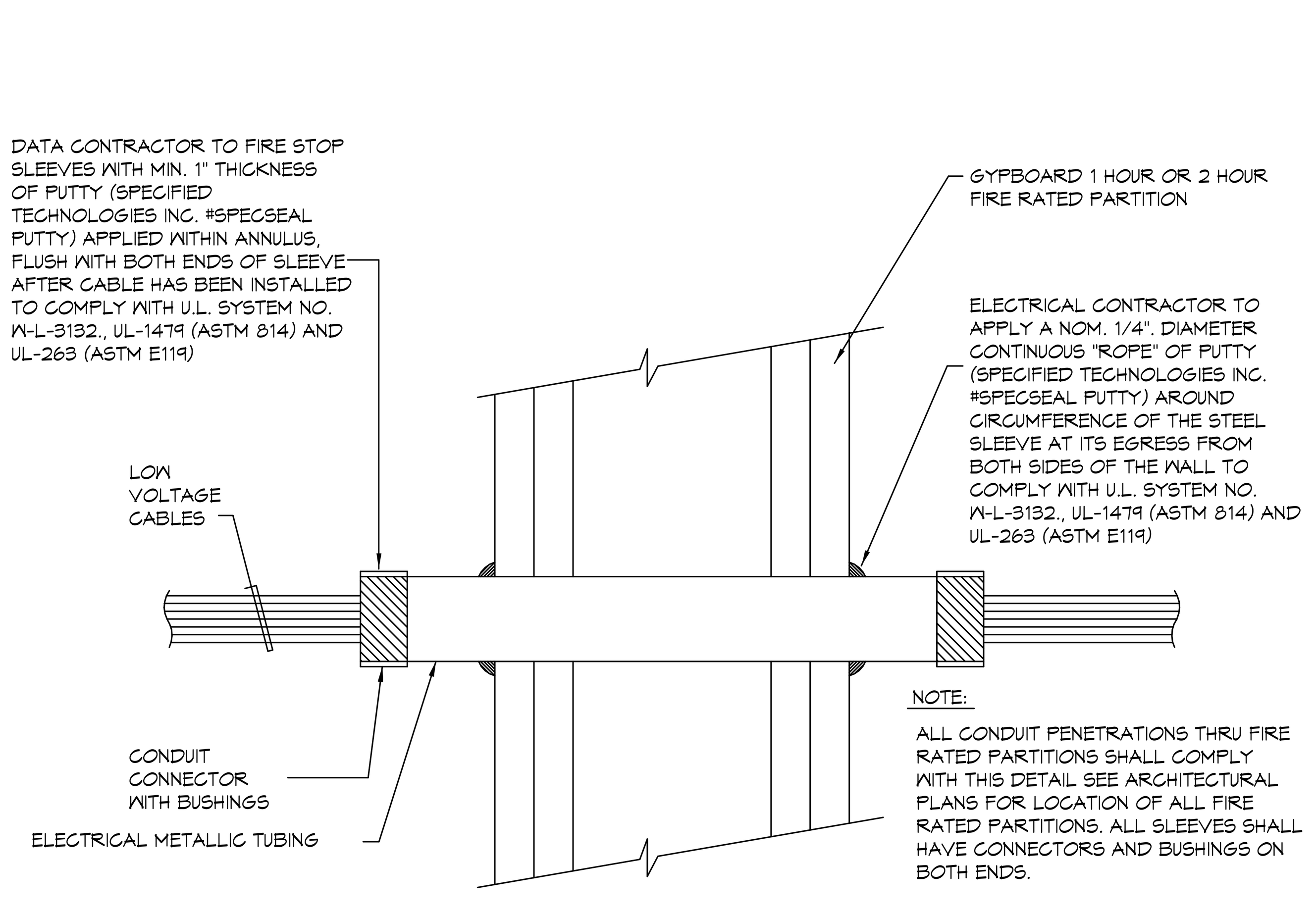
NOTE:
FOR OUTDOOR RATED WAPS WITH EXTERNAL ANTENNAS, THE WAP MUST BE ORIENTED IN HORIZONTAL POSITION.

EXTERIOR OUTDOOR RATED WIRELESS ACCESS POINT MOUNTING DETAIL
NO SCALE
1 / E4.4

NOTE: ALL WIRELESS ACCESS POINTS FURNISHED BY THE DISTRICT AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO FURNISH AND INSTALL MOUNTING BRACKETS FOR ALL NEW WAP LOCATIONS.

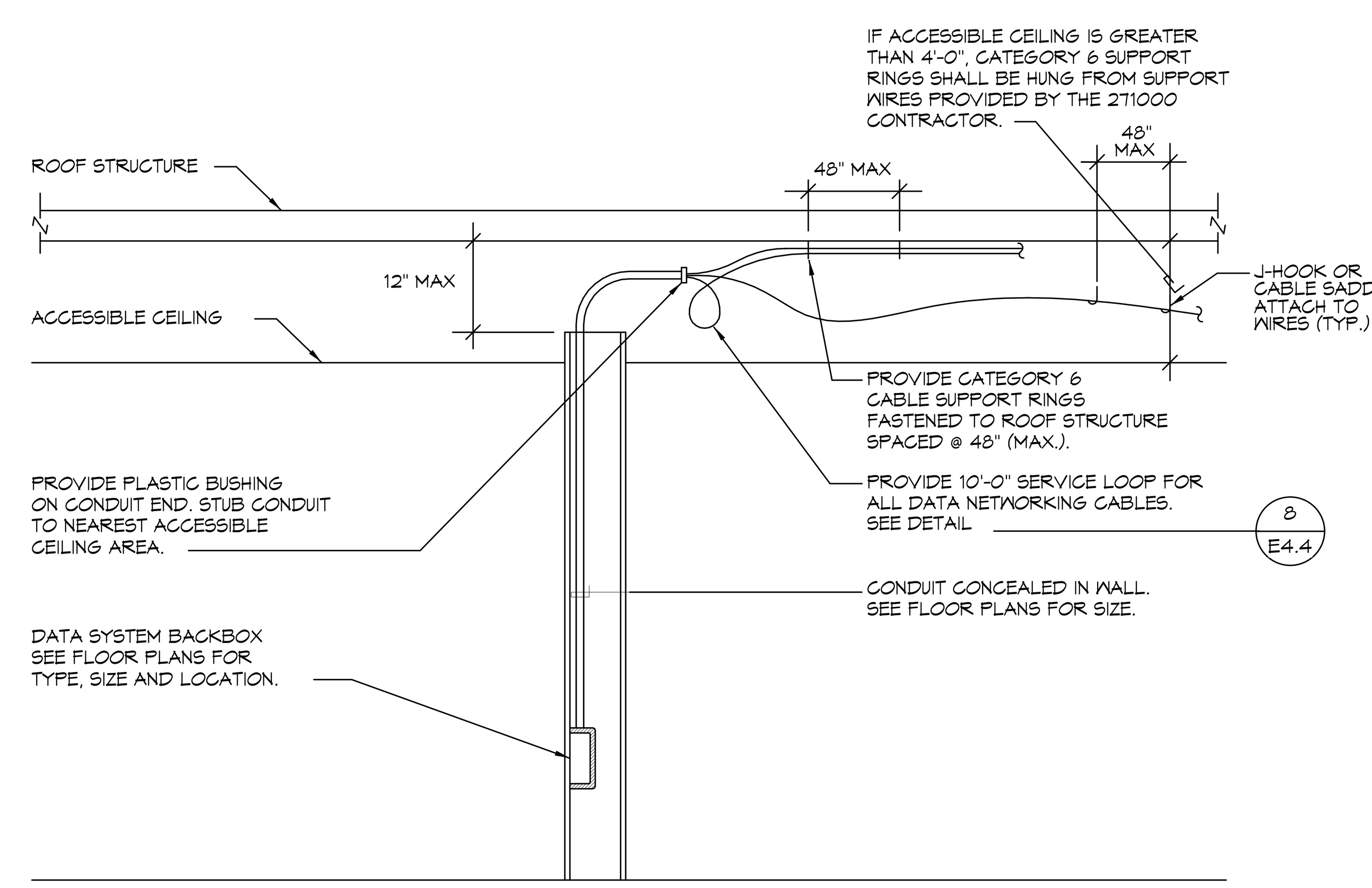


WIRELESS ACCESS POINT ANTENNA MOUNTING DETAILS
NO SCALE
2 / E4.4



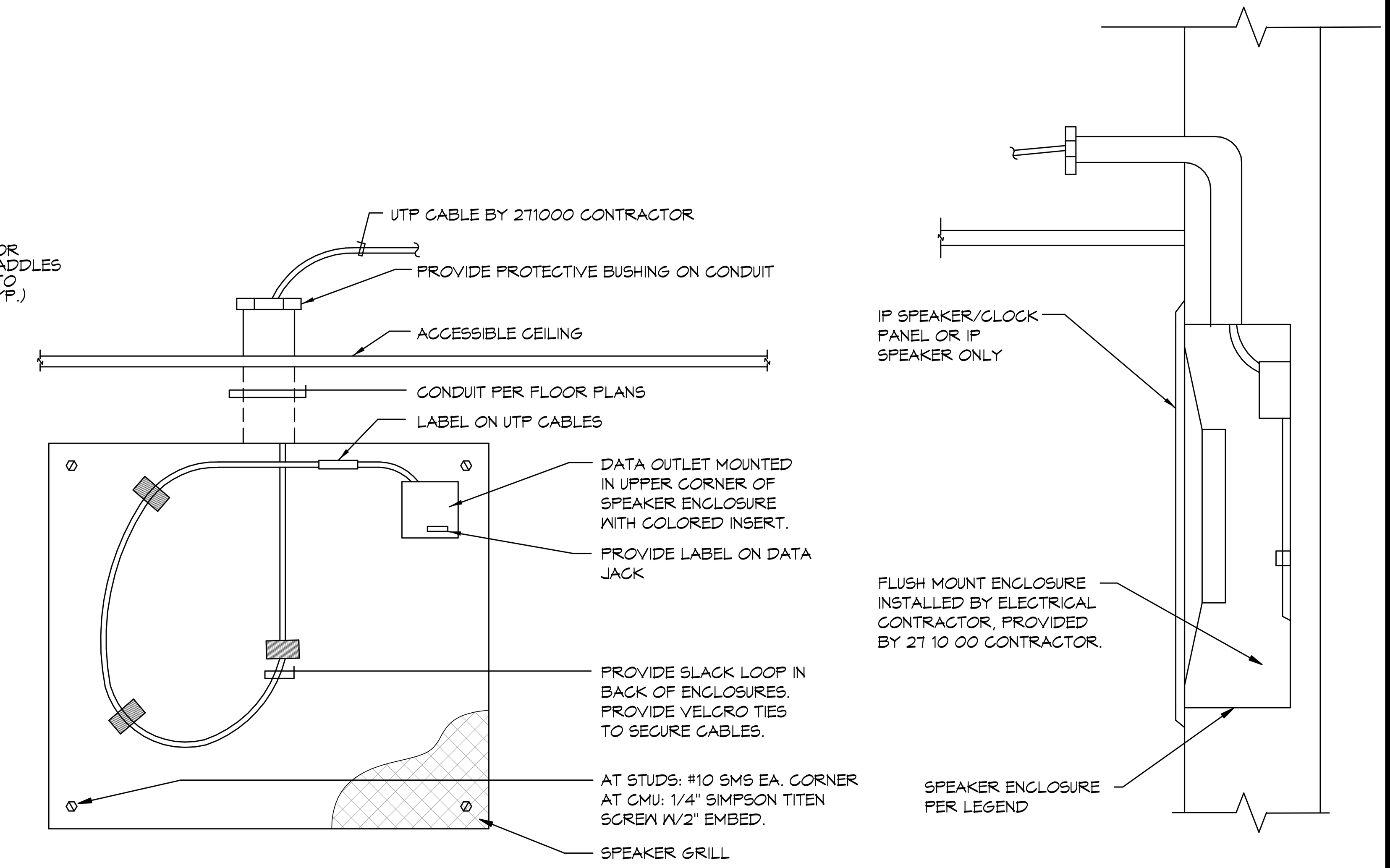
NOTE:
ALL CONDUIT PENETRATIONS THRU FIRE RATED PARTITIONS SHALL COMPLY WITH THIS DETAIL SEE ARCHITECTURAL PLANS FOR LOCATION OF ALL FIRE RATED PARTITIONS. ALL SLEEVES SHALL HAVE CONNECTORS AND BUSHINGS ON BOTH ENDS.

DATA SLEEVE PENETRATION THRU FIRE RATED PARTITIONS
NO SCALE
3 / E4.4

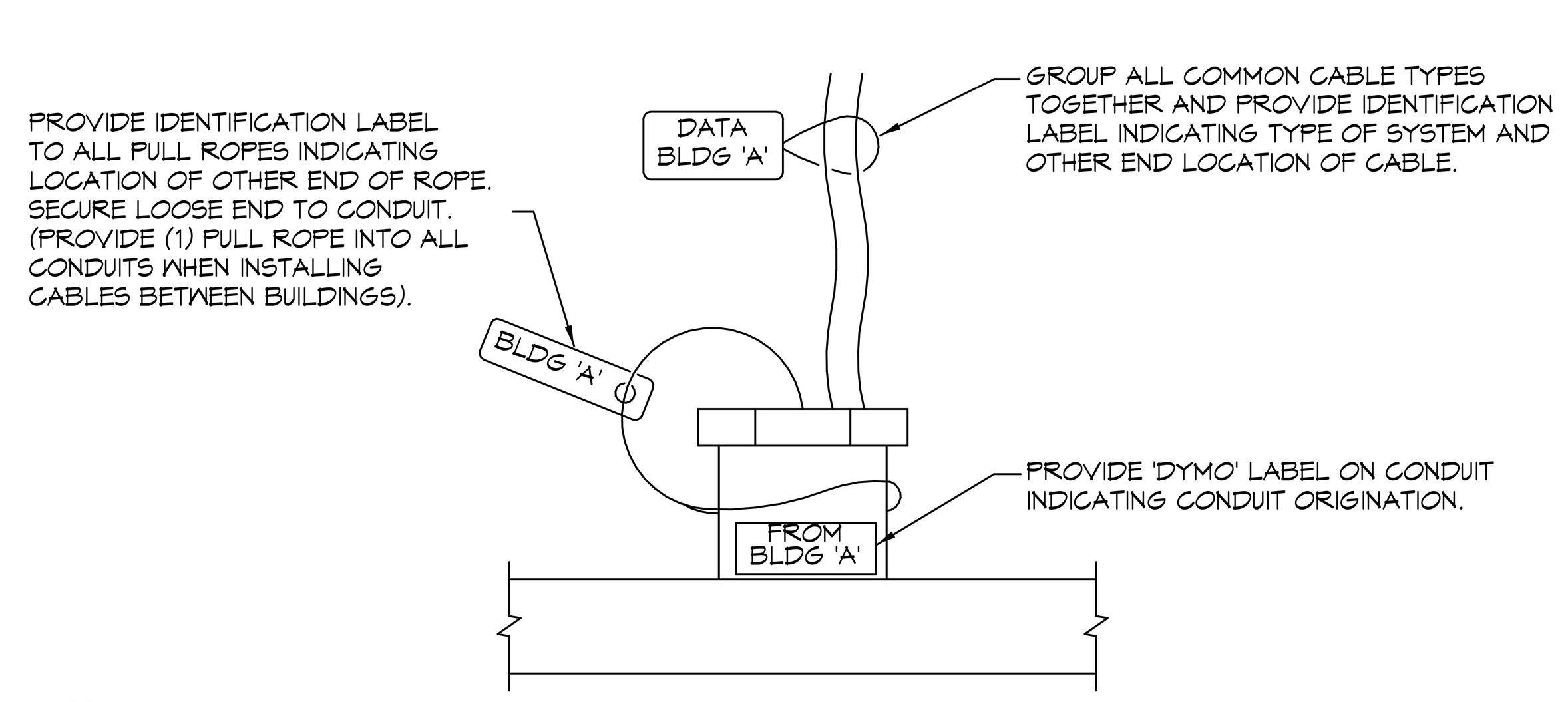


NOTES:
#1 REFERENCE CONTRACT DOCUMENTS FOR WHICH SYSTEMS, AND IN WHAT AREAS OPEN WIRE INSTALLATIONS ARE PERMITTED.

COMMUNICATIONS SYSTEM OPEN WIRE/CONDUUIT STUB TYPICAL
NO SCALE
4 / E4.4



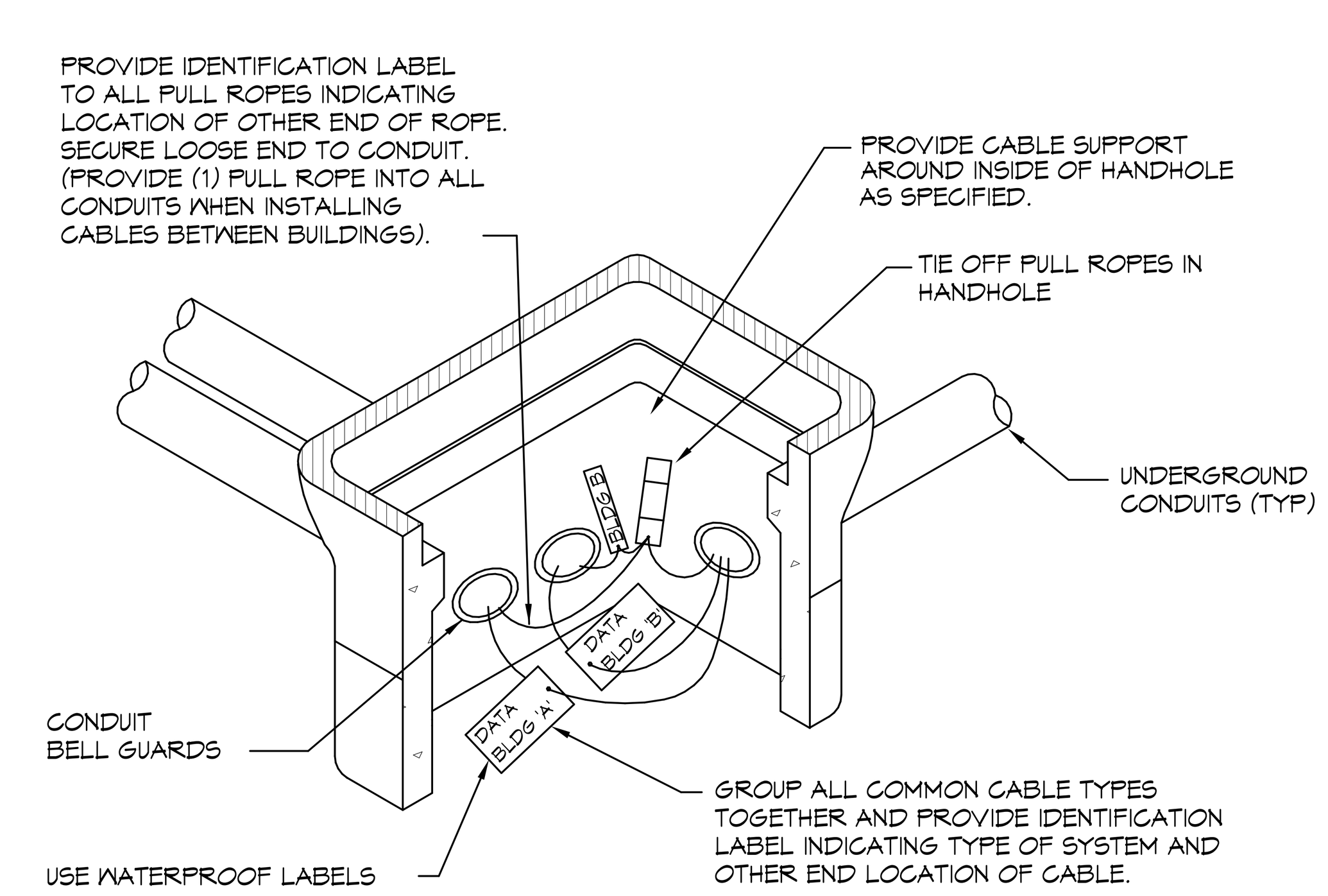
FLUSH MOUNTED IP SPEAKER/CLOCK COMBINATION
NO SCALE
5 / E4.4



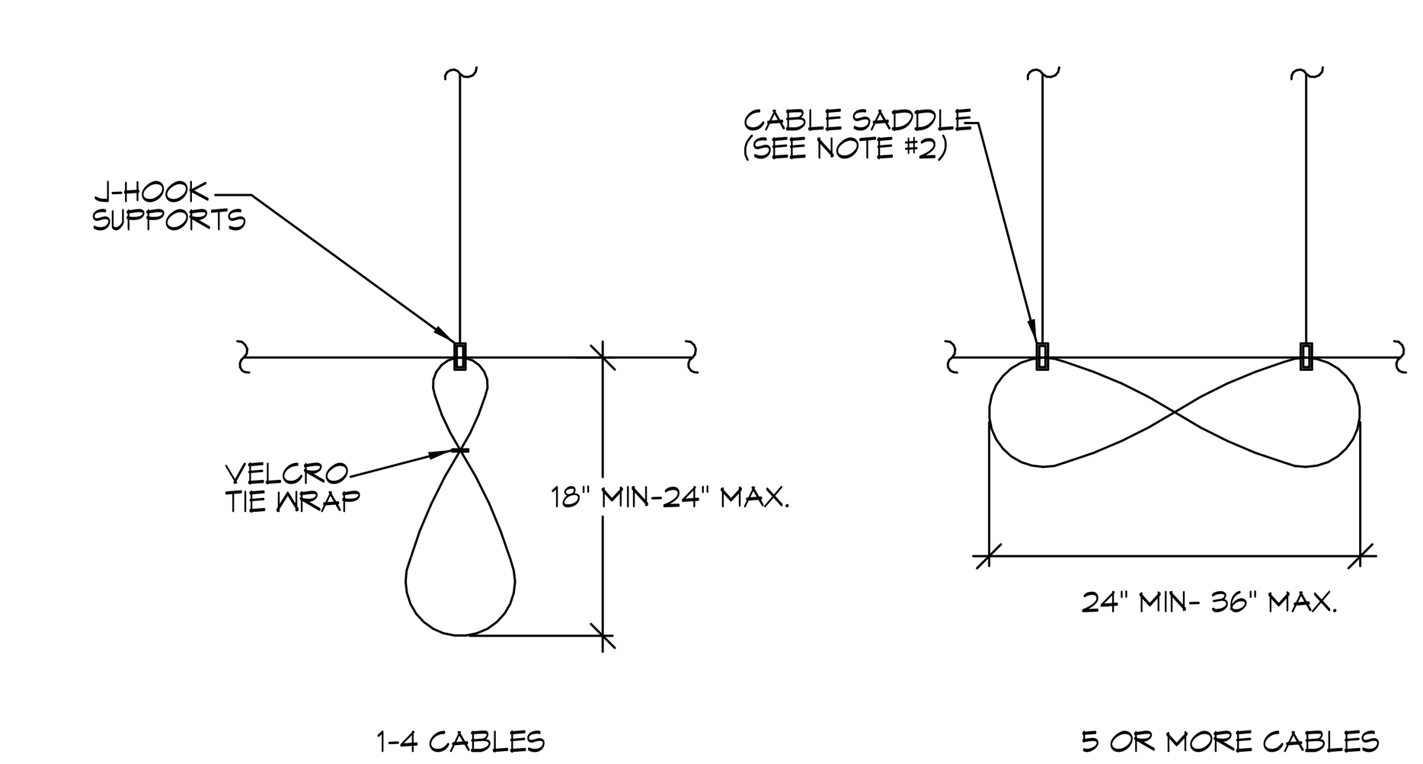
NOTE:
1. THIS DETAIL APPLIES TO ALL CONDUITS ENTERING BUILDINGS FROM UNDERGROUND OR OVERHEAD WHERE CONDUITS ENTER UNDERGROUND HANDHOLES, PROVIDE SIMILAR LABELING EXCEPT USE WATERPROOF LABELS.
2. HAND WRITTEN LABELS ARE NOT PERMITTED.

COMMUNICATION CABLE TYPICAL LABELING DETAIL
NO SCALE
6 / E4.4

NOTE:
1. HAND WRITTEN LABELS ARE NOT PERMITTED
2. CABLES SHALL NOT BE PULLED UNTIL CONDUIT BELL GUARDS HAVE BEEN PLACED.



COMMUNICATION HANDHOLE LABELING DETAIL (TYP)
NO SCALE
7 / E4.4



NOTE:
1. ALL SERVICE LOOPS SHALL BE FORMED IN FIGURE 8 CONFIGURATION
2. SADDLE SHALL BE SIZED TO HOLD QUANTITY OF CABLES REQUIRED PER MANUFACTURE REQ.

TYPICAL SERVICE LOOP
NO SCALE
8 / E4.4

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E4.4

REGISTERED PROFESSIONAL ENGINEER
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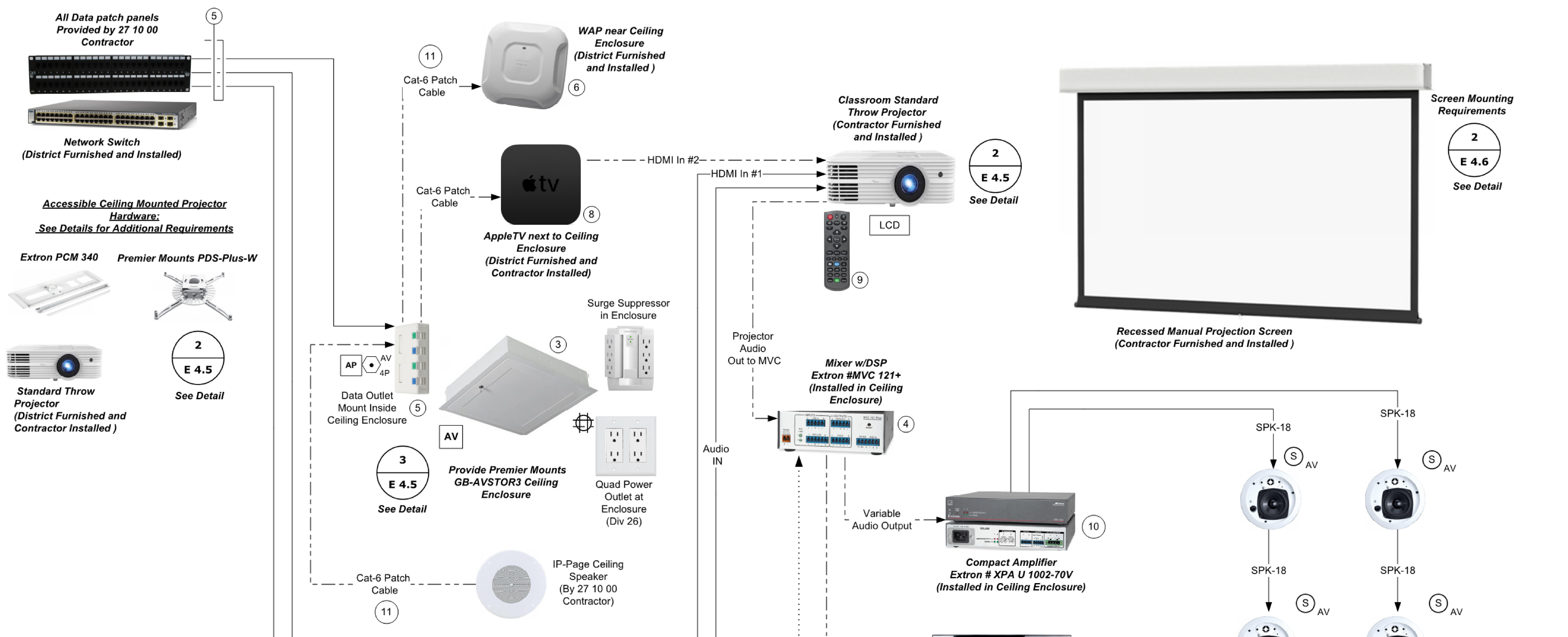
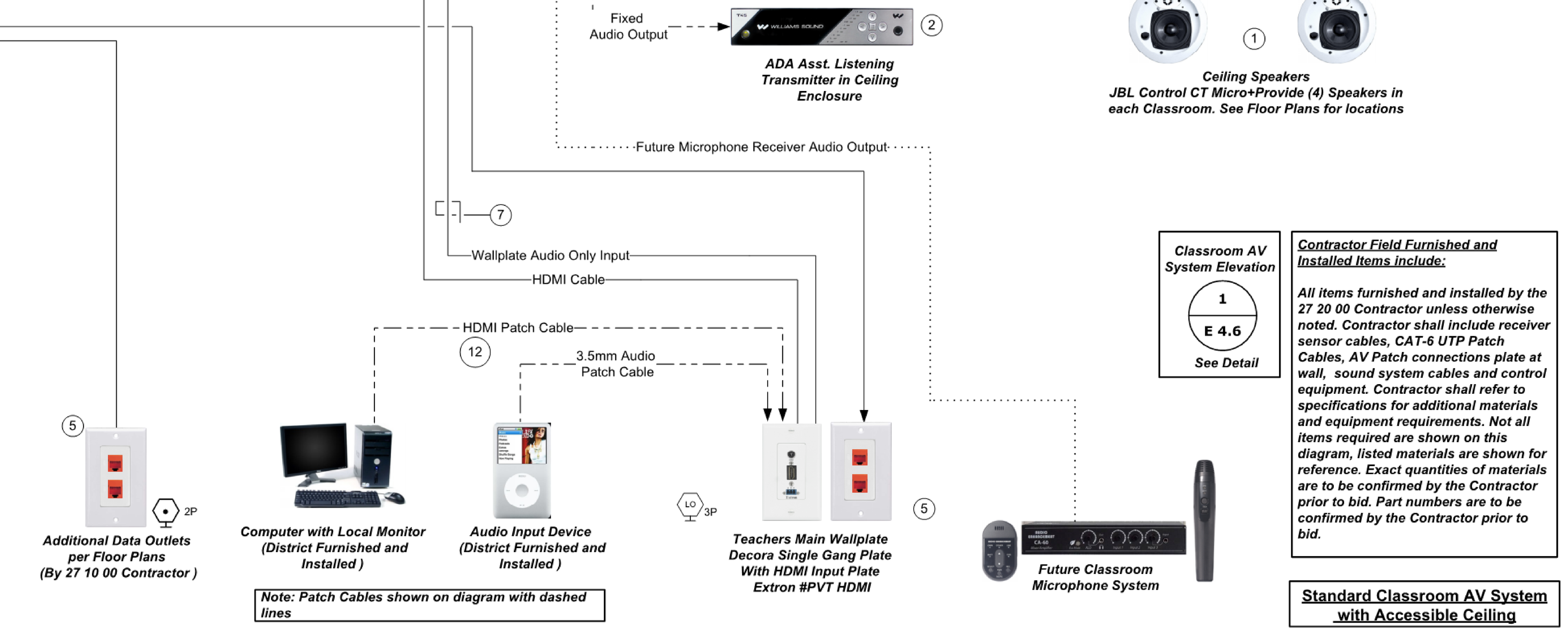




Contractor Field Furnished and Installed Items include:

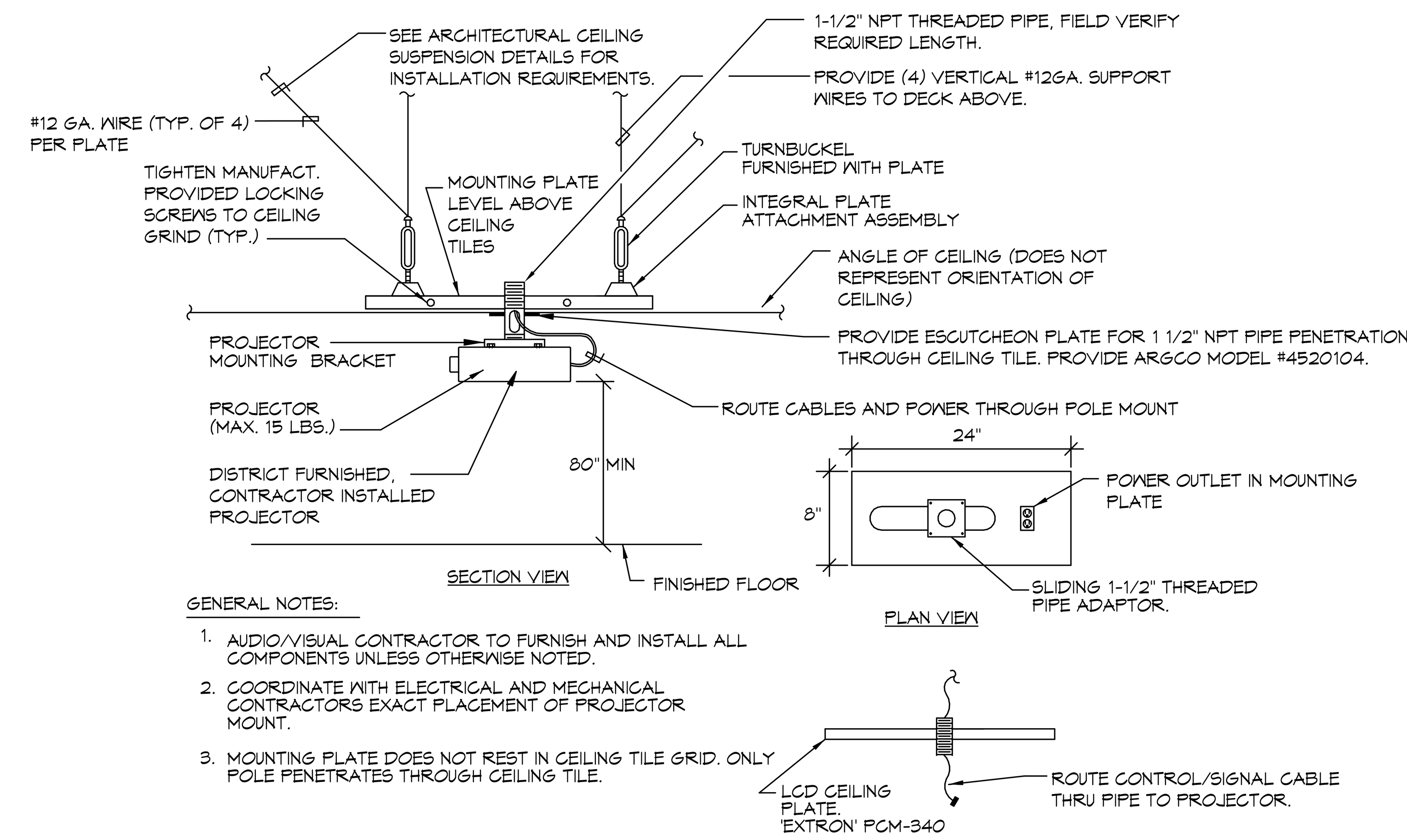
All items furnished and installed by the 27 20 00 Contractor unless otherwise noted. Contractor shall include receiver sensor cables, CAT-6 UTP Patch Cables, AV Patch connections plate at wall, sound system cables and control equipment. Contractor shall refer to specifications for additional materials and equipment requirements. Not all items required are shown on this diagram, listed materials are shown for reference. Exact quantities of materials are to be confirmed by the Contractor prior to bid. Part numbers are to be confirmed by the Contractor prior to bid.

Standard Classroom AV System with Accessible Ceiling

DETAIL KEYNOTES:

1. Connect Speakers to amplifier in pairs @70V with (2) per channel. Speakers shall be tapped at 12-watts each.
2. RF Transmitter for ADA Assistive Listening System installed in Ceiling Enclosure. Input connection shall be ¼" TRS male or XLR.
3. Power Supplies for AV Equipment installed in Ceiling Enclosure
4. Extron Mixer/DSP shall be used for a fully mixed audio output to both the Amplifier and ADA Transmitter. Program Mixer for optimal performance
5. Category-6 UTP Data Cables, Outlet Wallplates and Surface Jacks furnished and installed by the 27 10 00 Contractor
6. District Furnished WAP to be connected to the data outlet provided by the 27 10 00 located in the AV Ceiling Enclosure
7. Provide Stand-Alone Audio Input from HDMI wallplate for Audio Playback from Smartphones, iPods, etc. Connect Audio Input to the Mixer/DSP located in the AV Ceiling Enclosure.
8. District Furnished AppleTV to be connected to the data outlet provided by the 27 10 00 located in the AV Ceiling Enclosure. Connect the AppleTV HDMI Output to HDMI Input #2 on projector
9. Classroom AV System shall controlled with the Projector's Remote. Contractor shall set up remote for proper operation of all inputs, sound volume and image properties. Test all programming to insure proper operation.
10. Provide 70-Volt version of the amplifier. Provide stereo output to amplifier for speaker connection.
11. Category-6 patch cable furnished and installed by the 27 10 00 Contractor
12. HDMI patch cable assembly shall be furnished with a HDMI to DisplayPort Adapter

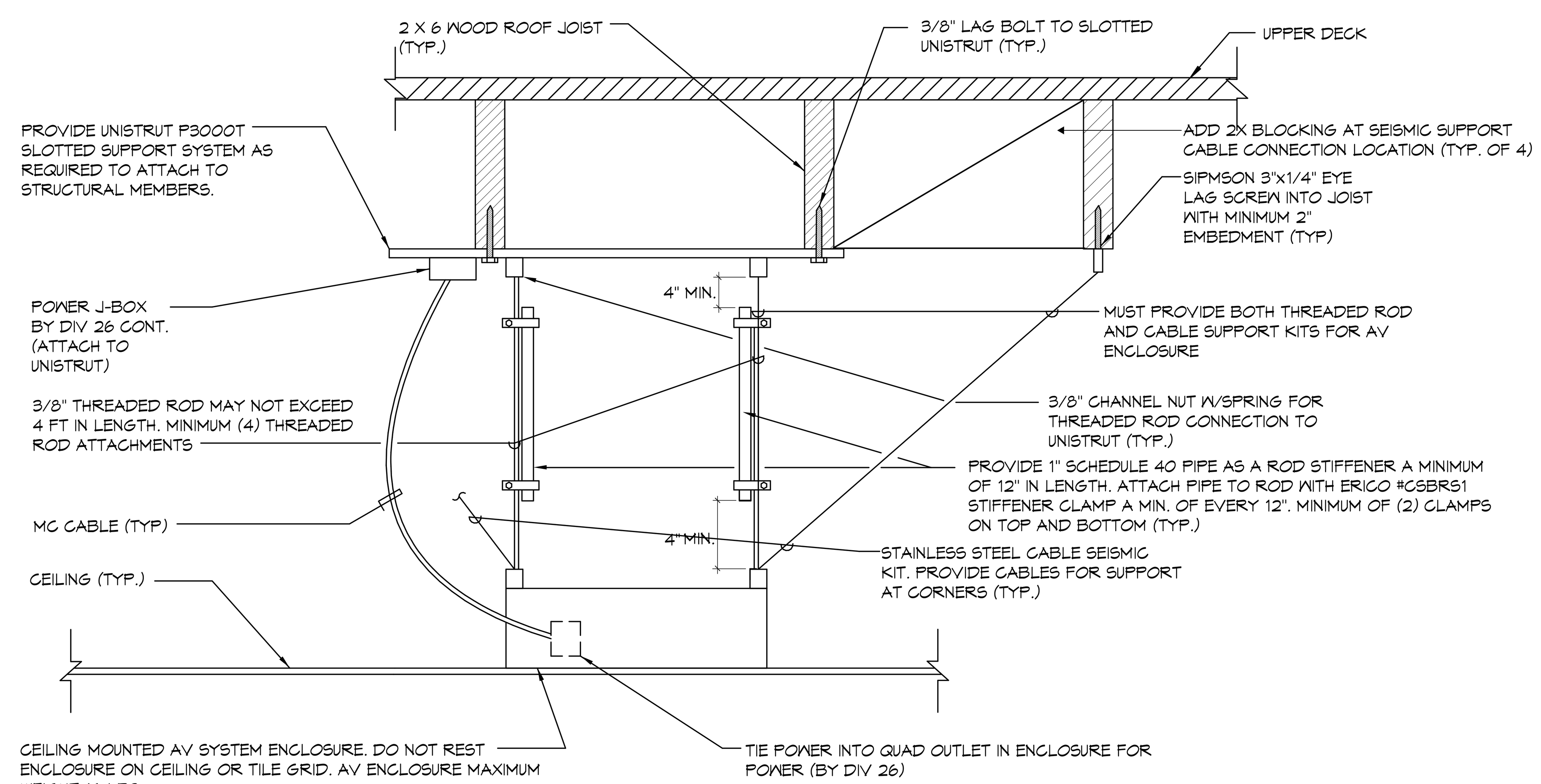
STANDARD CLASSROOM AUDIO-VISUAL SYSTEM DIAGRAM
NO SCALE
1 / E4.5



GENERAL NOTES:

1. AUDIO/VISUAL CONTRACTOR TO FURNISH AND INSTALL ALL COMPONENTS UNLESS OTHERWISE NOTED.
2. COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTORS EXACT PLACEMENT OF PROJECTOR MOUNT.
3. MOUNTING PLATE DOES NOT REST IN CEILING TILE GRID, ONLY POLE PENETRATES THROUGH CEILING TILE.

CEILING PROJECTOR MOUNTING DETAIL FOR ACCESSIBLE CEILING
NO SCALE
2 / E4.5



NOTES:

1. PROVIDE LENGTH OF THREADED ROD AND SUPPORT CABLES AS REQUIRED TO MAKE ATTACHMENT.
2. COORDINATE WITH ARCHITECTURAL FOR CEILING TILE AND T-GRID FOR PLACEMENT OF AV ENCLOSURE.
3. PROVIDE CEILING MOUNTED ENCLOSURE BY PREMIER MOUNTS MODEL #GB-AVSTOR3 WITH BOTH THREADED ROD AND SUPPORT CABLES KITS.

CLASSROOM AUDIO-VISUAL CEILING ENCLOSURE
NO SCALE
3 / E4.5

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APP. 04-118743 INC:
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CLASSROOM AUDIO-VISUAL DETAILS

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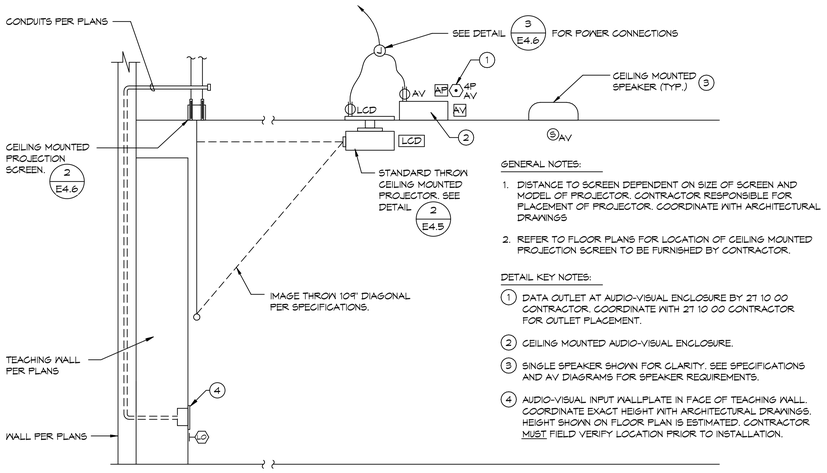
E4.5



GENERAL NOTES:

1. DISTANCE TO SCREEN DEPENDENT ON SIZE OF SCREEN AND MODEL OF PROJECTOR. CONTRACTOR RESPONSIBLE FOR PLACEMENT OF PROJECTOR. COORDINATE WITH ARCHITECTURAL DRAWINGS
2. REFER TO FLOOR PLANS FOR LOCATION OF CEILING MOUNTED PROJECTION SCREEN TO BE FURNISHED BY CONTRACTOR.

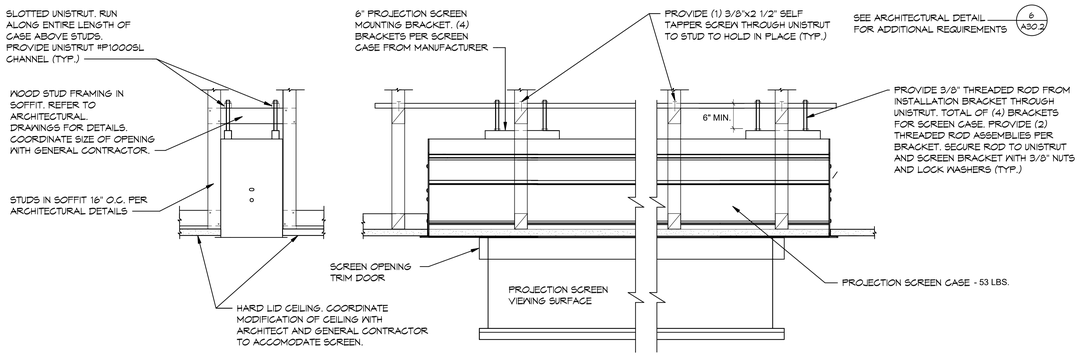
DETAIL KEY NOTES:

1. DATA OUTLET AT AUDIO-VISUAL ENCLOSURE BY 27 10 00 CONTRACTOR. COORDINATE WITH 27 10 00 CONTRACTOR FOR OUTLET PLACEMENT.
2. CEILING MOUNTED AUDIO-VISUAL ENCLOSURE.
3. SINGLE SPEAKER SHOWN FOR CLARITY. SEE SPECIFICATIONS AND AV DIAGRAMS FOR SPEAKER REQUIREMENTS.
4. AUDIO-VISUAL INPUT WALLPLATE IN FACE OF TEACHING WALL. COORDINATE EXACT HEIGHT WITH ARCHITECTURAL DRAWINGS. HEIGHT SHOWN ON FLOOR PLAN IS ESTIMATED. CONTRACTOR MUST FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

TYPICAL CEILING MOUNTED PROJECTOR INSTALLATION - ACCESSIBLE CEILINGS

NO SCALE

1 / E4.6

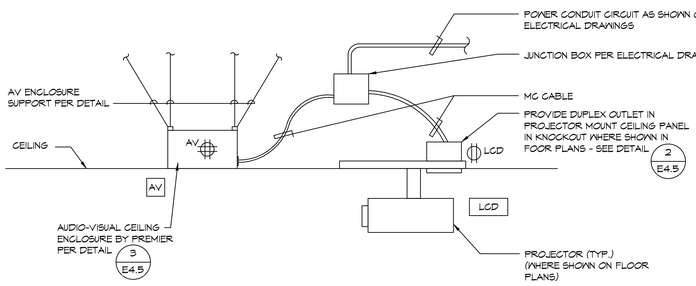


NOTE:
PROVIDE PROJECTION SCREEN CASE SEPERATELY FROM 'GUTS'. INSTALL CASE PRIOR TO INSTALLATION OF DRYWALL ON SOFFIT. INSTALL SCREEN ASSEMBLY, MOTOR, AND LOW VOLTAGE CONTROLS IN CASE AFTER SOFFIT HAS BEEN FINISHED.

RECESSED TENSIONED PROJECTION SCREEN MOUNTING DETAILS

NO SCALE

2 / E4.6



NOTES:

1. REFER TO ELECTRICAL AND COMMUNICATIONS FLOOR PLANS FOR LOCATIONS OF POWER AND AV DEVICES.
2. PROVIDE UNISTRUT SUPPORT ABOVE AV CEILING ENCLOSURE TO STRUCTURAL SUPPORT MEMBERS. TIE 3/8" ROD INTO UNISTRUT FOR ENCLOSURE SUPPORT.

CEILING ENCLOSURE / PROJECTOR - POWER CONNECTION

NO SCALE

3 / E4.6

KEY NOTES:

1. DUPLEX RECEPTACLE.
2. PROVIDE 1-WATT PRIMEX WIRELESS CLOCK TRANSMITTER MODEL #XR01EM ON WALL MOUNTED SHELF. PROVIDE SHELF CPI #40074-100 OR EQUAL.
3. PROVIDE ANTENNA ON ROOF WITH CONDUIT CLAMPS. PROVIDE PRIMEX WIRELESS OUTDOOR GROUND PLANE ANTENNA. ROUTE ANTENNA CABLE TO IDF ROOM.
4. PROVIDE GPS RECEIVER AND CLAMPS. ROUTE CABLE TO IDF ROOM.

GENERAL NOTES:

1. PROVIDE NEW TRANSMITTER AS REQUIRED IN SPECIFICATIONS.
2. PROVIDE NEW TRANSMITTER IN IDF-BLDG 'D' - ROOM #13 TRANSMITTER WEIGHT 6 LBS
3. SEE SPECIFICATIONS FOR RACK SHELF STRAP REQUIREMENTS.

WIRELESS CLOCK TRANSMITTER DETAIL

NO SCALE

4 / E4.6

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SYCAMORE CANYON ELEMENTARY SCHOOL
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SANTEE SCHOOL DISTRICT

CLASSROOM AUDIO-VISUAL DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.6

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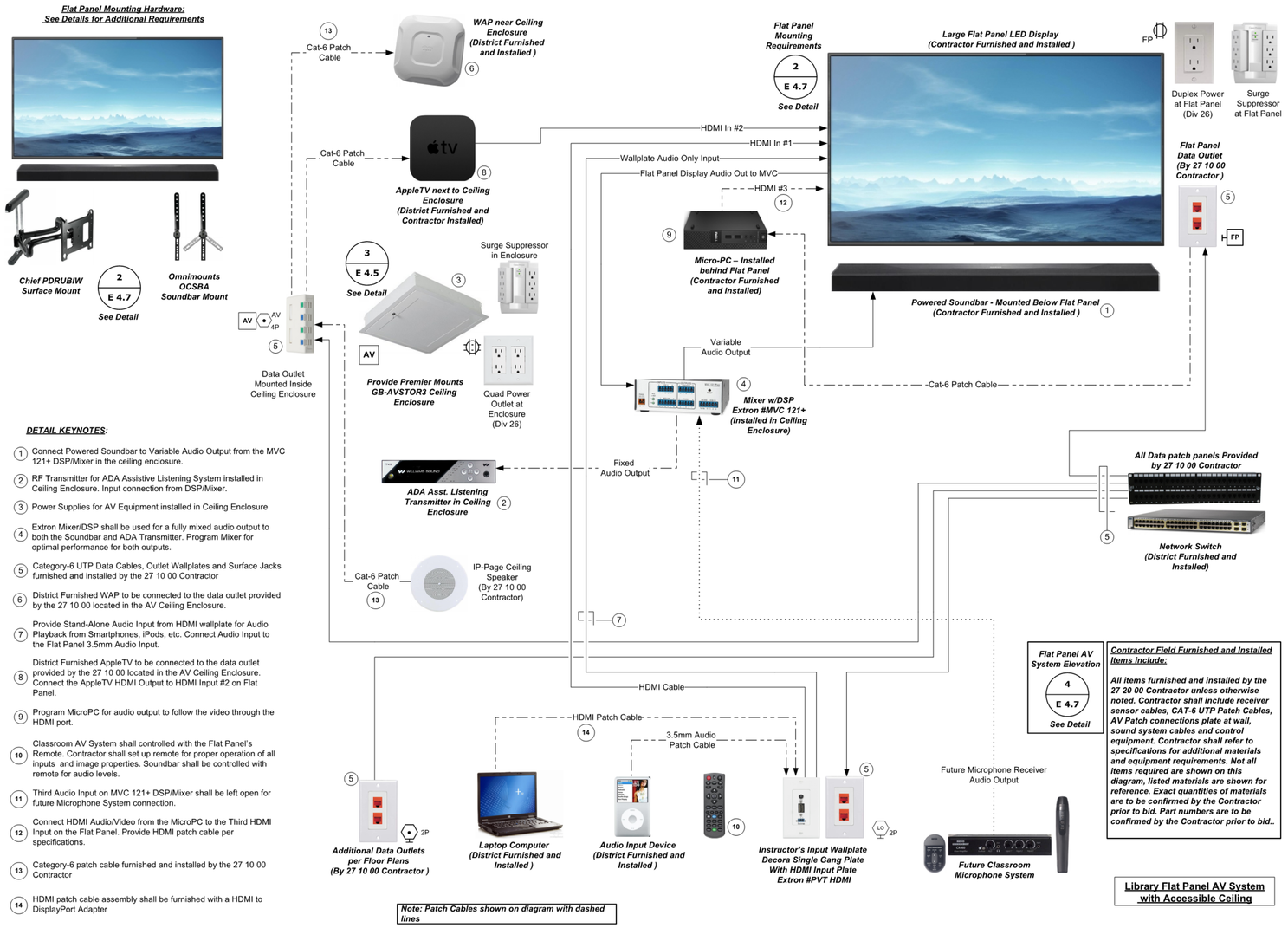


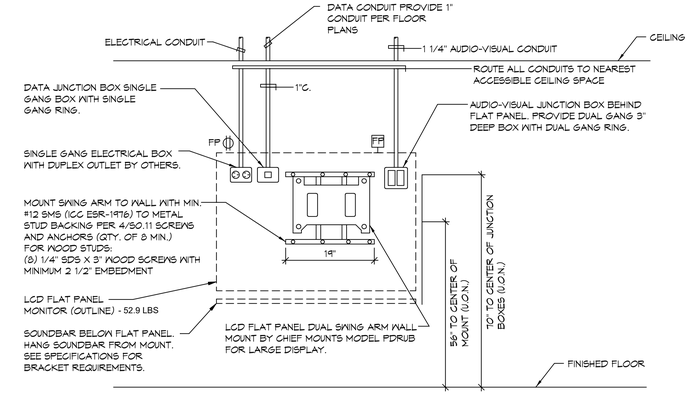
LIBRARY AUDIO-VISUAL SYSTEM DIAGRAM

NO SCALE

1 / E4.7

DETAIL KEYNOTES:

1. Connect Powered Soundbar to Variable Audio Output from the MVC 121+ DSP/Mixer in the ceiling enclosure.
2. RF Transmitter for ADA Assistive Listening System installed in Ceiling Enclosure. Input connection from DSP/Mixer.
3. Power Supplies for AV Equipment installed in Ceiling Enclosure
4. Extron Mixer/DSP shall be used for a fully mixed audio output to both the Soundbar and ADA Transmitter. Program Mixer for optimal performance for both outputs.
5. Category-6 UTP Data Cables, Outlet Wallplates and Surface Jacks furnished and installed by the 27 10 00 Contractor
6. District Furnished WAP to be connected to the data outlet provided by the 27 10 00 located in the AV Ceiling Enclosure.
7. Provide Stand-Alone Audio Input from HDMI wallplate for Audio Playback from Smartphones, iPods, etc. Connect Audio Input to the Flat Panel 3.5mm Audio Input.
8. District Furnished AppleTV to be connected to the data outlet provided by the 27 10 00 located in the AV Ceiling Enclosure. Connect the AppleTV HDMI Output to HDMI Input #2 on Flat Panel.
9. Program MicroPC for audio output to follow the video through the HDMI port.
10. Classroom AV System shall controlled with the Flat Panel's Remote. Contractor shall set up remote for proper operation of all inputs and image properties. Soundbar shall be controlled with remote for audio levels.
11. Third Audio Input on MVC 121+ DSP/Mixer shall be left open for future Microphone System connection.
12. Connect HDMI Audio/Video from the MicroPC to the Third HDMI Input on the Flat Panel. Provide HDMI patch cable per specifications.
13. Category-6 patch cable furnished and installed by the 27 10 00 Contractor
14. HDMI patch cable assembly shall be furnished with a HDMI to DisplayPort Adapter



NOTE: FINAL FLAT PANEL MODEL CHOSEN MAY EFFECT MOUNTING HEIGHT. REFER TO FLOOR PLANS PRIOR INSTALLING MOUNT, AS FLOOR PLANS MAY SHOW A DIFFERENT MOUNTING HEIGHT.

LED FLAT PANEL INSTALLATION - SURFACE MOUNT

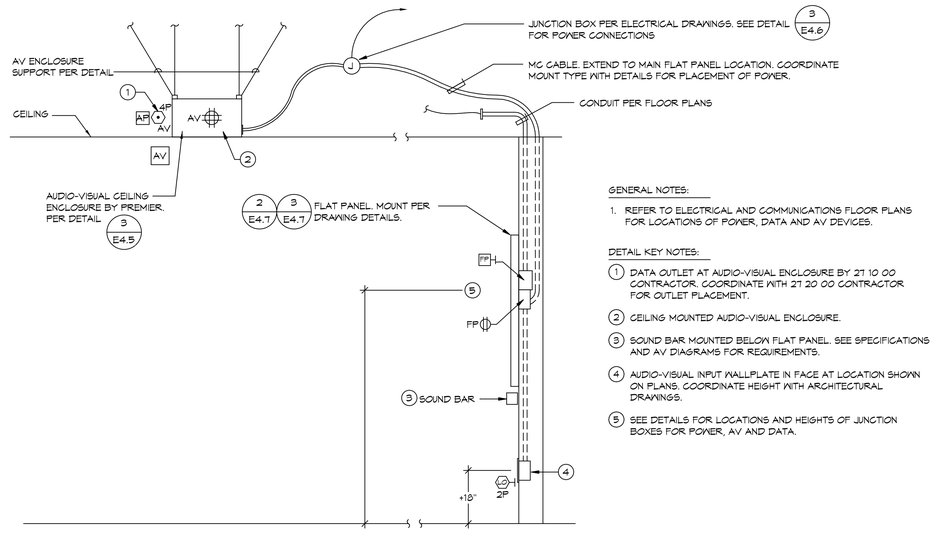
NO SCALE

2 / E4.7

AUDIO-VISUAL SYSTEM CEILING ENCLOSURE AND FLAT PANEL MONITOR - POWER CONNECTION

NO SCALE

4 / E4.7



GENERAL NOTES:

1. REFER TO ELECTRICAL AND COMMUNICATIONS FLOOR PLANS FOR LOCATIONS OF POWER, DATA AND AV DEVICES.

DETAIL KEY NOTES:

1. DATA OUTLET AT AUDIO-VISUAL ENCLOSURE BY 27 10 00 CONTRACTOR. COORDINATE WITH 27 20 00 CONTRACTOR FOR OUTLET PLACEMENT.
2. CEILING MOUNTED AUDIO-VISUAL ENCLOSURE.
3. SOUND BAR MOUNTED BELOW FLAT PANEL. SEE SPECIFICATIONS AND AV DIAGRAMS FOR REQUIREMENTS.
4. AUDIO-VISUAL INPUT WALLPLATE IN FACE AT LOCATION SHOWN ON PLANS. COORDINATE HEIGHT WITH ARCHITECTURAL DRAWINGS.
5. SEE DETAILS FOR LOCATIONS AND HEIGHTS OF JUNCTION BOXES FOR POWER, AV AND DATA.

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SANTEE SCHOOL DISTRICT

LIBRARY AUDIO-VISUAL DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E4.7

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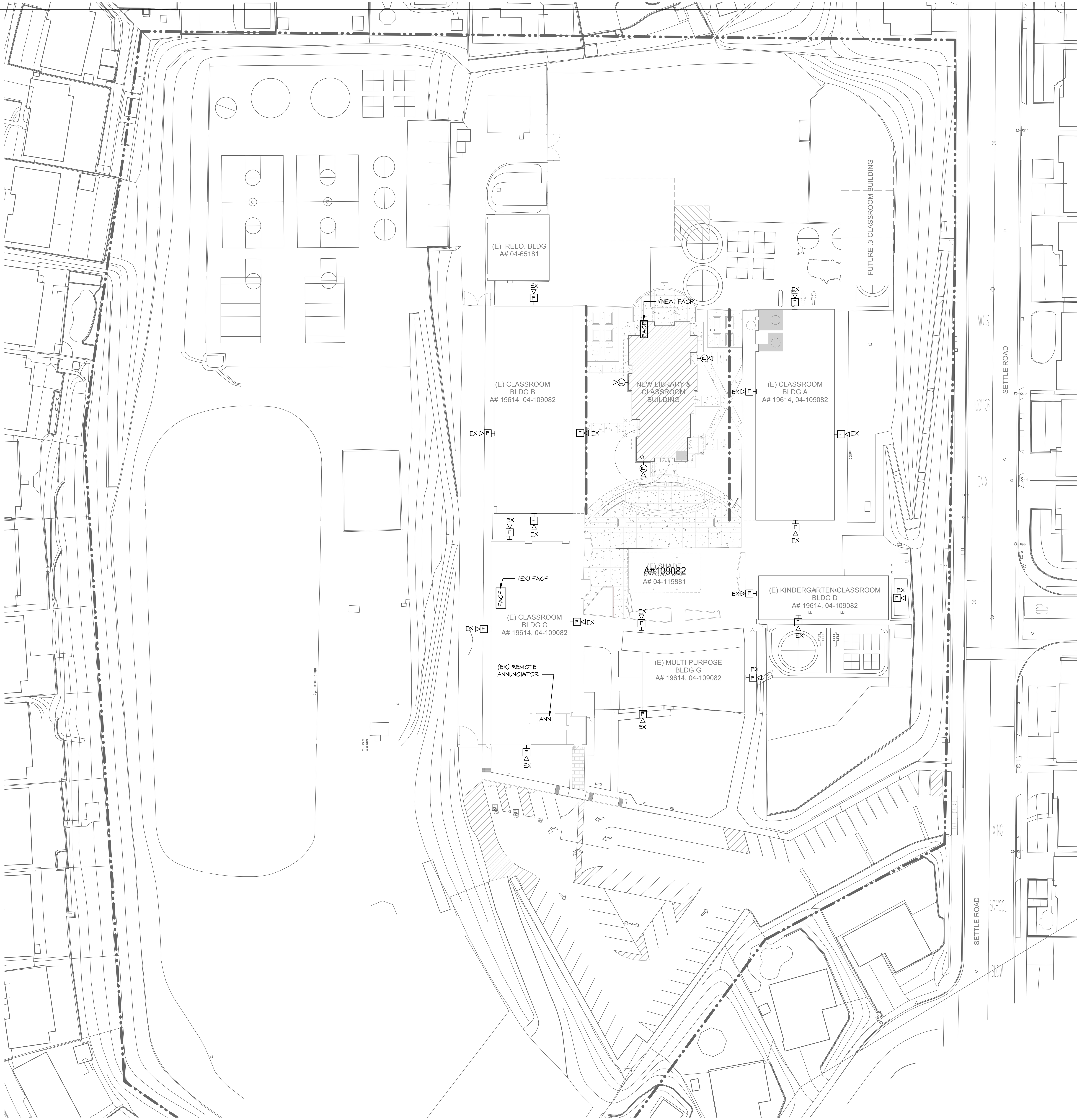

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GENERAL NOTES:

1. LOCATIONS/ROUTING OF EXISTING/NEW EQUIPMENT IS APPROXIMATE ONLY.
2. PROVIDE DOCUMENTATION CABINET LOCATION PER NFPA 72.7.7.2.1 AND POSTED INSTRUCTIONS FOR MICROPHONE USE PER NFPA 72.24.3.2. IN ELECTRICAL ROOM #8 NEXT TO FACP.

FIRE ALARM SYMBOLS LEGEND:

(F) WALL MOUNTED WEATHERPROOF EXTERIOR SPEAKER MOUNTED +90" AFF TO BOTTOM OF DEVICE.

Revison	Date

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SYCAMORE CANYON ELEMENTARY SCHOOL
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SANTEE SCHOOL DISTRICT

FIRE ALARM SITE PLAN

Drawn: Author
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Date: APRIL 24, 2019
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E5.0

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FIRE ALARM SITE PLAN | 1" = 30'-0" | 1

FIRE ALARM SYMBOLS LEGEND:

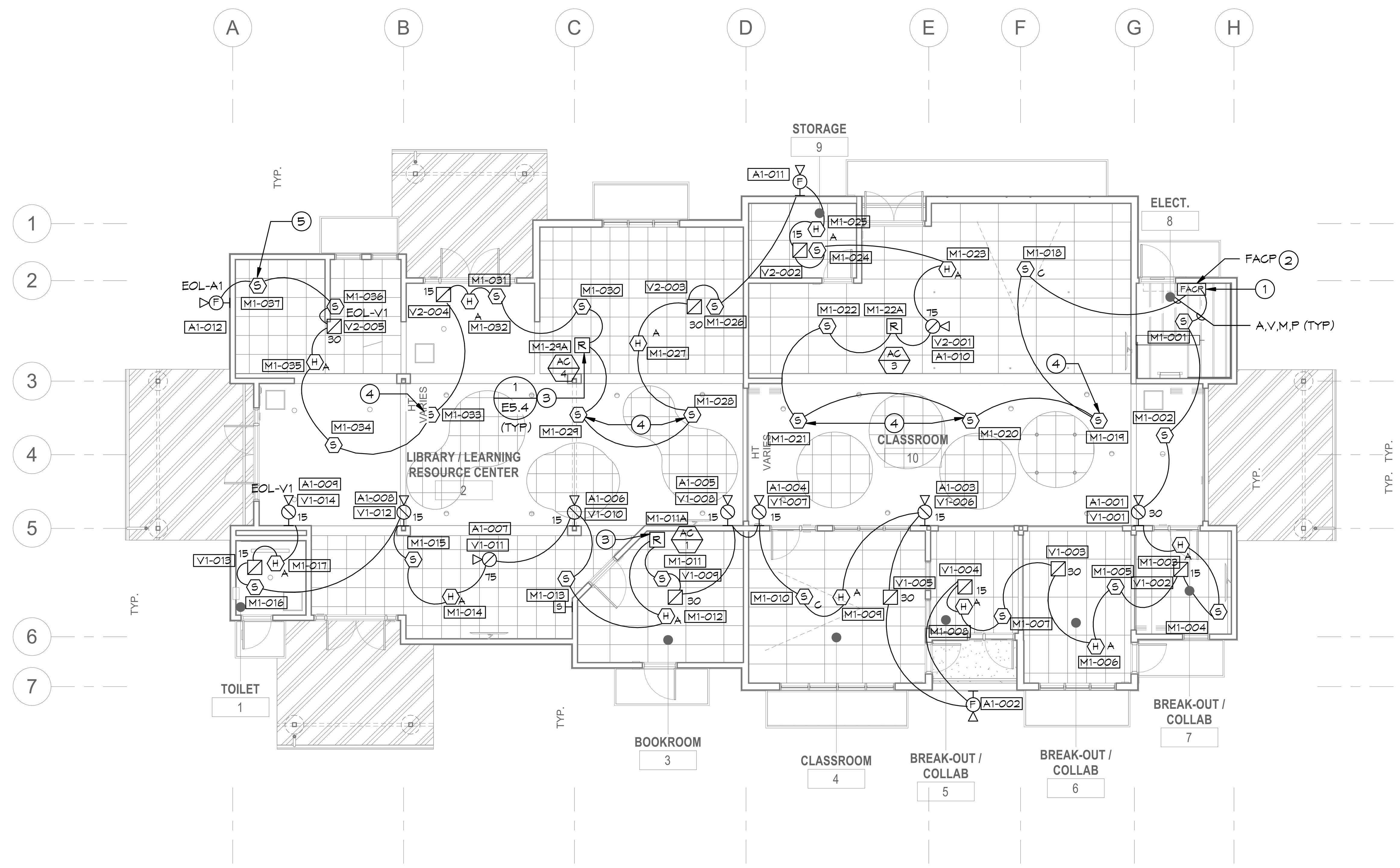
- VI / AI / 15 — WALL MOUNTED SPEAKER/STROBE MOUNTED +80"-96" A.F.F. OR 6" BELOW CEILING TO BOTTOM OF DEVICE WHICHEVER IS LOWER. ENTIRE LENS MUST BE WITHIN THE +80"-96" DIMENSION. (15 = STROBE CANDELA RATING) (AI = AUDIO SIGNAL CIRCUIT IDENTIFICATION) (VI = VISUAL SIGNAL CIRCUIT IDENTIFICATION) TAP AT 1/4 WATT (U.O.N.)
- VI / 15 — CEILING MOUNTED FLASHING LIGHT STROBE (15 = STROBE CANDELA RATING) (VI = VISUAL SIGNAL CIRCUIT IDENTIFICATION)
- VI / AI / 15 — CEILING MOUNTED COMBINATION HORN/STROBE (15 = STROBE CANDELA RATING) (AI = AUDIO SIGNAL CIRCUIT IDENTIFICATION) (VI = VISUAL SIGNAL CIRCUIT IDENTIFICATION) TAP AT 1/4 WATT (U.O.N.)
- AI / F — WALL MOUNTED WEATHERPROOF EXTERIOR SPEAKER MOUNTED +90" A.F.F. TO BOTTOM OF DEVICE (AI = AUDIO SIGNAL CIRCUIT IDENTIFICATION) SEE TYPICAL DETAIL
- S — CEILING MOUNTED SMOKE DETECTOR
- S C — CEILING MOUNTED CO/SMOKE DETECTOR
- H A — HEAT DETECTOR MOUNTED ABOVE CEILING (SEE GENERAL NOTE #6)
- FACP — MAIN FIRE ALARM CONTROL PANEL
- DSM — DUAL SYNC MODULE (SEE RISER DIAGRAM FOR LOCATION)
- R — ADDRESSABLE RELAY MODULE
- M — ADDRESSABLE MONITOR MODULE
- EOL-V — END OF LINE RESISTOR AUDIO
- EOL-V — END OF LINE RESISTOR VISUAL

GENERAL NOTES:

1. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES.
2. REFERENCE E5 AND E8 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
3. REFERENCE RISER DIAGRAMS FOR TYPICAL CONDUIT SIZES AND INITIATION ZONE CIRCUIT IDENTIFICATIONS.
4. REFERENCE MECHANICAL PLANS FOR EXACT LOCTION OF ALL DUCT DETECTORS AND SMOKE DAMPER LOCATIONS.
5. UNLESS OTHERWISE NOTED SOLID LINES BETWEEN DEVICES SHALL BE 1" E.M.T. ROUTED CONCEALED ABOVE CEILINGS OR IN WALLS. DASHED LINES INDICATE 1 1/4" P.V.C. UNDERGROUND CONDUIT. ALL WIRING TO BE PROVIDED PER MANUFACTURER SHOP DRAWINGS.
6. CONTRACTOR SHALL PROVIDE CEILING ACCESS PANEL AT ALL NON-LAYIN TYPE CEILINGS, WHERE HEAT DETECTOR ABOVE CEILING IS INDICATED.
7. PROVIDE WIRE PROTECTIVE GUARD OVER ALL FIRE ALARM DEVICES LOCATED IN THE FOLLOWING AREAS: GYMNASIUM, LOCKER ROOMS, SHOP AREAS, AND ANY OTHER AREA WHERE DEVICES MAY BE SUBJECT TO CONTACT.

KEY NOTES:

1. PROVIDE DEDICATED 120 VOLT CIRCUIT TO PANEL CONNECT TO "LOCK ON BREAKER". REFER TO POWER E3 SERIES SHEETS FOR CIRCUIT INFORMATION.
2. PROVIDE CONNECTION TO (EX) "FACP", REFER TO SITE PLAN SHEET E1.1.
3. MAKE CONNECTION TO AIR CONDITIONING CONTROL CIRCUIT FOR AUTOMATIC SHUT OFF OF UNIT UPON SMOKE DETECTION VERIFY LOCATION.
4. SMOKE DETECTOR TO BE LOCATED WITHIN 36" OF THE HIGH SIDE OF THE CEILING.



FIRE ALARM NOTE:
THIS FIRE ALARM DESIGN IS A COMPLETE PLAN SUBMITTAL IN ACCORDANCE WITH 2016 CBC 907.1.

FULLY AUTOMATIC FIRE ALARM DESIGN:
THIS PROJECT IS DESIGNED TO COMPLY WITH ALL REQUIREMENTS FOR A FULLY PROTECTED AUTOMATIC FIRE ALARM SYSTEM.

EXPANSION OF EXISTING SYSTEM:
THIS PROJECT ADDS TO AND OR MODIFIES AN EXISTING SYSTEM, PREVIOUSLY APPROVED BY DSA. ALL NEW COMPONENTS ARE COMPATIBLE WITH THE EXISTING SYSTEM EQUIPMENT.

LEVEL 1 FLOOR PLAN - FIRE ALARM | 1/8" = 1'-0" | 1

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

LEVEL 1 FLOOR PLAN - FIRE ALARM

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E5.1

FCI MODEL E3					
	SYM	MODEL NO.	DESCRIPTION	C.S.F.M. LISTING	MFG.
	FACP	FCI-E3	FIRE ALARM CONTROL PANEL/VOICE EVAC	7165-1703:0125	GAMEWELL FCI
	SM	SERIES DMS	SYNC MODULE	7300-0785:0132	COOPER WHEELOCK
	S C	MCS-COF	INTELLIGENT SMOKE /CO DETECTOR	7275-1703:0175	GAMEWELL FCI
		B200S	SENSOR SOUNDER BASE	7300-1653:0213	SYSTEM SENSOR
	S	ASD-PL2F	INTELLIGENT SMOKE DETECTOR	7272-1703:0121	GAMEWELL FCI
		B210LP	SENSOR BASE	7300-1653:0109	SYSTEM SENSOR
				7300-1653:0109	SYSTEM SENSOR
	H A	ATD-HL2F	INTELLIGENT HEAT DETECTOR (ABOVE CEILING)	7270-1703:0115	GAMEWELL FCI
		B501	SENSOR BASE	7300-1653:0109	SYSTEM SENSOR
		ET1010	EXTERIOR SPEAKER W/WBB BACKBOX	7320-0785:0105	COOPER WHEELOCK
		LSTC	STROBE (15/30/75/110) cd (CEIL MNT)	7125-0785:0180	COOPER WHEELOCK
		LSPSTC	SPEAKER/STROBE - CEILING	7125-0785:0178	COOPER WHEELOCK
		LSPST	SPEAKER/STROBE - WALL	7125-0785:0175	COOPER WHEELOCK
	M	AMM-2F	ADDRESSABLE MONITOR MODULE	7300-1703:0102	GAMEWELL FCI
	R	AOM-2RF	ADDRESSABLE RELAY MODULE	7300-1703:0102	GAMEWELL FCI
	R1	RIC-1	120 VOLT RELAY MODULE	7300-1004:0101	SAE INC
		TYPE FPL	SIGNAL LINE CIRCUIT CONDUCTORS ('M')	7161-0859:0101	WEST PENN
		TYPE THHN	AUDIO VISUAL AND POWER CONDUCTORS (AV,P)	N/A	SOUTHWIRE

✦ IF OTHER MANUFACTURER IS USED IT IS TO BE UL. AND CSFM LISTED.

FIRE ALARM MONITORING NOTE:

1. AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY CFC SECTION 907. 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.

FIRE ALARM GENERAL REQUIREMENTS:

1. THE COMPLETE INSTALLATION SHALL BE REVIEWED AND APPROVED BY THE ABOVE LOCAL MANUFACTURERS REPRESENTATIVE. SEE SPECIFICATIONS (28 30 00), FOR ADDITIONAL CONTRACTOR QUALIFICATIONS AND REQUIREMENTS.
2. UNLESS OTHERWISE NOTED SOLID LINES BETWEEN DEVICES SHALL BE 1" E.M.T. ROUTED CONCEALED ABOVE CEILINGS OR IN WALLS. DASHED LINES INDICATE 1 1/4" P.V.C. UNDERGROUND CONDUIT. ALL WIRING TYPES AND QUANTITES SHOWN ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL PROVIDE ALL WIRING AS REQUIRED TO MAKE A FULLY OPERATIONAL SYSTEM. SHOP DRAWINGS AND OR AS-BUILT DOCUMENTS SHALL INDICATE ALL WIRING PROVIDED.
3. THE AUDIBILITY OF FIRE ALARM WARNING DEVICES SHALL BE AUDIBLE THROUGH THE OCCUPANCY WITH A MINIMAL SOUND LEVEL 15 db's OVER THE AMBIENT NOISE LEVEL. ADD ADDITIONAL DEVICES AS REQUIRED.
4. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A REACCEPTANCE TEST OF THE ENTIRE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE ENFORCING AGENCY AND IN ACCORDANCE WITH SPECIFICATIONS (28 30 00). THE CONTRACTOR SHALL FURNISH 20 METERS AND ALL OTHER EQUIPMENT TO PERFORM THESE TESTS.
5. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL PREVENT THE PASSAGE OF HEAT, SMOKE AND FIRE GASES. ALL PENETRATIONS SHALL COMPLY WITH U.L. ASSEMBLY XL-1001. REFER TO THROUGH-PENETRATION FIRESTOP DETAIL ON THE DETAIL SHEET.
6. ALL OPERATING HARDWARE AT INITIATING DEVICES SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST, AND THE FORCE REQUIRED TO OPERATE SHALL BE LESS THAN 5 POUNDS.

APPLICABLE CODES

SEE T1.1 FOR ALL APPLICABLE CODES

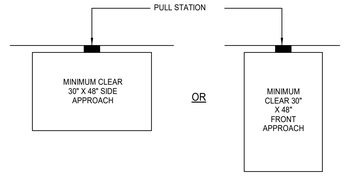
APPLICABLE STANDARDS

SEE T1.1 FOR ALL APPLICABLE STANDARDS

WIRING SCHEDULE

DES	CONDUCTOR TYPE	WIRE COLOR	CIRCUIT TYPE
M	(1) 1 PR #14 TWISTED SHIELDED	RED/BLACK/SHIELD	SIGNAL LINE CIRCUIT
A	(2) #12 THHN (UON ON CALCS)	BLUE/WHITE	NOTIFICATION APP. CIRCUIT (NAC)
V	(2) #12 THHN (UON ON CALCS)	GREEN/BLUE	NOTIFICATION APP. CIRCUIT (NAC)
P	(2) #12 THHN	RED/BLACK	POWER

CLEAR SPACE REQUIREMENTS AT
FIRE ALARM PULL STATIONS:



MAXIMUM NUMBER OF CONDUCTORS IN TRADE SIZES OF CONDUIT OR TUBING MINIMUM CONDUIT SIZE FOR THIS PROJECT IS 3/4"

CONDUIT TRADE SIZE (INCHES)		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5
TYPE LETTERS	CONDUCTOR SIZE AWG, kcmil											
THWN	14 12	13 10	24 18	39 29	69 51	94 70	154 114	164				
THHN	10 8	8 3	11 5	18 9	32 16	44 22	73 36	104 51	160 79	106	136	

TRADE SIZE	INTERNAL DIAMETER INCHES	AREA—SQUARE INCHES								
			PERCENT REDUCTION PER NUMBER OF 18AWG TWISTED SHIELD PAIRS							
		100% INCHES	OVER 2 COND. 40%	1	2	3	4	5	6	7	8
1/2	.622	.30	.12	38%	66%	99%	X	X	X	X	X
3/4	.824	.53	.21	19%	38%	57%	76%	95%	X	X	X
1	1.049	.86	.34	12%	24%	36%	48%	60%	72%	84%	96%
1 1/4	1.380	1.50	.60	7%	14%	21%	28%	35%	42%	49%	56%
1 1/2	1.610	2.04	.82	5%	10%	15%	20%	25%	30%	35%	40%
2	2.067	3.36	1.34	3%	6%	9%	12%	15%	18%	21%	24%

ANNUNCIATOR ZONE SCHEDULE

	ROOM SMOKE/CO OR HEAT DETECTORS	ABOVE CEILING HEAT DETECTORS	SPRINKLER SYSTEM	TROUBLE INDICATION
BLDG. SCE	YES	YES	N/A	YES

NOTES:

1. ALL SMOKE DETECTORS/CO DETECTORS, HEAT DETECTORS ABOVE CEILING DETECTORS, DUCT DETECTORS MANUAL PULL STATIONS, FLOW SWITCHES, TAMPER SWITCHES SHALL BE INDIVIDUALLY ADDRESSABLE.
2. EXISTING ANNUNCIATOR LOCATED IN BUILDING 'C' WHICH WILL PROVIDE LED LIGHT INDICATORS TO IDENTIFY THE ABOVE ZONE SCHEDULE.

FIRE ALARM SEQUENCE OF OPERATION

ACTION \ DEVICE	MANUAL PULL STATION	AREA/DUCT SMOKE/HEAT DETECTOR	AC POWER FAILURE
SOUND ALARM TROUGHOUT BLDG.	YES	YES	NO
ACTIVATE RELAY FOR MONITORING	YES	YES	YES
ANNUNCIATE AT PANEL AND ANNUNCIATOR	YES	YES	YES
SOUND TROUBLE BUZZER	ON WIRING FAULT	ON WIRING FAULT	YES
REPORT TO MONITORING STATION	YES	YES	YES
INITIATE SHUTDOWN OF HVAC UNITS	YES	YES	NO

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DATE: 02.05.20

Revision | Date

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ROBERT D. WEBB AIA
C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

FIRE ALARM SCHEDULE

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E5.2

REGISTERED PROFESSIONAL ENGINEER
MICHAEL GEESE-HANSEN
NO.E 14781
Exp. 6-30-2021
ELECTRICAL
STATE OF CALIFORNIA

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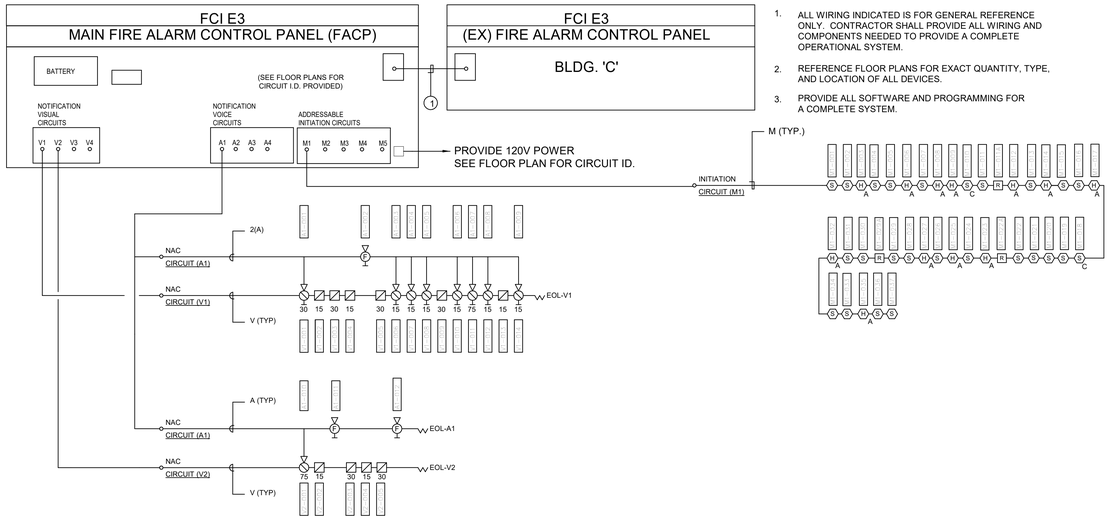

GENERAL NOTES:

1. ALL WIRING INDICATED IS FOR GENERAL REFERENCE ONLY. CONTRACTOR SHALL PROVIDE ALL WIRING AND COMPONENTS NEEDED TO PROVIDE A COMPLETE OPERATIONAL SYSTEM.
2. REFERENCE FLOOR PLANS FOR EXACT QUANTITY, TYPE, AND LOCATION OF ALL DEVICES.
3. PROVIDE ALL SOFTWARE AND PROGRAMMING FOR A COMPLETE SYSTEM.

KEYNOTES

(1) FIRE ALARM FIBER NETWORK

Main Fire Alarm Control Panel
FACP FCI E3 Battery Calculations
Building ' LRC ' (FACP)

Type of Device Or Equipment	Standby Amperage Qty	Current	Total	Alarm Amperage Quantity	Current	Total
Control Panel Devices :						
INV-VG	1	0.1500	0.1500	1	0.1500	0.1500
AMS-16	1	0.0110	0.0110	1	0.0110	0.0110
AA SERIES AMP	1	0.3060	0.3060	1	1.8500	1.8500
ANU-48	1	0.0110	0.0110	1	0.0110	0.0110
ILI-E3 SERIES	1	0.0810	0.0810	1	0.1500	0.1500
Signal Line Circuit Devices:						
Smoke Detector	25	0.0003	0.0083	25	0.0065	0.1625
Heat Detector	12	0.0002	0.0024	12	0.0065	0.0780
Relay Module	3	0.0003	0.0009	3	0.0003	0.0009
Monitor Module	0	0.0004	0.0000	0	0.0070	0.0000
Remote Annunciator	0	0.0300	0.0000	0	0.0650	0.0000
Beam Detector (REC. & TRANS)	0	0.0040	0.0000	0	0.0150	0.0000
Extender Panel (NAC)	0	0.0880	0.0000	0	0.1950	0.0000
Pull Station	0	0.0003	0.0000	0	0.0000	0.000
Smoke/CO Detector	2	0.0005	0.0010	2	0.03500	0.070
Dual Sync Module	2	0.035	0.070	2	0.035	0.070
15cd Wall Speaker/Strobe				6	0.030	0.180
30cd Wall Speaker/Strobe				1	0.040	0.040
75cd Wall Speaker/Strobe				1	0.115	0.115
110cd Wall Speaker/Strobe				0	0.200	0.000
0				0	0.000	0.000
0				0	0.000	0.000
15cd (Ceiling) Speaker/Strobe				0	0.040	0.000
30cd (Ceiling) Speaker/Strobe				0	0.058	0.000
75cd (Ceiling) Speaker/Strobe				1	0.155	0.155
95cd (Ceiling) Speaker/Strobe				0	0.258	0.000
0				0	0.000	0.000
0				0	0.000	0.000
0				0	0.000	0.000
15cd Wall Strobe				0	0.057	0.000
30cd Wall Strobe				0	0.085	0.000
75cd Wall Strobe				0	0.135	0.000
110cd Wall Strobe				0	0.182	0.000
135cd Wall Strobe				0	0.205	0.000
185cd Wall Strobe				0	0.253	0.000
15cd (Ceiling) Strobe				5	0.040	0.200
30cd (Ceiling) Strobe				5	0.058	0.290
75cd (Ceiling) Strobe				0	0.155	0.000
95cd (Ceiling) Strobe				0	0.258	0.000
Exteior Speaker @ 2 watt tap	3	0.02857	0.0286	3	0.02857	0.086
Speaker only @ 1/4 watt tap	0	0.00357	0.000	0	0.00357	0.000
Speaker only @ 2 watt tap	0	0.02857	0.000	0	0.02857	0.000
		Total Standby Amperage	**0.670**		**Total Alarm Amperage**	**3.619**

Standby Time Required

24 Hours x Total Standby Amperage = 24 x 0.670 = 16.083 Amp Hours

Alarm Time Required

.25 (15 Min.) x Total Alarm Amperage = 0.25 x 3.619 = 0.905 Amp Hours

Total Required = **16.988** Amp Hours
x120% = 20.385189
Provide Battery & Minimum Battery Amp Hour Required = **30** Amp Hours

Fire Alarm Voltage Drop Calculations

Calculation Formula:

Total Current x Feet x 21.6 / Circular Mills (Voltage Drop)

Circular Mils Using #10 wire =10380
Circular Mils Using #12 wire = 6530
Circular Mils Using #14 wire = 4110
Circular Mils Using #18 wire = 1620

Voltage Drop / 24 Volts x 100 Percent = Percentage Voltage Drop

Building ' LRC ' (FACP)

Device Type	Circuit: V1,A1 Devices x Current	Total Current	Circuit: V2,A2 Devices x Current	Total Current	Circuit: 0 Devices x Current	Total Current	Circuit: 0 Devices x Current	Total Current
Exteior Speaker @ 2 watt tap	1 0.02857	0.029	2 0.02857	0.057	0 0.02857	0.000	0 0.02857	0.000
Dual Sync Module	1 0.035	0.035	1 0.035	0.035	0 0.035	0.000	0 0.035	0.000
15cd Wall Speaker/Strobe	6 0.030	0.180	0 0.030	0.000	0 0.030	0.000	0 0.030	0.000
30cd Wall Speaker/Strobe	1 0.040	0.040	0 0.040	0.000	0 0.040	0.000	0 0.040	0.000
75cd Wall Speaker/Strobe	1 0.115	0.115	0 0.115	0.000	0 0.115	0.000	0 0.115	0.000
110cd Wall Speaker/Strobe	0 0.200	0.000	0 0.200	0.000	0 0.200	0.000	0 0.200	0.000
	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
15cd (Ceiling) Speaker/Strobe	0 0.040	0.000	0 0.040	0.000	0 0.040	0.000	0 0.040	0.000
30cd (Ceiling) Speaker/Strobe	0 0.058	0.000	0 0.058	0.000	0 0.058	0.000	0 0.058	0.000
75cd (Ceiling) Speaker/Strobe	0 0.155	0.000	1 0.155	0.155	0 0.155	0.000	0 0.155	0.000
95cd (Ceiling) Speaker/Strobe	0 0.258	0.000	0 0.258	0.000	0 0.258	0.000	0 0.258	0.000
	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
15cd Wall Strobe	0 0.057	0.000	0 0.057	0.000	0 0.057	0.000	0 0.057	0.000
30cd Wall Strobe	0 0.085	0.000	0 0.085	0.000	0 0.085	0.000	0 0.085	0.000
75cd Wall Strobe	0 0.135	0.000	0 0.135	0.000	0 0.135	0.000	0 0.135	0.000
110cd Wall Strobe	0 0.182	0.000	0 0.182	0.000	0 0.182	0.000	0 0.182	0.000
135cd Wall Strobe	0 0.205	0.000	0 0.205	0.000	0 0.205	0.000	0 0.205	0.000
185cd Wall Strobe	0 0.253	0.000	0 0.253	0.000	0 0.253	0.000	0 0.253	0.000
15cd (Ceiling) Strobe	3 0.040	0.120	2 0.040	0.080	0 0.040	0.000	0 0.040	0.000
30cd (Ceiling) Strobe	3 0.058	0.174	2 0.058	0.116	0 0.058	0.000	0 0.058	0.000
75cd (Ceiling) Strobe	0 0.155	0.000	0 0.155	0.000	0 0.155	0.000	0 0.155	0.000
95cd (Ceiling) Strobe	0 0.258	0.000	0 0.258	0.000	0 0.258	0.000	0 0.258	0.000
0	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000	0 0.000	0.000
Speaker only @ 1/4 watt tap	0 0.00357	0.000	0 0.00357	0.000	0 0.00357	0.000	0 0.00357	0.000
Speaker only @ 2 watt tap	0 0.02857	0.000	0 0.02857	0.000	0 0.02857	0.000	0 0.02857	0.000
	Total	0.693	**Total**	0.443	**Total**	0.000	**Total**	0.000
Circuit Length:	360		260		0		0	
Circular mils:	6530		6530		6530		6530	
Volts dropped:	0.82		0.38		0.00		0.00	
Percent voltage drop:	**3.44%**		**1.59%**		**0.00%**		**0.00%**	

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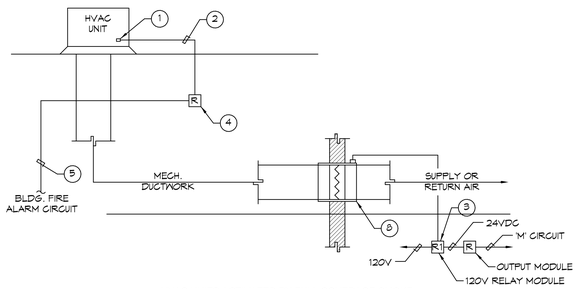
LICENSED ARCHITECT ROBERT D. WEBB R.A. C-28036 OCTOBER 31, 2021 STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

FIRE ALARM RISER AND CALCULATION

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E5.3



HVAC UNITS ACTIVATED BY FULL COVERAGE SMOKE DETECTION SYSTEM DAMPER CONTROL DIAGRAM

KEY NOTES:

1. ALL A/C UNITS SHALL SHUT DOWN, WHETHER IN HEATING OR COOLING MODE, UPON ACTIVATION OF ANY FIRE ALARM DEVICE IN THE BUILDING INCLUDING SMOKE/HEAT DETECTORS, MANUAL STATIONS, DUCT DETECTORS, AREA DETECTORS, CONTROLLING SMOKE DAMPERS, SPRINKLER ACTIVATION. 45 SECONDS AFTER THE A/C UNITS HAVE BEEN SHUT DOWN, ALL SMOKE DAMPERS SHALL CLOSE.
2. 1/2" CONDUIT PROVIDED BY (ELECTRICAL) WITH CONTROL WIRING PROVIDED BY (FIRE ALARM). FINAL CONNECTIONS TO A/C UNIT BY (MECHANICAL) AND ALL CONNECTIONS AT FIRE ALARM DEVICES BY (FIRE ALARM) CONTRACTOR.
3. FIRE ALARM CONTROL MODULE MOUNTED AT FACP OR FA PANELS, BOXES AND INTERCONNECTING CONDUITS BY (ELECTRICAL) CONTRACTOR. WIRING BY (FIRE ALARM) CONTRACTOR.
4. FIRE ALARM CONTROL MODULE MOUNTED TO J-BOX ADJACENT TO A/C UNIT, BOXES AND INTERCONNECTING CONDUITS BY (ELECTRICAL) CONTRACTOR. WIRING BY (FIRE ALARM) CONTRACTOR.
5. 1/2" CONDUIT PROVIDED BY (ELECTRICAL) WITH CONTROL WIRING PROVIDED BY (FIRE ALARM) CONTRACTOR.
6. SMOKE DETECTOR WITH 24V AUXILIARY CONTROL CONTACT INSTALL IN DUCT DETECTOR HOUSING BY (FIRE ALARM) CONTRACTOR.
7. DUCT DETECTOR HOUSING AND SAMPLING TUBES FURNISHED BY (FIRE ALARM) CONTRACTOR AND INSTALLED BY (MECHANICAL) CONTRACTOR SAMPLING TUBES SHALL BE SIZED TO MATCH THE DUCT SIZE AND CFM RATING.
8. SMOKE/FIRE DAMPER BY (MECHANICAL).

DAMPER/HVAC UNIT FIRE ALARM CONTROL DIAGRAM

NO SCALE

1
E5.4

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SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

DETAILS

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E5.4

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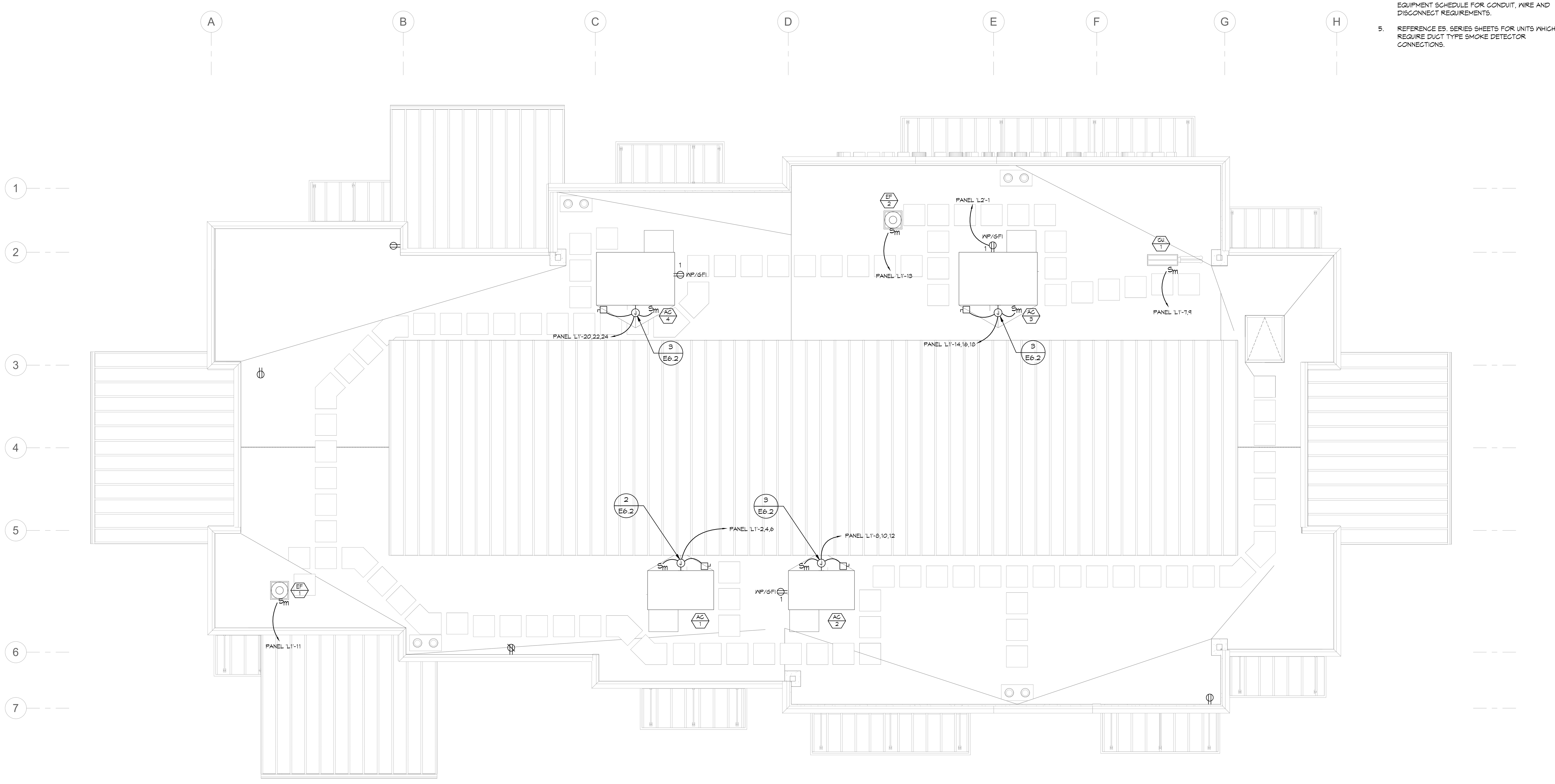

ROOF PLAN | 1/4" = 1'-0" | 1

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GENERAL NOTES:

1. REFERENCE MECHANICAL PLANS FOR EXACT EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.
2. DASHED EQUIPMENT INDICATES THAT EQUIPMENT IS LOCATED WITHIN CEILING SPACE. ALL OTHER EQUIPMENT IS ROOF MOUNTED (U.O.N.).
3. ALL CONDUIT FEEDERS TO ROOF MOUNTED EQUIPMENT SHALL BE RUN CONCEALED IN CEILING SPACE WHERE EQUIPMENT CURBS ARE PROVIDED. ROUTE FEEDER UP THROUGH CURB TO EQUIPMENT DISCONNECT.
4. REFERENCE SHEET E6 SERIES MECHANICAL EQUIPMENT SCHEDULE FOR CONDUIT, WIRE AND DISCONNECT REQUIREMENTS.
5. REFERENCE E5. SERIES SHEETS FOR UNITS WHICH REQUIRE DUCT TYPE SMOKE DETECTOR CONNECTIONS.

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ROOF PLAN

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E6.1

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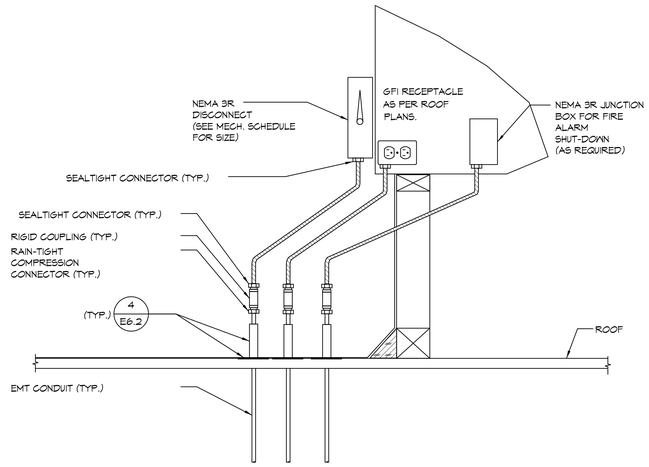


A/C UNIT CONNECTION DETAIL

NO SCALE

1 E6.2

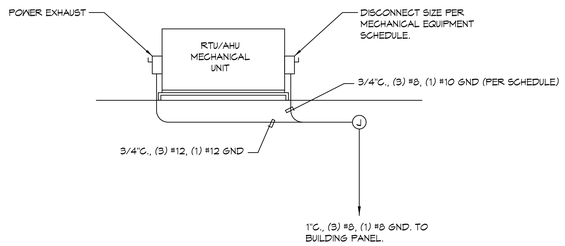
MECHANICAL EQUIPMENT SCHEDULE

Mark	Voltage/Phase	Conduit/Wire	Fuse	Disc. Switch	Panel	Remarks
AC 1	208/3	3/4"C., (3) #8, (1) #10 GND.	40	60A/3P/3R	SEE PLANS	27 MCA (1)
AC 2	208/3	1"C., (3) #6, (1) #10 GND.	45	60A/3P/3R	SEE PLANS	31 MCA (1)
AC 3	208/3	1"C., (3) #6, (1) #10 GND.	45	60A/3P/3R	SEE PLANS	35 MCA (2)
AC 4	208/3	1"C., (3) #6, (1) #10 GND.	45	60A/3P/3R	SEE PLANS	35 MCA (2)
FC 1	208/1	3/4"C., (2) #10, (1) #10 GND.		(3)	SEE PLANS	1.4 MCA (15 MOCP)
CU 1	208/1	3/4"C. (2) #10, (1) #10 GND		(3)	SEE PLANS	12.1 MCA (25 MOCP)
EF 1	120/1	3/4"C., (2) #10, (1) #10 GND.		(3)	SEE PLANS	66w
EF 2	120/1	3/4"C., (2) #10, (1) #10 GND.		(3)	SEE PLANS	1/6 HP (4.4 FLA)
EWH 1	120/1	3/4"C., (2) #8, (1) #8 GND.		(3)	SEE PLANS	3.5kW

(1) PROVIDE SEPARATE POWER FOR POWER EXHAUST (HP = 0.5, FLA = 2.7, MOCP = 6.1A) 208v, 3Ø. PROVIDE POWER EXHAUST DISCONNECT SEPARATE FROM THE UNIT DISCONNECT. PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE.

(2) PROVIDE SEPARATE POWER FOR POWER EXHAUST (HP = 1.0, FLA = 5.1, MOCP = 11.5) 208v, 3Ø. PROVIDE POWER EXHAUST DISCONNECT SEPARATE FROM THE UNIT DISCONNECT. PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE.

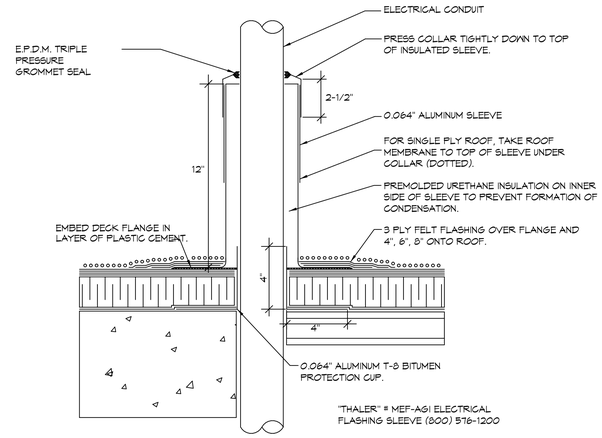
(3) PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE.



TYPICAL MECHANICAL UNIT COMBINATION FEEDER DETAIL (40A)

NO SCALE

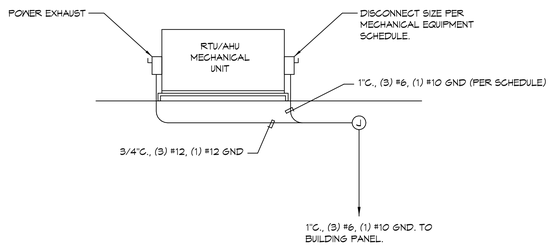
2 E6.2



CONDUIT ROOF PENETRATION DETAIL

NO SCALE

4 E6.2



TYPICAL MECHANICAL UNIT COMBINATION FEEDER DETAIL (50A)

NO SCALE

3 E6.2

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MECHANICAL SCHEDULE

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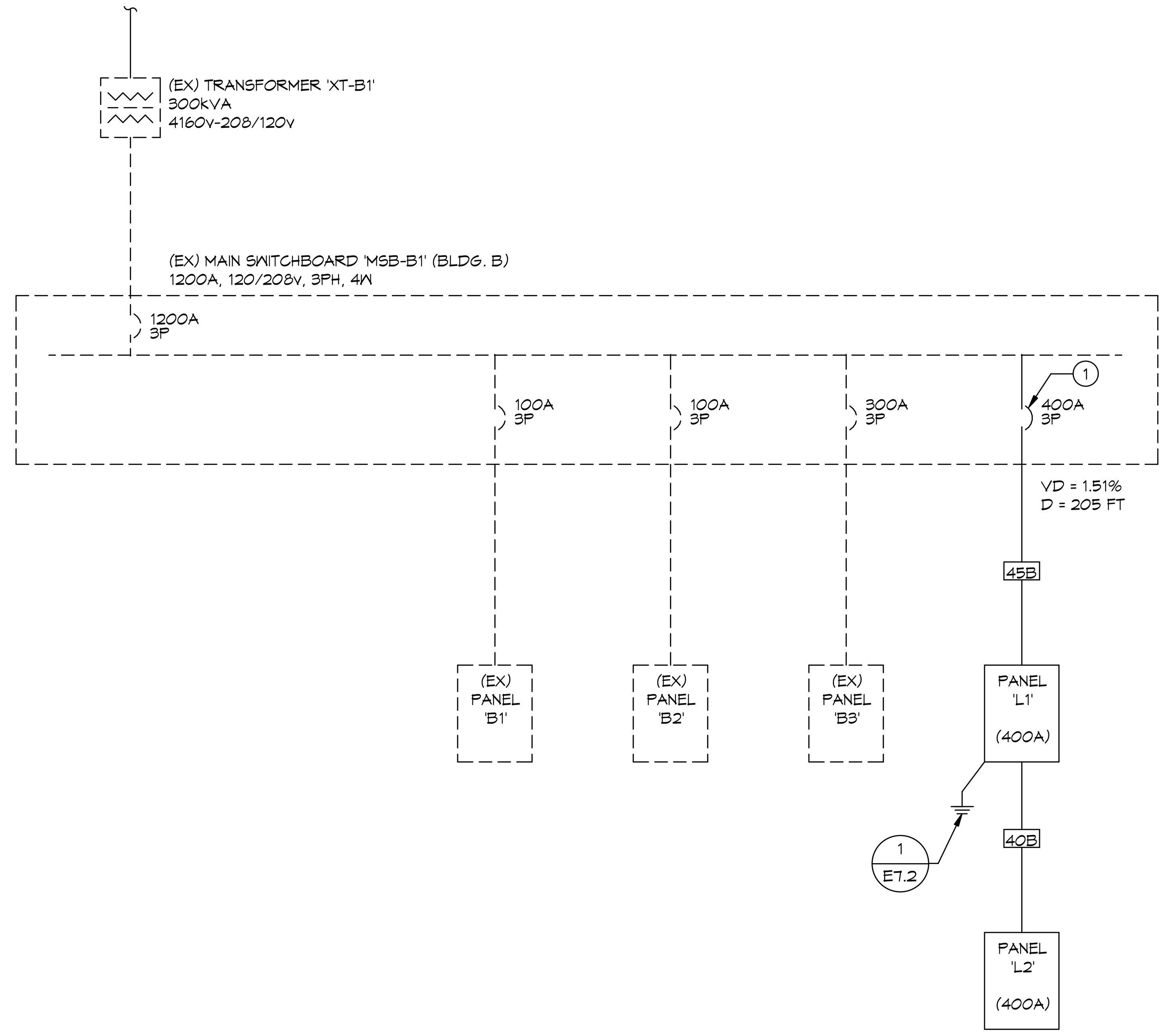

ONE-LINE DIAGRAM
NO SCALE

1 / E7.1

GENERAL NOTES:

1. A FAULT CURRENT AND TIME CURRENT STUDY MUST BE PROVIDED AS DESCRIBED IN THE SPECIFICATIONS PRIOR TO FINAL APPROVAL OF THE POWER EQUIPMENT.
2. REFERENCE DETAIL (2 / E7.2) FOR ALL EQUIPMENT FAULT CURRENT RATINGS.
3. UNLESS WHERE OTHERWISE NOTED. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK.
4. ALL ELECTRICAL GEAR AND EQUIPMENT SHOWN ON ONE-LINE DIAGRAM SHALL BE NEMA 3R UNLESS OTHERWISE NOTED.

KEY NOTES:

(1) EXISTING CIRCUIT BREAKER.

LOAD CALCULATION		
PEAK DEMAND	=	108 KW
X 1.25	=	135 KW
TOTAL LOAD (120/208v)	=	375 A
NEW ADDED LOAD	=	252 A
	=	627 A
EXISTING MSB-B1 1200 AMPS, 120/208v		

600Volt Feeder Schedule

I.D.	Type	Ampacity	Copper Conduit		Copper Conductors	Aluminum Conduit		Aluminum Conductors
2A	.	20	(1)	3/4"	3 # 12, 1# 12 Gnd		NA	NA
2B	.	20	(1)	3/4"	4 # 12, 1# 12 Gnd		NA	NA
3A		30	(1)	3/4"	3 # 10, 1# 10 Gnd		NA	NA
3B		30	(1)	3/4"	4 # 10, 1# 10 Gnd		NA	NA
4A		40	(1)	1"	3 # 8, 1# 10 Gnd		NA	NA
4B		40	(1)	1"	4 # 8, 1# 10 Gnd		NA	NA
5A		50	(1)	1"	3 # 6, 1# 10 Gnd		NA	NA
5B		50	(1)	1"	4 # 6, 1# 10 Gnd		NA	NA
6A		60	(1)	1 1/4"	3 # 4, 1# 8 Gnd		NA	NA
6B		60	(1)	1 1/4"	4 # 4, 1# 8 Gnd		NA	NA
7A		70	(1)	1 1/4"	3 # 4, 1# 8 Gnd		NA	NA
7B		70	(1)	1 1/4"	4 # 4, 1# 8 Gnd		NA	NA
8A		80	(1)	1 1/4"	3 # 3, 1# 8 Gnd		NA	NA
8B		80	(1)	1 1/4"	4 # 3, 1# 8 Gnd		NA	NA
9A		90	(1)	1 1/2"	3 # 2, 1# 8 Gnd		NA	NA
9B		90	(1)	1 1/2"	4 # 2, 1# 8 Gnd		NA	NA
10A		100	(1)	1 1/2"	3 # 1, 1# 6 Gnd		NA	NA
10B		100	(1)	1 1/2"	4 # 1, 1# 6 Gnd		NA	NA
12A		125	(1)	2"	3 # 1, 1# 6 Gnd	(1)	2"	3 # 2/0, 1# 3 Gnd
12B		125	(1)	2"	4 # 1, 1# 6 Gnd	(1)	2"	4 # 2/0, 1# 3 Gnd
15A		150	(1)	2"	3 # 1/0, 1# 6 Gnd	(1)	2"	3 # 3/0, 1# 3 Gnd
15B		150	(1)	2"	4 # 1/0, 1# 6 Gnd	(1)	2"	4 # 3/0, 1# 3 Gnd
17A		175	(1)	2"	3 # 2/0, 1# 6 Gnd	(1)	2"	3 # 4/0, 1# 3 Gnd
17B		175	(1)	2"	4 # 2/0, 1# 6 Gnd	(1)	2"	4 # 4/0, 1# 3 Gnd
20A		200	(1)	3"	3 # 3/0, 1# 4 Gnd	(1)	3"	3 # 250, 1# 2 Gnd
20B		200	(1)	3"	4 # 3/0, 1# 4 Gnd	(1)	3"	4 # 250, 1# 2 Gnd
22A		225	(1)	3"	3 # 4/0, 1# 4 Gnd	(1)	3"	3 # 300, 1# 2 Gnd
22B		225	(1)	3"	4 # 4/0, 1# 4 Gnd	(1)	3"	4 # 300, 1# 2 Gnd
25A		250	(1)	3"	3 # 250, 1# 4 Gnd	(1)	3"	3 # 350, 1# 2 Gnd
25B		250	(1)	3"	4 # 250, 1# 4 Gnd	(1)	3"	4 # 350, 1# 2 Gnd
30A		300	(1)	3"	3 # 350, 1# 4 Gnd	(1)	3"	3 # 500, 1# 2 Gnd
30B		300	(1)	3"	4 # 350, 1# 4 Gnd	(1)	3"	4 # 500, 1# 2 Gnd
35A		350	(2)	2"	3 # 2/0, 1# 2 Gnd	(2)	2"	3 # 4/0, 1# 1 Gnd
35B		350	(2)	2"	4 # 2/0, 1# 2 Gnd	(2)	2"	4 # 4/0, 1# 1 Gnd
40A		400	(2)	3"	3 # 3/0, 1# 2 Gnd	(2)	3"	3 # 250, 1# 1/0 Gnd
40B		400	(2)	3"	4 # 3/0, 1# 2 Gnd	(2)	3"	4 # 250, 1# 1/0 Gnd
45A		450	(2)	3"	3 # 4/0, 1# 2 Gnd	(2)	3"	3 # 300, 1# 1/0 Gnd
45B		450	(2)	3"	4 # 4/0, 1# 2 Gnd	(2)	3"	4 # 300, 1# 1/0 Gnd
50A		500	(2)	3"	3 # 250, 1# 2 Gnd	(2)	3"	3 # 350, 1# 1/0 Gnd
50B		500	(2)	3"	4 # 250, 1# 2 Gnd	(2)	3"	4 # 350, 1# 1/0 Gnd
60A		600	(2)	3"	3 # 350, 1# 1 Gnd	(2)	3"	3 # 500, 1# 2/0 Gnd
60B		600	(2)	3"	4 # 350, 1# 1 Gnd	(2)	3"	4 # 500, 1# 2/0 Gnd
70A		700	(3)	3"	3 # 4/0, 1# 1/0 Gnd	(3)	3"	3 # 300, 1# 3/0 Gnd
70B		700	(3)	3"	4 # 4/0, 1# 1/0 Gnd	(3)	3"	4 # 300, 1# 3/0 Gnd
80A		800	(3)	3"	3 # 300, 1# 1/0 Gnd	(3)	3"	3 # 500, 1# 3/0 Gnd
80B		800	(3)	3"	4 # 300, 1# 1/0 Gnd	(3)	3"	4 # 500, 1# 3/0 Gnd
100B		1000	(4)	3"	4 # 250, 1# 2/0 Gnd	(4)	3"	4 # 400, 1# 4/0 Gnd
120B		1200	(4)	4"	4 # 350, 1# 3/0 Gnd	(4)	4"	4 # 500, 1# 250 Gnd
160B		1600	(5)	4"	4 # 400, 1# 4/0 Gnd	(5)	4"	4 # 600, 1# 350 Gnd
200B		2000	(6)	4"	4 # 500, 1# 250 Gnd	(6)	4"	4 # 600, 1# 400 Gnd
250B		2500	(7)	4"	4 # 500, 1# 350 Gnd	(7)	4"	4 # 750, 1# 600 Gnd
300B		3000	(8)	4"	4 # 500, 1# 350 Gnd	(8)	4"	4 # 750, 1# 600 Gnd
350B		3500	(12)	4"	4 # 350, 1# 400 Gnd	(12)	4"	4 # 500, 1# 600 Gnd
400B		4000	(12)	4"	4 # 400, 1# 400 Gnd	(12)	4"	4 # 600, 1# 750 Gnd

600V FEEDER SCHEDULE LEGEND

MS — REFERENCE MECHANICAL EQUIPMENT SCHEDULE FOR SIZE

T75 — "T" INDICATES TYPICAL TRANSFORMER FEEDER REFERENCE. THE NUMBER INDICATES TRANSFORMER TYPE. REFER TO SCHEDULE ON SHEET FOR SIZE REQUIRED.

2 | | CO — 2 | | — INDICATES QUANTITY OF CONDUITS REQUIRED = (2)

| 4 | — INDICATES SIZE OF CONDUITS REQUIRED = 4"

| | CO — INDICATES "CONDUIT ONLY"

600V FEEDER SCHEDULE GENERAL NOTES:

1. ALL CONDUCTOR SHALL BE PROVIDED WITH TYPE THWN-2 INSULATION. REFERENCE SPECIFICATION SECTION 26 05 19 (16120) FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE 60 DEGREE COPPER/ALUMINUM RATED TERMINATION FOR ALL FEEDERS SIZED WITH #2 OR SMALLER CONDUCTORS. PROVIDE 75 DEGREE COPPER/ALUMINUM RATED TERMINATIONS FOR ALL FEEDERS SIZED WITH #1 OR LARGER CONDUCTORS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING LUG CONFIGURATION AN ALL EQUIPMENT, BREAKER OF DISCONNECTS TO MATCH FEEDER CONFIGURATIONS INDICATED.
4. WHERE MULTIPLE CONDUIT QUANTITIES ARE INDICATED, CONDUCTOR QUANTITIES AND SIZES SHOWN IN SCHEDULE SHALL BE PROVIDED IN EACH CONDUIT.

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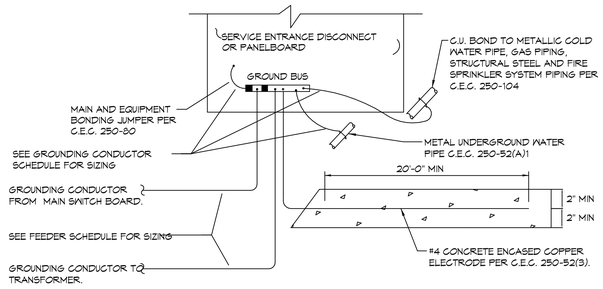
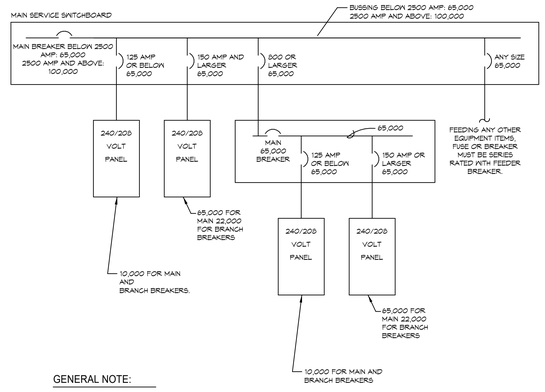


GROUND SIZING SCHEDULE	
EQUIPMENT AMPACITY	GROUNDING CONDUCTOR SIZE
0 - 200 AMPS	#4 CU.
201 - 400 AMPS	#1/0 CU.
401 - 800 AMPS	#2/0 CU.
801 - 1200 AMPS	#3/0 CU.
1201 - 2000 AMPS	#250 CU.
2001 - 4000 AMPS	#350 CU.

SERVICE ENTRANCE GROUNDING AND BONDING DETAIL

NO SCALE

1 / E7.2



GENERAL NOTE:

1. ALL RATINGS SHOWN ARE FOR A UL LISTED SERIES COMBINATION OF THE BREAKERS INDICATED.

TYPICAL 208/240 VOLT SERVICE AIC EQUIPMENT RATING

NO SCALE

2 / E7.2

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L1

120/208	120/208 3PH, 4WIRE		400 AMP	Main	Breaker	X	ENCLOSURE TYPE	ENCLOSURE NOTE
	200% Neutral Bus				Lug		X NEMA TYPE 1	
	(INTEGRAL)TVSS Protection			Enclosure	Recessed		NEMA TYPE 3R	
L1	(REMOTE)TVSS Protection				Surface	X	NEMA TYPE 4X	
	Service Entrance Rated	X	GENERAL DISTRIBUTION	PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING,				
	Load Side Feed thru Lugs	X	BREAKER REQUIREMENTS :	MOTORS, AND FIRE ALARM EQUIPMENT SERVED FROM THIS PANEL				

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
X		INTERIOR LTG	20	1	1	3240			2	40	3	AC-1		
X		INTERIOR LTG	20	1	3		3240		4	-	-	"		
X		INTERIOR LTG	20	1	5			3240	6	-	-	"		
		CU-1	30	2	7	1260 / 3720			8	50	3	AC-2		
		"	-	-	9		1260 / 3720		10	-	-	"		
		EF-1	20	1	11			66 / 3720	12	-	-	"		
		EF-2	20	1	13	66 / 3720			14	50	3	AC-3		
		EWH-1-CR10	40	1	15		3500 / 3720		16	-	-	"		
		EWH-1-CR10	40	1	17			3500 / 3720	18	-	-	"		
		EWH-1-TOILET	40	1	19	3500 / 3720			20	50	3	AC-4		
		SPARE	20	1	21		3720		22	-	-	"		
		EXTERIOR LTG	20	1	23			260 / 3720	24	-	-	"		
		SPARE	20	1	25	150			26	20	2	FC-1		
		SPARE	20	1	27		150		28	-	-	"		
		SPARE	20	1	29				30	20	1	SPARE		
		SPARE	20	1	31				32	20	1	SPARE		
		SPARE	20	1	33				34	20	1	SPARE		
		SPARE	20	1	35				36	20	1	SPARE		
		SPARE	20	1	37				38	20	1	SPACE		
		SPARE	20	1	39				40	20	1	SPACE		
		EM LTG INVERTER	25	1	41				42	20	1	SPACE		

		PHASE A	PHASE B	PHASE C		
SPECIAL PANEL NOTE					NOTE #1	
					NOTE #2	
NHL= Non Harmonic Load	TOTAL LOAD PER PHASE	19376	19310	18226		
LCL= Long Continuous Load	25% LONG CONTINUOUS LOADS	0	0	0	HIGH PHASE 29026 / 0.9pf = VA @ 120V	268.8 AMPS
					ALL PHASES 81612 / 0.9pf = VA @ 208V/3PH	251.9 AMPS
	SUB PANEL L2	8000	5900	10800		
Max. Neut. Load	SUB PANEL				DEMAND PER	
274 AMPS	TOTAL CONNECTED LOAD	27376	25210	29026	NEC 220-34	AMPS

M:\Panel Schedule\2019\19030 Sycamore Canyon\L1 11:59 AM1/17/2020

Per NFPA 72 provide:
1. Dedicated circuit
2. Mechanical protected (lock out device)
3. Red marking
4. Accessible to authorized personnel only
5. Identified as "fire alarm circuit"
6. Location of circuit breaker permanently identified at fire alarm control unit.

L2

120/208	120/208 3PH, 4WIRE		400 AMP	Main	Breaker	x	ENCLOSURE TYPE	ENCLOSURE NOTE
	200% Neutral Bus				Lug		x NEMA TYPE 1	
	(INTEGRAL)TVSS Protection	X		Enclosure	Recessed		NEMA TYPE 3R	
L2	(REMOTE)TVSS Protection				Surface	X	NEMA TYPE 4X	
	Service Entrance Rated		GENERAL DISTRIBUTION	PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING, MOTORS				
	Load Side Feed thru Lugs		BREAKER REQUIREMENTS :	AND FIRE ALARM EQUIPMENT (DEVICE SHALL BE RED) SERVED FROM THIS PANEL				

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
		ROOFTOP RECEPT.	20	1	1	600 / 600			2	20	1	RECEPT CORD REEL -10		
		EXTERIOR RECEPT.	20	1	3		800 / 600		4	20	1	RECEPT CORD REEL -10		
		RECEPT - 2	20	1	5			1000 / 600	6	20	1	RECEPT CORD REEL -10		
		RECEPT - 2	20	1	7	1000 / 600			8	20	1	RECEPT CORD REEL -10		
		RECEPT - 2	20	1	9		600 / 600		10	20	1	RECEPT CORD REEL -10		
		RECEPT - 2	20	1	11			800 / 600	12	20	1	RECEPT CORD REEL -10		
		RECEPT - 3,4	20	1	13	600 / 600			14	20	1	RECEPT CORD REEL -10		
		RECEPT - 3,4	20	1	15		400 / 800		16	20	1	RECEPT - 10		
		RECEPT - 2	20	1	17			400 / 600	18	20	1	RECEPT - 10		
		RECEPT - 4	20	1	19	800 / 400			20	20	1	RECEPT -10		
		RECEPT - 4	20	1	21		800 / 400		22	20	1	RECEPT - 10		
		RECEPT - 6	20	1	23			600 / 1500	24	20	1	IDF RECEPT.		
		RECEPT - 7	20	1	25	800 / 1500			26	20	1	IDF RECEPT.		
		RECEPT - 5	20	1	27		400 / 400		28	20	1	RECEPT.		
		HAND DRYER	20	1	29			1200 / 3000	30	30	1	IDF RECEPT. - UPS		
		SPARE	20	1	31	500			32	20	1	LTG CONTROL PANEL		
		SPARE	20	1	33		500		34	20	1	WIRELESS CLOCK		
		SPARE	20	1	35				36	20	1	SPARE		
		SPARE	20	1	37				38	20	1	SPARE		
		SPARE	20	1	39				40	20	1	SPARE		
		SPARE	20	1	41			500	42	20	1	FIRE ALARM EXT. PANEL		

		PHASE A	PHASE B	PHASE C		
SPECIAL PANEL NOTE					NOTE #1	
					NOTE #2	
NHL= Non Harmonic Load	TOTAL LOAD PER PHASE	8000	6300	10800		
LCL= Long Continuous Load	25% LONG CONTINUOUS LOADS	0	0	0	HIGH PHASE 10800 / 0.9pf = VA @ 120V	100.0 AMPS
					ALL PHASES 25100 / 0.9pf = VA @ 208V/3PH	77.5 AMPS
	SUB PANEL					
Max. Neut. Load	SUB PANEL				DEMAND PER	
153 AMPS	TOTAL CONNECTED LOAD	8000	6300	10800	NEC 220-34	AMPS

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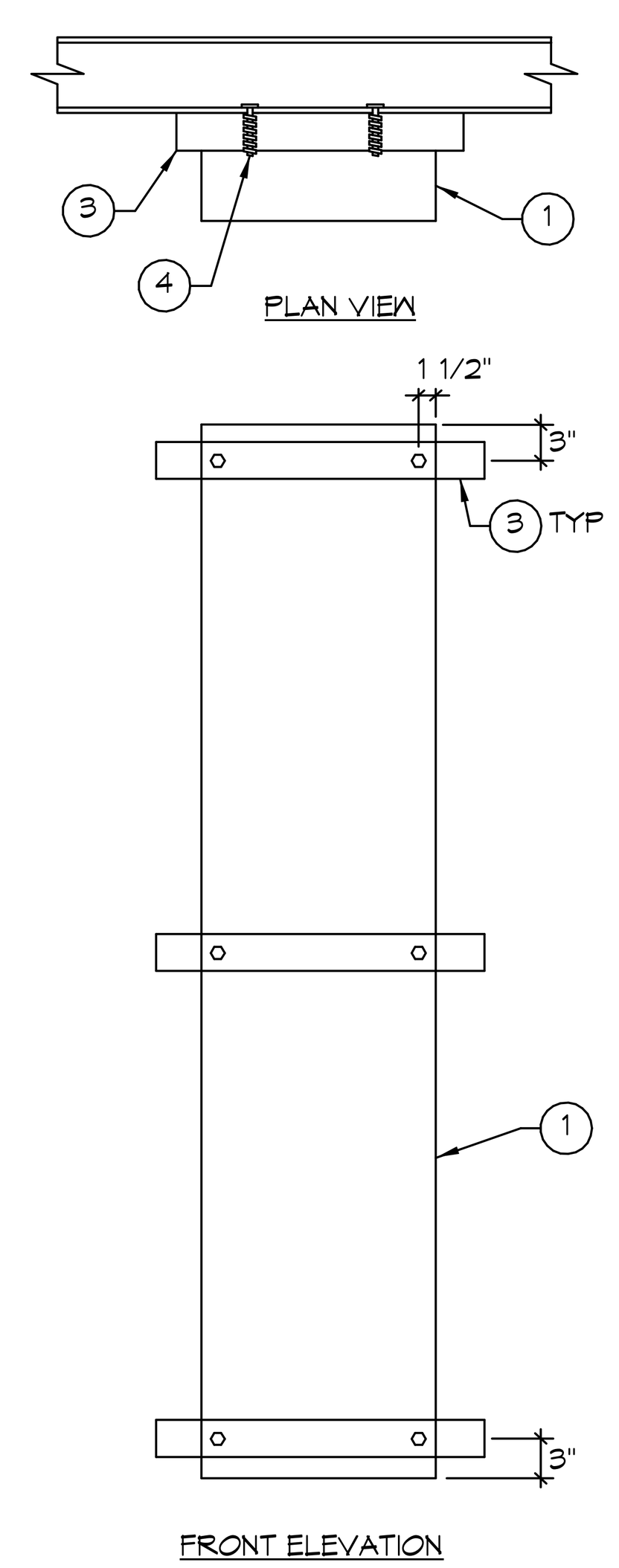

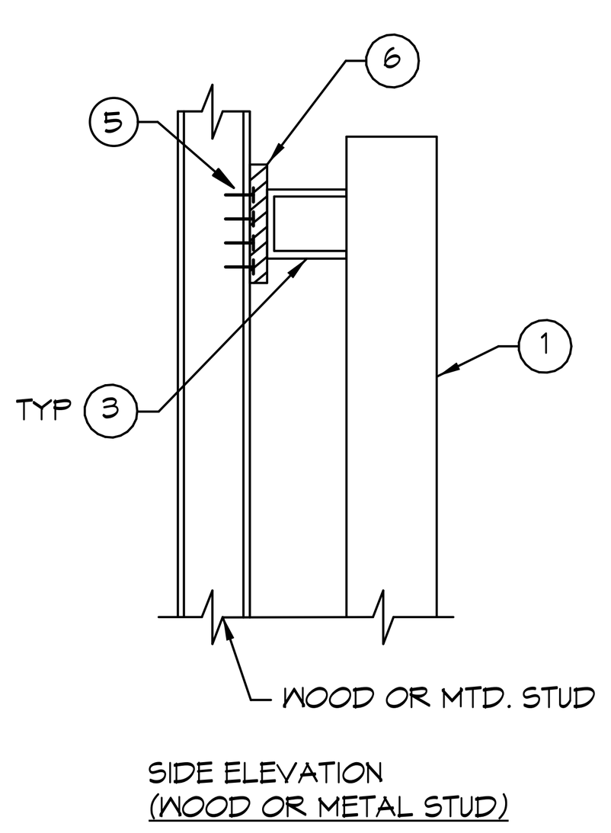

DETAIL NOTES

1. ELECTRICAL PANEL WALL MOUNTED 90" H. X 20" W. X 6" D. MAXIMUM. 150 LBS MAXIMUM WEIGHT.
2. NOT USED.
3. UNISTRUT P1000 C-CHANNEL.
4. UNISTRUT P2380 ANCHOR.
5. (2) #12 SMS. @ C.L EACH STUD.
6. 6"x18GA (54 MINUS) NOTCHED TRACK ANCHOR BACKING TO (3) STUDS MIN.

SURFACE WALL MOUNTED ELECTRICAL PANEL DETAIL

NO SCALE

1 / E9.1

		L1
		L2

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REGISTERED PROFESSIONAL ENGINEER — NO.E 14781 — Exp. 6-30-2021 — ELECTRICAL — STATE OF CALIFORNIA

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118743 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02.05.20

Revison	Date

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Engineer

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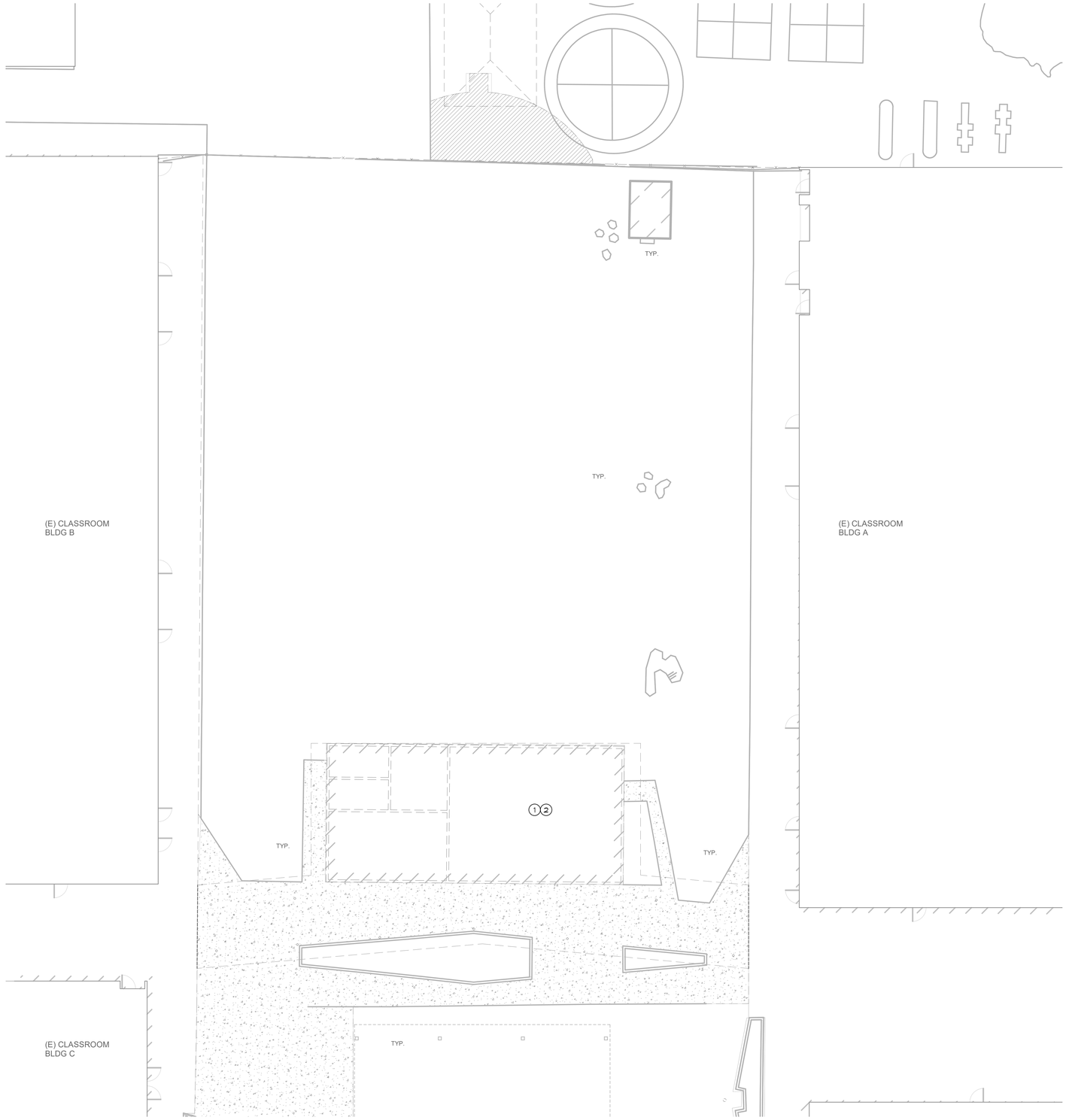
LICENSED ARCHITECT — C-28036 — STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

PANEL SCHEDULES

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E9.1



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

DEMOLITION GENERAL NOTES:

1. ALL ITEMS SHOWN ON THIS DRAWING ARE EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. SEE REQUIREMENTS BELOW FOR SCOPE OF WORK. ALL OTHER ELECTRICAL ITEMS IN THIS BUILDING ARE EXISTING TO REMAIN, MAINTAIN POWER CIRCUIT CONTINUITY UNTIL NEW SOURCE IS ENERGIZED AND READY FOR TRANSFER, REFER TO POWER AND LIGHTING PLANS.
2. ALL ELECTRICAL DEMOLITION WORK SHALL BE DIRECTED BY THE ELECTRICAL CONTRACTOR.

GENERAL DEMOLITION REQUIREMENTS:

1. LIGHTING FIXTURES
   WHERE EXISTING LIGHTING FIXTURES ARE TO BE REMOVED, AND ARE NOT RELOCATED, CONTRACTOR SHALL DISPOSE OF ALL FIXTURES INCLUDING LAMPS AND BALLAST.
2. WIRING DEVICES
   WHERE EXISTING SWITCHES OR RECEPTACLES ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSE OF ALL DEVICES AS REQUIRED.
3. COMMUNICATION DEVICES
   WHERE EXISTING TELEPHONE/INTERCOM AND CLOCK HEAD END EQUIPMENT, PHONES, SPEAKERS AND OTHER ASSOCIATED EQUIPMENT ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.
4. FIRE ALARM
   WHERE EXISTING FIRE ALARM PANELS AND ASSOCIATED SMOKE, HEAT, DUCT DETECTORS, PULL STATIONS AND STROBE OR HORN UNITS ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.
5. INTRUSION ALARM
   EXISTING INTRUSION ALARM SENSORS AND EQUIPMENT SHALL BE REMOVED WHERE INDICATED. RETURN ALL DEVICES TO THE SCHOOL DISTRICT MAINTENANCE FACILITIES.
6. POWER EQUIPMENT
   WHERE EXISTING SWITCHBOARDS, PANELBOARDS, LOAD CENTERS, TRANSFORMERS, DISCONNECT SWITCHES OR OTHER DISTRIBUTION EQUIPMENT ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.
7. ALL BOXES, EXPOSED CONDUIT, WIRE, AND OTHER ITEMS ASSOCIATED WITH ELECTRICAL EQUIPMENT TO BE REMOVED, SHALL BE DISCONNECTED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AS REQUIRED, UNLESS SPECIFICALLY NOTED OTHERWISE. CUT AND CAP CONCEALED CONDUITS. PATCH, SEAL AND REPAIR SURFACE TO MATCH ADJACENT AREA WHERE BOXES ARE REMOVED.

KEY NOTES:

1. EXISTING BUILDING TO BE REMOVED IN ITS ENTIRETY.
2. REMOVE EXISTING FEEDER BACK TO SWITCHBOARD 'MSB-A' IN BUILDING A. LABEL EXISTING CIRCUIT BREAKER SPARE.

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C-28036
OCTOBER 31, 2021
STATE OF CALIFORNIA

SYCAMORE CANYON ELEMENTARY SCHOOL
LIBRARY RESOURCE CENTER (LRC)
SANTEE SCHOOL DISTRICT

ENLARGED SITE PLAN - DEMOLITION

Drawn: Author
Checked: Checker
Date: APRIL 24, 2019
Job: SSD-SC-03

E10.1

REGISTERED PROFESSIONAL ENGINEER
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