GLENDALE UNIFIED SCHOOL DISTRICT
NEW 2-STORY MODULAR BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD., GLENDALE, CA 91206

LEGEND

EXTERIOR ELEVATION NO.
EXTERIOR ELEVATION SYMBOL
SHEET NO.

SIGNAGE SYMBOL

DETAIL NO.
DETAIL SYMBOL
SHEET NO.

DETAIL NO.
SECTION/DETAIL/ PHOTO REFERENCE SYMBOL
SHEET NO.

BUILDING DATA

BLDG.	DESCRIPTION	OCCUPANCY CONST. TYPE	TOTAL AREA	BASIC ALLOWABLE	ACTUAL < ALLOWABLE
1	2 STORY MODULAR CLASSROOM	OCC "E" TYPE VA	1ST FLR = 6,896 2ND FLR = 7,928 =14,824 S.F. INCLUDES EXIT BALCONIES & ROOF OVERHANG AREAS	74,000 S.F.	14,824 S.F < 74,000 S.F

BUILDING HEIGHT: TWO STORY
AUTOMATIC FIRE SPRINKLER: YES

SCOPE OF WORK

NEW CONSTRUCTION OF A 2 STORY MODULAR TYPE VA CLASSROOM BUILDING WITH BOY'S AND GIRLS RESTROOMS, EXTERIOR STAIRS, ANCILLARY SPACES, NEW PC ELEVATOR, PER PC-03-118291 & MECHANICAL ROOM, NEW ACCESSIBLE PARKING STALLS, NEW PARKING STALLS, FENCING, SITE CONCRETE/ASPHALT WALKWAYS, SITE SIGNAGE, UNDERGROUND UTILITIES CONNECTIONS TO THE BUILDING AND NEW BUILDING CONCRETE FOUNDATION SYSTEM WITH GROUND AIR VENTS.

CONSULTANTS

OWNER:
GLENDALE UNIFIED
SCHOOL DISTRICT
223 NORTH JACKSON
STREET
GLENDALE, CA 91206
818-241-3111

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909-985-6939
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CIVIL ENGINEER:
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31045 TEMECULA PARKWAY,
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TEMECULA, CA. 92592
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ELECTRICAL ENGINEER:
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MODULAR COMPANY:
American Modular Systems (AMS)
787 spreckles Ave.,
Manteca, CA. 95336
209-825-1921
americanmodular.com
Architect: Randal Cavanagh
Structural Engineer: Manny Frisch

SHEET INDEX

APPLICABLE CODES

APPLICABLE CODES AS OF JANUARY 1, 2021

PART 1 2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (CBSAC), TITLE 24, C.C.R.
PART 2 2019 CALIFORNIA BUILDING CODE (CBC), TITLE 24, C.C.R. (2018 INTERNATIONAL BUILDING CODE WITH 2019 WITH CALIFORNIA AMENDMENTS)
PART 3 2019 CALIFORNIA ELECTRICAL CODE (CEC), TITLE 24, C.C.R. (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
PART 4 2019 CALIFORNIA MECHANICAL CODE (CMC),TITLE 24, C.C.R. (2018 UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
PART 5 2019 CALIFORNIA PLUMBING CODE (CPC), TITLE 24 , C.C.R (2018 UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
PART 6 2019 CALIFORNIA ENERGY CODE (CEnC),TITLE 24, C.C.R.
PART 9 2010 CALIFORNIA FIRE CODE (CFC),TITLE 24, C.C.R (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
PART 12 2019 CALIFORNIA REFERENCE STANDARDS CODE (CRSC),TITLE 24, C.C.R. REGULATIONS OF THE STATE FIRE MARSHAL, C.C.R. TITLE 19
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

PARTIAL LIST OF APPLICABLE STANDARDS

2019	CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35	
NFPA 13	AUTOMATIC SPRINKLER SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED)	2016 EDITION
(NOTE:	SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION

DSA NOTES

Statement of General Conformance

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS,
INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS
(Application No. *03-121340* File No. *19-41*)

This drawing, page of specifications/calculations, or the attached list of items has been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and

2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

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

Drawings: see drawing list. SEE SHEET INDEX FOR DRAWINGS MARKED WITH (*)

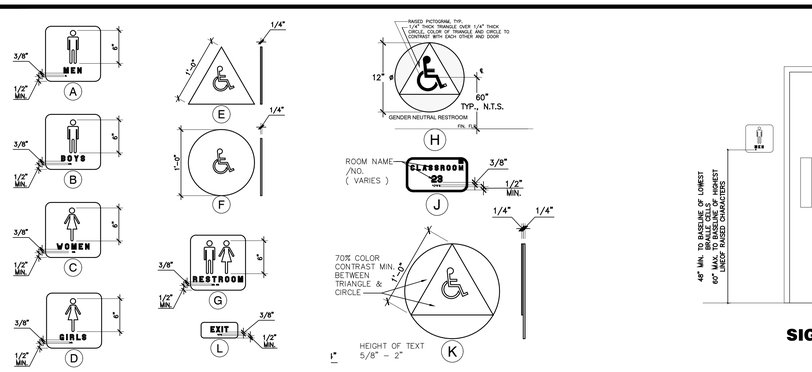
3/24/2021
Signature *Date*

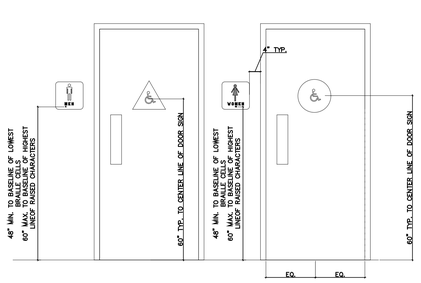
Richard D. Duncan C-21818 *3/31/23*
Print Name License Number *Expiration Date*

ABBREVIATIONS

@	AT THE RATE OF	COL.	COLUMN	F.D.	FLOOR DRAIN	MET.	METAL	PTD.	PAINTED	W.C.	WATER CLOSET
A.C.	ASPHALTIC CONCRETE	CONT.	CONTINUOUS	F.F.	FACTORY FINISH	MFGR.	MANUFACTURER	"R"	THERMAL VALUE	WD.	WOOD
A.C.C.	ACCESSIBLE	CONC.	CONCRETE	F.G.	FINISH GRADE	MIN.	MINIMUM	R.B.	RUBBER BASE	WDW.	WINDOW
ACT.	ACOUSTIC TILE	CONTR.	CONTRACTOR	FIN.	FINISH	MISC.	MISCELLANEOUS	R.D.	ROOF DRAIN	W.H.	WATER HEATER
A.D.	AREA DRAIN	CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	FL.	FLOW LINE	MTD.	MOUNTED	S.A.T.	SUSPENDED ACOUSTICAL TILE	W.P.	WATERPROOF
ADJ.	ADJUSTABLE	CPT.	CARPET	FLR.	FLOOR	MTL.	METAL	S.C.	SOLID CORE	W.R.	WATER RESISTANT
AFF	ABOVE FINISHED FLOOR	CT.	CERAMIC TILE	F.O.C.	FACE OF CONCRETE	(N.)	NEW	S.D.	STORM DRAIN		
ALUM.	ALUMINUM	DET.	DETAIL	F.O.S.	FACE OF STUD	N.I.C.	NOT IN CONTRACT	S.S.	SERVICE SINK		
ANOD.	ANODIZED	DIM.	DIMENSION	F.V	FIELD VERIFY	O.C.	ON CENTER	S.V.	SHEET VINYL		
ARCH.	ARCHITECT	DR.	DOOR	G.A.	GUAGE	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	T.C.	TOP OF CONC. OR CURB		
BC	BOOK CASE	D.S.	DOWNSPOUT	GL.	GLASS			T.O.R.	TOP OF RIDGE		
BD./BRD	BOARD	DWG.	DRAWING	GYP.BD.	GYPSUM BOARD	OFOI	OWNER FURNISHED, OWNER INSTALLED	T.O.S.	TOP OF SHEATHING		
B.M.	BENCH MARK	EA.	EACH	H.C.	HOLLOW CORE			TYP.	TYPICAL		
CAB.	CABINET	(E.)	EXISTING	H.M.	HOLLOW METAL	O.F.D.	OVERFLOW DRAIN	U.B.C.	UNIFORM BUILDING CODE		
CLG.	CEILING	ELECT.	ELECTRICAL	INSUL.	INSULATION	PH	PANIC HARDWARE ON DOORS	UNO	UNLESS NOTED OTHERWISE		
CER.T.	CERAMIC TILE	EQ.	EQUAL	LAV.	LAVATORY	PLYWD.	PLYWOOD	V.T.	VINYL TILE		
CL.	CENTER LINE			L.P.	LAMINATED PLASTIC	P.S.	PRESSED STEEL	W/	WITH		
C.O.	CLEAN OUT										

SIGNAGE & NOTES (1)





SIGN MOUNTING HEIGHTS

ACCESSIBILITY SIGN DESIGN NOTES:

A. 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 GRADE 2 BRAILLE COMPLYING WITH 11B-703.3.1, 11B-703.3.3

B. CHARACTER SIZE: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH (15.9 mm) AND A MAXIMUM OF 2 INCHES (51 mm) HIGH.

C. FINISH AND CONTRAST: CHARACTERS, SYMBOLS AND THEIR BACKGROUNDS SHALL BE EITHER MATTE OR NON-GLARE. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. 11B-703.5.1

D. PROPORTIONS: CHARACTERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1, AND A STROKE WIDTH-TO-HEIGHT RATIO OF BETWEEN 1:5 AND 1:10. 11B-703.5.4

1. ALL LETTERS MEASURED MUST BE UPPERCASE. AFTER CHOOSING A TYPESTYLE TO TEST, BEGIN BY PRINTING THE LETTERS "X" AND "O" AT 1 INCH HIGH. PLACE THE TEMPLATE'S 1:1 SQUARE OVER THE "X" OR "O", WHICHEVER IS MORE NARROW. IF THE STROKE OF THE "X" OR "O" IS TOO THICK OR THE letter is more than the 3:5 RECTANGLE, THE PROPORTIONS ARE CORRECT. USE THE 1:5 RECTANGLE TO DETERMINE IF THE STROKE OF THE "X" IS TOO BROAD, AND THE 1:10 RECTANGLE TO SEE IF IT IS TOO NARROW. IF ALL TESTS ARE PASSED, THE TYPESTYLE IS COMPLIANT WITH PROPORTION CODES.

2. THE BRAILLE MEASUREMENT TEMPLATE IS USED BY PLACING THE GRID OVER A SECTION OF DOTS TO CHECK DISTANCE BETWEEN BRAILLE CELLS AS INDICATED BY THE ARCH.. EACH BOX IS 1/10 INCH IN HEIGHT AND WIDTH.

TEMPLATE FOR CHECKING CHARACTER AND STROKE WIDTH TO HEIGHT PROPORTIONS
1:1 100%
3:5 60%
1:5 20%
1:10 10%
CHARACTER WIDTH
STROKE WIDTH
TITLE 24 BRAILLE SPACING TEMPLATE
.100"
.300"
1/10" GRID

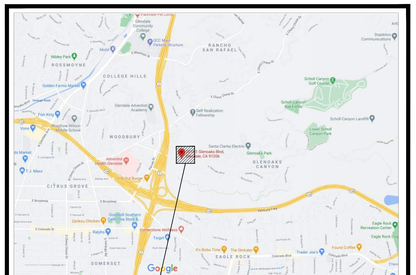
E. BRAILLE: CALIFORNIA GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL BE 1/10 INCH (2.54 mm) ON CENTERS IN EACH CELL WITH 2/10 INCH (5.08 mm) SPACE BETWEEN CELLS, MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40 INCH (0.635 mm) ABOVE THE BACKGROUND. DOTS SHALL BE DOMED/ROUNDED CALIFORNIA BRAILLE DOTS. 11B-703.3.1

NOTE : ALL SIGNAGE SHOWN ON THIS SHEET ONLY SHALL BE PROVIDED AND INSTALLED BY SITE CONTRACTOR AND VERIFIED BY SITE INSPECTOR.

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA OF REGULATIONS. (CCR).
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338 PART 1, TITLE 24, CCR.
3. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
5. A DSA INSPECTOR WITH CLASS 1 CERTIFICATION IS REQUIRED FOR THIS PROJECT.
6. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
9. CALIFORNIA GEOLOGICAL SURVEY HAZARD REVIEW PROJECT NUMBER (03-CGS4862) SUBMITTED ON MARCH 12, 2021 AND REVIEW DATE MAY 3, 2021.

VICINITY MAP



REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
SUITE 200
UPLAND, CA 91786
(909) 985 - 6939 OFFICE
(909) 985 - 9086 FAX

NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

BUILDING DATA,GENERAL NOTES, ABBREVIATIONS, VICINITY MAP, LEGENDS

DSA NUMBER: 2019-026
DRAWN BY:
DATE: 10.01.2021
DSA APP#: 00-000000

T-1

BID SET 10/01/2021

GRADING NOTES

1. ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. ALL GRADING SHALL BE DONE UNDER OBSERVATION AND TESTING BY A QUALIFIED CIVIL ENGINEER OR GEOTECHNICAL ENGINEER AND, IF REQUIRED, BOTH A QUALIFIED PROFESSIONAL CIVIL ENGINEER OR GEOTECHNICAL ENGINEER AND AN ENGINEERING GEOLOGIST.
3. PROPOSED BUILDING PADS, STRUCTURAL IMPROVEMENT AREAS, AND AREAS TO RECEIVE FILL SHOULD BE CLEARED OF ANY DELETERIOUS MATERIAL, VEGETATION, ASPHALT, CONCRETE AND DEBRIS PRIOR TO COMMENCING GRADING. ANY ORGANIC OR UNSUITABLE MATERIAL GENERATED SHOULD BE EXPORTED FROM THE SITE. THE REMOVAL OF UNSUITABLE MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL CONSULTANT TO EVALUATE THE COMPETENCY OF THE EXPOSED MATERIALS FOR SUPPORT OF STRUCTURAL AND FILL LOADS.
4. BRUSH AND TREES SHALL BE REMOVED ONLY WITHIN THE AREA TO BE GRADED. WHEN TREES ARE REMOVED, THE ROOT SYSTEM SHALL ALSO BE REMOVED AND THE RESULTING EXCAVATION FILLED WITH PROPERLY COMPACTED FILL SOILS.
5. ANY MAN-MADE STRUCTURES OR IMPROVEMENTS WITHIN THE GRADING LIMITS, THAT ARE NOT TO BE SAVED FOR FUTURE USE, SHOULD BE DEMOLISHED AND LEGALLY DISPOSED OFF-SITE. SUBSURFACE IMPROVEMENTS OR OBSTRUCTIONS THAT ARE TO BE REMOVED SHOULD BE EXCAVATED AND HAULED OFF-SITE. THE RESULTING EXCAVATIONS SHOULD BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT. MAN-MADE IMPROVEMENTS TO BE SAVED SHOULD BE PROTECTED FROM DAMAGE BY THE CONTRACTOR.
6. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF LOCATION OF EXISTING FACILITIES.
7. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
8. THE PAVEMENT SECTIONS SHOWN ON THESE PLANS ARE PRELIMINARY. FINAL PAVEMENT SECTIONS SHOULD BE DETERMINED ONCE SUBGRADE ELEVATIONS HAVE BEEN ATTAINED AND R-VALUE TESTING ON SUBGRADE SAMPLES IS PERFORMED.
9. CUT AND FILL SLOPES SHALL BE TRIMMED TO THE FINISH GRADE TO PRODUCE A SMOOTH AND UNIFORM SURFACE OR CROSS-SECTION. THE SLOPES OF EXCAVATIONS OR EMBANKMENT SHALL BE SHAPED AND TRIMMED AS DIRECTED BY THE ENGINEER OF WORK AND LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS, OR OTHER WASTE MATTER EXPOSED ON EXCAVATION OR EMBANKMENT SLOPE SHALL BE REMOVED AND DISPOSED OF.
10. DURING CONSTRUCTION: THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER. CONTRACTOR SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE. THE CONTRACTOR SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS AND UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. AFTER COMPLETION: AFTER GRADING IS COMPLETED AND THE SOILS ENGINEER HAS FINISHED HIS OBSERVATIONS OF THE WORK, NO FURTHER EXCAVATION OR FILLING SHALL BE DONE EXCEPT UNDER THE OBSERVATION OF THE SOILS ENGINEER.
11. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS REQUIRED TO PROTECT ADJACENT PROPERTIES DURING THE GRADING OPERATIONS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AGENCY APPROVAL OF THE ROUTE AND SITE LOCATION FOR EXPORT AND/OR IMPORT MATERIALS.
13. REMEDIAL GRADING MAY BE NECESSARY TO REMOVE COMPRESSIBLE SOILS BENEATH STRUCTURES OR STRUCTURAL FILLS, BENEATH EXTERIOR FLATWORK AND PAVEMENT AREAS, OR WHEREVER THE EXISTING SOILS ARE DISTURBED DUE TO DEMOLITION OF EXISTING STRUCTURES OR IMPROVEMENTS. REMEDIAL GRADING SHOULD CONSIST OF COMPLETE REMOVAL OF COMPRESSIBLE SOILS UNTIL COMPETENT SOILS ARE EXPOSED. REMEDIAL EXCAVATIONS SHOULD INCLUDE ALL AREAS THAT WILL SUPPORT STRUCTURES, IMPROVEMENTS OR NEW FILLS. EXCAVATION BOTTOMS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER TO EVALUATE THE NEED FOR DEEPER REMOVALS.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF PERRIS FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
2. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.
3. CONTRACTOR TO VERIFY EXACT PERIMETER OF DEMOLITION AND AREA OF WORK FOR THE PROJECT. AREA SHOWN IS APPROXIMATE.

DIGALERT

DIAL TOLL FREE
1-800-422-4133
AT LEAST TWO DAYS
BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

SPECIAL NOTES

1. ALL LANDSCAPE AREAS SHALL BE GRADED TO SLOPE AWAY FROM STRUCTURES AND PROPERTY LINES TOWARD LANDSCAPE DRAINAGE SWALES AND/ OR SITE DRAIN INLETS AT 2% MINIMUM GRADIENT (1% WHERE FLOW IS CONCENTRATED). SMOOTH FINISH GRADES TO ELIMINATE PONDING OR STANDING WATER.
2. ALL LANDSCAPE DRAINS SHALL BE 4" MINIMUM CONSTRUCTED WITH RIGID BELOW GRADE PIPING WITH A 1% MINIMUM GRADIENT UNLESS OTHERWISE NOTED.
3. LANDSCAPE DRAINS, CATCH BASINS, INLETS, ETC. SHOWN HEREON ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE COMPLETE DRAINAGE SYSTEMS AND ADJUST THE LAYOUT AS REQUIRED TO MATCH SITE CONDITIONS AND/ OR MINOR DISCREPANCIES WITH THESE PLANS.
4. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO MAINTAIN PROPER DRAINAGE AND EROSION CONTROL DURING CONSTRUCTION.
5. CONTRACTOR SHALL NOTIFY ENGINEER UPON THE DISCOVERY OF AREAS WHICH DO NOT DRAIN PROPERLY OR ANY OTHER DISCREPANCY OR AREA WHICH HAS NOT BEEN ADEQUATELY ADDRESSED AS A RESULT OF A FIELD CONDITION OR ANOMALY IN THE TOPOGRAPHY.
6. HARDSCAPE GRADES SHALL BE 0.02' BELOW DRIP SCREED AT HIGHEST POINT NEAR STRUCTURE AND SHALL SLOPE AT A 1% MINIMUM GRADE TO DRAINS OR LANDSCAPE AREAS. HARDSCAPE SHALL SLOPE AND DRAIN AWAY FROM THE STRUCTURE UNLESS OTHERWISE NOTED.
7. THE HIGHEST ADJACENT GRADE AGAINST STRUCTURE FOOTINGS SHALL BE PER THE LATEST CALIFORNIA BUILDING CODE AND GREEN BOOK STANDARDS.
8. EARTHWORK QUANTITIES SHOWN HEREON ARE RAW QUANTITIES CALCULATED FOR PERMIT AND/OR BONDING PURPOSES ONLY. UNLESS NOTED, THEY DO NOT INCLUDE POTENTIAL SHRINKAGE OR BULKING FACTORS, REMEDIAL GRADING, FOOTING SPOILS, UTILITY TRENCH SPOILS, ETC. THE CONTRACTOR SHALL VERIFY QUANTITIES TO THEIR OWN SATISFACTION.
9. THE LOCATIONS OF UNDERGROUND STRUCTURES AND UTILITIES SHOWN HEREON HAVE BEEN OBTAINED FROM AVAILABLE RECORDS FOR THE BENEFIT OF THE CONTRACTOR. THE DEPICTION OF UTILITIES SHOWN ON THESE PLANS DOES NOT CONSTITUTE A GUARANTEE OF THEIR EXACT LOCATION, DEPTH, SIZE, OR TYPE. EXACT SIZE, DEPTH, TYPE AND SIZE SHOULD BE VERIFIED BY POTHOLING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT ALL UNDERGROUND AND/OR OVERHEAD STRUCTURES AND/OR UTILITIES WHETHER OR NOT THEY ARE SHOWN HEREON. ALL DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND AT THE EXPENSE OF THE CONTRACTOR.
10. CONTRACTOR SHALL NOTIFY DIGALERT OR UNDERGROUND SERVICE ALERT (USA) @ 811 AT LEAST TWO DAYS BEFORE START OF CONSTRUCTION.
11. CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF WORK OF ANY DISCREPANCIES PRIOR TO START OF WORK.
12. LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
13. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE & COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT TO BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR AGREES TO DEFEND, INDEMNIFY AND HOLD THE JURISDICTIONAL AGENCY AND THE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE JURISDICTIONAL AGENCY OR DESIGN PROFESSIONAL.
14. NEITHER THE OWNER, NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS, THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. THE CONTRACTOR SHALL ENFORCE ALL SAFETY MEASURES.
15. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL SLOPES, STREETS, UTILITIES, AND STORM DRAINS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK. THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULTS FROM HIS OPERATIONS BY APPROPRIATE MEANS (SAND BAGS, HAY BALES, TEMPORARY DESILTING BASINS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHATEVER OWNER, AGENCY OR ASSOCIATION IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
16. CONTRACTOR SHALL NOTIFY THE LOCAL GAS & ELECTRIC UTILITY AGENCY PRIOR TO STARTING WORK NEAR AGENCY FACILITIES AND SHALL COORDINATE HIS WORK WITH AGENCY REPRESENTATIVES. NOTICE: ELECTRICAL AND GAS SERVICES MAY BE "UNDERGROUND INSTALLATIONS". USA WILL NOT HAVE ANY ON-SITE UNDERGROUND INFORMATION, CONTRACTOR SHALL SECURE SERVICES OF PRIVATE UTILITY LOCATOR SERVICE.
17. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER OF UTILITIES OR STRUCTURES PRIOR TO ANY EXCAVATION FOR VERIFICATION AND LOCATION OF UTILITIES.

EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE LOCAL AGENCY.
2. GRADING FOR THE PROJECT SHOULD BE ENCOURAGED DURING THE DRY SEASON (APRIL 1 THROUGH OCTOBER 31). GRADING WHICH OCCURS DURING THE RAINY SEASON (OCTOBER 15 TO APRIL 15) SHALL REQUIRE EROSION CONTROL MEASURES.
3. EMERGENCY EROSION CONTROL MEASURES ARE REQUIRED TO CONTROL SOIL MOVEMENT SATISFACTORY TO THE INSPECTOR IN THE EVENT THE SITE IS EXPOSED TO EROSION DURING THE PERIOD BETWEEN OCTOBER 15TH AND APRIL 15TH, EROSION CONTROL MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, SLOPE PROTECTION, INSTALLATION OF JUTE MATING OR APPROVED EQUIVALENT, SILTING BASINS, SILT CONTROL, GRAVEL BAGGING AND STORM DRAINS.
4. 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.
5. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE INSPECTOR AFTER EACH RUN-OFF PRODUCING RAINFALL.
6. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSON/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE AGENCY PERSONNEL DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES WHICH MAY ARISE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
8. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
9. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE INSPECTOR.
10. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS AND WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
11. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
14. ALL GRAVEL BAGS SHALL BE BURLAP TYPE WITH 3/4-INCH MINIMUM AGGREGATE
15. 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 1.0' 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.
16. GRADED, DISTURBED, OR ERODED AREAS THAT WILL NOT BE PERMANENTLY PAVED, COVERED BY STRUCTURE, OR PLANTED FOR A PERIOD OVER 90 CALENDAR DAYS SHALL BE TEMPORARILY REVEGETATED WITH A NON-IRRIGATED HYDROSEED MIX, GROUND COVER, OR EQUIVALENT MATERIAL.

TOPOGRAPHY SOURCE

THE EXISTING TOPOGRAPHY AS SHOWN ON THESE PLANS IS BASED ON AN AERIAL MAP DONE BY SWS ENGINEERING ON 9/21/2020

BASIS OF BEARINGS

ASSUMED CL OF GLENOAKS BLVD.
I.E. N 76°49'30" W

BENCHMARK

CITY OF GLENDALE BM814
NAIL IN SOUTHERLY CURB GLENOAKS BLVD. 2.0 FT
WESTERLY BCR SOUTHWESTERLY CORNER

STANDARDS AND SPECIFICATIONS

WORK SHOWN ON THE PLANS SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:

1. 2012 STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
2. 2018 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREEN BOOK").
3. 2019 CALIFORNIA BUILDING CODE

ANY CHANGE OR REVISIONS THEREFORE SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.

CIVIL SHEET INDEX

ABBREVIATIONS

AC	ASPHALT CONCRETE	PIV	POST INDICATOR VALVE
AB	AGGREGATE BASE	PL	PROPERTY LINE
CB	CATCH BASIN	PA	PLANTED AREA
CF	CURB FACE	R/W	RIGHT-OF-WAY
CL	CENTERLINE	RD	ROOF DRAIN
CLR	CLEAR	S=	SLOPE
CO	CLEAN OUT	SD	STORM DRAIN
DDC	DOUBLE DETECTOR CHECK	SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION
EC	EDGE OF CONCRETE		
EX	EXISTING	SWR	SEWER
FDC	FIRE DPT CONNECTION	SS	SANITARY SEWER
FF	FINISH FLOOR	TC	TOP OF CURB
FG	FINISH GRADE	TF	TOP OF FOOTING
FS	FINISH SURFACE	TG	TOP OF GRATE
FH	FIRE HYDRANT	TW	TOP OF WALL
FL	FLOW LINE	TYP	TYPICAL
G	GAS	W	WATER
GB	GRADE BREAK	WM	WATER METER
HP	HIGH POINT	WV	WATER VALVE
IE	INVERT ELEVATION	NDS	NATION DIVERSIFIED SALES
LD	LOCAL DEPRESSION	SDR	PIPE SCHEDULE
LG	LIP OF GUTTER	HDPE	HIGH DENSITY POLYETHYLENE
LP	LOW POINT	SDRSD	SAN DIEGO AREA REGIONAL STANDARD DRAWINGS
MAX	MAXIMUM	RCP	REINFORCED CONCRETE PIPE
MH	MANHOLE	RCB	REINFORCED CONCRETE BOX
MIN	MINIMUM	CASQA	CALIFORNIA STORMWATER QUALITY ASSOCIATION
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION

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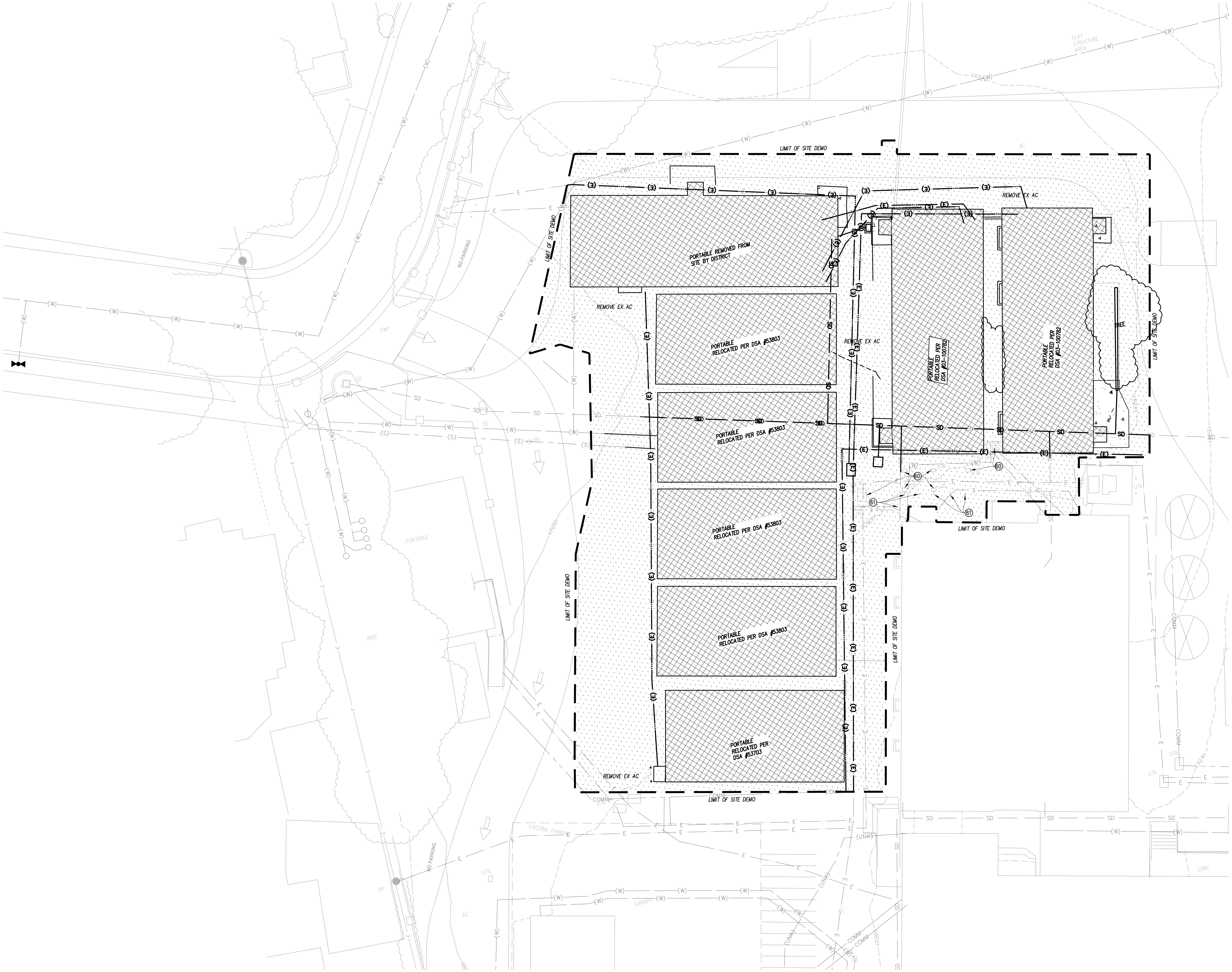
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

GENERAL NOTES

JOB NUMBER: 2019-026
DRAWN BY: CS
DATE: 07.12.2021
SCALE: AS NOTED

C1.0

BID SET 10/01/2021



DEMOLITION NOTES

Symbol	Description
(crosshatch)	REMOVED/RELOCATED EXISTING PORTABLE
(concrete pattern)	DEMO EXISTING CONCRETE
(stipple)	DEMO EXISTING ASPHALT PAVEMENT
(SD)	CAP AND DEMO EXISTING STORM DRAIN LINE
(W)	CAP AND DEMO EXISTING WATER LINE
(S)	CAP AND DEMO EXISTING SEWER LINE
(E)	CAP AND DEMO EXISTING ELECTRICAL CONDUIT
(double line)	DEMO EXISTING TRENCH DRAIN
(heavy dash)	SAWCUT EXISTING PAVEMENT
60	EXISTING UTILITY TO REMAIN
61	EXISTING PIPE BOLLARDS TO REMAIN

NOTE:

NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING DEMOLITION WORK HAVE BEEN APPROVED BY DSA

EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. POTHOLE IN THE FIELD IS REQUIRED FOR ANY UNDERGROUND UTILITY WORK. POTHOLE TO IDENTIFY TYPE OF UTILITY, SIZE AND EXACT LOCATION.

10 5 0 10 20 30
SCALE IN FEET
GRAPHIC SCALE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. SCHWEITZER
No. 59658
Exp 12-31-2021
CIVIL
STATE OF CALIFORNIA

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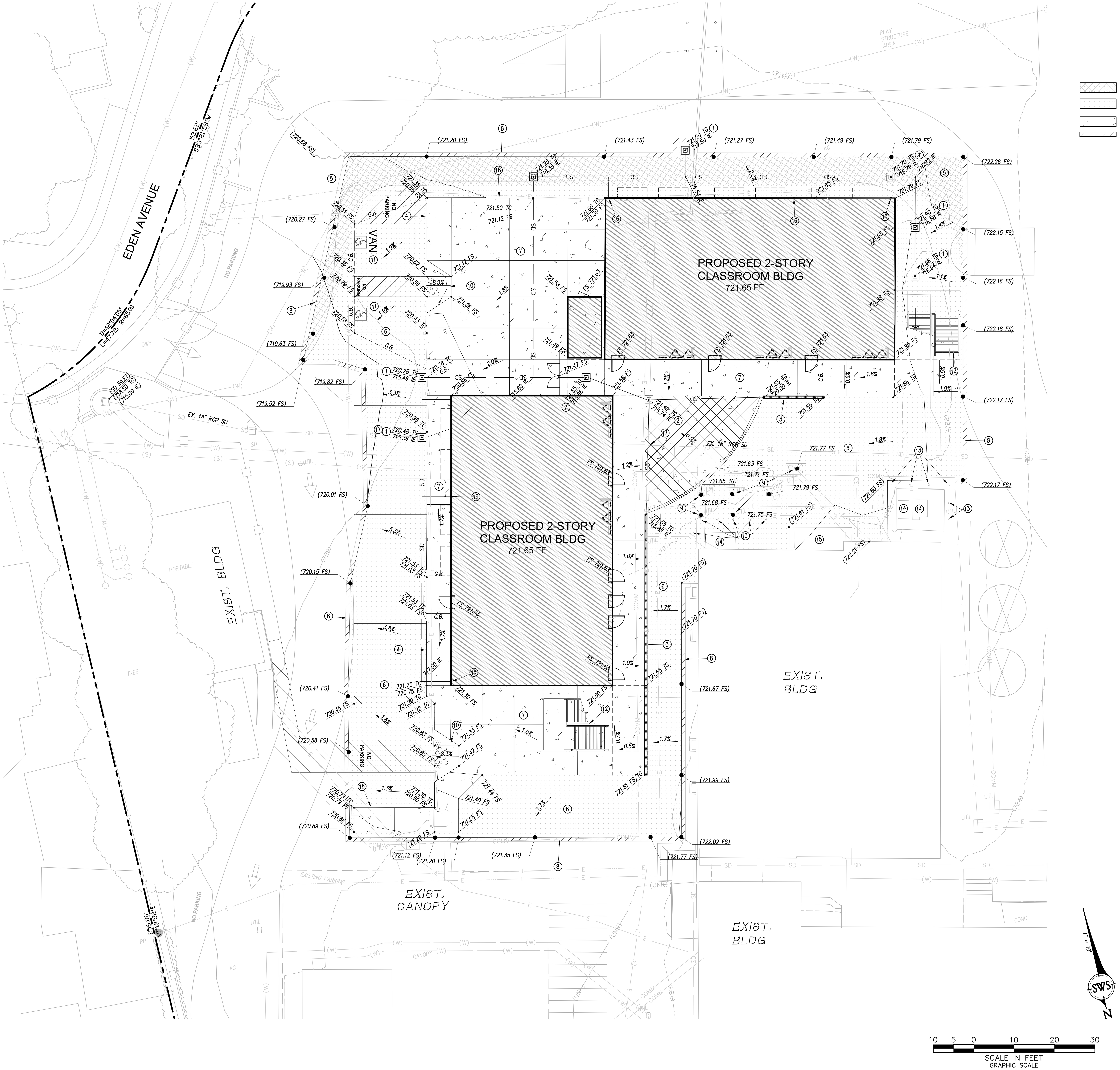
GLENDALE UNIFIED SCHOOL DISTRICT

DEMOLITION PLAN

JOB NUMBER: 2019-026
DRAWN BY: CS
DATE: 07.12.2021
SCALE: AS NOTED

C2.0

BID SET 10/01/2021



CONSTRUCTION NOTES

1. 12" x 12" INLET W/ TRAFFIC RATED ADA COMPLIANT GRATE PER DETAIL 15, SHEET C6.0
2. 12" x 12" INLET W/ PEDESTRIAN ADA COMPLIANT GRATE PER DETAIL 15, SHEET C6.0
3. TRENCH DRAIN PER DETAIL 3 SHEET C6.0
4. 6" VERTICAL CURB PER DETAIL 2 SHEET C6.0
5. 4" AC / 4" AB - FIRE TRUCK RATED PAVEMENT SECTION OVER 12" 95% COMPACTED SUBGRADE
6. 3" AC / 4" AB - PARKING/DRIVE AISLE RATED PAVEMENT SECTION OVER 12" 95% COMPACTED SUBGRADE
7. 4" PCC SIDEWALK W/ #4 BARS @ 24" O.C. EACH WAY
8. 1" GRIND AND OVERLAY PER DETAIL 13 SHEET C6.0
9. EXISTING UTILITIES, RAISE TO GRADE
10. ADA RAMP PER DETAIL 14 SHEET C6.0
11. ADA STALL, STRIPING AND SIGNAGE PER ARCHITECTURAL PLANS
12. STAIRS PER ARCHITECTURAL PLANS
13. EXISTING BOLLARDS, PROTECT IN PLACE
14. EXISTING ELECTRICAL TRANSFORMER, PROTECT IN PLACE
15. EX STAIRS, PROTECT IN PLACE, MATCH FS @ BOTTOM STEP
16. 4" PVC DOWNSPOUT CONNECTION, SEE BUILDING PLANS FOR CONTINUATION
17. CONNECT TO EXISTING STORM DRAIN PIPE, CONTRACTOR TO POTHOLE EXIST. SD LINE TO CONFIRM IE ELEVATIONS AND COORDINATE W/ ENGINEER
18. VARIABLE HEIGHT CURB
19. EXISTING GATE AND FENCE TO REMAIN

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D SCHWEITZER
No. 59658
Exp. 12-31-2021
CIVIL
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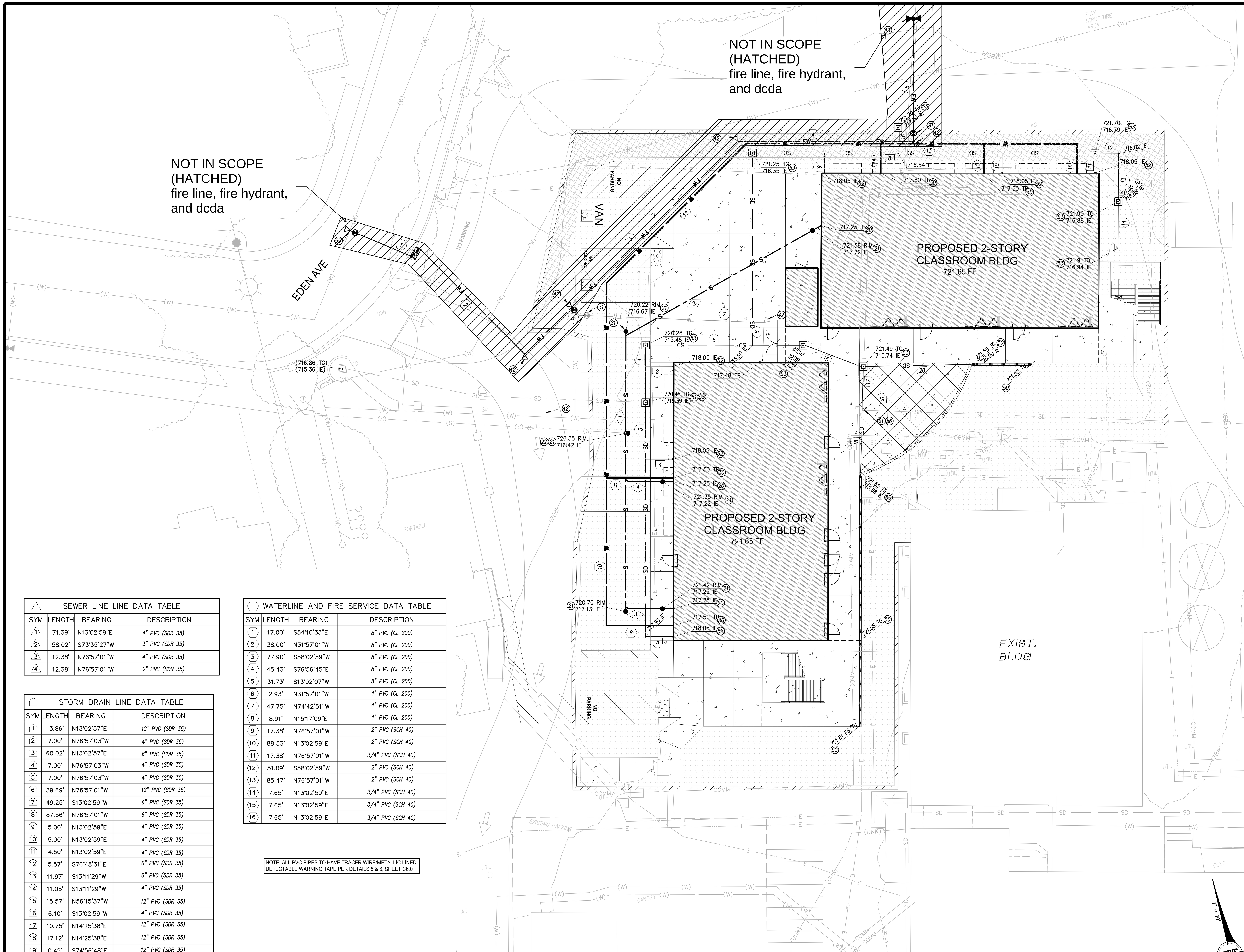
GLENDALE UNIFIED SCHOOL DISTRICT

GRADING PLAN

JOB NUMBER:	DRAWN BY:	DATE:	SCALE:
2019-026	CS	07.12.2021	AS NOTED

C3.0

BID SET 10/01/2021



SYM	LENGTH	BEARING	DESCRIPTION
1	71.39'	N13°02'59"E	4" PVC (SDR 35)
2	58.02'	S73°35'27"W	3" PVC (SDR 35)
3	12.38'	N76°57'01"W	4" PVC (SDR 35)
4	12.38'	N76°57'01"W	2" PVC (SDR 35)

SEWER LINE LINE DATA TABLE

SYM	LENGTH	BEARING	DESCRIPTION
1	17.00'	S54°10'33"E	8" PVC (CL 200)
2	38.00'	N31°57'01"W	8" PVC (CL 200)
3	77.90'	S58°02'59"W	8" PVC (CL 200)
4	45.43'	S76°56'45"E	8" PVC (CL 200)
5	31.73'	S13°02'07"W	8" PVC (CL 200)
6	2.93'	N31°57'01"W	4" PVC (CL 200)
7	47.75'	N74°42'51"W	4" PVC (CL 200)
8	8.91'	N15°17'09"E	4" PVC (CL 200)
9	17.38'	N76°57'01"W	2" PVC (SCH 40)
10	88.53'	N13°02'59"E	2" PVC (SCH 40)
11	17.38'	N76°57'01"W	3/4" PVC (SCH 40)
12	51.09'	S58°02'59"W	2" PVC (SCH 40)
13	85.47'	N76°57'01"W	2" PVC (SCH 40)
14	7.65'	N13°02'59"E	3/4" PVC (SCH 40)
15	7.65'	N13°02'59"E	3/4" PVC (SCH 40)
16	7.65'	N13°02'59"E	3/4" PVC (SCH 40)

WATERLINE AND FIRE SERVICE DATA TABLE

SYM	LENGTH	BEARING	DESCRIPTION
1	13.86'	N13°02'57"E	12" PVC (SDR 35)
2	7.00'	N76°57'03"W	4" PVC (SDR 35)
3	60.02'	N13°02'57"E	6" PVC (SDR 35)
4	7.00'	N76°57'03"W	4" PVC (SDR 35)
5	7.00'	N76°57'03"W	4" PVC (SDR 35)
6	39.69'	N76°57'01"W	12" PVC (SDR 35)
7	49.25'	S13°02'59"W	6" PVC (SDR 35)
8	87.56'	N76°57'01"W	6" PVC (SDR 35)
9	5.00'	N13°02'59"E	4" PVC (SDR 35)
10	5.00'	N13°02'59"E	4" PVC (SDR 35)
11	4.50'	N13°02'59"E	4" PVC (SDR 35)
12	5.57'	S76°48'31"E	6" PVC (SDR 35)
13	11.97'	S13°11'29"W	6" PVC (SDR 35)
14	11.05'	S13°11'29"W	4" PVC (SDR 35)
15	15.57'	N56°15'37"W	12" PVC (SDR 35)
16	6.10'	S13°02'59"W	4" PVC (SDR 35)
17	10.75'	N14°25'38"E	12" PVC (SDR 35)
18	17.12'	N14°25'38"E	12" PVC (SDR 35)
19	0.49'	S74°56'48"E	12" PVC (SDR 35)
20	27.87'	N78°19'40"W	6" PVC (SDR 35)

STORM DRAIN LINE DATA TABLE

NOTE: ALL PVC PIPES TO HAVE TRACER WIRE/METALLIC LINED DETECTABLE WARNING TAPE PER DETAILS 5 & 6, SHEET C6.0

THRUST BLOCK TABLE
PER NFPA 24
SOIL BEARING = 2,000 PSF W/ 1.5 SAFETY FACTOR

PIPE (IN)	ANGLE (DEG)	HEIGHT (FT)	WIDTH (FT)	AREA (SF)	PIPE (IN)	ANGLE (DEG)	HEIGHT (FT)	WIDTH (FT)	AREA (SF)
4	11.25	1.0	1.0	1.0	8	11.25	1.0	2.0	2.0
4	22.5	1.0	1.1	1.1	8	22.5	1.9	2.0	3.8
4	45	1.1	2.0	2.2	8	45	2.0	3.7	7.4
4	90	1.9	2.0	3.8	8	90	2.7	5.1	13.8
4	TEE	1.4	2.0	2.8	8	TEE	2.3	4.2	9.7
6	11.25	1.0	1.1	1.1	10	11.25	1.4	2.0	2.8
6	22.5	1.1	2.0	2.2	10	22.5	2.0	3.0	6.0
6	45	2.0	2.2	4.4	10	45	2.4	4.7	11.3
6	90	2.0	4.0	8.0	10	90	3.2	6.4	20.5
6	TEE	2.0	2.8	5.6	10	TEE	2.7	5.4	14.6

LEGEND

- S — SEWER LINE PER 6/C7.0 (PVC SDR35)
- W — WATER LINE PER 5/C7.0 (PVC CL150), CONSTRUCT WITH 3' MIN COVER
- FS — FIRE SERVICE LINE PER 5/C7.0 (PVC CL200), CONSTRUCT WITH 3.5' MIN COVER
- SD — STORM DRAIN PER 6/C7.0 (PVC OR HDPE)
- SEWER MANHOLE
- SEWER CLEANOUT
- THRUST BLOCK
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION & POST INDICATOR VALVE
- DC — DETECTOR CHECK ASSEMBLY
- TRENCH DRAIN
- CATCH BASIN

NOTES FOR UNDERGROUND PIPING FOR PRIVATE HYDRANTS AND SPRINKLERS

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 2019 EDITIONS CFC, NFPA 13 AND NFPA 24.
4. PRIVATE FIRE HYDRANTS SHALL BE APPROVED WET BARREL STYLE WITH A MINIMUM OF ONE 2 1/2" 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 SIX INCHES IN DIAMETER. THE CENTER OF THE HOSE OUTLET SHALL BE NOT 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, 10.3.5.2.
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 THE TOP OF THE PIPE, SHALL BE PROVIDED. WHEN SURFACE LOADS ARE EXPECTED, A MINIMUM OF 36" 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. BACK–FILL BETWEEN THE JOINTS TO PREVENT 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. ALL CONTROL VALVES SHALL BE LOCKED IN THE OPEN POSITION. VALVES SHALL BE MONITORED IF THEY SERVE 20 OR MORE SPRINKLER HEADS. CBC/CFC/903.4.
17. ALL CONTROL VALVES SHALL BE LISTED INDICATING TYPE UNLESS A NON–INDICATING VALVE, SUCH AS AN UNDERGROUND GATE VALVE WITH APPROVED ROADWAY BOX COMPLETE WITH T–WRENCH, IS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION (AHJ). NFPA 24, 6.1.1.
18. POST INDICATING VALVES (PIV) SHALL BE TESTED TO INSURE THAT THE "TARGETS" (OPEN, CLOSED) ARE CLEARLY IDENTIFIED WHEN VALVE IS OPENED AND CLOSED. NFPA 24, 10.10.1 & 14.1.
19. TESTS SHALL BE MADE BY THE INSTALLING CONTRACTOR IN THE PRESENCE OF THE (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

1. THE LOCATIONS OF UNDERGROUND STRUCTURES AND UTILITIES SHOWN HEREON HAVE BEEN OBTAINED FROM AVAILABLE RECORDS FOR THE BENEFIT OF THE CONTRACTOR. THE DEPICTION OF UTILITIES SHOWN ON THESE PLANS DOES NOT CONSTITUTE A GUARANTEE OF THEIR EXACT LOCATION, DEPTH, SIZE, OR TYPE. EXACT LOCATION, DEPTH, TYPE AND SIZE SHOULD BE VERIFIED BY POTHOLING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT ALL UNDERGROUND AND/OR OVERHEAD STRUCTURES AND/OR UTILITIES WHETHER OR NOT THEY ARE SHOWN HEREON. ALL DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND AT THE EXPENSE OF THE CONTRACTOR.
2. CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF WORK OF ANY DISCREPANCIES PRIOR TO START OF WORK.

CONSTRUCTION NOTES

(20) POINT OF CONNECTION - SEWER - SEE PLUMBING PLANS FOR CONTINUATION. CONSTRUCT CLEANOUT PER DETAIL 4, SHEET C6.0

(21) SEWER CLEANOUT PER DETAIL 4, SHEET C6.0

(22) CONNECT TO EXISTING SEWER. CONTRACTOR TO POTHOLE AND CONFIRM EXISTING INVERT AT POINT OF CONNECTION AND ELEVATIONS OF EXISTING UTILITY CROSSINGS PRIOR TO START OF CONSTRUCTION.

(30) POINT OF CONNECTION - WATER - SEE PLUMBING PLANS FOR CONTINUATION

(31) SHUT-OFF VALVE PER DETAIL 8, SHEET C6.0

(32) CONNECT TO EXISTING WATER

(40) POINT OF CONNECTION - FIRE - SEE SPRINKLER PLANS FOR CONTINUATION

(41) NOT USED

(42) THRUST BLOCK PER THRUST BLOCK TABLE ON SHEET C4.0 AND DETAIL 9, SHEET C6.0

(43) FIRE HYDRANT PER DETAIL 12, SHEET C6.0

(50) 4" NDS BG-FILCOTEN SLOPING TRENCH DRAIN W/ CLASS 'C' GALVANIZED STEEL HEEL-PROOF GRATE PER DETAIL 3, SHEET C6.0

(51) CONNECT TO EXISTING STORM DRAIN. CONTRACTOR TO POTHOLE AND CONFIRM EXISTING INVERT AT POINT OF CONNECTION AND ELEVATIONS OF EXISTING UTILITY CROSSINGS PRIOR TO START OF CONSTRUCTION.

(52) POINT OF CONNECTION - ROOF DRAIN DOWNSPOUT - SEE PLUMBING PLAN FOR CONTINUATION

(53) 12" X 12" CATCH BASIN PER DETAIL 15, SHEET C6.0

(54) TRENCH RESURFACING - P.C.C PER DETAIL 10, SHEET C6.0 & A.C. PER DETAIL 11, SHEET C6.0

(55) POINT OF CONNECTION - WATER MAIN. CONTRACTOR TO POTHOLE AND CONFIRM EXISTING INVERT AT POINT OF CONNECTION AND ELEVATIONS OF EXISTING UTILITY CROSSINGS PRIOR TO START OF CONSTRUCTION.

(56) 12" TEE WITH 18" INCREASER FOR CONNECTION TO EXISTING 18" RCP WITH A FERNCO 1006-1818 COUPLER OR APPROVED EQUAL ALTERNATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. SCHWEITZER
No. 59658
Exp. 12-31-2021
CIVIL
STATE OF CALIFORNIA

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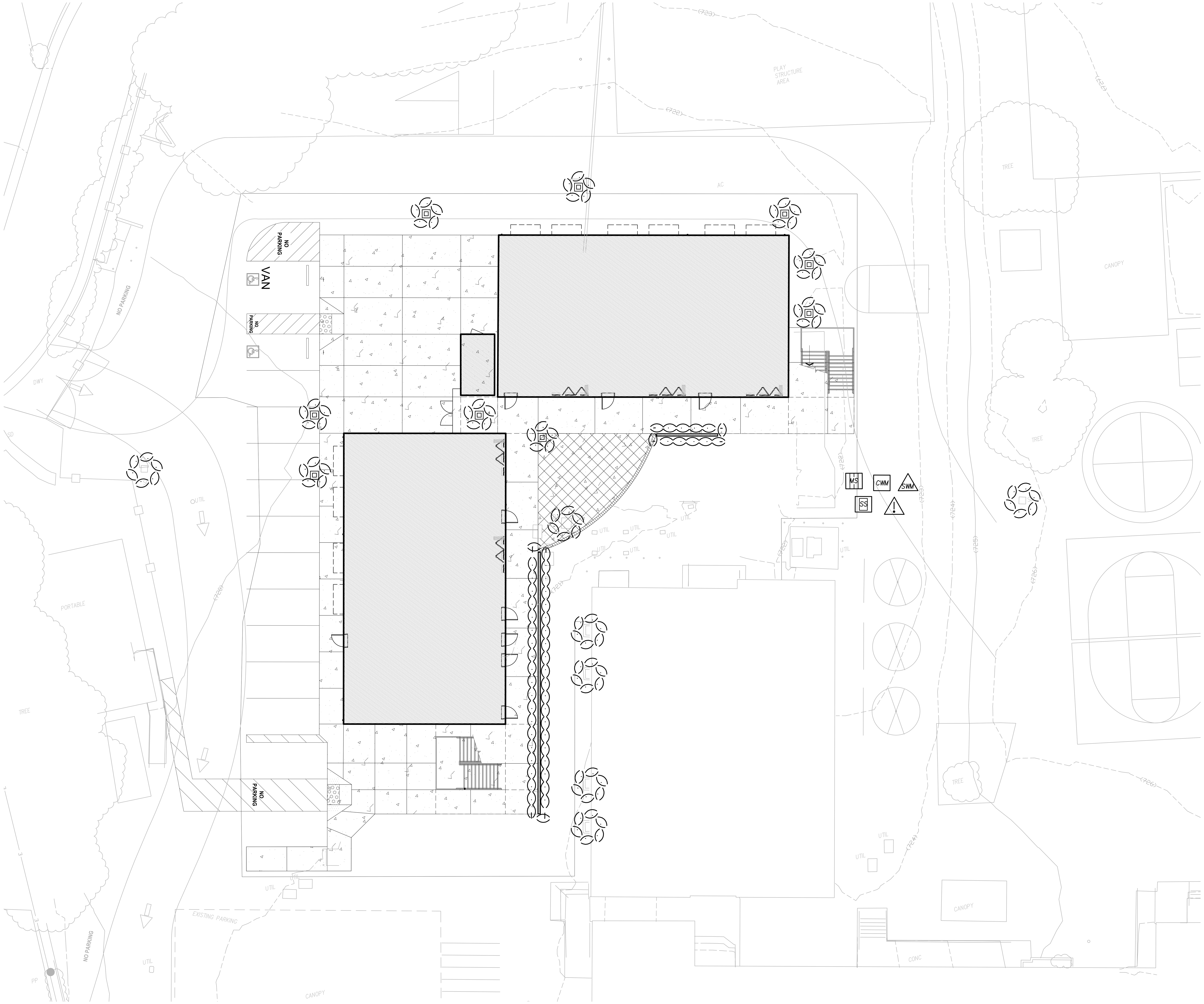
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

UTILITY PLAN

JOB NUMBER:	2019-026
DRAWN BY:	CS
DATE:	07.12.2021
SCALE:	AS NOTED

C4.0

BID SET 10/01/2021



EROSION CONTROL NOTES

- STORM DRAIN INLET PROTECTION (SE10) PER DETAIL 1 / C6.0
- MATERIAL DELIVERY STORAGE (WM1)
- SOLID WASTE MANAGEMENT (WM5)
- HAZARDOUS WASTE MANAGEMENT (WM6)
- CONCRETE WASTE MANAGEMENT (WM8)
- SANITARY/SEPTIC WASTE MANAGEMENT (WM9)

NOTE: BMP DRAWING NUMBERS IN () REFER TO THE CALIFORNIA STORMWATER QUALITY ASSOCIATION'S BEST MANAGEMENT PRACTICES HANDBOOK, CONSTRUCTION.

SCALE IN FEET
GRAPHIC SCALE
20 10 0 20 40 60

REGISTERED PROFESSIONAL ENGINEER
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No. 59658
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DATE: Jul 13, 21 11:34am by:Carol.Stein
FILE:Z:\Projects\2020\20-145\PROD\Construct\GP - 2 Story\20-145_C5.0-EC.dwg

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NEW 2 STORY BUILDING
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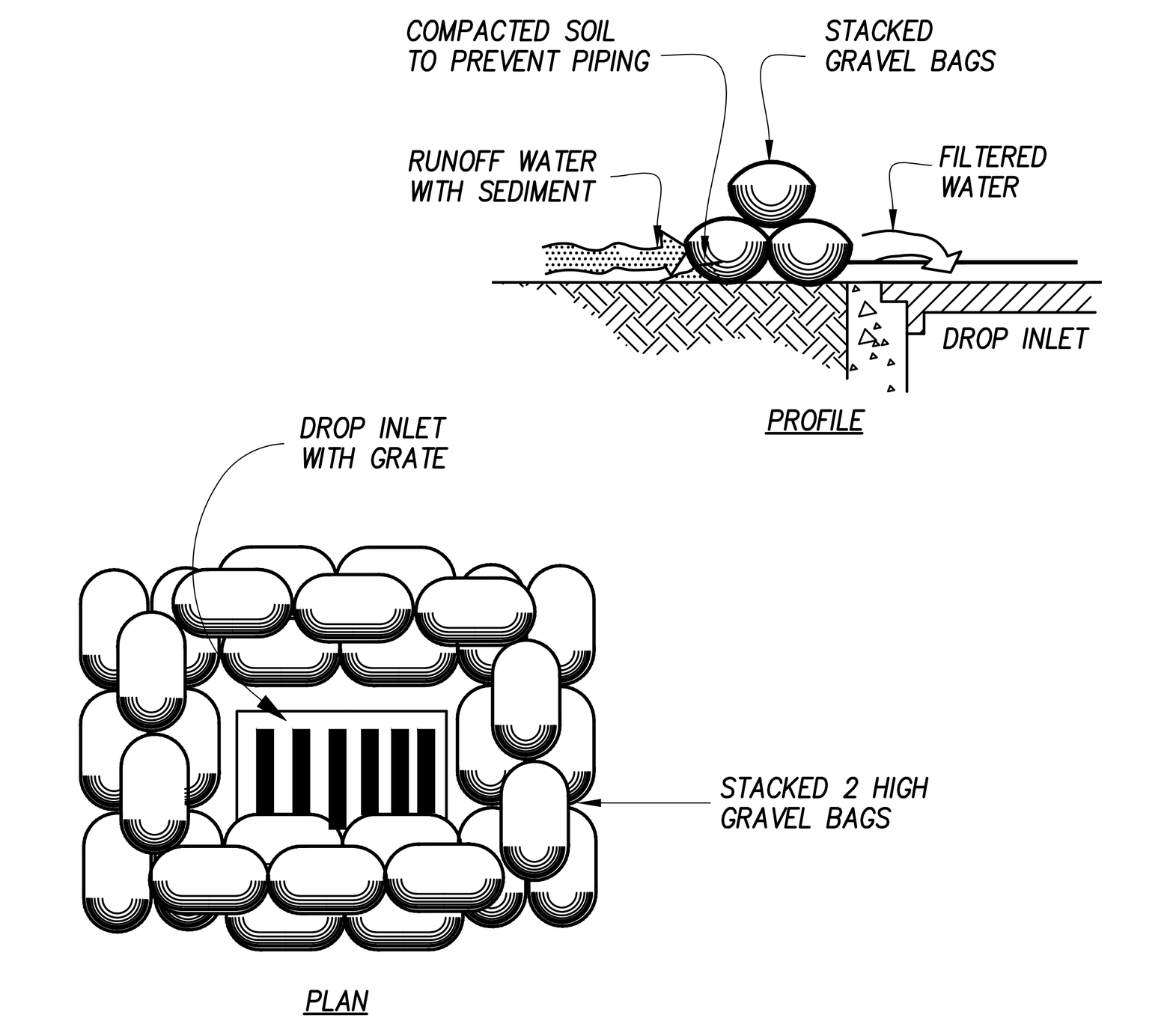
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

EROSION CONTROL PLAN

JOB NUMBER: 2019-026
DRAWN BY: CS
DATE: 07.12.2021
SCALE: AS NOTED

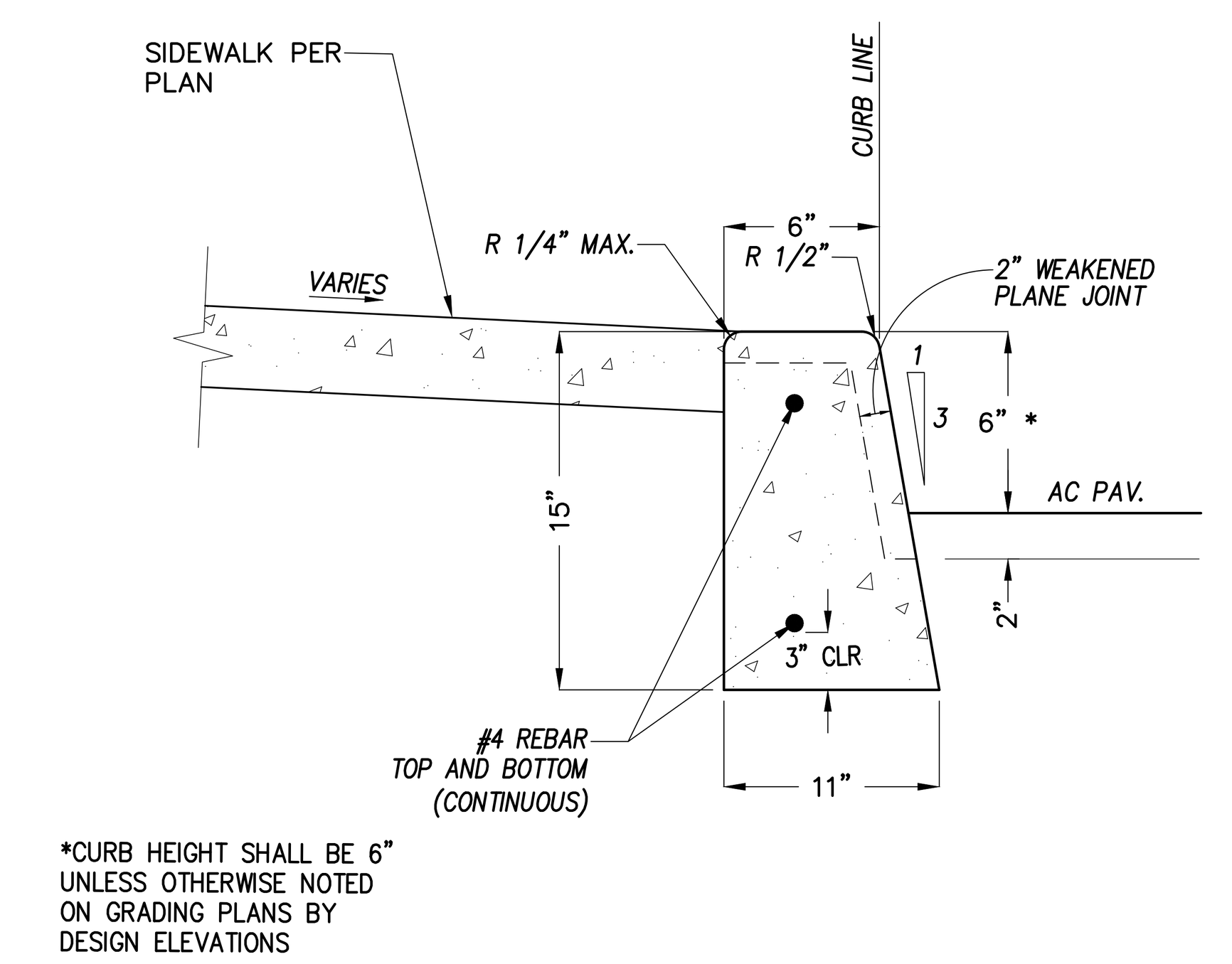
C5.0

BID SET 10/01/2021



NOT TO SCALE

INLET PROTECTION DETAIL | 1



*CURB HEIGHT SHALL BE 6" UNLESS OTHERWISE NOTED ON GRADING PLANS BY DESIGN ELEVATIONS

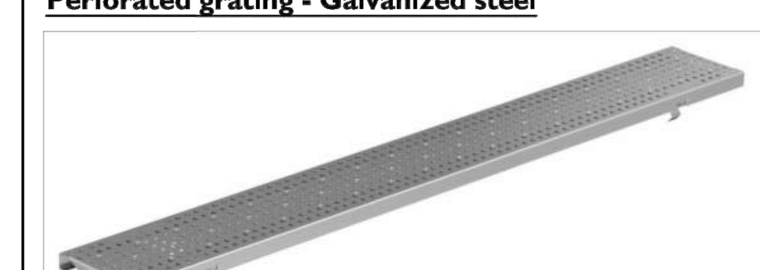
NOT TO SCALE

6" CURB | 2

FILCOTEN pro-tec NW100 (4")
Width 4.80" (122mm), length 39.40" (1000mm)
Load class C 250 kN

FILCOTEN — HYDRO BG Sustainable innovation.

Perforated grating - Galvanized steel



Product Features:
- Certified to EN 1433 Load Class C 250 kN 56,200 lbs.
- Uses fiX self-locking system.
- Suitable to use with NW100 channels.
- Manufactured from galvanized steel
- Hot-Dip galvanized material.
- Complies with ADA - American Disabilities Act.

Installation:
- The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

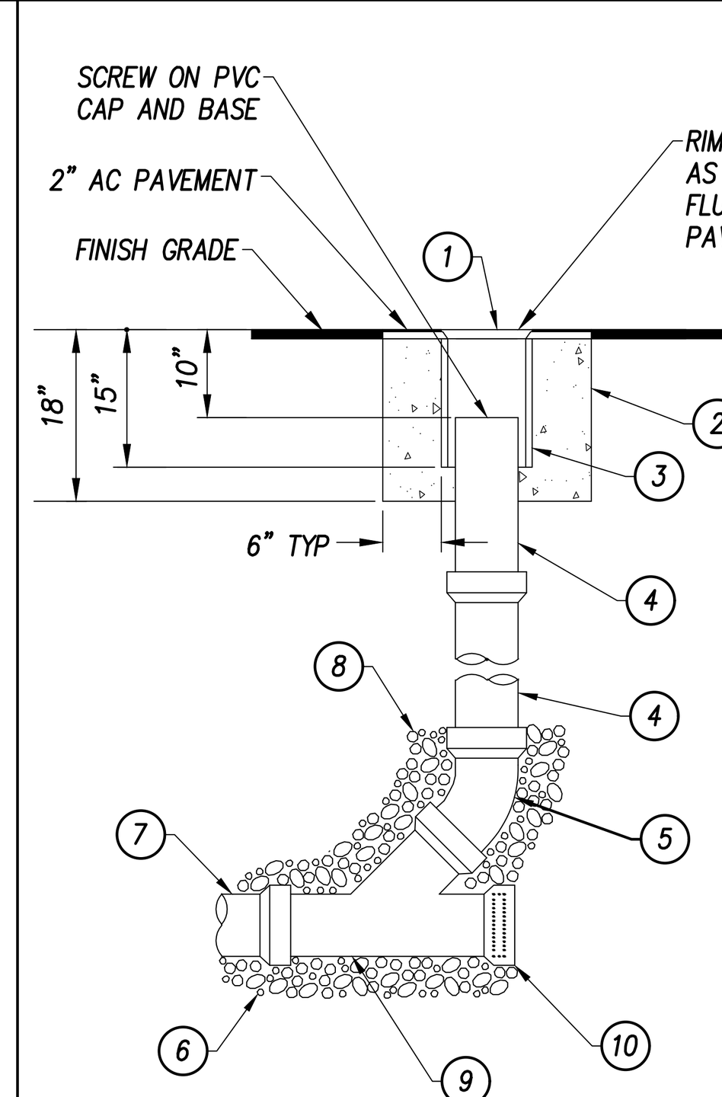
Gratings FILCOTEN® pro – v 100 (4") with fiX self-locking system.

	Item no.	Gratings	Material	Dimention	Load class as per EN-standard	Slot-/Mesh width	Weight Lbs	Weight Kg	Inlet cross-section sq.inches	Inlet cross-section cm2/m
○	17010228	ADA HEELPROOF Perforated grating	galvanized steel	39.40"/4.80"/0.78" 1000/122/20	C 250 kN	Ø 1/4" hole (6,0 mm)	7.28	3.3	26.35	170
○	17010229	ADA HEELPROOF Perforated grating	galvanized steel	19.70"/4.80"/0.78" 500/122/20	C 250 kN	Ø 1/4" hole (6,0 mm)	3.75	1.7	26.35	170

Specification: FILCOTEN pro-tec NW100, heavy duty, (Load Class C 250 kN), galvanized steel, reinforced grate is 4.80" (122mm) wide, 39.40" (1000mm) long, 0.78" (20mm) high, weighing 7.28 lbs (3.3 kg). The grate has Ø1/4" (6mm) diameter hole and is ADA compliant and Class C load rated - commercial applications. The grate is secured to the body with four point fiX self-locking (snap-on) system. Galvanized steel manufactured and tested according to EN1433 - CE certified.

NOT TO SCALE

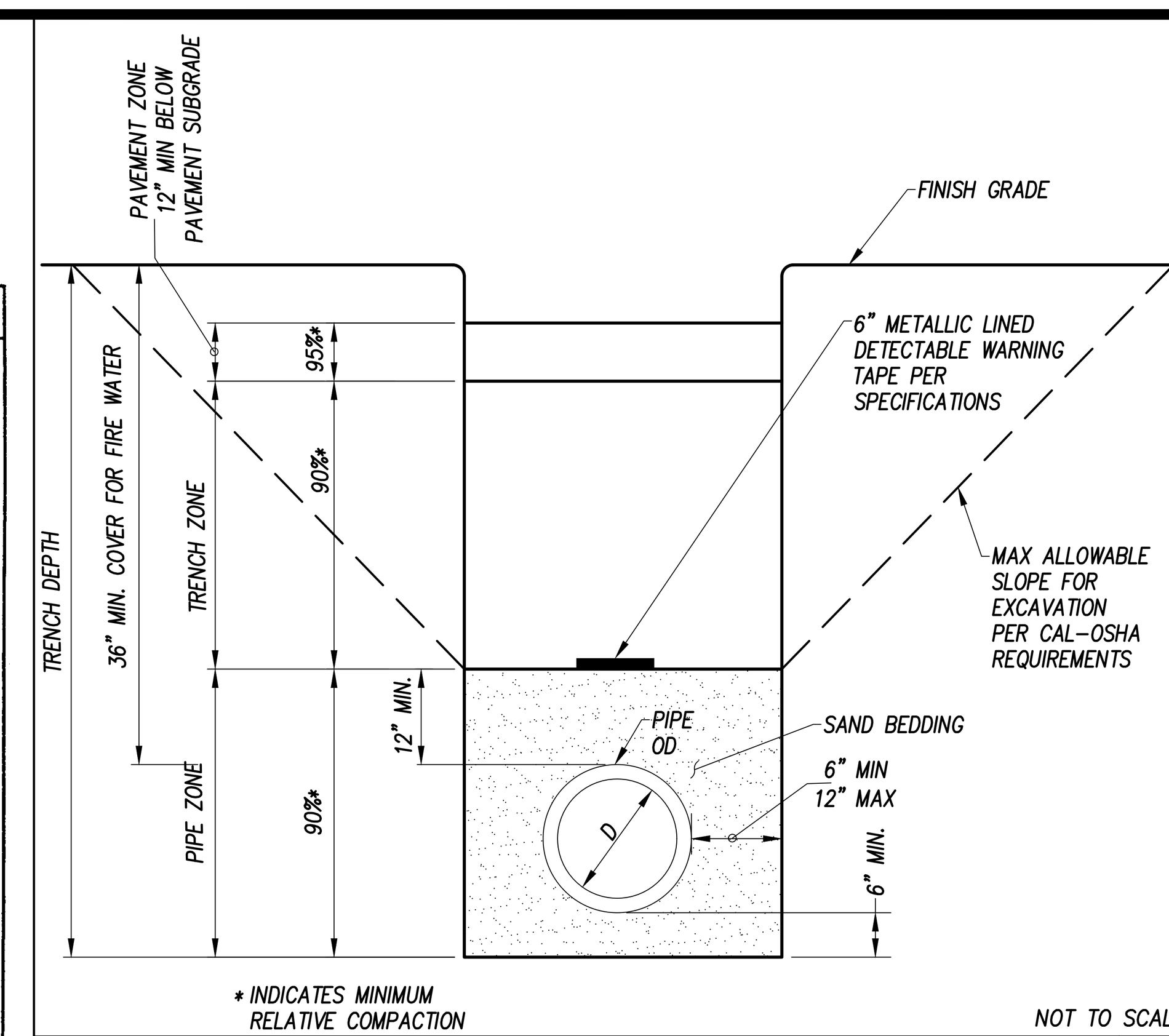
NDS HEEL-PROOF DRAIN GRATE | 3



CONSTRUCTION NOTES:
1. 12" CI CLEANOUT BOX COVER MARKED SEWER/STORM DRAIN
2. CONCRETE RING
3. 12" PVC, C–900 X 15" LONG (CLEANOUT BOX)
4. PVC SEWER RISER OR PVC/HDPE STORM DRAIN RISER AS APPLICABLE. RISER TO BE SAME SIZE AS MAIN LINE (8" MAX.)
5. 45° ELBOW
6. 3/4" CRUSHED ROCK PIPE BEDDING
7. PIPE SIZE AS SHOWN ON PLAN
8. 3/4" CRUSHED ROCK TO TOP OF 45° BEND
9. STANDARD WYE BRANCH
10. INSTALL PLUG IF AT END OF RUN

NOT TO SCALE

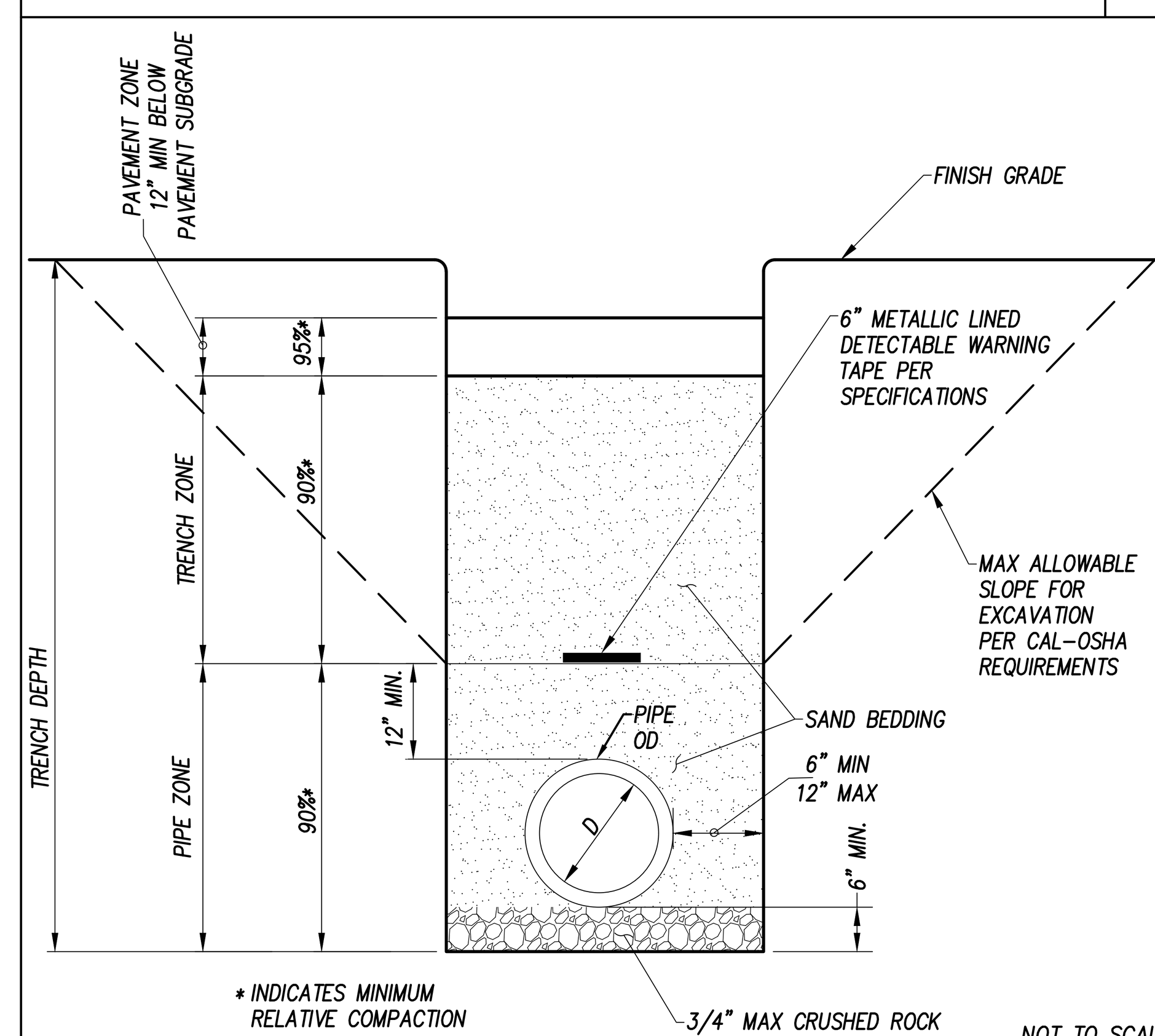
SEWER/STORM DRAIN CLEANOUT | 4



* INDICATES MINIMUM RELATIVE COMPACTION

NOT TO SCALE

PIPE BEDDING AND TRENCH BACKFILL FOR WATER AND FIRE | 5

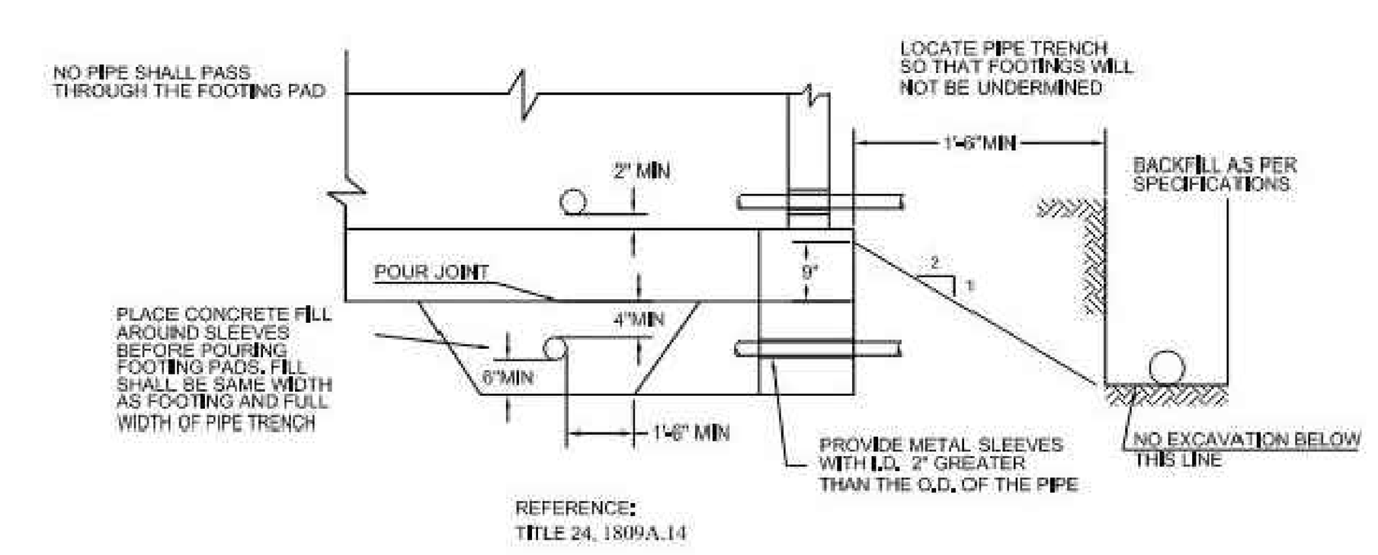


* INDICATES MINIMUM RELATIVE COMPACTION

3/4" MAX CRUSHED ROCK

NOT TO SCALE

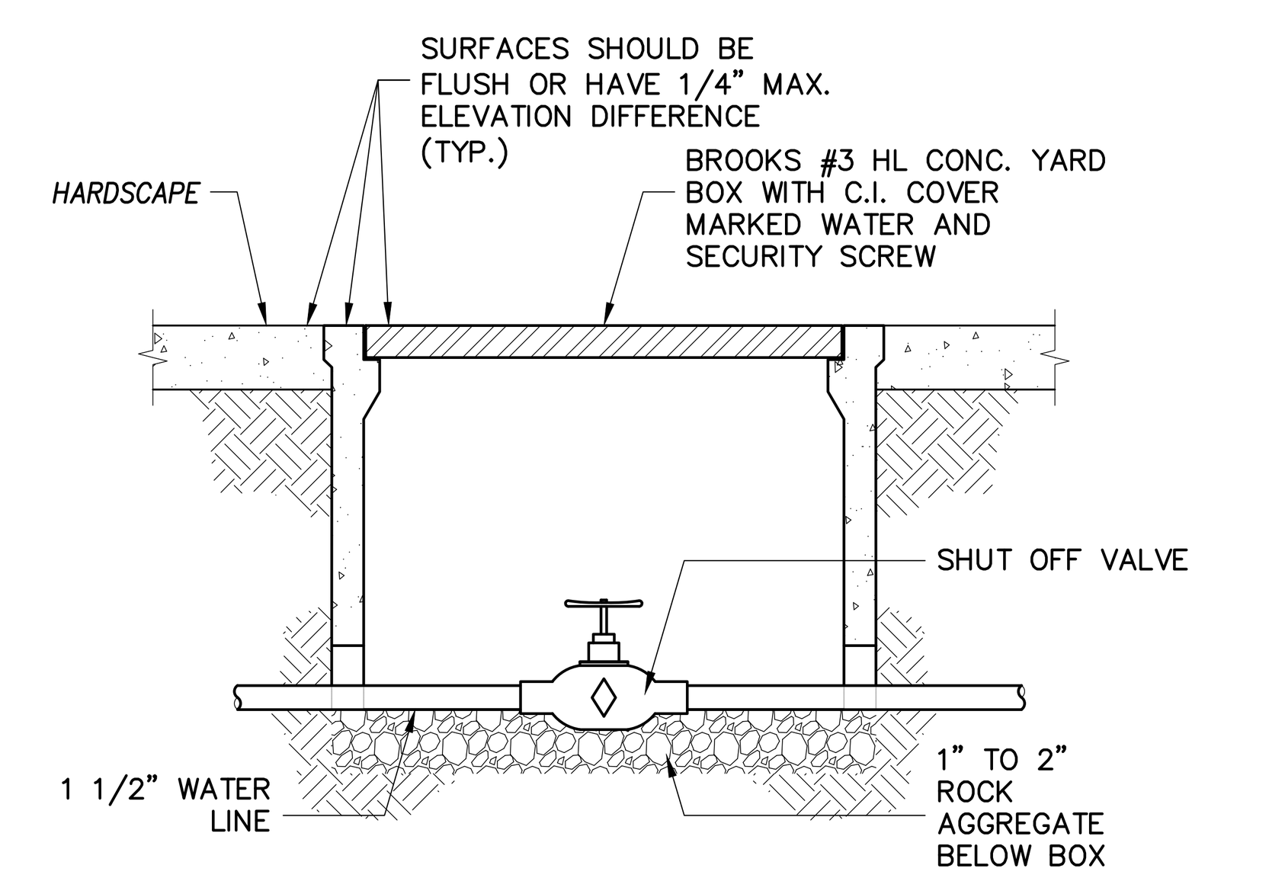
PIPE BEDDING AND TRENCH BACKFILL FOR SEWER AND STORM DRAIN | 6



REFERENCE: TITLE 24, 1809A.14

NOT TO SCALE

TYPICAL PIPE TRENCH/FOOTING DETAIL | 7



NOT TO SCALE

WATER SHUT-OFF VALVE | 8

CONCRETE THRUST BLOCKS

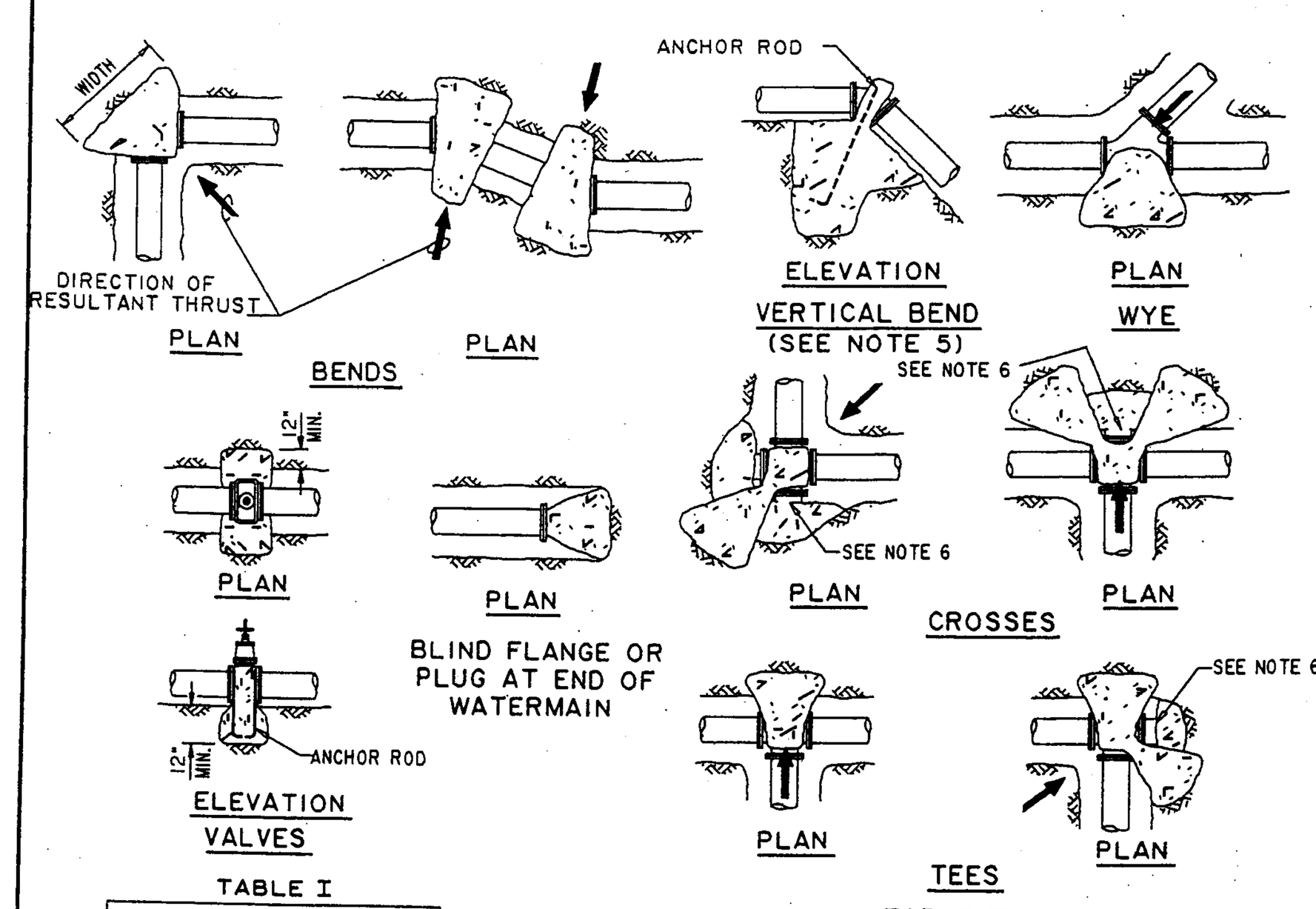


TABLE I

MAIN SIZE	TEE **	90° BEND	45° BEND	22 1/2° BEND
6"	4	4	4	3
8"	5	7	4	3
10"	9	12	6	4
12"	12	16	9	6

MINIMUM BEARING AREAS IN SQ. FT. *

* BASED ON 150 PSI W.W.P PRESSURE & SOIL BEARING LOADS OF 2000 PSF. THE RATIO OF WIDTH TO HEIGHT SHALL NOT EXCEED 1 1/2 TO 1.

** TEES, PLUGS, CAPS, AND HYDRANTS.

TABLE II

*** SOIL TYPE	**** MAX. ALLOWABLE SOIL BEARING VALUES	FACTORS FOR INCREASING AREAS IN TABLE I
LOOSE SAND	500 PSF	4
SOFT SANDY CLAY	1000 PSF	2
ADOBE	1000 PSF	2
COMPACT FINE SAND	2000 PSF	1
COMPACT COARSE SAND	2000 PSF	1
MEDIUM STIFF CLAY	2000 PSF	1

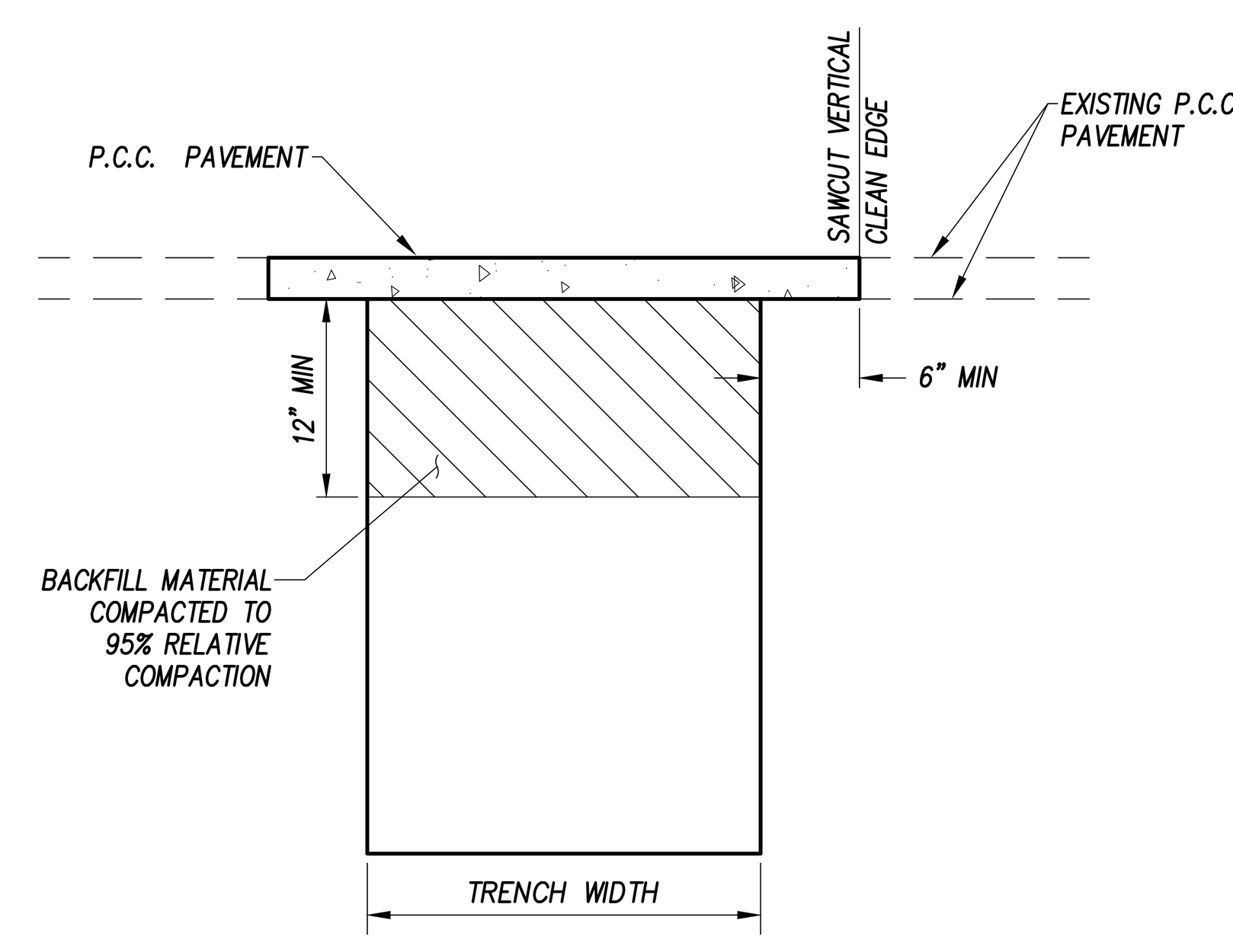
*** THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SAFE SOIL BEARING VALUES AND THE POSITION AND SIZE OF BEARING AREAS.

**** BASED ON 2 FEET MINIMUM DEPTH OF COVER OVER THE PIPE.

GENERAL NOTES
1. ALL ANCHOR AND THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED SOIL.
2. MINIMUM ALLOWABLE WATER PRESSURE FOR DESIGN OF THRUST BLOCKS IS 150 PSI. BEARING AREA INCREASES DIRECTLY WITH INCREASE IN PRESSURE
3. ALL CONCRETE USED IN THRUST BLOCKS SHALL ATTAIN 2000 PSI STRENGTH.
4. ALL ANCHOR RODS SHALL BE REINFORCING STEEL AND A MINIMUM OF 1/2 INCH IN DIAMETER.
5. USE ANCHOR BLOCKS AT VERTICAL BENDS WHEN PIPE IS ABOVE OR BELOW GROUND. SIZE OF BLOCK AND ROD SHALL BE AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER IN THE FIELD.
6. USE 30 POUND FELT TO INSURE COLD JOINT.
7. CONCRETE SHALL NOT COME INTO DIRECT CONTACT WITH ASBESTOS-CEMENT PIPE.
8. FOR PIPE 14" IN DIAMETER OR LARGER, ENGINEER IS TO SUBMIT CALCULATIONS.

LOS ANGELES COUNTY WATERWORKS DISTRICTS
DEPARTMENT OF PUBLIC WORKS
STANDARD PLAN W-21 SHEET 1 OF 1
APPROVED Dean D. Efstathiou, ASSISTANT DEPUTY DIRECTOR — AUGUST 93 DATE

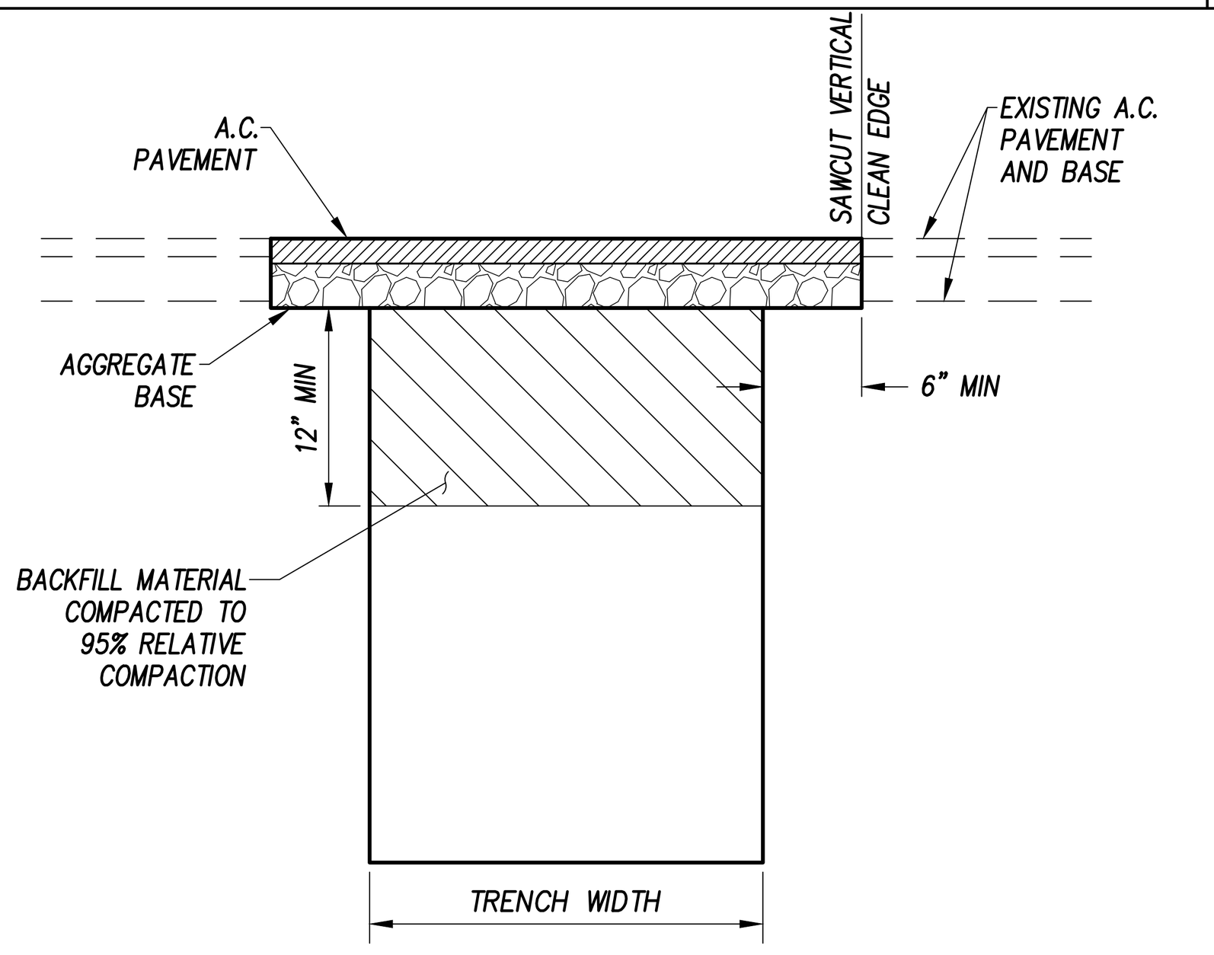
CONCRETE THRUST BLOCKS | 9



NOTE:
MINIMUM P.C.C. THICKNESS SHALL BE 5" OR THAT OF THE EXISTING P.C.C. PAVEMENT, WHICHEVER IS GREATER

NOT TO SCALE

TRENCH RESURFACING - P.C.C. PAVEMENT | 10

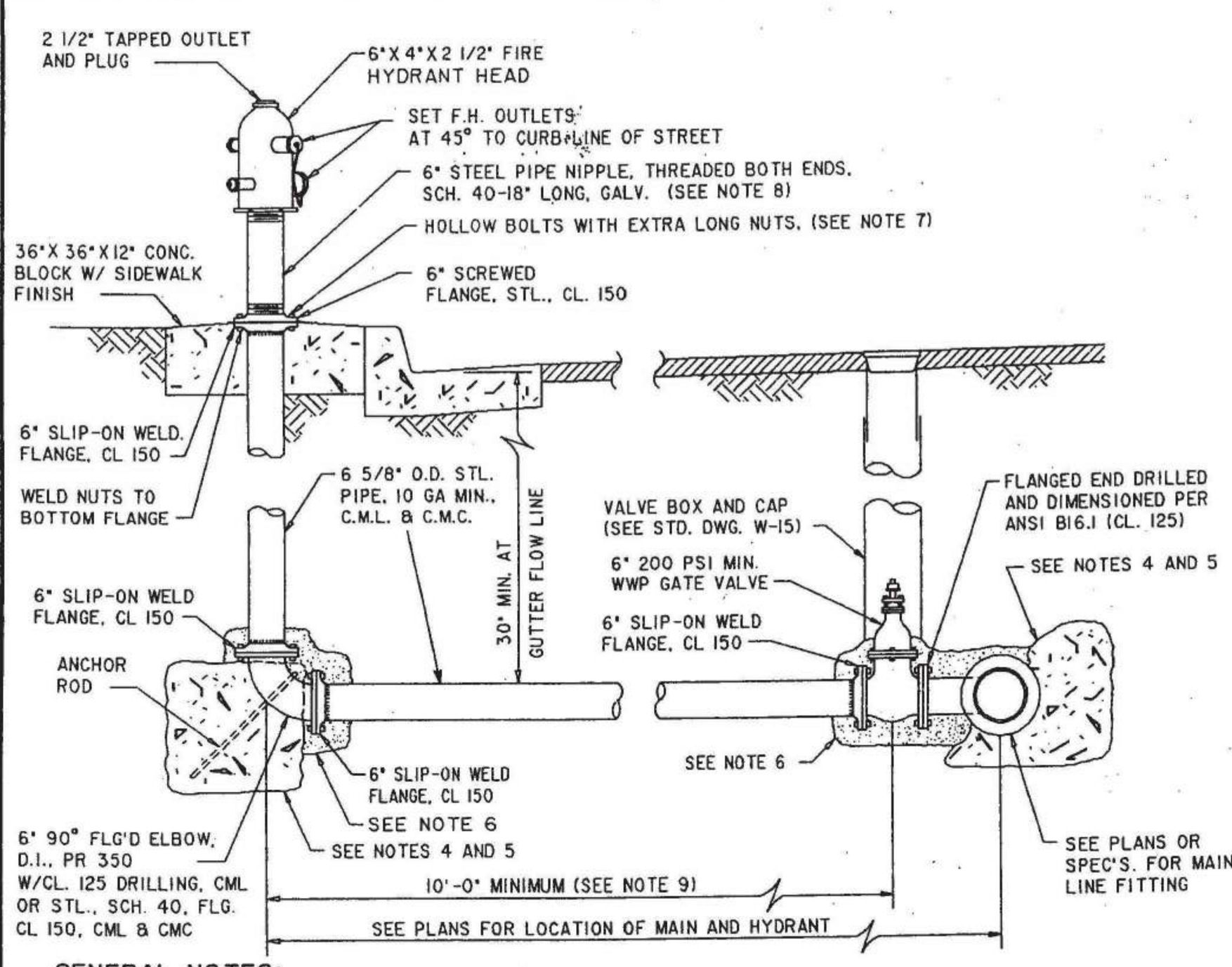


NOTES:
1. MINIMUM A.C. PAVEMENT THICKNESS SHALL BE ONE INCH GREATER THAN EXISTING A.C. OR AS SHOWN ON PLAN.
2. A.C. PAVEMENT SHALL BE HOT PLANT MIX.
3. TACK COAT SHALL BE APPLIED TO ALL EDGES PRIOR TO PLACEMENT OF A.C. PAVEMENT.
4. A.C. RESURFACING SHALL BE SEAL COATED WITH AN EMULSIFIED ASPHALT AND COVERED WITH SAND.
5. AGGREGATE BASE MATERIAL SHALL MATCH THE THICKNESS OF EXISTING BASE OR AS SHOWN ON PLAN

NOT TO SCALE

TRENCH RESURFACING - A.C. PAVEMENT | 11

FIRE HYDRANT - COMPLETE
(200 PSI MAX. WWP, LATERAL AT RIGHT ANGLE TO MAIN)

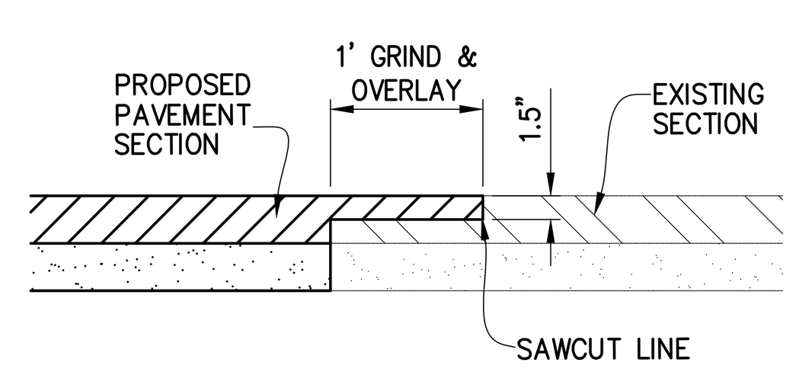


GENERAL NOTES:
1. IN THE ABSENCE OF A CURB, SET BOTTOM OUTLET 24-INCHES ABOVE CROWN OF ROAD AND PROVIDE STEEL PIPE BARRICADES AS DIRECTED BY DISTRICT. (SEE STD. DWG. W-14)
2. CENTERLINE OF RISER SHALL BE 2 FEET BEHIND CURB FACE EXCEPT WHERE 5-FOOT WIDE SIDEWALK IS ADJACENT TO CURB, IN WHICH CASE THE RISER SHALL BE AT 6 FEET OR AS SHOWN ON THE PLANS. (ALSO SEE NOTE 10).
3. NO FIRE HYDRANT SHALL BE INSTALLED CLOSER THAN FIVE FEET FROM EDGE OF ANY DRIVEWAY APRON.
4. USE 2000 PSI MINIMUM CONCRETE FOR THRUST BLOCKS AND HYDRANT PAD. PLACE CONCRETE ON UNDISTURBED OR COMPACTED SOIL.
5. SEE STD. DWG. W-21 FOR THRUST BLOCK REQUIREMENTS.
6. ALL UNCOATED METAL SURFACES INCLUDING BOLTS INSTALLED UNDERGROUND ARE TO BE "DIAPERED" AND GROUTED WITH 900-1000 PSI CEMENT MORTAR (1 CEMENT: 3 SAND: 1 LIME) TO PROVIDE A 2-INCH THICK COATING.
7. THE BOLTS AND NUTS CALLED FOR AT THE TOP FLANGE CONNECTION ON THE RISER SHALL BE 3/4" HOLLOW BOLTS FURNISHED BY THE DISTRICT.
8. THE EXTERIOR OF THE ABOVE GROUND PORTION OF THE HYDRANT, EXCEPT FOR THE THREADS SHALL BE PAINTED WITH 2 COATS OF RED-PRIMER RUST-OLEUM #1069 AND 2 COATS OF RUST-OLEUM YELLOW #944.
9. INTERMEDIATE PIPE JOINTS IN LATERAL SHALL BE EITHER LAP OR BELL, WELDED OR FLANGED. PIPE SHALL BE INSTALLED HORIZONTAL OR SLOPING DOWNWARD FROM MAIN TO PROVIDE MINIMUM COVER.
10. FOR FIRE HYDRANT LOCATION WITHIN THE CITY OF LANCASTER REFER TO THE CITY OF LANCASTER STANDARD PLAN PW-1.
11. OUTLETS SHALL BE CAPPED WITH APPROVED PLASTIC CAPS.

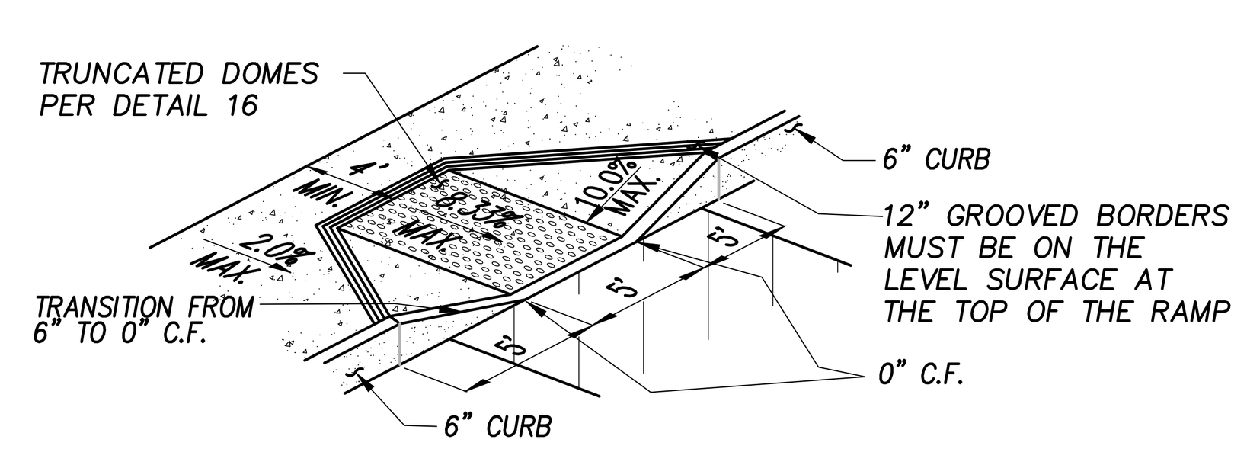
LOS ANGELES COUNTY WATERWORKS DISTRICTS
DEPARTMENT OF PUBLIC WORKS
STANDARD PLAN W-8 SHEET 1 OF 1
APPROVED Dean D. Efstathiou, ASSISTANT/DEPUTY DIRECTOR — OCTOBER 1998 DATE

NOT TO SCALE

FIRE HYDRANT | 12

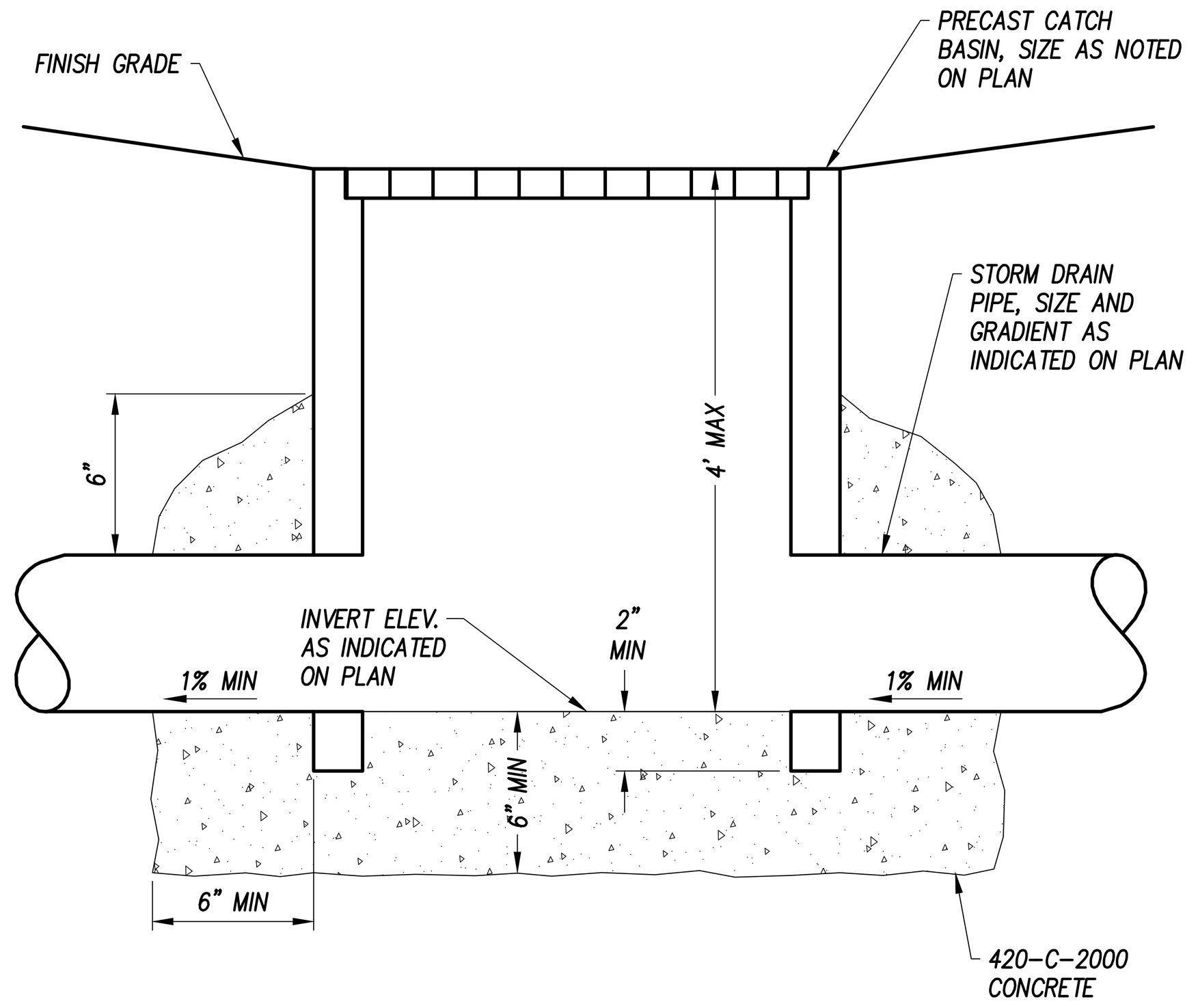


SAWCUT, GRIND, & OVERLAY | 13



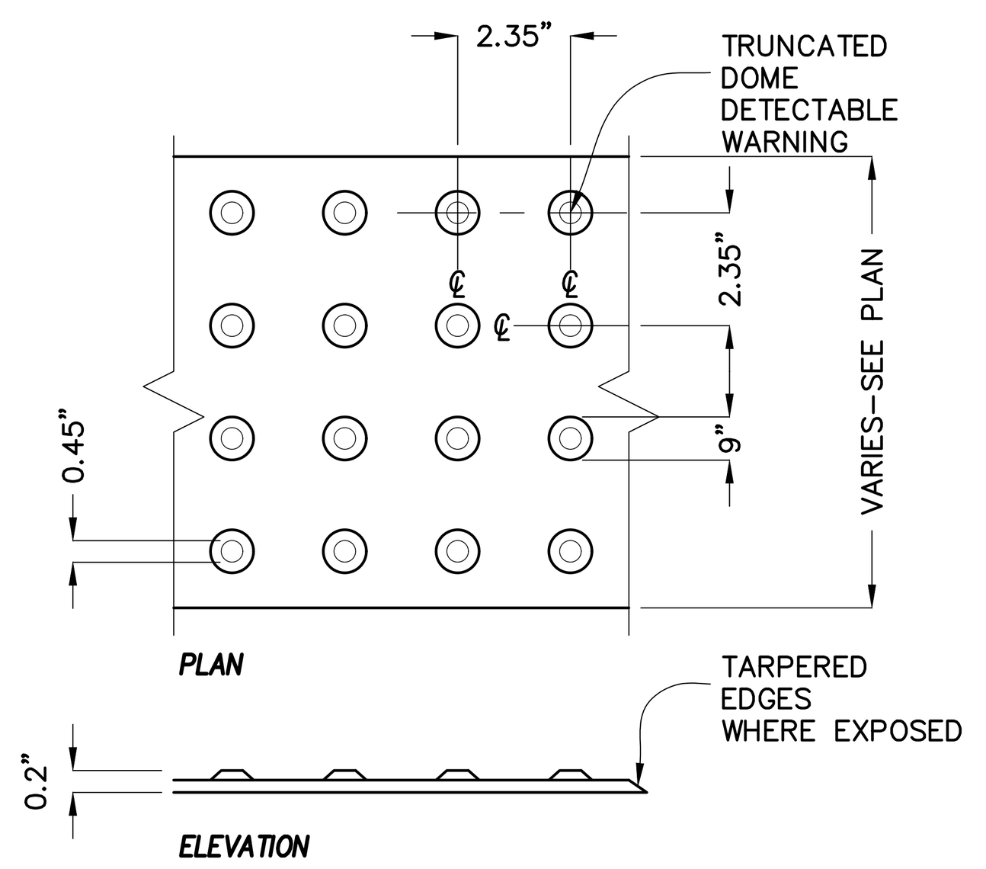
NOT TO SCALE

ACCESSIBLE CURB RAMP | 14



NOT TO SCALE

SHALLOW CATCH BASIN | 15



NOT TO SCALE

TRUNCATED DOMES | 16

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REGISTERED PROFESSIONAL ENGINEER — MICHAEL D SCHWEITZER — No. 59658 — Exp.12-31-2021 — CIVIL — STATE OF CALIFORNIA

DATE: Jul 13, 21 11:35am by:Carol.Stein
FILE:Z:\Projects\2020\20-145\PROD\Construct\GP - 2 Story\20-145_C6.0-DET.dwg

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
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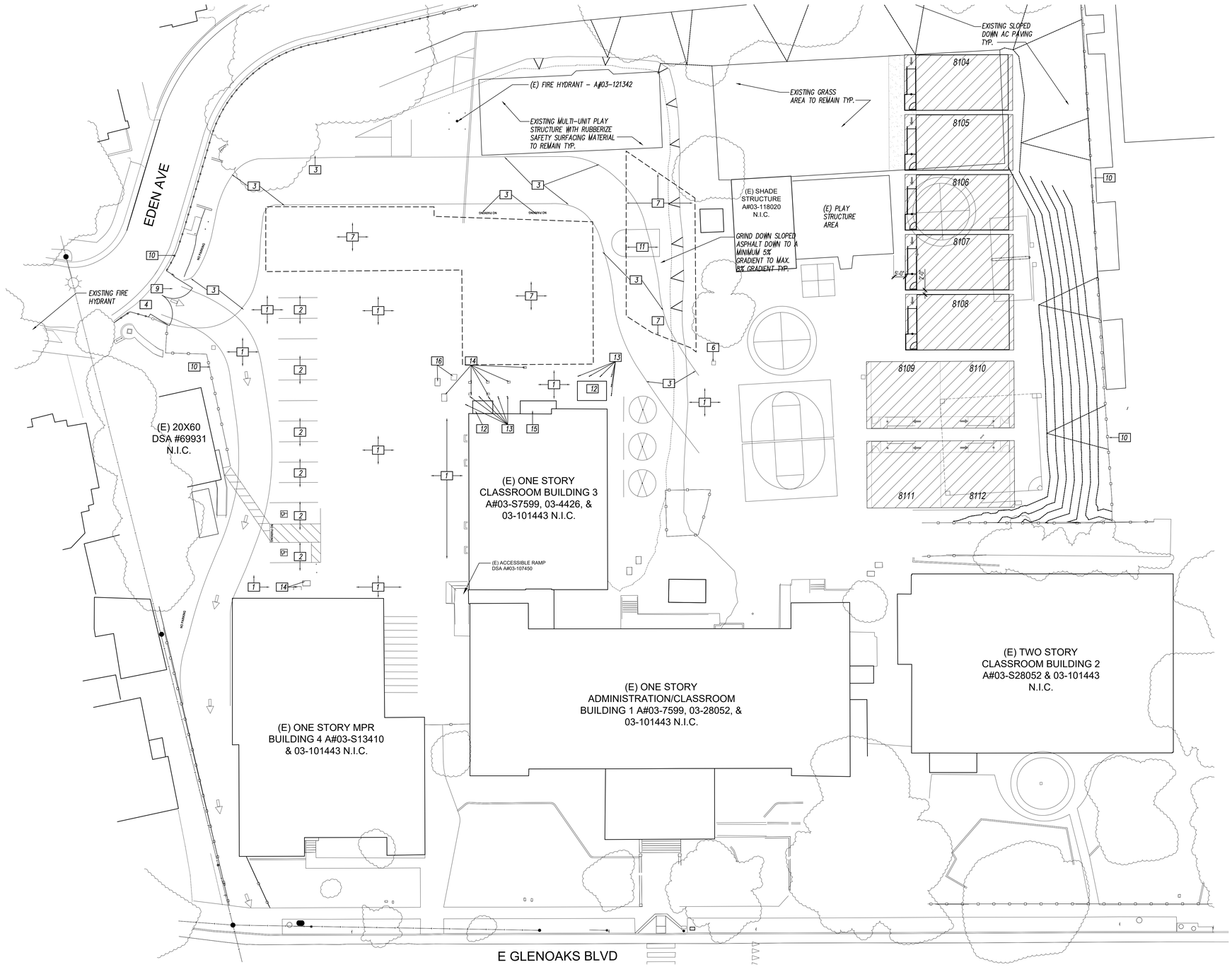
GLENDALE UNIFIED SCHOOL DISTRICT

DETAIL SHEET

JOB NUMBER	DRAWN BY	DATE	SCALE
2019-026	CS	07.12.2021	AS NOTED

C6.0

BID SET 10/01/2021



PARTIAL SITE PLAN | 1" = 60'-0" | 1

SITE KEY NOTES

1. EXISTING ASPHALT PAVING AND BASE TO BE REMOVED AND REPLACED WITH NEW ASPHALT PAVING AND BASE AND RE-GRADED TO THE CONTOURS/GRADE ELEVATIONS A SHOWN ON THE CIVIL DRAWINGS AND SHEET A-1.1 PARTIAL ALTERATION SITE PLAN.
2. REMOVE ALL EXISTING ADA PARKING STRIPING AND SIGNAGE AND GENERAL PARKING STALLS. SEE SHEET A-1.1 PARTICAL ALTERATION SITE PLAN FOR NEW ADA PARKING LOCATION AND SIGNAGE AS WELL AS GENERAL PARKING STALLS.
3. EXISTING FIRE LANE STRIPING SHALL BE BLACKEN OUT AND ANY ASSOCIATED LETTERING ALONG THE FIRE LANE STATING "NO PARKING" SHALL ALSO BE BLACKEN OUT. SEE SHEET A-1.1 PARTIAL ALTERATION SITE PLAN FOR NEW FIRE LANE STRIPING AND NEW 12" HIGH LETTERS (LINES AND LETTER COLORS IN RED) "NO PARKING".
4. EXISTING KNOX PAD LOCKS ON ALL FIRE DEPT. ACCESS GATES AS PER FIRE DEPARTMENT REQUIREMENTS, INSPECTOR WILL PLACE AT WALK THRU FOR BUILDING FINAL. A KNOX BOX IS REQUIRED AT THE MAIN BUILDING.
5. NEW FIRE HYDRANT INSTALLED PER GLENDALE CITY OR COUNTY REGULATIONS AND CODES. SEE CIVIL DRAWINGS FOR FIRE HYDRANT INFORMATION AND DETAILS TYPICAL.
6. REMOVE EXISTING TREE TO INCLUDE ENTIRE ROOT SYSTEM AND PLANTER WELL. FILL IN WITH MINIMUM 3" OF ASPHALT PAVING OVER 6" CLASS II CALTRANS AGGREGATE BASE OR AS INDICATED ON SHEET A-1.1 OVERALL ALTERATION SITE PLAN AND CIVIL DRAWINGS.
7. EXCAVATE GRADE WHERE THE EXISTING PORTABLE BUILDINGS WERE REMOVED. DEPTH OF EXISTING EXCAVATION IS ANYWHERE FROM 12" TO 24". CONTRACTOR TO REMOVE AND ASPHALT AND SOIL FOR OVER-EXCAVATION FOR THE BUILDING FOUNDATIONS AND ELEVATOR FOUNDATION.
8. NOT USED
9. EXISTING CHAIN LINK GATE TO BE REMOVE TO INCLUDE GATE POST FOOTINGS. SEE A-1.1 ALTERATION SITE PLAN FOR NEW 20' BY 8' HIGH CHAIN LINK GATE AND FOOTING REQUIREMENTS TYPICAL.
10. EXISTING CHAIN LINK FENCE TO REMAIN. PROTECT IN PLACE.
11. EXISTING BASKETBALL POLE AND BACKBOARD WITH RING SHALL BE REMOVE AND REUSED AT A NEW LOCATION ON THE SITE. BREAK OFF ENTIRE EXISTING FOOTING FROM THE EXISTING POST. AT RELOCATED AREA, PLACED EXISTING POST INTO A NEW 12" DIAMETER BY 48" CONCRETE FOOTING. CROWN TOP OF FOOTING 1/4" TO CENTER OF POST. VERIFY RIM HEIGHT FROM THE TOP OF THE RIM TO THE FINISH SURFACE WITH THE DISTRICT PRIOR TO INSTALLATION TYPICAL.
12. EXISTING ELECTRICAL TRANSFORMER/SWITCH GEAR AND CONCRETE PAD - PROTECT IN PLACE
13. EXISTING BOLLARDS - PROTECT IN PLACE
14. EXISTING UTILITIES - RAISE TO GRADE
15. EXISTING STAIRS AND HANDRAILS - PROTECT IN PLACE
16. REMOVE EXISTING UTILITIES - SEE CIVIL DRAWING FOR FURTHER INFORMATION

SCOPE OF WORK

NEW CONSTRUCTION OF A 2 STORY MODULAR TYPE VA CLASSROOM BUILDING WITH BOY'S AND GIRLS RESTROOMS, EXTERIOR STAIRS, ANCILLARY SPACES, NEW PC ELEVATOR, PER PC-03-118291 & MECHANICAL ROOM, NEW ACCESSIBLE PARKING STALLS, NEW PARKING STALLS, FENCING, SITE CONCRETE/ASPHALT WALKWAYS, SITE SIGNAGE, UNDERGROUND UTILITIES CONNECTIONS TO THE BUILDING AND NEW BUILDING CONCRETE FOUNDATION SYSTEM WITH GROUND AIR VENTS.

SITE LEGEND / NOTES

PORTABLE BUILDINGS PER DSA A# 03-121342

EXISTING BUILDINGS

NOTE:
REFER TO CIVIL/PLUMBING/ELECTRICAL DRAWINGS FOR ALL NEW UNDERGROUND UTILITIES TO BE IN STALLED AND/OR RELOCATED. CONTRACTOR SHALL PATCH AND REPAIR THE EXISTING SURFACE AND MATCH EXISTING FINISH SURFACE MATERIAL.

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NEW 2 STORY BUILDING
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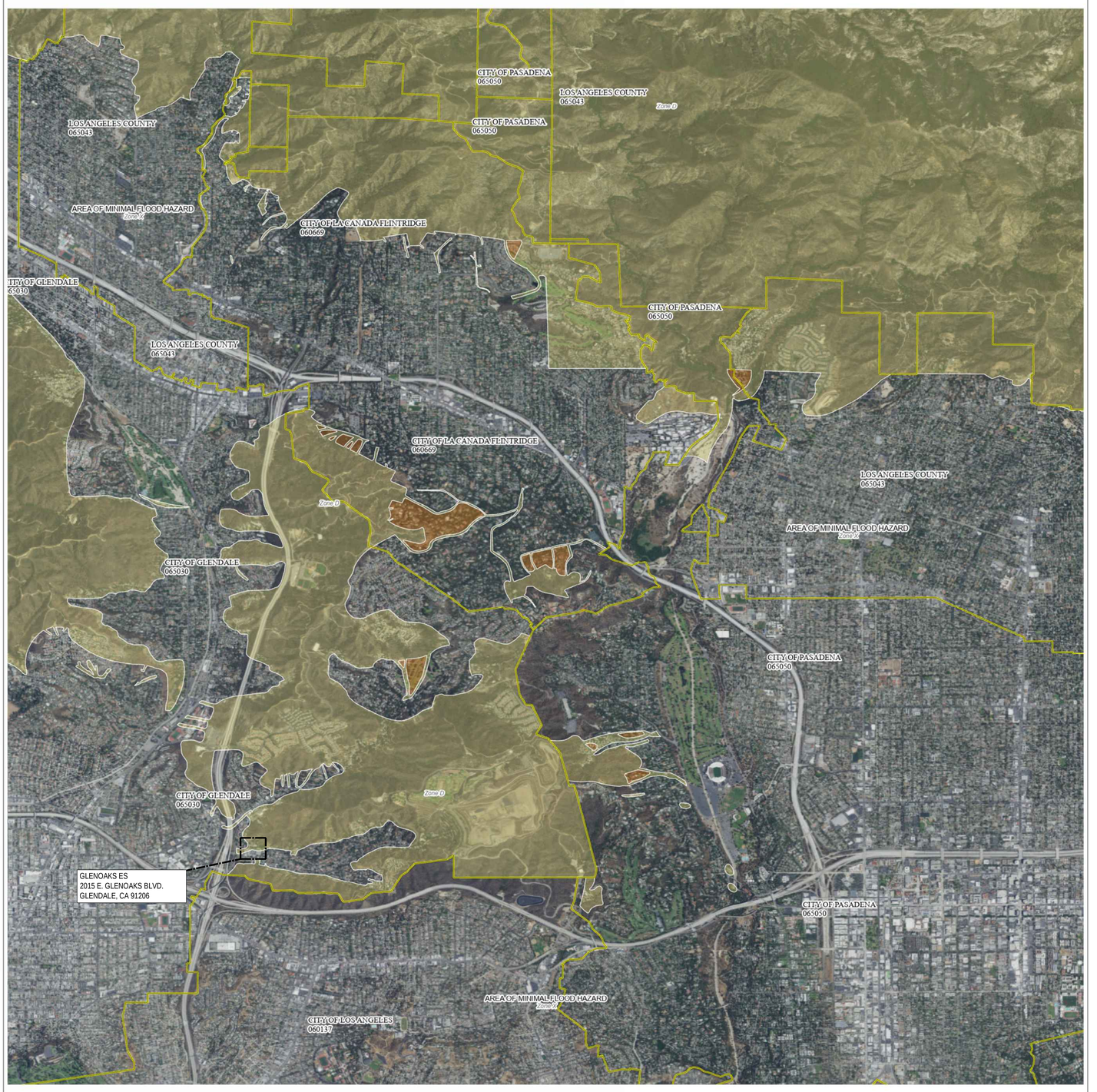
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

PARTIAL DEMO
SITE PLAN

JOB NUMBER	DRAWN BY:	DATE:	DSA APP#
2019-026		10.01.2021	00-000000

A-1.0

118°15'1.76"W 34°15'26.37"N



118°7'28.33"W 34°7'3.66"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP
FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes Zone X
- Area with Flood Risk due to Levee Zone D
- NO SCREEN Area of Minimal Flood Hazard Zone X

OTHER AREAS
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 6/16/2021 12:50 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection:
GCS: Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

1 inch = 2,000 feet 1:24,000

0 1,000 2,000 4,000 6,000 8,000 Feet

N

0 210 420 840 1,260 1,680 Meters

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1375 OF 2204

Panel Contains:

COMMUNITY	NUMBER	PANEL
CITY OF GLENDALE	065030	1375
CITY OF SAN MARINO	065057	1375
CITY OF PASADENA	065050	1375
LOS ANGELES COUNTY	065043	1375
CITY OF LOS ANGELES	060137	1375
CITY OF LA CANADA FLINTRIDGE	060669	1375
CITY OF SOUTH PASADENA	065061	1375

MAP NUMBER
06037C1375F
EFFECTIVE DATE
September 26, 2008

A-1.0A	JOB NUMBER: 2019-026 DRAWN BY: A.C.T. DATE: 10.01.2021 DSA APP#: 00-000000	FLOOD MAP	NEW 2 STORY BUILDING GLENOAKS ELEMENTARY SCHOOL 2015 E. GLENOAKS BLVD. GLENDALE, CALIFORNIA 91206 GLENDALE UNIFIED SCHOOL DISTRICT	DC | ARCHITECTS 820 N. MOUNTAIN AVENUE SUITE 200 UPLAND, CA. 91786 (909) 985 - 6939 OFFICE (909) 985 - 0864 FAX	REVISIONS

BID SET 10/01/2021

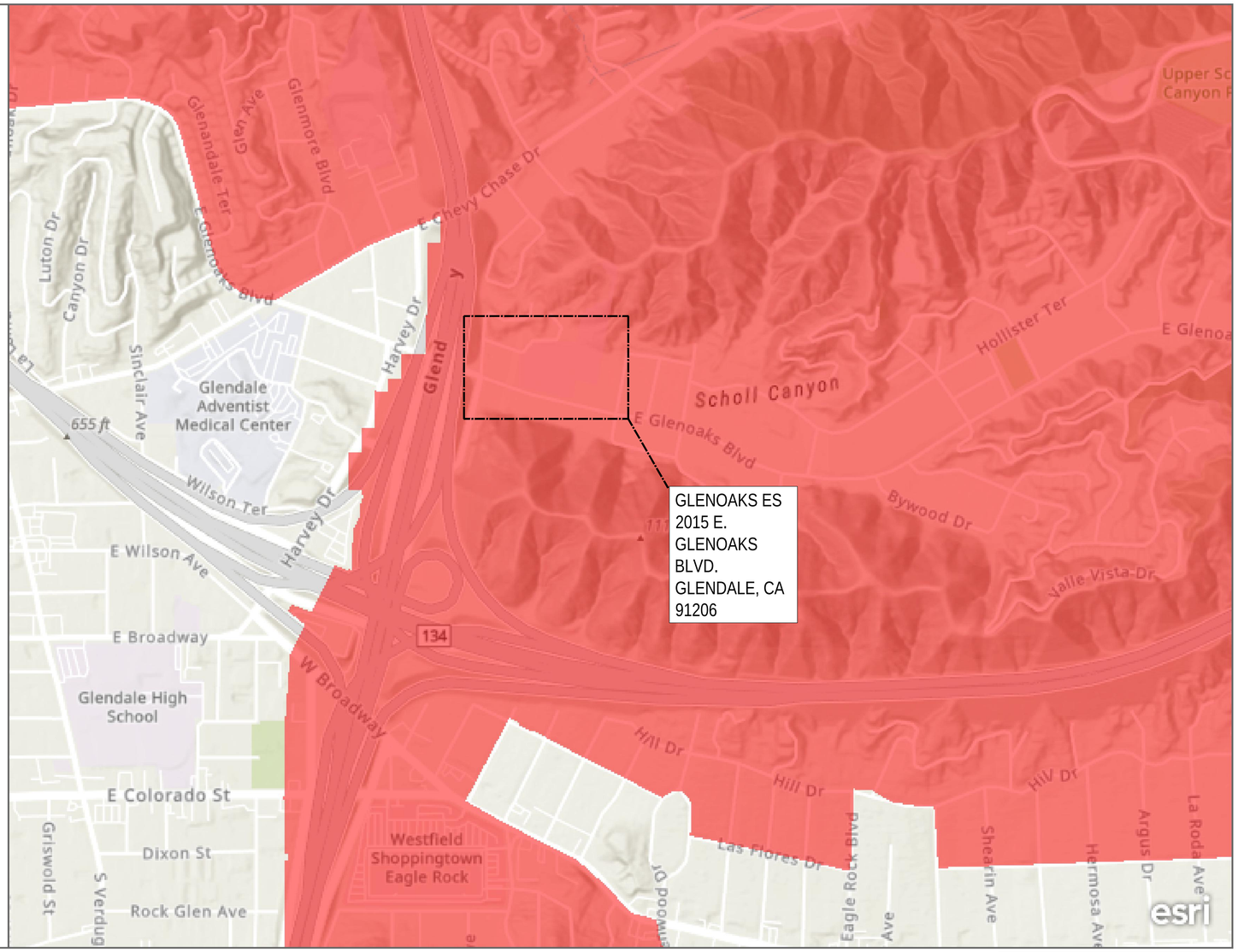
My Map

Hazards

Fire Hazards

Fire Hazard Severity Zones

- Very High
- High
- Moderate



Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, County of Los Angeles, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

REVISIONS

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

FIRE HAZARD ZONE MAP

JOB NUMBER 2019-026
DRAWN BY A.C.T.
DATE 10.01.2021
DSA APP# 00-000000

A-1.0B

BID SET 10/01/2021

AREA OF SCOPE OF WORK FOR 2-STORY MODULAR BUILDING

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

OVERALL ARIEL SITE PLAN

Job Number: 2019.026
Drawn by: A.C.T.
DATE: 10.01.2021
DSA APP#: 00-000000

A-1.0C

BID SET 10/01/2021

GENERAL NOTES

SEE DRAWING SHEET A-1.0 AND A-1.1 FOR DEMOLITION AND SITE ALTERATION PLANS FOR SCOPE OF WORK

EXISTING RESTROOMS AS SHOWN AND INDICATED PER DSA A# 03-121342

EXISTING RESTROOMS AS SHOWN AND INDICATED PER DSA A# 03-121342

(E) ACCESSIBLE RAMP DSA A#03-107450

SLOPE 1:12

SLOPE 5% MAX

PARTIAL SITE SURVEY PLAN 1" = 60'-0" 1

REVISIONS

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NEW 2 STORY BUILDING
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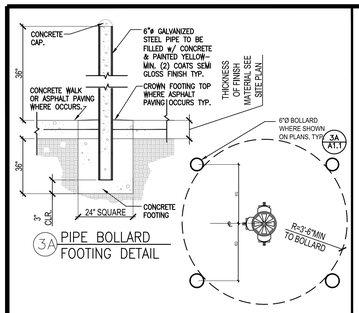
PARTIAL SITE SURVEY PLAN

JOB NUMBER: 2019-026
DRAWN BY:
DATE: 10.01.2021
DSA APP#: 00-000000

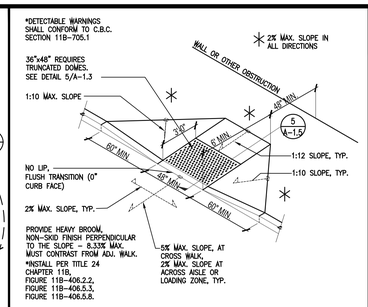
A-1.0D

BID SET 10/01/2021



3A PIPE BOLLARD FOOTING DETAIL

TYPICAL PIPE BOLLARD	NO SCALE:	3



TYPICAL CURB RAMP	NO SCALE:	2

NOT USED	NO SCALE:	1

BUILDING DATA

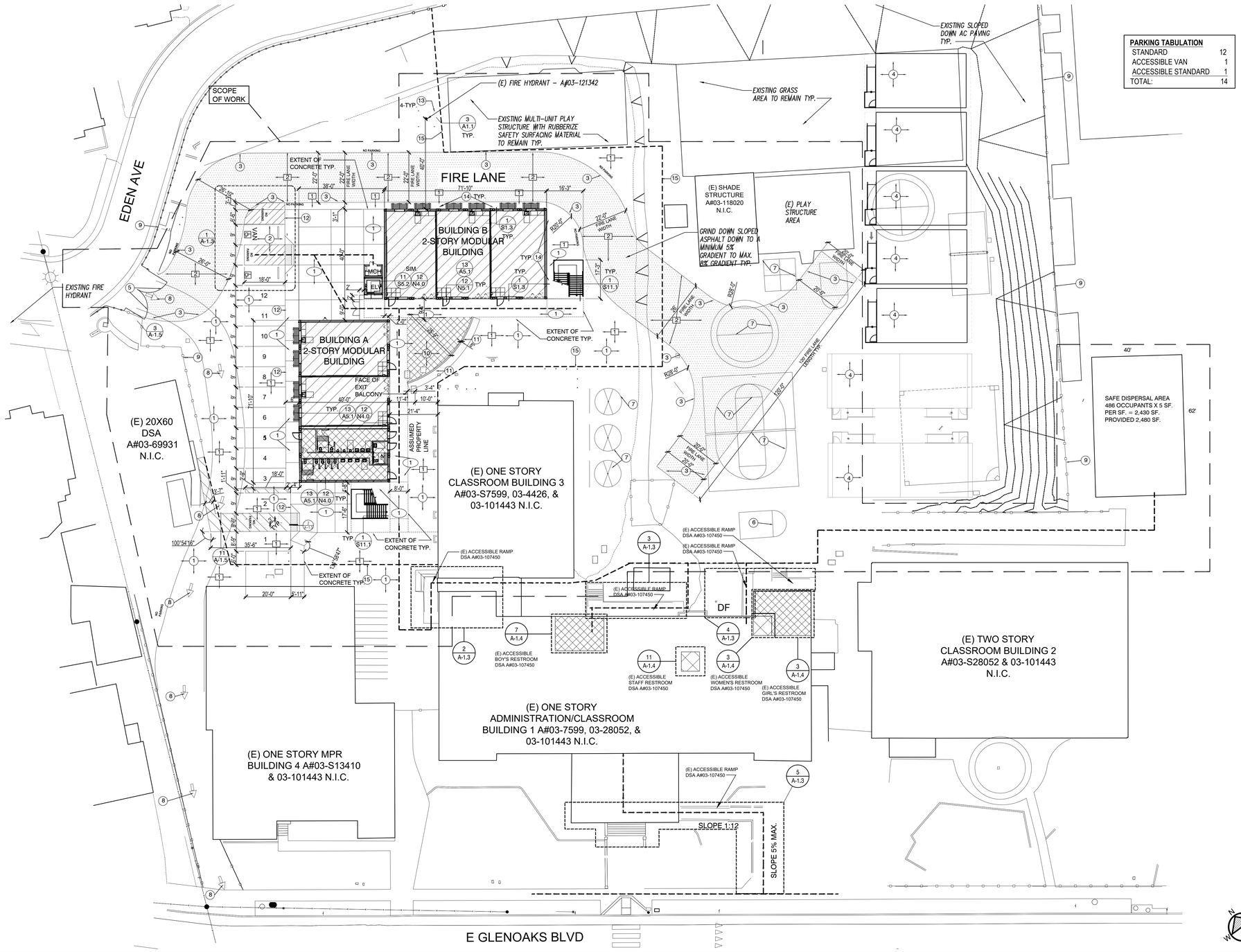
BLDG.	DESCRIPTION	OCCUPANCY CONST. TYPE	TOTAL AREA	BASIC ALLOWABLE	ACTUAL < ALLOWABLE
1	2 STORY MODULAR CLASSROOM	OCC "E" TYPE VA	*1ST FLR = 6,896 2ND FLR = 7,928 =14,824 S.F.	74,000 S.F.	14,824 S.F < 74,000 S.F

BUILDING HEIGHT: TWO STORY
AUTOMATIC FIRE SPRINKLER: YES

* AREA CALCULATIONS INCLUDE EXIT BALCONIES AND BUILDING OVERHANGS.

ALTERATION SITE PLAN KEY NOTES

1. NEW MINIMUM 3" ASPHALT PAVING OVER MINIMUM 6" OF CLASS II CALTRANS AGGREGATE BASE. SEE ASPHALT PAVEMENT THICKNESS CHART AND OR CIVIL DRAWINGS FOR ACTUAL ASPHALT AND AGGREGATE BACE THICKNESS TYPICAL.
2. NEW VAN & ADA PARKING STALL.
3. NEW 3" WIDE STRIP PAINTED RED. PROVIDE 12" HIGH LETTERS (COLOR RED) STATING "NO PARKING".
4. TEMPORARY INTERIM PORTABLES LOCATIONS SET PER DSA A# 03-121342.
5. NEW MINIMUM 20' WIDE CHAIN LINK GATE BY 8' HIGH. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
6. RELOCATED BASKETBALL POST, BACKBOARD AND RING. SET POST INTO NEW 12" DIAMETER BY 48" DEEP CONCRETE FOOTING. CROWN TOP OF FOOTING 1/4" TO CENTER OF POST. RING/RIM HEIGHT FROM THE FINISH SURFACE TO THE TOP OF THE RIM SHALL BE DETERMINED BY THE DISTRICT. CONSULT WITH THE DISTRICT PRIOR TO INSTALLATION. LINE STRIP SHALL BE 2' WIDE PAINTED WHITE.
7. EXISTING HARDCOURT GAME LINES, BASKETBALL POLES/BACKBOARDS/RIMS TO REMAIN. PROTECT IN PLACE.
8. NEW DIRECTIONAL ARROWS FOR ONE-WAY VEHICLE EXIT FROM THE SITE TYPICAL. EXISTING DIRECTIONAL ARROWS SHALL BE REPAINTED MINIMUM ONE COAT TYPICAL.
9. EXISTING CHAIN LINK FENCE TO REMAIN. PROTECT IN PLACE TYPICAL.
10. NEW 2' SQUARE CONCRETE JOINTS EACH WAY WITH MEDIUM AGGREGATE FINISH. CONCRETE MINIMUM 4" THICK OVER 4" AGGREGATE BASE OR PER SOILS REPORT WITH # 3 BARS SPACED AT 18" O.C. TYPICAL.
11. NEW 6" WIDE CONCRETE BAND WITH A MEDIUM BROOM FINISH. BROOM FINISH SHALL RUN IN THE DIRECTION OF THE 8" BAND. FOR CONCRETE INFORMATION REFER TO NOTE # 10 THIS SHEET.
12. NEW 6" WIDE CONCRETE CURB. SEE CIVIL DRAWINGS FOR FURTHER INFORMATION AND DETAILS TYPICAL.
13. NEW 6" DIAMETER BY MINIMUM 36" HIGH PIPE BOLLARD FILLED WITH CONCRETE. PROVIDE A CROWN CONCRETE CAP. PAINT PIPES YELLOW MINIMUM 2-COATS SEMI GLOSS FINISH TYPICAL.
14. NEW 18" WIDE BY 4" THICK CONCRETE BUTT TO THE BUILDING. PROVIDE MINIMUM 1/2" FIBROUS FELT PLACED TO THE SIDE OF THE BUILDING FOUNDATION AND LEAVE 1/2" TO 1/4" FROM THE TOP OF THE CONCRETE APRON. PROVIDE CONTINUOUS BEAD OF SIKA FLEX SEALANT. CONCRETE APRON TO RECEIVE A MEDIUM BROOM FINISH TYPICAL.
15. TEMPORARY 8' HIGH WITH FULL HEIGHT CANVAS SCREEN TO THE ENTIRE LENGTH OF THE FENCING. PROVIDE MINIMUM 1-VEHICLE GATE ENTRANCE AND 1'-3' WIDE MAN GATE OR GENERAL ACCESS FOR CONSTRUCTION WORKER PERSONNEL.



PARKING TABULATION	
STANDARD	12
ACCESSIBLE VAN	1
ACCESSIBLE STANDARD	1
TOTAL:	14

SCOPE OF WORK

NEW CONSTRUCTION OF A 2 STORY MODULAR TYPE VA CLASSROOM BUILDING WITH BOY'S AND GIRLS RESTROOMS, EXTERIOR STAIRS, ANCILLARY SPACES, ELEVATOR/MECHANICAL ROOM, NEW ACCESSIBLE PARKING STALLS, UNDERGROUND SITE UTILITES POINTS OF CONNECTION, SITE WORK AND SITE CONCRETE/ASPHALT WALKWAYS.

SITE LEGEND / NOTES

- TWO STORY PORTABLE BUILDING
- EXISTING BUILDINGS
- ACCESSIBLE PATH OF TRAVEL
- GENDER NEUTRAL TOILET
- BOYS/GIRLS TOILET
- FIRE ACCESS LANE
- DF (E) HI/LOW ACCESSIBLE DRINKING FOUNTAIN

ASPHALT THICKNESS CHART

1. TYPICAL AT ALL PAVED PARKING AREAS, VEHICLE DRIVE AREAS AND PLAYGROUND AREAS PROVIDE NEW MINIMUM 3" ASPHALT PAVING OVER MINIMUM 4" OF CLASS II CALTRANS AGGREGATE BASE UNLESS NOTED OTHERWISE ON THE SITE PLAN AND OR AS STATED ON THE CIVIL DRAWINGS.
2. TYPICAL AT ALL PAVED FIRE LANES/TRUCK LANES, PROVIDE NEW MINIMUM 4" ASPHALT PAVING OVER MINIMUM 4" OF CLASS II CALTRANS AGGREGATE BASE UNLESS NOTED OTHERWISE ON THE SITE PLAN AND OR AS STATED ON THE CIVIL DRAWINGS.

CONCRETE/WALKWAYS/SLAB CHART

1. TYPICAL AT ALL PAVED WALKWAYS, EXTERIOR SLAB AREAS, PROVIDE NEW MINIMUM 5" CONCRETE PAVING OVER MINIMUM 4" OF CLASS II CALTRANS AGGREGATE BASE, REINFORCED WITH # 3 REINFORCING BARS SPACED AT 18" O.C. EACH WAY UNLESS NOTED OTHERWISE ON THE SITE PLAN AND OR AS STATED ON THE CIVIL DRAWINGS. PROVIDE MEDIUM BROOM FINISH, TYP.
2. TYPICAL AT ALL PAVED CONCRETE PADS, AT TRUCK OR FIRE LANES, AT CONCRETE PADS IN FRONT OF NEW TRASH ENCLOSURES, EXTERIOR ELECTRICAL SLAB AREAS, PROVIDE NEW MINIMUM 6" CONCRETE PAVING OVER MINIMUM 4" OF CLASS II CALTRANS AGGREGATE BASE, REINFORCED WITH # 3 REINFORCING BARS SPACED AT 18" O.C. EACH WAY UNLESS NOTED OTHERWISE ON THE SITE PLAN AND OR AS STATED ON THE CIVIL DRAWINGS. PROVIDE MEDIUM BROOM FINISH, TYP.

GENERAL PATH OF TRAVEL ACCESSIBILITY NOTES

1. "DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."
2. ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGE NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP-RESISTANT. CROSS-SLOPE SHALL NOT BE STEEPER THAN 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT BE STEEPER THAN 1:20. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND FREE OF OBJECTS PROTRUDING MORE THAN 4" FROM THE WALL ABOVE 27" AND LESS THAN 80" ABOVE THE FLOOR. ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.
3. GRATING LOCATED IN THE SURFACE OF ANY PEDESTRIAN WAY IN THE POT SHALL HAVE GRID OPENINGS IN GRATING LIMITED TO 1/2" MAXIMUM CLEAR IN THE DIRECTION OF TRAVEL FLOW.

PARTIAL SITE ALTERATION PLAN	1" = 60'-0"	1

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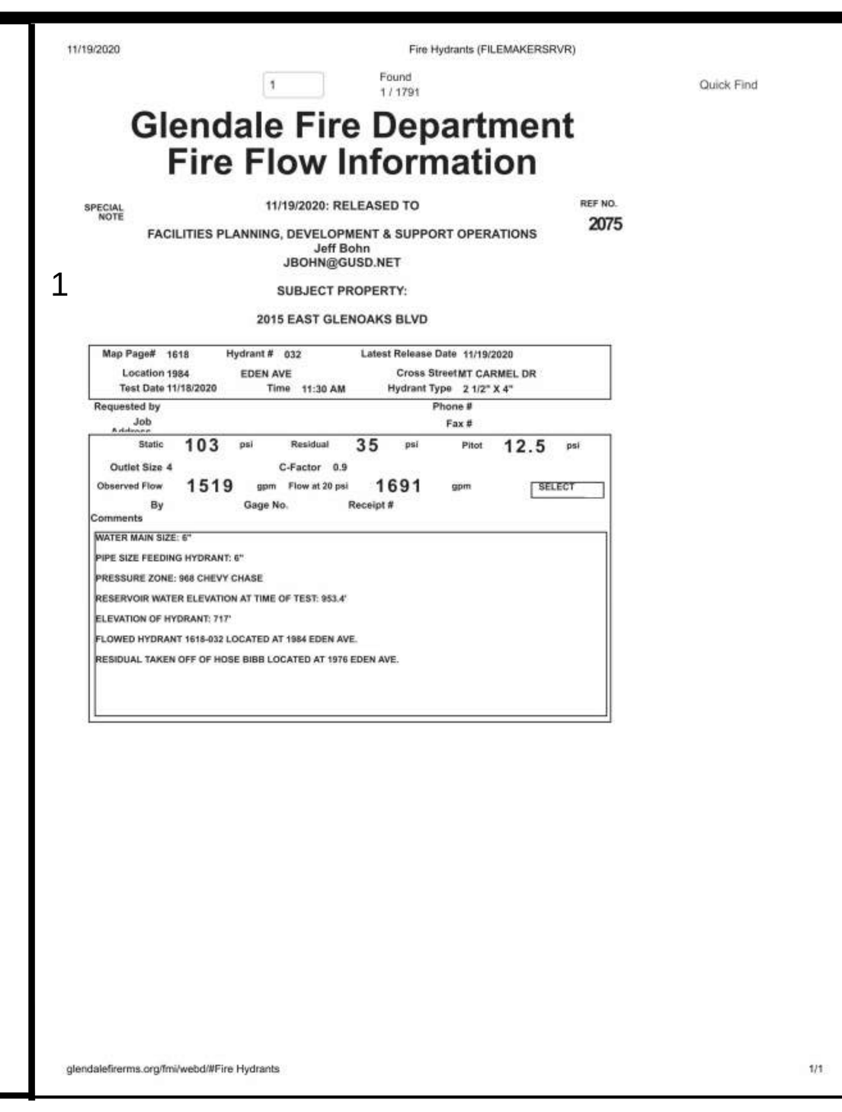
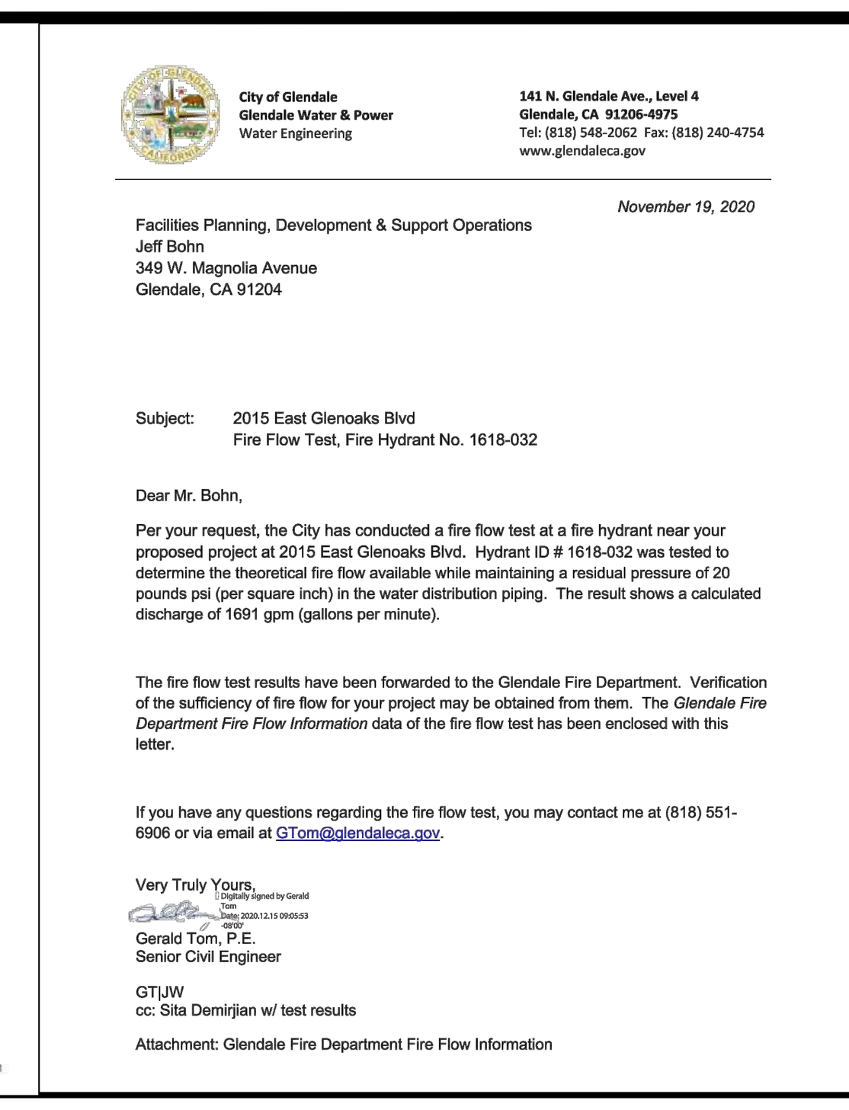
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

PARTIAL SITE
ALTERATION PLAN
2 STORY MODULAR CLASSROOM

JOB NUMBER	DRAWN BY	DATE	DSA APP#
2019-026	A.C.T.	10.01.2021	00-000000

A-1.1





BUILDING DATA

BLDG.	DESCRIPTION	OCCUPANCY CONST. TYPE	TOTAL AREA	BASIC ALLOWABLE	ACTUAL < ALLOWABLE
1	2 STORY MODULAR CLASSROOM	OCC "E" TYPE VA	*1ST FLR = 6,896 2ND FLR = 7,928 =14,824 S.F.	74,000 S.F.	14,824 S.F < 74,000 S.F

BUILDING HEIGHT: TWO STORY
AUTOMATIC FIRE SPRINKLER: YES
*AREA CALCULATION INCLUDE EXIT BALCONY'S AND BUILDING OVERHANGS

FIRE MARSHAL SITE NOTES

A. PLANS SHALL BE SUBMITTED FOR FIRE APPARATUS ACCESS ROADS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION, FOR EMERGENCY ACCESS AND FIRE FIGHTING PURPOSES. 20 FEET IS REQUIRED PRIOR, DURING CONSTRUCTION AND AFTER PORTABLE BUILDING FINAL, AND SHALL BE MAINTAINED AT ALL TIMES.

B. THE EXISTING ADDRESS IS PROVIDED ON THE ADMINISTRATION BUILDING WITH 12" NUMBERS PLAINLY VISIBLE AND LEGIBLE FROM THE STREET.

C. EXISTING SURFACE - FIRE APPARATUS ACCESS ROADS ARE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND ARE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

D. COMMERICAL DUMPSTERS OR CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN FIVE FEET OF COMBUSTIBLE ROOF EAVE LINES UNLESS AREAS CONTAINING DUMPSTERS ARE PROTECTED BY AN APPROVED SPRINKLER SYSTEM. FIRE CODE CHAPTER 3.

E. EXISTING KNOX PAD LOCKS ON ALL FIRE DEPT. ACCESS GATES AS PER FIRE DEPARTMENT REQUIREMENTS, INSPECTOR WILL PLACE AT WALK THRU FOR BUILDING FINAL. A KNOX BOX IS REQUIRED AT THE MAIN BUILDING.

F. ALL FIRE HYDRANTS ARE EXISTING HYDRANTS 2½ "x4", HYDRANTS ARE INSTALLED PER SPECIFICATION OF CITY GLENDALE WATER AND POWER.

G. THE EXISTING ALL WEATHER SURFACE ACCESSIBLE TO NEW CLASSROOMS SHALL BE PROVIDED AND MAINTAINED.

H. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT, CBC 2019 TITLE 24 1010.

I. WIDTH AND HEIGHT OF REQUIRED EXIT DOORWAYS TO COMPLY WITH CBC 2019 TITLE 24 1003, 1005, 1010.

J. EXITS SHALL BE ILLUMINATED AT ANY TIME THE BUILDING IS OCCUPIED WITH LIGHT HAVING AN INTENSITY OF NOT LESS THAN (1) FIVE FOOT-CANDLES AT FLOOR LEVEL. CBC 2019 TITLE 24 1006.

K. FENCES AND GATES TO COMPLY WITH CBC 2019 TITLE 24 1008. LOCKING DEVICES TO COMPLY WITH CITY OF GLENDALE FIRE DEPARTMENT REGULATIONS.

L. FIRE RESISTANCE OF EXTERIOR WALLS SHALL COMPLY WITH C.B.C. TABLE 601.

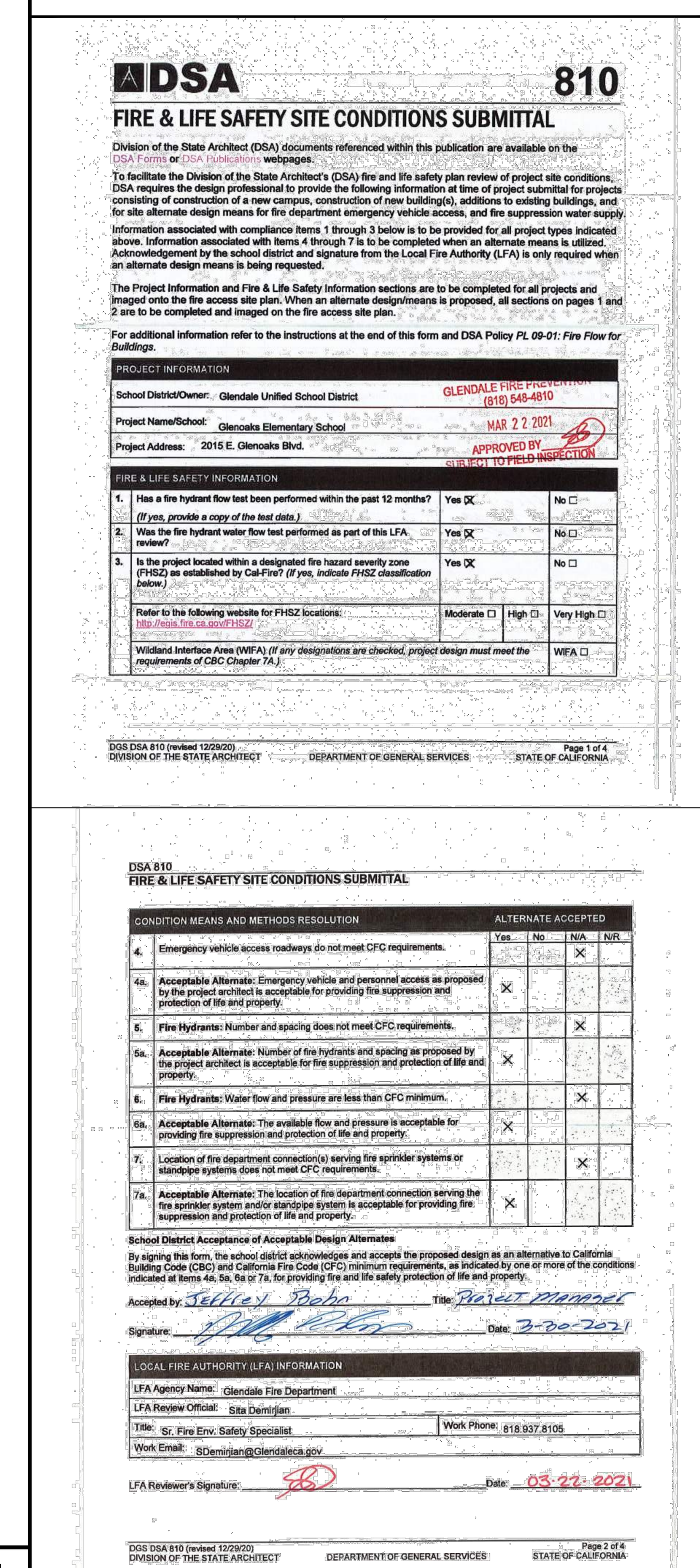
SCOPE OF WORK

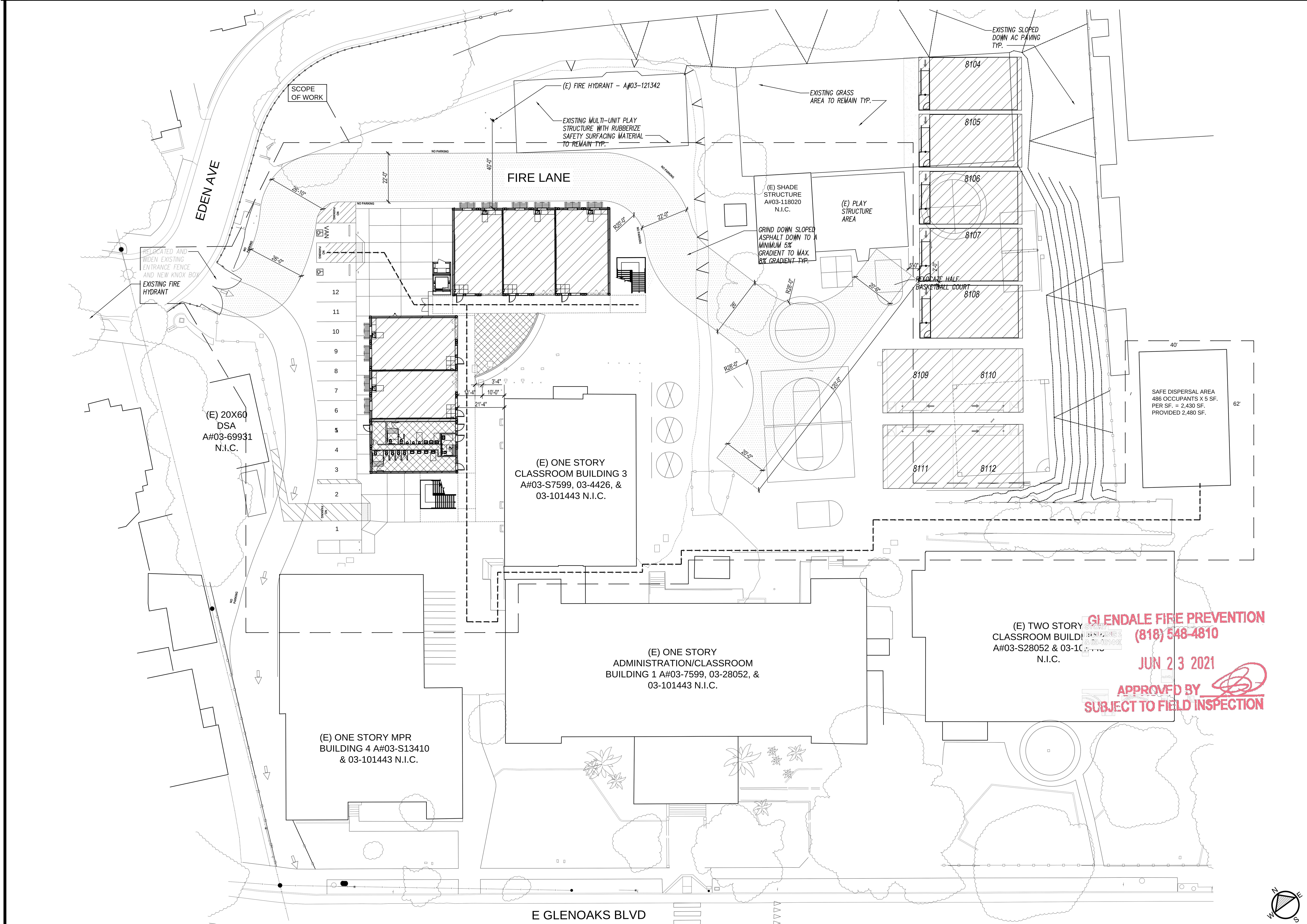
NEW CONSTRUCTION OF A 2 STORY MODULAR TYPE VA CLASSROOM BUILDING WITH BOY'S AND GIRLS RESTROOMS, EXTERIOR STAIRS, ANCILLARY SPACES, ELEVATOR/MECHANICAL ROOM, NEW ACCESSIBLE PARKING STALLS, AND SITE CONCRETE/ASPHALT WALKWAYS.

SITE LEGEND / NOTES

- RELOCATED PORTABLE BUILDING
- EXISTING BUILDINGS
- ACCESSIBLE PATH OF TRAVEL
- GENDER NEUTRAL TOILET
- BOYS/GIRLS TOILET
- FIRE ACCESS LANE

LOCAL FIRE AUTHORITY REVIEW





PARTIAL SITE PLAN - LOCAL FIRE AUTHORITY | 1" = 60'-0" | 1

REVISIONS

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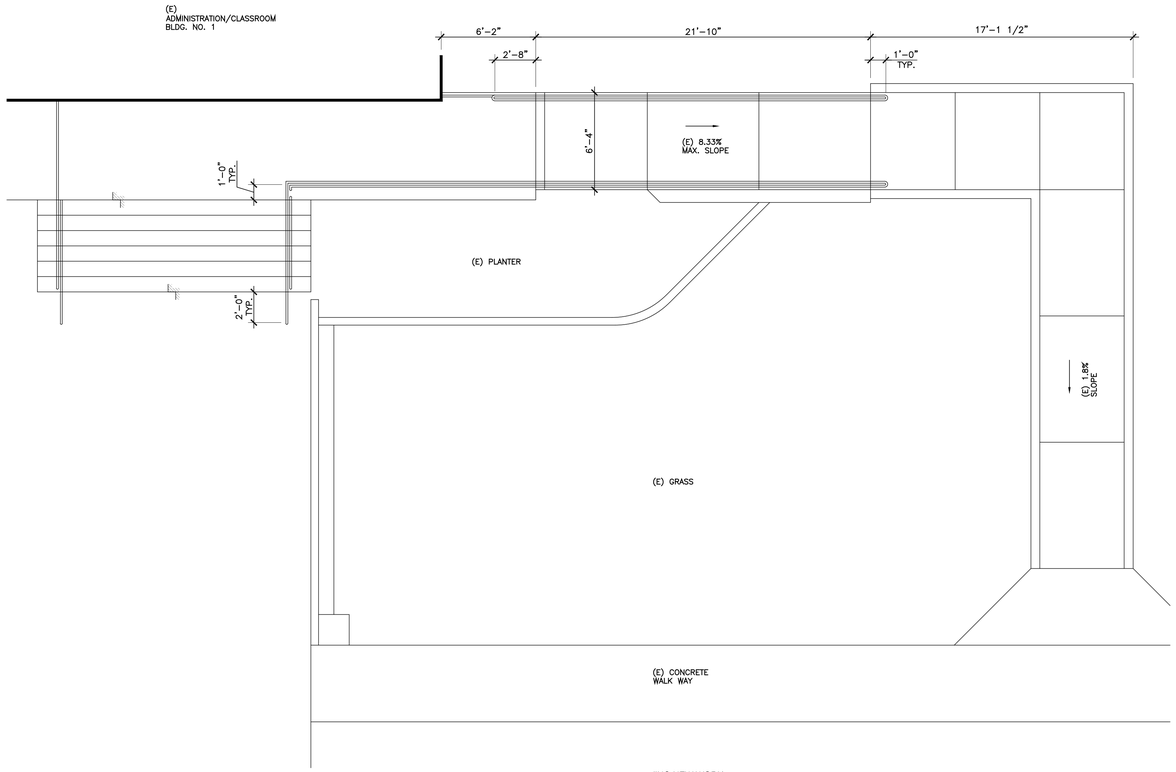
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

PARTIAL SITE PLAN - LOCAL FIRE AUTHORITY - 2 STORY MODULAR CLASSROOM

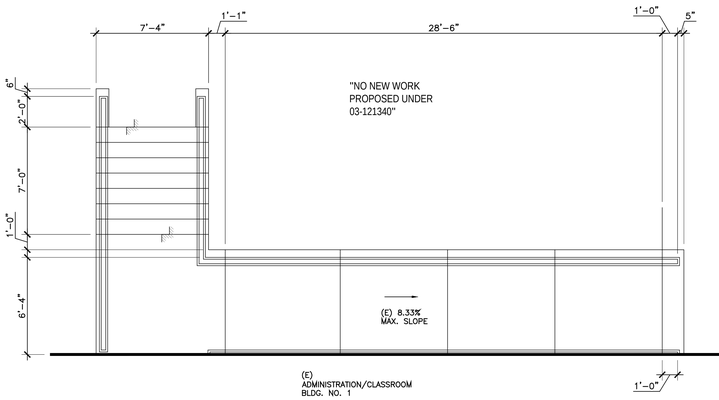
JOB NUMBER: 2019-026
DRAWN BY: A.C.T.
DATE: 10.01.2021

A-1.1

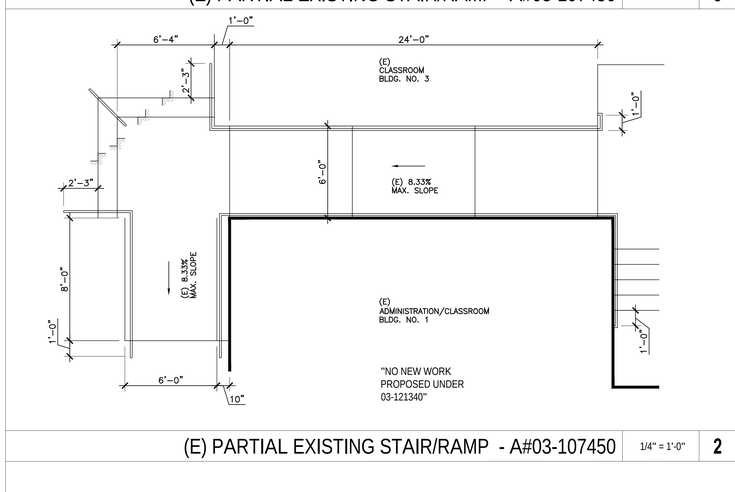
BID SET 10/01/2021



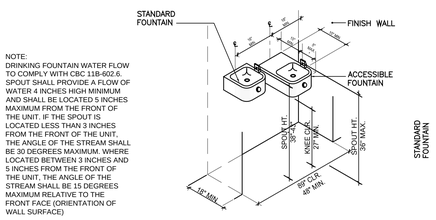
(E) PARTIAL EXISTING STAIR/RAMP - A#03-107450 | 1/4" = 1'-0" | 5



(E) PARTIAL EXISTING STAIR/RAMP - A#03-107450 | 1/4" = 1'-0" | 3

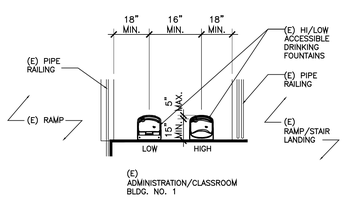


(E) PARTIAL EXISTING STAIR/RAMP - A#03-107450 | 1/4" = 1'-0" | 2

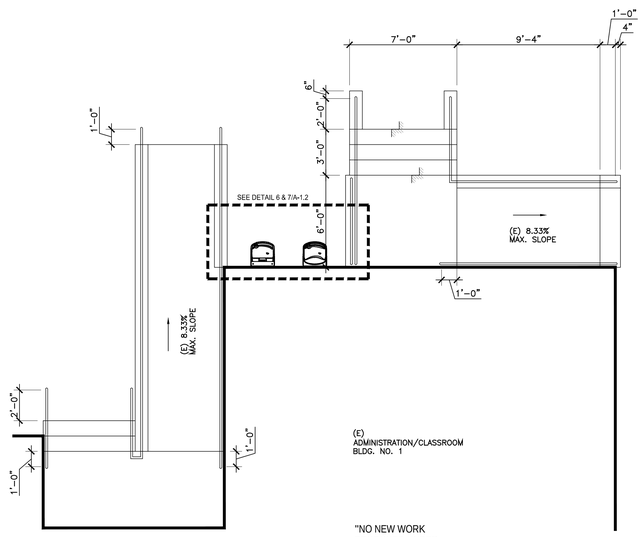


NOTE:
DRINKING FOUNTAIN WATER FLOW TO COMPLY WITH CBC 11B-602.6. SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT. IF THE SPOUT IS LOCATED LESS THAN 3 INCHES FROM THE FRONT OF THE UNIT, THE ANGLE OF THE STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE LOCATED BETWEEN 3 INCHES AND 5 INCHES FROM THE FRONT OF THE UNIT, THE ANGLE OF THE STREAM SHALL BE 15 DEGREES MAXIMUM RELATIVE TO THE FRONT FACE (ORIENTATION OF WALL SURFACE)

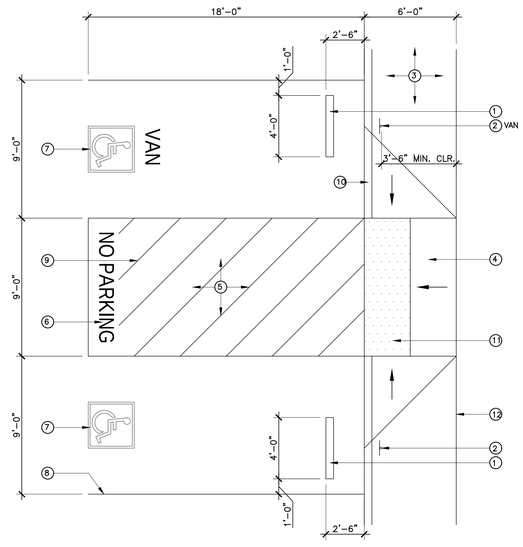
HI/LOW DRINKING FOUNTAIN DETAIL | 1/4" = 1'-0" | 7



(E) PARTIAL HI/LOW DRINKING FOUNTAIN - A#03-107450 | 1/4" = 1'-0" | 6



(E) PARTIAL EXISTING STAIR/RAMP - A#03-107450 | 1/4" = 1'-0" | 4



NOTE;
* ALL PAINTED LINES, LETTERS, SYMBOLS SHALL RECEIVE A MINIMUM OF (2)-COATS OF PAINT

(N) PARTIAL ACCESSIBLE PARKING | 1/4" = 1'-0" | 1

LEGEND

- EXISTING ACCESSIBLE PARKING LOADING AREA
- EXISTING PAINTED "NO PARKING"
- EXISTING ACCESSIBLE PARKING STALL
- EXISTING INTERNATIONAL ACCESSIBLE SYMBOL
- EXISTING PARKING BUMPER
- EXISTING ACCESSIBLE SIGN WITH $250 FINE SIGN
- EXISTING 3" BLUE ACCESSIBLE PARKING STRIP

KEYNOTES

1. WHEEL STOP - SEE DETAIL 14/A-1.5
2. ACCESSIBLE PARKING SIGN WITH $250 FINE TO BE PLACED IN FRONT OF EACH DISABLED PARKING STALL WITHIN CLEAR VIEW BUT NOT TO CONSTRICT PASSAGE FROM PARKING STALL OR ANY WALKWAY - VAN AS NOTED - TYP. - SEE DETAIL 1/A-1.5
3. WALKWAY - MAX. SLOPE 2% IN ANY DIRECTION - TYP.
4. CURB RAMP - TYP. - SEE DETAIL 2/A-1.1
5. CROSSWALK - 3" WIDE WHITE STRIPES - TYP.
6. 12" HIGH WHITE PAINT LETTERS "NO PARKING" - TYP.
7. ACCESSIBILITY SYMBOL - TYP. - SEE DETAIL 4/A-1.5
8. 3" WIDE BLUE LINES - TYP.
9. 3" WIDE BLUE LINES W/ 3'-0" MAX. O.C. SPACING. USE COLOR NO. 15090 - FEDERAL STANDARDS 595B.
10. CURB - SEE CIVIL DRAWINGS
11. TRUNCATED DOMES - SEE DETAIL 5/A-1.5
12. CONTROL JOINT(S) - SEE DETAIL 13B/A-1.5

REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
SUITE 200
UPLAND, CA. 91786
(909) 985 - 6539 OFFICE
(909) 985 - 0084 FAX

NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

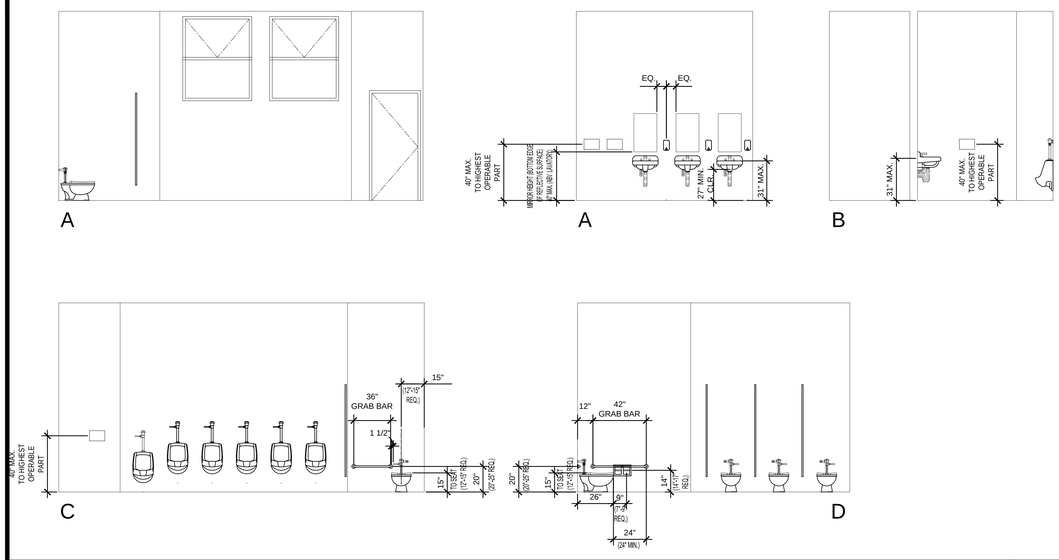
EXISTING/NEW
ENLARGED SITE PLAN

JOB NUMBER: 2019-026
DRAWN BY: A.C.T.
DATE: 10.01.2021
DSA APP#: 00-000000

A-1.3

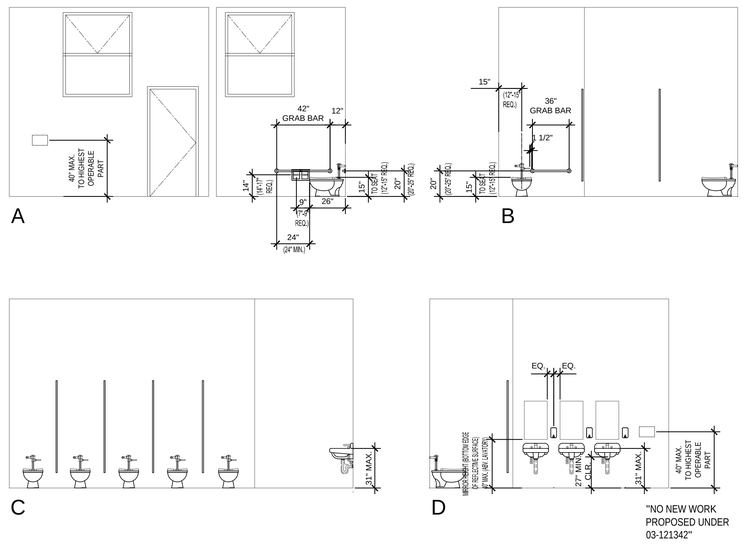
BID SET 10/01/2021

"NO NEW WORK PROPOSED UNDER 03-121342"



(E) BOY'S RESTROOMS ENLARGED FLOOR PLAN | 1/4" = 1'-0" | 8

"NO NEW WORK PROPOSED UNDER 03-121342"



(E) GIRL'S/STAFF WOMEN'S/STAFF MEN'S RESTROOMS ENLARGED FLOOR PLAN | 1/4" = 1'-0" | 4

LEGEND

DOOR PERMITTED TO SWING OVER HATCHED PORTION OF MANEUVERING SPACE

30"WIDEX48"LONG CLEAR SPACE

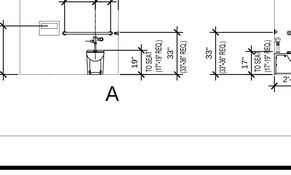
60" MIN. CLR.

60" CLR. TURNING RADIUS

INTERIOR ELEVATION SYMBOL:
- DRAWING NUMBER
- SHEET NUMBER
- INTERIOR ELEVATION & ORIENTATION

KEYNOTES

1. (E) ACCESSIBLE ROOM IDENTIFICATION SIGN
2. (E) ACCESSIBLE DOOR SIGN



"NO NEW WORK PROPOSED UNDER 03-121342"

(E) UNISEX RESTROOM ENLARGED FLOOR PLAN | 1/4" = 1'-0" | 11

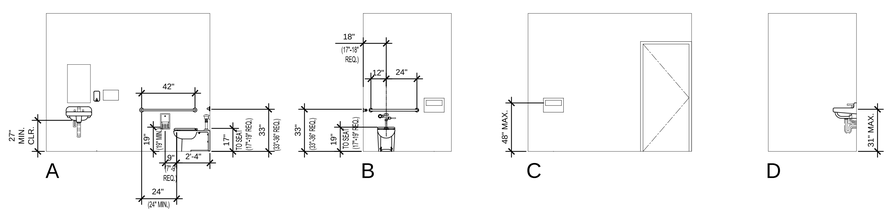
"NO NEW WORK PROPOSED UNDER 03-121342"

(E) BOY'S RESTROOMS ENLARGED FLOOR PLAN | 1/4" = 1'-0" | 7

"NO NEW WORK PROPOSED UNDER 03-121342"

(E) GIRL'S/STAFF WOMEN'S/STAFF MEN'S RESTROOMS ENLARGED FLOOR PLAN | 1/4" = 1'-0" | 3

"NO NEW WORK PROPOSED UNDER 03-121342"

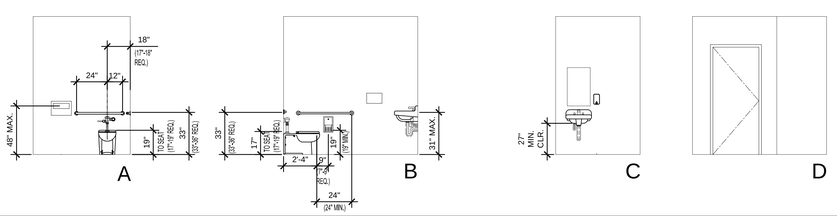


(E) UNISEX RESTROOM INTERIOR ELEVATIONS | 1/4" = 1'-0" | 2

"NO NEW WORK PROPOSED UNDER 03-121342"

(E) WOMEN'S STAFF RESTROOM INTERIOR ELEVATIONS | 1/4" = 1'-0" | 5

"NO NEW WORK PROPOSED UNDER 03-121342"



(E) MEN'S STAFF RESTROOM INTERIOR ELEVATIONS | 1/4" = 1'-0" | 1

GENERAL NOTES

1. DEMOLISH FINISHES, AND WALL MATERIALS AT RESTROOM WALL ARE TO THE FACE OF STUDS (U.N.O.)
2. FOR ACCESSIBLE PLUMBING FIXTURE AND TOILET ACCESSORY MOUNTING HEIGHTS, REFER TO DETAIL 12/A-10.4
3. TOILET ROOM ACCESSORIES TO BE AS SHOWN ON ACCESSORY CHART (THIS PAGE) OR APPROVED EQUAL, AS NOTED OTHER WISE IN THE SPECIFICATIONS

EXISTING RESTROOMS DSA A#107450

REVISIONS

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NEW 2 STORY BUILDING
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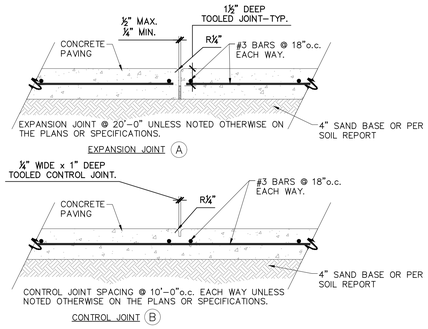
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

EXISTING
ENLARGED RESTROOMS

JOB NUMBER	DRAWN BY	DATE	DSA APP#
2019-026	A.C.T.	10.01.2021	00-000000

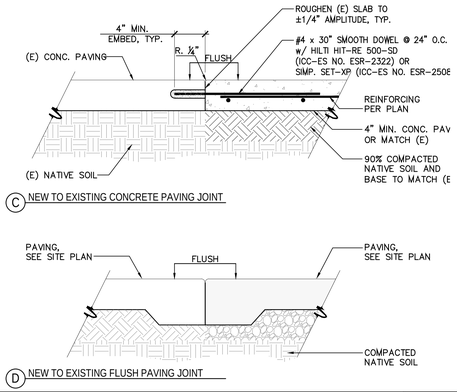
A-1.4

BID SET 10/01/2021



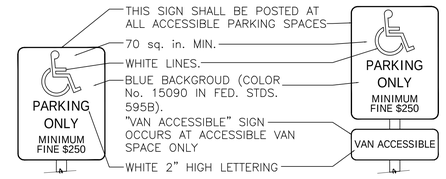
CONCRETE PAVING JOINTS

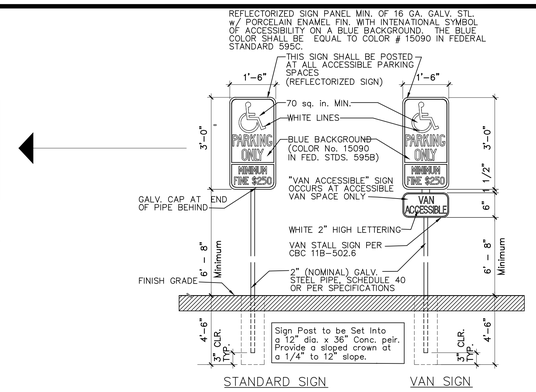
N.T.S. | 13



PAVING JOINTS

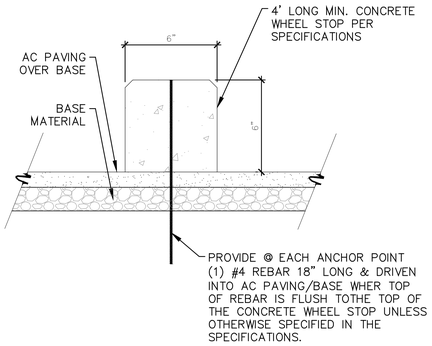
1 1/2" = 1'-0" | 9





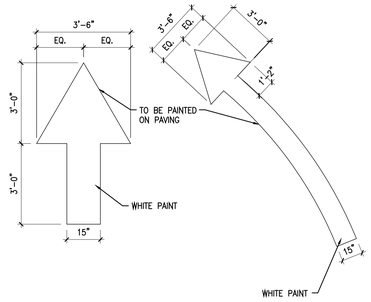
PARKING SIGN

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



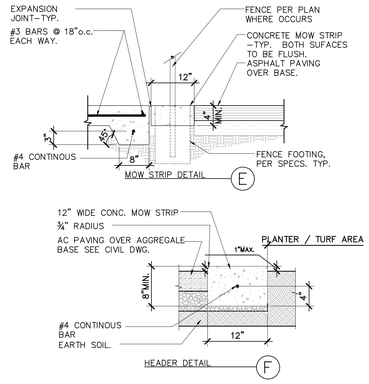
CONCRETE WHEEL STOP

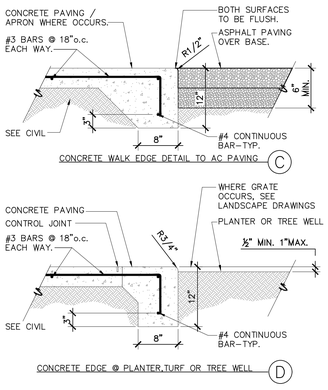
3" = 1'-0" | 14

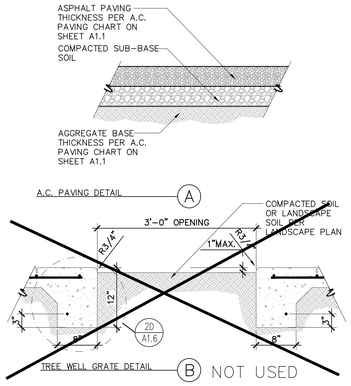


DIRECTIONAL SIGNAGE - ARROW

3"=1'-0" | 10





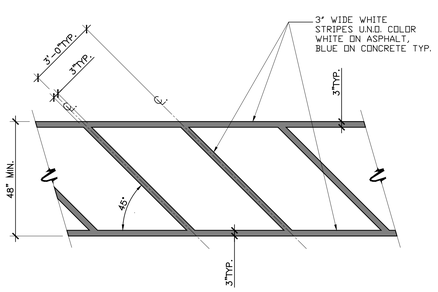


TYPICAL CONCRETE WALK EDGE

1"=1'-0" | 2

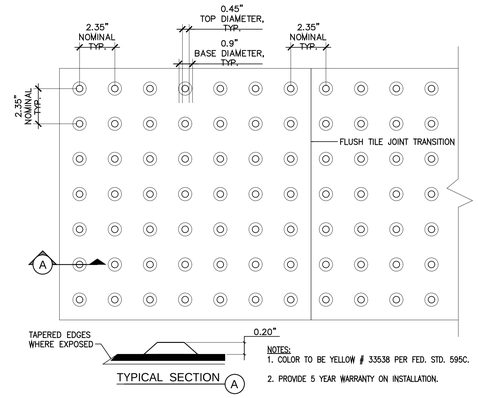
NOT USED

3/8" = 1'-0" | 15



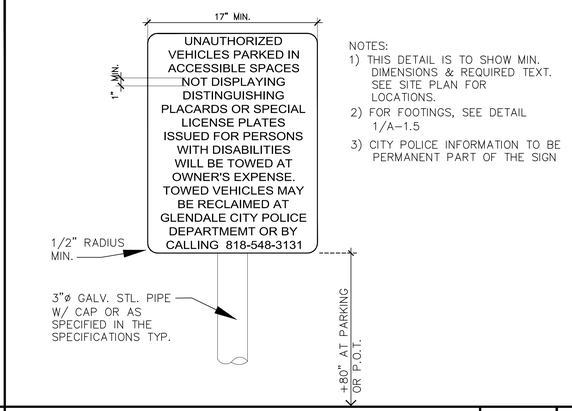
PEDESTRIAN WALKWAY

3/8" = 1'-0" | 11



TRUNCATED DOME TYPICAL DETAIL

NO SCALE: | 5

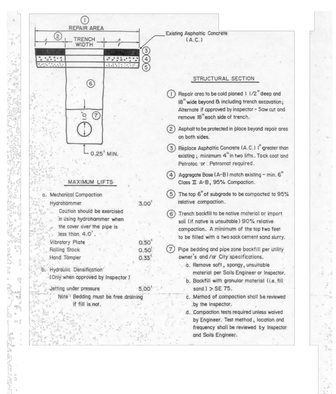


TOW-AWAY SIGNAGE

NO SCALE: | 3

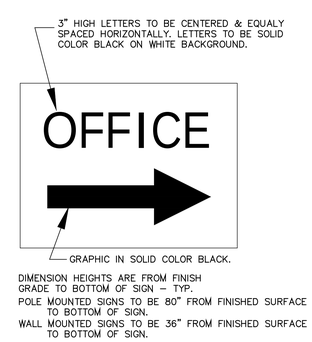
NOT USED

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



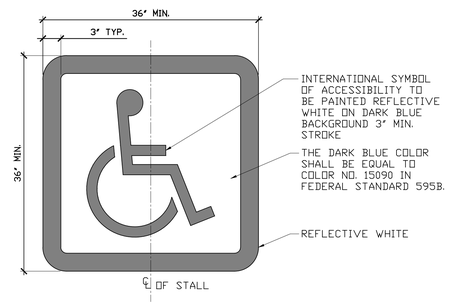
TYP. UTILITY TRENCH DETAIL

NO SCALE: | 12



OFFICE DIRECTIONAL SIGN

NO SCALE: | 6



INTERNATIONAL SYMBOL OF ACCESSIILITY

NO SCALE: | 4

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
SUITE 200
UPLAND, CA. 91786
(909) 985 - 6539 OFFICE
(909) 985 - 5064 FAX

REVISIONS

NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

SITE DETAILS

JOB NUMBER 2019-026
DRAWN BY ALAN C.
DATE 10.01.2021
DSA APP# 00-000000

A-1.5

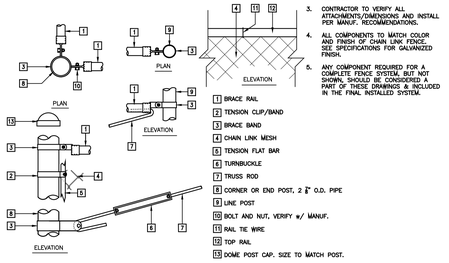
BID SET 10/01/2021

NOT USED | N.T.S. | 13

NOT USED | 3" = 1'-0" | 14

NOT USED | 3/8" = 1'-0" | 15

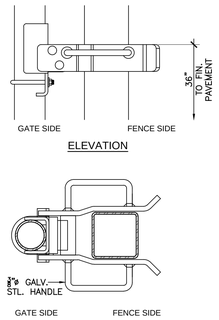
NOT USED | 1 1/2" = 1'-0" | 16



NOTES:
1. SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW.
2. SUBMIT SAMPLES OF ALL COMPONENTS AND MATERIAL w/ SHOP DRAWINGS TO ARCHITECT FOR REVIEW.
3. CONTRACTOR TO VERIFY ALL ATTACHMENTS/DIMENSIONS AND INSTALL PER MANUF. RECOMMENDATIONS.
4. ALL COMPONENTS TO MATCH COLOR AND FINISH OF CHAIN LINK FENCE. SEE SPECIFICATIONS FOR GALVANIZED FINISH.
5. ANY COMPONENT REQUIRED FOR A COMPLETE FENCE SYSTEM, BUT NOT SHOWN, SHOULD BE CONSIDERED A PART OF THESE DRAWINGS & INCLUDED IN THE FINAL INSTALLED SYSTEM.

1. BRACE RAIL
2. TENSION CLIP/BAND
3. BRACE BAND
4. CHAIN LINK MESH
5. TENSION FLAT BAR
6. TURNBUCKLE
7. TRUSS ROD
8. CORNER OR END POST, 2 ⅜" O.D. PIPE
9. LINE POST
10. BOLT AND NUT, VERIFY w/ MANUF.
11. RAIL TIE WIRE
12. TOP RAIL
13. DOME POST CAP. SIZE TO MATCH POST.

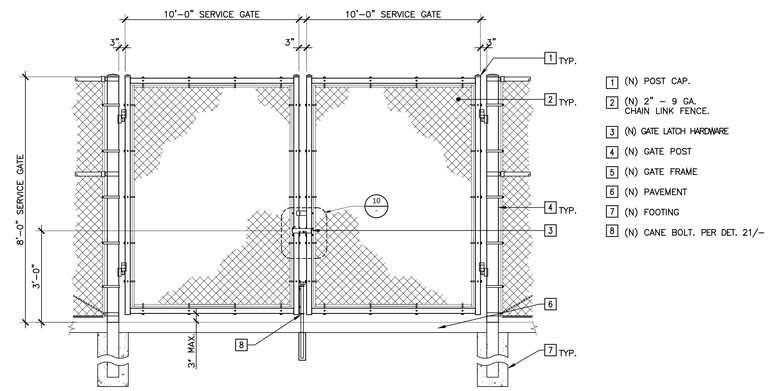
CHAIN LINK COMPONENTS & CONNECTIONS | 1" = 1'-0" | 9



GATE LATCH | 3"=1'-0" | 10

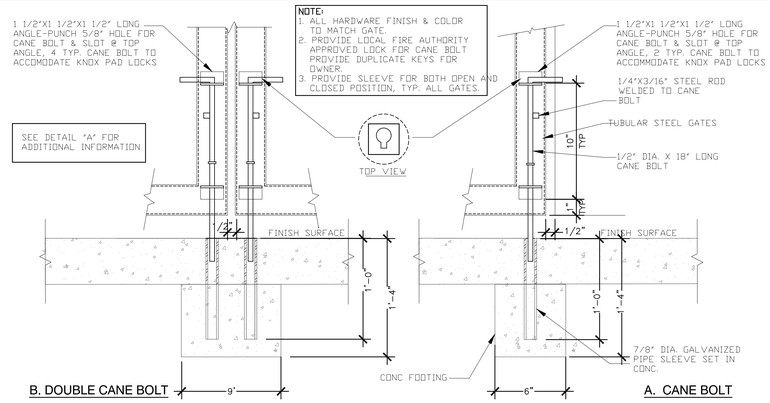
NOT USED | 3/8" = 1'-0" | 11

NOT USED | NO SCALE: | 12



1. (N) POST CAP.
2. (N) 2" – 9 GA. CHAIN LINK FENCE.
3. (N) GATE LATCH HARDWARE
4. (N) GATE POST
5. (N) GATE FRAME
6. (N) PAVEMENT
7. (N) FOOTING
8. (N) CANE BOLT. PER DET. 21/–

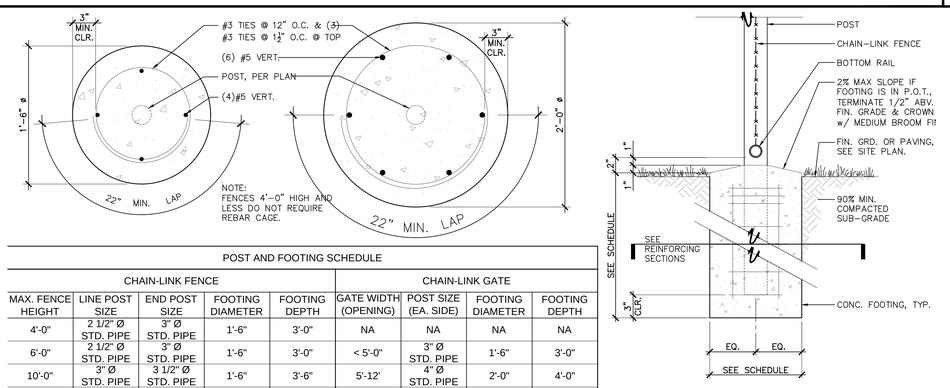
CHAIN LINK SERVICE GATE | 1/2" = 1'-0" | 1



B. DOUBLE CANE BOLT

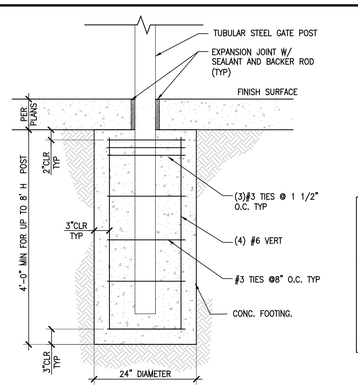
A. CANE BOLT

LEVER HARDWARE | 3"=1'-0" | 2



POST AND FOOTING SCHEDULE								
CHAIN-LINK FENCE					CHAIN-LINK GATE			
MAX. FENCE HEIGHT	LINE POST SIZE	END POST SIZE	FOOTING DIAMETER	FOOTING DEPTH	GATE WIDTH (OPENING)	POST SIZE (EA. SIDE)	FOOTING DIAMETER	FOOTING DEPTH
4'-0"	2 1/2" Ø STD. PIPE	3" Ø STD. PIPE	1'-6"	3'-0"	NA	NA	NA	NA
6'-0"	2 1/2" Ø STD. PIPE	3" Ø STD. PIPE	1'-6"	3'-0"	< 5'-0"	3" Ø STD. PIPE	1'-6"	3'-0"
10'-0"	3" Ø STD. PIPE	3 1/2" Ø STD. PIPE	1'-6"	3'-6"	5'-12'	4" Ø STD. PIPE	2'-0"	4'-0"

POST FOOTING | 1 1/2" = 1'-0" | 3

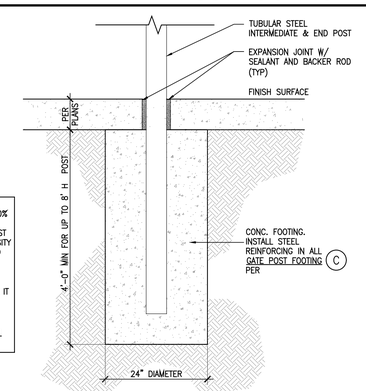


A GATE POST FOOTING @ CONC PAVEMENT

NOTE:
SUB GRADE SHOULD BE COMPACTED TO A MIN. OF 90% RELATIVE COMPACTION FOR A MINIMUM DEPTH OF 12 INCHES. BACKFILL SHOULD BE COMPACTED TO AT LEAST 90% RELATIVE COMPACTION BASED ON THE MAX. DENSITY DEFINED BY ASTM D1557. FOOTINGS TO BE EMBEDDED AT LEAST 24 INCHES BELOW THE LOWEST ADJACENT FINISH GRADE (SEE GEOTECH REPORT)

GATE POST MAY BE OFFSET IN CONC FOOTING WHERE IT IS ADJACENT TO A WALL, MIN 4" CLR FROM FACE OF POST TO FACE CONC FOOTING, SEE DET D.

FOR FENCE/GATE POST ON CONC BASE, SEE DETAIL 1 AND 1/A1.6 FOR ADDITIONAL REINFORCING



B LINE POST FOOTING @ CONC PAVEMENT

CHAIN LINK COMPONENTS & CONNECTIONS | 1" = 1'-0" | 4

REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

SITE DETAILS

JOB NUMBER: 2019-026
DRAWN BY: ALAN C.
DATE: 10.01.2021
DSA APP'V: 00-000000

A-1.6

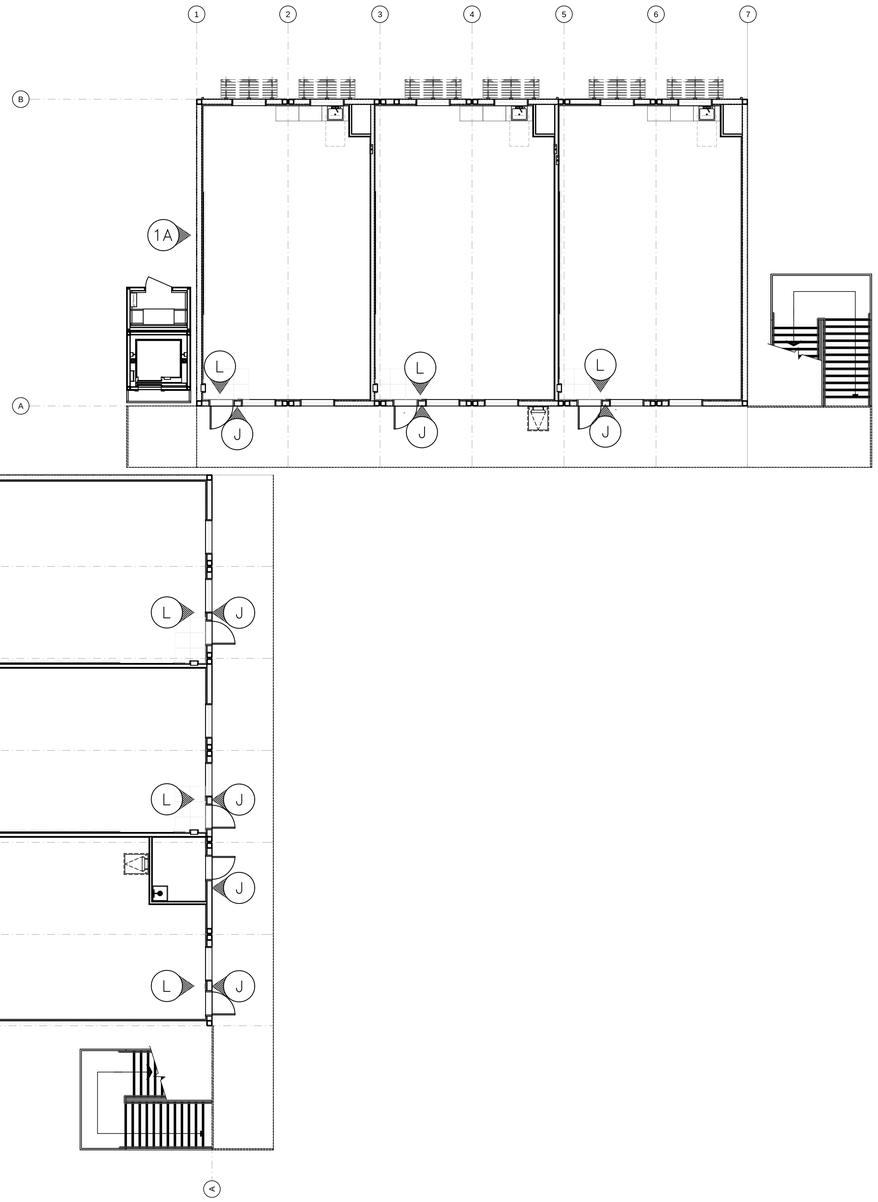
BID SET 10/01/2021

BUILDING/DOOR SIGNAGE

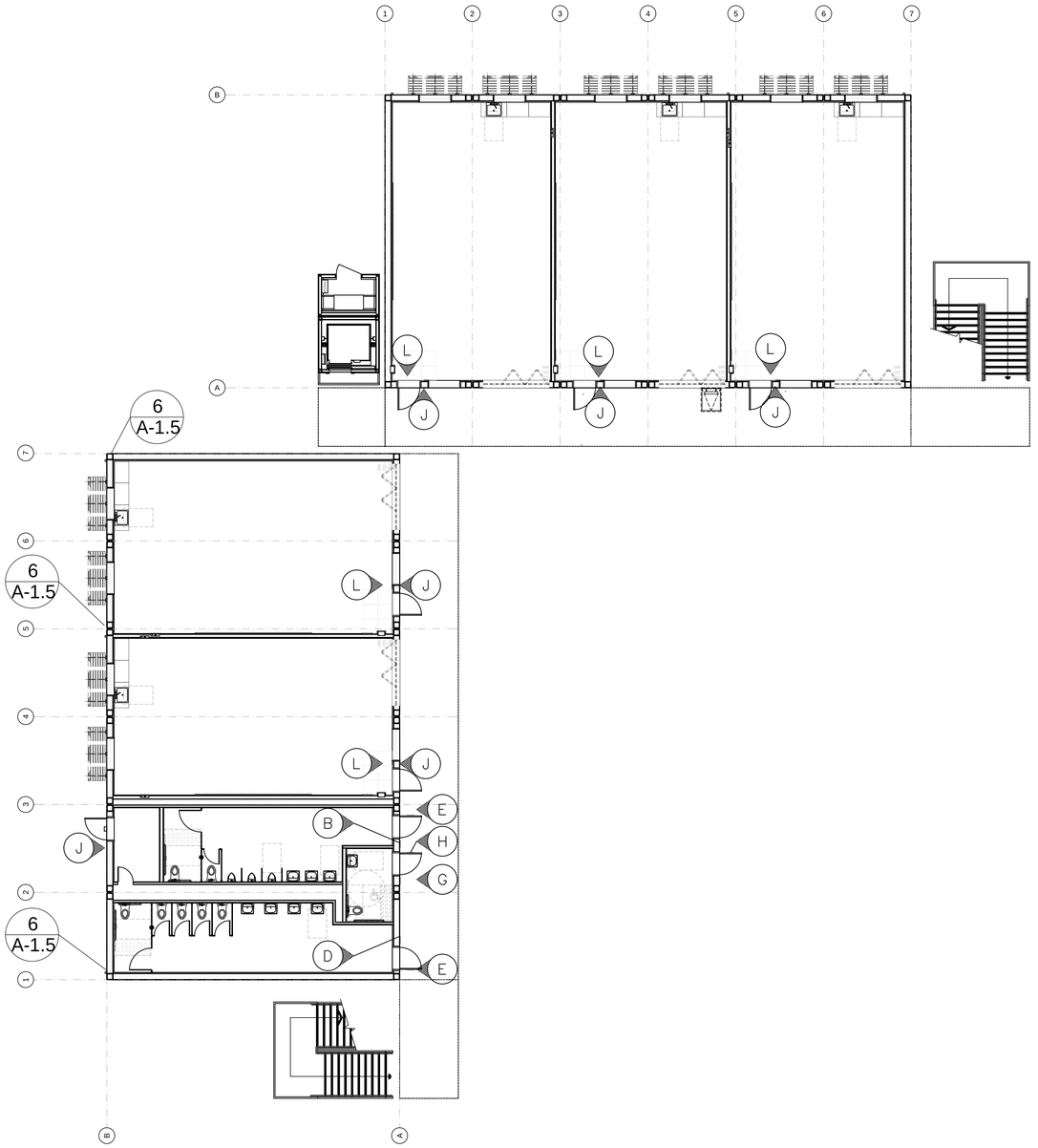
NOTE: SEE SHEET T-1 SIGNAGE & NOTES FOR TYPICAL DOOR SIGNS & DETAILS.

1. BUILDING SIGNAGE: 12" HIGH CAST ALUMINUM INDIVIDUAL LETTERS STATING BUILDING A (1A) AND BUILDING B (1B) PAINTED MIMIMUM 2-COATS, WITH SEMI GLOSS FINISH. COLOR AS SELECTED BY DISTRICT PER MANUFACTURE SELECTION

SEE T-1 SHEET FOR DOOR SIGNAGE LISTING/GRAPHICS TYPICAL



SECOND FLOOR SIGNAGE PLAN | 1/8" = 1'-0" | 2



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

REVISIONS

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NEW 2 STORY BUILDING
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2015 E. GLENOAKS BLVD.
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

FIRST AND SECOND
FLOOR SIGNAGE PLAN
2 STORY MODULAR CLASSROOM

JOB NUMBER 2019-026
DRAWN BY A.C.T.
DATE 10.01.2021
DSA APP# 00-000000

A-1.7

BID SET 10/01/2021

SYMBOLS

	SWITCHES & CONTROLS		POWER		LIGHTING/CEILING
$	SWITCH, SINGLE POLE +48" ✖		SERVICE DISCONNECT, FUSED OR NON FUSED PER DRAWING		LIGHT, WALL MOUNTED, HEIGHT PER DRAWING, DETAILS PER FIXTURE SCHEDULE,
$DH	SWITCH, DIMMER, SIZE PER LOAD OR SPECIFICATION +48" ✖		SERVICE DISCONNECT, MAGNETIC STARTER		LIGHT, WALL MOUNTED, HEIGHT PER DRAWING, DETAILS PER FIXTURE SCHEDULE, EMERGENCY LIGHT IF FILLED CENTER
$DO	SWITCH, DIMMER 0-10V +48" ✖	VFD	SERVICE DISCONNECT, VFD		LIGHT, CEILING MOUNTED, DETAILS PER FIXTURE SCHEDULE
$3	SWITCH, 3 WAY, SINGLE POLE +48" ✖		OUTLET, SINGLE, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, CEILING MOUNTED, DETAILS PER FIXTURE SCHEDULE EMERGENCY LIGHT IF FILLED CENTER
$4	SWITCH, 4 WAY +48" ✖		OUTLET, DUPLEX, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, CEILING MOUNTED, PENDANT, DETAILS PER FIXTURE SCHEDULE
$K	SWITCH, KEY +48" ✖		OUTLET, HALF HOT, HALF SWITCHED, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, CEILING MOUNTED, PENDANT, DETAILS PER FIXTURE SCHEDULE EMERGENCY LIGHT IF FILLED CENTER
$P	SWITCH, PILOT LIGHT, SINGLE POLE +48" ✖		OUTLET, DOUBLE DUPLEX, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		FLUSH MOUNTED DOWN LIGHT, DETAILS PER FIXTURE SCHEDULE
$T	SWITCH, TIMER, 2 HR. NO HOLD MANUEL TYPE UNLESS NOTED OTHERWISE +48" ✖		OUTLET, DOUBLE DUPLEX, HALF HOT, HALF SWITCHED, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		FLUSH MOUNTED WALL WASH/ADJUSTABLE, DETAILS PER FIXTURE SCHEDULE
V	SWITCH, VACANCY DETECTOR +48" ✖		OUTLET, SINGLE, 240V SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		IN-GRADE RECESSED UP-LIGHT, DETAILS PER FIXTURE SCHEDULE
W11	OCCUPANCY SENSOR SINGLE CIRCUIT WALL SWITCH +48" ✖		OUTLET, SINGLE, 120/240V SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		FLUSH MOUNTED DOWN LIGHT, SQUARE CAN, DETAILS PER FIXTURE SCHEDULE
W12	OCCUPANCY SENSOR DUAL CIRCUIT WALL SWITCH +48" ✖		OUTLET, SINGLE, 3 PHASE SIZE AND TYPE PER CIRCUIT REQUIREMENTS OR SPECIFICATION		FLUSH MOUNTED WALL WASH/ADJUSTABLE, SQUARE CAN, DETAILS PER FIXTURE SCHEDULE
WDH	OCCUPANCY SENSOR SINGLE CIRCUIT DIMMER 120V WALL SWITCH - LIKE LUTRON +48" ✖		OUTLET, DUPLEX, 120V, GFCI +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, xxxxxx, DETAILS PER FIXTURE SCHEDULE
WDL	OCCUPANCY SENSOR SINGLE CIRCUIT DIMMER 0-10V WALL SWITCH - LIKE LUTRON +48" ✖		OUTLET, DOUBLE DUPLEX, 120V, GFCI +18" ✖ SIZE AND TYPE PER CIRCUIT REQUIREMENTS OR SPECIFICATIOIN		LIGHT, xxxxxx, DETAILS PER FIXTURE SCHEDULE
U	CEILING MOUNTED MOTION SENSOR, ULTRA SOUND		OUTLET, DUPLEX, 120V, FLOOR MOUNT SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, xxxxxx, DETAILS PER FIXTURE SCHEDULE
I	CEILING MOUNTED MOTION SENSOR, INFRARED		OUTLET, DOUBLE DUPLEX, 120V, FLOOR MOUNT SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, xxxxxx, DETAILS PER FIXTURE SCHEDULE
U/I	CEILING MOUNTED MOTION SENSOR, COMBINATION ULTRA SOUND / INFRARED		OUTLET, PEDOC, DUPLEX, 120V, GFCI ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		VANITY WALL LIGHT, DETAILS PER FIXTURE SCHEDULE
R	CEILING MOUNTED RELAY / POWER PACK FOR LOW VOLTAGE MOTION SENSORS, SIZE PER CIRCUIT AND SENSOR REQUIREMENTS		OUTLET, PEDOC, DOUBLE DUPLEX, 120V, GFCI ✖ SIZE AND TYPE PER CIRCUIT REQUIREMENTS OR SPECIFICATION		TRACK LIGHT, DETAILS PER FIXTURE SCHEDULE
SP	CEILING MOUNTED RELAY SLAVE PACK FOR LOW VOLTAGE MOTION SENSOR, SIZE PER CIRCUIT AND SENSOR REQUIREMENTS		OUTLET, PEDOC, SINGLE, 120/240V, GFCI ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS	XX	COVE LIGHT, DETAILS PER FIXTURE SCHEDULE
T	THERMOSTAT, +48" ✖		OUTLET, SINGLE/2-PORT USB COMBO, 120V ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, POLE-ARM, DETAILS PER FIXTURE SCHEDULE
T	TIME CLOCK, POLES AND VOLTAGE AS NEEDED OR SPECIFIED		OUTLET, 4-PORT USB ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, POLE-CENTER, DETAILS PER FIXTURE SCHEDULE
P	EXTERIOR=PHOTO CELL, SIZE AND VOLTAGE PER CIRCUIT OR AS SPECIFIED INTERIOR=0-10V PHOTO SENSOR RE. DAYLIGHT CONTROLLER		OUTLET, DUPLEX EM CIRCUIT, 120V +18" ✖ SIZE PER CIRCUIT AND LOCATION REQUIREMENTS		LIGHT, BOLLARD SQUARE, DETAILS PER FIXTURE SCHEDULE
E	EM LIGHTING INVERTER RELAY SWITCH	J	JUNCTION BOX		LIGHT, BOLLARD ROUND, DETAILS PER FIXTURE SCHEDULE
					LANDSCAPE UP OR DOWN LIGHT, DETAILS PER FIXTURE SCHEDULE
			COMMUNICATIONS/CONTROLS		EXIT SIGN, DARK SPOT INDICATES DIRECTION THE LIGHTED FACE IS TO BE VISIBLE FROM, ARROWS INDICATE DIRECTION OF ARROWS ON THE SIGN FACE
	NOTES & MISC.	T	THERMOSTAT, +48" ✖		EXIT SIGN, DARK SPOTS INDICATE DIRECTION THE LIGHTED FACES ARE TO BE VISIBLE FROM, ARROWS INDICATE DIRECTION OF ARROWS ON THE SIGN FACE
?	INDICATES PLAN KEYED NOTE	H	HUMIDITY SENSOR		COMBINATION EXIT SIGN, EMERGENCY LIGHT WITH BATTERY BACK UP
?	INDICATES PLAN KEYED NOTE	S	SPEAKER AND BOX PROVIDED BY OTHERS, BOX PIPED AND INSTALLED BY E. C.		EMERGENCY LIGHT, BATTERY POWERED
?	INDICATES PLAN KEYED NOTE		TELEPHONE OUTLET, +18" ✖		STEP/NICHE LIGHT, DETAILS PER FIXTURE SCHEDULE
?	INDICATES REVISION		COMPUTOR OUTLET, +18" ✖		LIGHT, WALL SMALL UP/DN-LIGHT, HEIGHT PER DRAWING, DETAILS PER FIXTURE SCHEDULE
?	INDICATES FIXTURE TYPE		CABLE OUTLET, +18" ✖		ALL LIGHT FIXTURES ABOVE ARE EMERGENCY LIGHT IF FILLED CENTER
FC 4	INDICATES MECHANICAL FIXTURE TYPE		TELEPHONE OUTLET, FLOOR		
E0.1 1	INDICATES DETAIL		COMPUTOR OUTLET, FLOOR		
A	PANEL, MOUNTING ACCORDING TO PLACEMENT ON PLANS		CABLE OUTLET, FLOOR		
Z	PANEL, CONTROL-LRG, MOUNTING ACCORDING TO PLACEMENT ON PLANS		COMBINATION TELEPHONE & COMPUTER OUTLET, +18" ✖		
1	PANEL, CONTROL-SML, MOUNTING ACCORDING TO PLACEMENT ON PLANS	V	TELEVISION OUTLET, +18" ✖		
	VALVE, ALARM CONTACT OR SOLENOID OPERATOR DEPENDING ON APPLICATION	B	DOOR BELL PUSH BUTTON		
	EYS FITTING. SIZE PER CONDUIT, LOCATE PER N.E.C.	B	FIRE ALARM BELL		
	SMOKE DETECTOR, CEILING OR WALL MOUNTED PER PLANS	T	DOOR BELL TRANSFORMER		WIRE TYPES
SCO	COMBINATION SMOKE DETECTOR AND CO SENSOR	NC	NURSES CALL LIGHT		HOME RUN IN CABLE OR CONDUIT (PER SPECIS AND CODE), CIRCUIT AND CIRCUIT & CONDUCTOR SIZE AS NOTED, CONDUIT PER NEC OR AS NOTED
	EXHAUST FAN	N	NURSES CALL SWITCH WITH PULL CORD		EXISTING WIRING TO REMAIN
	CEILING FAN	E	ELECTRIC DOOR STRIKE RELEASE		EXISTING WIRING TO BE REMOVED
	MOTOR	AP	WIRELESS ACCESS POINT		NEW ABOVE FLOOR WIRING
PS	POWER SUPPLY	IC	INTERCOM		NEW UNDER FLOOR WIRING
PC 1	POWER CENTER	KEY	KEY PAD		STUB UP TO OR DOWN FROM NEXT FLOOR LEVEL
CL	CURRENT LIMITER				STUB DOWN TO OR UP FROM THE NEXT FLOOR LEVEL

✖ STANDARD HEIGHT TO MEET STATE HANDICAP REQUIREMENTS AND PROVISIONS OF THE ADA IS 36" - 48" AFF FOR SWITCHES AND THERMOSTATS, 15" - 48" FOR OUTLETS. HEIGHT SHOWN IN SYMBOL LIST IS PREFERRED HEIGHT TO BE CHANGED ONLY IF PHYSICAL REQUIREMENTS OF THE STRUCTURE OR CASEWORK REQUIRE. CHANGES MUST MEET STANDARDS IF OUTLET OR SWITCH IS FOR GENERAL USAGE. OUTLET TO BE MOUNTED AT HEIGHT SHOWN ON PLAN WHEN SPECIAL PURPOSE.

SYMBOLS | SCALE:NONE

GENERAL

1. ALL WORK IS TO BE PERFORMED PER THE 2019 ISSUE OF THE CALIFORNIA ELECTRICAL CODE AND THE 2019 CALIFORNIA ENERGY CODE AS ACCEPTED BY THE CALIFORNIA STATE FIRE MARSHAL, DSA, AND ALL OTHER APPLICABLE NATIONAL, STATE AND LOCAL CODES AND LAWS PERTAINING TO ELECTRICAL WORK.
2. ALL WORK IN HAZARDOUS LOCATIONS SHALL COMPLY WITH CEC ART. 500 THROUGH 516 AS APPLICABLE.
3. NOTHING IN THESE NOTES SHALL BE CONSTRUED AS CIRCUMVENTING ANY MORE STRINGENT SPECIFICATION OR REQUIREMENT OF THE CONTRACT DOCUMENTS.
4. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BIDDING WORK AND INCLUDE IN HIS BID THE NECESSARY COSTS REQUIRED TO COMPLETE THIS PROJECT ACCORDING TO THE INTENT OF THE DRAWINGS.
5. ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT COORDINATOR OR ARCHITECT PRIOR TO BID IF POSSIBLE.
6. ELECTRICAL WORK UNDER THIS CONTRACT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION COVERED UNDER THE CONTRACT INCLUDING CONTROL CONDUIT AND WIRING AS DOCUMENTED OR INFERRED IN THE MECHANICAL DRAWINGS.
7. ALL MATERIAL AND EQUIPMENT FURNISHED AND OR INSTALLED UNDER THIS CONTRACT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY PROBLEMS DEVELOP DURING THIS WARRANTY PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL DEFECTS OR EQUIPMENT DEFECTS OR FAILURE, THE ELECTRICAL CONTRACTOR SHALL CORRECT THE PROBLEM AND REPAIR OR REPLACE EQUIPMENT OR MATERIAL WITHOUT COST TO THE OWNERS. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL BE NEAT IN APPEARANCE AS WELL AS FUNCTIONAL WHEN COMPLETED.
8. UNLESS NOTED OTHERWISE OR COORDINATED WITH THE GENERAL CONTRACTOR, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION, CUTTING, AND PATCHING RELATING TO ELECTRICAL WORK.
9. STATE HANDICAP REQUIREMENTS ARE TO BE MET PER STANDARDS LISTED IN 'SYMBOL LIST'.
10. CUT SHEETS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT PROVIDED WITHIN CONTRACT SCOPE OF WORK.

MATERIAL AND INSTALLATION

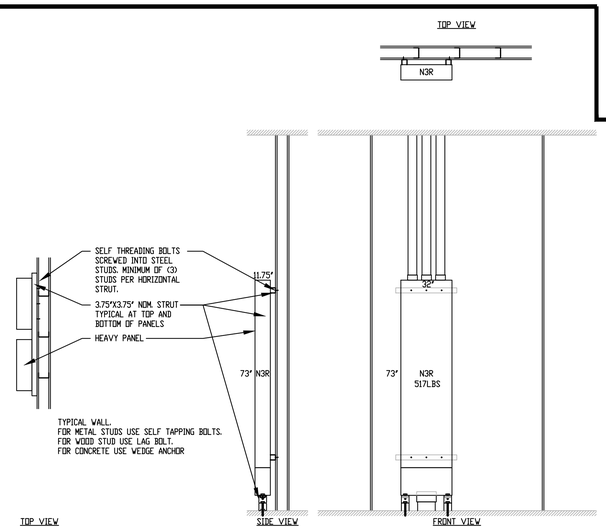
1. ALL ELECTRICAL MATERIALS AND EQUIPMENT ARE TO BE UNDERWRITER'S LABORATORY LISTED OR LISTED BY AN EQUIVALENT NATIONALLY RECOGNIZED TESTING LABORATORY ACCEPTED BY THE CALIFORNIA STATE FIRE MARSHAL AND DSA. ALL MATERIALS SHALL BE APPROVED FOR THE INTENDED PURPOSE AND USED FOR SUCH PURPOSE.
2. ALL 600-VOLT INSULATED WIRE IN CONDUITS SHALL BE COPPER TYPE THHN/THWN-2 UNLESS NOTED OTHERWISE.
3. ALL CONDUCTORS SIZE AWG #12 AND SMALLER SHALL BE SOLID, ALL CONDUCTORS SIZE #10 AND LARGER SHALL BE STRANDED.
4. ALL JUNCTION BOXES SHALL BE MARKED (IN INK) WITH THE PANEL NUMBER, CIRCUIT NUMBERS, AND SYSTEM VOLTAGE CONTAIN WITHIN, ('MAGIC MARKERS' ARE ACCEPTABLE). I.E. 'LA'-1,3,5 277/480V OR 'RA'-2,4,6 120/208V ETC.
5. WHEN CONDUIT MUST CROSS TRAFFIC AREAS, THE CONDUIT SHALL CROSS PERPENDICULAR TO THE NORMAL TRAFFIC PATTERN.
6. ALL BALLASTS ARE TO BE CEC LISTED.
7. ALL OUTDOOR LIGHTING FIXTURES ARE TO BE LISTED FOR WET OR DAMP LOCATION DEPENDING ON TYPE OF EXPOSURE.
8. ALL DEVICES SHALL BE GROUNDED BY MEANS OF A SEPARATE GROUNDING CONDUCTOR AND EITHER A WIRE BOND FROM THE DEVICE STRAP TO THE BOX OR A SELF-GROUNDING SCREW.
9. EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES. (CEC 210.4(B))
10. THE UNGROUNDED AND GROUNDED CONDUCTORS OF EACH MULTIWIRE BRANCH CIRCUIT SHALL BE GROUPED BY WIRE TIES OR SIMILAR MEANS IN AT LEAST ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGINATION. (CEC 210.4(D))
11. ALL NEW OVERCURRENT DEVICES INSTALLED IN EXISTING PANELS/SWITCHBOARDS SHALL MATCH OR EXCEED THE MAKE, MODEL AND INTERRUPTING CAPACITY OF THE EXISTING OVERCURRENT DEVICES.
12. A BONDED COMMON GROUNDED ELECTRODE SHALL BE PROVIDED FOR EACH METAL BUILDING, EXPOSED METAL FRAME, RAMP, STAIR AND THE ELECTRICAL SYSTEM PER DSA IR E-1: GROUNDING OF BUILDINGS FABRICATED OFF-SITE: 2016, 2013, 2010 AND 2007 CEC.

COMPLETION

1. UPON COMPLETION OF WORK, ELECTRICAL CONTRACTOR SHALL INSURE THE INSTALLATION TO BE FREE FROM SHORT CIRCUITS, PHASE GROUNDS AND NEUTRAL GROUNDS.
2. ALL FEEDERS SHALL HAVE INSULATION TESTED PRIOR TO ENERGIZATION.
3. ALL PANELS, TRANSFORMERS, DISTRIBUTION BOARDS, SWITCHES, ETC. SHALL BE LABELED PER SINGLE LINE DIAGRAM USING PLASTIC PLATES WITH 3/8" HIGH WHITE LETTERS ON BLACK BACKGROUNDS. LABEL SHALL INCLUDE ITEM NAME AND VOLTAGE PRESENT. TRANSFORMER LABEL SHALL INCLUDE BOTH PRIMARY AND SECONDARY VOLTAGES. LABEL SHALL BE PERMANENTLY ATTACHED USING AT LEAST (2) ROUND HEAD STAINLESS STEEL MACHINE SCREWS WITH MINIMUM THREAD SIZE 8-32.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO ARCHITECT UPON COMPLETION OF WORK.
5. ELECTRICAL CONTRACTOR SHALL BE AVAILABLE FOR NIGHT INSPECTION AND APPROVAL OF COMPLETED WORK.
6. PRIOR TO FINAL ENERGIZATION, NEUTRAL FEED SHALL BE DISCONNECTED FROM THE PANEL AND BUS WITH ALL LOAD NEUTRALS CONNECTED SHALL BE TESTED IN THE PRESENCE OF THE ELECTRICAL ENGINEER FOR FAULTS TO GROUND.
7. ALL CIRCUIT BREAKER, NEUTRAL AND GROUND LUG CONNECTIONS SHALL BE TORQUED PER MANUFACTURER'S SPECIFICATIONS IN THE PRESENCE OF THE ELECTRICAL INSPECTOR.
8. THE ISSUANCE OF A PERMIT SHALL NOT PREVENT FROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

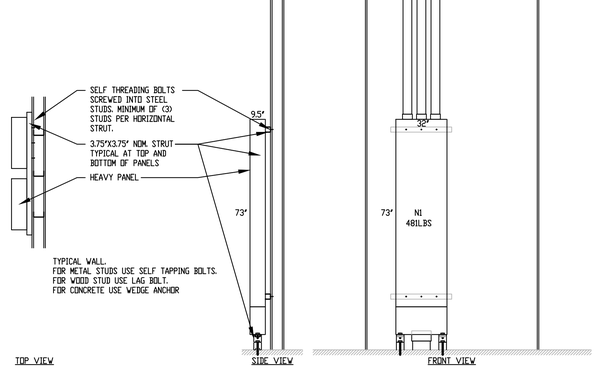
NOTES | SCALE:NONE

ADDITIONAL NOTES | SCALE:NONE



TYPICAL HEAVY N3R PANEL MOUNTING - SURFACE & FLOOR

DBP-1 PANEL MOUNTING SURFACE & FLOOR DETAIL | SCALE:NONE



TYPICAL HEAVY PANEL MOUNTING - SURFACE & FLOOR

DBP-2 PANEL MOUNTING SURFACE & FLOOR DETAIL | SCALE:NONE

SHEET NO	SHEET TITLE
E-0.0	ELECTRICAL SYMBOLS & NOTES
E-0.1	SINGLE LINE DIAGRAM AND LOAD CALCULATIONS
ED-0.1	DEMO SINGLE LINE DIAGRAM
E-0.2	PANEL SCHEDULES
E-0.3	INSTALLATION DETAILS
E-1.0	OVERALL ELECTRICAL SITE PLAN
E-2.1	ELECTRICAL ENLARGED - FIRST FLOOR PLAN
E-2.2	ELECTRICAL ENLARGED - SECOND FLOOR PLAN
E-4.0	OVERALL COMMUNICATION SITE PLAN
E-4.1	COMMUNICATION ENLARGED - FIRST FLOOR PLAN
E-4.2	COMMUNICATION ENLARGED - SECOND FLOOR PLAN
FA-0.0	FIRE ALARM SYMBOLS & NOTES
FA-0.1	FIRE ALARM RISER DIAGRAM & CALCULATIONS
FA-1.0	OVERALL FIRE ALARM SITE PLAN
FA-2.1	FIRE ALARM - FIRST FLOOR PLAN
FA-2.2	FIRE ALARM - SECOND FLOOR PLAN

SHEET INDEX | SCALE:NONE

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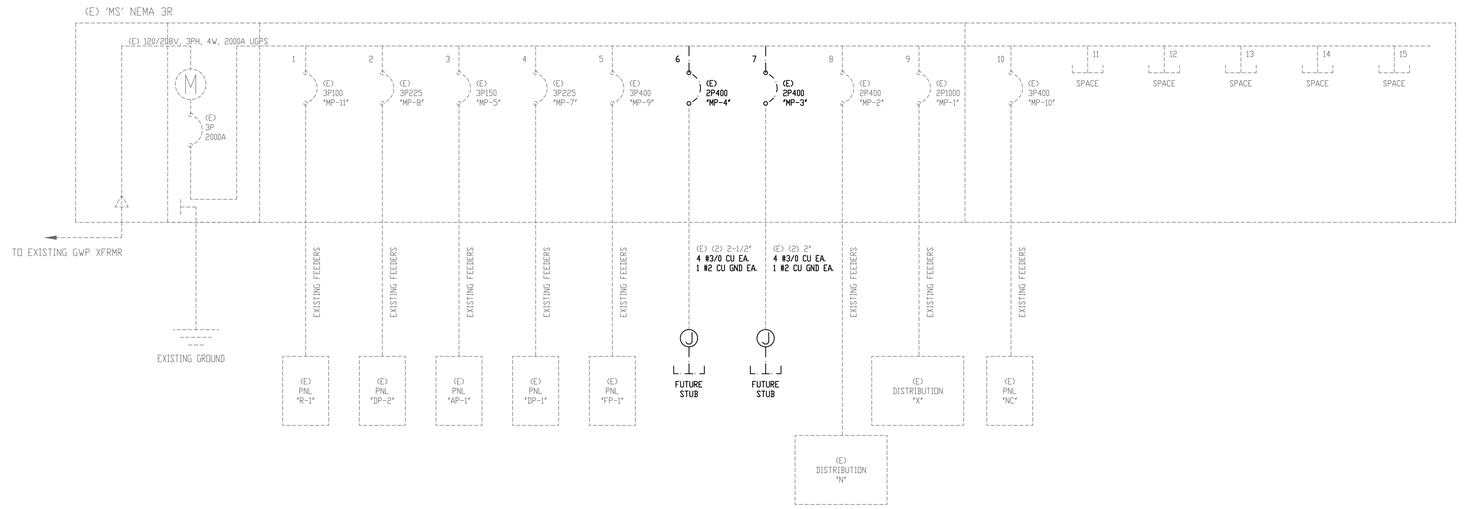
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

SYMBOLS & NOTES

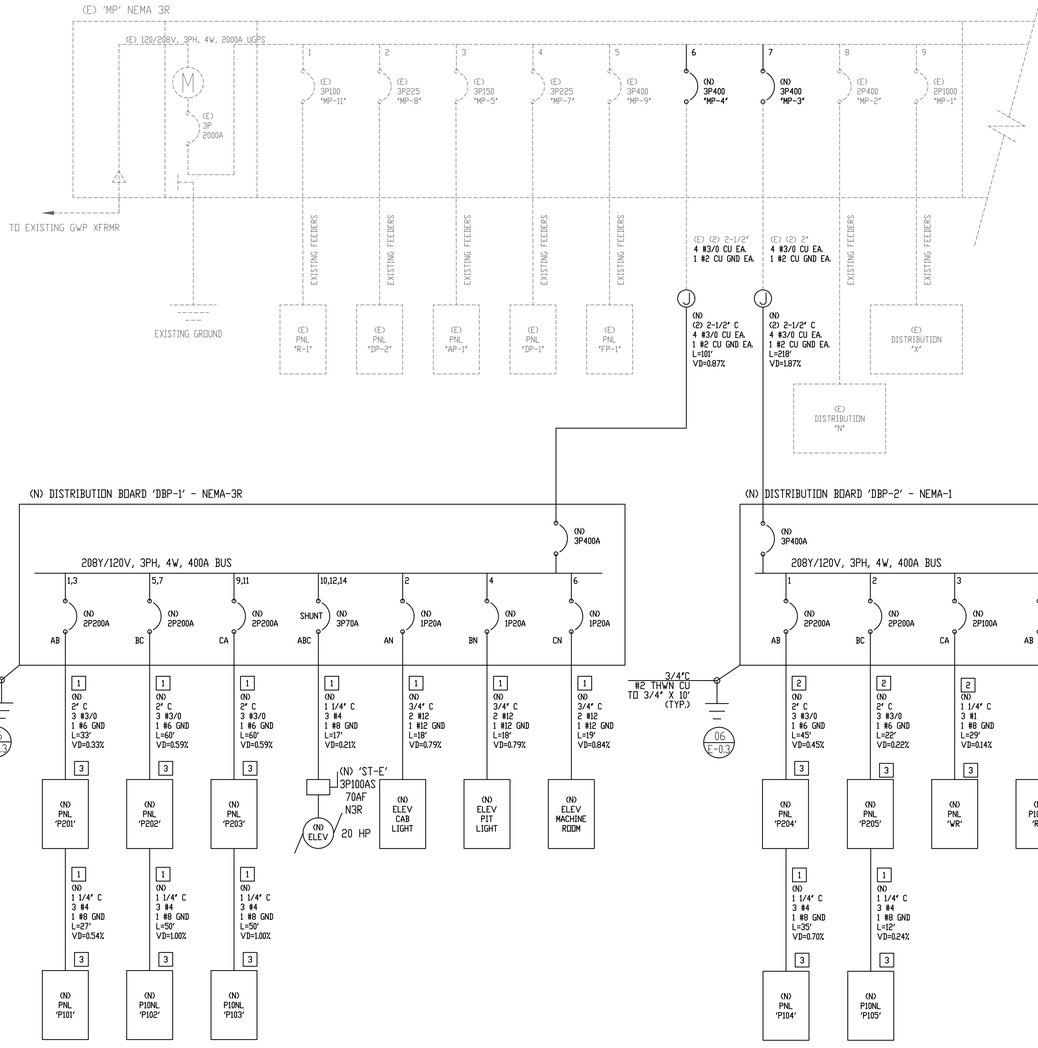
JOB NUMBER	2019-026
DRAWN BY	J.H.
DATE	01.08.2021
DSA APP#	00-000000

E-0.0

BID SET 10/01/2021



EXISTING SINGLE LINE DIAGRAM | SCALE:NONE | 1



CONTINUATION OF SINGLE LINE DIAGRAM ON SHEET E-0.1 DETAIL #1

SINGLE LINE KEYED NOTES (NOT ALL MAY APPLY)

1. CONDUCTOR AND CONDUIT ROUTE FROM NEW DISTRIBUTION BOARD 'DBP-1' TO MODULAR BUILDING. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.
2. CONDUCTOR AND CONDUIT ROUTE FROM NEW DISTRIBUTION BOARD 'DBP-2' TO MODULAR BUILDING. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.
3. PANEL IS FURNISHED AND INSTALLED BY BUILDING MANUFACTURER.

SINGLE LINE DIAGRAM KEYNOTES | SCALE:NONE | 3

NEW SINGLE LINE DIAGRAM | SCALE:NONE | 2

VOLTAGE DROP CALCULATIONS

FORMULA IS

V=AxLxXxZ/C.M. Z=1+y(T-75)

WHERE

V=volts dropped
A=current of load in amps
L=length of run one way only
C.M.=size of wire in circular mils.
T=operating temp of wire in Celsius

y=.00323 for copper wire
.00330 for aluminum wire
X=21.6 for 1 PH copper wire
35.4 for 1 PH aluminum wire
18.7 for 3 PH copper wire
30.7 for 3 PH aluminum wire

PANEL 'P101'	A	80.0
AT 80% CAP	L	27
	X	21.6
	T	75
	y	0.00323
	C.M.	41740
	V	1.1
WIRE SIZE BELOW	SYS. V	208
4	% DROP	0.54%

PANEL 'P102'	A	80.0
AT 80% CAP	L	50
	X	21.6
	T	75
	y	0.00323
	C.M.	41740
	V	2.1
WIRE SIZE BELOW	SYS. V	208
4	% DROP	1.00%

PANEL 'P103'	A	80.0
AT 80% CAP	L	50
	X	21.6
	T	75
	y	0.00323
	C.M.	41740
	V	2.1
WIRE SIZE BELOW	SYS. V	208
4	% DROP	1.00%

PANEL 'P104'	A	80.0
AT 80% CAP	L	35
	X	21.6
	T	75
	y	0.00323
	C.M.	41740
	V	1.4
WIRE SIZE BELOW	SYS. V	208
4	% DROP	0.70%

PANEL 'P105'	A	80.0
AT 80% CAP	L	12
	X	21.6
	T	75
	y	0.00323
	C.M.	41740
	V	0.5
WIRE SIZE BELOW	SYS. V	208
4	% DROP	0.24%

PANEL 'P201'	A	160.0
AT 80% CAP	L	33
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	0.7
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.33%

PANEL 'P202'	A	160
AT 80% CAP	L	60
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	1.2
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.59%

PANEL 'P203'	A	160
AT 80% CAP	L	60
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	1.2
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.59%

PANEL 'P204'	A	160.0
AT 80% CAP	L	45
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	0.9
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.45%

PANEL 'P205'	A	160.0
AT 80% CAP	L	22
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	0.5
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.22%

PANEL 'WR'	A	80.0
AT 80% CAP	L	29
	X	21.6
	T	75
	y	0.00323
	C.M.	167800
	V	0.3
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.14%

PANEL 'RR'	A	80.0
AT 80% CAP	L	11
	X	21.6
	T	75
	y	0.00323
	C.M.	83690
	V	0.2
WIRE SIZE BELOW	SYS. V	208
1	% DROP	0.11%

FEEDERS FOR	A	56.0
ELEVATOR	L	17
AT 80% CAP	X	18.7
	T	75
	y	0.00323
	C.M.	41740
	V	0.4
WIRE SIZE BELOW	SYS. V	208
4	% DROP	0.21%

FEEDERS FOR	A	16.0
ELEV CAB LIGHT	L	18
AT 80% CAP	X	21.6
	T	75
	y	0.00323
	C.M.	6530
	V	1.0
WIRE SIZE BELOW	SYS. V	120
12	% DROP	0.79%

FEEDER FOR	A	16.0
ELEVATOR PIT LIGHT	L	18
AT 80% CAP	X	21.6
	T	75
	y	0.00323
	C.M.	6530
	V	1.0
WIRE SIZE BELOW	SYS. V	120
12	% DROP	0.79%

FEEDER FOR	A	16.0
ELEVATOR	L	19
MACHINE ROOM	X	21.6
AT 80% CAP	T	75
	y	0.00323
	C.M.	6530
	V	1.0
WIRE SIZE BELOW	SYS. V	120
12	% DROP	0.84%

FEEDERS FOR	A	160.0
DBP-1'	L	101
AT 80% CAP	X	18.7
	T	75
	y	0.00323
	C.M.	167800
	V	1.8
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	0.87%

FEEDERS FOR	A	160.0
DBP-2'	L	218
AT 80% CAP	X	18.7
	T	75
	y	0.00323
	C.M.	167800
	V	3.9
WIRE SIZE BELOW	SYS. V	208
3/0	% DROP	1.87%

VOLTAGE DROP CALCULATIONS | SCALE:NONE | 4

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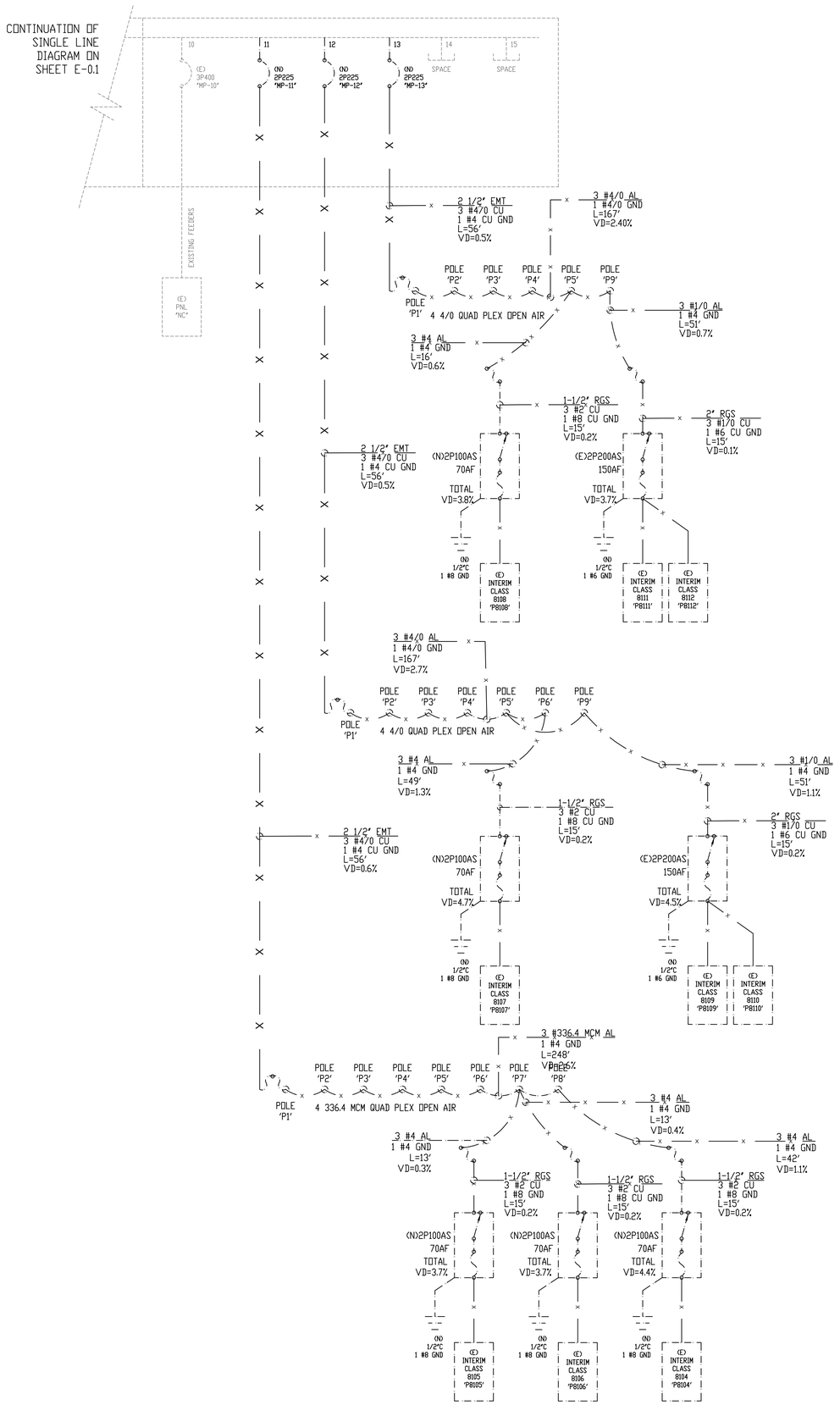
SINGLE LINE DIAGRAM
AND LOAD CALCULATIONS

JOB NUMBER: 2019-026	DRAWN BY: J.H.	DATE: 01.08.2021	DSA APP# 00-000000

E-0.1

BID SET 10/01/2021

CONTINUATION OF SINGLE LINE DIAGRAM ON SHEET E-0.1



DEMO SINGLE LINE DIAGRAM | SCALE:NONE

REVISIONS

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

DEMO
SINGLE LINE DIAGRAM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

ED-0.1

BID SET 10/01/2021

PANELBOARD: MP (EXISTING)

BUS AMPS: 2000A
MAIN SIZE/TYPE: 2000A MCB
VOLTS/PHASE: 208Y/120V, 3PH, 4W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES:
MOUNTING: SURFACE
LOCATION:

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	C	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	C	DESCRIPTION	CKT NO.
1		6,000					2	400			13,867			(E) DISTRIBUTION BOARD 'N'	2
3	(E) PANEL 'R-1'		6,000			100	3					13,867			4
5				6,000									60,000		6
7		13,500					3	1000			60,000			(E) DISTRIBUTION BOARD 'X'	8
9	(E) PANEL 'DP-2'		13,500			225	3					60,000			10
11				13,500									24,000		12
13		9,000					3	400			24,000			(E) PANEL 'NC'	14
15	(E) PANEL 'AP-1'		9,000			150	3					24,000			16
17				9,000											18
19		13,500													20
21	(E) PANEL 'DP-1'		13,500			225	3								22
23				13,500											24
25		24,000													26
27	(E) PANEL 'FP-1'		24,000			400	3								28
29				24,000											30
31	(NEW) DISTRIBUTION BOARD	31,538													32
33	DBP-1'		30,518			400	3								34
35				31,538											36
37	(NEW) DISTRIBUTION BOARD	33,000													38
39	DBP-2'		12,418			400	3								40
41				20,400											42
	SUBTOTAL	130,538	108,936	117,938							97,867	97,867	84,000	SUBTOTAL	

TOTAL PHASE A - VA	228,404	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	1903	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	206,802	HEATING		0	SIGN/DISPLAY		1.25
AMPS	1723	LIGHTING	7,018	1.25	KITCHEN		1.00
TOTAL PHASE C - VA	201,938	RECEPTACLES	49,593	1.0/.5	EXISTING	501,733	1.00
AMPS	1683	MOTORS	97,820	1.00	LARGE MOTOR		1.25
TOTAL PNLBD - VA	637,144	SUPP HEAT		1.00	SHOW WINDOW		1.25
AMPS	1769	MISC EQUIP	4,980	1.00	LTG TRACK		1.00

TOTAL DEMAND
643,102 VA
1785 A

PANELBOARD NOTES

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

EXISTING SERVICE 'MP' SCALE:NONE

PANELBOARD: DBP-1 (NEW)

BUS AMPS: 400A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120V, 3PH, 4W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: REF 1-LINE
SERVES: MODULAR BUILDING
MOUNTING: SURFACE
LOCATION:

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	C	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	C	DESCRIPTION	CKT NO.
1	PNLBD P201/SUB P101	11,800				200	2	1	20		1,920			ELEVATOR CAB LIGHT	2
3	CLASSROOMS 101 & 201		10,360					1	20			900		ELEVATOR PIT LIGHT	4
5	PNLBD P202/SUB P102			11,800		200	2	1	20				1,920	ELEVATOR MACHINE ROOM	6
7	CLASSROOMS 102 & 202	10,360						[illegible]						[illegible]	8
9	PNLBD P203/SUB P103		11,800			200	2	[illegible]			7,458			[illegible]	10
11	CLASSROOMS 103 & 203			10,360				3	70			7,458	7,458	ELEVATOR 20HP	12 ST
13							1				7,458				14
15							1	1							16
17							1	1							18
19							1	1							20
21							1	1							22
23							1	1							24
25							1	1							26
27							1	1							28
29							1	1							30
31							1	1							32
33							1	1							34
35							1	1							36
37							1	1							38
39							1	1							40
41							1	1							42
	SUBTOTAL	22,160	22,160	22,160							9,378	8,358	9,378	SUBTOTAL	

TOTAL PHASE A - VA	31,538	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	263	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	30,518	HEATING		0	SIGN/DISPLAY		1.25
AMPS	254	LIGHTING	3,300	1.25	KITCHEN		1.00
TOTAL PHASE C - VA	31,538	RECEPTACLES	36,593	1.0/.5	EXISTING		1.00
AMPS	263	MOTORS	53,700	1.00	LARGE MOTOR		1.25
TOTAL PNLBD - VA	93,593	SUPP HEAT		1.00	SHOW WINDOW		1.25
AMPS	260	MISC EQUIP		1.00	LTG TRACK		1.00

TOTAL DEMAND
81,121 VA
225 A

PANELBOARD NOTES

ST - SHUNT TRIP

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW DISTRIBUTION 'DBP-1' SCALE:NONE

PANELBOARD: DBP-2

BUS AMPS: 400A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120V, 3PH, 4W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: REF 1-LINE
SERVES: MODULAR BUILDING
MOUNTING: SURFACE
LOCATION:

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	C	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	C	DESCRIPTION	CKT NO.
1	PNLBD P204/SUB P104	11,800				200	2	2	100		4,100			PNLBD RR	2
3	CLASSROOM 104 & 204		10,360					2	100			2,058		RESTROOMS 106 & 107	4
5	PNLBD P205/SUB P105			11,800		200	2	2	100				8,600	PNLBD WR	6
7	CLASSROOMS 105 & 205	10,360									6,740			WORKROOM 206	8
9							1	1							10
11							1	1							12
13							1	1							14
15							1	1							16
17							1	1							18
19							1	1							20
21							1	1							22
23							1	1							24
25							1	1							26
27							1	1							28
29							1	1							30
31							1	1							32
33							1	1							34
35							1	1							36
37							1	1							38
39							1	1							40
41							1	1							42
	SUBTOTAL	22,160	10,360	11,800							10,840	2,058	8,600	SUBTOTAL	

TOTAL PHASE A - VA	33,000	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	275	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	12,418	HEATING		0	SIGN/DISPLAY		1.25
AMPS	103	LIGHTING	3,718	1.25	KITCHEN		1.00
TOTAL PHASE C - VA	20,400	RECEPTACLES	13,000	1.0/.5	EXISTING		1.00
AMPS	170	MOTORS	44,120	1.00	LARGE MOTOR		1.25
TOTAL PNLBD - VA	65,818	SUPP HEAT		1.00	SHOW WINDOW		1.25
AMPS	183	MISC EQUIP	4,980	1.00	LTG TRACK		1.00

TOTAL DEMAND
65,248 VA
181 A

PANELBOARD NOTES

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW DISTRIBUTION 'DBP-2' SCALE:NONE

PANELBOARD: P101 (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 45A MCB
VOLTS/PHASE: 208Y/120V, 1PH, 3W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES: CLASSROOMS (LOWER TYP.)
MOUNTING: RECESSED
LOCATION: INTERIOR
EQUIPMENT GROUND BUS

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	DESCRIPTION	CKT NO.
1	CLASSROOM LIGHTS	400			20	1	1	20		900		RECEPTACLES	2
3	MONITOR OUTLET		380		20	1	1	20			900	RECEPTACLES	4
5						1	1						6
7						1	1						8
9						1	1						10
11						1	1						12
13						1	1						14
15						1	1						16
17						1	1						18
19						1	1						20
21						1	1						22
23						1	1						24
25						1	1						26
27						1	1						28
29						1	1						30
	SUBTOTAL	400	380							900	900	SUBTOTAL	

TOTAL PHASE A - VA	1,300	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	11	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	1,280	HEATING		0	DISPLAY CASE		1.25
AMPS	11	LIGHTING	400	1.25	KITCHEN		1.00
TOTAL PNLBD - VA	2,580	RECEPTACLES	2,180	1.0/.5	EXISTING		1.00
AMPS	12	MOTORS		1.00	LARGE MOTOR		1.25
		SUPP HEAT		1.00	SHOW WINDOW		1.25
		MISC EQUIP		1.00	LTG TRACK		1.00

TOTAL DEMAND
2,680 VA
13 A

PANELBOARD NOTES

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW PANEL 'P101' SCHEDULE (TYP. P102-P105) SCALE:NONE

PANELBOARD: P201 (NEW)

BUS AMPS: 225A
MAIN SIZE/TYPE: 200A MCB
VOLTS/PHASE: 208Y/120V, 1PH, 3W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES: CLASSROOMS (UPPER TYP.)
MOUNTING: RECESSED
LOCATION: INTERIOR
EQUIPMENT GROUND BUS

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	DESCRIPTION	CKT NO.
1	HVAC UPPER FLOOR	4,160			50	2	2	50		4,160		HVAC LOWER FLOOR	2
3			4,160								4,160		4
5	CLASSROOM LIGHTS	400			20	1	1	20		900		RECEPTACLES	6
7	MONITOR OUTLET		380		20	1	1	20			360	HVAC RECEPTACLES	8
9	RECEPTACLES	900			20	1	1	20				SPARE	10
11						1	1						12
13						1	1						14
15						1	2	40			1,300	PNLBD P101 (TYP. FIRST LVL PANEL)	16
17						1				1,280			18
19						1	1						20
21						1	1						22
23						1	1						24
25						1	1						26
27						1	1						28
29						1	1						30
	SUBTOTAL	5,460	4,540							6,340	5,820	SUBTOTAL	

TOTAL PHASE A - VA	11,800	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	98	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	10,360	HEATING		0	DISPLAY CASE		1.25
AMPS	86	LIGHTING	800	1.25	KITCHEN		1.00
TOTAL PNLBD - VA	22,160	RECEPTACLES	3,460	1.0/.5	EXISTING		1.00
AMPS	107	MOTORS	17,900	1.00	LARGE MOTOR		1.25
		SUPP HEAT		1.00	SHOW WINDOW		1.25
		MISC EQUIP		1.00	LTG TRACK		1.00

TOTAL DEMAND
22,360 VA
108 A

PANELBOARD NOTES

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW PANEL 'P201' SCHEDULE (TYP. P202-P205) SCALE:NONE

PANELBOARD: RR

BUS AMPS: 125A
MAIN SIZE/TYPE: 100A MCB
VOLTS/PHASE: 208Y/120V, 1PH, 3W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES: RESTROOMS, ELECTRICAL ROOM
MOUNTING: RECESSED
LOCATION: INTERIOR
EQUIPMENT GROUND BUS

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	DESCRIPTION	CKT NO.
1	BOYS R.R. LIGHTS/EXHAUST	550			20	1	1	20		550		GIRLS R.R. LIGHTS/EXHAUST	2
3	STAFF R.R. LIGHTS/EXHAUST		150		20	1	1	20			540	GFCI RECEPTACLES	4
5	WATER HEATER	900			20	2	1	20		720		ELEC ROOM RECEPTACLES	6
7			900				1	20			468	SOFFIT LIGHTS	8
RL 9	FIRE ALARM BELL	180			20	1	1	20		1,200		FAPS	10 RL
11						1	1						12
13						1	1						14
15						1	1						16
17						1	1						18
19						1	1						20
21						1	1						22
23						1	1						24
25						1	1						26
27						1	1						28
29						1	1						30
	SUBTOTAL	1,630	1,050							2,470	1,008	SUBTOTAL	

TOTAL PHASE A - VA	4,100	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	34	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	2,058	HEATING		0	DISPLAY CASE		1.25
AMPS	17	LIGHTING	1,718	1.25	KITCHEN		1.00
TOTAL PNLBD - VA	6,158	RECEPTACLES	2,460	1.0/.5	EXISTING		1.00
AMPS	30	MOTORS		1.00	LARGE MOTOR		1.25
		SUPP HEAT		1.00	SHOW WINDOW		1.25
		MISC EQUIP	1,980	1.00	LTG TRACK		1.00

TOTAL DEMAND
6,588 VA
32 A

PANELBOARD NOTES

L - LOCK-ON
R - CIRCUIT BREAKER SHALL BE RED

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW PANEL 'RR' SCHEDULE SCALE:NONE

PANELBOARD: WR

BUS AMPS: 125A
MAIN SIZE/TYPE: 100A MCB
VOLTS/PHASE: 208Y/120V, 1PH, 3W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES: WORKROOM
MOUNTING: RECESSED
LOCATION: INTERIOR
EQUIPMENT GROUND BUS

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	DESCRIPTION	CKT NO.
1	HVAC UPPER FLOOR	4,160			50	2	2	30		1,500		WATER HEATER	2
3			4,160								1,500		4
5	WORKROOM LIGHTS	400			20	1	1	20		900		RECEPTACLES	6
7	RECEPTACLES		540		20	1	1	20			360	HVAC RECEPTACLES	8
9	SPEECH OFFICE #1	820			20	1	1	20		820		SPEECH OFFICE #2	10
11	GFCI RECEPTACLES		180		20	1	1						12
13						1	1						14
15						1	1						16
17						1	1						18
19						1	1						20
21						1	1						22
23						1	1						24
25						1	1						26
27						1	1						28
29						1	1						30
	SUBTOTAL	5,380	4,880							3,220	1,860	SUBTOTAL	

TOTAL PHASE A - VA	8,600	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	72	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	6,740	HEATING		0	DISPLAY CASE		1.25
AMPS	56	LIGHTING	400	1.25	KITCHEN		1.00
TOTAL PNLBD - VA	15,340	RECEPTACLES	3,620	1.0/.5	EXISTING		1.00
AMPS	74	MOTORS	8,320	1.00	LARGE MOTOR		1.25
		SUPP HEAT		1.00	SHOW WINDOW		1.25
		MISC EQUIP	3,000	1.00	LTG TRACK		1.00

TOTAL DEMAND
15,440 VA
74 A

PANELBOARD NOTES

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

NEW PANEL 'WR' SCHEDULE SCALE:NONE

PANELBOARD: XA (EXISTING)

BUS AMPS: 225A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 240/120V, 1PH, 3W
SECTION: 1

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATING: FCA +10% MINIMUM, FULLY RATED
SERVES:
MOUNTING: SURFACE
LOCATION:
EQUIPMENT GROUND BUS

CKT NO.	DESCRIPTION	VOLTAMPS/PHASE A	B	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	DESCRIPTION	CKT NO.
1	(E) CLASSROOM #6 - LIGHTS & FANS	1,350			20	1	1	20		1,605		(E) CLASSROOM #5 - LIGHTS & FANS	2
3	(E) CLASSROOM #4 - LIGHTS & FANS		1,105		20	1	1	20			942	(E) CLASS B116 LIGHTS & FANS	4
5	SPARE				15	1	1	20				SPARE	6
7	(E) LIGHTS ROOMS 14,15,16,7,8		1,200		15	1	1	20			1,000	(E) LIGHTS ROOMS 5 &6	8
9	(E) RECEPTACLES RMS 14,17,18	1,000			20	1	1	20				SPARE	10
11	(E) LIGHTS WEST CORRIDOR		1,200		15	1	1	15				SPARE	12
13	(E) RECEPTACLES - HEATER SECT.	1,000			15	1	1	15		500		(E) CLOCK	14
15	(E) CLASSROOM 4 & 22		1,000		20	1	1	20			1,000	(E) RECEPTACLE RM #16	16
17	(E) FACP	500			20	1	1	20				SPARE	18
RL 19	(N) EVAC		500		20	1	1	15				SPARE	20
21	SPARE				20	1	1	15				SPARE	22
23	SPARE				15	1	1	15				SPARE	24
25						1	1						26
27						1	1						28
29						1	1						30
	SUBTOTAL	3,850	5,005							2,105	2,942	SUBTOTAL	

TOTAL PHASE A - VA	5,955	LOAD	CONN. VA	DF	LOAD	CONN. VA	DF
AMPS	50	COOLING		1.00	REFRIGERATION		1.00
TOTAL PHASE B - VA	7,947	HEATING		0	DISPLAY CASE		1.25
AMPS	66	LIGHTING		1.25	KITCHEN		1.00
TOTAL PNLBD - VA	13,902	RECEPTACLES	500	1.0/.5	EXISTING	13,402	1.00
AMPS	58	MOTORS		1.00	LARGE MOTOR		1.25
		SUPP HEAT		1.00	SHOW WINDOW		1.25
		MISC EQUIP		1.00	LTG TRACK		1.00

TOTAL DEMAND
13,902 VA
58 A

PANELBOARD NOTES

L - LOCK-ON
R - CIRCUIT BREAKER SHALL BE RED

LTG TRACK - TRACK LENGTH
SIGN/DISPLAY - SIGNAGE & DISPLAY CASE

REVISED PANEL 'XA' SCHEDULE SCALE:NONE

REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
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(909) 985 - 6684 FAX

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Phone: (626) 683-0200

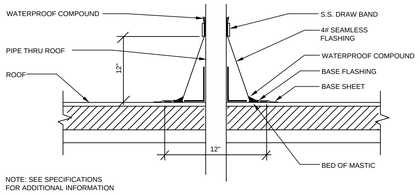
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

PANEL SCHEDULES

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
SSA APP#: 00-000000

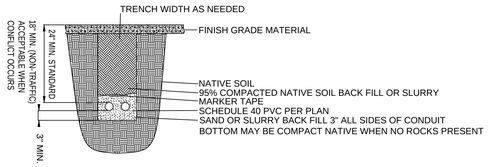
E-0.2

BID SET 10/01/2021

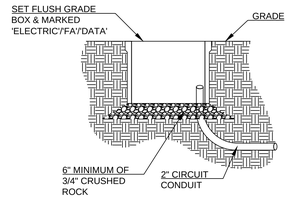


NOTE: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

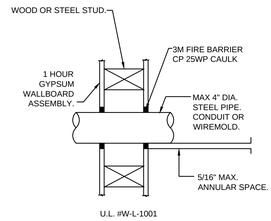
PIPE THRU ROOF DETAIL | 04 | NONE



TYPICAL CONDUIT TRENCH - FLEXIBLE CONDITIONS | 03 | NONE



11 X 17 AND 16 X 24 GRADE BOX | 02 | NONE



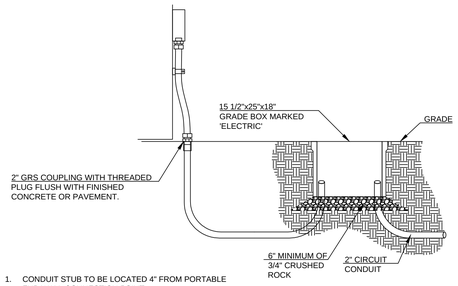
U.L. #W-L-1001

PENETRATION THRU GYPSUM BOARD

NOT TO SCALE

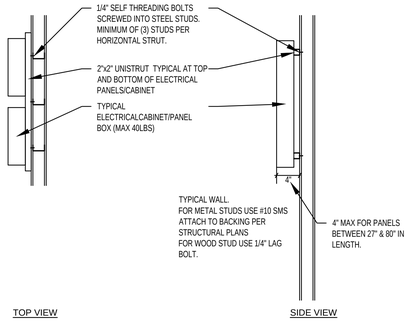
NOTE: DETAILS HERE ARE ALL 2016 EDITION OF THE UL FIRE RESISTANCE DIRECTORY.

FIRE STOP DETAIL | 01 | NONE

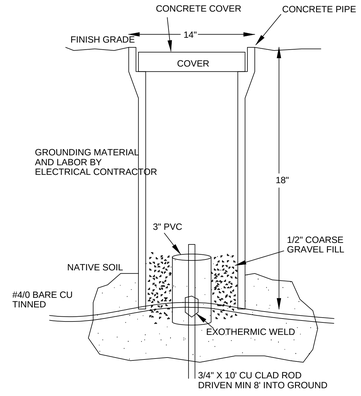


1. CONDUIT STUB TO BE LOCATED 4" FROM PORTABLE END WALL CONNECTION POINT.
2. PULL/SPLICE BOX TO BE LOCATED SOMEWHERE NEAR UTILITY CONNECTION POINT OUTSIDE OF NORMAL PEDESTRIAN PATHWAYS.
3. FINAL CONNECTION TO BE MADE USING SEAL TIGHT FLEX DIRECTLY TO PORTABLE CONNECTION BOX.
4. CONDUCTOR SPLICES AT GRADE BOX TO BE IN RATED WATERPROOF CONNECTORS OR EPOXY ENCAPSULATED.
5. UPON TRAILER REMOVAL, CONDUIT STUB CAN BE PLUGGED UNTIL NEEDED BY FUTURE OR REPLACEMENT PORTABLE BLDG.

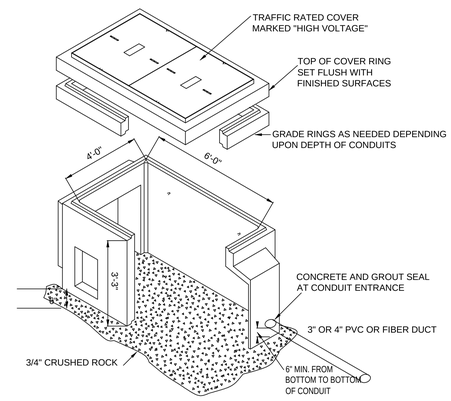
PORTABLE CLASSROOM STUBS FROM GRADE BOXES | 08 | NONE



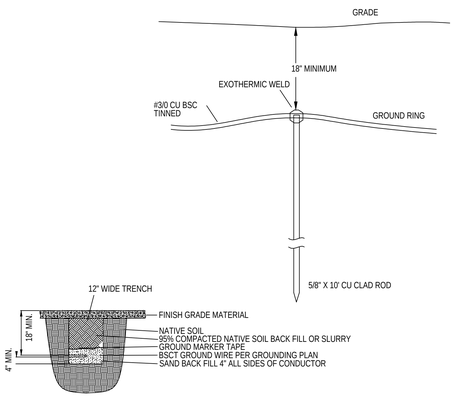
TYPICAL PANEL MOUNTING - SURFACE | 07 | NONE



ACCESSIBLE GROUND ROD | 06 | NONE



4 X 6 UNDERGROUND PULL BOX | 05 | NONE



TRENCH GROUND ROD FOR UFER APPLICATION | 09 | NONE

REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
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UPLAND, CA. 91786
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(909) 985 - 6684 FAX

NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

INSTALLATION DETAILS

JOB NUMBER:	DRAWN BY:	DATE:	DSA APP#
2019-026	J.H.	07.08.2021	00-000000

E-0.3

BID SET 10/01/2021

SITE PLAN GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS. THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATION FROM NEAT WORKMANSHIP.

2 COMBINING OF HOMERUNS AND OTHER CIRCUITS OTHER THAN WHAT IS SHOWN ON PLAN WILL NOT BE APPROVED.

3 COMBINING OF EMERGENCY CIRCUITS WITH OTHER CIRCUITS IN CONDUITS AND/OR JUNCTION BOXES WILL NOT BE APPROVED.

4 CONDUITS AND ROUTING FOUND OBJECTIONABLE BY THE ARCHITECT WILL BE REWORKED AT ELECTRICAL CONTRACTORS EXPENSE.

5 ELECTRICAL CONTRACTOR SHALL PROVIDE APPROVED SEISMIC STRUCTURAL SUPPORTS AS CURRENTLY ADOPTED BY IBC OR CBC WHERE APPLICABLE FOR ALL FIXTURES, BOXES AND OTHER ELECTRICAL EQUIPMENT.

6 ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS AND EQUIPMENT WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

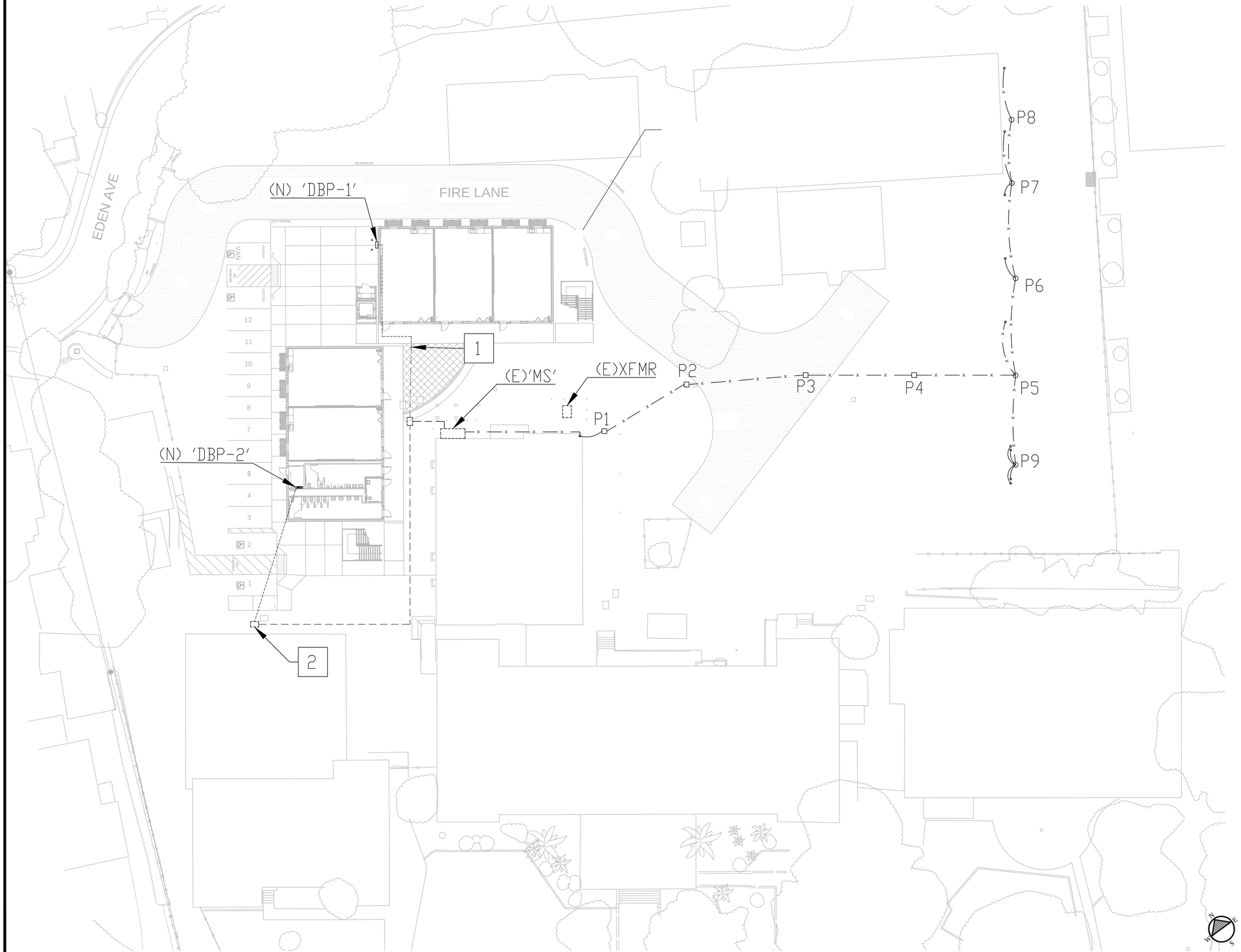
SITE PLAN KEYED NOTES

1 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-1'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

2 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-2'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

SITE PLAN KEYNOTES

SCALE:NONE



NEW/DEMO ELECTRICAL SITE PLAN | SCALE:1/16"=1'-0" | 1

DC | ARCHITECTS
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UPLAND, CA. 91786
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Engineous Group, Inc.

REVISIONS

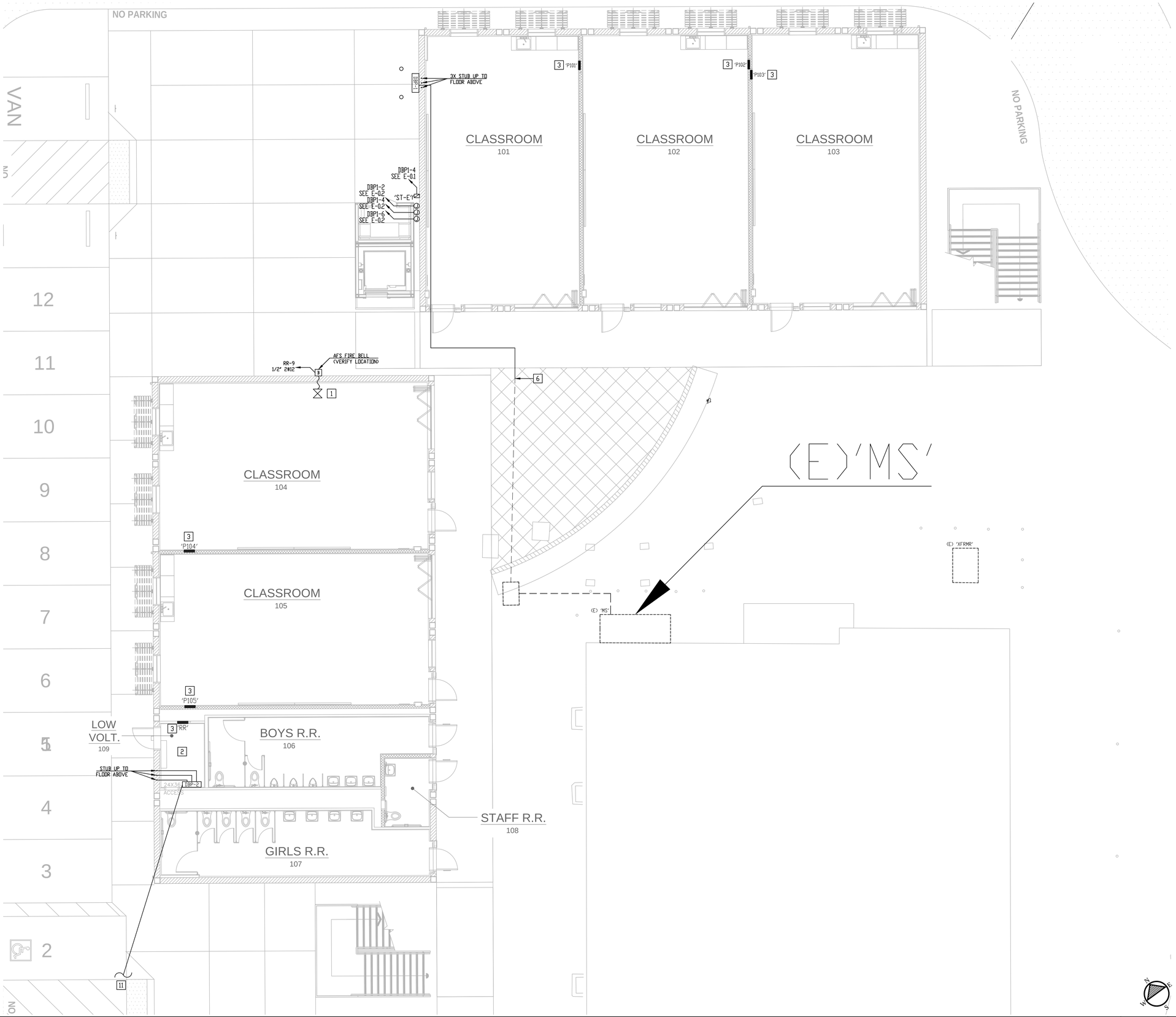
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

OVERALL NEW/DEMO
ELECTRICAL SITE PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

E-1.0

BID SET 10/01/2021



ENLARGED FIRST FLOOR PLAN | SCALE:3/16"=1'-0" | 1

POWER GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATIONS FROM NEAT WORKMANSHIP.

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4 CONDUITS AND ROUTING FOUND OBJECTIONABLE BY THE ARCHITECT WILL BE REWORKED AT ELECTRICAL CONTRACTORS EXPENSE.

5 ELECTRICAL CONTRACTOR SHALL PROVIDE APPROVED SEISMIC STRUCTURAL SUPPORTS AS CURRENTLY ADOPTED BY IBC OR CBC WHERE APPLICABLE FOR ALL FIXTURES, BOXES AND OTHER ELECTRICAL EQUIPMENT.

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POWER GENERAL NOTES | SCALE:NONE

POWER PLAN KEYED NOTES (NOT ALL MAY APPLY)

1 INSTALL AND VERIFY LOCATION FOR NEW FIRE ALARM VALVE. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR INSTALLATION.

2 PRE-FABRICATED BUILDING MANUFACTURER SHALL EQUIP THE LUMINAIRE INSIDE THE INDICATED ZONE(S) WITH A 90-MIN BATTERY PACK AND CONSTANT HOT FEED TO CHARGE.

3 PANEL IS FURNISHED AND INSTALLED BY BUILDING MANUFACTURER.

4 NOT USED.

5 NOT USED.

6 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-1'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

7 NOT USED.

8 CONDUITS FROM NEW DISTRIBUTION BOARD 'DBP-1' TO MODULAR BUILDING CLASSROOMS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

9 NOT USED.

10 CONDUITS FROM NEW DISTRIBUTION BOARD 'DBP-2' TO MODULAR BUILDING CLASSROOMS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

11 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-2'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

POWER PLAN KEY NOTES | SCALE:NONE

REVISIONS

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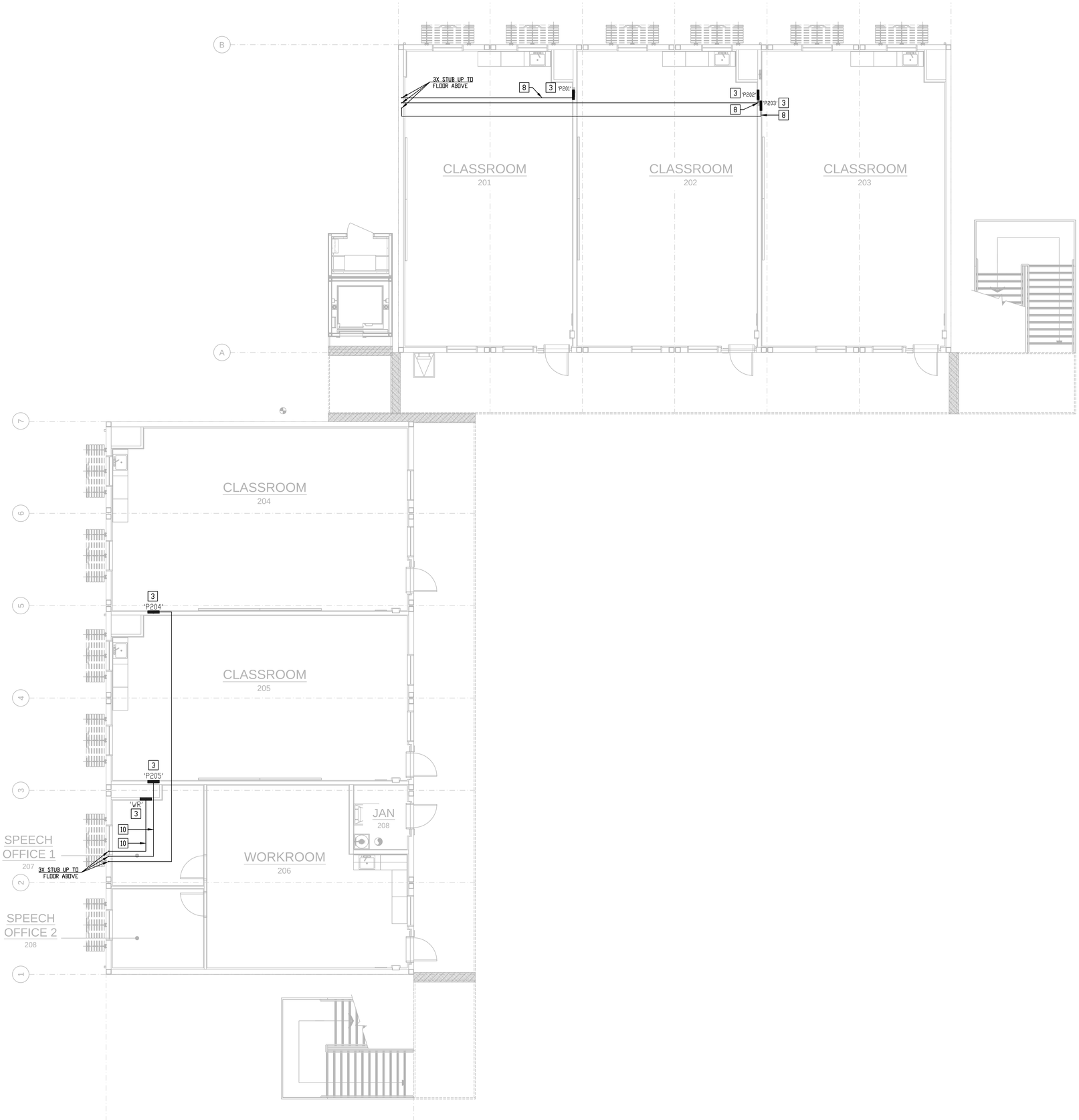
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

ELECTRICAL ENLARGED FIRST FLOOR PLAN - LOCAL FIRE AUTHORITY - 2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

E-2.1

BID SET 10/01/2021



ENLARGED SECOND FLOOR FIRE ALARM PLAN | SCALE:3/16"=1'-0" | 1

POWER GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATIONS FROM NEAT WORKMANSHIP.

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POWER GENERAL NOTES | SCALE:NONE

POWER PLAN KEYED NOTES (NOT ALL MAY APPLY)

1 INSTALL AND VERIFY LOCATION FOR NEW FIRE ALARM VALVE. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR INSTALLATION.

2 PRE-FABRICATED BUILDING MANUFACTURER SHALL EQUIP THE LUMINAIRE INSIDE THE INDICATED ZONE(S) WITH A 90-MIN BATTERY PACK AND CONSTANT HOT FEED TO CHARGE.

3 PANEL IS FURNISHED AND INSTALLED BY BUILDING MANUFACTURER.

4 NOT USED.

5 NOT USED.

6 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-1'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

7 NOT USED.

8 CONDUITS FROM NEW DISTRIBUTION BOARD 'DBP-1' TO MODULAR BUIDLING CLASSROOMS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

9 NOT USED.

10 CONDUITS FROM NEW DISTRIBUTION BOARD 'DBP-2' TO MODULAR BUILDING CLASSROOMS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

11 INTERCEPT EXISTING FEEDERS AND PROVIDE POWER CONDUCTOR AND CONDUIT FROM EXISTING MAIN SWITCHBOARD 'MS' TO NEW MODULAR BUILDING DISTRIBUTION BOARD 'DBP-2'. REFER TO SINGLE LINE FOR RATINGS. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

POWER PLAN KEY NOTES | SCALE:NONE

REVISIONS

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(909) 985 - 6539 OFFICE
(909) 985 - 0864 FAX

Engineous Group, Inc.

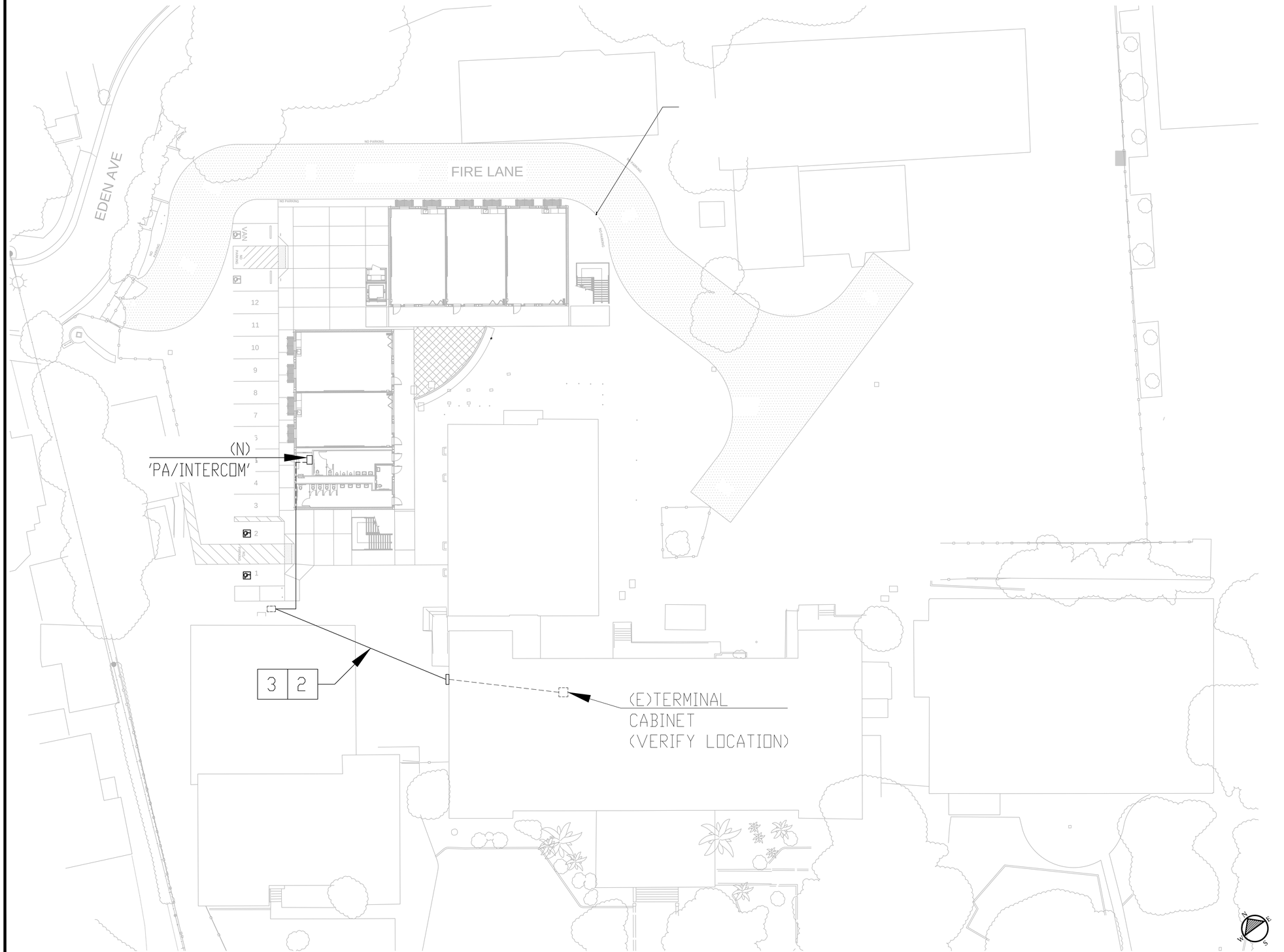
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

ELECTRICAL ENLARGED SECOND FLOOR PLAN - LOCAL FIRE AUTHORITY - 2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

E-2.2

BID SET 10/01/2021



OVERALL COMMUNICATION SITE PLAN | SCALE:1/16"=1'-0" | 1

SITE PLAN GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATION FROM NEAT WORKMANSHIP.

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6 ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS AND EQUIPMENT WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

SITE PLAN KEYED NOTES

1 NOT USED.

2 PROVIDE 2" CONDUIT ONLY FOR CAT6 DATA/FIBER FROM EXISTING TERMINAL CABINET IN ADMIN 'BUILDING 1000'. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

3 PROVIDE 2" FOR PA/INTERCOM FROM EXISTING TERMINAL CABINET IN ADMIN 'BUILDING 1000'. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

SITE PLAN KEYNOTES | SCALE:NONE

Engineous Group, Inc.
713 N. Post Oaks Ave. Suite 201
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Phone: (713) 647-0000

REVISIONS

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(909) 985 - 6939 OFFICE
(909) 985 - 6984 FAX

NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

OVERALL COMM.
SITE PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.06.2021
DSA APP#: 00-000000

E-4.0

BID SET 10/01/2021

DATA GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATIONS FROM NEAT WORKMANSHIP.

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DATA GENERAL NOTES

SCALE:NONE

POWER PLAN KEYED NOTES (NOT ALL MAY APPLY)

1 NOT USED.

2 PROVIDE (2) 2" CONDUIT SLEEVES FOR LOW VOLTAGE CONDUCTORS, INSTALLED AT 24" BELOW GRADE. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

3 PROVIDE 2" CONDUIT ONLY FOR CAT6 DATA/FIBER FROM EXISTING TERMINAL CABINET IN "BUILDING 1000" TO NEW "PA/INTERCOM" IN LOW VOLT ROOM "109" ON GROUND LEVEL. RUN 2" CONDUIT ONLY FOR CAT6 DATA/FIBER BELOW MODULAR BUILDING CONSTRUCTION AND STUB UP TO SECOND LEVEL OF NEW MODULAR BUILDING. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

DATA PLAN KEY NOTES

SCALE:NONE

ENLARGED FIRST FLOOR COMMUNICATION PLAN

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

Engineous Group, Inc.

REVISIONS

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

COMM. ENLARGED
FIRST FLOOR PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

E-4.1

BID SET 10/01/2021

ENLARGED SECOND FLOOR COMMUNICATION PLAN | SCALE:3/16"=1'-0" | 1

DATA GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS, THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATIONS FROM NEAT WORKMANSHIP.

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DATA GENERAL NOTES | SCALE:NONE

POWER PLAN KEYED NOTES (NOT ALL MAY APPLY)

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DATA PLAN KEY NOTES | SCALE:NONE

Engineous Group, Inc.

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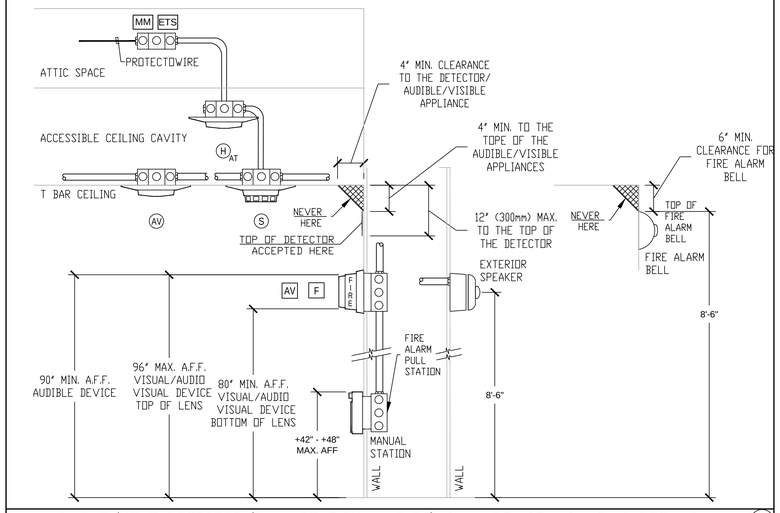
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

COMM. ENLARGED
SECOND FLOOR PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

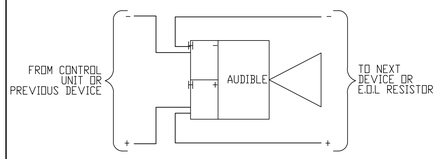
JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP# 00-000000

E-4.2

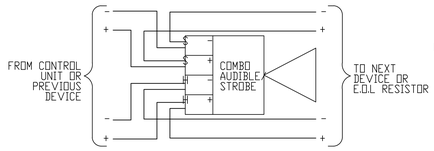
BID SET 10/01/2021



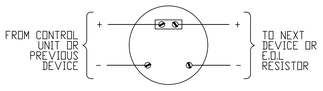
SMOKE/HEAT DETECTOR/PULL STATION, AUDIO/VISUAL DEVICE MOUNTING DETAILS (1)



OUTDOOR VOICE EVAC SPEAKER UNIT



COMBINATION AUDIBLE SPEAKER/STROBE UNIT



SMOKE AND/OR HEAT DETECTOR

TYPICAL DEVICE WIRING (2)

MEP Component Anchorage Note — Revised 02/14/2020

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 2019 CBC, Sections 1616A1.18 through 1616A1.26 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 or has a center of mass located 4 feet or more above the adjacent floor or roof level that directly support the component are required to be anchored with temporary attachments.

The following mechanical and electrical components shall be positively attached to the structure, but the attachment need not be detailed on the plans. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit.

A. Components weighing less than 400 pounds and 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 foor, 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 design professional in general responsible charge or structural engineer delegated responsibility 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 1616A1.24, 1616A1.25 and 1616A1.26.

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 DSHPD 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.

MP ☐MD ☐PP ☐E ☐ - Option 2 : Shall comply with the applicable OSHPD Pre-Approval (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 specific notes and details. The details shall account for the applicable Seismic Hazard Level _____ and Connection Level _____ for the project and conditions.

MEP COMPONENT ANCHORAGE NOTE (3)

NEW FIRE ALARM SYMBOLS LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	CSFM NUMBER
(S)	SMOKE DETECTORS/PHOTOELECTRIC SMOKE DETECTORS	NOTIFIER	FSP-851	7272-0028:0206
	STANDARD SENSOR BASE	NOTIFIER	B210LP	7300-1653:0109
(H)	HEAT DETECTORS	NOTIFIER	FST-851	7270-0028:0196
	STANDARD SENSOR BASE	NOTIFIER	B210LP	7300-1653:0109
(H)AT	HEAT DETECTORS (ATTIC SPACE)	NOTIFIER	FST-851	7270-0028:0196
	STANDARD SENSOR BASE	NOTIFIER	B210LP	7300-1653:0109
(AV)cd W	INDOOR SPEAKER-STROBE (15cd, 30cd, 75cd, 110cd) (CEILING MOUNTED)	NOTIFIER	SPSCWL(AX-EX-F), SPSCRL(AX-EX-F),	7320-1653:0505
▷S W	OUTDOOR SPEAKER (1/4W, 1/2W, 1W, 2W)	NOTIFIER	SPWK(A) OR SPRK(A)	7320-1653:0201
B	FIRE ALARM BELL	SYSTEM SENSOR	SSM/SSV	7135-1653:0217
FD	NEW INTELLIGENT/ADDRESSABLE FLOW DETECTOR MONITOR MODULE WITH FLASHSCAN	NOTIFIER	FMM-1	7300-0028:0219
FD	EXISTING INTELLIGENT/ADDRESSABLE FLOW DETECTOR MONITOR MODULE WITH FLASHSCAN	NOTIFIER	FMM-1	7300-0028:0219
EVAC	EMERGENCY VOICE EVACUATION	NOTIFIER	NFC-50DA(E)	7300-0028:0266
FAPS	FIRE ALARM REMOTE POWER SUPPLY	NOTIFIER	FCPS-24S6, FCPS-24S8	7315-0028:0225
FACP	EXISTING FIRE ALARM CONTROL PANEL (A#107450)	NOTIFIER	AFP1010	7165-0028:0141

SEQUENCE OF OPERATION

	BLDG POWER FAILURE	AREA SMOKE DETECTOR	AREA HEAT DETECTOR	PULL STATION	GROUND FAULT	FA SYSTEM LOW BATTERY	CIRCUIT SHORT	DCDA TAMPER SWITCH
ANNUNCIATE AT FIRE CONTROL PANEL (SUPERVISION)	NO	NO	NO	NO	NO	NO	NO	YES
ANNUNCIATE AT FIRE CONTROL PANEL (TROUBLE)	YES	NO	NO	NO	YES	YES	YES	NO
SUPERVISORY SIGNAL	NO	NO	NO	NO	NO	NO	NO	YES
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM SIGNAL)	NO	YES	YES	YES	NO	NO	NO	NO
SOUND CONTROL PANEL TROUBLE BUZZER	YES	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	YES	YES	YES	ON WIRING FAULT
ACTIVATE AUDIBLE ALARM SIGNALS	NO	YES	YES	YES	NO	NO	NO	NO
ACTIVATE VISUAL ALARM SIGNALS	NO	YES	YES	YES	NO	NO	NO	NO
CENTRAL STATION SIGNALS (UNTIL RESET)	YES	YES	YES	YES	NO	NO	NO	NO

SYMBOL NOTES

'X' WHEN SHOWN ADJACENT TO OUTLET SYMBOL OR IN CONDUIT RUN INDICATES EXISTING TO REMAIN. INTERCEPT, REROUTE, AND EXTEND, IF NECESSARY.

'XR' WHEN SHOWN ADJACENT TO OUTLET SYMBOL OR LIGHT FIXTURE INDICATES EXISTING TO BE REMOVED.

'XX' WHEN SHOWN IN CONDUIT RUN INDICATES EXISTING CONDUIT RUN TO BE REWIRED. PULL OUT EXISTING WIRES AND INSTALL NEW WIRES, QUANTITY AS INDICATED BY HASH MARKS.

'XA' WHEN SHOWN ADJACENT TO LIGHT FIXTURE OR OUTLET SYMBOL OR IN CONDUIT RUN INDICATES EXISTING TO BE ABANDONED. REMOVE DEVICE AND INSTALL BLANK PLATE AND PULL WIRES FROM CONDUIT AS REQUIRED.

'XRR' WHEN SHOWN ADJACENT TO FA SYSTEM DEVICE INDICATES EXISTING SHALL BE DISCONNECTED, REMOVED, CLEANED, AND RE-INSTALLED FURNISH AND INSTALL ALL MATERIAL NECESSARY TO MAKE ALL CONNECTION REQUIRED FOR A COMPLETE AND OPERABLE FIRE ALARM (FA) SYSTEM.

'XRN' WHEN SHOWN ADJACENT TO FA SYSTEM DEVICE INDICATES EXISTING SHALL BE DISCONNECTED, AND REMOVED. FURNISH AND INSTALL NEW DEVICE AT PRE-EXISTING LOCATION WITH SPECIFICATIONS NOTED IN FA LEGENDS ON SHEET E-0.0. FURNISH AND INSTALL ALL MATERIAL NECESSARY TO MAKE ALL CONNECTION REQUIRED FOR A COMPLETE AND OPERABLE FIRE ALARM (FA) SYSTEM.

'XRL' WHEN SHOWN ADJACENT TO EQUIPMENT, DEVICES OR LIGHTING FIXTURE, INDICATES EXISTING EQUIPMENT, DEVICE OR LIGHTING FIXTURE AND ALL ASSOCIATED WIRING TO BE RELOCATED, U.O.N.

'XB' WHEN SHOWN NEXT TO DUPLEX OUTLET INDICATE REMOVE EXISTING DEVICE AND COVER PLATE. FURNISH AND INSTALL NEW DUPLEX OUTLET,EXTENSION RING AND STAINLESS STEEL COVER PLATE AND MAKE ALL CONNECTION REQUIRED TO RE-ESTABLISH CIRCUITRY AS BEFORE.

'NL' INDICATE NEW LOCATION OF RELOCATED EQUIPMENT, DEVICE, LIGHTING FIXTURE OR FA SYSTEM DEVICE.

CODES AND STANDARDS

CODES AND PERMITS: ALL EQUIPMENT, INSTALLATION, ETC., SHALL CONFORM TO LOCAL ELECTRICAL, MECHANICAL AND OTHER APPLICABLE CODES. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT. CODES INCLUDE BUT NOT LIMITED TO:

TITLE 24, PART 2, CCR (2019 CALIFORNIA BUILDING CODE W/AMENDMENTS)
TITLE 24, PART 3, CCR (2019 CALIFORNIA ELECTRICAL CODE W/AMENDMENTS)
TITLE 24, PART 4, CCR (2019 CALIFORNIA MECHANICAL CODE W/AMENDMENTS)
TITLE 24, PART 5, CCR (2019 CALIFORNIA PLUMBING CODE W/AMENDMENTS)
TITLE 24, PART 9, CCR (2019 CALIFORNIA FIRE CODE W/AMENDMENTS)
2019 CALIFORNIA GREEN BUILDINGS STANDARDS CODES)
2019 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)
NFPA 13 - 2016
NFPA 72 - 2016
REFERENCED CODE SECTIONS FOR APPLICABLE STANDARDS
2019 CBC, CHAPTER 35
2019 CFC, CHAPTER 45
NFPA STANDARDS AND GUIDES
NFPA 72 NATIONAL FIRE ALARM CODES (CALIFORNIA AMENDED, 2016 EDITION)
NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES".

THE SEISMIC ANCHORAGE OF ELECTRICAL EQUIPMENT SHALL CONFORM TO CBC 2019 AND NFPA 13 2019 EDITION

FIRE ALARM SPECIFICATIONS

1. APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35
2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
10. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (DBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
11. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
    11.1. 2.16 APPLICABLE CODES: ENSURE THE CURRENT CODES ARE LISTED ON THE PLANS.
12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
15. ALL FIRE ALARM WIRING SHALL BE FPL OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
16. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
17. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS. UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL." CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 17.8.2.
22. 120 VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
23. ALL OPENINGS IN RATED ASSEMBLIES SHALL BE REPAIRED PER UFC, NEC, UBC AND STANDARD BUILDING CODES IN EFFECT AT THE TIME OF APPROVAL. THE SYSTEM SHALL CONFORM TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT (CBC PART 2, CH. 7, TITLE 24).
24. ALL BACK BOXES SHALL BE AS RECOMMENCED BY MANUFACTURER. CONTRACTOR SHALL LOCATE JUNCTION BOXES AS REQUIRED AND PER CEC CODES.
25. ALL PANELS SHALL BE MOUNTED WITH CLEARANCES FOR OBSERVATION AND TESTING, AND ALL FIRE ALARM JUNCTION BOXES SHALL BE MARKED FOR IDENTIFICATION.
26. ALL WIRING OF INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPLE POINT OF ANNUNCIATION (THE FIRE ALARM CONTROL PANEL IS TO SUPERVISE THE ANNUNCIATOR PANEL, ALL CIRCUITS AND INITIATING DEVICES).
27. WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND OUT. POINT COMMON ANNUNCIATION AND T-TAPPING ARE PROHIBITED.
28. A. EXCEPTION: ADDRESSABLE SYSTEMS, MAPNET CONDUCTORS WIRED CLASS 'B' MAY BE T-TAPPED.
29. ALL FIRE ALARM WIRING SHALL BE RUN IN MINIMUM 3/4" CONDUIT.
30. A. ALL CONDUIT SIZES SHOWN AND INDICATED ON DRAWING ARE MINIMUMS. CONTRACTOR TO ADJUST SIZES FOR FIELD CONDITIONS (I.E. NUMBER OF BENDS, ETC.) BUT SHALL NOT BE SMALLER THAN 3/4".
31. ALL FIRE ALARM SYSTEM WIRING TERMINATIONS IN MAIN PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS.
32. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS. SEE INSTALLATION MANUALS FOR FIELD WIRING SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
33. (2) PRIMARY PHONE LINE SHALL BE DEDICATED FOR THE FIRE ALARM SYSTEM TO COMMUNICATE WITH U.L. LISTED CENTRAL STATION.
34. WIRING COLOR CODE SHALL BE CONSISTENT THROUGHOUT THE SYSTEM AND SHALL ALLOW FOR EASY IDENTIFICATION OF INITIATING, INDICATING AND AUXILIARY CIRCUITS.
35. CABINET TERMINALS SHALL BE NUMBERED AND CODED. FLEXIBLE CONNECTORS SHALL BE USED FOR DEVICES MOUNTED IN SUSPENDED PANELS.
36. THE FIRE DEPARTMENT WILL TEST AND VERIFY ADEQUATE AUDIBILITY BEING PROVIDED THROUGHOUT, PARTICULARLY IN OPEN WORK AREAS AND IN TESTING AREAS.
37. AUDIBLE DEVICES(S) TO BE AT LEASE 15 DBA ABOVE THE AMBIENT SOUND LEVELS, BUT NOT LESS THAN THE 75 DBA AT 10' OR MORE THAN 110DBA AT THE MINIMUM HEARING DISTANCE. AUDIBLE DEVICES SHALL SOUND THE TEMPORAL FIRE ALARM SIGNAL.
38. CONDUIT AND JUNCTION BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
39. ALL CONDUIT MOUNTING BOXES, AND PANELS SHALL BE HUNG AND FASTENED WITH FITTINGS TO ENSURE POSITIVE GROUNDING THROUGHOUT THE ENTIRE SYSTEM.
40. PLACE THE BOTTOM OF THE WALL MOUNTED STROBE EXACTLY 80" ABOVE THE FLOOR TO BOTTOM OF LENS AND MAKE SURE THE TOP OF THE STROBE IS AT LEAST 6" BELOW THE CEILING. PLACE THE TOP OF THE STROBE 6" BELOW THE CEILING IF THE CEILING IS TOO LOW, AND MAKE SURE IT PROTRUDES LESS THAN 4" IF IN A WALKWAY, CORRIDOR OR AISLE. NOTE THAT THESE MOUNTING REQUIREMENTS ALSO APPLY TO COMBINATION HORN/STROBE OR SPEAKER/STROBE APPLIANCES THAT ARE WALL MOUNTED (NFPA 72, CH.18).
41. STROBES SHALL BE VISIBLE IN ALL LOCATIONS THROUGHOUT THE BUILDING PER NFPA 72, CHAPTER 18, SECTION 18-5.
42. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHER PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
43. PROVIDE 24 HOUR TELEPHONE NUMBER OF CENTRAL STATION NEAR ANNUNCIATOR AND FIRE ALARM CONTROL PANEL.
44. ON SMOKE DETECTORS CONTRACTOR SHALL MAINTAIN 36" DISTANCE FROM SUPPLY AIR DIFFUSER.

WIRING SCHEDULE

DESIGN.	CIRCUIT TYPE	DESCRIPTION	MODEL
A	HORN NOTIFICATION LOOP	2 TWISTED PAIR, 16 AWG FPLR	WESTPENN CABLE FPLP 2 PAIR #16 TWISTED, CSFM #7161-0859:0101
F	SLC INTELLIGENT LOOP NETWORK COMM	1 TWISTED PAIR, 18 AWG FPLR (FA2 = 2 SET OF CABLES)	WESTPENN CABLE FPLP 2 PAIR #16 TWISTED, CSFM #7161-0859:0101
V	HORN/STROBE SIGNAL OUTPUT CIRCUIT CABLE	(2) SETS OF 2#14 AWG (RED/BLACK)	WESTPENN CABLE FPLP 2#14 OR 2#12, CSFM #7161-0859:0101

NOTES:
1. ALL CABLE SHALL BE INSTALLED PER NEC/CEC PA VOICE CIRCUIT.
2. ALL WIRING SHALL CONFORM TO NEC 760 PART A & C FOR A POWER-LIMITED SUPPLY.
3. ALL WIRING IN WET LOCATIONS SHALL BE THWN, UL LISTED FOR OUTDOOR USE OR EQUAL.
4. ALL FIRE ALARM CABLING SHALL BE RUN IN MINIMUM 3/4" CONDUIT RACEWAY UNLESS OTHERWISE NOTED.

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REVISIONS

Engineous Group, Inc.

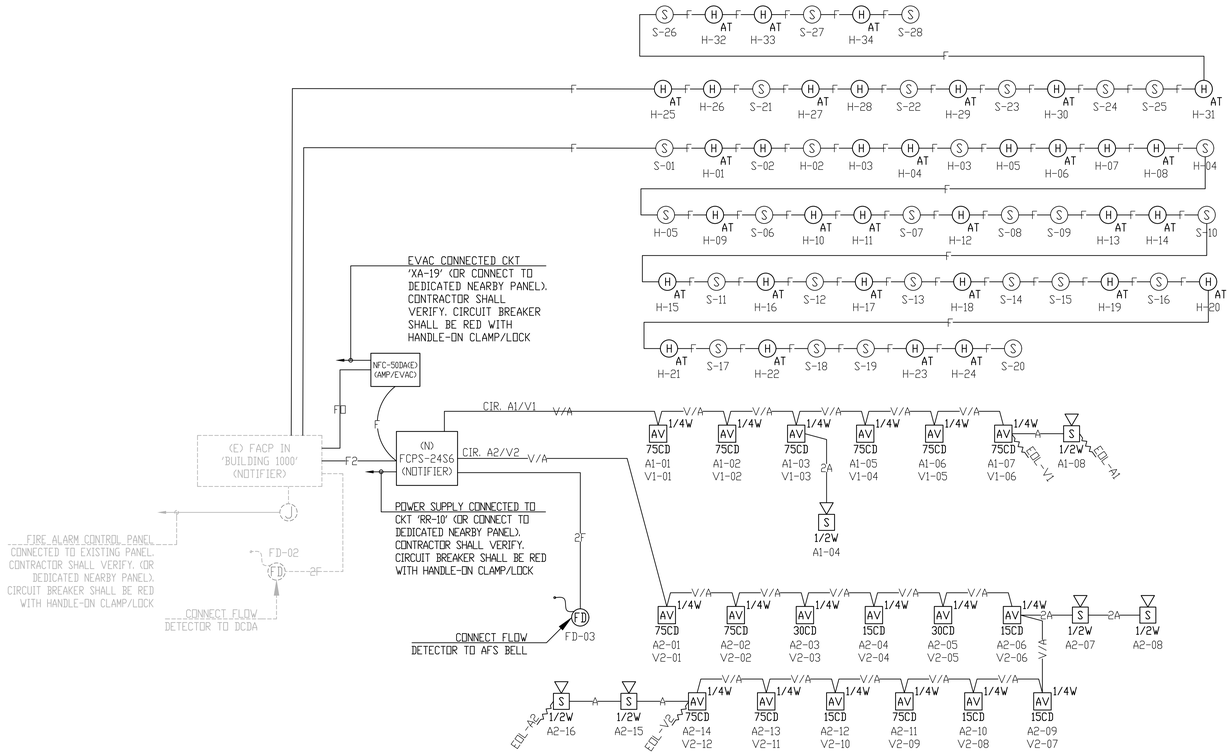
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

FIRE ALARM
SYMBOLS & NOTES

DSA SUBMITTAL 2019-026
DRAWN BY: J.M.
DATE: 07.09.2021
DSA APP# 00-000000

BID SET 10/01/2021

FA-0.0



FIRE ALARM RISER DIAGRAM

SCALE:NONE

STROBE/HORN BATTERY CALCULATION - (E) FACP IN BLDG-1 (A# 03-107450)						
	DEVICE	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
	2020 : BE-1010	1	0.1160	0.1160	0.1160	0.1160
	2020 : LIP-200	1	0.0490	0.0490	0.0490	0.0490
	2020 : SIB 2048	1	0.0550	0.0550	0.0550	0.0550
	2020 : UZC-256	1	0.0350	0.0350	0.0350	0.0350
	2020 : XPC-8, 8	2	0.0330	0.0090	0.0660	0.0180
	2020 : XPP-1	1	0.0230	0.0090	0.0230	0.0090
	PS : AVPS-24	1	0.0090	0.0090	0.0090	0.0090
	PS : MPS-24A	1	0.1040	0.0640	0.1040	0.0640
	MOD_M : BGX-101L	19	0.0002	0.0002	0.0038	0.0038
	HORN : GMH-24	13	0.0000	0.0450	0.0000	0.5850
	STR. : GXS-4-1575	12	0.0000	0.2000	0.0000	2.4000
	ANN. : LCD-80	1	0.0500	0.1000	0.0500	0.1000
	H/S : P2475	10	0.0000	0.2450	0.0000	2.4500
	MOD : MMX	1	0.0003	0.0003	0.0003	0.0003
	MPS : NRG-12LX	3	0.0002	0.0002	0.0006	0.0006
	HEAT : FST-751	30	0.0002	0.0002	0.0060	0.0060
	SMOKE : FSP-751	75	0.0002	0.0002	0.0150	0.0150
	H/S : P2415	4	0.0000	0.0680	0.0000	0.2720
	H/S : P2475	12	0.0000	0.1480	0.0000	1.7760
	MOD : FCM	3	0.0003	0.0003	0.0009	0.0009
	MOD : FMM	3	0.0003	0.0003	0.0009	0.0009
	STROBE : S2415	17	0.0000	0.0430	0.0000	0.7310
	STROBE : S2475	4	0.0000	0.1230	0.0000	0.4920
EXISTING	FLOW DETETECTOR MONITOR MODULE	1	0.0000	0.0050	0.0000	0.0050
NEW	FIRE ALARM REMOTE POWER SUPPLY (FAPS)	1	0.0020	3.2000	0.0020	3.2000
NEW	SMOKE DETECTORS - 2 STORY MOD. BLDG.	28	0.0003	0.0065	0.0084	0.1820
NEW	HEAT DETECTORS - 2 STORY MOD. BLDG.	34	0.0003	0.0065	0.0102	0.2210
				TOTAL	0.5551	12.7965

ALARM CURRENT X ALARM TIME / 60 = AMP/HR FOR ALARM					
12.7965	X	1/12	=	1.0664	

STANDBY CURRENT X 24 = AMP/HR FOR ALARM					
0.5551	X	24	=	13.3224	

ADJUSTED BATTERY CAPACITY		
REQUIRED STANDBY CAPACITY (AMP-HOURS) + REQUIRED ALARM CAPACITY (AMP-HOURS)	14.3888	
REQUIRED CAPACITY WITH SAFETY FACTOR (120%)	17.2665	
BATTERY SIZE =	25 AMP HR.	

(E) FACP REVISED BATTERY CALCULATION

SCALE:NONE

PORTABLES STROBE/SPEAKER BATTERY CALCULATION - (N) FAPS					
DEVICE	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
75cd STROBE (CEILING)	11	0.0000000	0.1110	0.0000000	1.2210000
75cd SPEAKER (1/4W CELING)	11	0.0000000	0.0104	0.0000000	0.1144000
30cd STROBE (CEILING)	2	0.0000000	0.0630	0.0000000	0.1260000
30cd SPEAKER (1/4W CELING)	2	0.0000000	0.0104	0.0000000	0.0208000
15cd STROBE (CEILING)	5	0.0000000	0.0410	0.0000000	0.2050000
15cd SPEAKER (1/4W CELING)	5	0.0000000	0.0104	0.0000000	0.0520000
FA HORN WP (1/2W)	6	0.0000000	0.0208	0.0000000	0.1248000
FLOW DETECTOR MONITOR MODULE	1	0.0000	0.0050	0.0000000	0.0050000
POWER SUPPLY	1	0.0020	3.2000	0.0020000	3.2000000
			TOTAL	0.0020	5.0690

ALARM X ALARM TIME / 60 = AMP/HR FOR ALARM					
5.0690	X	1/4	=	1.2673	

STANDBY CURRENT X 24 = AMP/HR FOR ALARM					
0.0020	X	24	=	0.0480	

ADJUSTED BATTERY CAPACITY		
REQUIRED STANDBY CAPACITY (AMP-HOURS) + REQUIRED ALARM CAPACITY (AMP-HOURS)	1.3153	
REQUIRED CAPACITY WITH SAFETY FACTOR (120%)	1.5783	
NEW BATTERY SIZE =	7 AMP HR.	

FAPS BATTERY CALCULATION - 2 STORY MODULAR BLDG.

SCALE:NONE

(N) FAPS STROBE/SPEAKER WORSE CASE VOLTAGE DROP CALCULATION							
FAPS SIGNAL CIRCUIT							
QTY.	DESCRIPTION				ALARM (A)		TOTAL (A)
11	75cd STROBE (CEILING)				0.1110	=	1.2210
11	75cd SPEAKER (1/4W CEILING)				0.0104	=	0.1144
2	30cd STROBE (CEILING)				0.0630	=	0.1260
2	30cd SPEAKER (1/4W CEILING)				0.0104	=	0.0208
5	15cd STROBE (CEILING)				0.0410	=	0.2050
5	15cd SPEAKER (1/4W CEILING)				0.0104	=	0.0520
1	FLOW DETECTOR MONITOR MODULE				0.0050	=	0.0050
6	FA SPEAKER WP (1/2W)				0.0208	=	0.1248
					TOTAL	=	1.8690
							0.0000 A
	1.8690	X	130	X	21.50	=	0.8000
CIRCULAR MILLS	6,530						VD
	0.8000	X	100			=	3.3340
VOLTAGE	24						VD%

(N) FAPS VOLTAGE DROP CALCULATION

SCALE:NONE

REVISIONS

DC | ARCHITECTS
820 N. MOUNTAIN AVENUE
SUITE 200
UPLAND, CA. 91786
(909) 985 - 6939 OFFICE
(909) 985 - 0864 FAX

Engineous Group, Inc.

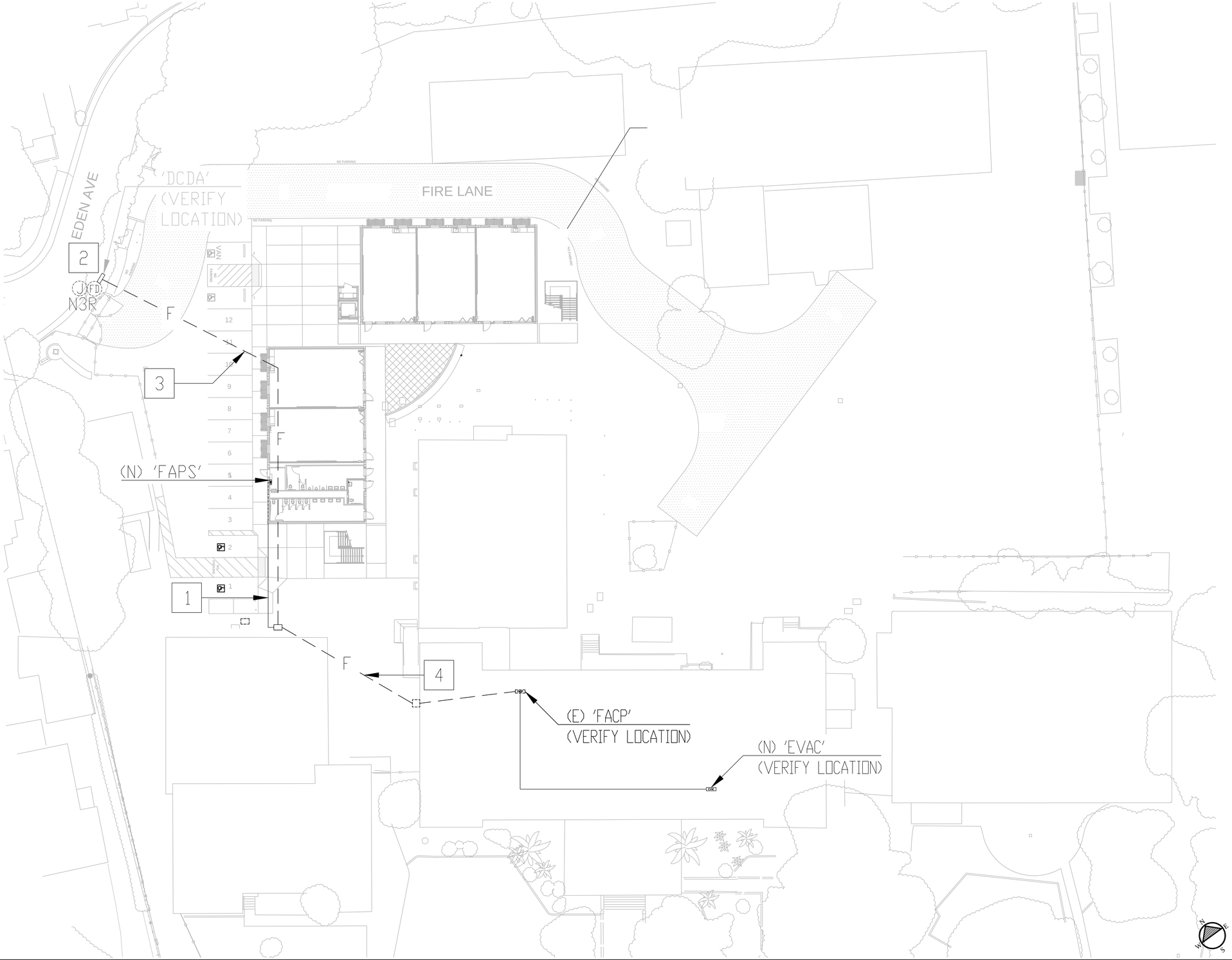
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

FIRE ALARM
RISER DIAGRAM
& CALCULATIONS

JOB NUMBER: 2019-026
DRAWN BY: JJL
DATE: 01.08.2021
CHK'D BY: 00.000000

FA-0.1

BID SET 10/01/2021



OVERALL FIRE ALARM SITE PLAN | SCALE:1/16"=1'-0" | 1

SITE PLAN GENERAL NOTES

1 ALL CONDUITS SHALL BE RUN NEATLY AND PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS. CONDUIT ROUTING SHOWN ON PLAN IS DIAGRAMMATIC AND IS INTENDED TO SHOW POSSIBLE FUNCTIONAL ROUTE OF CONDUITS AND CONDUCTORS. IN SOME CASES THE DRAWING SHOWS ROUTING WHICH MAY NOT BE PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL MEMBERS. THIS IS FOR CLARITY OF CIRCUITING AND NOT INTENDED TO APPROVE ANY DEVIATION FROM NEAT WORKMANSHIP.

2 COMBINING OF HOMERUNS AND OTHER CIRCUITS OTHER THAN WHAT IS SHOWN ON PLAN WILL NOT BE APPROVED.

3 COMBINING OF EMERGENCY CIRCUITS WITH OTHER CIRCUITS IN CONDUITS AND/OR JUNCTION BOXES WILL NOT BE APPROVED.

4 CONDUITS AND ROUTING FOUND OBJECTIONABLE BY THE ARCHITECT WILL BE REWORKED AT ELECTRICAL CONTRACTORS EXPENSE.

5 ELECTRICAL CONTRACTOR SHALL PROVIDE APPROVED SEISMIC STRUCTURAL SUPPORTS AS CURRENTLY ADOPTED BY IBC OR CBC WHERE APPLICABLE FOR ALL FIXTURES, BOXES AND OTHER ELECTRICAL EQUIPMENT.

6 ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS AND EQUIPMENT WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

SITE PLAN KEYED NOTES

1 PROVIDE 2" CONDUIT FOR FIRE ALARM SYSTEM FROM EXISTING FACP (NOTIFIER) IN 'BUILDING 1000' TO NEW MODULAR BUILDING. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.

2 EXISTING LOOP CONNECTION BACK TO EXISTING FIRE ALARM CONTROL PANEL IN BUILDING 1 FOR FLOW DETECTOR AT DCDA LOCATION. CONTRACTOR SHALL VERIFY LOCATION OF CONDUIT ROUTE PRIOR BID/CONSTRUCTION.

3 EXISTING CONDUIT AND CONDUCTORS TO FLOW DETECTOR TAMPER SWITCH AT DCDA LOCATION.

4 EXISTING UNDERGROUND FIRE ALARM CONDUITS AND CONDUCTORS.

SITE PLAN KEYNOTES | SCALE:NONE

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

OVERALL
FIRE ALARM SITE PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

FA-1.0

BID SET 10/01/2021

FIRE ALARM PLAN KEYED NOTES (NOT ALL MAY APPLY)

1. PROVIDE 2" CONDUIT ONLY FOR FIRE ALARM FROM EXISTING FIRE ALARM CONTROL PANEL "FACP" IN "BUILDING 1000" TO NEW "FAPS" IN LOW VOLT ROOM "109". RUN 2" CONDUIT ONLY FOR FIRE ALARM BELOW BUILDING CONSTRUCTION AND STUB UP TO SECOND LEVEL OF NEW MODULAR BUILDING. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR BID/CONSTRUCTION.
2. PROVIDE (1) 2" C.O. UNDERGROUND CONDUITS AND CONDUCTORS INSTALLED FOR FIRE ALARM.
3. EXISTING FIRE ALARM WIRING. CONTRACTOR SHALL VERIFY CONDITIONS OF EXISTING CONDUITS, CONDUCTORS, AND DEVICES PRIOR BID/CONSTRUCTION.
4. CONNECT FIRE ALARM POWER SUPPLY TO CIRCUIT 'RR-10', WITH A DEDICATED 1P20A 120V BREAKER. CIRCUIT BREAKER SHALL BE RED WITH HANDLE-IN CLAMP/LOCK. CONTRACTOR SHALL VERIFY CIRCUIT.
5. PROVIDE NEW FLOW DETECTOR MONITOR MODULE AT AFS BELL LOCATION. CONTRACTOR SHALL VERIFY CONDUIT ROUTE AND CONNECTIONS PRIOR INSTALLATION.

FIRE ALARM GENERAL NOTES

SCALE: NONE

NO PARKING

VAN

NO PARKING

CLASSROOM 101

CLASSROOM 102

CLASSROOM 103

S-10 S-12 S-14

STUB UP TO FLOOR ABOVE

STUB UP TO FLOOR ABOVE

H-14 AT — 75cd A1-01 V1-01 1/4W — H-13 AT

H-15 AT — 75cd A1-02 V1-02 1/4W — H-16 AT

H-17 AT — 75cd A1-03 V1-03 1/4W — H-18 AT

S-9 S-11 S-13

A1-04 1/2W

2

5 N3R AFS FIRE BELL (VERIFY LOCATION)

H-12 AT

A2-08 1/2W

S-7 — 75cd A2-01 V2-01 1/4W — S-8

H-11 AT

CLASSROOM 104

H-10 AT

CLASSROOM 105

A2-02 V2-02 75cd 1/4W

S-5 S-6

H-9 AT

STUB UP TO FLOOR ABOVE

LOW VOLT. 109

S-1 — H-1 AT 1/4W 15cd — A2-06 V2-06

H-2

4 2-HR ACCESS

H-8 AT H-7 AT

S-4 — A2-03 V2-03 30cd 1/4W

BOYS R.R. 106

S-3 — H-5 AT H-6 AT

A2-04 V2-04 15cd 1/4W

STAFF R.R. 108

GIRLS R.R. 107

3 1/2W EDL A2-07

1

A2-05 V2-05 30cd 1/4W

S-2 — H-4 AT H-3 AT

CONNECT TO EXISTING FACP IN IDF ROOM IN ADMINISTRATION 'BUILDING 1' (SEE SHEET FA-1.0)

12 11 10 9 8 7 6 5 4 3 2

ENLARGED FIRST FLOOR FIRE ALARM PLAN — SCALE: 3/16"=1'-0" — 1

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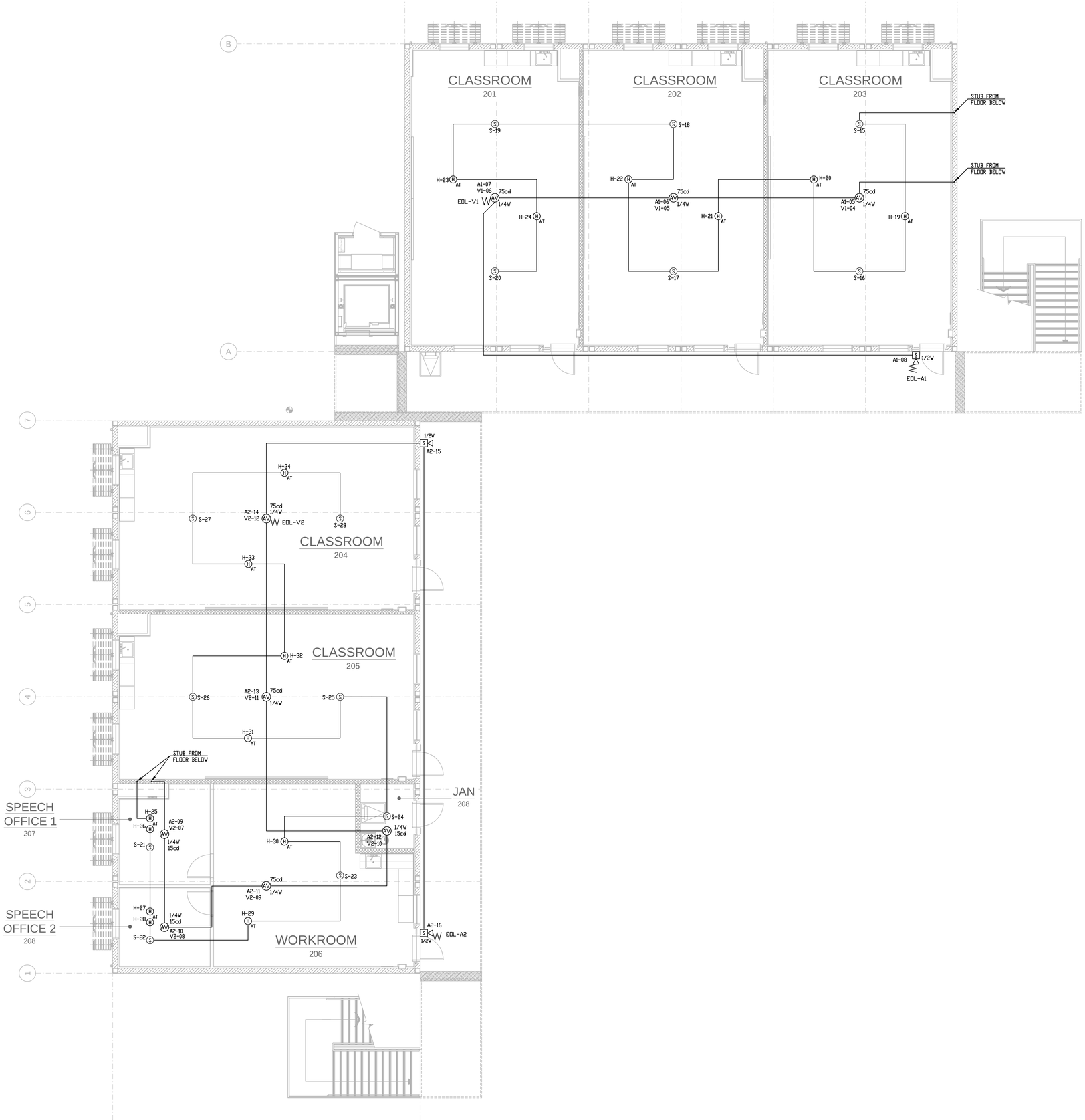
NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
GLENDALE, CALIFORNIA 91206
GLENDALE UNIFIED SCHOOL DISTRICT

FIRE ALARM
FIRST FLOOR PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

FA-2.1

BID SET 10/01/2021



FIRE ALARM GENERAL NOTES | SCALE: NONE

ENLARGED SECOND FLOOR FIRE ALARM PLAN | SCALE: 3/16"=1'-0" | 1

REVISIONS

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NEW 2 STORY BUILDING
GLENOAKS ELEMENTARY SCHOOL
2015 E. GLEN OAKS BLVD
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GLENDALE UNIFIED SCHOOL DISTRICT

FIRE ALARM
SECOND FLOOR PLAN -
LOCAL FIRE AUTHORITY -
2 STORY MODULAR CLASSROOM

JOB NUMBER: 2019-026
DRAWN BY: J.H.
DATE: 01.08.2021
DSA APP#: 00-000000

FA-2.2

BID SET 10/01/2021

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2017

- 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC) - PART 1, TITLE 24, CCR)
- 2019 CALIFORNIA BUILDING CODE (CBC), VOLUME 1 & 2 - (PART 2, TITLE 24 CCR) BASED ON THE 2015 INTERNATIONAL BUILDING CODE
- 2019 CALIFORNIA ELECTRICAL CODE (CEC) - (PART 3, TITLE 24, CCR) BASED ON THE 2014 NATIONAL ELECTRIC CODE
- 2019 CALIFORNIA MECHANICAL CODE (CMC) - (PART 4, TITLE 24, CCR) BASED ON THE 2015 UNIFORM MECHANICAL CODE
- 2019 CALIFORNIA PLUMBING CODE (CPC) - (PART 5, TITLE 24, CCR) BASED ON THE 2015 UNIFORM PLUMBING CODE
- 2019 CALIFORNIA ENERGY CODE (CEC) - (PART 6, TITLE 24, CCR)
- 2019 CALIFORNIA FIRE CODE (CFC) - (PART 9, TITLE 24, CCR) BASED ON THE 2015 INTERNATIONAL FIRE CODE
- 2019 CALIFORNIA GREEN BUILDING CODE (CGC) - (PART 11, TITLE 24, CCR)
- 2019 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

PARTIAL LIST OF APPLICABLE STANDARDS

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

GENERAL NOTES

1. ELEVATOR AND ELEVATOR STRUCTURE IS REQUIRED BUT IS PER PC 03-118291.
2. FIRE ALARM SYSTEM IS NOT PART OF THIS APPROVAL. REFER TO SITE FIRE ALARM PLANS.
3. FIRE SPRINKLER SYSTEM IS NOT PART OF THIS APPROVAL. REFER TO FIRE SPRINKLER DRAWINGS.
4. BUILDING EXITING IS BASED ON THE USE OR OCCUPANCY AND WILL BE REVIEWED AS SITE SPECIFIC.
5. BUILDINGS LOCATED IN FIRE HAZARD SEVERITY ZONES PER WILDLAND URBAN INTERFACE FIRE AREAS (WUI) SHALL CONFORM TO CBC CHAPTER 7A.
6. BUILDING IS NOT APPROVED TO HOUSE KINDERGARTEN, FIRST OR SECOND GRADE ABOVE THE FIRST STORY IN CONFORMANCE TO C.B.C. 442.1.4. NOT FOR USE IN SPECIAL HAZARD SUCH AS SCIENCE LAB AND VOCATIONAL SHOP OCCUPANCY.
7. SITE SPECIFIC PROJECTS INCLUDING THESE APPROVED BUILDING PLANS MUST BE SUBMITTED TO DSA FOR REGULAR PROJECT REVIEW AND MAY NOT BE SUBMITTED FOR OVER-THE-COUNTER (OTC) PLAN REVIEW.
8. THIS BUILDING REQUIRES AN AUTOMATIC FIRE SPRINKLER SYSTEM (AFSS) APPROVED BY DSA. THE FIRE SPRINKLER SYSTEM PLANS, FIRE FLOW TEST, UNDERGROUND PIPING SYSTEM, HYDRAULIC CALC'S, AND LOCAL FIRE SIGN OFF MUST BE PROVIDED WITH SITE SPECIFIC PROJECT. DESIGN AND PLANS FOR THE AFSS MAY NOT BE DEFERRED. (NOTE: SEE BUILDING DATA THIS SHEET FOR FIRE SPRINKLER SYSTEM WEIGHT INCLUDED IN BUILDING DESIGN)
9. IF THE STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF THE SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD. BUILDING FOUNDATIONS ARE NOT DESIGNED FOR LIQUEFIABLE SOILS.
10. THIS BUILDING IS NOT DESIGNED FOR FLOOD HAZARD AREAS.
11. THE PLACEMENT OF THE BUILDING(S) ON OR ADJACENT TO SLOPES SHALL COMPLY WITH THE 'FOUNDATION CLEARANCES FROM SLOPES' SPECIFICATIONS FOUND ON SHEET N2.0 OF THESE DRAWINGS.
12. BUILDING SHALL NOT BE PLACED OR BE RELOCATED IN AREAS HAVING A NOISE CONTOUR GREATER THAN OR EQUAL TO 65 CNEL, OR IN AREAS EXPOSED TO A NOISE LEVEL OF 65 dB L_{eq}-1-hr DURING ANY HOUR OF OPERATION WHEN NOISE CONTOURS ARE NOT READILY AVAILABLE, AS SPECIFIED IN CALGREEN CODE, SECTION 5.507.4.1 & 5.507.4.1.1.
13. THIS BUILDING IS NOT DESIGNED FOR SNOW LOADS.
14. THE BUILDING MANUFACTURER SHALL LEAVE FOR THE BUILDING OWNER AT OCCUPANCY THE OPERATING INFORMATION FOR ALL APPLICABLE MECHANICAL AND ELECTRICAL FEATURES, MATERIALS, COMPONENTS AND DEVICES INSTALLED IN THE BUILDING RELATED TO EFFICINET ENERGY USE. IN ADDITION, THE BUILDING MANUFACTURER SHAL LEAVE MAINTENANCE INFORMATION FOR ALL FEATURES, MATERIALS,COMPONENTS, AND MANUFACTURED DEVICES THAT REQUIRE ROUTINE MAINTENANCE FOR EFFICIENT OPERATION OF MECHANICAL EQUIPMENT AND LIGHTING SYSTEMS.

SITE-SPECIFIC OPTIONS

ROOFING	☒ SINGLE-PLY		
FLOOR DECK	☒ 3WH DECK 3"x18 GA. ASC PER IAPMO UES ER #0329		
FLOOR LIVE LOAD	UPPER FLOOR	☒ 50+15 PSF	
	GROUND FLOOR	☒ 50+15 PSF	
WALL STUDS		☒ LIGHT-GAUGE STEEL (SEE S9.0-S9.2)	
EXTERIOR WALL FINISH	☒ STUCCO		
PARAPET	☒ SEE S4.4 & S4.5	☒ (4) SIDED	
HVAC	☒ ROOF MOUNTED	☒ SPLIT SYSTEM	
CEILING HEIGHT	☒ 9'-0"		
FIRE SPRINKLERS	☒ (SEE GENERAL NOTES #3 & #9 THIS SHEET)		
SOLATUBE ON ROOF	☒ YES		
STAIRS	LIVE LOAD =100PSF R=2.50 Ω_o=1.25 Cd=2.50 ρ=1.3 I_e=1.25 STEEL SPECIAL CANTILEVER COLUMN SYSTEM		☒ SEE PAGE S11.0
	STAIR WIDTH	☒ 6'-6"	
	STAIR DECK	☒ 3"x18GA.	
ELEVATOR ROOF	☐ NO	☒ YES (SEE SHEET S13.0 - FOR 44' MEM ELEVATOR TOWER)	
LIQUEFIABLE SOILS	☒ NO	☐ YES (SEE GENERAL NOTE #13 THIS SHEET)	
GEOTECHNICAL & GEOHAZARD REPORT (REQUIRED FOR 2-STORY)	GEOTECHNICAL FIRM: SALEM ENGINEERING GROUP, INC.		
	GEOTECHNICAL REPORT #:3-220-0584 DATE: 09-18-20	GEOHAZARD REPORT #: 3-220-0584 DATE: 09-18-20	
	ALLOWABLE SOIL BEARING CAPACITY (PSF)	DEAD LOAD: 2,000 PSF	DEAD + LIVE LOAD: 2,500 PSF
		TOTAL LOAD, INCLUDING WIND OR SEISMIC LOADS 3,325 PSF	
	DEEPER FOOTINGS REQUIRED?	☐ NO	☒ YES - REQUIRED DEPTH: 18" MINIMUM
	WIDER FOOTINGS REQUIRED?	☐ NO	☒ YES - REQUIRED WIDTH: 15" MINIMUM
	OTHER FOUNDATION REQUIREMENTS: ☒ NO YES - EXPLAIN		
	* - INCREASE IN SOIL BEARING CAPACITY FOR LATERAL LOAD COMBINATIONS NOT PERMITTED UNLESS USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605A.3.2.		

American Modular Systems

(2) 72 x 40'
2 STORY MODULAR CLASSROOM BUILDINGS

BUILDING DATA

OCCUPANCY	E
TYPE OF CONSTRUCTION	V-B WITH AN AUTOMATIC FIRE SPRINKLER FOR HEIGHT AND ONE STORY INCREASE
WIND LOAD ASCE 7-10 SECTION 28.6.3 SIMPLIFIED PROCEDURE	V = 101 MPH . WIND SPEED; EXPOSURE = C; RISK CATEGORY = II; GC_{pi}=±0.18; K_{ZT} = 1.0; λ = 1.40; ROOF ANGLE = 1.2°
FLOOR LIVE LOAD (PSF)	UPPER FLOOR 50+15 GROUND FLOOR 50+15
ROOF LIVE LOAD (MAX PSF)	20 (NOT REDUCIBLE)
SNOW LOAD	NOT CONSIDERED
DESIGN DEAD LOADS (MAX PSF)	UPPER FLOOR ROOF: 17(20 OVER HANG) GROUND FLOOR ROOF: 18.0 FLOORS: 47.0 BALCONY: 64.0 EXTERIOR WALLS: 15.0 PARAPETS: 15.0 STAIRS: 40.0 STAIR LANDINGS: 47.0 SKYWALKS: 65.0
FIRE SPRINKLER SYSTEM DESIGN WEIGHT @ ROOF (PSF)	1.5 PSF AT ROOF (SEE GENERAL NOTES #3 & #9 THIS SHEET)
DESIGN SOIL BEARING CAPACITY[(a)] (PSF)	2,000
FLOOD HAZARD AREA	BUILDING NOT DESIGNED FOR FLOOR HAZARD AREA
BUILDING AREA (SQ. FT.)	BUILDING: 5,746 SF (LOWER), 5,746 SF (UPPER) - 11,492 SF TOTAL BALCONY: 1,150 SF. STAIRS: 454 SF SKYWALKS: 208 SF
CLIMATE ZONE	9
STRUCTURAL SYSTEM	LIGHT MODULAR STEEL MOMENT FRAMES PER CBC SECTION 2212A
MODULES	12'x40' MODULES
FOUNDATION TYPE[(a)]	CONCRETE

SITE SPECIFIC SEISMIC CRITERIA:

SITE SPECIFIC S_S = 2.149 SITE CLASS = C

SITE SPECIFIC S_1 = 0.765 (SEE FOOTNOTE (b) BELOW IF $S_1 > 0.75$)

SITE SPECIFIC S_{DS} = 1.719

SITE SPECIFIC S_{D1} = 0.714

SEISMIC: RISK CATEGORY II

Ω_O = 3.0 T = 0.370s R = 3.5 (OMF) F_V = 1.4

ρ = 1.0 C_d = 3.0 SEISMIC DESIGN CATEGORY: D ($S_1 \leq 0.75$)
E ($0.75 < S_1 < 1.5$)[(b)]

I_e = 1.25

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

NOTE:
ALL COMPONENTS AND CLADDING DESIGNED FOR S_{DS}=1.90.

FOOTNOTES:

(a) A GEOTECHNICAL REPORT AND GEOHAZARD REPORT IS REQUIRED PER 2019 CAC 4-317(e) AND 2019 CBC SECTION 1803A. THE GEOHAZARD REPORT MUST BE SUBMITTED TO CGS FOR ACCEPTANCE. A ⅓ INCREASE IN SOIL BEARING CAPACITY IS NOT PERMITTED UNLESS USING THE ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605A.3.2.

(b) PER CBC SECTION 1616A.1.3, FOR BUILDINGS ASSIGNED TO SEISMIC DESIGN CATEGORY E (S_1 >0.75), A GROUND MOTION HAZARD ANALYSIS SHALL BE PERFORMED IN ACCORDANCE WITH ASCE 7, CHAPTER 21 AS MODIFIED BY SECTION 1803A.6 OF THE 2019 CBC.

SHEET INDEX

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

TS

BID SET 10/01/2021

SECTION 1 GENERAL REQUIREMENTS

1. GENERAL

   A. THE REQUIREMENTS OF THE GENERAL CONDITIONS OF THE AGREEMENT AND THIS GENERAL REQUIREMENT APPLY TO THE SEVERAL TRADE SECTIONS WITH THE SAME FORCE AS THOUGH FULLY REPEATED IN EACH TRADE SECTION.

   B. NAME BRANDS ARE INDICATED TO ESTABLISH A STANDARD OF QUALITY. ITEMS OF EQUAL OR BETTER QUALITY MAY BE SUBSTITUTED FOR THE LISTED BRAND NAMED PRODUCTS WITH THE WRITTEN APPROVAL OF D.S.A. AND THE RDPRC.

   C. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF TITLES 19 AND 24 CALIFORNIA CODE OF REGULATIONS, 2019 C.B.C. NO CHANGES SHALL BE MADE FROM D.S.A. APPROVED DRAWINGS OR SPECIFICATIONS WITHOUT PRIOR WRITTEN APPROVAL OF D.S.A. AND THE RDPRC.

2. SCOPE OF WORK

   A. THE WORK CONSISTS OF MANUFACTURING OFF-SITE IN A PLANT AND INSTALLING ON-SITE, MODULAR RELOCATABLE BUILDINGS AS DEFINED HEREIN AND SHOWN AND DETAILED ON DRAWINGS.

   B. ALL REQUIREMENTS OF TITLE 24 OF THE STATE OF CALIFORNIA, CODE OF REGULATIONS, RELATING TO INSPECTIONS AND VERIFIED REPORTS SHALL BE COMPLIED WITH AND SHALL INCLUDE:

      1. GENERAL RESPONSIBLE CHARGE OF FIELD ADMINISTRATION BY THE ARCHITECT OF RECORD.
      2. INSPECTION IN-PLANT DURING THE COURSE OF CONSTRUCTION BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE DISTRICT ARCHITECT. THE INSPECTOR SHALL BE RESPONSIBLE FOR AND APPROVED TO INSPECT THE GENERAL CONSTRUCTION WELDING, MECHANICAL, AND ELECTRICAL WORK. COST OF THESE INSPECTIONS SHALL BE BORNE BY THE SCHOOL DISTRICTS.
      3. ON-SITE INSPECTION OF THE BUILDING INSTALLATION ELECTRICAL AND UTILITY INSTALLATION OR CONNECTIONS BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE DISTRICT ARCHITECT AND RETAINED BY THE SCHOOL DISTRICT.
      4. OTHER SPECIAL TESTS OR INSPECTIONS AS MAY BE REQUIRED BY THE DIVISION OF THE STATE ARCHITECT.
      5. ADDENDUMS SHALL BE SIGNED BY THE ARCHITECT & APPROVED BY D.S.A.
      6. CHANGES TO CONSTRUCTION DOCUMENT AFFECTING ACS, FLS & SSS SHALL BE SIGNED BY THE OWNER & ARCHITECT & APPROVED BY D.S.A. PRIOR TO COMMENCING WORK. CHANGES TO THE CONSTRUCTION COST ARE REPORTED TO D.S.A. USING FORM DSA-168 AT THE CONCLUSION OF THE PROJECT.
      7. THE TESTING LAB SHALL BE IN THE EMPLOY OF THE OWNER.
      8. ALL CONTRACTORS SHALL VERIFY ALL WORK CONDITIONS, DIMENSIONS AND DETAILS AND REPORT ANY OR ALL OMISSIONS AND DISCREPANCIES TO THE RDPRC/OWNER IMMEDIATELY BEFORE COMMENCING WORK.
      9. EACH CONTRACTOR TO BE RESPONSIBLE TO SEE THAT THEIR WORK CONFORMS TO ALL GOVERNMENTAL CODES WHETHER OR NOT SO STATED ON THE DRAWINGS.
      10. ALL MATERIALS AND WORKMANSHIP TO CONFORM TO THE LATEST REQUIREMENTS OF THE GOVERNING BUILDING CODES IN EFFECT AT TIME OF DSA APPLICATION.
      11. ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED AND ERECTED PER MANUFACTURER'S DIRECTIONS AND INSTRUCTIONS.
      12. SHOP DRAWINGS MAY BE REQUIRED. IF SO, THEY WILL BE ACCURATELY DRAWN TO A LARGE ENOUGH SCALE TO SHOW ALL PERTINENT FEATURES OF THE ITEM AND ITS CONNECTION TO RELATED WORK.
      13. THE MANUFACTURER OF BUILDING IS TO PLACE TWO PERMANENT METAL IDENTIFICATION LABEL ON EACH MODULE, MECHANICALLY FASTENED TO THE FRAME SEE "GENERAL DESIGN REQUIREMENTS", SHEET N2.0. FOR PROJECTS MANUFACTURED OFF-SITE, THE PLANT INSPECTOR IS TO INDICATE THE MANUFACTURER'S NAME AND SERIAL NUMBER OF EACH MODULE ON THE VERIFIED REPORT AND D.S.A. APP. NUMBER.
      14. ALL TESTS AND INSPECTIONS REQUIRED BY DSA SHALL BE COMPLIED WITH. ALL TESTS REQUIRED BY FIRE AND LIFE SAFETY REGULATIONS SHALL BE BY A NATIONALLY RECOGNIZED TESTING LABORATORY.

SECTION 2 FOUNDATION

1. ASSUMED ALLOWABLE SOIL BEARING CAPACITY FOR FOUNDATION DESIGN:
   - 2000 P.S.F. FOR CONCRETE FOUNDATIONS EMBEDDED 12" MINIMUM BELOW GRADE. (1/3 INCREASE IN SOIL BEARING CAPACITY NOT PERMITTED FOR WIND & SEISMIC LOAD COMBINATIONS UNLESS USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605A.3.2)
   - PROJECT GEOTECHNICAL REPORT #3-220-0584 DATED 09-18-20 PROVIDED BY SALEM ENGINEERING GROUP, INC.
2. FOOTINGS SHALL BE LOCATED ON UNDISTURBED, FIRM, NATURAL SOIL OR APPROVED COMPACTED FILL IN ACCORDANCE WITH THE SITE PROJECT GEOTECHNICAL REPORT.
3. WORK NOT INCLUDED:

   A. ALL ON-SITE OR OFF-SITE UTILITIES AND THE CONNECTION OF THEM TO THE BUILDING UNLESS INDICATED ON THE DRAWINGS.

   B. ALL LEVELING, GRADING OR OTHER SITE PREPARATION EXCEPT CONCRETE OR WOOD LEVELING STRIPS WHERE REQUIRED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

   C. FIRE ALARM SYSTEM, PROGRAM BELL, PUBLIC ADDRESS SYSTEM, INTERCOM SYSTEM, TV, TELEPHONE SYSTEM, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, OR MODIFIED BY CHANGE ORDER.
4. WHEELS AND HITCH SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
5. ACCESSIBILITY OF SITE: THE SCHOOL DISTRICT SHALL PROVIDE ACCESS TO THE SITE FOR THE INSTALLATION OF BUILDINGS. REMOVAL OF TREES, SHRUBS, FENCING, SPRINKLERS ETC. NECESSARY FOR THE MOVE-IN OF BUILDINGS SHALL BE THE RESPONSIBILITY OF THE SCHOOL DISTRICT.

SECTION 3 CONCRETE

1. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-14.
2. THE MINIMUM 28 DAY STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:
   BUILDING FOUNDATION VENTS & ACCESS WELLS ....PER SHEET S1.0 (150 PCF)
   CONCRETE OVER METAL DECK, STAIR UPPER LANDING & SKYWALK FOUNDATIONS...........PER SHEET S1.0 (150PCF)
3. THE MAXIMUM WATER TO CEMENT (W/C) RATIO SHALL BE PER SHEET S1.0 FOR FOUNDATIONS AND 0.45 FOR CONCRETE OVER METAL DECK SLABS.
4. CONCRETE SLUMP SHALL BE 4" ± 1".
5. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
   A. FLY ASH SHALL CONFORM TO ASTM C618 CLASS 'F' OR 'N' AND SHALL NOT EXCEED 25% CEMENT REPLACEMENT BY WEIGHT.
   B. SLAG CEMENT SHALL CONFORM TO ASTM C 989, GRADE 100 OR 120 AND SHALL NOT EXCEED 50% CEMENT REPLACEMENT BY WEIGHT.
   C. COMBINATION OF FLY ASH & SLAG CEMENT SHALL NOT EXCEED 50% CEMENT REPLACEMENT BY WEIGHT.
6. CONCRETE AGGREGATES:
   A. NATURAL SAND AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
   B. LIGHTWEIGHT AGGREGATE SHALL CONFORM TO ASTM C330.

CONCRETE continued

   C. MAX AGGREGATE SIZE SHALL BE 1"±1/4" FOR NORMAL WEIGHT CONCRETE EXCEPT 3/8" OR 1/2" MAX. MAY BE USED FOR FOUNDATION VENTS & ACCESS WELLS.
   D. MAX AGGREGATE SIZE SHALL BE 3/8" OR1/2" FOR LIGHT WT. CONCRETE.

7. REINFORCING SHALL CONFORM TO ASTM A615-GRADE 60, UNLESS OTHERWISE NOTED.
8. CONCRETE COVERAGE OVER REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON DRAWINGS:
   CONCRETE DIRECTLY AGAINST GROUND (EXCEPT SLABS) ....3"
   CONCRETE EXPOSED TO GROUND BUT PLACED IN FORMS ....2"
   SLABS (ON GROUND) ....POSITION IN CENTER OF SLAB
9. ALL BARS SHALL HAVE A CLASS B MINIMUM LAP SPLICE PER 20/S1.3 AND SPLICES IN ADJACENT BARS SHALL BE STAGGERED, UNLESS OTHERWISE NOTED.
10. REINFORCING BARS SHALL NOT BE WELDED UNLESS SPECIFICALLY DETAILED IN THE APPROVED DRAWINGS. BARS DETAILED TO BE WELDED SHALL BE ASTM A706 BARS AND WELDING ELECTRODES SHALL BE E80XX. WELDING SHALL CONFORM WITH AWS D1.4-2017 AND SHALL BE CONTINUOUSLY INSPECTED.
11. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE LAP SPLICED TWO SQUARES MINIMUM EACH DIRECTION.
12. NOTIFY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.
13. CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C494.
14. AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260.
15. NON-SHRINK GROUT: ASTM C1107, 5000 PSI MIN AT 7 DAYS

SECTION 5 STEEL

1. GENERAL - ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC 360-16 AND SECTION 2212A.1.2, TITLE 24 OF CALIFORNIA CODE OF REGULATIONS. A COPY OF TITLE 24 SHALL BE KEPT AT THE JOBSITE AT ALL TIMES.
   A. FABRICATION AND ERECTION SHALL COMPLY WITH AISC 360-16 CHAPTER "M" AND AISC 341-16 CHAPTER "1"
2. WELDING - ALL WELDING DONE BY SHIELDED ELECTRIC-ARC OR FLUX CORED-ARC PROCESS COMPLYING WITH REQUIREMENTS OF THE "STRUCTURAL WELDING CODE" OF THE AMERICAN WELDING SOCIETY. WELDING DONE BY OPERATORS QUALIFIED BY TESTS ACCEPTABLE TO THE DIVISION OF THE STATE ARCHITECT. WELDING INSPECTION PER TITLE 24, PART 2, CCR, SECTION 1705A.2.5 WELDING ELECTRODE SHALL BE E70XX. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20FT-LBS AT ZERO DEGREES F AND COMPLYING WITH AWS D1.8-2016. SECTION 6.1.
3. STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:
   A. WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A992, GRADE 50, TYP. U.N.O.
   B. STRUCTURAL STEEL CHANNELS SHALL CONFORM TO ASTM A572 GRADE 50 TYP. U.N.O. WHERE DRAWINGS SPECIFY 36 KSI MIN., CHANNELS MAY CONFORM TO EITHER ASTM A36 (36KSI) OR ASTM A572 GRADE 50.
   C. PIPE COLUMNS SHALL CONFORM TO ASTM A-53 WITH SULFUR CONTENT NOT EXCEEDING 0.05% TYP. U.N,O.
   D. STRUCTURAL STEEL TUBING (HSS) SHALL CONFORM TO ASTM A-500 GRADE B OR C OR ASTM A1085, TYP. U.N.O.
   E. STEEL PLATES, ANGLES, BARS AND MISC. SHAPES SHALL CONFORM TO ASTM A36 (36 KSI) TYP. U.N.O. WHERE DRAWINGS SPECIFY 50 KSI, PROVIDE STEEL CONFORMING TO ASTM A572 GRADE 50 NOTE: UNLESS NOTED OTHERWISE ASTM A572 GRADE 50 MAY BE SUBSTITUTED FOR ASTM A36 (36 KSI).
4. ERECTION - STRUCTURAL STEEL ERECTED TRUE, STRAIGHT, PLUMB AND TO ITS DESIGNATED LOCATIONS. FIELD CONNECTIONS BOLTED OR WELDED AS INDICATED ON THE DRAWINGS.
5. NAILS, BOLTS, SCREWS AND NUTS, ETC. - FOR EXTERIOR WORK SHALL BE CADMIUM PLATED OR GALVANIZED.
   A. BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED. ALL HOLES FOR BOLTS THRU STEEL TO BE DRILLED, OR TORCHED PILOT HOLE AND REAMED TO DIAMETER OF BOLT + 1/16" UNLESS OTHERWISE NOTED. NELSON STUDS (WELDED TO STEEL) MAY BE SUBSTITUTED FOR BOLTS SAME LENGTH AND DIAMETER.
   B. SEE "FASTENERS FOR ATTACHMENT TO STEEL" ON SHEET N2.0 FOR SHOT PINS & SCREWS.
6. HANDRAILS - FABRICATED, AS DETAILED, NON-FILLET WELDS GROUND SMOOTH.
7. SHOP PAINT
   A. EXPOSED STEEL COATED WITH ONE SHOP COAT OF RED OXIDE PRIMER.
   B. ALL SURFACES THOROUGHLY CLEANED BY EFFECTIVE MEANS PRIOR TO APPLICATION OF SHOP COATS.
8. GALVANIZING
   A. APPLY ZINC COATING BY THE HOT-DIP PROCESS PER ASTM A123.
   B. WHERE GALVANIZING IS DAMAGED OR MISSING, REPAIR WITH GALVANIZING REPAIR PAINT PER ASTM A780.
   C. UNLESS NOTED OTHERWISE, GALVANIZE ALL UNPAINTED EXTERIOR STEEL THAT IS EXPOSED TO THE ELEMENTS.
9. TESTS
   A. PROVIDE MILL CERTIFICATES OR TEST ALL STEEL MEMBERS PER TITLE-24 PART 2, CCR SECTION 1705A.2 & 2202A.

SECTION 6 CARPENTRY

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL CARPENTRY.
2. MATERIALS
   LUMBER GRADE MARKED IN ACCORDANCE WITH "STANDARD GRADING AND DRESSING RULES NO. 17" OF WEST COAST LUMBER INSPECTION BUREAU, OR "WESTERN LUMBER GRADING RULES", LATEST EDITION OF WESTERN WOOD PRODUCTS ASSOCIATION. OSB OR PLYWOOD GRADE MARKED IN ACCORDANCE WITH VOLUNTARY PRODUCT STANDARD PS 1-09 & PS 2-10 FOR SOFTWOOD OSB OR PLYWOOD, OF DEPARTMENT OF COMMERCE (DOC). EACH SHEET SHALL BEAR THE STAMP OF APA, PITTSBURGH TESTING, OR PFS TECO. MOISTURE CONTENT SHALL NOT EXCEED 19%.

   A. JOISTS, HEADERS, PLATES, STUDS: DOUGLAS FIR S4S #2 OR HEM FIR S4S #2 MINIMUM, U.N.O. NOTE: MSR 1650f-1.5E (HEM FIR) MAY BE SUBSTITUTED FOR #2 GRADE IF IT MEETS THE STRUCTURAL REQUIREMENTS FOR FLOOR AND ROOF MEMBERS.

   B. PSL HEADERS: TRUS JOIST PARALLAM PSL BY WEYERHAEUSER (ICC ESR-1387) OR EQUIV. MEETING THE FOLLOWING STRUCTURAL PROPERTIES.

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

   C. POSTS AND TIMBERS: DOUGLAS FIR S4S #1 OR HEM FIR S4S #1 MIN.

   D. BLOCKING: DOUG FIR #3, OR HEM FIR #3, OR STD. & BET.

   E. SILLS AND LUMBER & SHIM PLATES IN CONTACT WITH CONCRETE, MASONRY OR EARTH: DOUG FIR #2 OR HEM FIR #2 MIN. PRESSURE TREATED IN ACCORDANCE WITH CBC 2304.12.1. EACH PIECE SHALL BEAR AWPA STAMP. AWPA STANDARD U1 GROUND CONTACT, D.F. (OR H.F.) #2.

CARPENTRY continued

   F. MOISTURE BARRIER: KRAFT WATERPROOF BUILDING PAPER, OR 15 LB. FELT, CBC SECTION 1404.2 & ASTM D226, TYPE I.

   G. STUDS - S4S DOUG FIR #2 OR #2 HEM FIR. MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION.

   H. FASTENERS - FASTENERS SHALL BE CORROSION RESISTANT PER C.B.C. 2304.10.1.1 (COMMON NAILS PER ASTM F1667 FOR EXTERIOR SHEATHING ONLY) (0.131"x3" NAILS @ STACKED 2x PLATES)

   I. BUILDING TRIM - 2x RESAWN SELECT D.F., H.F., OR CEDAR.

   J. DOOR/WINDOW TRIM - 1x4 RESAWN D.F., H.F., OR CEDAR.

   K. FRAMING CONNECTORS SHALL BE FROM SIMPSON CATALOG LATEST ED.

   L. FIRE BLOCKS SHALL CONFORM TO CBC SECTION 718.2

   M. ALL NAILS SHALL BE COMMON NAILS PER ASTM F1667 UNLESS OTHERWISE NOTED.

   N. ALL CUT ENDS AND HOLES IN PRESSURE TREATED LUMBER SHALL BE TREATED WITH "CUPRINOL".

   O. ALL BOLTS AND LAG SCREWS SHALL COMPLY WITH THE 2018 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (ANSI\AWC NDS-2018).

   P. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".

   Q. HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME NOMINAL DIAMETER AND DEPTH AS THE SHANK. THE REMAINDER OF THE HOLE SHALL BE NO LARGER THAN THE ROOT OF THE THREAD.

   R. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD.

3. WORKMANSHIP

   A. FRAMING - SECURELY NAILED, BRIDGED AND BLOCKED TO FORM RIGID STRUCTURE. WORK CUT, FITTED AND ASSEMBLED LEVEL PLUMB AND TRUE TO LINE. TRIM IN AS LONG LENGTHS AS POSSIBLE WITH ALL STANDING TRIM IN ONE PIECE. TRIM SEALED AT ALL EDGES.

   B. NAILING - IN ACCORDANCE WITH TITLE 24, CALIFORNIA BUILDING CODE, TABLE 2304.10.1.

   C. EXTERIOR WALLS - FACTORY FABRICATED. CAULKING PROVIDED BETWEEN PERIMETER OF WALL AND STRUCTURAL MEMBERS PROVIDING WEATHER-PROOF AND WATER-TIGHT SEAL. NECESSARY CLOSERS, SEALS, AND FLASHINGS PLACED AT TOP AND BASE SUPPORT OF PANELS AND AROUND OPENINGS.

   D. NAILS INTO P.T. LUMBER TO BE HOT DIPPED GALVANIZED.

   E. MACHINE APPLIED NAILING: USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" OSB. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

   F. MOISTURE BARRIER - APPLIED TO STUDS WEATHER-BOARD FASHION, HORIZONTAL JOINTS LAPPED MIN 6" INCLUDING BUILDING CORNERS. SHEATHING APPLIED OVER MOISTURE BARRIER.

   G. TRIM SEALED AT ALL EDGES. SEALANT PAINTED TO MATCH TRIM OR SIDING UNLESS TRANSPARENT TYPE.

SECTION 7A SHEET METAL

1. SCOPE OF WORK

   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL INDICATED SHEET METAL.

2. MATERIALS

   A. SHEET METAL - STEEL SHEETS HOT DIP GALVANIZED WITH 1.25 OZ. PER SQUARE FOOT ZINC COATING CONFORMING TO ASTM A653 MINIMUM 26 GA. UNLESS OTHERWISE NOTED ON THE DRAWINGS.

   B. SOLDER - OF STAND, GRADE "A" OF EQUAL PARTS, ARD BRAND, LEAD AND TIN ASTM B32.

   C. FLUX - ZINC SATURATED MURIATIC ACID.

   D. GUTTERS: 26 GA. G-90 GALV. STEEL
      DOWNSPOUTS: 2"x3" CONVOLUTED 30 GA. G-90 GALV. STEEL
      GUTTER ENDCAPS: 26 GA. G-90 GALV. STEEL
      GUTTER CLIPS: 18 GA. G-90 GALV. STEEL

   E. FASTENERS:
      SELF-DRILLING OR SELF-TAPPING SHEET METAL SCREWS. LENGTH TO HAVE 3 EXPOSED
      THREADS MIN.

3. WORKMANSHIP
   SHEET METAL ACCURATELY FORMED TO DIMENSIONS AND SHAPES DETAILED WITH TRUE STRAIGHT LINES, CORNERS AND ANGLES. FLASHING INSTALLED IN LONGEST LENGTHS POSSIBLE. EXTERIOR WORK FORMED, FABRICATED AND INSTALLED SO THAT IT ADEQUATELY PROVIDES FOR EXPANSION AND CONTRACTION IN THE COMPLETED WORK AND FINISHES WATER AND WEATHER TIGHT. ALUMINUM SHALL BE SEPARATED FROM FERROUS METAL BY POLYETHYLENE TAPE OR FLOOD COAT OF ASPHALTIC PAINT.

SECTION 7B METAL ROOFING

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL METAL ROOFING. TEST RESULTS OR CALCULATIONS SHOWING THE ROOFING SYSTEM WILL WITHSTAND THE UPLIFT OF 101 MPH BASIC WIND SPEED SHALL BE SUBMITTED WITH THE PLANS AND SPECIFICATIONS.
2. MATERIALS

   A. ROOF: 3 INCH STANDING SEAM, MINIMUM 20-GAUGE, ASTM A653 G-90 GALV. INTERLOCKING (UN-PENETRATED) ASTM A1011 SS GR. 36 SHEET STEEL PANELS (G90).

   B. CLASS B FIRE RATING.

   C. FASTENERS SHALL BE HOT-DIPPED GALVANIZED.

SECTION 7C SEALANT

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND SERVICES TO SEAL BUILDINGS.
2. MATERIALS
   VULKEM SEALANT, POLYURETHANE, MANUFACTURED BY MAMECO INTERNATIONAL FOR ROOFS.
   "GEOCEL" SILICONIZED CAULK, GE, DUPONT, EAGLESEAL OR DAP FOR ALL OTHER APPLICATIONS, OR EQUAL.

   A. SEALANT V.O.C. LIMITS PER SCAQMD RULE 1168 (AS SHOWN IN TITLE 24, PART 11, TABLE 5.504.4.1 AND TABLE 5.504.4.2)

SEALANT continued

3. WORKMANSHIP
   SEALANT APPLIED TO DRY CLEAN SURFACES, WHEREVER INDICATED ON DETAILS AND AS NEEDED TO MAKE BUILDING WATERTIGHT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

SECTION 8 HOLLOW METAL DOORS AND FRAMES

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL HOLLOW METAL DOORS AND FRAMES.
2. MATERIALS

   A. DOORS - INSULATED TYPE L FULL FLUSH, MANUFACTURED BY AMWELD MANUFACTURING COMPANY, 18 GA. 1-3/4" THICK PER CS242 MIN, REINFORCE FOR HARDWARE-BOTH FACES FOR CLOSER, SOUND DEADEN INTERIOR.

   B. FRAMES - 16 GA COLD ROLLED, 2" FACES, CS242 MIN. 3 ANCHORS PER JAMB + ADJUSTABLE FLOOR ANCHOR, EACH JAMB REINFORCE FOR HARDWARE. PROVIDE STRIKE BOX, PROVIDE SOUND DEADENING: 1/8" UNDERCOATING OR INSULATING FILL.
3. WORKMANSHIP
   ALL WORK FABRICATED IN SHOP TO REQUIRED PROFILES BY FORMING AND WELDING, WITH ARISES AND EDGES STRAIGHT, SHARP FIT FABRICATED ACCURATELY WITH SQUARE CORNERS, HAIRLINE JOINTS AND SURFACES FREE FROM WARP, WAVE, BUCKLE OR OTHER DEFECTS AFTER FABRICATION, DOORS AND FRAMES CLEANED THOROUGHLY, ALL WELDS GROUND SMOOTH AND GIVEN PRIME COAT.

SECTION 9A STUCCO (EXTERIOR PORTLAND CEMENT PLASTER)

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

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

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

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

EXCEPTION: WHERE THE WATER-RESISTIVE BARRIER THAT IS APPLIED OVER WOOD-BASED SHEATHING HAS A WATER RESISTANCE EQUAL TO OR GREATER THAN THAT 60-MINUTE GRADE D PAPER COMPLYING WITH ASTM E2556, TYPE II AND IS SEPARATED FROM THE STUCCO BY AN INTERVENING, SUBSTANTIALLY NONWATER-ABSORBING LAYER OR DRAINAGE SPACE.

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

SECTION 9B PAINTS & COATINGS

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

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

   B. FOR INTERIOR TRIM:

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

   C. FOR METAL:

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

   D. INTERIOR PAINT & COATINGS SHALL COMPLY WITH TITLE 24, PART 11, "CAL-GREEN" SECTION 5.504.4.3, AND V.O.C. LIMITS PER TABLE 5.504.4.3.
3. WORKMANSHIP
   ALL EXPOSED SURFACES SHALL BE PAINTED EXCEPT ALUMINUM WINDOW FRAMES, THRESHOLDS AND METAL ROOFING. MATERIAL SHALL BE OF THE GRADE SPECIFIED OR EQUAL.

   A. EXTERIOR WOOD SIDING, TRIM AND SKIRTING - FLAT OR SEMI-GLOSS LATEX. APPLY ONE COAT OF PRIME AND AT LEAST ONE FINISH COAT. PRIME COAT SHALL BE BRUSHED ON OR SPRAYED AND BACK BRUSHED INTO ALL GROOVES IN THE SIDING. IF NECESSARY, IN THE OPINION OF THE INSPECTOR, AN EXTRA COAT SHALL BE APPLIED TO ALL GROOVES SO THAT THE FINISH COAT WILL HAVE A UNIFORM APPEARANCE. ALLOW PRIME COAT TO DRY ACCORDING TO MANUFACTURER'S RECOMMENDATION. PRIME AND FINISH COATS SHALL BE COMPATIBLE AND MANUFACTURED BY THE SAME COMPANY.

   B. INTERIOR TRIM - TRIM NOT PRE-COATED SHALL BE PAINTED WITH TWO COATS OF SEMI-GLOSS LATEX OVER PRIMER.

   C. INTERIOR HARDWOOD CABINETS - TWO COATS LOW LUSTER POLYURETHANE FINISH. APPLY FIRST COAT THINNED WITH ONE QUART MINERAL SPIRITS PER GALLON. APPLY SECOND COAT AS RECOMMENDED BY MANUFACTURER.

   D. METAL - ALL METAL SURFACES SHALL BE PAINTED WITH TWO COATS OF ALKYD FINISH COAT OVER ZINC CHROMATE OR EQUAL RUST INHIBITING PRIMER.

PAINTS & COATINGS continued

   E. RAMP - ONE COAT OF FERROX NON-SLIP (0.8 MIN. C.O.F.) SURFACING AS MANUFACTURED BY AMERICAN ABRASIVE METALS OR COMPARABLE. ALL PAINTS OF THE TYPE INDICATED SHALL BE LISTED ON THE STATE OF CALIFORNIA QUALIFIED PRODUCTS LIST, OR EQUAL.
   F. SUBMIT ONE SET OF COLOR SAMPLES TO ARCHITECT FOR EACH PRODUCT TO ASSIST IN SELECTION.

SECTION 9C INTERIOR AIR QUALITY CONTROL

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

1. ADHESIVES, SEALANTS, CAULKS — SECTION 5.504.4.1
2. PAINTS, COATINGS — SECTION 5.504.4.3
3. AEROSOL PAINTS & COATINGS — SECTION 5.504.4.3.1
4. CARPET SYSTEMS — SECTION 5.504.4.4
   A. CARPET SHALL MEET CRI'S "GREEN LABEL PLUS" PROGRAM, NSF/ANSI '140 GOLD' LEVEL, OR OTHER APPROVED TESTING PER 5.504.4.4.
5. CARPET CUSHION OR PAD — SECTION 5.504.4.4.1
   A. CUSHION/PAD SHALL MEET THE CRI'S "GREEN LABEL" PROGRAM.
6. COMPOSITE WOOD PRODUCTS — SECTION 5.504.4.5
   A. ALL COMPOSITE WOODS MUST NOT EXCEED THE FORMALDEHYDE LIMITS AS SPECIFIED IN ARB'S "AIR TOXICS CONTROL MEASURE" (17 CCR 93120), OR NON-EXEMPT MATERIALS PER TABLE 5.504.4.5.
7. RESILIENT FLOORING SYSTEMS — SECTION 5.504.4.6
   A. RESILIENT FLOORING SHALL BE CERTIFIED UNDER THE "FLOORSCORE" PROGRAM BY RFCI, COMPLY WITH CA-CHPS, OR OTHER APPROVED TESTING PER 5.504.4.6.

SECTION 13 SITE ASSEMBLY

1. SCOPE OF WORK
   CONTRACTOR SHALL PROVIDE ALL LABOR MATERIALS AND SERVICES TO PREPARE THE BUILDING ELEMENTS, TRANSPORT THEM FROM THE PLANT TO THE SITE AND TO COMPLETE THE ASSEMBLY AT THE SITE. THE CONDITION OF THE SITE, SUCH AS DRAINAGE AND SOIL BEARING CAPACITY, SHALL BE THE RESPONSIBILITY OF THE SCHOOL DISTRICT. UNLESS SPECIFICALLY CALLED FOR IN THE CONTRACT, STEPS, RAMPS, OR HANDRAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ASSEMBLY OF ELEMENTS

   A. IN A LOCATION ON THE SITE AS DETERMINED BY THE SCHOOL DISTRICT, (APPROVED BY DSA) THE CONTRACTOR SHALL PLACE WOOD LEVELING STRIPS OR OTHER SUITABLE SUPPORTS AS DETAILED ON THE DRAWINGS.

   B. THE ELEMENTS SHALL BE BROUGHT TO THE SITE ON WHEEL ASSEMBLY AND TRANSFERRED TO THE PREPARED SITE. GREAT CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ELEMENTS BY RACKING OR BUMPING EACH OTHER.

   C. CONNECTION OF THE ELEMENTS TOGETHER SHALL BE DONE ACCORDING TO INSTRUCTION ON THE DRAWINGS. FLASHINGS, TRIM AND OTHER LOOSE ITEMS SHALL BE INSTALLED PER DETAILS ON THE DRAWINGS.

SECTION 23 AIR CONDITIONING

1. SCOPE OF WORK (SEE SHEET M1.7 FOR HVAC SPEC. AND NOTES)
   CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL THE AIR CONDITIONING SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS, INCLUDING A/C UNITS AND ACCESSORIES, REMOTE THERMOSTAT, GRILLS AND POWER WIRING COMPLETE TO LOAD CENTER. CONTRACTOR SHALL INSTRUCT OWNER'S OPERATORS ON OPERATION AND MAINTENANCE OF A/C SYSTEM.
2. EQUIPMENT
   SEE NOTE ON FLOOR PLAN FOR SIZE AND TYPE.
3. WORKMANSHIP
   UNITS SHALL BE INSTALLED COMPLETE AND OPERATING WITH ALL ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

SECTION 26 ELECTRICAL

1. SCOPE OF WORK

   A. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES FOR ELECTRICAL INSTALLATION COMPLETE WITH ASSOCIATED EQUIPMENT AND FIXTURES, IN OPERATING CONDITION READY FOR USE. THE WORK INCLUDES: LIGHT AND POWER SYSTEMS, LIGHTING FIXTURES COMPLETE WITH LAMPS, CONNECTIONS AND DISCONNECTS TO A/C EQUIPMENT, EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVACS).

   B. PROVIDE CONDUIT WITH PULL STRINGS AND JUNCTION BOXES FOR AUTOMATIC DETECTION FIRE ALARM SYSTEM AND NOTIFICATION PER NFPA 72.
2. MATERIALS
   ALL NEW COMPLYING WITH REQUIREMENTS OF CALIFORNIA ELECTRIC CODE AND NATIONAL FIRE PROTECTION ASSOCIATION.

   A. ELECTRIC METALLIC TUBING - COUPLING AND FLEX CONDUIT GALVANIZED OR SHERARDIZED. EXTERIOR FLEX-GALV. STEEL WITH FACTORY APPLIED P.V.C. JACKET.

   B. PANEL BOARDS - FLUSH MOUNTED.

   C. CONDUCTORS - COPPER, INSULATED FOR 600 VOLTS, TYPE THHN FOR SIZES #12 TO #6, TYPE THW FOR LARGER SIZES. MINIMUM SIZE-#14.

   D. RECEPTACLES - AS NOTED. +18" A.F.F. MIN. TO BOTTOM OF BOX

   E. CLOCK RECEPTACLE - AS NOTED.

   F. SWITCHES - AS NOTED. +48" A.F.F. MAX. TO TOP OF BOX

   G. LIGHTING FIXTURES - AS NOTED ON THE DRAWINGS.
3. WORKMANSHIP
   MATERIALS AND EQUIPMENT INSTALLED IN A SECURE, NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH CODE REQUIREMENTS. PANEL BOARD CARDS SHALL BE FILLED OUT. CONDUIT AND CABLE INSTALLED IN WALL AND CEILING SPACES. WORK PIERCING WATERPROOFED AREAS FLASHED AND SEALED TO A WATERTIGHT CONDITION. BUILDING CONDUIT/WIRING FROM FACE OF BUILDING TO SITE TERMINATION BY SITE CONTRACTOR (N.I.C.). (FLEXIBLE CONDUIT S-BEND SEALTITE).

INSPECTION

INSPECTION OF PREFABRICATED BUILDINGS IS DIVIDED INTO TWO SEPARATE FUNCTIONS:

1. IN-PLANT INSPECTION.
2. ON-SITE INSPECTION.

THE CONTRACTOR SHALL ALLOW UP TO SEVEN (7) DAYS FROM THE DATE OF PLAN APPROVAL TO OBTAIN AN IN-PLANT INSPECTOR APPROVED BY D.S.A.

IN-PLANT INSPECTION AND MATERIAL TESTING SHALL BE ACCOMPLISHED UNDER THE SUPERVISION OF THE DISTRICT ARCHITECT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT ARCHITECT, DSA, AND THE DESIGNATED INSPECTOR/INSPECTION AGENCY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK. THE MANUFACTURER SHALL PROVIDE THE INSPECTOR WITH FULL ACCESS TO ALL PLANT OPERATIONS INVOLVING WORK UNDER THIS CONTRACT AND SHALL ADVISE THE INSPECTOR IN ADVANCE OF THE TIME AND PLACE OF OPERATIONS THAT THE INSPECTOR WANTS TO OBSERVE TAKE PLACE. BEFORE THE BUILDING(S) ARE REMOVED FROM THE PLANT FOR DELIVERY TO THE STORAGE FACILITY, OR FROM THE STORAGE FACILITY TO THE SITE, THE INSPECTOR SHALL DETERMINE THAT THEY ARE ACCEPTABLE AND ISSUE A WRITTEN RELEASE WHICH SHALL BE IN THE FORM OF A VERIFIED REPORT (FORM DSA 152-IPI).

A COPY OF THE INSPECTOR'S VERIFIED REPORT SHALL ACCOMPANY EACH BUILDING TO STORAGE OR TO THE SITE. THE INSPECTOR SHALL PUT ONE COPY IN EACH BUILDING.

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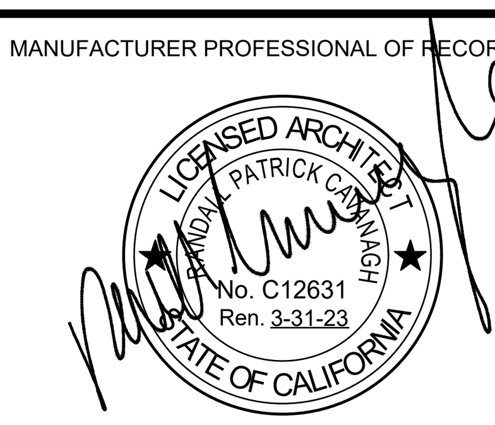
SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC



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

REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER:

N1.0

BID SET 10/01/2021

COORDINATION OF WORK

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

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

MATERIALS AND WORKMANSHIP

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

GENERAL DESIGN REQUIREMENTS

1. UP TO TWENTY (20) MODULES, APPROXIMATELY 12' x 40', DESIGNED SO THAT FOUR (4) OR MORE MODULES MAY BE JOINED TOGETHER TO FORM A COMPLETE STRUCTURE, TO MAINTAIN A POSITIVE ALIGNMENT OF FLOORS, WALLS, AND ROOF, AND TO PERMIT SIMPLE NON-DESTRUCTIVE DETACHMENT FOR FUTURE RELOCATION.
2. EACH MODULE SHALL BE PERMANENTLY IDENTIFIED WITH (2) IMPRINTED (STAMPED, NOT ENGRAVED) METAL IDENTIFICATION TAGS 3"x1-1/2" MINIMUM SIZE WITH THE FOLLOWING INFORMATION:
   A. MANUFACTURER'S NAME AND BUILDING SERIAL NUMBER.
   B. DESIGN WIND SPEED / EXPOSURE
   C. DESIGN SEISMIC S VALUE
   D. DESIGN ROOF LIVE LOAD & SNOW LOAD.
   E. DESIGN FLOOR LIVE LOAD
   F. D.S.A. APPLICATION NUMBER
3. 2-TAGS PER MODULE: ONE ON EXTERIOR, AND ONE ON MODULE BEAM AT FRONT OF BUILDING ABOVE CEILING.
4. EACH MODULE SHALL BE CAPABLE OF RESISTING ALL VERTICAL AND LATERAL LOADS DURING TRANSPORTATION AND RELOCATION. (NORMAL INDUSTRY PRACTICE FOR BRACING MODULES DURING TRANSPORTATION AND RELOCATIONS IS ACCEPTABLE.) WHEN MODULES ARE ASSEMBLED JOINTS SHALL BE SEALED WITH REMOVABLE CLOSING STRIPS OR OTHER METHOD TO PRESENT A FINISHED APPEARANCE AND BE PERMANENTLY WATERPROOF.
5. EACH MODULE SHALL BE SUFFICIENTLY RIGID TO BE JACKED UP AT THE FRONT AND BACK CORNERS FOR RELOCATION WITHOUT DAMAGE OR THE MODULE SHALL HAVE LIFT LUGS AT FRONT AND BACK LOCATED AS REQUIRED SO THAT THE MODULE MAY BE JACKED UP FOR RELOCATION IN ONE PIECE WITHOUT ADDITIONAL SUPPORTS OF ANY TYPE. EVIDENCE OF EXCESSIVE BOWING DURING THE INSTALLATION OF THE MODULES WHICH, IN THE OPINION OF THE AGENCY ARCHITECT OR STRUCTURAL ENGINEER, CAUSES EXCESSIVE WORKING AT ANY JOINT OR COMPROMISES THE STRUCTURAL INTEGRITY OF THE MODULE SHALL BE SUFFICIENT REASON FOR REJECTION OF THE MODULE.
6. FINISH AND BASE MATERIALS AT EACH MODULE SHALL TERMINATE AT INTERIOR MODULE JOINTS IN A MANNER TO JOIN FLUSH AND TIGHT WITH SAME MATERIAL IN ADJACENT MODULE SO THE MODULE MAY BE RELOCATED WITH MINIMUM CUTTING AND PATCHING.

DOORS & WINDOWS

1. EXTERIOR DOORS: METAL DOORS - 3'-O"x7'-0" HOLLOW METAL DOOR CONSTRUCTION OF 1 SHEET OF 18 GA. GRADE II STEEL ASSEMBLED PER CS242 MINIMUM, AND REINFORCED WITH 20 GA. MINIMUM. FILL DOOR SPACES WITH MINERAL WOOL OR OTHER INSULATION. (REINFORCE BOTH FACES FOR CLOSURE.) PROVIDE FLUSH TOP ON DOORS. HARDWARE REINFORCEMENT SHALL BE 10 GA. MIN FOR HINGES, DOOR FRAME SHALL BE 16 GA. PRESSED STEEL FRAME ASTM A366 & C5242. HARDWARE REINFORCEMENT SHALL BE 10 GA. PLATE. FRAMES SHALL BE DESIGNED WITH INTEGRAL STOP AND TRIM. PROVIDE (3) ANCHORS PER JAMB PLUS ADJUSTABLE FLOOR ANCHOR. ROOMS WITH AN OCCUPANT LOAD OF FIVE OR MORE SHALL HAVE DOOR HARDWARE CAPABLE OF BEING LOCKED FROM THE INSIDE (PER CBC 1010.1.11).
2. EXTERIOR WINDOWS: PROVIDE ANODIZED ALUMINUM FRAME 5/8" MINIMUM DUAL PANE WINDOW UNITS, AS SHOWN ON FLOOR PLANS. THE 5/8" DIMENSION IS THE MINIMUM THICKNESS FOR THE DUAL GLAZED WINDOW PANEL CONSISTING OF TWO LITES OF GLASS AND THE AIR SPACE.
3. GLAZING MATERIAL SHALL BE: EXTERIOR LITE - 3/16" MINIMUM TEMPERED GLASS OR LAMINATED AS - 1 GLASS OF SOLAR GRAY GLARE REDUCING TYPE WITH A LIGHT TRANSMISSION FACTOR OF 45% MAXIMUM. INTERIOR LITE - 1/8" MINIMUM CLEAR TEMPERED. MINIMUM AIR SPACE SHALL BE 1/4" SPACE - BENT OR SEALED CORNER ALUMINUM WITH DESICCANT FILL SEALER - BUTYL PRIMARY SEAL AND POLYSULFIDE OR SILICONE SECONDARY SEAL. CERTIFICATION - ALL GLAZING TO BE CERTIFIED IN ACCORDANCE WITH ASTM E-773, E-774.
4. HEADER HEIGHT SHALL BE THE SAME AS THE DOOR. ALL OPERABLE SASH SHALL HAVE ALUMINUM SCREENS. WINDOWS SHALL NOT BE MOUNTED TO THE EXTERIOR OSB SURFACE. ALL WINDOWS SHALL MEET THE AAMA GS101-88 VOLUNTARY SPEC. FOR ALUMINUM PRIME WINDOWS AND SLIDING GLASS (ANS1), COMMERCIAL GRADE.

INTERIOR

1. FLOOR COVERING: PER CBC SECTION 804, COMPLY WITH NFPA 253 CLASS I OR II. COMPLY WITH ASTM E 648 FOR SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 450. IN EXIT PASSAGEWAYS OR CORRIDORS, THE MINIMUM CRITICAL RADIANT FLUX (CBC 804.4.2) SHALL NOT BE LESS THAN CLASS II. (CARPET SHALL BE SECURELY ATTACHED, HAVE FIRM CUSHION, PAD OR BACKING, OR NONE AT ALL. PILE YARN SHALL BE BRANDED NYLON AND HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL-CUT PILE OR LEVEL-CUT/UNCUT PILE TEXTURE. THE MAXIMUM PILE HEIGHT SHALL BE 1/2" INCH. NO CROSS SEAMS SHALL BE ALLOWED. THE CARPET DENSITY SHALL BE 4600 MINIMUM. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 11B-303. COLOR TO BE SELECTED BY ARCHITECT OR OWNER.)
2. BASE: RESILIENT COVE BASE - BEST QUALITY, MOULDED RUBBER, 1/8" THICK, 4" HIGH MOULDED TOP SET COVE. PROVIDE PREFORMED BASE FOR SQUARE EXTERNAL CORNERS AND PREFORMED END STOPS WHERE BASE DOES NOT ABUT. SOLID COLOR AS MANUFACTURE BY "JOHNSONITE CO.", FLEXCO, OR EQUAL. APPLY COVE TO COMPLETE PERIMETER OF CLASSROOM.
3. INTERIOR WALLS SHALL BE VINYL COVERED TACKBOARD (U.O.N.) APPLIED IN ONE CONTINUOUS LENGTH FROM FLOOR TO CEILING. THE TACKBOARD SHALL BE INDUSTRIAL INSULATION BOARD MANUFACTURED SPECIFICALLY AS A SUBSTITUTE FOR VINYL COVERED WALL PANELS. THE BOARD SHALL BE ASPHALT FREE, SHALL HAVE AN IRONED-ON COATING AND SHALL HAVE A MINIMUM DENSITY OF 18 LBS. PER FOOT. THE VINYL COATING SHALL BE MADE OF VIRGIN VINYL CALENDERED BASE COLOR, WEIGHING A MINIMUM OF 8 OZ. PER SQUARE YARD. THE COATING BACKING SHALL BE SHEETING OR NON-WOVEN FABRIC. THE VINYL COATING SHALL BE MECHANICALLY LAMINATED, WITH THE LONG EDGES WRAPPED, TO THE TACKBOARD. TACKBOARD SHALL BE APPLIED OVER 1/2" SHEETROCK OR OSB SHEATHING. THE VINYL WALL COVERED PANEL SHALL HAVE A CLASS 'C' RATING (PER ASTM E 84 OR UL 723). FLAME SPREAD/SMOKE DEVELOPED INDEX MAXIMUMS PER NOTE #6 BELOW. THE PANEL SHALL BE APPROVED FOR CLASSROOM USE BY THE CALIFORNIA STATE FIRE MARSHAL. REFERENCE BRAND: VINYL COVERED TACKBOARD AS MANUFACTURED BY CHATFIELD-CLARKE OR COMPARABLE. CARE SHALL BE TAKEN IN MOUNTING THE TACKBOARD SO THAT THE TEXTURE OF ALL PANELS WILL HAVE THE SAME ORIENTATION AND COLOR MATCH.
4. CEILING: SUSPENDED T-BAR SYSTEM, SEE SHEET M1.4 FOR DETAILS, MATERIALS AND INSTALLATION PER ASTM C635, ASTM C636 AND ASTM E580 AS APPLICABLE TO CLASSROOMS. PANELS SHALL BE 5/8" MINIMUM THICK, MINERAL FIBERBOARD OR VINYL-FACED FIBERGLASS LAY-IN PANELS, SQUARE EDGE, LIGHT REFLECTION 75% MINIMUM. NOISE REDUCTION COEFFICIENT OF 0.65 MINIMUM. ASTM E 84 TESTED, RATED CLASS 'C': FLAME SPREAD INDEX NOT TO EXCEED 200, SMOKE DEVELOPED INDEX RATING NOT TO EXCEED 450.
5. THE INTERIOR ENVIRONMENT SHALL BE ASSEMBLED WITH PRODUCTS THAT CONTRIBUTE TO A HEALTHY INDOOR AIR QUALITY (IAQ). THE FOLLOWING SHALL COMPLY TITLE 24, PART 11 ("CAL-GREEN"), SECTION 5.504.4.
   A. ADHESIVES, SEALANTS, CAULKS — SECTION 5.504.4.1
   B. PAINTS, COATINGS — SECTION 5.504.4.3
   C. AEROSOL PAINTS & COATINGS — SECTION 5.504.4.3.1
   D. CARPET SYSTEMS — SECTION 5.504.4.4
      D.1. CARPET SHALL MEET CRI'S "GREEN LABEL PLUS" PROGRAM, NSF/ANSI '140 GOLD' LEVEL, OR OTHER APPROVED TESTING PER 5.504.4.4.
   E. CARPET CUSHION OR PAD — SECTION 5.504.4.4.1
      E.1. CUSHION/PAD SHALL MEET THE CRI'S "GREEN LABEL" PROGRAM.
   F. COMPOSITE WOOD PRODUCTS — SECTION 5.504.4.5
      F.1. ALL COMPOSITE WOODS MUST NOT EXCEED THE FORMALDEHYDE LIMITS AS SPECIFIED IN ARB'S "AIR TOXICS CONTROL MEASURE" (17 CCR 93120), OR NON-EXEMPT MATERIALS PER TABLE 5.504.4.5.
   G. RESILIENT FLOORING SYSTEMS — SECTION 5.504.4.6
      G.1. RESILIENT FLOORING SHALL BE CERTIFIED UNDER THE "FLOORSCORE" PROGRAM BY RFCI, COMPLY WITH CA-CHPS 01350, OR OTHER APPROVED TESTING PER 5.504.4.6.
   H. HVAC FILTER (MERV RATING OF 8+) — 5.504.5.3.1
6. FLAME SPREAD/SMOKE-DEVELOPED INDEX (TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, PER CBC 803.1.1):

   WALL FINISH MATERIAL (CLASS 'C')
   FLAME SPREAD MAX = 200
   SMOKE DEVELOPED MAX = 450

   PIPE INSULATION (CLASS 'A')
   FLAME SPREAD MAX = 25
   SMOKE DEVELOPED MAX = 450

   BUILDING INSULATION (CLASS 'A')
   FLAME SPREAD MAX = 25
   SMOKE DEVELOPED MAX = 450

   DUCT INSULATION (CLASS 'A')
   FLAME SPREAD MAX = 25
   SMOKE DEVELOPED MAX = 50
7. TOILET PARTITIONS: SOLID PLASTIC BY ACCURATE PARTITIONS CORP. OR EQUIVALENT w/ FLOOR ANCHORS, OVERHEAD BRACED OR EQUIVALENT. MINIMUM FLAME SPREAD RATING: 50. MINIMUM SMOKE DEVELOPMENT RATING: 450. (BY OTHERS)

MARKERBOARD SPECIFICATIONS

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

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

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

MECHANICAL EQUIPMENT PROTECTION

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

FOUNDATION CLEARANCES FROM SLOPES

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

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

FIRE EXTINGUISHER

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

ACCESSIBILITY STANDARDS

REFERENCE: 2019 CALIFORNIA BUILDING CODE (TITLE 24, PART 2, CCR), CHAPTER 11B "ACCESSIBILITY TO PUBLIC..."

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

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

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

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

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

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

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

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

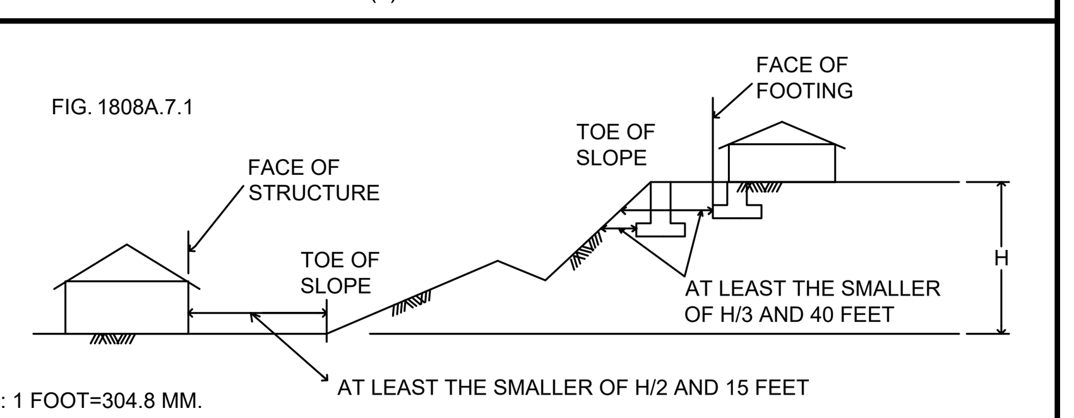
SECTION 11B-608.5 WATER CONTROLS
1. CONTROLS TO OPERATE A WATER FAUCET OR OUTLET SHALL BE A SINGLE-LEVER DESIGN, CAPABLE OF BEING OPERATED WITH A SINGLE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
2. THE FORCE REQUIRED TO OPERATE CONTROLS SHALL NOT EXCEED 5 LBS.

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

OUTDOOR VENTILATION REQUIREMENTS:

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

FIG. 1808A.7.1



FOR SI: 1 FOOT=304.8 MM.

LIGHT GAUGE METAL STUDS & COLD FORMED STEEL

1. ALL LIGHT GAUGE METAL STUDS & COLD FORMED STEEL SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE AISI S100-16.
2. ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A653.
3. CUSTOM FORMED SHAPES SHALL BE BENT FROM ASTM A1011 SS STEEL SHEETS.
4. STUD AND TRACK DESIGNATIONS ARE BASED ON STEEL STUD MANUFACTURERS ASSOCIATION. ICC-ES EVALUATION REPORT ESR-3064P.
5. GALVANIZED FRAMING PRODUCTS SHALL BE COATED IN ACCORDANCE WITH AISI S240-15,SECTION A4. PRODUCTS WILL BE FURNISHED WITH A G-60 OR EQUIVALENT COATING IF SPECIFIED, AND SHALL BE IN CONFORMANCE WITH ASTM C-955, OTHERWISE, G-90 OR EQUIVALENT COATING WILL BE PROVIDED.
6. LIGHT GAUGE STEEL TUBES FOR GUARD RAILS/POSTS SHALL BE ASTM A1011, GRADE 45(Fy=45KSI).
7. WELDING OF LIGHT GAUGE METAL STUDS & COLD FORMED STEEL SHALL COMPY WITH AWS D1.3-08.

FASTENERS FOR ATTACHMENT TO STEEL

1. SCREWS FOR STEEL TO STEEL & WOOD TO STEEL CONNECTIONS SHALL BE SELF-DRILLING, SELF-TAPPING SCREWS (SDSTS) PER ASTM C1513,UON..
   A. HEAD TYPE AS REQUIRED FOR APPLICATION.
   B. SCREW LENGTHS TO HAVE 3 EXPOSED THREADS MIN.
2. SHOT PINS SPECIFIED FOR PLYWOOD DIAPHRAM TO LIGHT GAUGE STEEL CONNECTIONS SHALL BE ET&F PINS PER IAPMO UES REPORT ER-0335.
3. SHOT PINS FOR ATTACHMENT OF 2X WOOD OR LIGHT GAUGE STEEL MEMBERS TO STRUCTURAL STEEL OR CONCRETE SHALL BE BY HILTI UNO.

METAL FLOOR DECK

1. SECTION PROPERTIES SHALL BE DERIVED IN ACCORDANCE WITH AISI, "SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, LATEST EDITION."
2. METAL DECKING IS TO BE ATTACHED TO THE STRUCTURAL FRAME IN CONFORMANCE WITH AWS D1.1 AND D1.3, "SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES."
3. ASTM REFERENCE NUMBERS: ASTM A653, STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANEALED) BY THE HOT-DIP PROCESS STRUCTURAL (PHYSICAL) QUALITY.
4. STEEL DECK INSTITUTE (SDI)-METAL FLOOR DECK PROFILES SHALL BE IN CONFORMANCE WITH SDI STANDARDS.
5. METAL FLOOR DECK TO BE ASC STEEL DECK PER IAPMO ER-0329:
   5.1. BH-36, 18 GAUGE, $1\frac{1}{2}$" DEEP x 36" WIDE
   5.2. NH-32, 18 GAUGE, 3" DEEP x 32" WIDE
   5.3. 3WxH-36, 18 GAUGE, 3" DEEP x 36" WIDE
6. DECK UNITS ARE TO BE FABRICATED FROM SHEET STEEL CONFORMING TO:
   6.1. ASTM A653 SS, Fy=50 KSI WITH A GALVANIZED COATING, G-60 OR G-90.

ABBREVIATION LEGEND

A	ACCESSIBLE
AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
A/C	AIR CONDITIONING
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS	ACOUSTICAL
ADD	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE OR ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECT(URAL)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWC	AMERICAN WOOD COUNCIL
AWPA	AMERICAN WOOD PROTECTION ASSOCIATION
AWS	AMERICAN WELDING SOCIETY
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BN	BOUNDARY NAILING
BOT/BOTT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
BUR	BUILT UP ROOFING
C	CARPET
CAB	CABINET
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CCR	CALIFORNIA CODE OF REGULATIONS
CEM	CEMENT
CF	CUBIC FOOT
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CLG	CEILING
CLR	CLEAR
CT	CERAMIC TILE
CMU	CONCRETE MASONRY UNIT
CNEL	COMMUNITY NOISE EQUIVALENT LEVEL
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CSK	COUNTERSINK
CTRD	CENTERED
CW	COLD WATER
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN OR DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DR	DOOR
DS	DOWNSPOUT
DSA	DIVISION OF THE STATE ARCHITECT
DWG	DRAWING
(E)	EXISTING
EA	EACH
EJ	EXPANSION JOINT
ELEV	ELEVATION
ELECT	ELECTRICAL
EMBED	EMBEDMENT
EMT	ELECTRICAL MAGNETIC TUBING
EN	EDGE NAILING (OR EDGE FASTENING)
ETC	ET CETERA
EQ	EQUAL
EW	EACH WAY
EXP	EXPOSURE
EXT	EXTERIOR
F	FAHRENHEIT
FUT	FUTURE
FAB	FABRICATION
FAC	FACTORY
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FG	FINISHED GRADE
FHWS	FLAT HEAD WOOD SCREW
FIN	FINISH
FLR	FLOOR
FLSHG	FLASHING
FN	FIELD NAILING
FND/FNDN	FOUNDATION
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOP	FACE OF PLYWOOD
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PLASTIC PANELS
FT	FOOT
FTG	FOOTING
FURR	FURRED (-ING)
GA	GAUGE
GB	GYPSUM BOARD
GL	GLASS OR GLAZING
GLV/GALV	GALVANIZED
GSM	GALVANIZED SHEET METAL
GYP	GYPSUM
GYP.BD.	GYPSUM BOARD
HB	HOSE BIBB
HC	HOLLOW CORE
HDR	HEADER
HDW	HARDWOOD
HF	HEM FIR
HM	HOLLOW METAL (STEEL)
HOR/HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION (STEEL)
HT	HEIGHT
HVAC	HEATING VENTILATING AIR CONDITIONING
HW	HOT WATER
IAPMO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATE (D), (ION)
INT	INTERIOR
INV	INVERT
IR	INTERPRETATION OF REGULATIONS
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY/ACCESS
JT	JOINT
KSI	KIPS PER SQUARE INCH (KIPS = 1,000LBS)
LAM	LAMINATE(D)
LAV	LAVATORY
LB, LBS	POUND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNDG	LANDING
LONG	LONGITUDINAL
LS	LAG SCREW
LT	LIGHT
LW	LIGHT WEIGHT
LWC	LIGHT WEIGHT CONCRETE
MATL	MATERIAL
MAX	MAXIMUM
MB	MECHANICAL BOLT
MECH	MECHANICAL
MFG	MANUFACTURING
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MM	MILLIMETER
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NDS	NATIONAL DESIGN SPECIFICATION
NW	NORMAL WEIGHT
NWC	NORMAL WEIGHT CONCRETE
O/	OVER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND OR OVERHANG
OL	OCCUPANT LOAD
OPG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PAF	POWER-ACTUATED FASTNER
PJP	PARTIAL JOINT PENETRATION
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLF	POUNDS PER LINEAR FOOT
PLT	PLATE
PLWD/PLY	PLYWOOD
PNL	PANEL
POC	POINT OF CONNECTION
PS	PRODUCT STANDARD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
PTDF	PRESERVATIVE TREATED DOUGLAS FIR
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
R	RISER
RD	ROOF DRAIN
RDPRC	REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE
RDWD	REDWOOD
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D/REQ	REQUIRED
RES	RESILIENT
RDWD	REDWOOD
RWL	RAIN WATER LEADER
SCH/SCHED	SCHEDULE
SD	STORM DRAIN
SDSTS	SELF DRILLING SELF-DRILLING, SELF-TAPPING SCREW
SEC	SECTION
SEP	SEPARATION
SF	SQUARE FEET
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SMS	SHEET METAL SCREW
SP	STRUCTURAL PLYWOOD
SPEC	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STAGG	STAGGERED
STN	STAIN
STD	STANDARD
STL	STEEL
STS	SELF TAPPING SCREW
STSMS	SELF TAPPING SHEET METAL SCREW
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TEMP	TEMPERED
THRU	THROUGH
TJ	TOOL JOINT
TOC	TOP OF CURB, CRICKET, OR CONCRETE
TOP	TOP OF PARAPET
TOS	TOP OF SLAB, SHEATHING, OR STEEL
TOW	TOP OF WALL
TRANS	TRANSVERSE
TS	TOP OF SHEATHING
TV	TELEVISION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UNO	UNLESS NOTED OTHERWISE
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VCTB	VINYL COVERED TACKBOARD
VERT	VERTICAL
VOC	VOLATILE ORGANIC COMPOUND(S)
VFY	VERIFY
VIF	VERIFY IN FIELD
VWC	VINYL WALL COVERING
W/	WITH
WD	WOOD
WF	WIDE FLANGE
WIN	WINDOW
W/O	WITHOUT
WS	WOODSCREW
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
∠	ANGLE
@	AT
℄	CENTER LINE
Ø	DIAMETER
°	DEGREES
M̸L	MODULE LINE
±	PLUS/MINUS

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SET NAME
(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME
GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
RANDALL PATRICK CAVANAGH
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS
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3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:
GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER:
N2.0

BID SET 10/01/2021

DOOR SCHEDULE

DOOR NO.	DOOR TYPE	DOOR SIZE	QUANTITY	MATERIAL	FINISH	HARDWARE SET NO.	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	REMARKS
1	D1	3'-0" x 7'-0"	11	HM	PT	A	F1	STL	PT	HARDWARE LOCKABLE FROM THE INSIDE, SEE DOOR NOTE #3
2	D2	3'-0" x 7'-0"	2	HM	PT	B	F1	STL	PT	
3	D2	3'-0" x 7'-0"	1	HM	PT	C	F1	STL	PT	
4	D1	3'-0" x 7'-0"	1	HM	PT	D	F2	STL	PT	
5	D2	3'-0" x 7'-0"	1	HM	PT	D	F1	STL	PT	

DOOR ABBREVIATIONS

HM - HOLLOW METAL
AL - ALUMINUM
S - STEEL
~~SST - STAINLESS STEEL~~
STL - STEEL FRAME, 16ga. FULLY WELDED
~~WWF - WINDOW WALL FRAME~~

SC - SOLID CORE WOOD
~~HC - HOLLOW CORE WOOD~~
PT - PAINTED
CA - CLEAR ANODIZED
~~BR - BRONZE ANODIZED~~
CLR - CLEAR FINISH

DOOR NOTES

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

WINDOW SCHEDULE

WINDOW TYPE	QTY.	FUNCTION	'W' WIDTH	'H' HEIGHT	FINISH	GLASS TYPE	U FACTOR	SHGC	VT MIN	MIN STC RATING	REMARKS
A	22	OPERABLE	4'-0"	5'-0"	CLEAR ANODIZED	SOLAR GREY	0.780	0.430	0.37	27	MANUAL
B	5	OPERABLE	4'-0"	5'-0"	CLEAR ANODIZED	SOLAR GREY	0.780	0.430	0.37	27	MANUAL W/4" MAXIMUM OPENING LIMIT
C	11	OPERABLE	4'-0"	5'-0"	CLEAR ANODIZED	SOLAR GREY	0.780	0.430	0.37	27	MOTORIZED W/4" MAXIMUM OPENING LIMIT

WINDOW NOTES

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

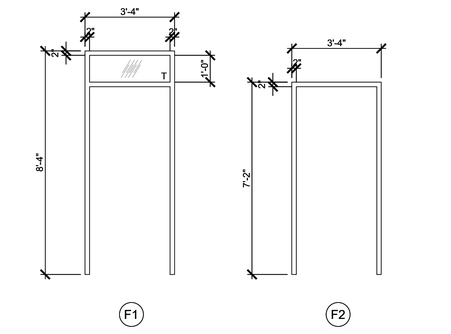
FINISHES

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CEILING HEIGHT	REMARKS
				FRONT	REAR	RIGHT	LEFT			
	GROUND FLOOR									
TYP	CLASSROOM	C	D	F	F	F	F	K	9'-0"	
106	BOYS RESTROOM	N	N	N	N	N	N	M	9'-0"	
107	GIRLS RESTROOM	N	N	N	N	N	N	M	9'-0"	
108	STAFF RESTROOM	N	N	N	N	N	N	M	9'-0"	
109	LOW VOLTAGE	O	D	P	P	P	P	K	9'-0"	
	UPPER FLOOR									
TYP	CLASSROOM	C	D	F	F	F	F	K	9'-0"	
206	WORKROOM	C	D	F	F	F	F	K	9'-0"	
208	JANITOR ROOM	N	N	J	J	J	J	M	9'-0"	

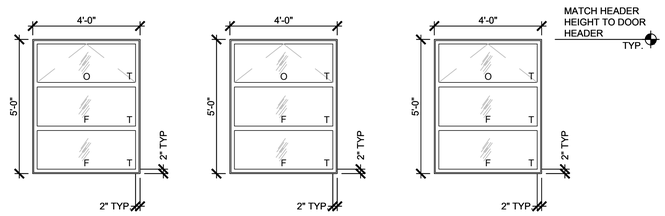
FINISH INDICATOR OPTIONS

~~A - CARPET, PER STATE OF CALIF SPEC COMPLYING WITH GROUP 1, TYPE A OR TYPE B, CLASS 2, DENSITY 4608.~~
~~B - VINYL SHEET FLOORING, 0.0 MIN, C.O.F. PER ASTM D 2047~~
C - VCT; ARMSTRONG, STANDARD, OR EXCELON.
D - TOP SET BASE; 4"
~~E - TOP SET BASE; 6"~~
F - WALL FINISH; 1/2" VINYL TACKBOARD CLASS 1 OVER 1/2" GYP BOARD BACKING
~~G - 1/2" W.R. GYP BOARD, TAPE, PAINTED FINISH~~
~~H - 1/2" GYP BOARD, TAPE, PAINTED FINISH~~
J - 3/32" F.R.P.; OVER 1/2" W.R. GYP BOARD
K - ACOUSTICAL LAY-IN GRID CEILING PANELS; 2'x4'
~~L - 1/2" VINYL TACKBOARD, CLASS 1, OVER 5/8" TYPE "X" GYP BOARD BACKING~~
M - 5/8" TYPE 'X' GYP BOARD; TAPE, TEXTURE, PAINTED FINISH
N - CERAMIC TILE - (FULL HEIGHT AT WALLS)
O - EXPOSED CONCRETE WITH CONCRETE SEALER
P - 3/4" FIRE RATED PLYWOOD

DOOR TYPES



WINDOW TYPES



NOTE:
O- OPERABLE
F- FIXED
T-TEMPERED GLAZING

ROOM FINISHES SCHEDULE

T = TEMPERED GLAZING

DOOR FRAME TYPES

A	EXTERIOR DOOR LOCKSET w/LEVER RHODES SCHLAGE ND95RD
B	EXTERIOR DOOR LOCKSET SCHLAGE B561RD w/ADA COMPLIANT PUSH/PULL PLATE
C	EXTERIOR DOOR LOCKSET SCHLAGE B561RD w/ND44 LOCK
D	EXTERIOR DOOR LOCKSET w/LEVER RHODES SCHLAGE ND80PD
~~E~~	~~EXTERIOR DOOR LOCKSET w/LEVER RHODES SCHLAGE ND85PD~~
~~F~~	~~INTERIOR DOOR LOCKSET w/LEVER RHODES SCHLAGE ND50PD~~
~~G~~	~~INTERIOR CLASSROOM COPPER CREEK 6260 CLASSROOM w/ADA LEVER~~

EXTERIOR DOOR HARDWARE

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

*ADDITIONAL DOORS MAY BE REQUIRED BASED ON BUILDING LAYOUT.

DOOR HARDWARE SCHEDULE

NOT USED

NOT USED

NOT USED

NOT USED

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

SCHEDULES
DOORS, WINDOWS
& FINISHES

SHEET NUMBER:

N3.0

BID SET 10/01/2021

NOT USED 1

NOT USED 2

NOT USED 3

NOT USED 4

NOT USED 5

NOT USED 6

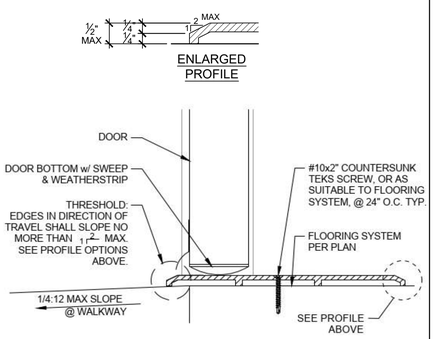
NOT USED 7

NOT USED 8

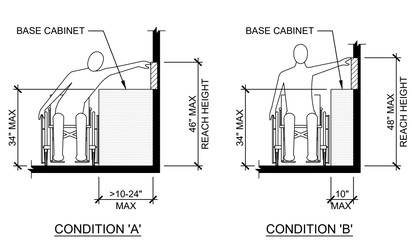
NOT USED 9

NOT USED 10

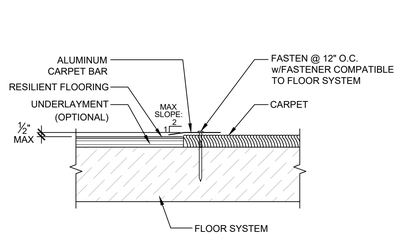
NOT USED 11



THRESHOLD @ EXTERIOR DOOR
NOT TO SCALE 12



SIDE REACH AT BASE CABINET
NOT TO SCALE 13



FLOORING TRANSITION DETAIL
NOT TO SCALE 14

NOT USED 15

NOT USED 16

NOT USED 17

NOT USED 18

NOT USED 19

NOT USED 20

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

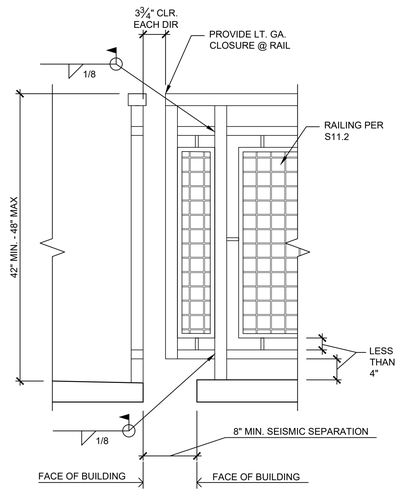
SHEET TITLE:

ACCESSIBILITY
STANDARDS & DETAILS

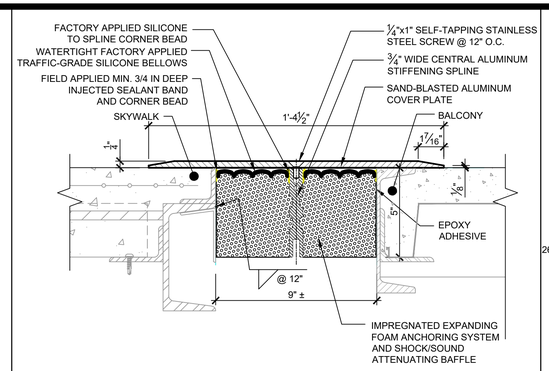
SHEET NUMBER:

N4.0

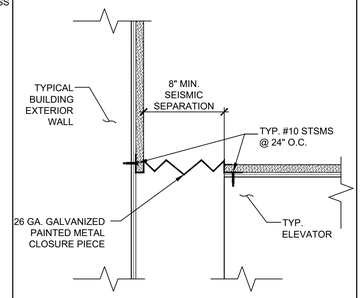
BID SET 10/01/2021



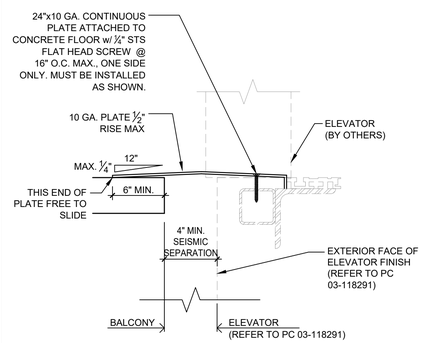
DETAILS @ RAILING SEPARATION
SCALE: 1" = 1' - 0" | 6



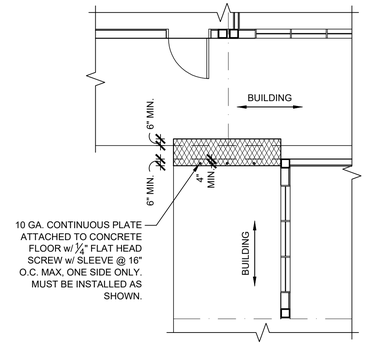
SEISMIC SEPARATION DETAIL
SCALE: 3" = 1' - 0" | 2



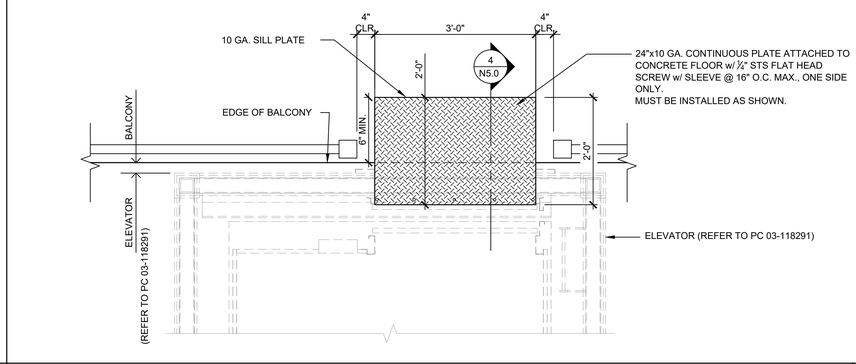
DETAIL @ BALCONY
SCALE: 1 1/2" = 1' - 0" | 3



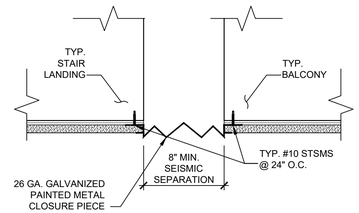
DETAILS @ ELEVATOR SEPARATION
SCALE: 3" = 1'-0" | 4



ENLARGED VIEW OF PLATE DETAIL @ SEPARATION
SCALE: 3/16" = 1' - 0" | 5



DETAILS @ ELEVATOR SEPARATION
SCALE: 3/4" = 1' - 0" | 8



DETAIL @ STAIR LANDING
SCALE: 1 1/2" = 1' - 0" | 9

NOT USED | 11

NOT USED | 12

NOT USED | 13

NOT USED | 14

NOT USED | 15

NOT USED | 16

NOT USED | 17

NOT USED | 18

NOT USED | 19

NOT USED | 20

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
PATRICK C. JOHNSON
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

BUILDING
SEPARATION DETAILS

SHEET NUMBER:

N5.0

BID SET 10/01/2021

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 1 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

A. GENERAL INFORMATION

1.	Project Location (city)	Glendale	8.	Standards Version	Compliance2019
2.	CA Zip Code	91206	9.	Compliance Software (version)	CBECC-Com 2019.1.3
3.	Climate Zone	9	10.	Weather File	BURBANK-GLENDALE_722880_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	5,661 ft²	11.	Building Orientation (deg)	(N) 13 deg
5.	Total Unconditioned Floor Area	0 ft²	12.	Permitted Scope of Work	NewComplete
6.	Total # of Stories (Habitable Above Grade)	2	13	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☐ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☒ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☒ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)*	
	☐ Not Included				Electrical Power Distribution S110.11	*NRCC-ELC-E is required*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning S120.8	*NRCC-CXR-E is required*
	☒ Not Included				Solar Ready S110.10	*NRCC-SRA-E is required*

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 2 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	10.39	36.18	-25.79
Space Cooling	112.25	81.18	31.07
Indoor Fans	123.88	105.73	18.15
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	13.30	13.30	--
Indoor Lighting	29.46	13.86	15.60
ENERGY STANDARDS COMPLIANCE TOTAL	**289.28**	**250.25**	**39.03 (13.5%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	77.44	77.44	--
Process	--	--	--
Other Ltg	--	--	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**366.72**	**327.69**	**39.0 (10.6%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 3 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
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C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	--	--	29.1	103.2	-74.1
Space Cooling	13.3	8.4	4.9	--	--	--
Indoor Fans	22.9	15.6	7.3	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	41.7	41.7	0.0
Indoor Lighting	5.5	2.5	3.0	--	--	--
Compliance Total	**41.7**	**26.5**	**15.2**	**70.8**	**144.9**	**-74.1**
Receptacle	15.0	15.0	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**56.7**	**41.5**	**15.2**	**70.8**	**144.9**	**-74.1**

C4. UNMET LOAD HOURS

This Section Does Not Apply

D. EXCEPTIONAL CONDITIONS

The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.

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

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

This Section Does Not Apply

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 4 of 19
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Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing[1]	1,415 ft²	240 ft²	1
East-Facing[2]	800 ft²	0 ft²	0
South-Facing[3]	1,415 ft²	527 ft²	3
West-Facing[4]	800 ft²	0 ft²	0
Total	**4,430 ft²**	**767 ft²**	**1**
Roof	2,831 ft²	0 ft²	0

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G2. CRRC ROOFING PRODUCT SUMMARY

1	2	3	4	5
Assembly Name	Roof Pitch	Aged Solar Reflectance	Thermal Emittance	SRI
Ext Roof	Low-Slope	0.63	0.75	78

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status[1]	Description of Assembly Layer
Ext Roof	Roof	2831	Metal	30	NA	U-Factor: 0.062	N	Metal Standing Seam - 1/16 in Metal framed roof, 24in. OC, 9.25 R-30 Air - Ceiling - 3 1/2 in. Gypsum Board - 1/2 in.

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 5 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status[1]	Description of Assembly Layers
Ext Wall	ExteriorWall	4430	Metal	22	NA	U-Factor: 0.153	N	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Fiber cement board - 88 lb/ft3 - 1/2 in. Metal framed wall, 16in. OC, 7.25in., R-22 Gypsum Board - 1/2 in.
Interior Floor/Ceiling	InteriorFloor	2831	Metal	19	NA	U-Factor: 0.074	N	Rubber tile - 1 in. Plywood - 1/2 in. Metal framed floor, 16in. OC, 7.25in., R-19 Acoustic Tile - 3/8 in.
Floor over Crawlspace	ExteriorFloor	2831	NA	0	NA	U-Factor: 0.163	N	Air - Floor - 3 1/2 in. Concrete - 80 lb/ft3 - 4 in. Rubber tile - 1 in.
Int Wall	InteriorWall	1600	Metal	0	NA	U-Factor: 0.344	N	Gypsum Board - 1/2 in. Metal framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.

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

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-factor	Status[1]
Door	0.700	N

G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method[1]	Assembly Method	Area ft²	Overall U-factor	Overall SHGC	Overall VT	Status[2]
Windows	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	389	0.42	0.28	0.34	N

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 6 of 19
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Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method[1]	Assembly Method	Area ft²	Overall U-factor	Overall SHGC	Overall VT	Status[2]
NanaWall	VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	378	0.35	0.19	0.43	N

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A – Altered, E – Existing*

G6. OVERHANG DETAILS

1	2	3	4	5	6
Fenestration Tag/ID	Orientation	Depth(ft.)	Height from Bottom of Sill to Overhang(ft)	Right Extent(ft)	Left Extent(ft)
CL000003_W-1-W0	South	8.0	11	3.0	3.0
CL000003_W-1-W1	South	8.0	9	3.0	3.0
CL000003_W-1-W2	South	8.0	5.6	3.0	3.0
CL000003_W1-W0	North	2.0	6	0.0	0.0
CL000003_W1-W1	North	2.0	6	0.0	0.0
CL000006_W-1-W0	South	8.0	11	3.0	3.0
CL000006_W-1-W1	South	8.0	9	3.0	3.0
CL000006_W-1-W2	South	8.0	5.6	3.0	3.0
CL000006_W1-W0	North	2.0	6	0.0	0.0
CL000006_W1-W1	North	2.0	6	0.0	0.0
CL000000_W-1-W1	South	8.0	11	3.0	3.0
CL000000_W-1-W2	South	8.0	9	3.0	3.0
CL000000_W-1-W3	South	8.0	5.6	3.0	3.0
CL000000_W1-W0	North	2.0	6	0.0	0.0
CL000000_W1-W1	North	2.0	6	0.0	0.0
CL000001_W-1-W0	South	8.0	11	3.0	3.0
CL000001_W-1-W1	South	8.0	5.6	3.0	3.0

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 7 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

G6. OVERHANG DETAILS

1	2	3	4	5	6
Fenestration Tag/ID	Orientation	Depth(ft.)	Height from Bottom of Sill to Overhang(ft)	Right Extent(ft)	Left Extent(ft)
CL000001_W-1-W3	South	8.0	9	3.0	3.0
CL000001_W1-W0	North	2.0	6	0.0	0.0
CL000001_W1-W1	North	2.0	6	0.0	0.0
CL000009_W-1-W0	South	8.0	11	3.0	3.0
CL000009_W-1-W1	South	8.0	5.6	3.0	3.0
CL000009_W-1-W3	South	8.0	9	3.0	3.0
CL000009_W1-W0	North	2.0	6	0.0	0.0
CL000009_W1-W1	North	2.0	6	0.0	0.0
CL000008_W-1-W0	South	8.0	11	3.0	3.0
CL000008_W-1-W1	South	8.0	5.6	3.0	3.0
CL000008_W-1-W3	South	8.0	9	3.0	3.0
CL000008_W1-W0	North	2.0	6	0.0	0.0
CL000008_W1-W1	North	2.0	6	0.0	0.0

G7. FIN DETAILS

This Section Does Not Apply

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 8 of 19
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Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

H. HVAC SYSTEM SUMMARY

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

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

1	2	3	4	5	6	7	8	9	10
			Heating				Cooling		
Equipment Name	Equipment Type	Qty	Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtuh)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	Status[5]
AC-1 - AC-5_5T	SZVAVAC (Packaged3Phase)	3	49	No	0	AFUE-81.0	59	SEER-16.00 / EER-12.40	N
AC-7 - AC-11_5T	SZVAVAC (Packaged3Phase)	3	49	No	0	AFUE-81.0	59	SEER-16.00 / EER-12.40	N

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

H2. FAN SYSTEMS SUMMARY[1]

1	2	3	4	5	6	7	8	9	10	11	12	13
	System Type	Design OA	Supply Fan				Return Fan					
Name or Item Tag	packaged, DOAS, etc.	CFM	CFM	BHP	Watts	Control	CFM	BHP	Watts	Control	Economizer Type (if present)	Status[5]
AC-1 - AC-5_5T	SZVAVAC	359	2000	1.900	1556.7	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N
AC-7 - AC-11_5T	SZVAVAC	359	2000	1.900	1556.7	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N

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

H3. EXHAUST FAN SUMMARY

This Section Does Not Apply

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 9 of 19
Project Address:	2015 E Glenoaks Blvd Glendale 91206	Calculation Date/Time:	17:45, Tue, Mar 16, 2021
Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
AC-1 - AC-5_5T	No Optimum Start	No	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
AC-7 - AC-11_5T	No Optimum Start	No	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
	Mechanical Ventilation							
Zone Name	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
Zn_F1_Classrooms	Education - Classrooms (ages 9-18)	0	70.76	0	1076	0	2831	NA
Zn_F2_Classrooms	Education - Classrooms (ages 9-18)	0	70.76	0	1076	0	2831	NA

Multifamily or Hotel/Motel Occupancy? (if "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)	No
Does the Project include Zonal Systems?	No

H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
			Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
System ID	Zone Name	System Type	Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
AC-1 - AC-5_5T_TU	Zn_F1_Classrooms	VAVNoReheatBox	NA	NA	2000	1000	0.50	NA	NA	NA	☐

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www.americanmodular.com

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD GLENOAKS ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
RANDALL PATRICK CAVANAGH
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

SHEET TITLE:

ENERGY CALCULATIONS

SHEET NUMBER:

EN.1

BID SET 10/01/2021

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 10 of 19
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Input File Name:	AMS Glenoaks ES ClassR Bldg.cibd19		

H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
AC-7 - AC-11_5T_TU	Zn_F2_Classrooms	VAVNoReheatBox	NA	NA	2000	1000	0.50	NA	NA	NA	☐

H8. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

I. DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY

I1. DHW EQUIPMENT SUMMARY

This Section Does Not Apply

I2. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

I3. SOLAR HOT WATER HEATING SUMMARY

This Section Does Not Apply

J. COVERED PROCESS SUMMARY

This Section Does Not Apply

K. INDOOR LIGHTING SUMMARY

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 11 of 19
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K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5		Confirmed	
Occupancy Type [1]	Conditioned Floor Area [2] (ft^2)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance		Pass	Fail
				Area Category Footnotes (Watts)	Tailored Method (Watts)	☐	☐
Classroom, Lecture, Training, Vocational Areas	5,662	2,400	0	0	0	☐	☐
Building Totals:	**5,662**	**2,400**	**0**	**0**	**0**		

[1] *See Table 140.6-C*
[2] *See NRCC-LTI-01-E for unconditioned spaces*
[3] *Lighting information for existing spaces modeled is not included in the table*

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)		Installed Watts (Conditioned)					Confirmed	
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined: CEC Default from NA8	How Wattage is Determined: According to §130.0(c)	Total Number Luminaires	Installed Watts	Pass	Fail
2x4 VTLED	Lithonia 2VTL4 or equal	50	No	Yes	48	2,400	☐	☐

[1] *If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.*

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.)	# of Units	Watts of Controlled Lighting	Power Adjustment Factor	Control Credit Watts	√ If Acceptance Test Required	Pass	Fail
Classroom 101	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 101	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A); Control Credit Calculation; Confirmed

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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A); Control Credit Calculation; Confirmed

Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.)	# of Units	Watts of Controlled Lighting	Power Adjustment Factor	Control Credit Watts	√ If Acceptance Test Required	Pass	Fail
Classroom 102	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 102	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 103	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 103	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 201	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 201	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 202	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 202	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 203	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐
Classroom 203	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.0 00.00	0	X	☐	☐

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K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1); **Standards Compliance** (√ all that apply or "E" if exempt); Confirmed

Location in Building	Type/Description of Lighting Control (i.e., occupancy sensor, dimming, automatic daylighting control, etc.)	# of Units	§130.1(a)	§130.1(b)	§130.1(c)	§130.1(d)	§130.1(e)	Is Acceptance Test Required?	Pass	Fail
Classroom 101	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 102	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 103	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 201	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 202	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 203	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐

§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

K5. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST

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

K6. GENERAL LIGHTING POWER

This Section Does Not Apply

K7. GENERAL LIGHTING FROM SPECIAL FUNCTION AREA

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft^2)	**Allowed Watts**	Confirmed Pass	Confirmed Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

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K8. ROOM CAVITY RATIO

Rectangular Spaces

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

Non-Rectangular Spaces

This Section Does Not Apply

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

K9. ADDITIONAL "USE IT OR LOSE IT"

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

K10. Wall Display

This Section Does Not Apply

K11. Floor Display and Task Lighting

This Section Does Not Apply

K12. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

K13. Very Valuable Merchandise

This Section Does Not Apply

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L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
Envelope	☒	☐	NRCI-ENV-01-E - Must be submitted for all buildings	☐	☐
Mechanical	☒	☐	NRCI-MCH-01-E - Must be submitted for all buildings	☐	☐
Plumbing	☒	☐	NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐
	☐	☒	NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance	☐	☐
	☐	☒	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water system distribution systems to be recognized for compliance	☐	☐
	☐	☒	NRCI-PLB-21-E - Must be HERS verified for central systems in high-rise residential hotel/ motel application	☐	☐
	☐	☒	NRCI-PLB-22-E - Must be HERS verified for single dwelling unit systems in high-rise residential, hotel/motel application	☐	☐
	☐	☒	NRCI-STH-01-E - Must be submitted for solar hot water heating systems	☐	☐
Indoor Lighting	☒	☐	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
	☒	☐	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	☐	☐
	☐	☒	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	☐	☐
	☐	☒	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance	☐	☐
	☐	☒	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance	☐	☐
Covered Process	☐	☒	NRCI-PRC-01-E - Must be submitted for all Covered Processes	☐	☐

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
Envelope	☒	☐	NRCA-ENV-02-F - NRFC label verification for fenestration	☐	☐
	☐	☐	NRCA-ENV-03-F - Daylighting Design PAFs	☐	☐
Indoor Lighting	☒	☐	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls	☐	☐
	☒	☐	NRCA-LTI-03-A - Automatic Daylight Controls	☐	☐
	☐	☒	NRCA-LTI-04-A - Demand Responsive Lighting Controls	☐	☐
	☐	☒	NRCA-LTI-05-A - Institutional Tuning Power Adjustment Factor (PAF)	☐	☐
Covered Process	☐	☒	NRCA-PRC-02-F - Kitchen Exhaust	☐	☐
	☐	☒	NRCA-PRC-03-F - Garage Exhaust	☐	☐
	☐	☒	NRCA-PRC-12-F – Elevator Lighting and Ventilation Controls	☐	☐
	☐	☒	NRCA-PRC-13-F –Escalator and Moving Walkways Speed Control	☐	☐
	☐	☒	NRCA-PRC-14-F – Lab Exhaust Ventilation System	☐	☐
	☐	☒	NRCA-PRC-15-F - Fume Hood Automatic Sash Closures System	☐	☐

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
Mechanical	☒	☐	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap	☐	☐
	☒	☐	NRCA-MCH-03-A Constant Volume Single Zone HVAC	☐	☐
	☐	☒	NRCA-MCH-04(a)-H Air Distribution Duct Leakage - HERS Verification required	☐	☐
	☐	☐	NRCA-MCH-04(b)-A Air Distribution Duct Leakage - ATT only	☐	☐
	☐	☒	NRCA-MCH-05-A Air Economizer Controls	☐	☐
	☐	☒	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints	☐	☐
	☒	☐	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
	☐	☒	NRCA-MCH-08-A Valve Leakage Test	☐	☐
	☐	☒	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
	☐	☒	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
	☐	☒	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
	☐	☒	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
	☐	☒	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance	☐	☐
	☐	☒	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance	☐	☐
	☐	☒	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-18 Energy Management Control Systems	☐	☐
	☐	☒	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 18 of 19
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N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents bust be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Building Component	YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
Mechanical	☐	☒	NRCV-MCH-04-H Duct Leakage Test	☐	☐
	☐	☒	NRCV-MCH-24-H Enclosure Air Leakage	☐	☐
	☒	☐	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation	☐	☐
	☐	☒	NRCV-MCH-32-H Local Mechanical Exhaust	☐	☐
Plumbing	☐	☒	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	☐	☐

Project Name:	Glendale USD Glenoaks ES - ClassR 101-203	NRCC-PRF-01-E	Page 19 of 19
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Hans Marsman, CEA, LEED AP BD+C	Signature: Digitally signed by Hans Marsman, LEED AP, CEA Date: 2021.03.16 17:48:33-07'00'	
Company: Marsman Consulting		
Address: 1150 J Street #409	Signature Date: 2021-03-16	
City/State/Zip: San Diego CA 92101	CEA/ HERS Certification Identification (if applicable): NR-16-09-20024	
Phone: (619) 573-6374		

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Lighting Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Mechanical Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631

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

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD GLENOAKS ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

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

REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

SHEET TITLE:

ENERGY CALCULATIONS

SHEET NUMBER:

EN.2

BID SET 10/01/2021

Project Name:	Glendale USD Glenoaks ES - Office Wing	NRCC-PRF-01-E	Page 1 of 21
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Input File Name:	AMS Glenoaks ES OfficeBldg.cibd19		

A. GENERAL INFORMATION

1.	Project Location (city)	Glendale	8.	Standards Version	Compliance2019
2.	CA Zip Code	91206	9.	Compliance Software (version)	CBECC-Com 2019.1.3
3.	Climate Zone	9	10.	Weather File	BURBANK-GLENDALE_722880_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	4,794 ft²	11.	Building Orientation (deg)	(N) 13 deg
5.	Total Unconditioned Floor Area	743 ft²	12.	Permitted Scope of Work	NewComplete
6.	Total # of Stories (Habitable Above Grade)	2	13	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance						Building Components Complying Prescriptively	
Envelope (see Table G)	☒	Performance	Covered Process: Commercial Kitchens	☐	Performance	*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐	Not Included		☒	Not Included		
Mechanical (see Table H)	☒	Performance	Covered Process: Computer Rooms	☐	Performance	Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐	Not Included		☒	Not Included	Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒	Performance	Covered Process: Laboratory Exhaust	☐	Performance	Sign Lighting §140.8	*NRCC -LTS-E*
	☐	Not Included		☒	Not Included	Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☒	Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)*	
	☐	Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E is required*
Solar Thermal Water Heating (see Table I)	☐	Performance				Commissioning §120.8	*NRCC-CXR-E is required*
	☒	Not Included				Solar Ready §110.10	*NRCC-SRA-E is required*

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	8.63	31.52	-22.89
Space Cooling	114.53	83.49	31.04
Indoor Fans	138.47	113.47	25.00
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	12.73	36.37	-23.64
Indoor Lighting	31.32	15.55	15.77
ENERGY STANDARDS COMPLIANCE TOTAL	**305.68**	**280.40**	**25.28 (8.3%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	86.32	86.32	--
Process	--	--	--
Other Ltg	6.05	3.63	2.42
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**398.05**	**370.35**	**27.7 (7.0%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

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C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	0.1	--	20.2	74.9	-54.7
Space Cooling	11.9	7.6	4.3	--	--	--
Indoor Fans	21.7	15.5	6.2	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	0.3	6.3	-6.0	29.6	--	--
Indoor Lighting	5.0	2.4	2.6	--	--	--
Compliance Total	**38.9**	**31.9**	**7.0**	**49.8**	**74.9**	**-25.1**
Receptacle	14.1	14.1	0.0	--	--	--
Process	--	--	--	--	--	--
Other Ltg	1.0	0.6	0.4	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**54.0**	**46.6**	**7.4**	**49.8**	**74.9**	**-25.1**

C4. UNMET LOAD HOURS

This Section Does Not Apply

D. EXCEPTIONAL CONDITIONS

The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

This Section Does Not Apply

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing[1]	800 ft²	0 ft²	00.0%
East-Facing[2]	1,180 ft²	380 ft²	32.2%
South-Facing[3]	400 ft²	0 ft²	00.0%
West-Facing[4]	1,274 ft²	200 ft²	15.7%
Total	**3,654 ft²**	**580 ft²**	**15.9%**
Roof	2,851 ft²	0 ft²	00.0%

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G2. CRRC ROOFING PRODUCT SUMMARY

Assembly Name	Roof Pitch	Aged Solar Reflectance	Thermal Emittance	SRI
Ext Roof	Low-Slope	0.63	0.75	78

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G3. OPAQUE SURFACE ASSEMBLY SUMMARY

Surface Name	Surface Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status[1]	Description of Assembly Layers
Ext Roof	Roof	2851	Metal	30	NA	U-Factor: 0.062	N	Metal Standing Seam - 1/16 in. Metal framed roof, 24in. OC, 9.25in., R-30 Air - Ceiling - 3 1/2 in. Gypsum Board - 1/2 in.
Ext Wall	ExteriorWall	4451	Metal	22	NA	U-Factor: 0.153	N	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Fiber cement board - 88 lb/ft3 - 1/2 in. Metal framed wall, 16in. OC, 7.25in., R-22 Gypsum Board - 1/2 in.
Interior Floor/Ceiling	InteriorFloor	2851	Metal	19	NA	U-Factor: 0.074	N	Rubber tile - 1 in. Plywood - 1/2 in. Metal framed floor, 16in. OC, 7.25in., R-19 Acoustic Tile - 3/8 in.
Floor over Crawlspace	ExteriorFloor	2851	NA	0	NA	U-Factor: 0.163	N	Air - Floor - 3 1/2 in. Concrete - 80 lb/ft3 - 4 in. Rubber tile - 1 in.
Int Wall to UC	InteriorWall	556	Metal	19	NA	U-Factor: 0.147	N	Gypsum Board - 1/2 in. Metal framed wall, 24in. OC, 5.5in., R-19 Gypsum Board - 1/2 in.
Int Wall	InteriorWall	3012	Metal	0	NA	U-Factor: 0.344	N	Gypsum Board - 1/2 in. Metal framed wall, 16in. OC, 3.5in., R-0 Gypsum Board - 1/2 in.

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

G4. OPAQUE DOOR SUMMARY

Assembly Name	Overall U-factor	Status[1]
Door	0.700	N

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G5. FENESTRATION ASSEMBLY SUMMARY

Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method[1]	Assembly Method	Area ft²	Overall U-factor	Overall SHGC	Overall VT	Status[2]
Windows	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	343	0.42	0.28	0.34	N
NanaWall	VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	252	0.35	0.19	0.43	N

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A – Altered, E – Existing*

G6. OVERHANG DETAILS

Fenestration Tag/ID	Orientation	Depth(ft.)	Height from Bottom of Sill to Overhang(ft)	Right Extent(ft)	Left Extent(ft)
CL000007_W-1-W0	East	8.0	11	3.0	3.0
CL000007_W-1-W1	East	8.0	5.6	3.0	3.0
CL000007_W-1-W2	East	8.0	9	3.0	3.0
CL000007_W1-W0	West	2.0	6	0.0	0.0
CL000007_W1-W1	West	2.0	6	0.0	0.0
CL000002_W-1-W0	East	8.0	11	3.0	3.0
CL000002_W-1-W1	East	8.0	5.6	3.0	3.0
CL000002_W-1-W2	East	8.0	9	3.0	3.0
CL000002_W1-W0	West	2.0	6	0.0	0.0
CL000002_W1-W1	West	2.0	6	0.0	0.0
FF000003_W-1-W0	East	8.0	5.6	3.0	3.0
FF000000_W1-W1	East	8.0	5.6	3.0	3.0
FF000001_W-1-W0	East	8.0	5.6	3.0	3.0
CL000005_W-1-W0	East	8.0	11	3.0	3.0
CL000005_W-1-W1	East	8.0	5.6	3.0	3.0

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G6. OVERHANG DETAILS

Fenestration Tag/ID	Orientation	Depth(ft.)	Height from Bottom of Sill to Overhang(ft)	Right Extent(ft)	Left Extent(ft)
CL000005_W-1-W2	East	8.0	9	3.0	3.0
CL000005_W1-W0	West	2.0	6	0.0	0.0
CL000005_W1-W1	West	2.0	6	0.0	0.0
CL000004_W-1-W0	East	8.0	11	3.0	3.0
CL000004_W-1-W1	East	8.0	5.6	3.0	3.0
CL000004_W-1-W3	East	8.0	9	3.0	3.0
CL000004_W1-W0	West	2.0	6	0.0	0.0
CL000004_W1-W1	West	2.0	6	0.0	0.0
CL00000C_W-1-W1	East	8.0	9	3.0	3.0
CL00000C_W-1-W2	East	8.0	5.6	3.0	3.0
CL00000D_W0-W0	West	2.0	6	0.0	0.0
CL00000A_W-1-W0	West	2.0	6	0.0	0.0
CL00000B_W-1-W0	East	8.0	5.6	3.0	3.0

G7. FIN DETAILS

This Section Does Not Apply

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H. HVAC SYSTEM SUMMARY

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

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

Equipment Name	Equipment Type	Qty	Heating				Cooling		Status[2]
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtuh)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
AC-1 - AC-5_5T	SZVAVAC (Packaged3Phase)	2	49	No	0	AFUE-81.0	59	SEER-16.00 / EER-12.40	N
AC-6_5T	SZVAVAC (Packaged3Phase)	1	49	No	0	AFUE-81.0	59	SEER-16.00 / EER-12.40	N
AC-7 - AC-11_5T	SZVAVAC (Packaged3Phase)	2	49	No	0	AFUE-81.0	59	SEER-16.00 / EER-12.40	N
IDU-1	SZHP (Split3Phase)	1	19	No	0	HSPF-11.50	18	SEER-19.00 / EER-13.00	N

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

H2. FAN SYSTEMS SUMMARY[1]

Name or Item Tag	System Type packaged, DOAS, etc.	Design OA	Supply Fan				Return Fan				Economizer Type (if present)	Status[2]
			CFM	BHP	Watts	Control	CFM	BHP	Watts	Control		
AC-1 - AC-5_5T	SZVAVAC	355	2000	1.900	1556.7	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N
AC-6_5T	SZVAVAC	137	2000	1.900	1556.7	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N
AC-7 - AC-11_5T	SZVAVAC	355	2000	1.900	1556.7	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N
IDU-1	SZHP	0	490	0.023	20.2	TwoSpeed	NA	NA	NA	NA	NA	N

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

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H3. EXHAUST FAN SUMMARY

This Section Does Not Apply

H4. Wet System Equipment (boilers, chillers, cooling towers, etc.)

Name or Item Tag	Equipment Type	Qty	Vol (gal)	Rated Capacity (kBtu/h)	Efficiency	Standby Loss	Pumps				Status[1]
							Qty	GPM	HP	VSD (Y/N)	

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

H5. SYSTEM SPECIAL FEATURES

System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
AC-1 - AC-5_5T	No Optimum Start	No	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
AC-6_5T	No Optimum Start	No	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
AC-7 - AC-11_5T	No Optimum Start	No	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
Service HW	NA	NA	NA	NA	Fixed Temperature Control, No DDC
ITWH SHW	NA	NA	NA	NA	Fixed Temperature Control, No DDC

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H6. MECHANICAL VENTILATION

Zone Name	Mechanical Ventilation						DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
Zn_F1_Classrooms	Education - Classrooms (ages 9-18)	0	46.77	0	711	0	1871	NA

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

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
ANDREW PATRICK O'NEILL
No. C12631
Ren. 8-31-23
STATE OF CALIFORNIA

REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

SHEET TITLE:

ENERGY CALCULATIONS

SHEET NUMBER:

EN.3

BID SET 10/01/2021

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H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
Zn_F2_Classrooms	Education - Classrooms (ages 9-18)	0	46.77	0	711	0	1871	NA
Zn_F2_Office	Office - Office space	0	4.57	0	137	0	914	Occupant Sensor
Zn_Elec 109	General - Unoccupied	0	0.11	0	0	0	73	NA

Multifamily or Hotel/Motel Occupancy? (if "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)	No
Does the Project include Zonal Systems?	Yes

H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
IDU-1	Zn_Elec 109	SZHP	19.00	18.00	490	400	0.816327	0.023	20.2	☒	☐
AC-1 - AC-5_5T_TU	Zn_F1_Classrooms	VAVNoReheatBox	NA	NA	2000	1000	0.50	NA	NA	NA	☐
AC-6_5T_TU	Zn_F2_Office	VAVNoReheatBox	NA	NA	2000	1000	0.50	NA	NA	NA	☐
AC-7 - AC-11_5T_TU	Zn_F2_Classrooms	VAVNoReheatBox	NA	NA	2000	1000	0.50	NA	NA	NA	☐

H8. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

I. DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY

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I1. DHW EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11
DHW Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input (kBtu/h)	Efficiency	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	Heat Pump Type	Tank Location or Ambient Condition
WH-1	Electricity	Storage	1	19.90	4.8 (kW)	EF: 0.90	NA	SBLF: NA	NA	NA
ITWH	Electricity	Instantaneous	1	0.10	4.8 (kW)	UEF: 0.99	NA	SBLF: NA	NA	NA

I2. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

I3. SOLAR HOT WATER HEATING SUMMARY

This Section Does Not Apply

J. COVERED PROCESS SUMMARY

This Section Does Not Apply

K. INDOOR LIGHTING SUMMARY

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5		Confirmed	
Occupancy Type [1]	Conditioned Floor Area [2] (ft^2)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance		Pass	Fail
				Area Category Footnotes (Watts)	Tailored Method (Watts)	☐	☐
Classroom, Lecture, Training, Vocational Areas	3,742	1,600	0	0	0	☐	☐
Electrical, Mechanical, Telephone Rooms	73	30	0	0	0	☐	☐
Office Area (>250 square feet)	593	200	0	0	0	☐	☐

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K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5		Confirmed	
Occupancy Type [1]	Conditioned Floor Area [2] (ft^2)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance		Pass	Fail
				Area Category Footnotes (Watts)	Tailored Method (Watts)	☐	☐
Office Area (<250 square feet)	320	200	0	0	0	☐	☐
Commercial/Industrial Storage (Warehouse)	66	30	0	0	0	☐	☐
Building Totals:	**4,794**	**2,060**	**0**	**0**	**0**		

[1] See Table 140.6-C
[2] See NRCC-LTI-01-E for unconditioned spaces
[3] Lighting information for existing spaces modeled is not included in the table

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)		Installed Watts (Conditioned)					Confirmed	
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined		Total Number Luminaires	Installed Watts	Pass	Fail
			CEC Default from NA8	According to §130.0(c)				
2x2 VTLED	Lithonia 2VTL2 or equal	30	No	Yes	2	60	☐	☐
2x4 VTLED	Lithonia 2VTL4 or equal	50	No	Yes	40	2,000	☐	☐

[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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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)				Control Credit Calculation			√ If Acceptance Test Required	Confirmed	
Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.)	# of Units	Watts of Controlled Lighting	Power Adjustment Factor	Control Credit Watts		Pass	Fail
Classroom 104	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 104	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 105	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 105	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Elec 109	Electrical, Mechanical, Telephone Rooms	- none specified -- none specified -- none specified -- none specified -- none specified -	0		0.000.000.000.000.00	0		☐	☐
Classroom 204	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 204	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 205	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Classroom 205	Classroom, Lecture, Training, Vocational Areas	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Workroom 206	Office Area (>250 square feet)	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐

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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)				Control Credit Calculation			√ If Acceptance Test Required	Confirmed	
Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.)	# of Units	Watts of Controlled Lighting	Power Adjustment Factor	Control Credit Watts		Pass	Fail
Workroom 206	Office Area (>250 square feet)	- none specified -- none specified -- none specified -- none specified -- none specified -	0		0.000.000.000.000.00	0		☐	☐
Office 207	Office Area (<250 square feet)	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Office 208	Office Area (<250 square feet)	- none specified -- none specified -- none specified -- none specified -- none specified -	1		0.000.000.000.000.00	0	X	☐	☐
Jan 209	Commercial/Industrial Storage (Warehouse)	- none specified -- none specified -- none specified -- none specified -- none specified -	0		0.000.000.000.000.00	0		☐	☐

K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)			**Standards Compliance** (√ all that apply or "E" if exempt)					Is Acceptance Test Required?	Confirmed	
Location in Building	Type/Description of Lighting Control (i.e., occupancy sensor, dimming, automatic daylighting control, etc.)	# of Units	§130.1(a)	§130.1(b)	§130.1(c)	§130.1(d)	§130.1(e)		Pass	Fail
Classroom 104	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 105	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Elec 109	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 204	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Classroom 205	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Workroom 206	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Office 207	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Office 208	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐
Jan 209	Occupancy Sensor	1	NA	NA	√	NA	NA	No	☐	☐

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§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

K5. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST

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

K6. GENERAL LIGHTING POWER

This Section Does Not Apply

K7. GENERAL LIGHTING FROM SPECIAL FUNCTION AREA

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft^2)	Allowed Watts	Confirmed	
							Pass	Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

K8. ROOM CAVITY RATIO

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

Non-Rectangular Spaces

This Section Does Not Apply

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

K9. ADDITIONAL "USE IT OR LOSE IT"

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

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K10. Wall Display

This Section Does Not Apply

K11. Floor Display and Task Lighting

This Section Does Not Apply

K12. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

K13. Very Valuable Merchandise

This Section Does Not Apply

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L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Envelope	☒	☐	NRCI-ENV-01-E - Must be submitted for all buildings	☐	☐
Mechanical	☒	☐	NRCI-MCH-01-E - Must be submitted for all buildings	☐	☐
Plumbing	☒	☐	NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐
	☐	☒	NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance	☐	☐
	☐	☒	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water system distribution systems to be recognized for compliance	☐	☐
	☐	☒	NRCI-PLB-21-E - Must be HERS verified for central systems in high-rise residential hotel/ motel application	☐	☐
	☐	☒	NRCI-PLB-22-E - Must be HERS verified for single dwelling unit systems in high-rise residential, hotel/motel application	☐	☐
	☐	☒	NRCI-STH-01-E - Must be submitted for solar hot water heating systems	☐	☐
Indoor Lighting	☒	☐	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
	☒	☐	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	☐	☐
	☐	☒	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	☐	☐
	☐	☒	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance	☐	☐
	☐	☒	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance	☐	☐
Covered Process	☐	☒	NRCI-PRC-01-E - Must be submitted for all Covered Processes	☐	☐

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Envelope	☒	☐	NRCA-ENV-02-F - NRFC label verification for fenestration	☐	☐
	☐	☐	NRCA-ENV-03-F - Daylighting Design PAFs	☐	☐
Indoor Lighting	☒	☐	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls	☐	☐
	☒	☐	NRCA-LTI-03-A - Automatic Daylight Controls	☐	☐
	☐	☒	NRCA-LTI-04-A - Demand Responsive Lighting Controls	☐	☐
	☐	☒	NRCA-LTI-05-A - Institutional Tuning Power Adjustment Factor (PAF)	☐	☐
Covered Process	☐	☒	NRCA-PRC-02-F - Kitchen Exhaust	☐	☐
	☐	☒	NRCA-PRC-03-F - Garage Exhaust	☐	☐
	☐	☒	NRCA-PRC-12-F – Elevator Lighting and Ventilation Controls	☐	☐
	☐	☒	NRCA-PRC-13-F –Escalator and Moving Walkways Speed Control	☐	☐
	☐	☒	NRCA-PRC-14-F – Lab Exhaust Ventilation System	☐	☐
	☐	☒	NRCA-PRC-15-F - Fume Hood Automatic Sash Closures System	☐	☐

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Mechanical	☒	☐	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap	☐	☐
	☒	☐	NRCA-MCH-03-A Constant Volume Single Zone HVAC	☐	☐
	☐	☒	NRCA-MCH-04(a)-H Air Distribution Duct Leakage - HERS Verification required	☐	☐
	☐	☐	NRCA-MCH-04(b)-A Air Distribution Duct Leakage - ATT only	☐	☐
	☐	☒	NRCA-MCH-05-A Air Economizer Controls	☐	☐
	☐	☒	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints	☐	☐
	☒	☐	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
	☐	☒	NRCA-MCH-08-A Valve Leakage Test	☐	☐
	☐	☒	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
	☐	☒	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
	☐	☒	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
	☐	☒	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
	☐	☒	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance	☐	☐
	☐	☒	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance	☐	☐
	☐	☒	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
	☐	☒	NRCA-MCH-18 Energy Management Control Systems	☐	☐
	☐	☒	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐

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

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD GLENOAKS ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
RANDALL PATRICK CAVANAGH
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

SHEET TITLE:

ENERGY CALCULATIONS

SHEET NUMBER:

EN.4

BID SET 10/01/2021

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N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Building Component	YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
Mechanical	☐	☒	NRCV-MCH-04-H Duct Leakage Test	☐	☐
	☐	☒	NRCV-MCH-24-H Enclosure Air Leakage	☐	☐
	☒	☐	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation	☐	☐
	☒	☐	NRCV-MCH-32-H Local Mechanical Exhaust	☐	☐
Plumbing	☐	☒	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	☐	☐

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Hans Marsman, CEA, LEED AP BD+C	Signature: Digitally signed by Hans Marsman, LEED AP, CEA Date: 2021.03.16 17:47:32-07'00'
Company: Marsman Consulting	
Address: 1150 J Street #409	Signature Date: 2021-03-16
City/State/Zip: San Diego CA 92101	CEA/ HERS Certification Identification (if applicable): NR-16-09-20024
Phone: (619) 573-6374	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Lighting Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631
Responsible Mechanical Designer Name: Randall P Cavannagh	Signature:	
Company: American Modular Systems | Gen7 Schools		
Address: 787 Spreckels Avenue	Date Signed:	
City/State/Zip: Manteca CA 95336		
Phone: 209.825.1921	Title: Engineer	License #: C12631

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Glendale USD Glenoaks ES	**Report Page:** (Page 1 of 8)
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A. GENERAL INFORMATION

01	Project Location (city)	Glendale	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	9			
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐	LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐	LZ-1: Low - Developed Parkland	☒	LZ-3: Moderately High - Urban Areas		

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02
☒ New Lighting System	Must Comply with Allowances from §140.7
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

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C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L

01		02		03		04		05		06		07		08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
350	+	19	+	---	+	---	+	468	OR	---	=	837	≥	494	COMPLIES
										Cutoff Compliance (See Table G for Details)					N/A
										Controls Compliance (See Table H for Details)					COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7, all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L, only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector Pass	Field Inspector Fail
Ext LTG 26W	Ext LTG Fixture	☐ Linear	26	Mfr. Spec	19	New	☐	494	NA: < 6200 lumens	☐	☐
							Total Design Watts:	494			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*

[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*

[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

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H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector Pass	Field Inspector Fail
Entrance Door Elec R: Ext LTG 26W	Astronomical Timer	Yes	Yes	☐	☐
Overhangs/Canopies: Ext LTG 26W	Astronomical Timer	Yes	Yes	☐	☐

* *NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c)

I. LIGHTING POWER ALLOWANCE (per §140.7)

This table includes areas using allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B . Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

☐ General Hardscape Allowance Table I (below)	01 "Use it or lose it" Allowance (select all that apply) (select all that apply)			
	☒ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☒ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 0, 1 & 4)
This section does not apply to this project.
Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 2 & 3)
This section does not apply to this project.

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J. LIGHTING ALLOWANCE: PER APPLICATION

This table includes areas using the wattage allowance per application from Table 140.7-B .

01	02	03	04	05	06	07	08	09	10
Area Description	Application per Table 140.7-B[1]	CALCULATED ALLOWANCE (Watts) # of Locations	Allowance per Location[2]	Extra Allowance (Watts)	DESIGN WATTS Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Additional Allowance (Watts)
Entrance Door Elec R	Building Entrance/Exit	1	19	19	Ext LTG 26W	26	1	26	19
							Total Design Watts for this Area:	26	
							Total Allowance (Watts) All Areas:		19

[1] *FOOTNOTES: Primary entrance applications are only available for senior care facilities, healthcare facilities, police stations, hospitals, fire stations, and emergency vehicle facilities.*

[2] *The Allowance per Location for ATMs is 100W for the first ATM and 35W for each additional per Table 140.7-B .*

[3] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.*

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

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M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This table includes areas using the wattage allowance per specific area from Table 140.7-B . More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

01	02	03	04	05	06	07	08	09	10
Area Description	Specific Area Type per Table 140.7-B	CALCULATED ALLOWANCE (Watts) Specific Area (ft²)[1]	Allowed Density (W/ft²)	Extra Allowance (Watts)	DESIGN WATTS Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Additional Allowance (Watts)
Overhangs/Canopies	NonSalesCanopy	2900	0.2	783	Ext LTG 26W	26	18	468	468
							Total Design Watts for this Area:	468	
							Total Allowance (Watts) All Areas:		468

[1] *FOOTNOTES: See Table 140.7-B for rules for calculating the specific areas (ft²) for these additional lighting allowances.*

[2] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.*

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐
●	○	NRCI-LTO-02-E- Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
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P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Glendale USD Glenoaks ES	**Report Page:** (Page 8 of 8)
Project Address:		**Date Prepared:** 2021-03-16T12:25:24-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Hans Marsman	Documentation Author Signature: Digitally signed by Hans Marsman, LEED AP, CEA Date: 2021.03.16 09:26:57-07'00'
Company: Marsman Consulting	Signature Date:
Address: 1150 J Street #409	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92101	Phone: (619) 573-6374

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Randall P Cavannagh	Responsible Designer Signature:
Company: American Modular Systems | Gen7 Schools	Date Signed: 03/16/2021
Address: 787 Spreckels Avenue	License: C12631
City/State/Zip: Manteca, CA 95336	Phone: 209.825.1921

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

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD GLENOAKS ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT — BRENDAN PATRICK O'DONNELL — No. C12631 — Ren. 8-31-23 — STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

SHEET TITLE:

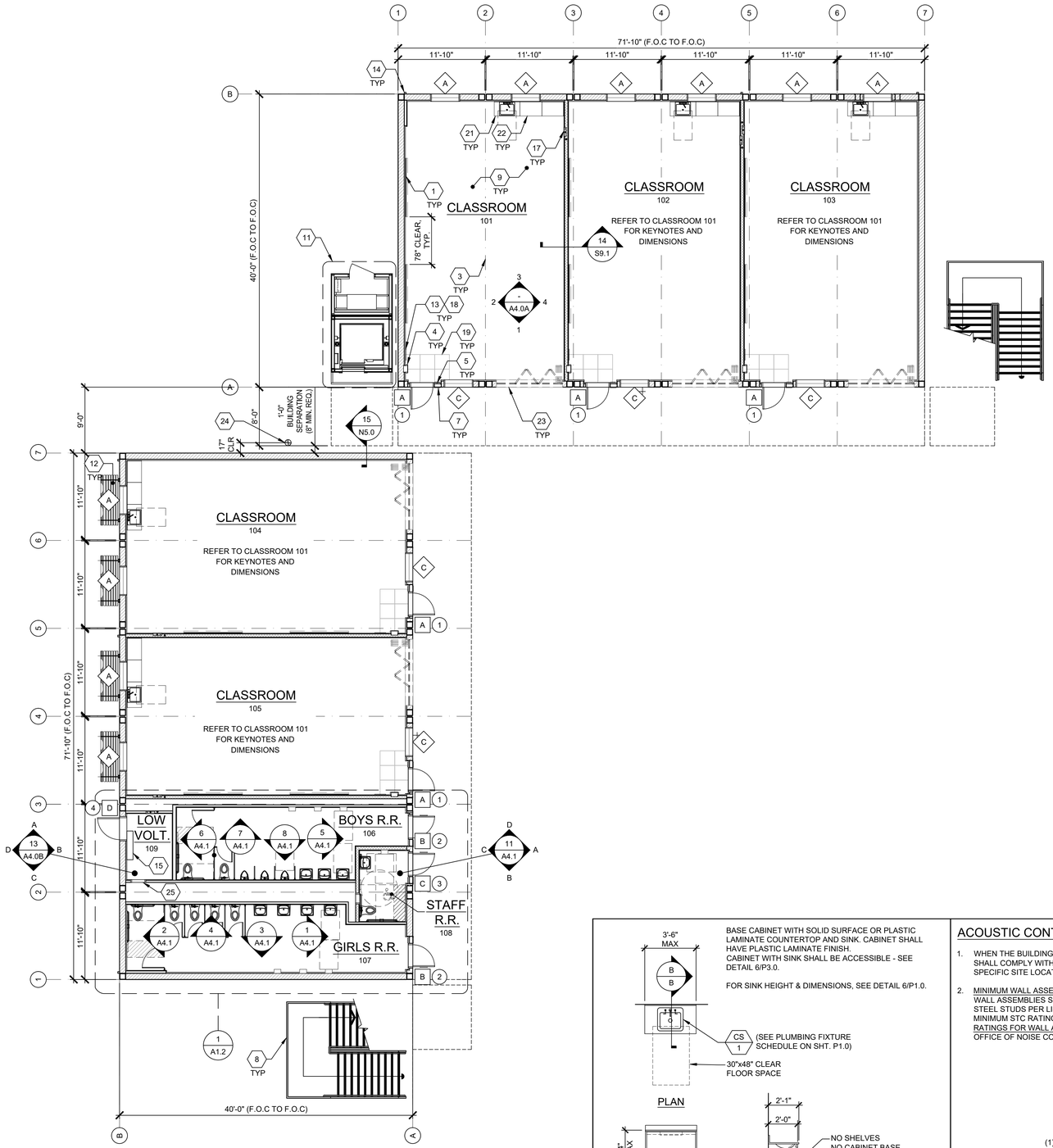
ENERGY CALCULATIONS

SHEET NUMBER:

EN.5

BID SET 10/01/2021

01-XXXX-[redacted]



GROUND LEVEL- FLOOR PLAN

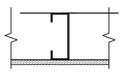
SCALE: 1/8" = 1'-0"

CLASSROOM SINK - DETAIL

NTS

ACOUSTIC CONTROLS

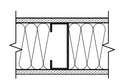
1. WHEN THE BUILDING IS SITE ADAPTED, THE BUILDING AND SITE FEATURES SHALL COMPLY WITH THE CALGREEN CODE, SECTION 5.507.4, FOR THE SPECIFIC SITE LOCATION.
2. MINIMUM WALL ASSEMBLIES:
   WALL ASSEMBLIES SHALL BE CONSTRUCTED PER DETAIL SHEETS A5.1,WITH STEEL STUDS PER LISTED OPTIONS.
   MINIMUM STC RATINGS LISTED BELOW ARE PER THE CATALOG OF STC & IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES, PRODUCED BY THE OFFICE OF NOISE CONTROL, CA DEPARTMENT OF HEALTH SERVICES.



(1) LAYER 1/2" GYPSUM BOARD
SECURED TO MIN. 2½" METAL STUDS
@ 24" O.C. MAX.

STC=27
(CATALOG SECTION 1.3.2.5.4.1)
TEST REF.: NATIONAL RESEARCH COUNCIL OF CANADA - NRC #66

3. IN THE EVENT THAT A CLASSROOM IS DESIGNED TO CONNECT TO ANOTHER CLASSROOM OR RESTROOM, INTERIOR SOUND TRANSMISSION IN THE INTERIOR ADJOINING WALL AND FLOOR/CEILING SHALL MEET THE MINIMUM REQUIREMENT OF A STC OF 40, PER CALGREEN CODE SECTION 507.4.3. (EXAMPLES OF QUALIFYING ASSEMBLIES SHOWN BELOW).



(2) LAYER 5/8" GYPSUM BOARD
SECURED TO MIN. 2½" METAL STUDS
@ 24" O.C. MAX. W/3½"
THK BATT INSULATION

STC=48
TEST REF.: AUDIO ALLOY L.L.C TEST
NUMBER OL-92-410

4. MINIMUM WINDOW & DOOR RATINGS:
   ALL WINDOWS AND DOORS SPECIFIED ON THE SCHEDULES FOUND ON SHEET N3.0 OF THIS PACKAGE SHALL MEET A MINIMUM STC RATING OF 27.

ACOUSTIC NOTES

1. (2) 8'-0"x4'-0" MARKERBOARDS
2. NOT USED
3. TYPICAL MOD LINE
4. SEMI-RECESSED FIRE EXTINGUISHER. TOP OF HANDLE @ +48" AFF. 4" MAX PROTRUSION FROM WALL IF FIRE EXTINGUISHER IS ABOVE 27" A.F.F.
5. TACTILE EXIT SIGN (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
6. NOT USED
7. ROOM SIGNAGE AND ISA (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
8. STAIRS - REFER TO SHEET S11.0 FOR DETAILS
9. VCT FLOORING
10. NOT USED
11. ELEVATOR PER PC 03-118201
12. WINDOW SUNSHADE
13. OCCUPANT LOAD SIGN (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
14. DOWNSPOUT - DISCHARGE TO SPLASH BLOCK (U.O.N.) PER DETAIL 10/A5.1
15. MINI-SPLIT HVAC CONDENSER
16. HOSE BIB
17. ELECTRICAL PANEL
18. FLOOR LIVE LOAD SIGN PER 2019 CBC SECTION 106.1 (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
19. WALK OFF MAT AT ENTRY AREA
20. THERMOSTAT - TOP OF BOX @ 46" A.F.F.
21. CASEWORK W/ SINK
22. CASEWORK
23. EXTERIOR NANAWALL
24. EXTERIOR FIRE RISER- SEE FIRE SPRINKLER PLANS
25. ACCESS PANEL DOOR

KEY NOTES

1. REFER TO SHEET S9.1 FOR WALL ATTACHMENTS

SITE NOTE

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

SHEET NOTES

- X/# = MECHANICAL OR PLUMBING FIXTURE - SEE MECHANICAL OR PLUMBING DRAWINGS
- X = KEY NOTE - SEE KEY NOTES ABOVE
- X = DOOR TYPE - SEE SCHEDULE, SHEET N3.0
- X = WINDOW TYPE - SEE SCHEDULE, SHEET N3.0
- X = DOOR HARDWARE - SEE HARDWARE SCHEDULE, SHEET N3.0

2X4 METAL STUD WALL
2X6 METAL STUD WALL
2X8 METAL STUD WALL
2X10 METAL STUD WALL

SYMBOLS LEGEND

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

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
ROBERT PATRICK JOHNSON
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

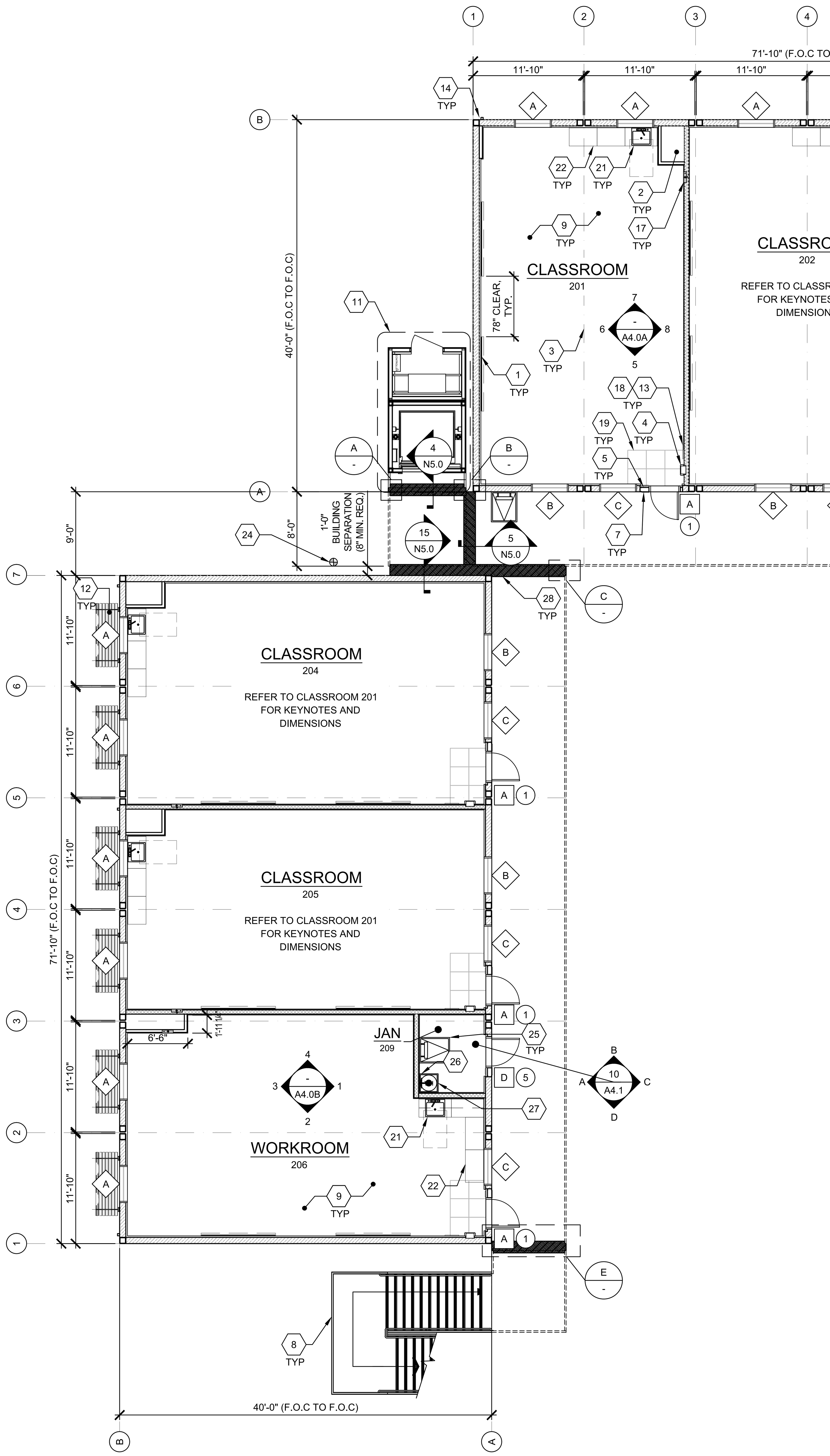
SHEET TITLE:

GROUND FLOOR PLAN

SHEET NUMBER:

A1.0

BID SET 10/01/2021



SECOND LEVEL- FLOOR PLAN

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

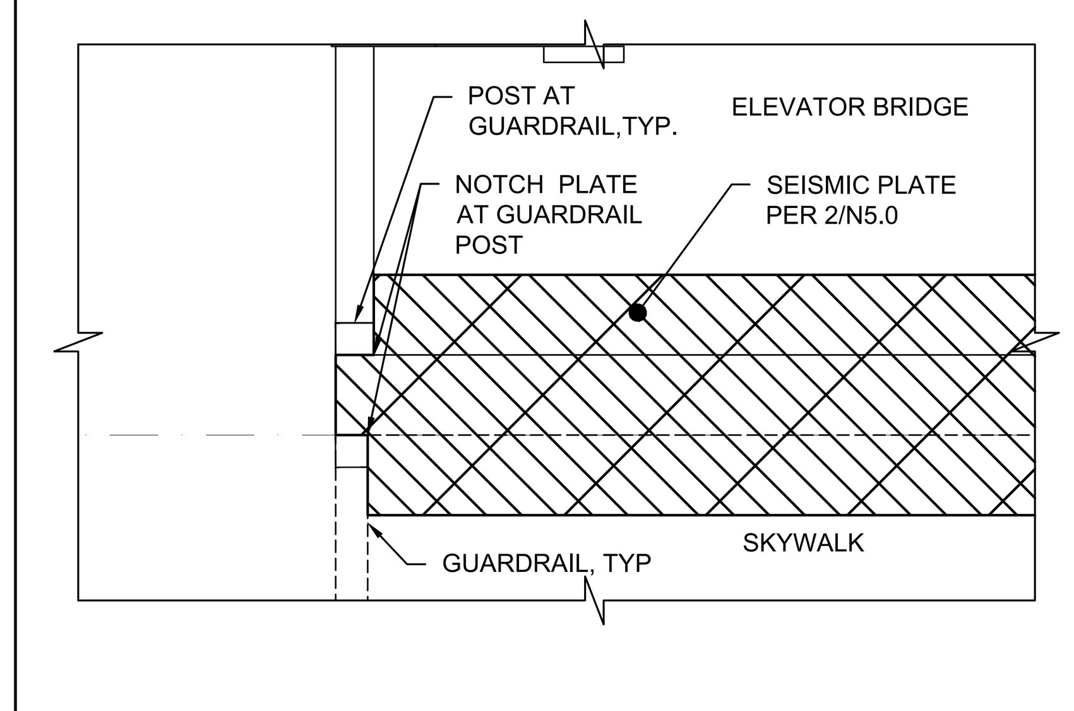


PLATE @ ELEVATOR BRIDGE TO SKYWALK A

SCALE 1"= 1'-0"

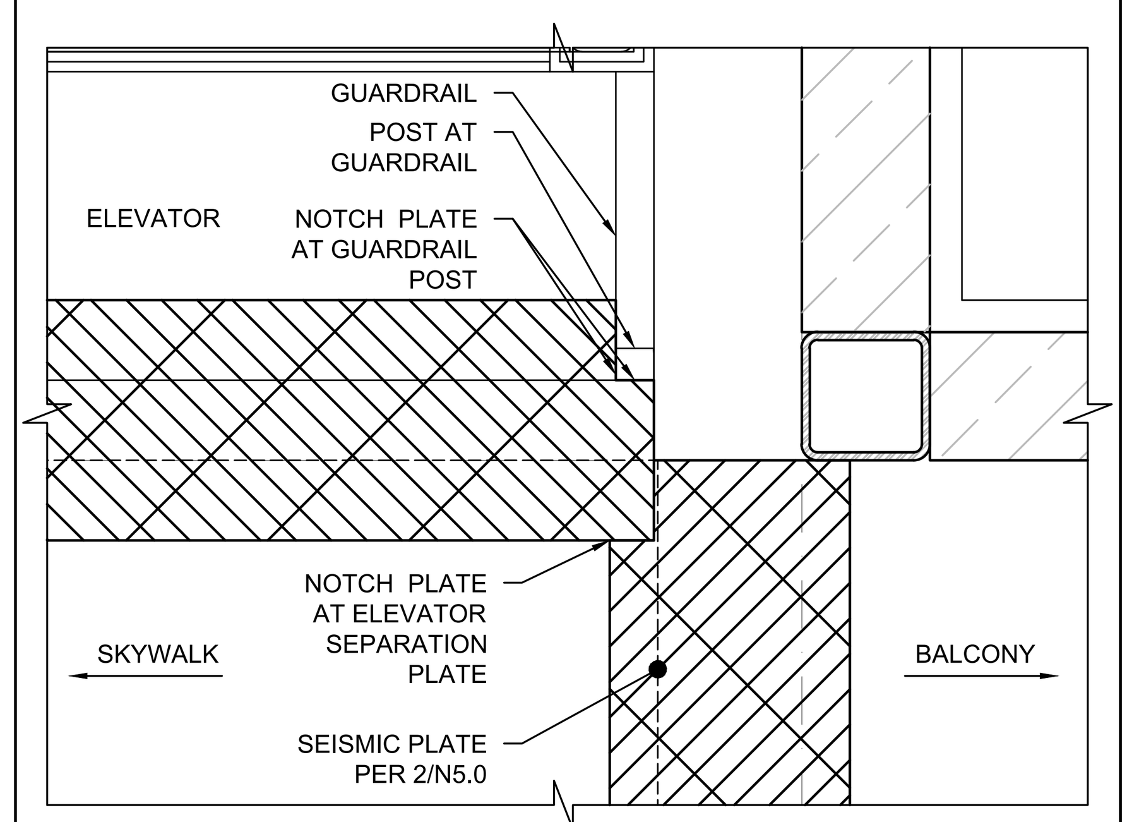


PLATE @ ELEVATOR BRIDGE PLATE B

SCALE 1"= 1'-0"

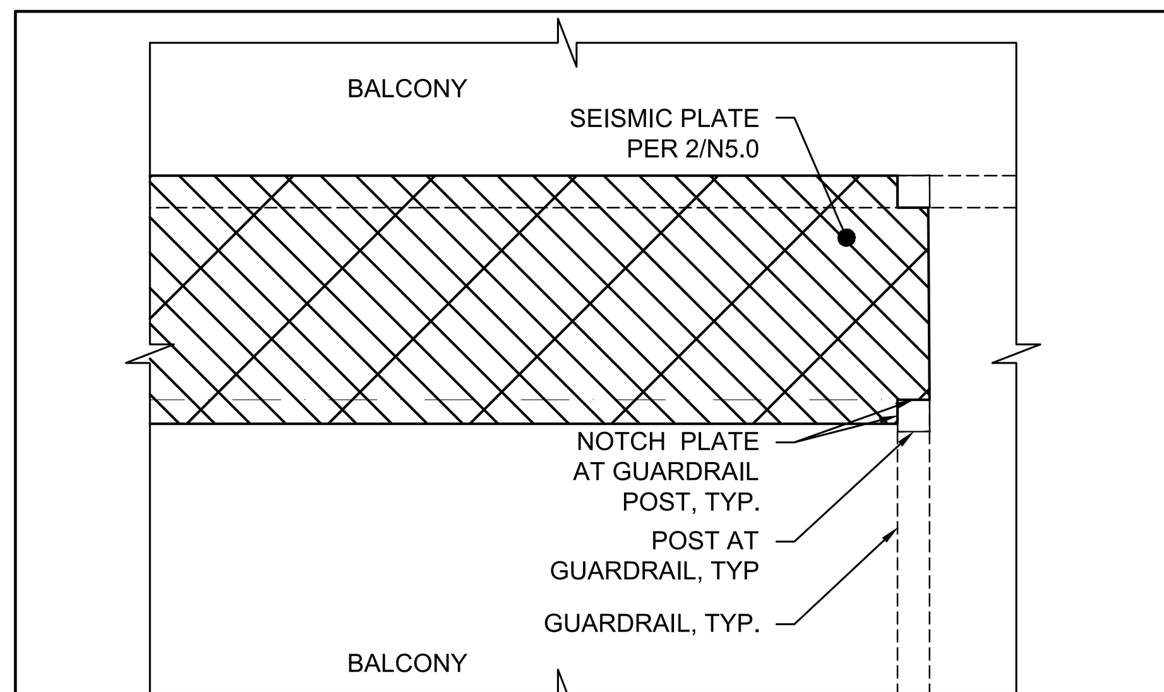


PLATE @ BALCONY TO BALCONY C

SCALE 1"= 1'-0"

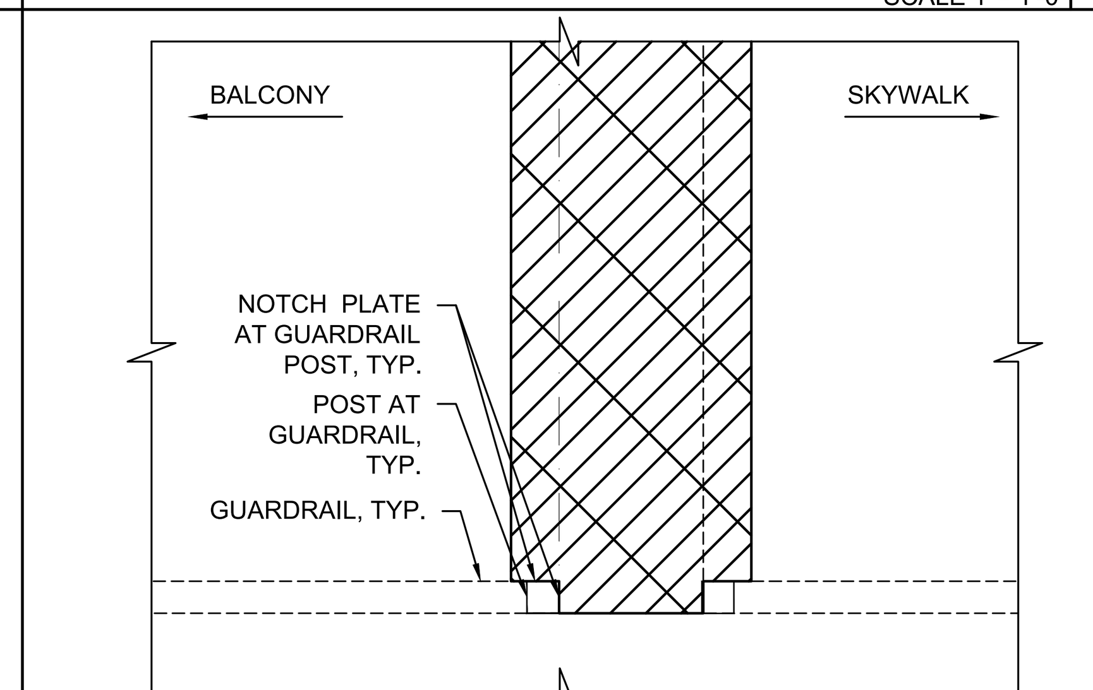


PLATE @ BALCONY TO SKYWALK D

SCALE 1"= 1'-0"

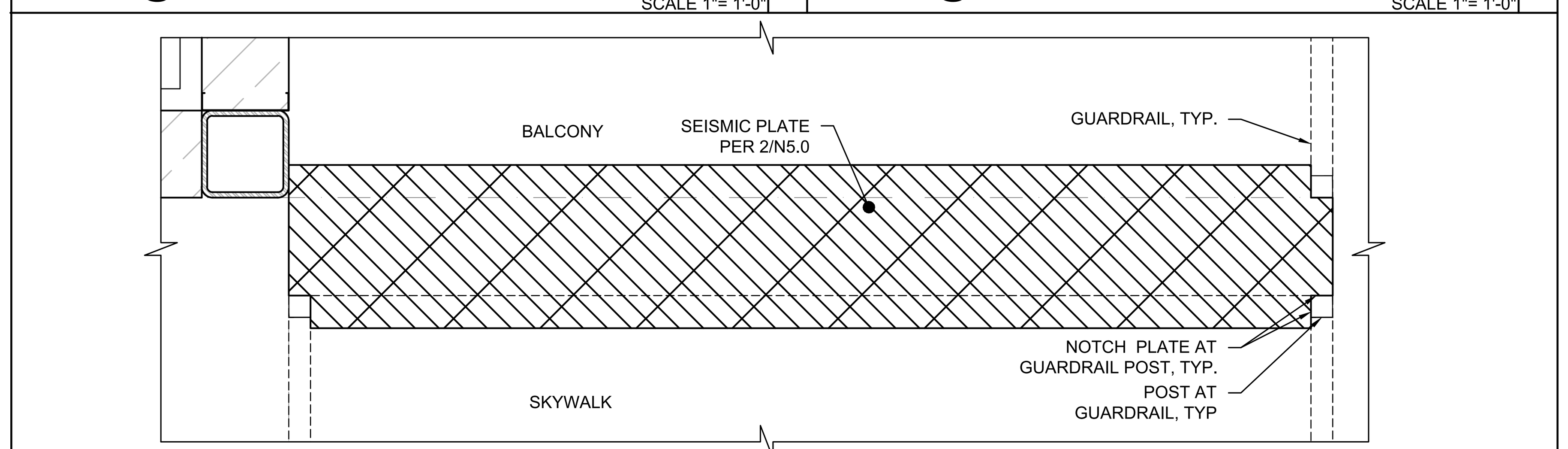
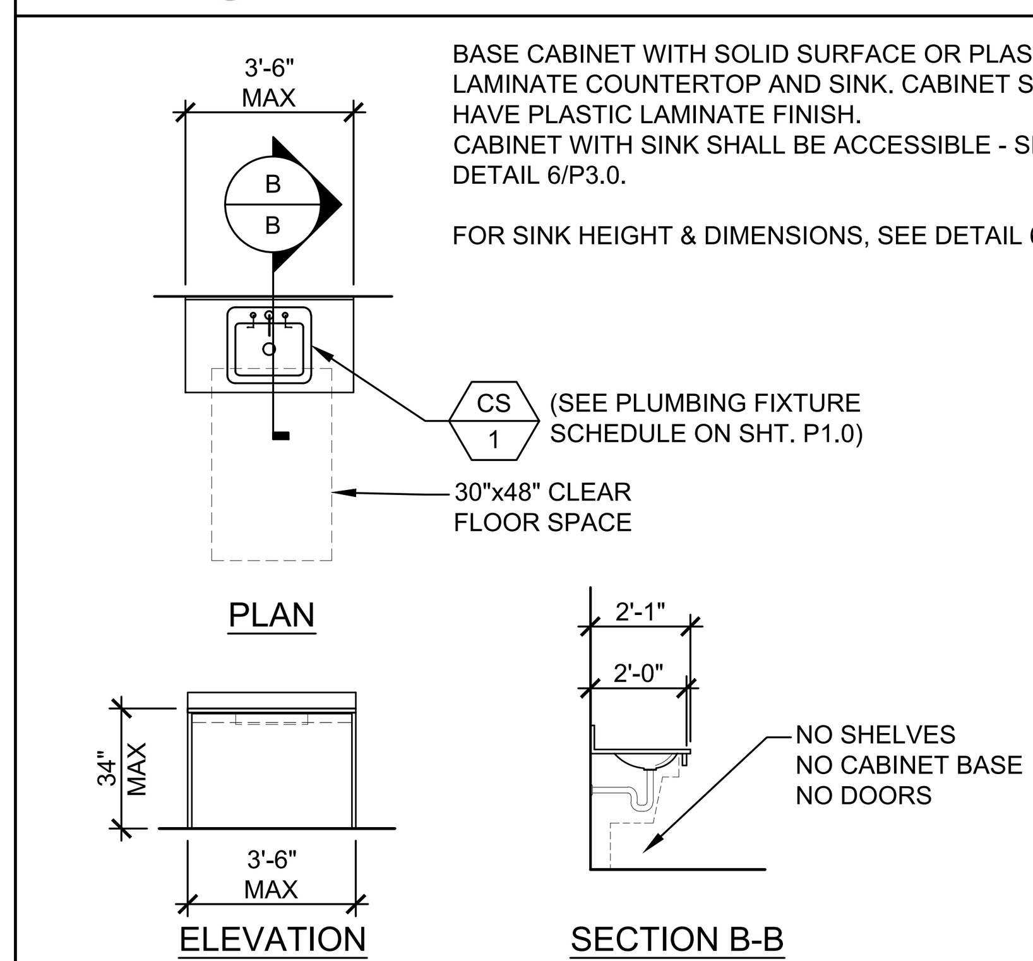


PLATE @ SKYWALK TO BALCONY E

SCALE 1"= 1'-0"



BASE CABINET WITH SOLID SURFACE OR PLASTIC LAMINATE COUNTERTOP AND SINK. CABINET SHALL HAVE PLASTIC LAMINATE FINISH.
CABINET WITH SINK SHALL BE ACCESSIBLE - SEE DETAIL 6/P3.0.

FOR SINK HEIGHT & DIMENSIONS, SEE DETAIL 6/P1.0.

CS 1 (SEE PLUMBING FIXTURE SCHEDULE ON SHT. P1.0)

CLASSROOM SINK - DETAIL

NTS 2

1. (1) 8'-0"x4'-0" MARKERBOARDS
2. MECHANICAL CHASE- REFER TO DETAIL A/A8.2 FOR WALL BRACING TO ROOF
3. TYPICAL MOD LINE
4. SEMI-RECESSED FIRE EXTINGUISHER. TOP OF HANDLE @ +48" AFF. 4" MAX PROTRUSION FROM WALL IF FIRE EXTINGUISHER IS ABOVE 27" A.F.F.
5. TACTILE EXIT SIGN (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
6. NOT USED
7. ROOM SIGNAGE AND ISA (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
8. STAIRS - REFER TO SHEET S11.0 FOR DETAILS
9. VCT FLOORING
10. NOT USED
11. ELEVATOR PER PC 03-118201
12. WINDOW SHADE
13. OCCUPANT LOAD SIGN (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
14. DOWNSPOUT - DISCHARGE TO SPLASH BLOCK (U.O.N.) PER DETAIL 10/A5.1
15. NOT USED
16. NOT USED
17. ELECTRICAL PANEL
18. FLOOR LIVE LOAD SIGN PER 2019 CBC SECTION 106.1 (BY OTHERS) PER DETAIL ON PAGE T-1 OF ARCHITECTS PLANS
19. WALK OFF MAT AT ENTRY AREA
20. THERMOSTAT - TOP OF BOX @ 46" A.F.F.
21. CASEWORK W/ SINK
22. CASEWORK
23. NOT USED
24. EXTERIOR FIRE RISER- SEE FIRE SPRINKLER PLANS
25. ROOF ACCESS HATCH AND LADDER- REFER TO SHEET A2.0
26. JANITORS SINK
27. WATER HEATER
28. THRESHOLD

KEY NOTES

1. REFER TO SHEET S9.1 FOR WALL ATTACHMENTS

SITE NOTE

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

SHEET NOTES

- X # = MECHANICAL OR PLUMBING FIXTURE - SEE MECHANICAL OR PLUMBING DRAWINGS
- X = KEY NOTE - SEE KEY NOTES ABOVE
- X = DOOR TYPE - SEE SCHEDULE, SHEET N3.0
- X = WINDOW TYPE - SEE SCHEDULE, SHEET N3.0
- X = DOOR HARDWARE - SEE HARDWARE SCHEDULE, SHEET N3.0

2X4 METAL STUD WALL

2X6 METAL STUD WALL

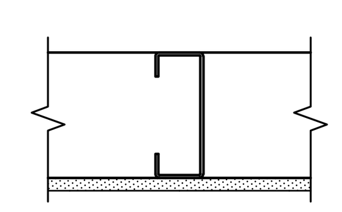
2X8 METAL STUD WALL

2X10 METAL STUD WALL

SYMBOLS LEGEND

ACOUSTIC CONTROLS

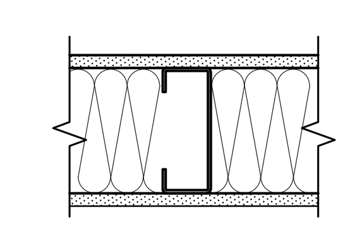
1. WHEN THE BUILDING IS SITE ADAPTED, THE BUILDING AND SITE FEATURES SHALL COMPLY WITH THE CALGREEN CODE, SECTION 5.507.4, FOR THE SPECIFIC SITE LOCATION.
2. MINIMUM WALL ASSEMBLIES: WALL ASSEMBLIES SHALL BE CONSTRUCTED PER DETAIL SHEETS A5.1,WITH STEEL STUDS PER LISTED OPTIONS. MINIMUM STC RATINGS LISTED BELOW ARE PER THE CATALOG OF STC & IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES, PRODUCED BY THE OFFICE OF NOISE CONTROL, CA DEPARTMENT OF HEALTH SERVICES.



(1) LAYER 1/2" GYPSUM BOARD SECURED TO MIN. 2½" METAL STUDS @ 24" O.C. MAX.

STC=27
(CATALOG SECTION 1.3.2.5.4.1)
TEST REF.: NATIONAL RESEARCH COUNCIL OF CANADA - NRC #66

3. IN THE EVENT THAT A CLASSROOM IS DESIGNED TO CONNECT TO ANOTHER CLASSROOM OR RESTROOM, INTERIOR SOUND TRANSMISSION IN THE INTERIOR ADJOINING WALL AND FLOOR/CEILING SHALL MEET THE MINIMUM REQUIREMENT OF A STC OF 40, PER CALGREEN CODE SECTION 507.4.3. (EXAMPLES OF QUALIFYING ASSEMBLIES SHOWN BELOW).



(2) LAYER 5/8" GYPSUM BOARD SECURED TO MIN. 2½" METAL STUDS @ 24" O.C. MAX. W/3½ THK BATT INSULATION

STC=48
TEST REF.: AUDIO ALLOY L.L.C TEST NUMBER OL-92-410

4. MINIMUM WINDOW & DOOR RATINGS: ALL WINDOWS AND DOORS SPECIFIED ON THE SCHEDULES FOUND ON SHEET N3.0 OF THIS PACKAGE SHALL MEET A MINIMUM STC RATING OF 27.

ACOUSTIC NOTES

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

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK ... HAGH
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

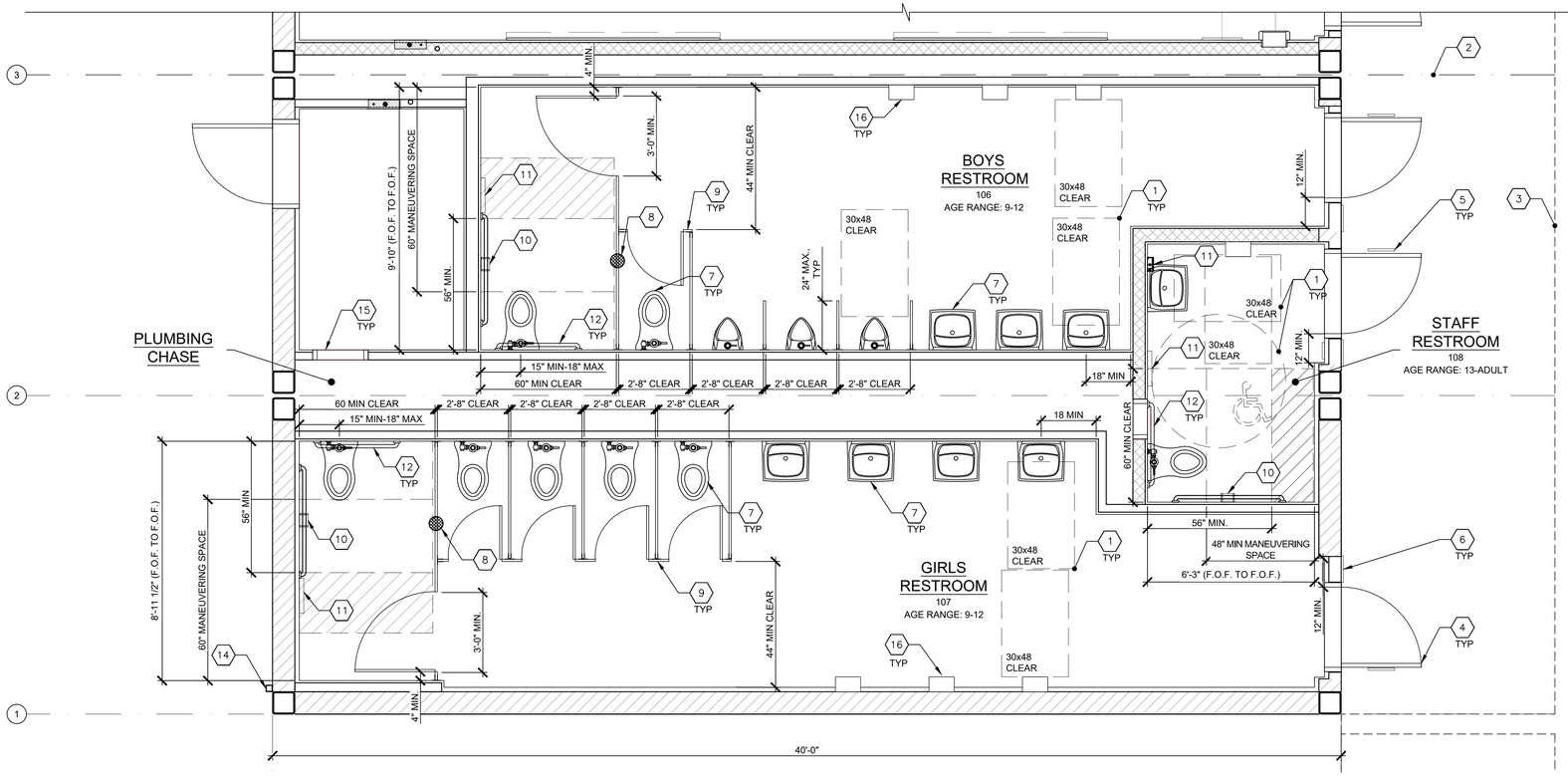
SHEET TITLE:

UPPER FLOOR PLAN

SHEET NUMBER:

A1.1

BID SET 10/01/2021



ENLARGED RESTROOM PLAN

SCALE : 3/8"=1'-0" | 1

NOT USED	3	NOT USED	4	NOT USED	5	NOT USED	6

1. CLEAR FLOOR SPACE AREA
2. TYP. MOD LINE
3. OVERHANG PER PLAN
4. DOOR PER SCHEDULE ON SHEET N3.0, TYP.
5. RESTROOM SIGNAGE (BY OTHERS) PER DETAILS 1-10, SHEET N4.0
6. ROOM AND ISA SIGNAGE (BY OTHERS) PER DETAILS 5&9/N4.0
7. PLUMBING FIXTURE PER P1.0
8. FLOOR DRAIN (LOCATION MAY VARY) - PER P1.0
   1:48 FLOOR SLOPE MAX.
9. TOILET PARTITIONS (ACCURATE, SOLID PLASTIC, OR EQUAL)
10. TOILET TISSUE DISPENSER (BOBRICK MODEL B6977)
11. TOILET SEAT COVER DISPENSER (BY DISTRICT)
12. GRAB BARS - SEE 6/A7.2
13. INSTAHOT WATER HEATER
14. DOWNSPOUT - DISCHARGE TO SPLASH BLOCK (U.N.O.)
15. ACCESS PANEL DOOR
16. HAND DRYER

KEY NOTES

1. DIMENSIONS ARE TO FACE OF FINISH (F.O.F.) UNLESS NOTED OTHERWISE (i.e. F.O.C., ¢)
2. REFER TO SCHEDULE 7/P3.0 FOR ACCESSIBLE HEIGHTS AT TOILETS.
3. REFER TO DETAILS 4 & 5/A7.1 FOR TOILET PARTITION ANCHORAGE BLOCKING.
4. SEWER AND WATER STUB OUTS SHALL BE LOCATED WITHIN THE ALLOWABLE AREA AS SHOWN ON FLOOR PLAN AND CONNECTIONS SHALL BE EASILY ACCESSIBLE FOR FUTURE RELOCATION. STUB OUT HEIGHT SHALL BE COORDINATED BY THE MANUFACTURER.
5. PIPING MATERIAL
   a. WATER: COPPER TYPE "L", 95/5 SOLDER.
   b. WASTE DRAIN AND VENT: ABS.

PLUMBING NOTE

MODULAR MFR. TO STUB THROUGH FLOOR ALL PLUMBING LINES. BUILDING PERIMETER POC'S SHOWN ARE FOR COORDINATION PURPOSES ONLY. ALL UNDER-FLOOR CONNECTIONS ARE BY SITE CONTRACTOR, U.O.N.

SITE NOTE

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

GENERAL NOTES

- = KEY NOTE - SEE KEY NOTES, THIS SHEET
- (X) = DOOR TYPE - SEE SCHEDULE SHEET N3.0
- [X] = DOOR HARDWARE - SEE HARDWARE SCHEDULE SHEET N3.0
- <X> = WINDOW TYPE - SEE SCHEDULE SHEET N3.0
- = 60" DIAMETER CLEAR FLOOR TURNING SPACE
- CLEAR FLOOR SPACE

SHEET NOTES

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
BRADLEY PATRICK CLEMENT
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	10/01/21
PROJECT NO:	1613-20

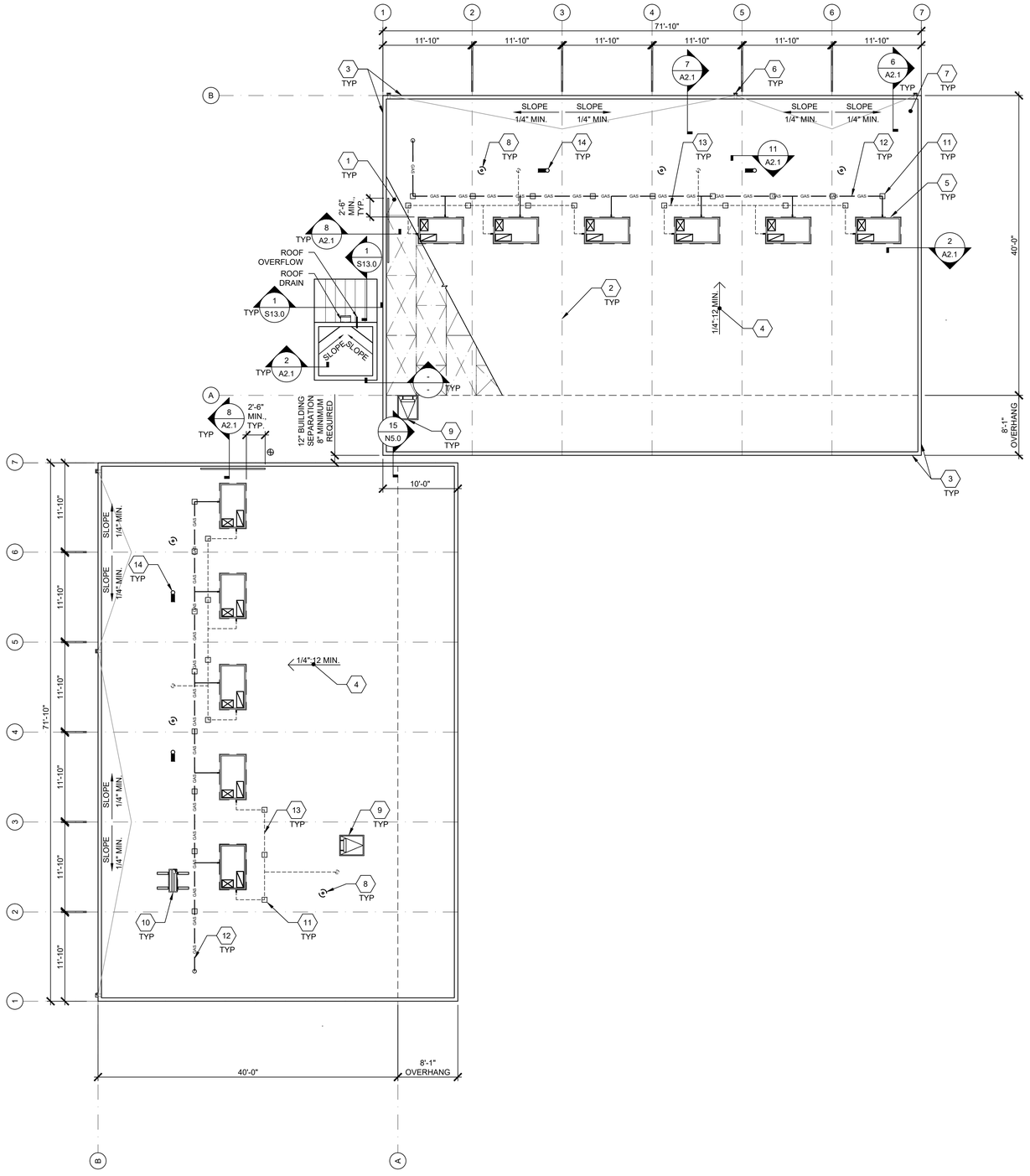
SHEET TITLE:

ENLARGED RESTROOM PLAN

SHEET NUMBER:

A1.2

BID SET 10/01/2021



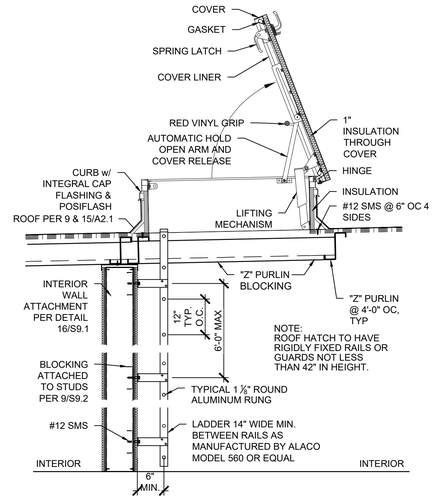
TYPICAL ROOF PLAN

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

1

1 ROOF SHEATHING PER SHEET S4.0
2 TYPICAL MOD LINE
3 PARAPET
4 TYPICAL ROOF SLOPE
5 TYPICAL HVAC UNIT
6 ROOF DRAIN/OVERFLOW, PER DETAIL 9/A2.1
7 SBS MODIFIED BITUMINOUS MEMBRANE ROOFING, COLD-APPLIED PER SHEET A2.1
8 PIPE VENT PER PLUMBING PLANS - PER DETAIL 5/M1.4. REFER TO PLUMBING PLANS FOR LOCATIONS
9 ROOF HATCH W/ACCESS LADDER - SEE SHEET A7.2
PROVIDE PROTECTIVE RAILING IF CLOSER THAN 10'-0" FROM EDGE OF ROOF
10 SPLIT HVAC OUTDOOR CONDENSING UNIT PER DETAILS 12 & 13/A2.1
11 PIPE SUPPORT PER DETAIL 5A/M1.4
12 GAS LINE (LOCATION MAY VARY PER SITE CONDITION)
13 CONDENSATE LINE (LOCATION MAY VARY PER SITE CONDITION)
14 HOSE BIBB

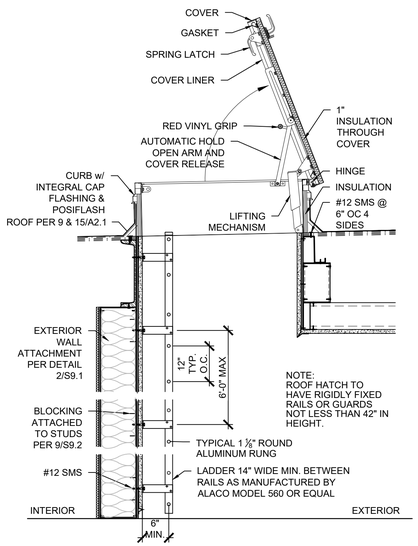
KEY NOTES



INTERIOR ROOF HATCH

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

A



EXTERIOR ROOF HATCH

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

B

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MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK CONNOR
No. C12631
Ren. 3-31-23
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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

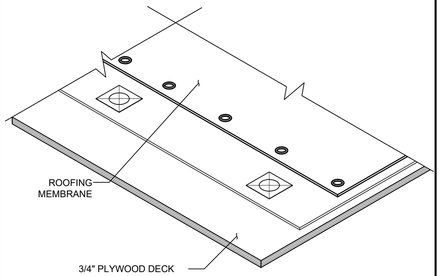
SHEET TITLE:

ROOF PLAN

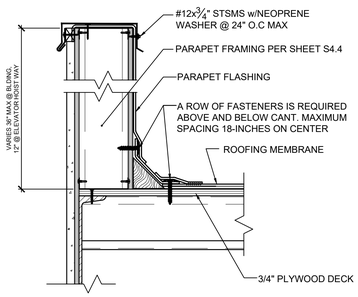
SHEET NUMBER:

A2.0

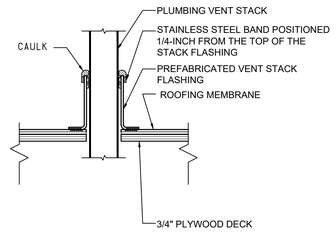
BID SET 10/01/2021



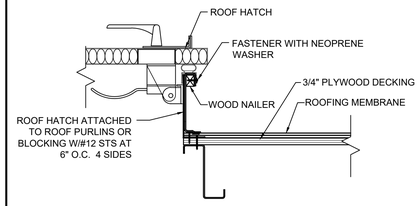
SINGLE PLY ROOFING DETAIL — SCALE : 1 1/2"=1'-0" — 1



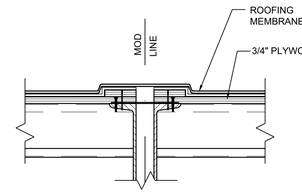
DETAIL @ PARAPET — SCALE : 1 1/2"=1'-0" — 2



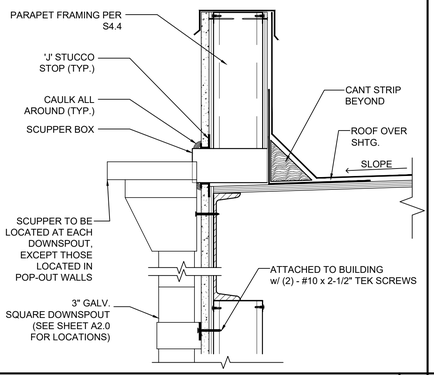
ROOF PENETRATION DETAIL — SCALE : 1 1/2"=1'-0" — 3



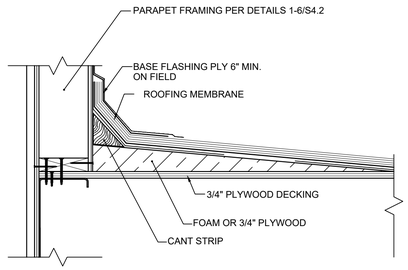
ROOF HATCH DETAIL — SCALE : 1 1/2"=1'-0" — 4



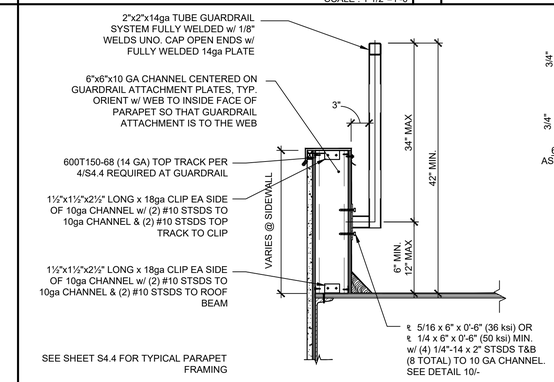
DETAIL AT MOD-LINE — SCALE : 1 1/2"=1'-0" — 5



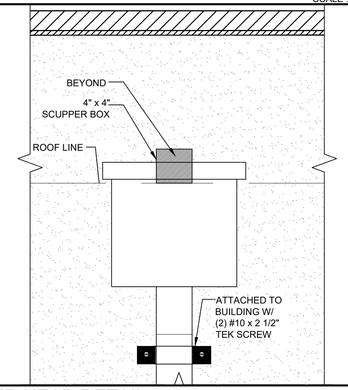
TYP. SCUPPER DETAIL — SCALE : 1 1/2"=1'-0" — 6



CRICKET DETAIL — SCALE : 1 1/2"=1'-0" — 7

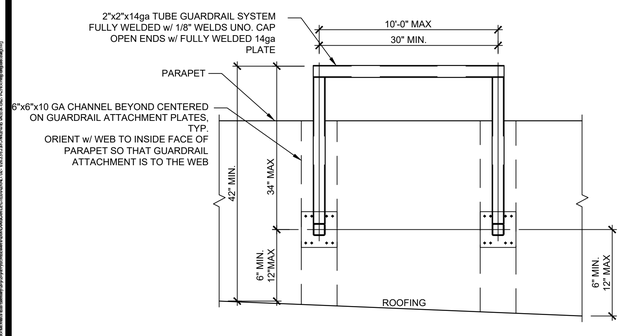


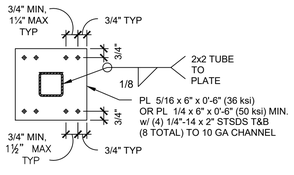
RAIL DETAIL — SCALE : 1 1/2"=1'-0" — 8



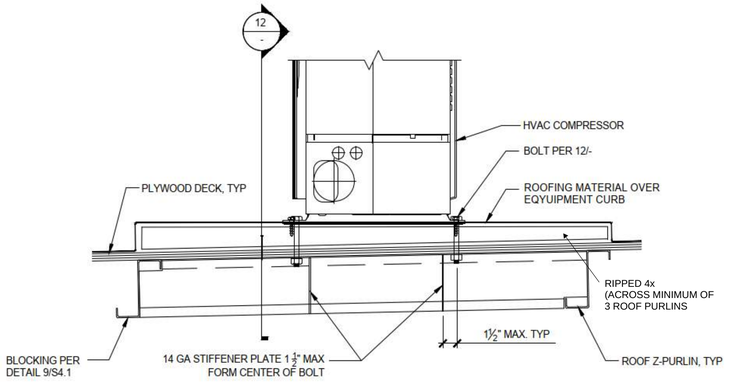
RAIN LEADER HEAD DETAIL — SCALE : 1 1/2"=1'-0" — 9

SEE SHEET S4.4 FOR TYPICAL PARAPET FRAMING

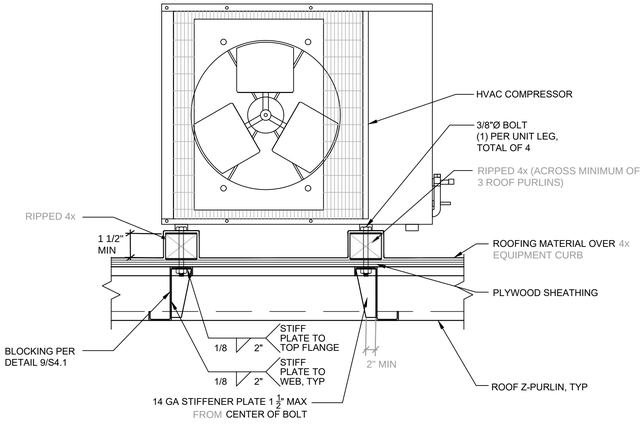




GUARD RAIL DETAIL — SCALE : 1 1/2"=1'-0" — 10



HVAC CONDENSER ANCHORAGE DETAIL — SCALE : 1 1/2"=1'-0" — 11



HVAC CONDENSER ANCHORAGE DETAIL — SCALE : 1 1/2"=1'-0" — 12

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK J. HOWE — No. C12631 — Ren. 9-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

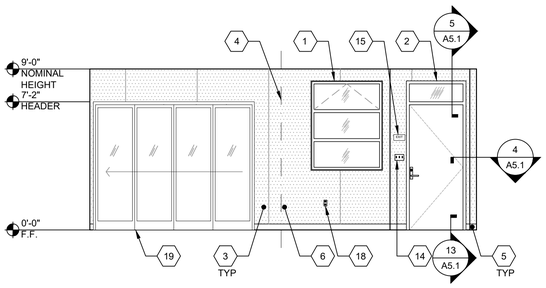
SHEET TITLE:

ROOFING DETAILS

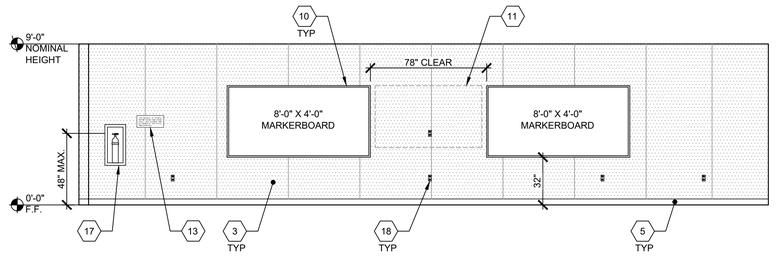
SHEET NUMBER:

A2.1

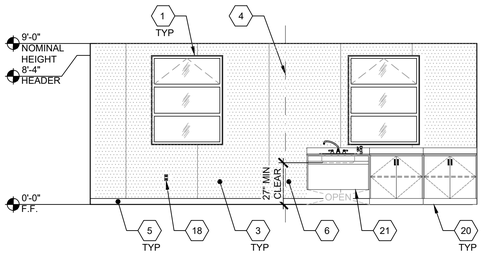
BID SET 10/01/2021



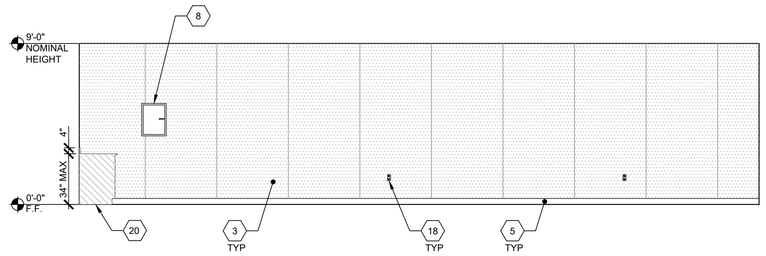
TYPICAL CLASSROOM FRONT WALL ELEVATION- GROUND FLOOR SCALE : 1/4"=1'-0" | 1



TYPICAL CLASSROOM SIDE WALL ELEVATION- GROUND FLOOR SCALE : 1/4"=1'-0" | 2



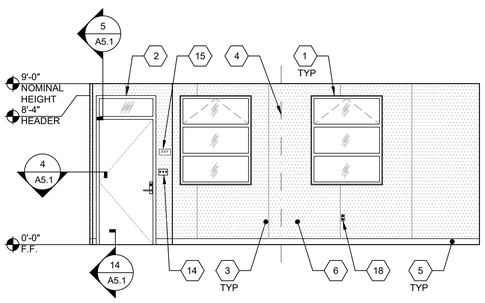
TYPICAL CLASSROOM REAR WALL ELEVATION- GROUND FLOOR SCALE : 1/4"=1'-0" | 3



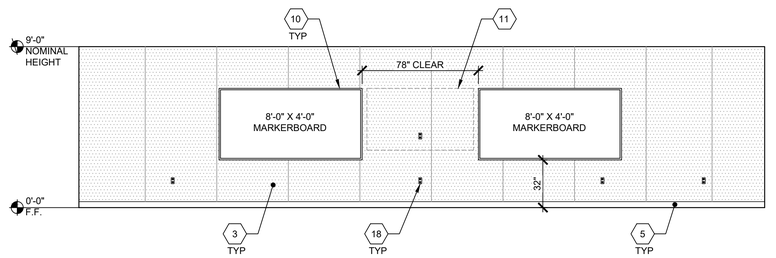
TYPICAL CLASSROOM SIDE WALL ELEVATION- GROUND FLOOR SCALE : 1/4"=1'-0" | 4

KEY NOTES

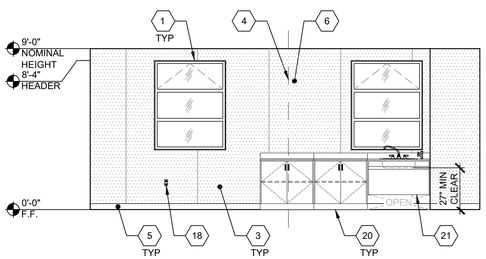
1. WINDOW. SEE SCHEDULE ON SHEET N3.0.
2. TYP. EXTERIOR DOOR. SEE SCHEDULE ON SHEET N3.0.
3. VINYL WRAPPED TACKABLE WALL PANELS. SEE FINISH SCHEDULE ON SHEET N3.0.
4. TYP. MOD LINE
5. TOP SET BASE
6. FULL PANEL CLOSE-UP @ MOD-LINES, TYP.
7. NOT USED
8. ELECTRICAL PANEL - SEE ELECTRICAL SHEETS
9. NOT USED
10. 8'x4' MARKERBOARD
11. FUTURE TV (BY DISTRICT)- AMS TO PROVIDE BLOCKING
12. NOT USED
13. NOT USED
14. LIGHT SWITCH, SEE ELECTRICAL SHEETS
15. EXIT TACTILE SIGN AT GROUND FLOOR, PER DETAIL 10/N4.0 (NIC)
16. THERMOSTAT, TOP OF BOX @ 46" A.F.F. - SEE MECHANICAL SHEETS
17. FIRE EXTINGUISHER. TOP OF OPERATING HANDLE @ +48" A.F.F. MAX PROTRUSION OF 4" FROM WALL, OR BOTTOM OF FIRE EXTINGUISHER LESS THAN +27" A.F.F.
18. TYP. DUPLEX OUTLET, SEE ELECTRICAL SHEETS
19. NANA WALL
20. CASEWORK- BLOCKING PER A7.1
21. CASEWORK W/ SINK- BLOCKING PER A7.1 & P1.0 FOR PLUMBING FIXTURE SCHEDULE



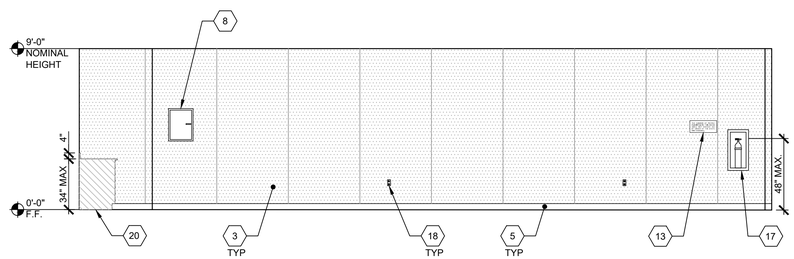
TYPICAL CLASSROOM FRONT WALL ELEVATION- SECOND FLOOR SCALE : 1/4"=1'-0" | 5



TYPICAL CLASSROOM SIDE WALL ELEVATION- SECOND FLOOR SCALE : 1/4"=1'-0" | 6

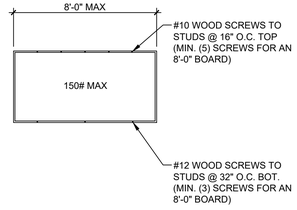


TYPICAL CLASSROOM REAR WALL ELEVATION- SECOND FLOOR SCALE : 1/4"=1'-0" | 7



TYPICAL CLASSROOM SIDE WALL ELEVATION- SECOND FLOOR SCALE : 1/4"=1'-0" | 8

MARKERBOARD DETAIL | A



NOTE:

1. ATTACHMENT IS FOR EACH MARKERBOARD.
2. EACH WHITEBOARD SHALL PROTRUDE 4" MAX HORIZONTALLY INTO THE CIRCULATION PATH, PER CBC SECTION 11B-307.2.

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GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
SIMON PATRICK GLENN
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

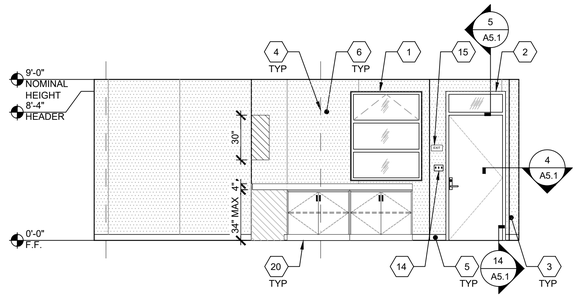
SHEET TITLE:

INTERIOR ELEVATIONS
@
TYP. CLASSROOM

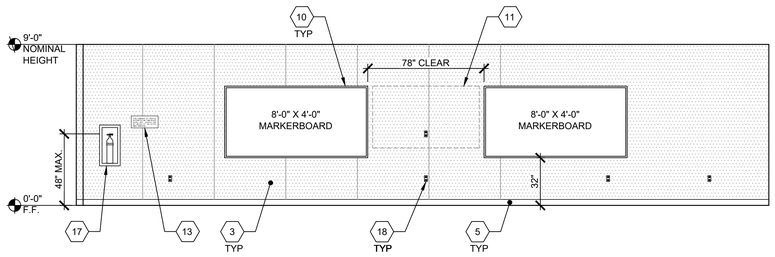
SHEET NUMBER:

A4.0A

BID SET 10/01/2021

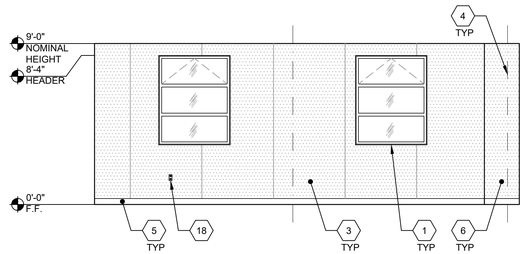


WORKROOM FRONT WALL ELEVATION — SCALE : 1/4"=1'-0" | 1

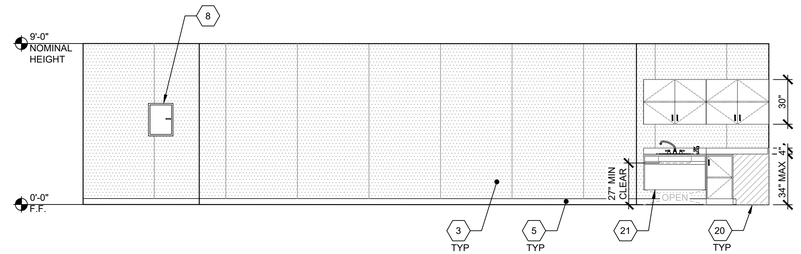


WORKROOM SIDE WALL ELEVATION — SCALE : 1/4"=1'-0" | 2

1. WINDOW. SEE SCHEDULE ON SHEET N3.0.
2. TYP. EXTERIOR DOOR. SEE SCHEDULE ON SHEET N3.0.
3. VINYL WRAPPED TACKABLE WALL PANELS. SEE FINISH SCHEDULE ON SHEET N3.0.
4. TYP. MOD LINE
5. TOP SET BASE
6. FULL PANEL CLOSE-UP @ MOD-LINES, TYP.
7. NOT USED
8. ELECTRICAL PANEL - SEE ELECTRICAL SHEETS
9. NOT USED
10. 8'x4' MARKERBOARD
11. FUTURE TV (BY DISTRICT) - AMS TO PROVIDE BLOCKING
12. NOT USED
13. NOT USED
14. LIGHT SWITCH, SEE ELECTRICAL SHEETS
15. EXIT TACTILE SIGN AT GROUND FLOOR, PER DETAIL 10/N4.0 (NIC)
16. THERMOSTAT, TOP OF BOX @ 46" A.F.F. - SEE MECHANICAL SHEETS
17. FIRE EXTINGUISHER. TOP OF OPERATING HANDLE @ +48" A.F.F. MAX PROTRUSION OF 4" FROM WALL, OR BOTTOM OF FIRE EXTINGUISHER LESS THAN +27" A.F.F.
18. TYP. DUPLEX OUTLET, SEE ELECTRICAL SHEETS
19. NOT USED
20. CASEWORK- BLOCKING PER A7.1
21. CASEWORK W/ SINK- BLOCKING PER A7.1 & P1.0 FOR PLUMBING FIXTURE SCHEDULE
22. NOT USED
23. FIRE RATED PLYWOOD
24. SELF COVED CONCRETE
25. SPLIT SYSTEM HVAC
26. ACCESS PANEL

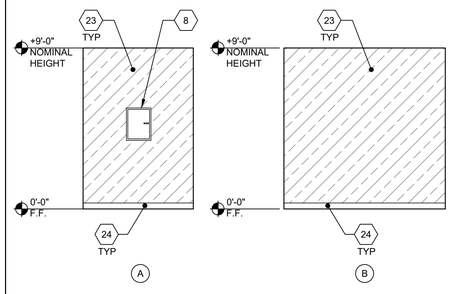


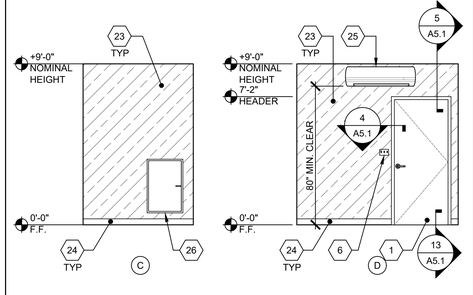
WORKROOM BACK WALL ELEVATION — SCALE : 1/4"=1'-0" | 3



WORKROOM SIDE WALL ELEVATION — SCALE : 1/4"=1'-0" | 4

KEY NOTES





NOT USED | 5

NOT USED | 6

NOT USED | 7

NOT USED | 8

NOT USED | 9

NOT USED | 10

NOT USED | 11

NOT USED | 12

LOW VOLTAGE ROOM ELEVATION — SCALE : 1/4"=1'-0" | 13

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MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT — PATRICK C. JOHNSON — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

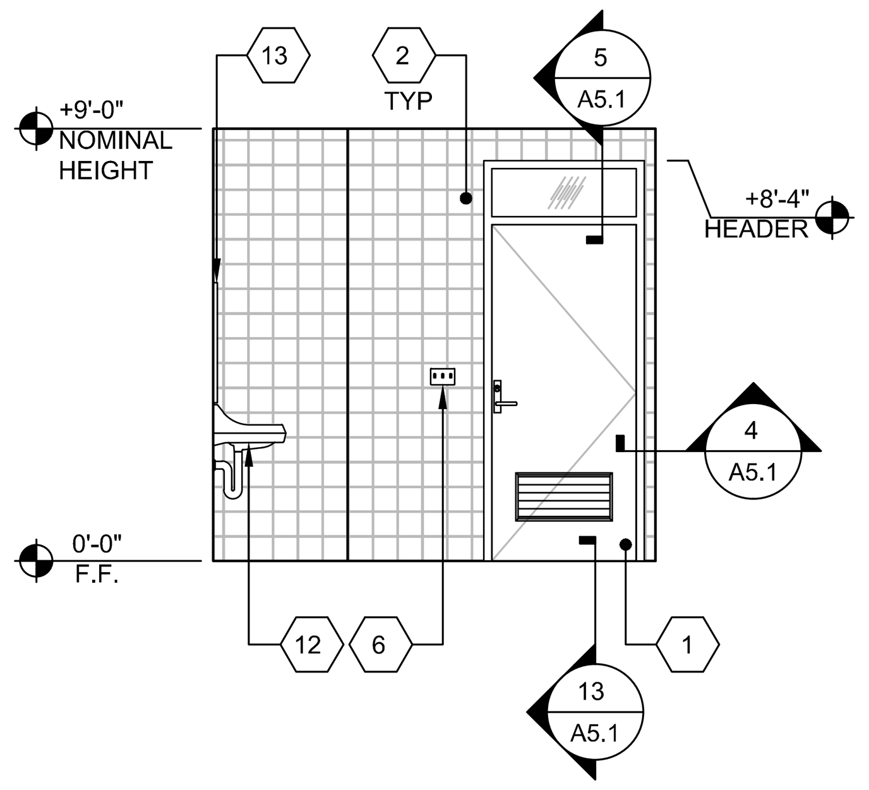
SHEET TITLE:

INTERIOR ELEVATIONS
@
TYP. CLASSROOM

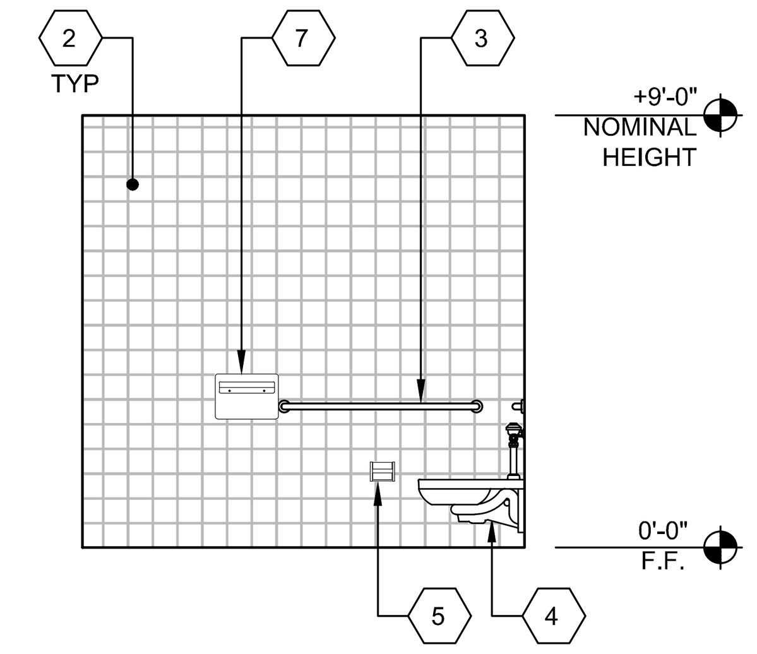
SHEET NUMBER:

A4.0B

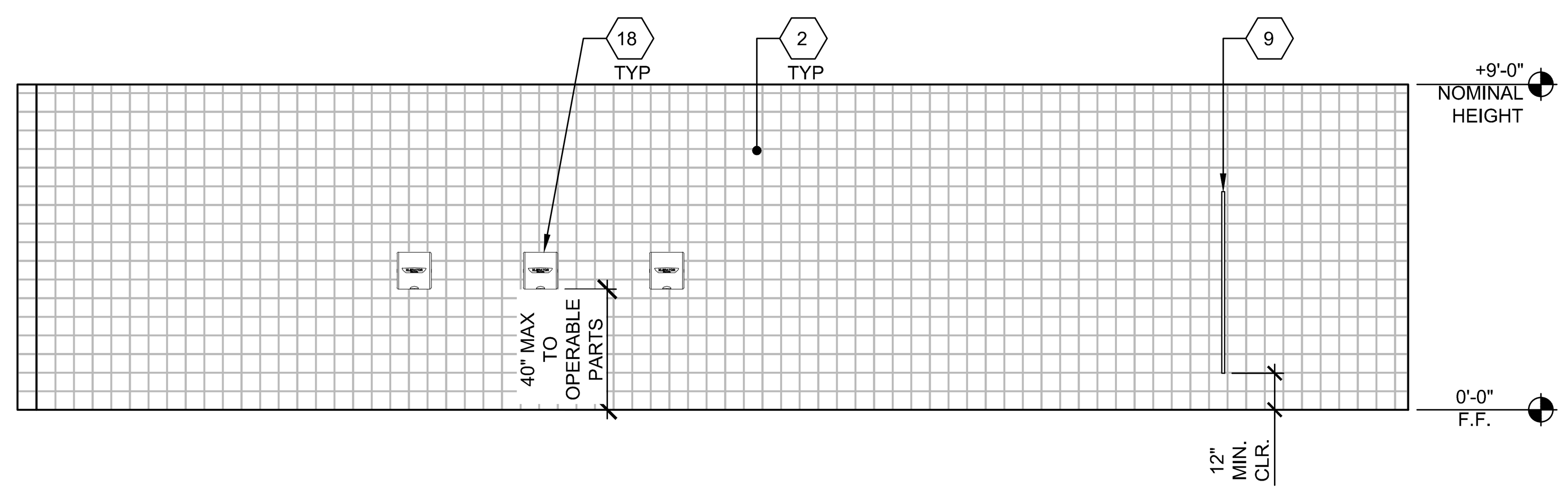
BID SET 10/01/2021



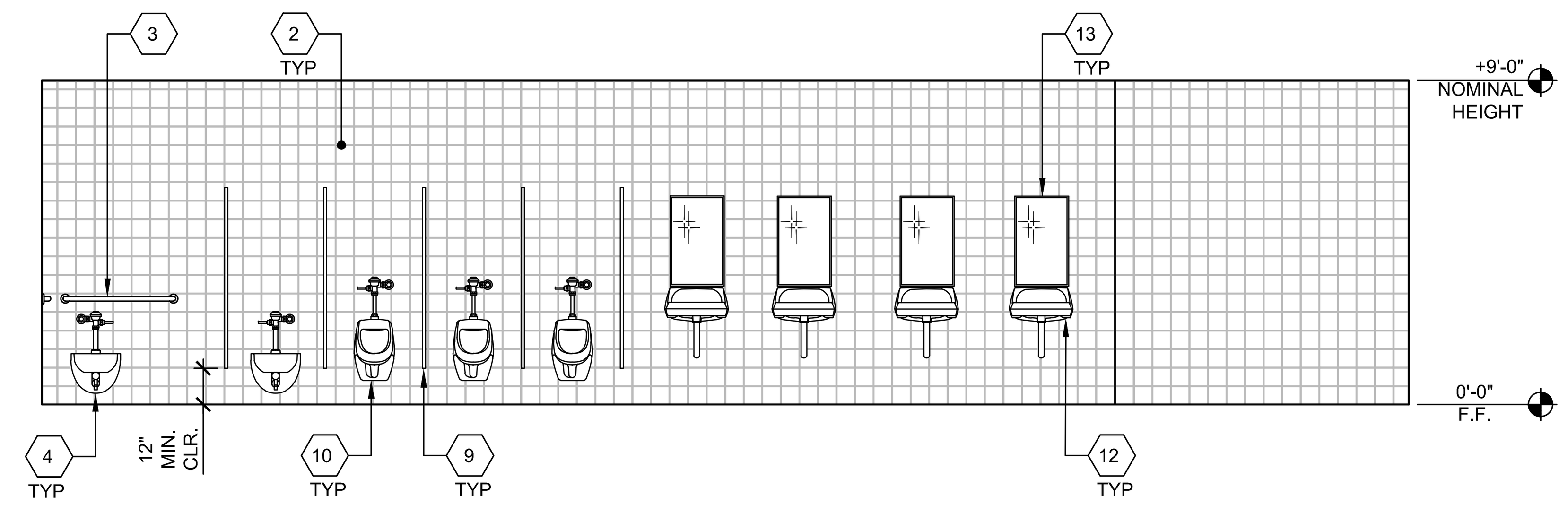
BOYS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 1



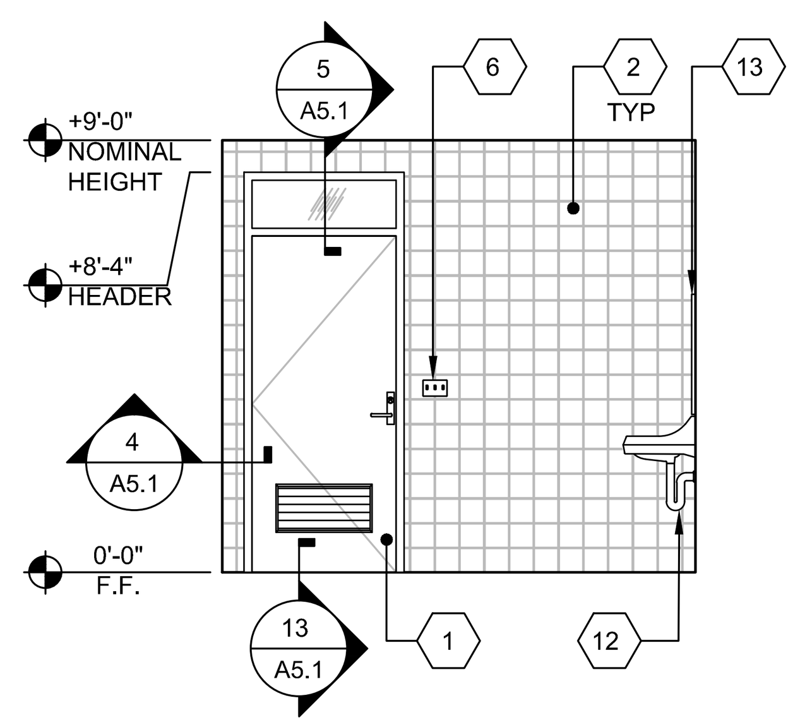
BOYS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 2



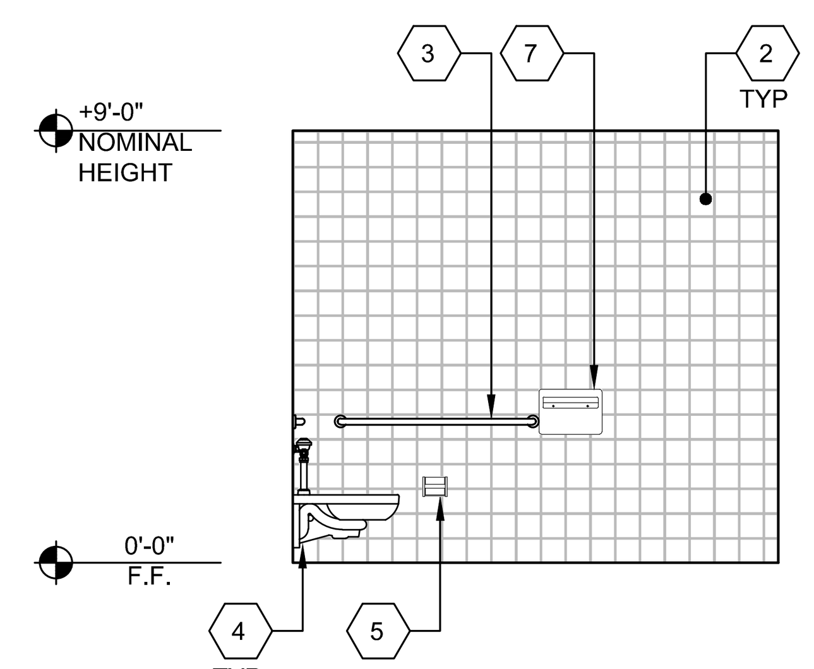
BOYS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 3



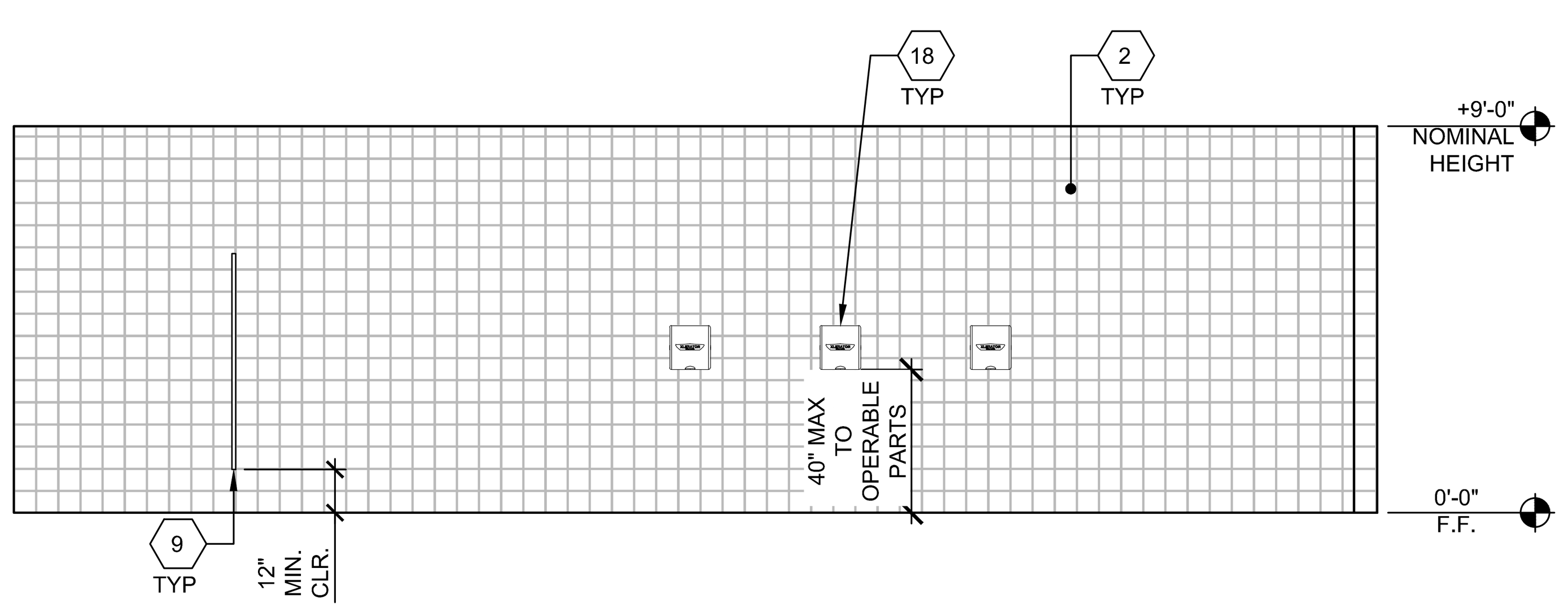
BOYS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 4



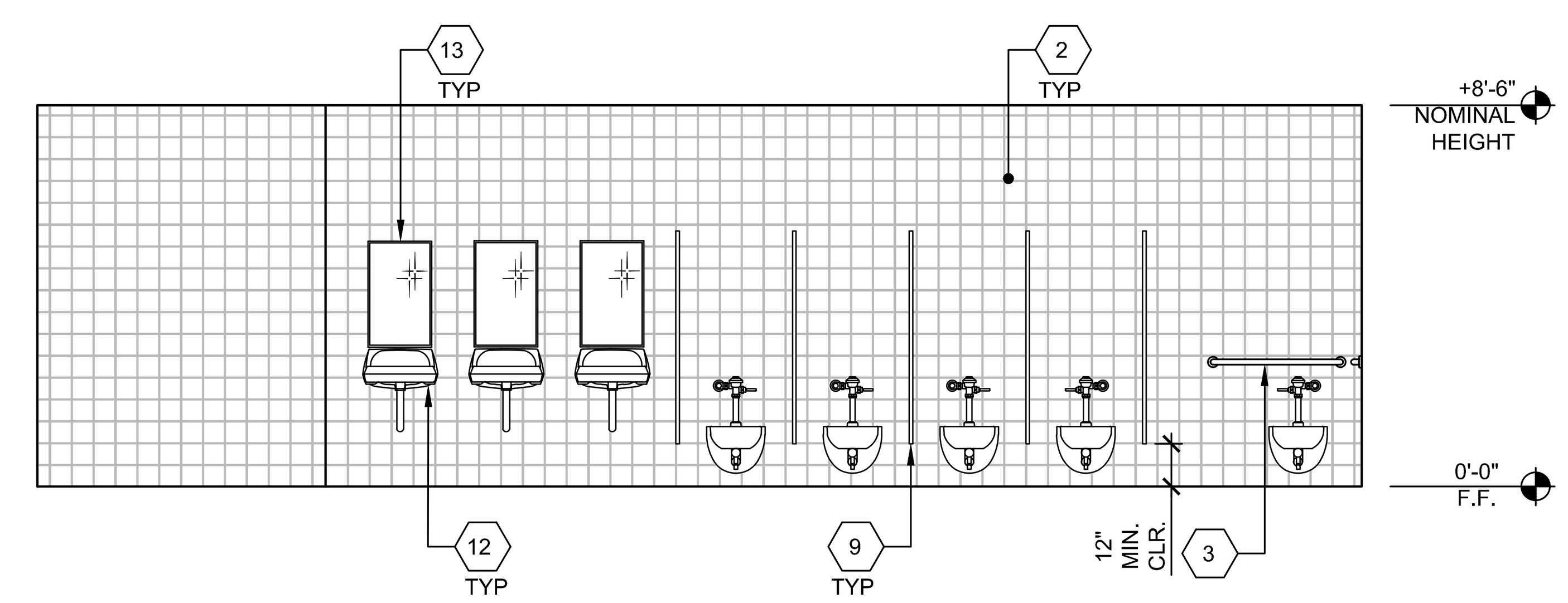
GIRLS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 5



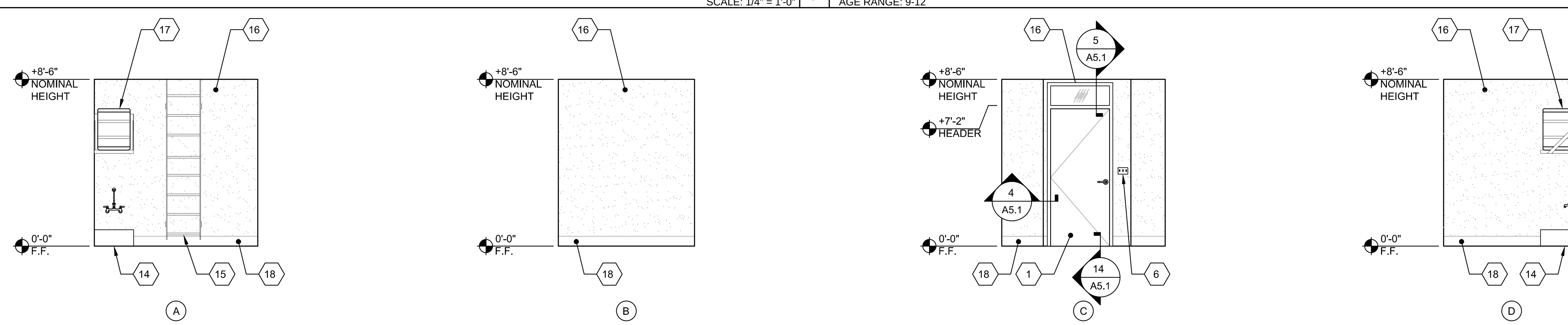
GIRLS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 6



GIRLS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 7



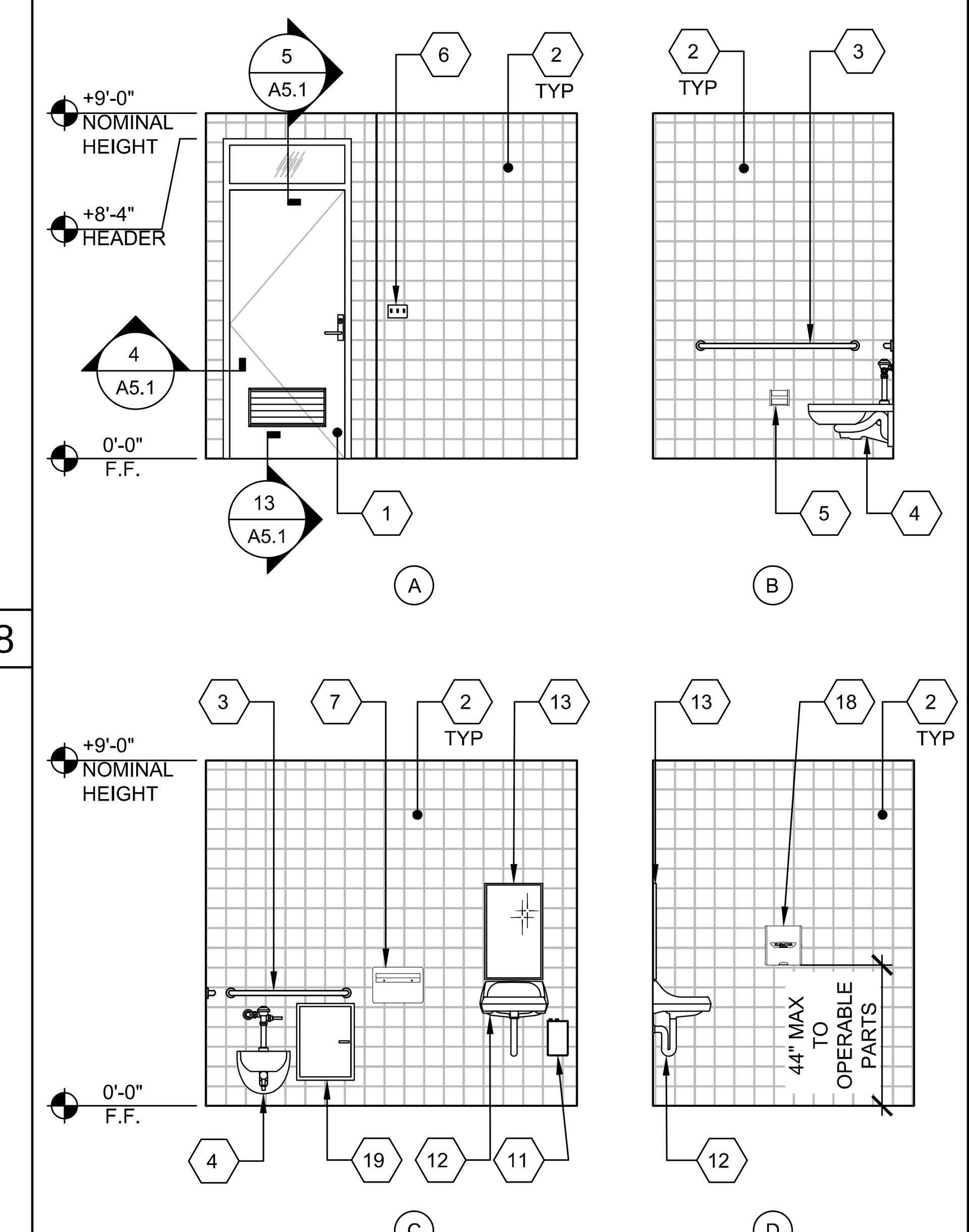
GIRLS RESTROOM ELEVATION
AGE RANGE: 9-12
SCALE: 1/4" = 1'-0" 8



JANITOR ROOM ELEVATION
SCALE: 1/4" = 1'-0" 10

1. TYPICAL DOOR
2. CERAMIC TILE
3. GRAB BAR 36" LENGTH - SEE DETAIL 3/A7.2
4. ACCESSIBLE TOILET - SEE DETAIL 14/P2.0
5. TOILET PAPER DISPENSER (BRADLEY MODEL 508-32, OR EQ.)
6. LIGHT SWITCH - SEE ELECTRICAL SHEETS
7. TOILET SEAT COVER DISPENSER (BOBRICK MODEL B-221, OR EQUAL) (BY OTHERS)
8. TYP. GFCI OUTLET - SEE ELECTRICAL SHEETS
9. TOILET PARTITION
10. ACCESSIBLE URINAL - SEE DETAIL 15/P2.0
11. INSTAHOT WATER HEATER
12. ACCESSIBLE LAVATORY - SEE DETAIL 17/P2.0
13. TYP. MIRROR (19# MAX. WEIGHT) - SEE DETAIL 17/P2.0
14. MOP SINK
15. ROOF HATCH LADDER
16. FRP
17. WATER HEATER
18. HAND DRYER- XLERATOR MODEL XL- SB WITH ADA RECESSED KIT 40502
19. ACCESS PANEL

KEY NOTES



STAFF RESTROOM ELEVATION
SCALE: 1/4" = 1'-0" 11

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Ren. 3-31-21
STATE OF CALIFORNIA

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

REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

SHEET TITLE:

INTERIOR ELEVATIONS
RESTROOM

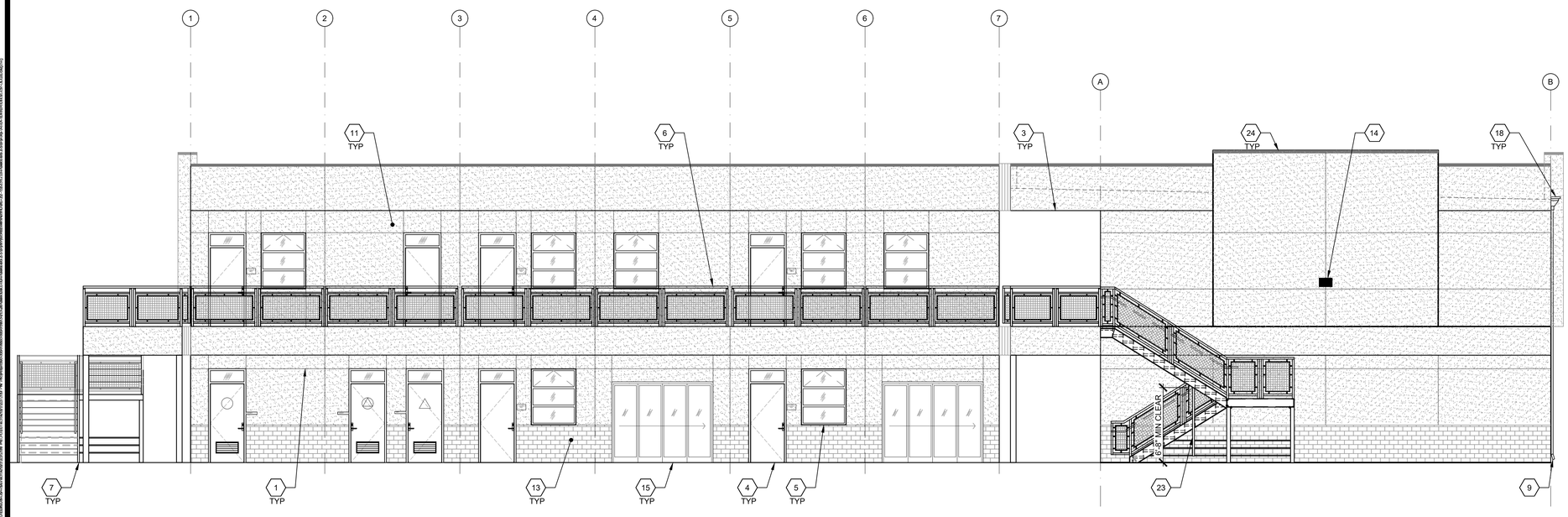
SHEET NUMBER:

A4.1

BID SET 10/01/2021

EXTERIOR ELEVATION - FRONT

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



EXTERIOR ELEVATION - LEFT

SCALE: 3/16" = 1' - 0" 2

KEYNOTES

1. CONTROL JOINT (LOCATION MAY VARY)
2. NOT USED
3. OVERHANG - SEE ROOF PLAN, STRUCTURAL
4. TYP. EXTERIOR DOOR - SEE SCHEDULE ON SHEET N4.0
5. WINDOW - SEE SCHEDULE ON SHEET N4.0
6. GUARDRAIL & RAILING - SEE STRUCTURAL SHEET S11.2
7. STAIRS WHERE OCCURS - SEE FLOOR PLANS AND STRUCTURAL SHEET S11.0.
8. NOT USED
9. DOWNSPOUT - SEE DETAIL 10 & 15/A5.1
10. ROOM ID AND ISA SIGNAGE (BY OTHERS) SEE DETAILS 5 & 9/N4.0 - TYP.
11. STUCCO FINISH
12. BALCONY WALKWAY PER SHEET S10.0
13. THIN BRICK
14. EXTERIOR LIGHT - SEE ELECTRICAL PLANS
15. NANAWALL
16. NOT USED
17. NOT USED
18. SCUPPER - SEE DETAIL 6/A2.
19. MODULAR IDENTIFICATION TAG @ +90" A.F.F.
20. SUNSHADE AWNING
21. PARAPET
22. ROOF LINE
23. PROVIDE CANE DETECTABLE RAILING WHERE VERTICAL CLEARANCE IS LESS THAN 80" (PER C.B.C. SECTION 11B-307.4) - PER 12/A5.1
24. BUMP OUT WALLS

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

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
GREGORY PATRICK O'BRIEN
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

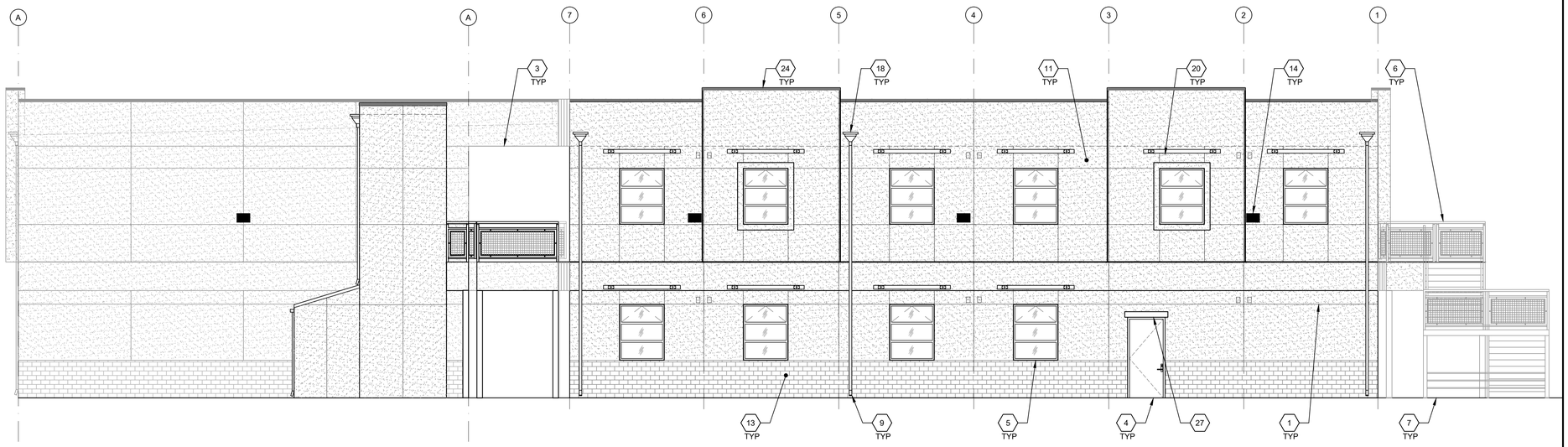
SHEET TITLE:

EXTERIOR ELEVATIONS

SHEET NUMBER:

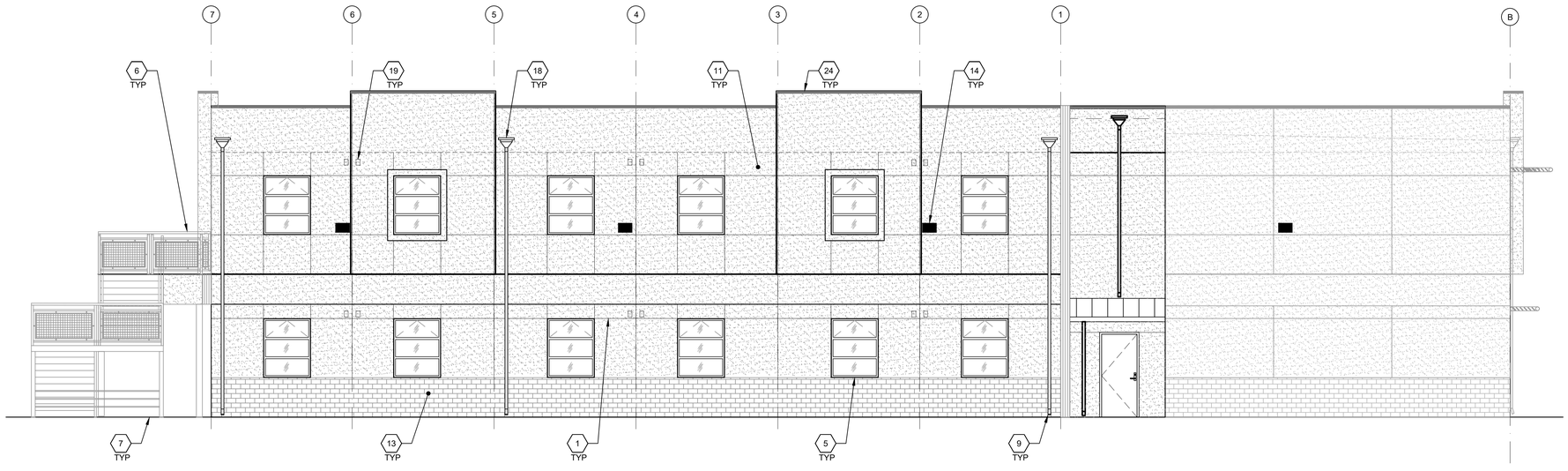
A5.0A

BID SET 10/01/2021



EXTERIOR ELEVATION - REAR

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



EXTERIOR ELEVATION - RIGHT

SCALE: 3/16" = 1' - 0" 2

1 CONTROL JOINT (LOCATION MAY VARY)
2 NOT USED
3 OVERHANG - SEE ROOF PLAN, STRUCTURAL
4 TYP. EXTERIOR DOOR - SEE SCHEDULE ON SHEET N4.0
5 WINDOW - SEE SCHEDULE ON SHEET N4.0
6 GUARDRAIL & RAILING - SEE STRUCTURAL SHEET S11.2
7 STAIRS WHERE OCCURS - SEE FLOOR PLANS AND STRUCTURAL SHEET S11.0.
8 NOT USED
9 DOWNSPOUT - SEE DETAIL 10 & 15/A5.1
10 ROOM ID AND ISA SIGNAGE (BY OTHERS) SEE DETAILS 5 & 9/N4.0 - TYP.
11 STUCCO FINISH
12 BALCONY WALKWAY PER SHEET S10.0
13 THIN BRICK
14 EXTERIOR LIGHT - SEE ELECTRICAL PLANS
15 NANAWALL
16 NOT USED
17 NOT USED
18 SCUPPER - SEE DETAIL 6/A2.
19 MODULAR IDENTIFICATION TAG @ +90" A.F.F.
20 SUNSHADE AWNING
21 PARAPET
22 ROOF LINE
23 PROVIDE CANE DETECTABLE RAILING WHERE VERTICAL CLEARANCE IS LESS THAN 80" (PER C.B.C. SECTION 11B-307.4) - PER 12/A5.1
24 BUMP OUT WALLS
25 NOT USED
26 HOSE BIBB - SEE 1/P1.0
27 DOOR HOOD PER 20/A5.1

KEYNOTES

American Modular Systems
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Fax (209) 825-7018
www.americanmodular.com

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
GREGORY PATRICK CHAMBERLAIN
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

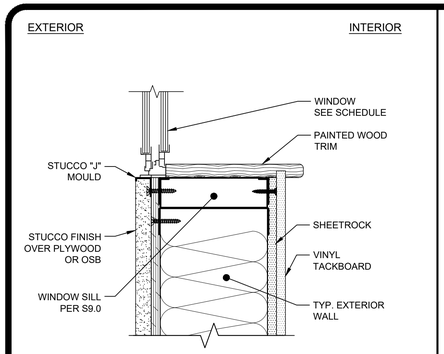
SHEET TITLE:

EXTERIOR ELEVATIONS

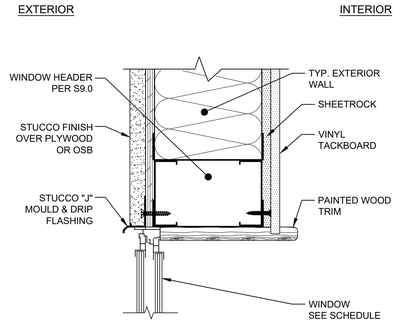
SHEET NUMBER:

A5.0B

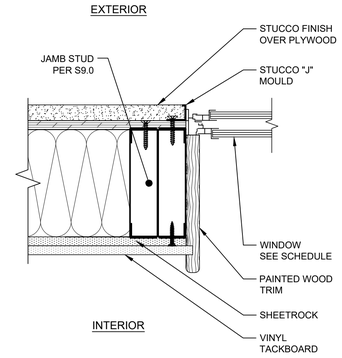
BID SET 10/01/2021



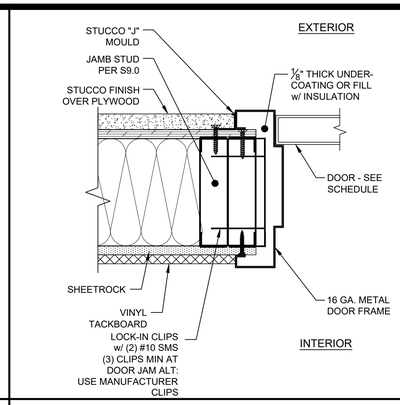
TYPICAL WINDOW SILL SCALE: 3" = 1'-0" 1



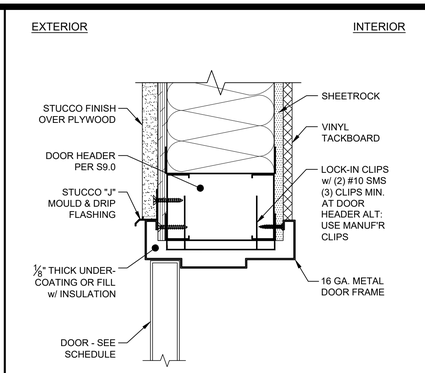
TYPICAL WINDOW HEADER SCALE: 3" = 1'-0" 2



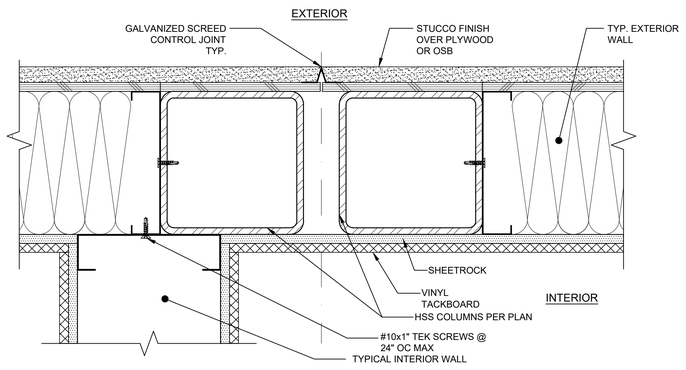
TYPICAL WINDOW JAMB SCALE: 3" = 1'-0" 3



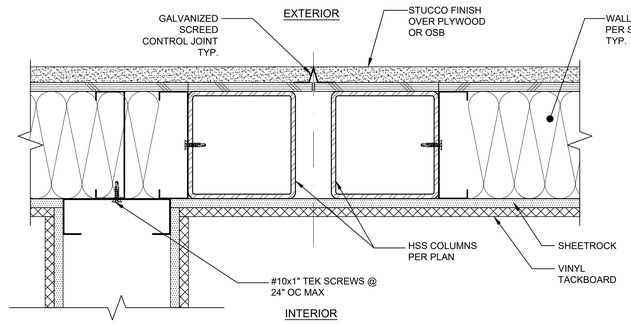
TYPICAL DOOR JAMB SCALE: 3" = 1'-0" 4



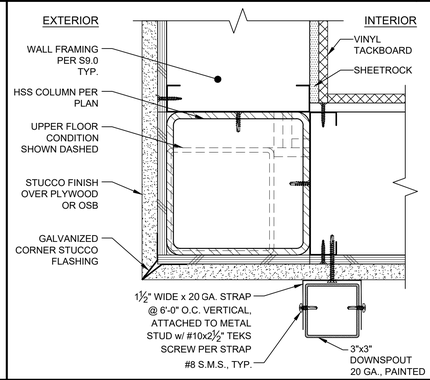
TYPICAL DOOR HEADER SCALE: 3" = 1'-0" 5



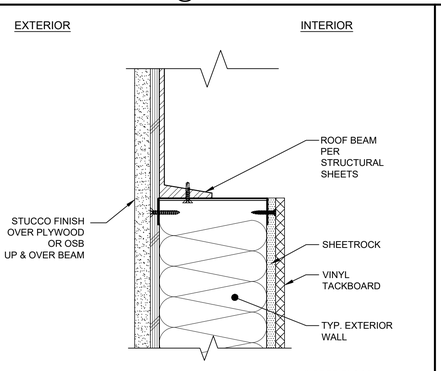
MODLINE CLOSURE @ GROUND FLOOR SCALE: 3" = 1'-0" 7



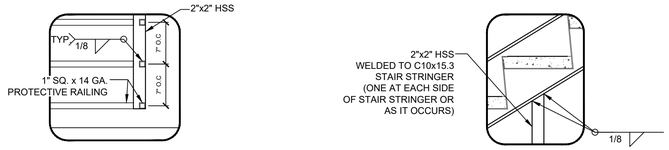
MODLINE CLOSURE @ UPPER FLOOR SCALE: 3" = 1'-0" 9



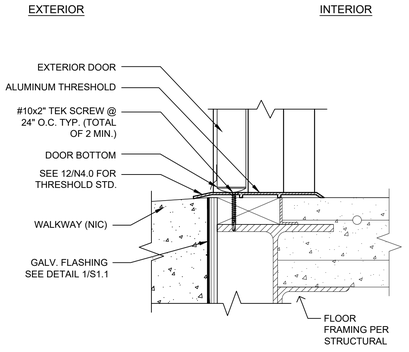
TYPICAL WALL CORNER AND TYPICAL DOWNSPOUT ATTACHMENT SCALE: 3" = 1'-0" 10



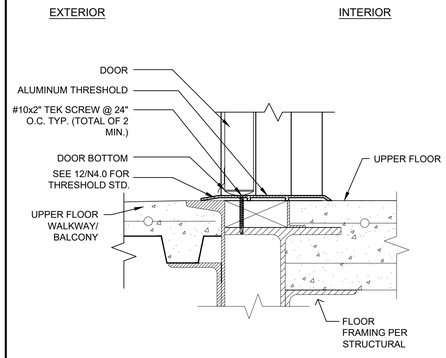
EXTERIOR FINISH @ ROOF BEAM SCALE: 3" = 1'-0" 11



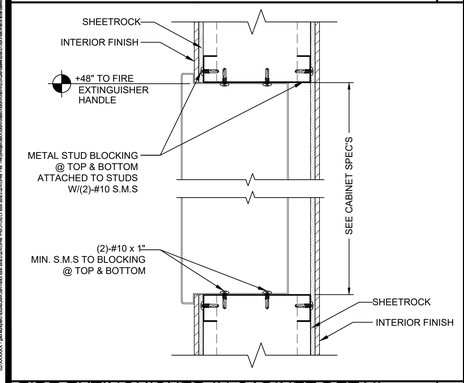
STAIR RAILING DETAIL SCALE: 3" = 1'-0" 12



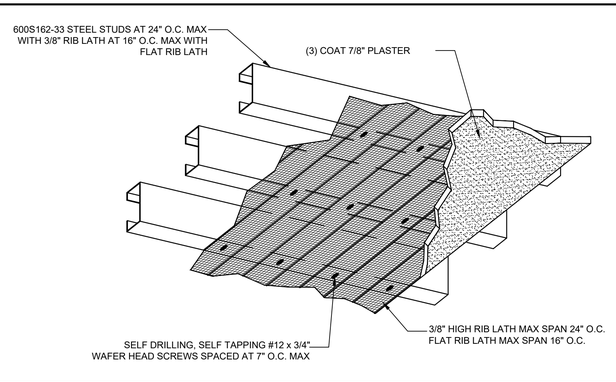
THRESHOLD @ GROUND FLOOR SCALE: 3" = 1'-0" 13



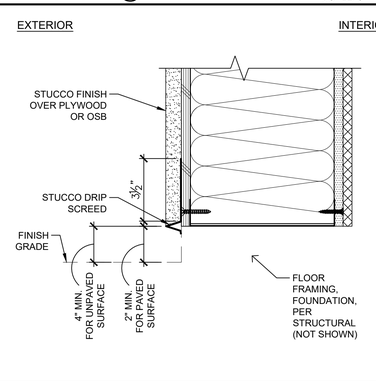
THRESHOLD @ UPPER FLOOR SCALE: 3" = 1'-0" 14



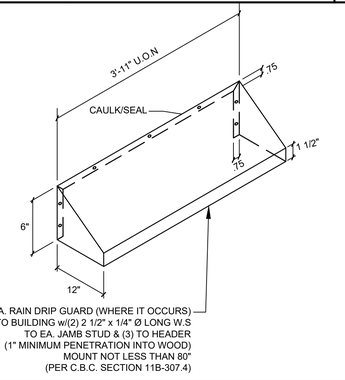
FIRE EXTINGUISHER IN CABINET DETAIL SCALE: 3" = 1'-0" 15



METAL LATH ATTACHMENT SCALE: 3" = 1'-0" 16



STUCCO TERMINATION @ GRADE 19



16 GA. RAIN DRIP GUARD (WHERE IT OCCURS) ATTACHED TO BUILDING w/(2) 2 1/2" x 1/4" Ø LONG W.S TO EA. JAMB STUD & (3) TO HEADER (1" MINIMUM PENETRATION INTO WOOD) MOUNT NOT LESS THAN 80" (PER C.B.C. SECTION 11B-307.4)

RAIN HOOD DETAIL 20

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Phone (209) 825-1921
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SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — RAYMOND PATRICK GUILFOYLE — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

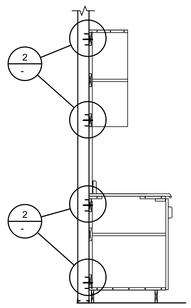
SHEET TITLE:

EXTERIOR FINISH DETAILS

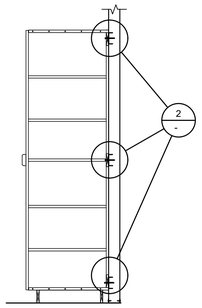
SHEET NUMBER:

A5.1

BID SET 10/01/2021



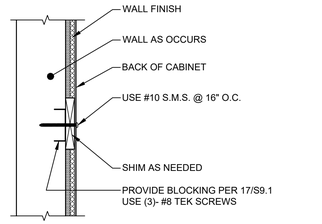
UPPER/BASE CABINET



TALL CABINET

TYP. CABINET BLOCKING

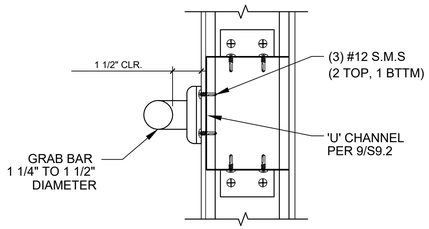
NOT TO SCALE | 1



NOTE: BLOCKING IS ONLY REQUIRED IF CABINET DOES NOT CROSS A MIN. OF (2) STUDS.

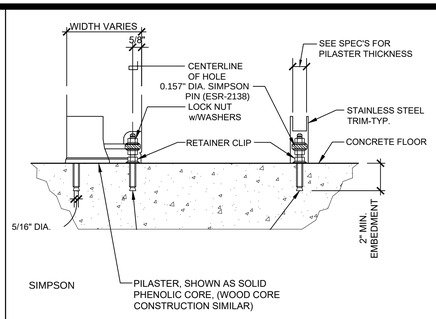
CABINET BLOCKING IN WALL

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



GRAB BAR BLOCKING DETAIL

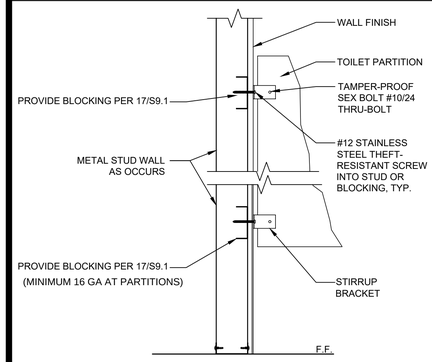
3



DRILL HOLES FOR FLOOR ATTACHMENT 5/8" FROM EDGE OF PILASTER. TYPICAL FOR ALL LOCATIONS.
NOTE: PLACE STAINLESS STEEL TRIM ON PILASTER, SLIDE UP BEFORE SECURING PILASTER TO FLOOR ATTACHMENT.

PARTITION TO CONCRETE FLOOR

4



TOILET PARTITION WALL BLOCKING

NOT TO SCALE | 5

NOT USED

6

NOT USED

9

NOT USED

10

NOT USED

13

NOT USED

14

NOT USED

15

NOT USED

16

NOT USED

17

NOT USED

18

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SET NAME

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CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
PATRICK C. HOVEY
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

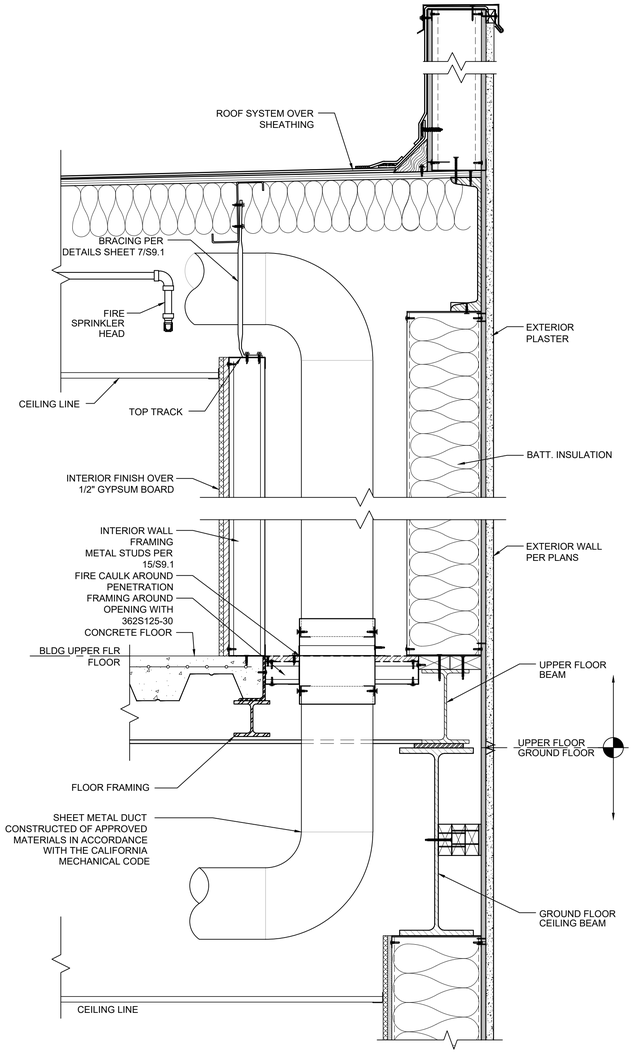
SHEET TITLE:

MISCELLANEOUS
ARCHITECTURAL DETAILS

SHEET NUMBER:

A7.2

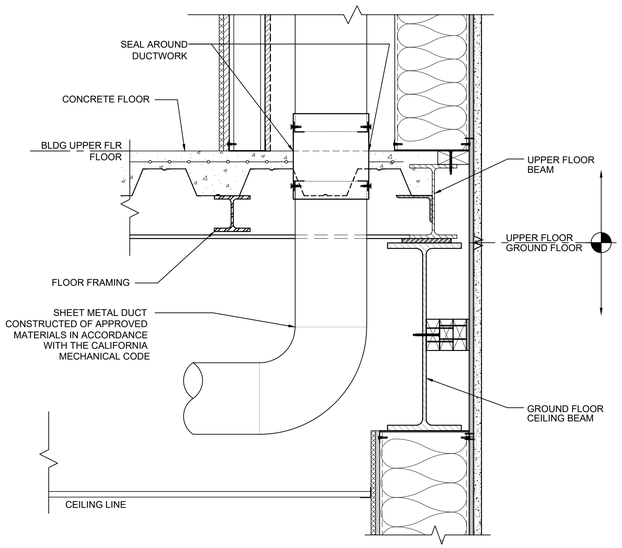
BID SET 10/01/2021



TYPICAL HVAC CHASE SECTION

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

A



OPTIONAL HVAC CHASE SECTION

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

B

NOT USED

AMS®
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SET NAME

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SITE SPECIFIC PROJECT NAME

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GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
PATRICK O'HARA
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D FRISCH
No. S3380
STRUCTURAL
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

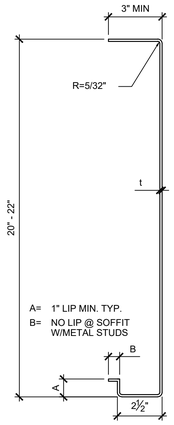
SHEET TITLE:

HVAC CHASE SECTION

SHEET NUMBER:

A8.2

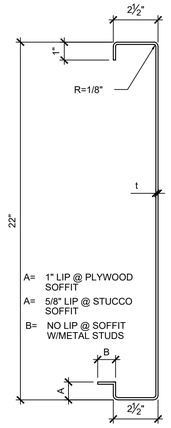
BID SET 10/01/2021



20-22 x 12 GA. TAPERED
OUTRIGGER UPPER FLOOR OVERHANG

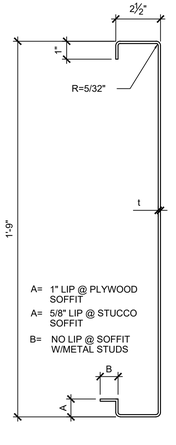
20"
ASTM = A1011
GRADE = 36
Fy = 36 ksi
A = 2.74 IN^2
Sx = 13.00 IN^3
Ix = 136.1 IN^4
t = 0.0966 IN MIN
(0.1017 IN DESIGN)

22"
ASTM = A1011
GRADE = 36
Fy = 36 ksi
A = 2.84 IN^2
Sx = 14.55 IN^3
Ix = 161.6 IN^4
t = 0.0966 IN MIN
(0.1017 IN DESIGN)



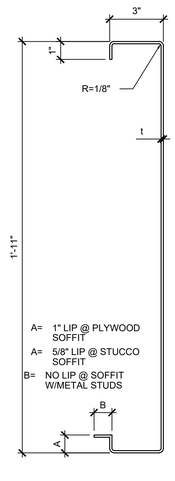
22x2 1/2x14GA
UPPER FLOOR OVERHANG
FASCIA

ASTM = A1011
GRADE = 33
Fy = 33 ksi
A = 2.00 IN^2
Sx = 10.28 IN^3
Ix = 114.49 IN^4
t = 0.0677 IN MIN
(0.0713 IN DESIGN)



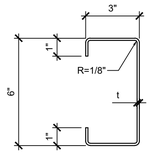
21x2-1/2x12GA
GROUND FLOOR OVERHANG
FASCIA

ASTM = A1011
GRADE = 33
Fy = 33 ksi
A = 2.73 IN^2
Sx = 13.38 IN^3
Ix = 142.31IN^4
t = 0.0966 IN MIN
(0.1017 IN DESIGN)



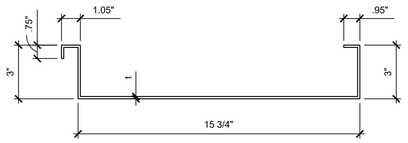
23x3x14GA
C CHANNEL - SKYWALK

ASTM = A1011
GRADE = 33
Fy = 33ksi
A = 2.17 in.^{2}
Sx = 12.24 in.^{3}
Ix = 140.81 in.^{4}
t = 0.0677 in. MIN.
(0.0713 in. DESIGNED)



6x3x14GA
C FORMED

ASTM = A1011
GRADE = 36
Fy = 36 ksi
A = 0.960 in.^{2}
Sx = 1.870 in.^{3}
Ix = 5.611 in.^{4}
t = 0.0677 in. MIN.
(0.0713 in. DESIGNED)



20 GA ROOF PAN STANDING SEAM
ROOF PANEL AT PC ELEVATOR
(PC 03-118291)
ASTM A1011, GRADE 36
Fy = 36 KSI

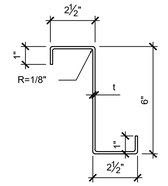
Sx$^+$(t) = 0.364 IN^3
Sx$^+$(b) = 1.372 IN^3
Ix$^+$= 0.863 IN^4

Sx$^-$(t) = 0.330 IN^3
Sx$^-$(b) = 0.305 IN^3
Ix$^-$= 0.476 IN^4
A = 0.840 IN^2

w/ GALVANIZATION
t = 0.0356 IN. MIN.

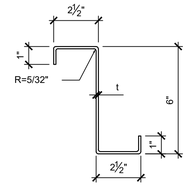
w/o GALVANIZATION
t = 0.0329 IN. MIN.
(0.035 IN. DESIGN)

NOTES:
1. MEMBERS TO BE FABRICTED FROM HOT ROLLED SHEETS WITH OPTIONAL RUST INHIBITVE COATING
2. UNLESS NOTED OTHERWISE ALL SECTION PROPERTIES ARE GROSS SECTION PROPERITIES



6x2 1/2x14GA
UPPER FLOOR
ROOF PURLIN

ASTM = A1011
GRADE = 36
Fy = 36 KSI
A = 0.889 IN^2
Sx = 1.662 IN^3
Ix = 4.985 IN^4
t = 0.0677 IN MIN
(0.0713 IN DESIGN)



6x2 1/2x12GA
GROUND FLOOR
ROOF PURLIN

ASTM = A1011
GRADE = 36
Fy = 36 KSI
A = 1.245 IN^2
Sx = 2.288 IN^3
Ix = 6.865 IN^4
t = 0.0966 IN MIN
(0.1017 IN DESIGN)

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
BENJAMIN PATRICK O'HANA
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
STRUCTURAL
STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

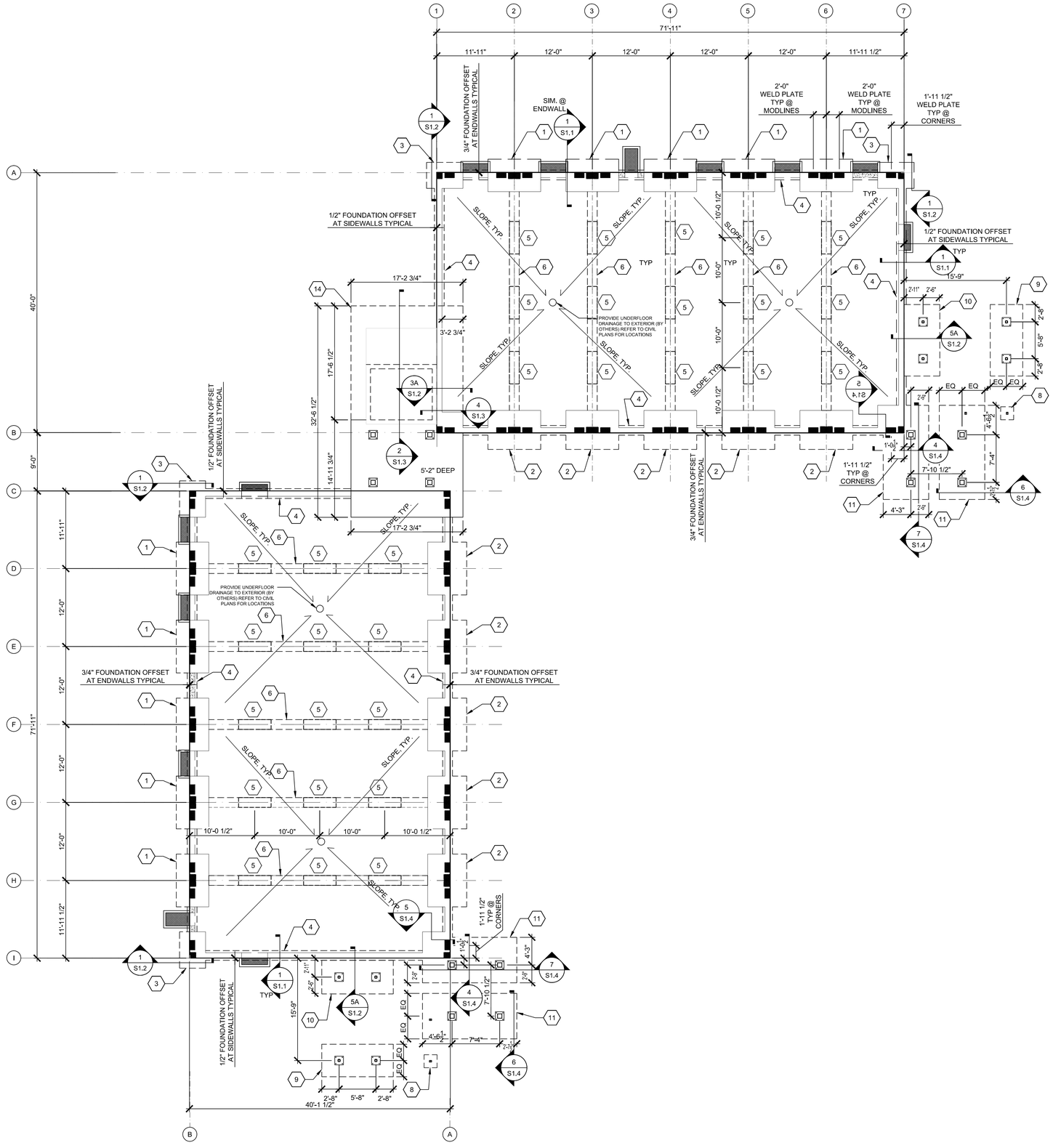
SHEET TITLE:

LIGHT GAUGE STEEL
MEMBER
PROPERTIES

SHEET NUMBER:

S0.0

BID SET 10/01/2021



FOUNDATION PLAN

SCALE $\frac{1}{8}$"=1'-0"

1

NOTES

1. DO NOT INSTALL BUILDING IN AREAS OF WATER FLOW LINES.
2. CONCRETE MIXTURES:
   A. CONCRETE STREGTH: FOOTINGS AND SLABS ON GRADE, (DESIGN BASED ON FC=3000 PSI) MINIMUN REQUIREMENTS: PSI @ 28 DAYS = 3500 PSI, MIN. CEMENT TYPE II/V WITH WATER/CEMENT RATIO OF 0.5. AND MAX SLUMP 4"
   B. PROPORTIONING OF CONCRETE MIXTURES SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.3.
   C. DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS SHALL BE IN ACCORDANCE WITH ACI 318-14, SECTION 26.4.4.
   D. CEMENT SHALL BE CERTIFIED PER TITLE 24, PART 2, SECTION 1910A.1
   E. SEE SHEET N1.0 FOR ADDITIONAL CONCRETE NOTES.
3. BUILDING MAY BE SET ON CONCRETE FOUNDATIONS THAT HAVE REACHED A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 70% OF THE SPECIFIED DESIGN STRENGTH (f'c) STATED ABOVE IN NOTE #2. PRIOR TO THE SETTING OF THE MODULAR BUILDING ON CONCRETE FOUNDATIONS THAT HAVE NOT YET CURED 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE, THE FOUNDATION CONTRACTOR SHALL:
   A. HAVE THE PROJECT TESTING LAB PERFORM CONCRETE CYLINDER COMPRESSION TESTS OF THE FOUNDATION CONCRETE USED AT THE SITE,
   B. FURNISH THE PROJECT IOR AND REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WITH CONCRETE TEST REPORTS VERIFYING THAT THE FOUNDATION CONCRETE HAS REACHED THE MINIMUM STRENGTH AS SPECIFIED ABOVE, AND
   C. NOTIFY THE PROJECT IOR AND REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THEIR INTENT TO SET THE MODULAR BUILDING PRIOR TO 28 DAYS POST PLACEMENT OF FOUNDATION CONCRETE.
4. THE REINFORCING BARS MUST BE TESTED PER TITLE 24, PART 2, SECTION 1910A.2.
5. REINFORCING STEEL SHALL BE 60,000 PSI MINIMUM, PER ASTM A615. LAP SPLICE PER SCHEDULE 20/S1.3
6. DESIGN SOIL BEARING CAPACITY = 2000 PSF (DL ONLY) AND 2500 PSF (DL + LL) PER SOIL REPORT (1/3 INCREASE IN SOIL BEARING CAPACITY NOT PERMITTED UNLESS USING ALTERNATIVE BASIC LOAD COMBINATIONS PER CBC SECTION 1605.A.3.2)
7. FOR PIPE PENETRATIONS SEE 20/S1.4
8. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHOULD VERIFY THAT THE NET AREA OF THE VENT COVER IS EQUAL TO OR LARGER THAN THE VENT AREA REQUIRED SHOWN IN THE TABLE.
9. THE DESIGN OF FLOOR DRAINS UNDER THE BUILDING SHALL BE PROVIDED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
10. MODLINE PIERS SHALL BE FORMED AND POURED SO THAT THE TOP OF THE CONCRETE IS AT THE SAME ELEVATION AS THE TOP OF THE COLUMN WELD PLATES SHOWN IN DETAILS 2/S1.1 & 1/S1.2 SHIM PLATES PER DETAIL 5/S1.3 MAY BE USED WHERE REQUIRED

VENTILATION SCHEDULE BUILDING A

Project Specific Building Size	Total Building Width	Total Floor Area (FT2)	Actual Crawl Space Area required to be vented (FT2)	Vent. Net Area Required (FT2)	Min. Total # 3'x24" access Vents (3 sq. ft.)	Min. Total # 4'x12" access Vents (3.12 sq. ft.)	Min. Total # 3'-10"x16" Vents (3.9 sq. ft.)	Vent Net Area Provided (FT2)
72' x 40"	71' x 10"	2880	2389	15.9	1	1	3	17.8

VENTILATION SCHEDULE BUILDING B

Project Specific Building Size	Total Building Width	Total Floor Area (FT2)	Actual Crawl Space Area required to be vented (FT2)	Vent. Net Area Required (FT2)	Min. Total # 3'x24" access Vents (3 sq. ft.)	Min. Total # 4'x12" access Vents (3.12 sq. ft.)	Min. Total # 3'-10"x16" Vents (3.9 sq. ft.)	Vent Net Area Provided (FT2)
72' x 40"	71' x 10"	2880	2389	15.9	1	2	2	17

FOOTING SCHEDULE

Type Mark	Type	Reference Detail	Remark
1	8'-1 1/2" x 5'-0" x 18" DP	(2/S1.1)	
2	8'-1 1/2" x 6'-0" x 18" DP	(1/S1.2)	
3	5'-7 1/4" x 4'-0" x 18" DP	(2/S1.1)	
4	1'-6"W CONT. x 18" DP	(1/S1.1)	
5	1'-6"W x 5'-0"L x 36"- 42" DP	(4/S1.1)	
6	1'-6"W CONT. x 18" DP	(4/S1.1)	
14	17'-2 3/4" x 32'-6 1/2"	(PC 03-118291)	

Type Mark	Type	Reinforcement	
8	2'-0" SQ. x 18" DP	(3) #4 E.W. T&B	10 $\frac{1}{2}$" BELOW F.F. 18" DEEP
9	5'-0"W x 11'-0"L x 24" DP	(6) #6 LONG. T&B & #6 TRANS. @ 8" O.C. T&B	10 $\frac{1}{2}$" BELOW F.F. 24" DEEP
10	5'-2"W x 11'-0"L x 3'-2" DP	(6) #6 LONG. T&B & #6 TRANS. @ 8" O.C. T&B	SEE DETAIL 5A/S1.2 10 $\frac{1}{2}$" BELOW F.F. 5'-2" DEEP
11	7'-0"W x 14'-6"L x 3'-2" DP MIN	(9) #6 LONG. T&B & #6 TRANS. @ 8" O.C. T&B	SEE DETAILS 5, 6 & 7/S1.4 10 $\frac{1}{2}$" BELOW F.F. 5'-2" DEEP

NOTES

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT — KEVIN PATRICK CONNOR — No. C12631 Ren. 3-31-21 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D FRUCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

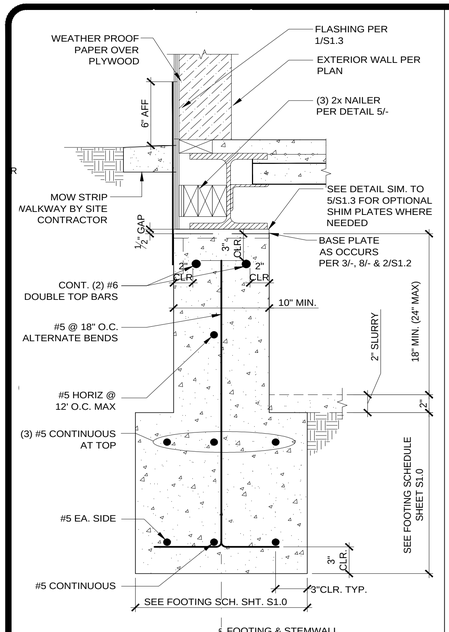
SHEET TITLE:

FOUNDATION PLAN

SHEET NUMBER:

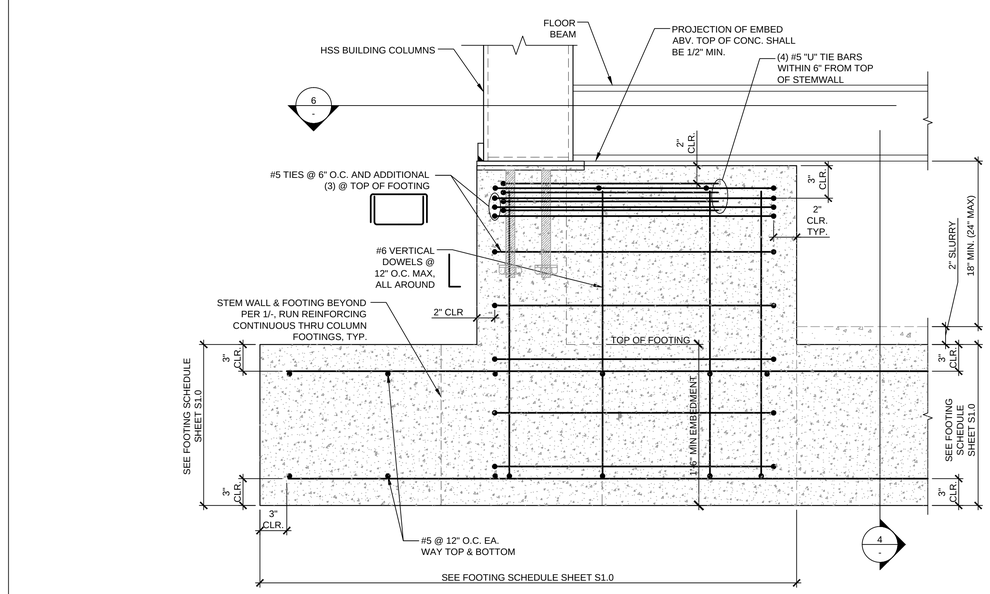
S1.0

BID SET 10/01/2021



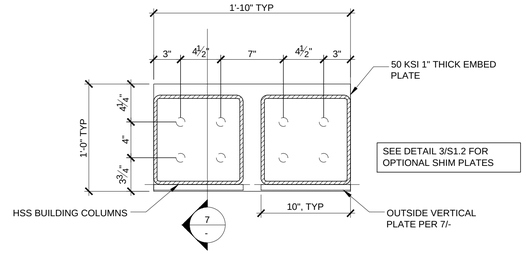
TYPICAL FOOTING DETAIL

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



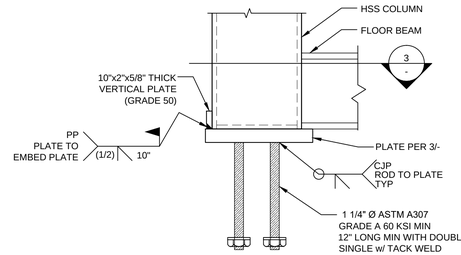
MODLINE FOOTING DETAIL

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



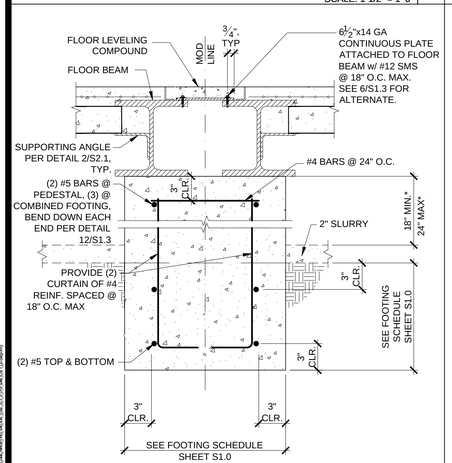
BASE PLATE @ MODLINE

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



BASE PLATE CONNECTION DETAIL@ MODLINE

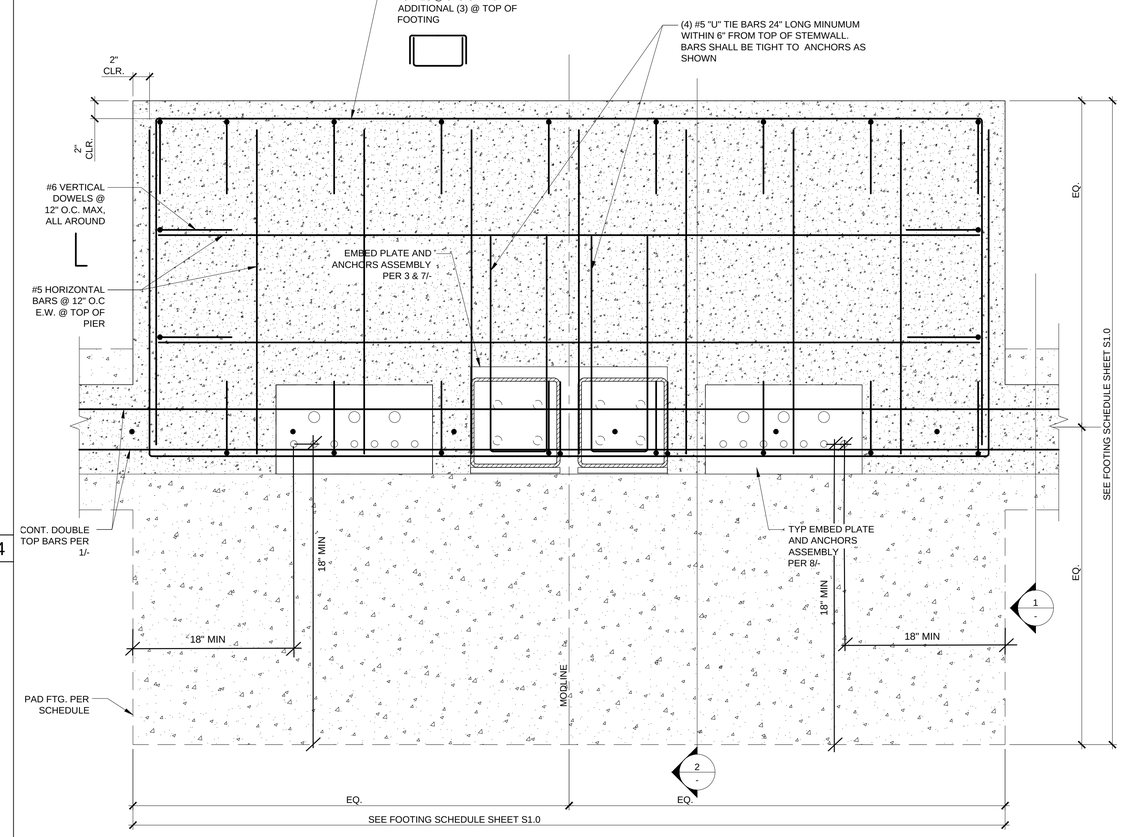
SCALE: 1-1/2" = 1'-0" | 7



* NOTE:
MODLINE PIERS SHALL BE FORMED & POURED SO THAT THE TOP OF THE CONCRETE IS AT THE SAME ELEVATION AS THE TOP OF THE COLUMN EMBED ANGLES/PLATES SHOWN ON DETAIL 2/S1.1. SHIM PLATES AS DETAILED ON S/S1.3 MAY BE USED WHERE REQUIRED.

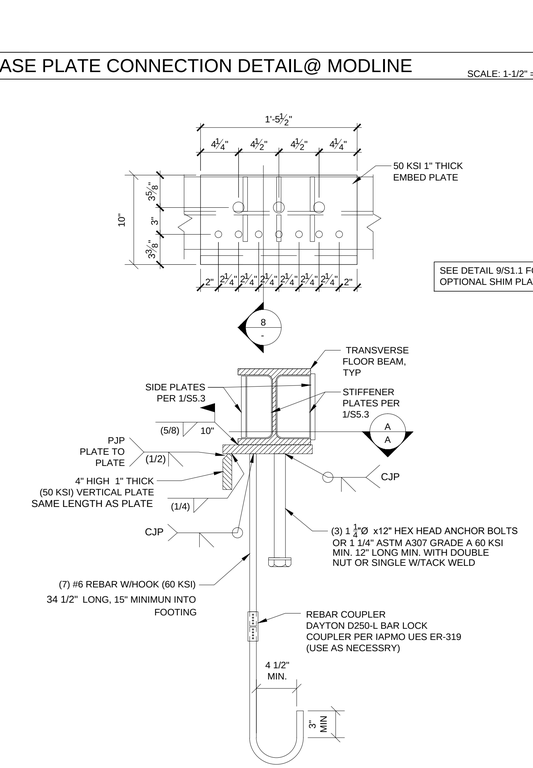
INTERIOR MODLINE FOOTING

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



PLAN VIEW @ MODLINE FOOTING

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

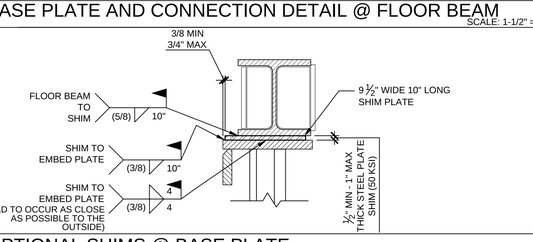


BASE PLATE AND CONNECTION DETAIL @ FLOOR BEAM

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

TYP. NAILER DETAIL

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



OPTIONAL SHIMS @ BASE PLATE

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

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — KEVIN PATRICK HOWARD — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRITSCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

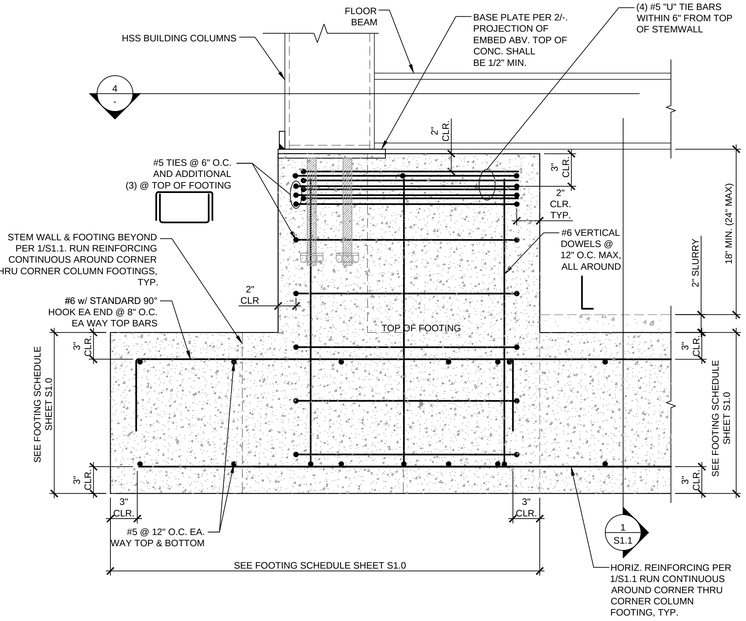
SHEET TITLE:

FOUNDATION DETAILS

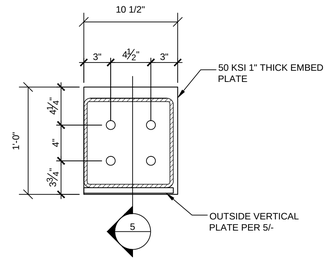
SHEET NUMBER:

S1.1

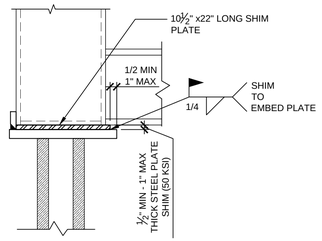
BID SET 10/01/2021



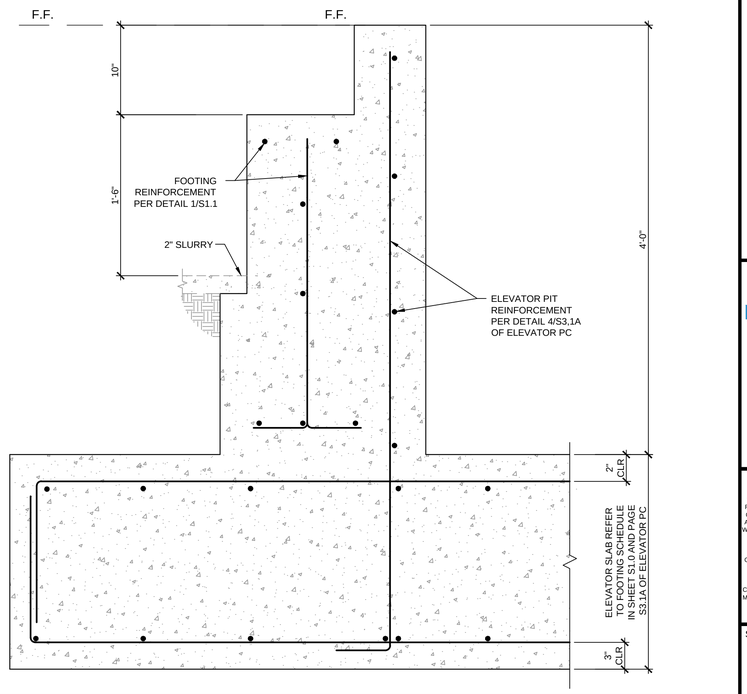
CORNER FOOTING DETAIL | 1



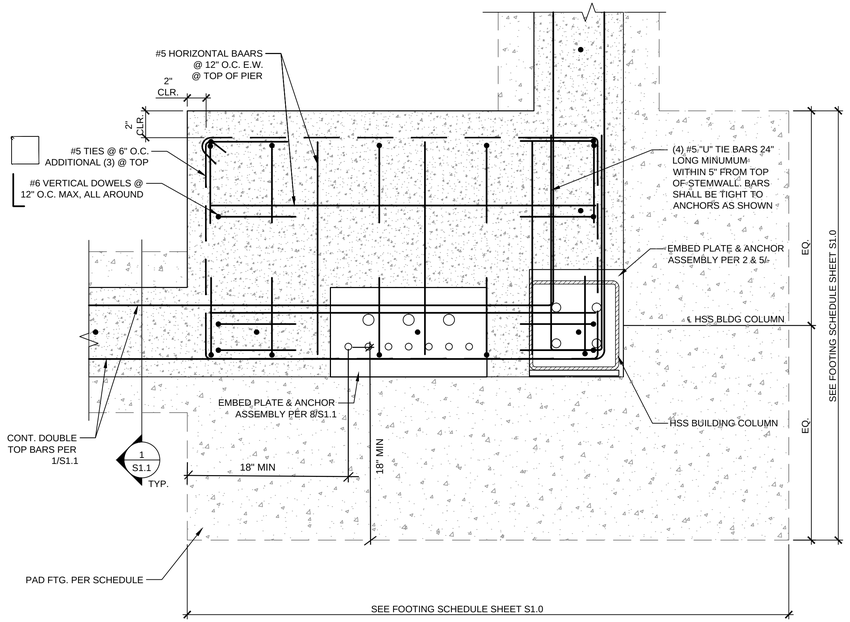
CORNER FOOTING ANCHORAGE PLAN DETAIL | 2
SCALE: 1-1/2" = 1'-0"



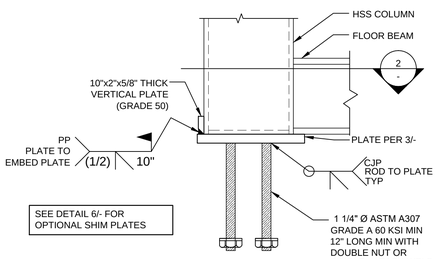
OPTIONAL SHIMS @ MODLINE & COMBINED FOOTING ANCHORAGE | 3
SCALE: 1-1/2" = 1'-0"



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

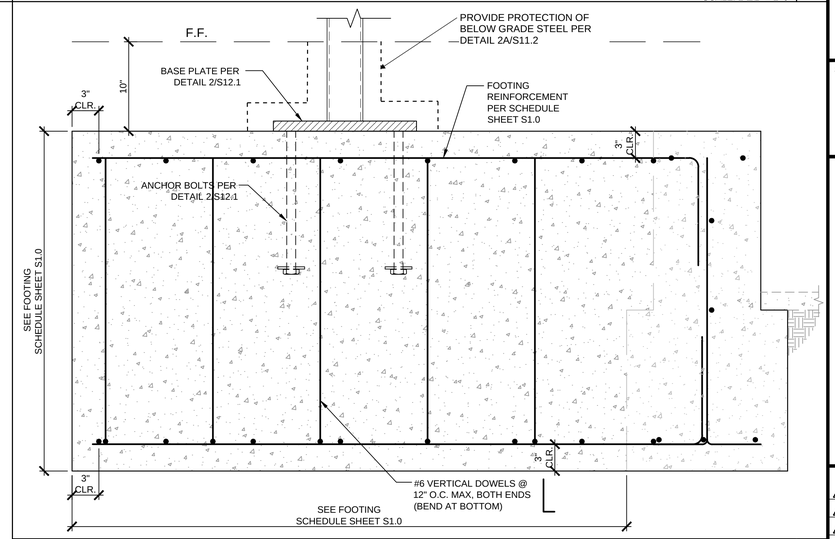


PLAN VIEW @ CORNER FOOTING
SCALE: 1-1/2" = 1'-0" | 4

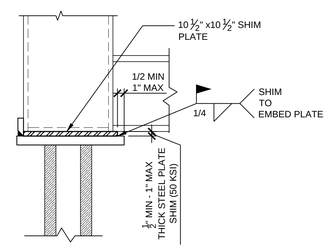


WELD PLATE DETAIL

CORNER FOOTING ANCHORAGE ELEVATION DETAIL | 5
SCALE: 1-1/2" = 1'-0"



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



OPTIONAL SHIMS @ CORNER FOOTING ANCHORAGE | 6
SCALE: 1-1/2" = 1'-0"

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SITE SPECIFIC PROJECT NAME

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ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANGELA PATRICK CHAN — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCO — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

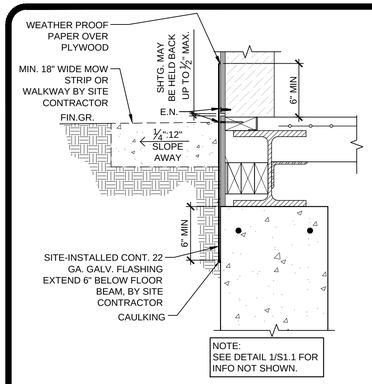
SHEET TITLE:

FOUNDATION
DETAILS

SHEET NUMBER:

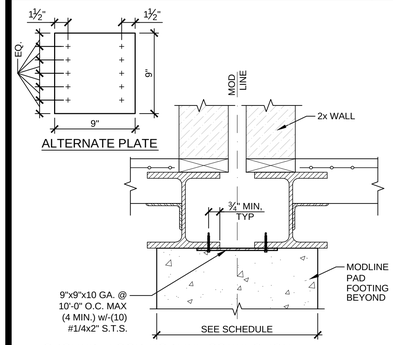
S1.2

BID SET 10/01/2021



TYP. FLASHING DETAIL

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



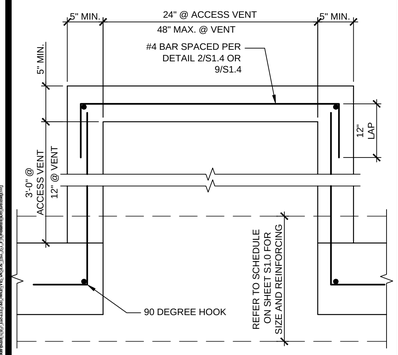
ALTERNATE PLATE

GROUND FLOOR MODLINE CONNECTION WHEN NOT ACCESSIBLE FROM ABOVE

GROUND FLOOR MODLINE

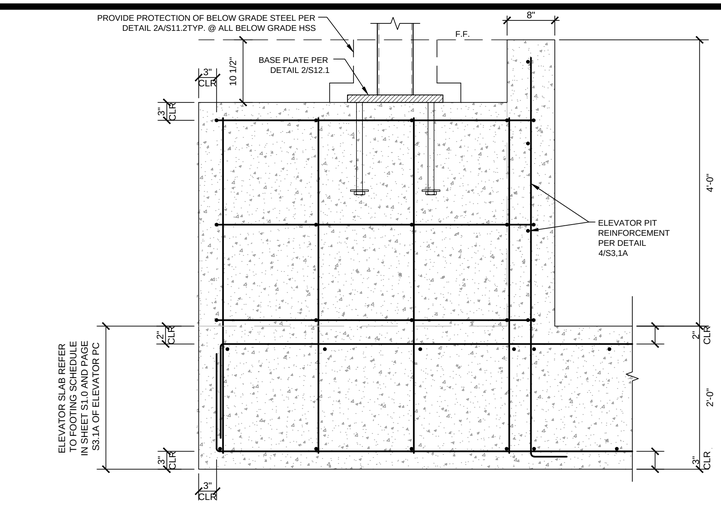
ALTERNATE CONNECTION

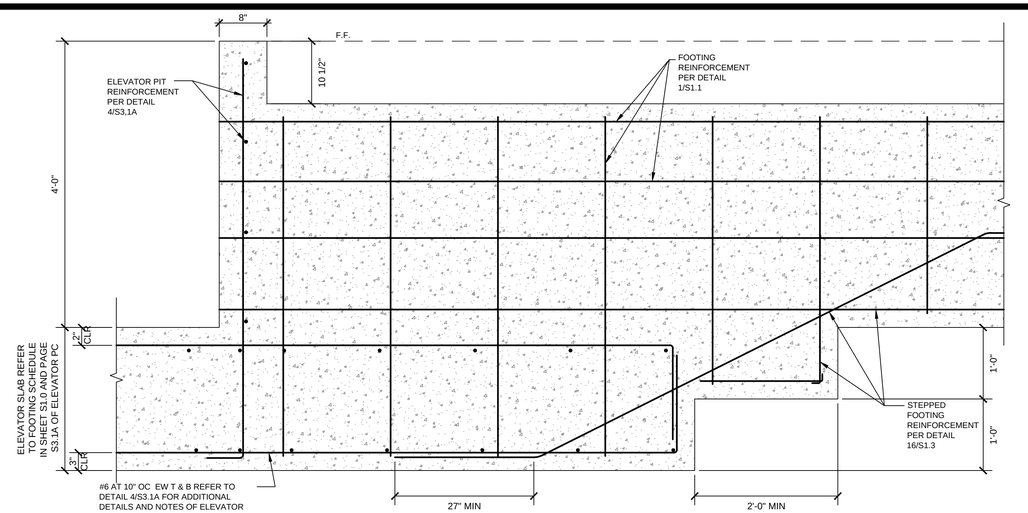
SCALE: 1-1/2" = 1'-0" | 6



REBAR PLAN @ ACCESS/VENT

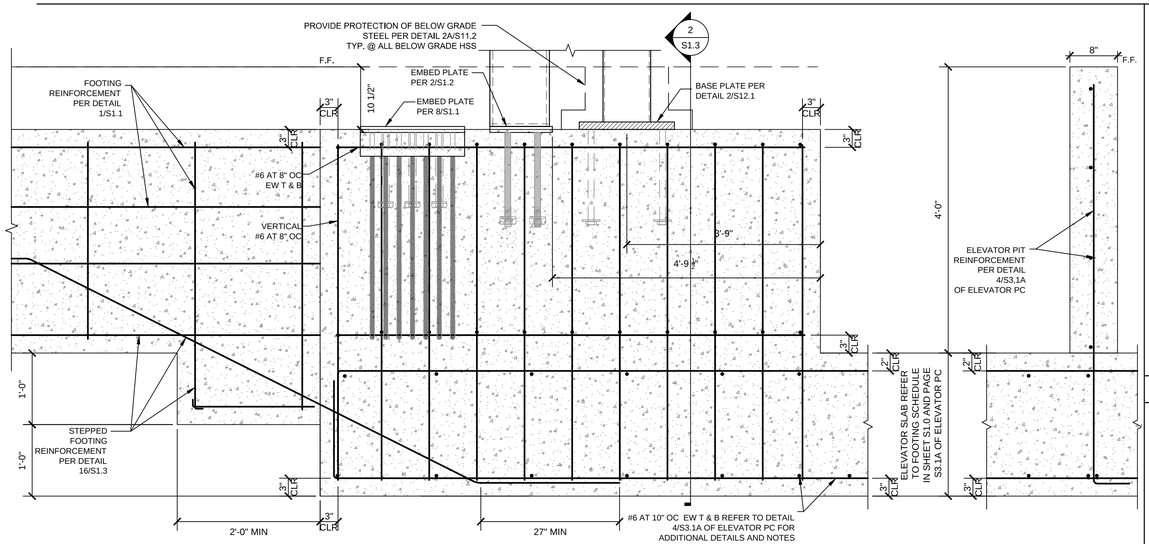
SCALE: 1-1/2" = 1'-0" | 11

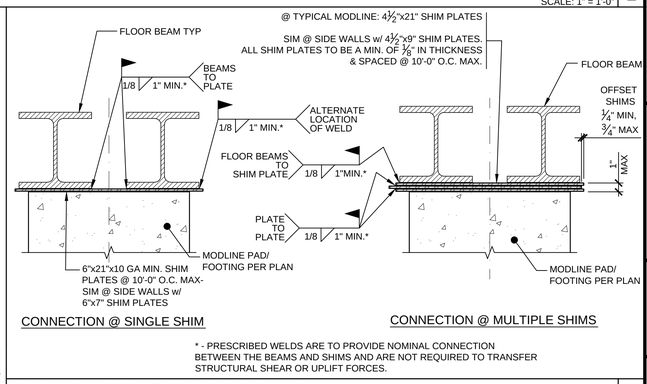




FOOTING SECTION

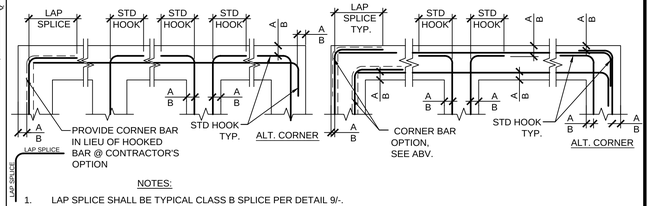
SCALE: 1" = 1'-0" | 2





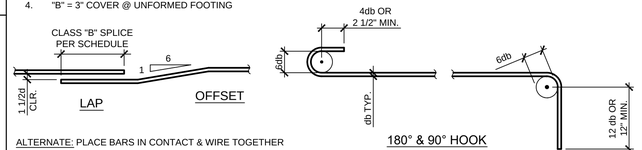
SHIM PLATES @ FLOOR BEAMS

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



NOTES:

1. LAP SPLICE SHALL BE TYPICAL CLASS B SPLICE PER DETAIL 9/-.
2. HOOK LENGTH SHALL BE MIN 12d OR 12", WHICHEVER IS GREATER, WHERE d = DIAMETER OF THE BAR.
3. "A" = 2" COVER @ FORMED FOOTING
4. "B" = 3" COVER @ UNFORMED FOOTING



ALTERNATE: PLACE BARS IN CONTACT & WIRE TOGETHER

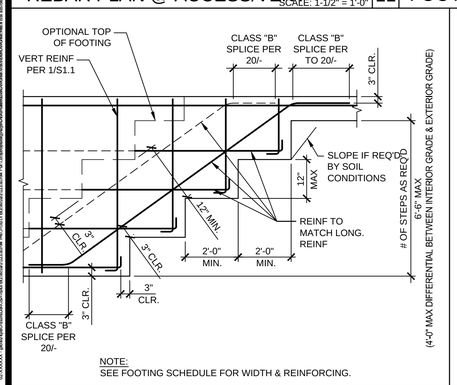
BAR SIZE #	DEVELOPMENT LENGTH[3]			TYPICAL CLASS B LAP SPLICE LENGTH[4]					
				3000 PSI		3500 PSI		4000 PSI	
	3000 PSI (IN)	3500 PSI (IN)	4000 PSI (IN)	TOP[1] (IN)	BOTTOM (IN)	TOP[1] (IN)	BOTTOM (IN)	TOP[1] (IN)	BOTTOM (IN)
3	13	12	12	21	16	20	16	20	16
4	17	16	15	28	22	26	20	24	19
5	21	20	18	35	27	33	25	30	24
6	25	23	22	42	32	39	30	36	28

NOTES:

1. THE ABOVE TABLE IS BASED ON GRADE 60 STEEL
2. TOP BARS ARE ANY BARS WITH MORE THAN 12" OF CONCRETE PLACED BELOW.
3. DEVELOPMENT LENGTH IS CALCULATED FOR TYP. BARS - Ψ_t=1.0
4. LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED, UNLESS OTHERWISE NOTED.

REINFORCEMENT BARS SPLICES & BENDS AND BAR LAP SCHEDULE

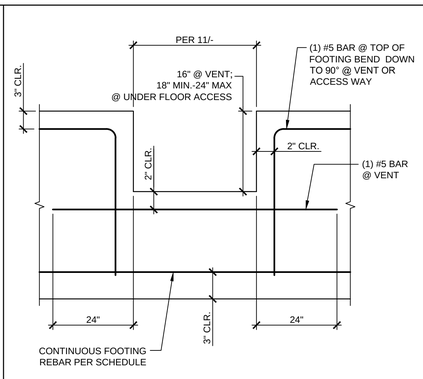
N.T.S. | 20



NOTE:
SEE FOOTING SCHEDULE FOR WIDTH & REINFORCING.

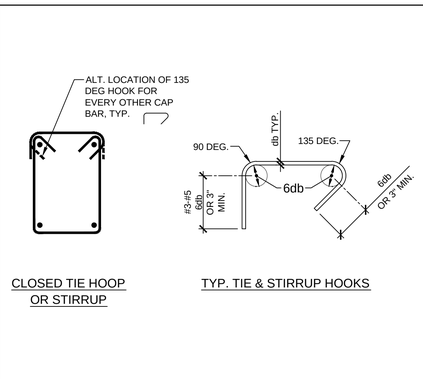
STEPPED FOOTING SECTION

N.T.S. | 16



REBAR ELEVATION @ ACCESS/VENT

N.T.S. | 12



CLOSED TIE HOOP OR STIRRUP

TYP. TIE & STIRRUP HOOKS

TYP. CLOSED TIE HOOP OR STIRRUP

N.T.S. | 13

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — JOSEPH PATRICK CAHILL — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — JAIMANT D. TRIPATHI — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

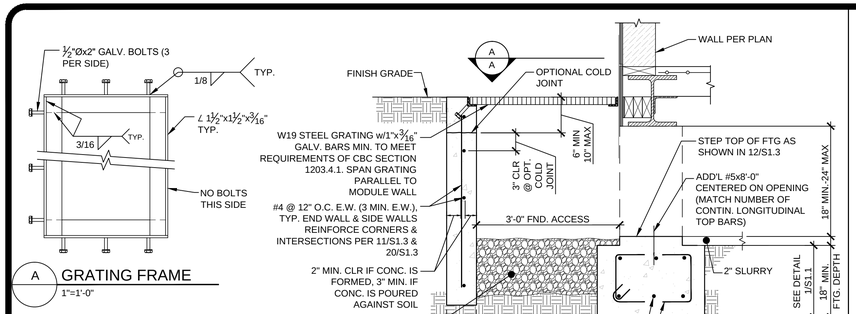
SHEET TITLE:

FOUNDATION DETAILS

SHEET NUMBER:

S1.3

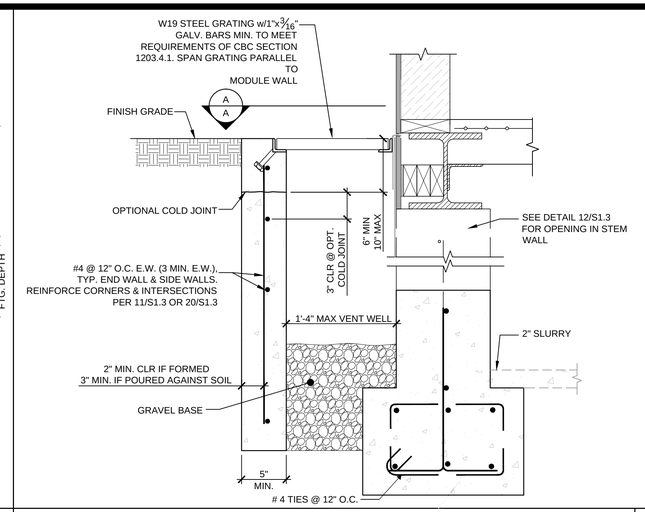
BID SET 10/01/2021



A GRATING FRAME
1"=1'-0"

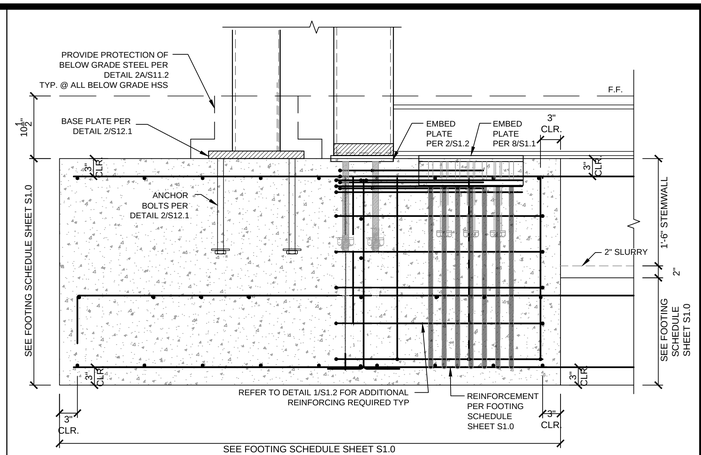
TYP. BELOW GRADE ACCESS WELL DETAIL

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



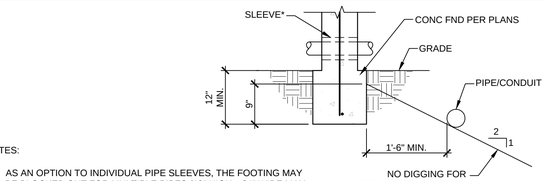
TYP. BELOW GRADE VENT DETAIL

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



FOOTING DETAIL

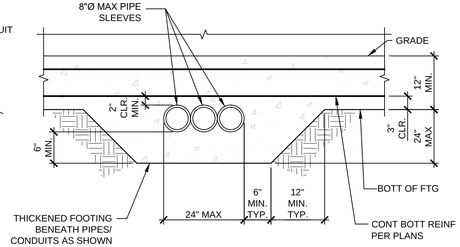
SCALE: 1" = 1'-0" | 4



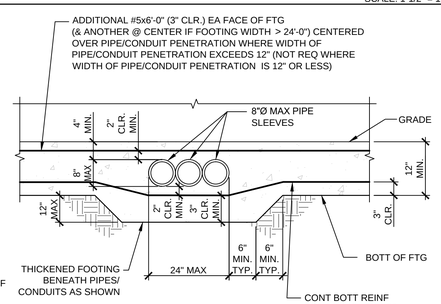
NOTES:

1. AS AN OPTION TO INDIVIDUAL PIPE SLEEVES, THE FOOTING MAY BE BLOCKED OUT FOR MULTIPLE PIPES (10" HIGH x 24" WIDE MAX @ OPTION "A", 8" HIGH x 24" WIDE MAX OPTION "B"), OR INDIVIDUALLY, PROVIDE 1" MIN CLEARANCE ALL AROUND BETWEEN PIPES/CONDUITS & BLOCKOUT/SLEEVES & FILL w/ CAULK.
2. CONCRETE SHALL BE WELL CONSOLIDATED AROUND & UNDER PIPES, CONDUITS, SLEEVES & BLOCKOUTS TO PREVENT CONCRETE VOIDS.
3. PROVIDE 2" CLEAR MINIMUM BETWEEN BLOCKOUT SLEEVES AND REINFORCEMENT.
4. WHERE TOP OF PIPES/CONDUITS ARE 12" OR MORE BELOW THE BOTTOM OF THE FOOTING, A THICKENED FOOTING AROUND PIPES/CONDUITS IS NOT REQUIRED. BACKFILL & COMPACT TO 95% OVER PIPES/CONDUITS PRIOR TO PLACING FOOTING.

*ALL PIPES TO CLEAR SLEEVES BY 1" ALL AROUND TYP., CAULK WITH PLASTIC MATERIAL



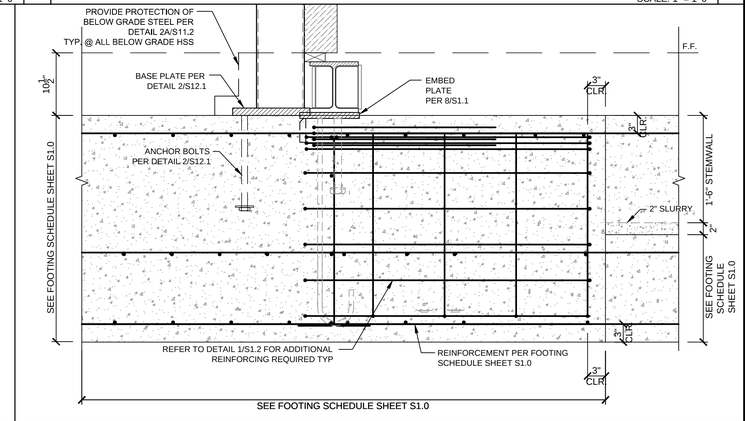
OPTION A



OPTION B

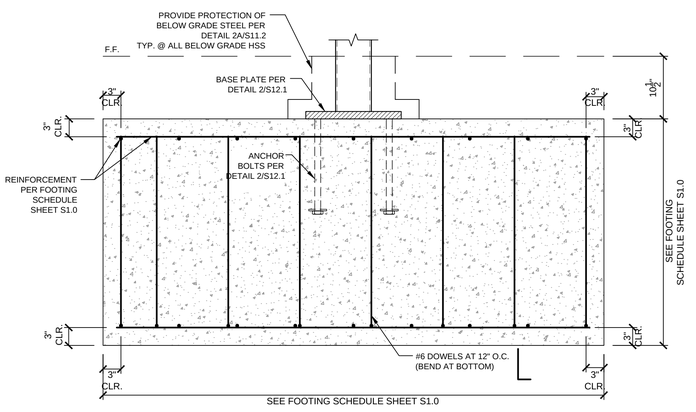
UTILITY PIPES / CONDUIT THROUGH FOOTING

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



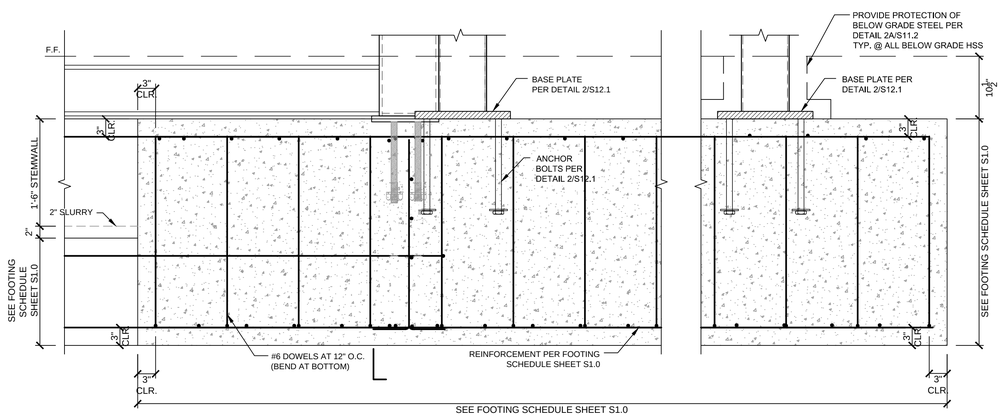
FOOTING DETAIL

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



FOOTING DETAIL

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



FOOTING DETAIL

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

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SET NAME

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CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANTHONY PATRICK GIANNINI — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FROSCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

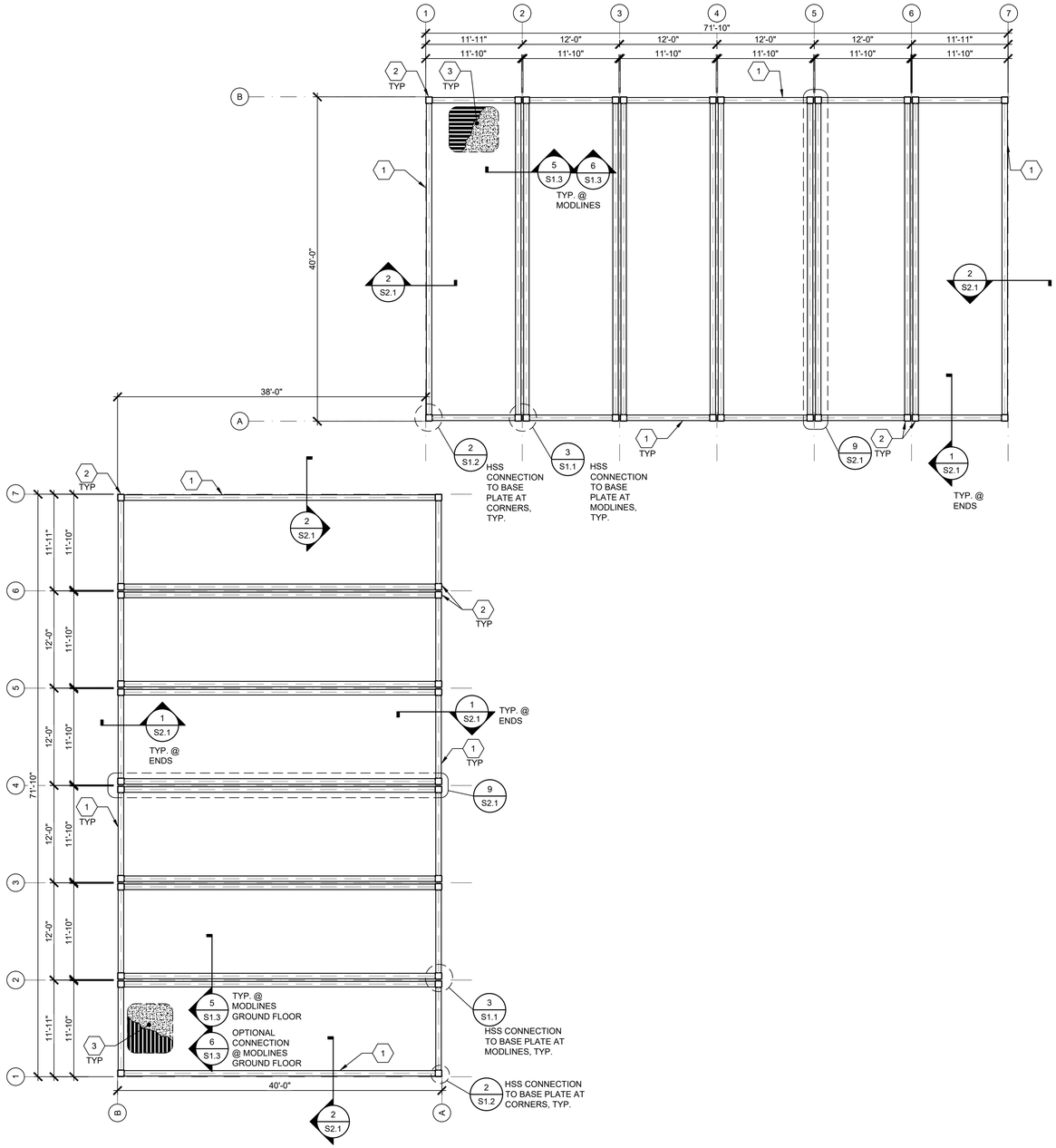
SHEET TITLE:

FOUNDATION
DETAILS

SHEET NUMBER:

S1.4

BID SET 10/01/2021



TYPICAL FLOOR FRAMING PLAN

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

KEY NOTES

1. FLOOR BEAM PER SCHEDULE 3B/S5.0
2. HSS COLUMN PER SCHEDULE 3B/S5.0
3. 2" LIGHT WEIGHT CONCRETE FILL w/ 6x6-W1.4xW1.4 WWF w/ 1'-0" LAP OVER ASC 18 GA 3W OR 3WH GALVANIZED DECK (5" TOTAL THICKNESS). SEE 4/S2.1 FOR DECK PROPERTIES AND ATTACHMENT PATTERN.

N

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ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
BRYAN PATRICK CHANNELL
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Ren. 3-31-23
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

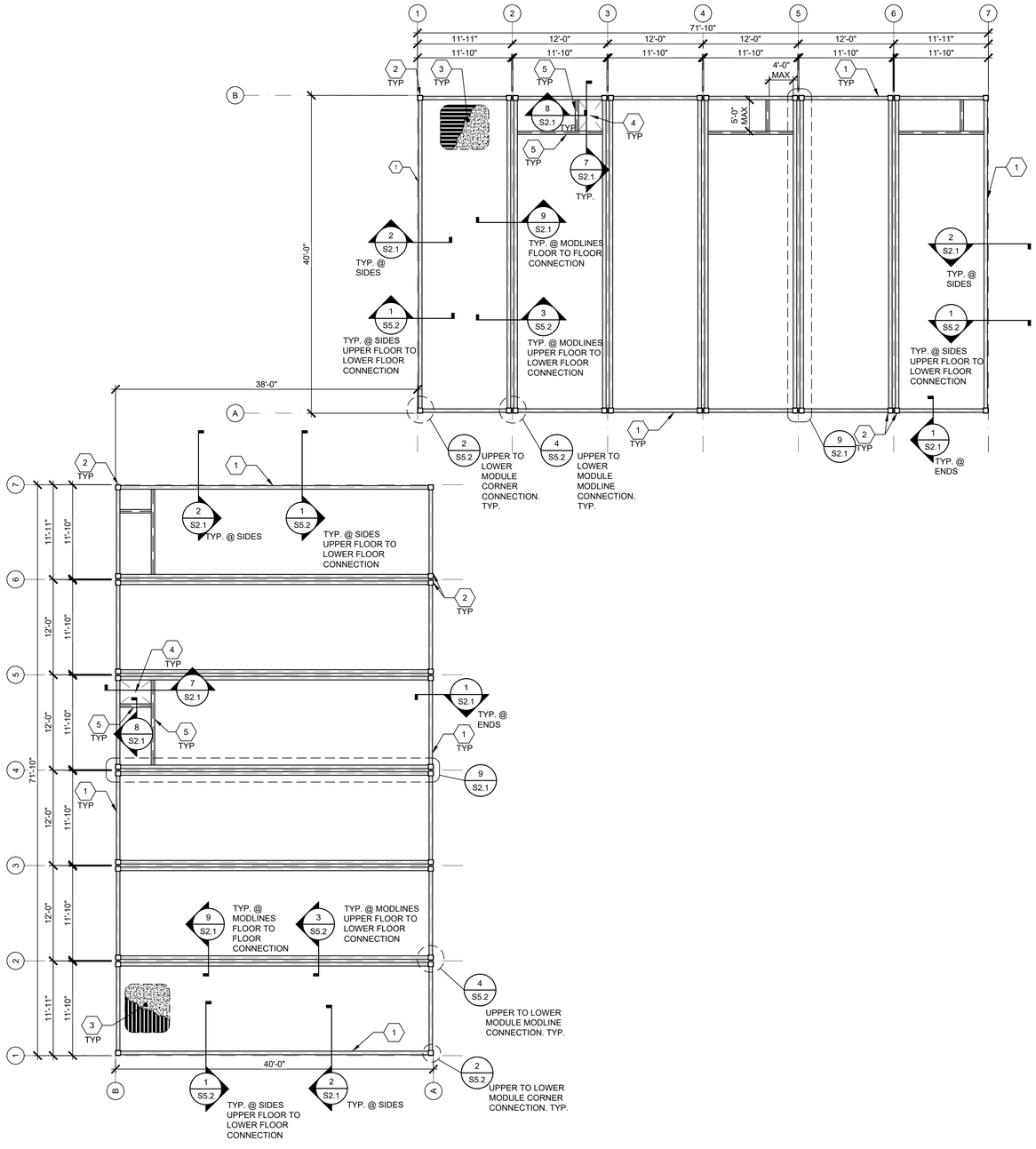
SHEET TITLE:

FLOOR FRAMING PLAN
GROUND FLOOR

SHEET NUMBER:

S2.0

BID SET 10/01/2021



TYPICAL UPPER FLOOR FRAMING PLAN

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

1

1. FLOOR BEAM PER SCHEDULE 3B/S5.0
2. HSS COLUMN PER SCHEDULE 3B/S5.0
3. 2" LIGHT WEIGHT CONCRETE FILL w/ 6x6-W1.4xW1.4 WWF w/ 1'-0" LAP OVER ASC 18 GA 3W OR 3WH GALVANIZED DECK (5" TOTAL THICKNESS). SEE 4/S2.1 FOR DECK PROPERTIES AND ATTACHMENT PATTERN.
4. FLOOR CHASE OPENING
5. W4x13 BEAM REINFORCEMENT AT OPENINGS

KEY NOTES

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REVISIONS

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SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

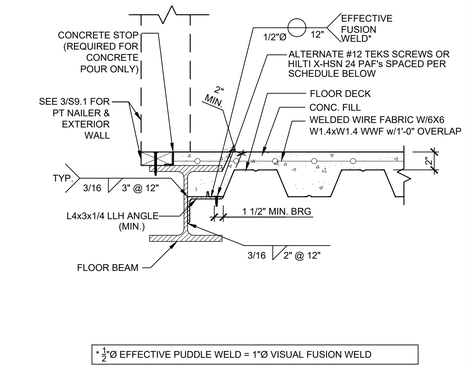
SHEET TITLE:

FLOOR FRAMING PLAN
UPPER FLOOR

SHEET NUMBER:

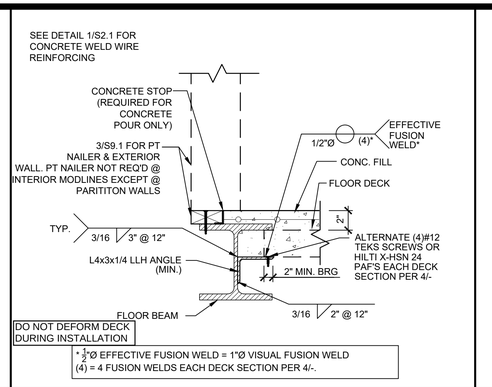
S2.0A

BID SET 10/01/2021



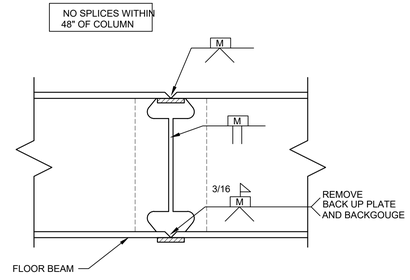
* $\frac{1}{2}$"Ø EFFECTIVE PUDDLE WELD = 1"Ø VISUAL FUSION WELD

FLOOR DETAIL @ END WALL
SCALE : 1 1/2"=1'-0" | 1



* $\frac{1}{2}$"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD
(4) = 4 FUSION WELDS EACH DECK SECTION PER 4/-.

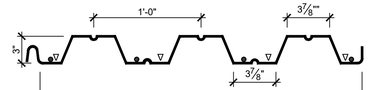
FLOOR DETAIL @ SIDE WALL
SCALE : 1 1/2"=1'-0" | 2



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

3WH DECK PER IAPMO ER #329		MINIMUM PROPERTIES		
PLAN DESIGNATION	DECK TYPE	S_{gbot} IN^3/FT	I_g IN^4/FT	AVAILABLE DIAPHRAGM SHEAR (LRFD)
	3"-16 GA ASC 3WH GALV DECK (36" WIDE)	0.880	1.397	1627 PLF w/2" LWC TOPPING (5" TOTAL SLAB THICKNESS)

DECK PROFILE

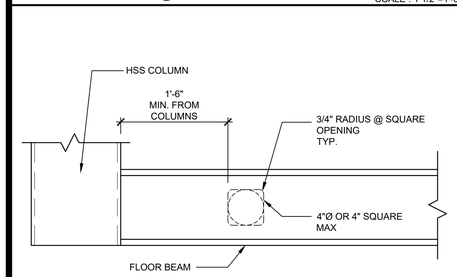


● = (4) 1/2"Ø EFFECTIVE FUSION WELDS* OR
▽ = (4) #12 TEKS SCREWS OR HILTI X-HSN 24 PAF's
(SEE 1/- FOR ATTACHMENT TO PARALLEL SUPPORTS)

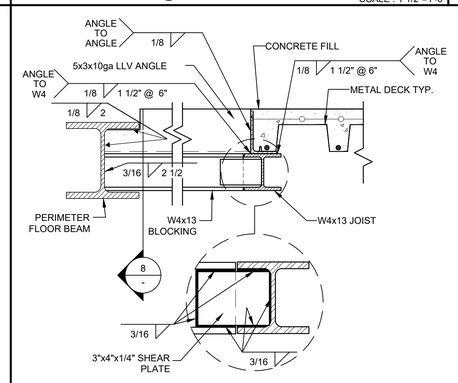
SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 36" O.C. MAX

* $\frac{1}{2}$"Ø EFFECTIVE WELD= 1"Ø VISUAL FUSION WELD

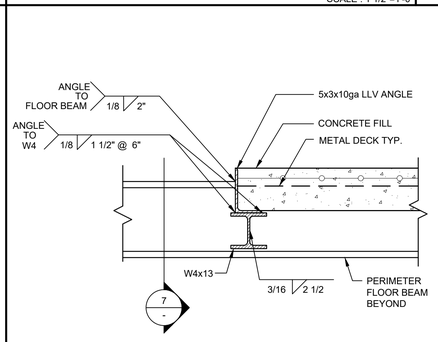
3WxH & 3WH METAL DECK PROP & PROFILE
SCALE : NTS | 4



OPENING @ FLOOR BEAM
SCALE : 1 1/2"=1'-0" | 6

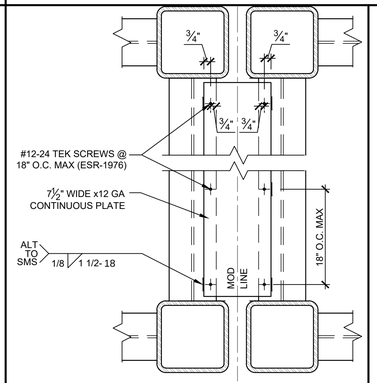


FLOOR OPENING REINFORCING
SCALE : 1 1/2"=1'-0" | 7



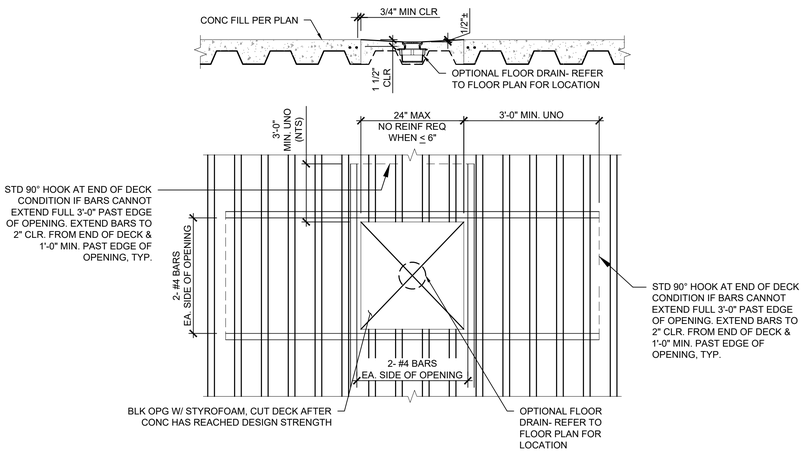
NOTE: END WALL SHOWN - SIDE WALL SIMILIAR

OPENING W4 TO FLOOR BEAM
SCALE : 1 1/2"=1'-0" | 8

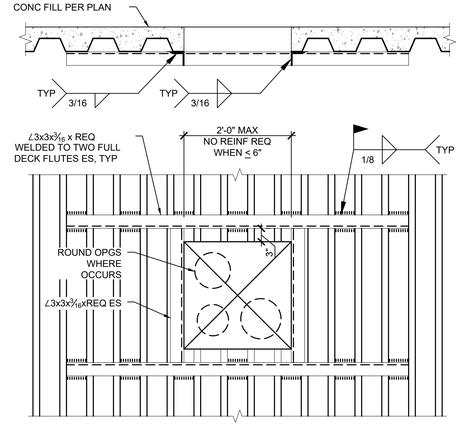


MOD-LINE CONNECTOR PLATE
SCALE : 1 1/2"=1'-0" | 9

NOT USED
10



FLOOR OPENING BLOCK-OUT DETAIL (BEFORE CONCRETE POUR OPTION)
17



FLOOR OPENING BLOCK-OUT DETAIL (AFTER CONCRETE POUR OPTION)
19

NOT USED
15

NOT USED
20

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MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GLENN HANNAH — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRESCO — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

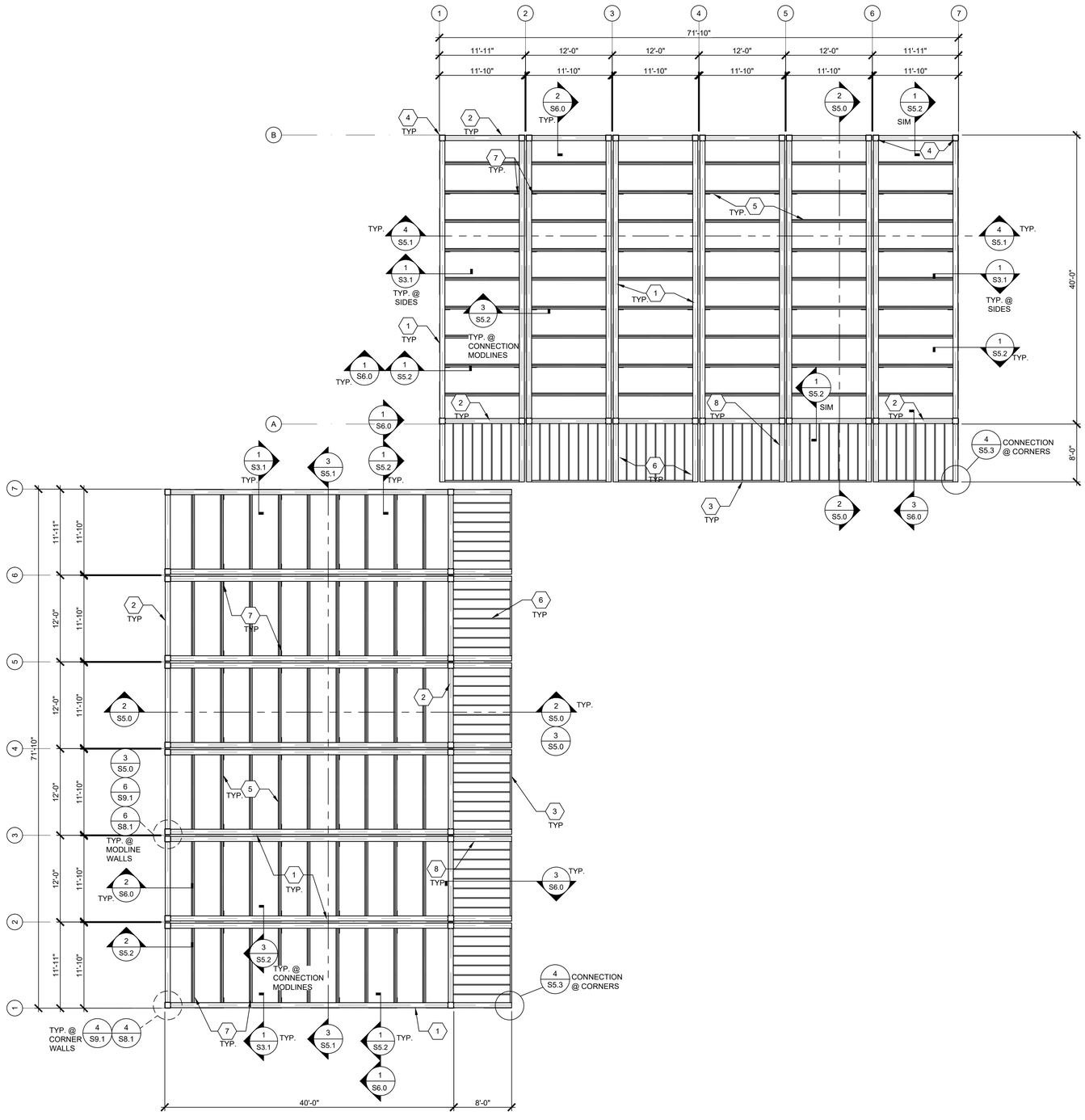
SHEET TITLE:

FLOOR FRAMING DETAILS

SHEET NUMBER:

S2.1

BID SET 10/01/2021



1. LONGITUDINAL BEAM - PER SCHEDULE 3B/S5.0
2. TRANSVERSE BEAM - PER SCHEDULE 3B/S5.0
3. 22"x2 1/2"x14GA FASCIA CHANNEL @ 8'-0" FRONT OVERHANG - REFER TO S0.0
4. HSS COLUMN PER SCHEDULE 3B/ S5.0
5. 6"x2 1/2"x12 GA 'Z' FORMED ROOF PURLINS @ 48" O.C. MAX - REFER TO SHEET S0.0
6. 600S162-33 STEEL STUDS @ 24" O.C. @ UPPER ROOF OVERHANG SOFFIT, PER 3/S6.0. SEE 19(B)/S9.1 FOR STUD SECTION PROPERTIES.
7. BRACE PER 1/S3.1
8. OVERHANG OUTRIGGER PER S5.0

ROOF FRAMING PLAN - GROUND FLOOR

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

1

KEY NOTES

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MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK CONNOR
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STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	08/10/21
PROJECT NO:	1613-20

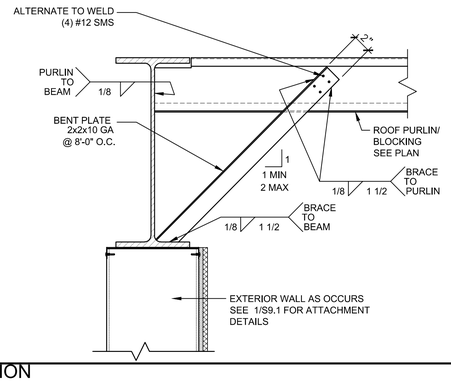
SHEET TITLE:

ROOF FRAMING PLAN
GROUND FLOOR

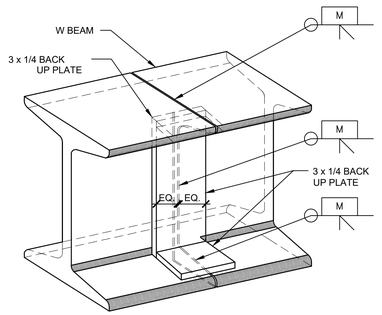
SHEET NUMBER:

S3.0

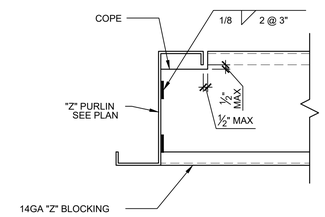
BID SET 10/01/2021



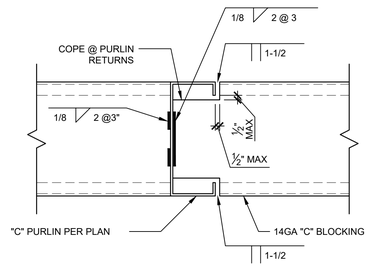
GROUND FLOOR PURLIN CONNECTION @ SIDEWALL SCALE : 1 1/2"=1'-0" 1



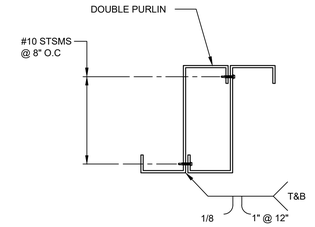
ROOF BEAM SPLICE DETAIL N.T.S. 2



@ 'Z' PURLINS



@ 'C' PURLINS



@ 'Z' PURLINS

NOT USED 5

NOT USED 6

BLOCKING DETAIL SCALE : 1 1/2"=1'-0" 7

DOUBLE PURLIN CONNECTION SCALE : 1 1/2"=1'-0" 8

NOT USED 9

NOT USED 10

NOT USED 11

NOT USED 12

NOT USED 13

NOT USED 14

NOT USED 15

NOT USED 16

NOT USED 17

NOT USED 18

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
ANTHONY PATRICK CARLSON
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Ren. 8-31-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S-3380
STRUCTURAL
STATE OF CALIFORNIA

09/20/2021
RST#20203

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

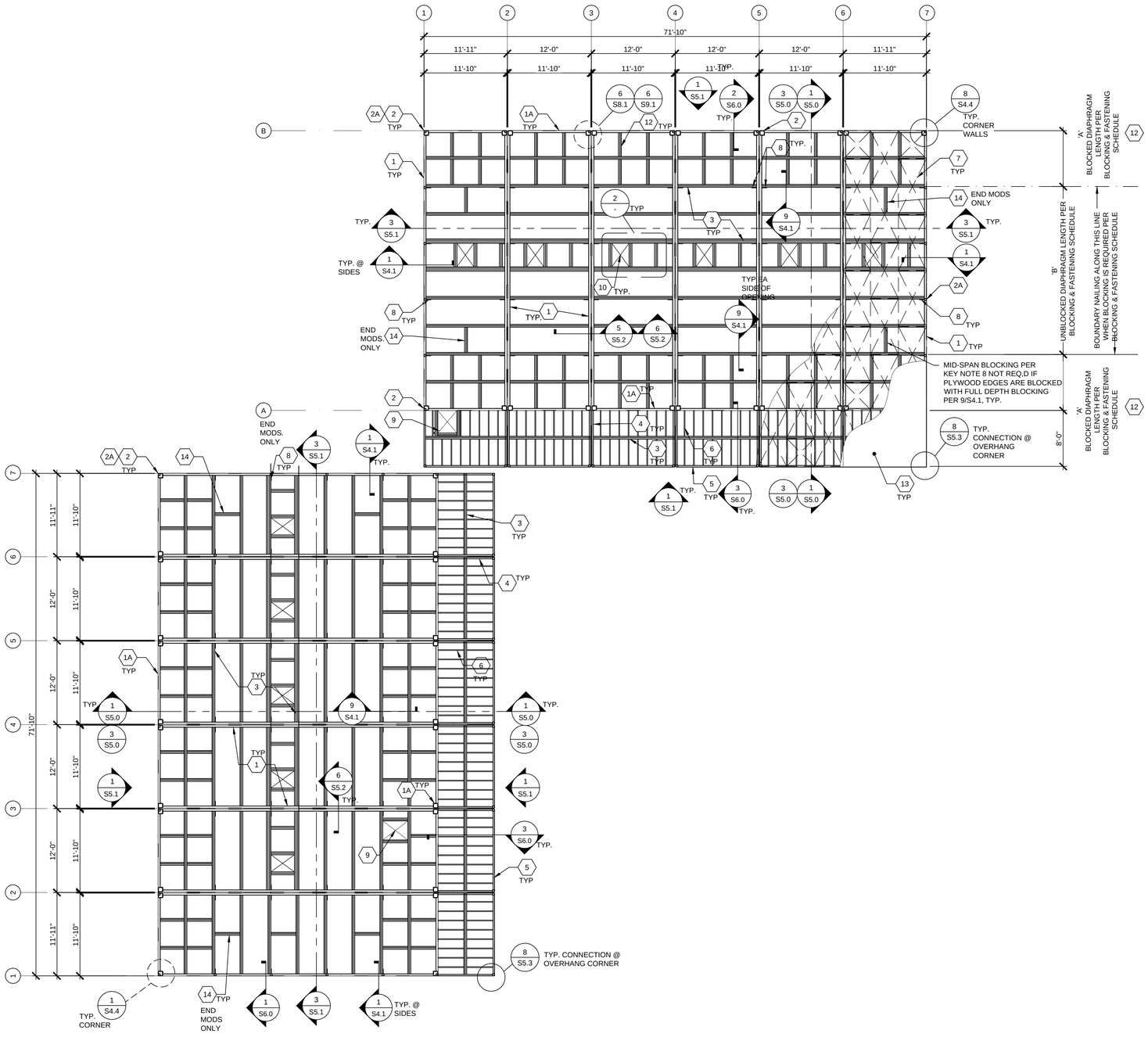
SHEET TITLE:

ROOF FRAMING
DETAILS
GROUND FLOOR

SHEET NUMBER:

S3.1

BID SET 10/01/2021



UPPER FLOOR - ROOF FRAMING PLAN

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

1

1 LONGITUDINAL BEAM - PER SHEET S5.0

1A TRANSVERSE BEAM - PER SHEET S5.0

2 HSS COLUMN PER SHEET S5.0

2A HSS PARAPET COLUMN
- REFER TO SHEET S4.4 FOR SIZES

3 6"x2 1/2"x14GA 'Z' FORMED OR 6"x3"x14GA "C" FORMED ROOF PURLINS @ 48" O.C. MAX - REFER TO SHEET S0.0

4 TAPERED 20"-22" DEEP X 12GA FORMED OUTRIGGER CHANNEL @ 8'-0" FRONT OVERHANG - REFER TO S0.0

5 22"x2 1/2"x14GA FASCIA CHANNEL @ 8'-0" FRONT OVERHANG
- REFER TO S0.0

6 600S162-33 STEEL STUDS @ 24" O.C. @ UPPER ROOF OVERHANG SOFFIT, PER 3/S6.0. SEE 19(B)/S9.1 FOR STUD SECTION PROPERTIES.

7 3/4" APA RATED L-P OSB OR 3/4" PLYWOOD (ALL PLYWOOD SHALL BE EITHER T&G OR EDGE CLIPPED AT UNSUPPORTED EDGES), COMPLY WITH DSA PA-062, CD EXPOSURE-1 48/24 SPAN INDEX, FACE GRAIN NORMAL TO ROOF PURLINS. ALL BOUNDARY, EDGE & FIELD ATTACHMENTS SHALL BE 1" MIN. FROM EDGE OF PLYWOOD & EDGE OF STEEL SUPPORTING MEMBER. REFER TO BLOCKING & FASTENING SCHEDULE FOR BLOCKING & FASTENING REQUIREMENTS.

ROOF FINISHES: SEE A2.0

ROOF PLYWOOD BLOCKING & FASTENING SCHEDULE			
	FASTENING	#10 SMS	0.144"Ø ET&F PINS[1]
'A' BLOCKED DIAPHRAGM @ MODULE ENDS[2]	'A' BLOCKED DIAPHRAGM LENGTH EA END OF EA MODULE	8'-0"	4'-0"
	BOUNDARY FASTENING[3]	4" O.C.	4" O.C.
	EDGE FASTENING	4" O.C.	4" O.C.
	FIELD FASTENING	12" O.C.	6" O.C.
'B' UNBLOCKED DIAPHRAGM @ MODULE INTERIOR	'B' UNBLOCKED DIAPHRAGM LENGTH @ MODULE INTERIOR	24"-0"	32"-0"
	BOUNDARY FASTENING[3]	6" O.C.	6" O.C.
	EDGE FASTENING	6" O.C.	6" O.C.
	FIELD FASTENING	12" O.C.	6" O.C.

(1) ET&F PINS PER IAPMO UES EVALUATION REPORT ER-335

(2) PROVIDE BLOCKING PER 9/S4.1 OR 14/S4.1 w/ EDGE FASTENING AT ALL UNSUPPORTED PLYWOOD EDGES AT END BAYS OF ALL MODULES AS INDICATED ON ROOF PLAN AND SCHEDULE ABOVE.

(3) BOUNDARY FASTENING IS APPLIED TO PERIMETER OF ALL MODULES ALONG ALL FRAME LINES AND AT BOUNDARY BETWEEN BLOCKED & UNBLOCKED DIAPHRAGMS WHERE INDICATED ON ROOF PLAN.

8 BENT PLATE DIAGONAL BEAM BRACE. SEE DETAIL 1/S4.1 AT EXTERIOR SIDE WALL ROOF BEAMS & DETAILS 5&6./S5.2 AT INTERIOR MODLINE ROOF BEAMS. PROVIDE MID-SPAN PURLINS BLOCKING AT EACH BRACE AT END MODULES ONLY PER 14 BELOW.

9 OPENING FOR ROOF HATCH. PROVIDE BLOCKING PER 9/S4.1

10 OPENING FOR HVAC PROVIDE BLOCKING PER 2/-

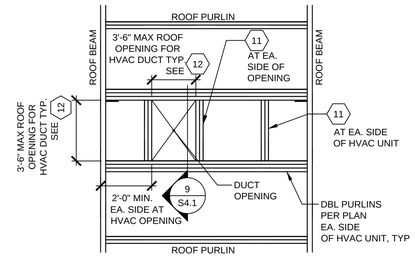
11 PROVIDE SINGLE PURLINS AND BLOCKING PER 9/S4.1 LOCATE OPENINGS PER ROOF PLAN & PROVIDE 48" CLEAR MIN BETWEEN ALL OPENINGS, TYP.
NOTE: DO NOT HEAD OFF ROOF PURLINS FOR OPENING OR HVAC FRAMING. ALL ROOF PURLINS SHALL BE CONTINUOUS ACROSS MODULE. LAYOUT OF CONTINUOUS ROOF PURLINS MAY BE ADJUSTED TO ACCOMMODATE HVAC LAYOUT AS LONG AS SPACING DOES NOT EXCEED 48" O.C.

12 BLOCKING PER 9/S4.1 OR 7/S4.1w/ EDGE FASTENING AT ALL UNSUPPORTED PLYWOOD EDGES WHEN REQUIRED PER BLOCKING & FASTENING SCHEDULE.

13 ROOFING - SEE A2.0

14 MID-SPAN PURLIN BLOCKING WELD TO ROOF PULINS PER 9/S4.1. BLOCKING IS ONLY REQUIRED AT END MODULES AT PURLINS WITH DIAGONAL BEAM BRACING @ EXTERIOR SIDE WALLS PER 8 ABOVE

KEY NOTES



HVAC OPENING PLAN

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

2

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MANUFACTURER PROFESSIONAL OF RECORD

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

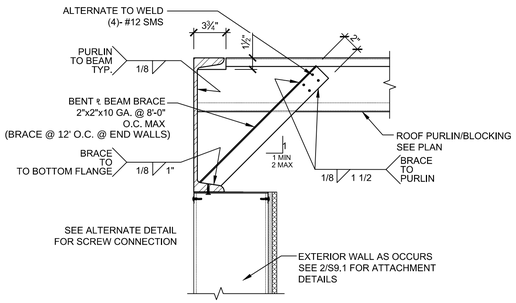
SHEET TITLE:

ROOF FRAMING PLAN
UPPER FLOOR

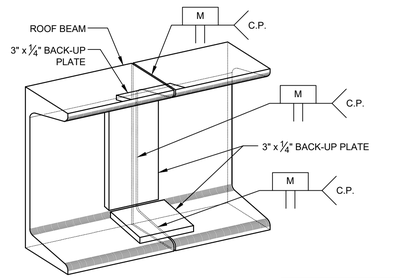
SHEET NUMBER:

S4.0

BID SET 10/01/2021

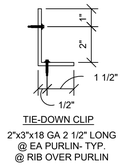


UPPER FLOOR PURLIN CONNECTION @ SIDEWALL — SCALE : 1 1/2"=1'-0" — 1

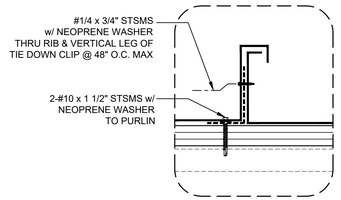


OPTIONAL

ROOF BEAM SPLICE DETAIL — SCALE : N.T.S. — 1A

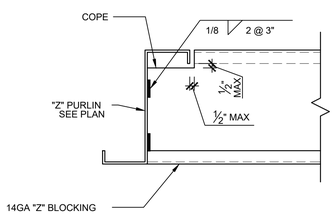


TIE-DOWN CLIP
2"x3"x18 GA 2 1/2" LONG
@ EA PURLIN- TYP.
@ RIB OVER PURLIN

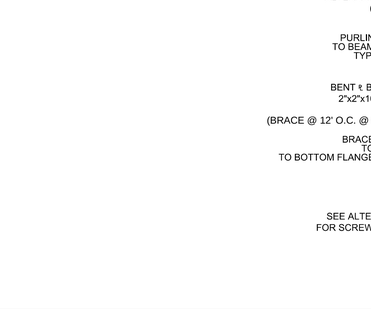


NOTE:
SEE 8/S4.1 FOR OPTIONAL ROOF PAN CLIP

ROOF PAN DETAIL — SCALE : 1 1/2"=1'-0" — 3

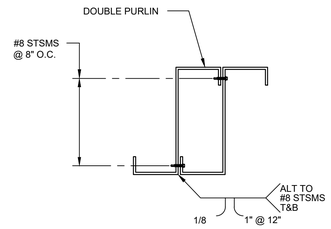


@ 'Z' PURLINS



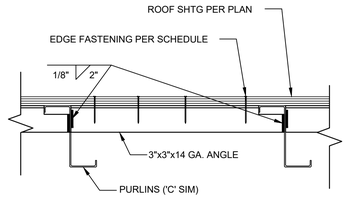
@ 'C' PURLINS

BLOCKING DETAIL — SCALE : 1 1/2"=1'-0" — 9

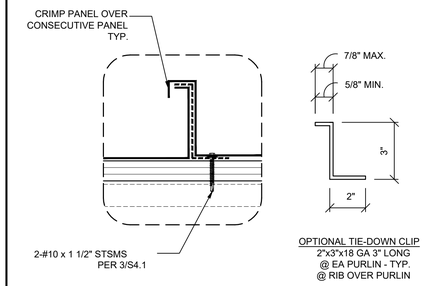


@ 'Z' PURLINS

DOUBLE PURLIN CONNECTION — SCALE : 1 1/2"=1'-0" — 10



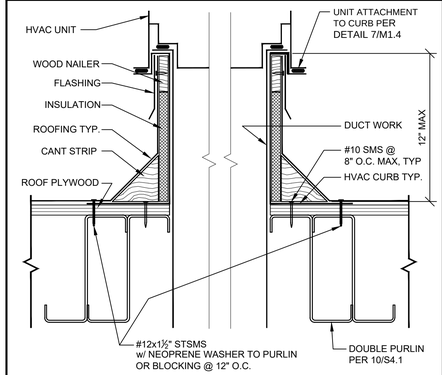
ALTERNATE BLOCKING DETAIL — SCALE : 1 1/2"=1'-0" — 7



OPTIONAL TIE-DOWN CLIP
2"x3"x18 GA 3" LONG
@ EA PURLIN - TYP.
@ RIB OVER PURLIN

NOTE:
MECHANICALLY CRIMP EACH STANDING SEAM ENTIRELY.
MECHANICALLY CRIMP PANELS OVER ALL CLIPS.

ROOF DETAIL (OPTIONAL ROOF PAN CLIP) — SCALE : N.T.S. — 8



HVAC CURB DETAIL — SCALE : 1 1/2"=1'-0" — 11

NOT USED — 12

NOT USED — 13

NOT USED — 14

NOT USED — 15

NOT USED — 16

NOT USED — 17

1. THE MATERIAL THICKNESS OF LIGHT GAUGE STRUCTURAL MEMBERS, IN THEIR END-USE, SHALL MEET OR EXCEED THE MINIMUM BASE METAL THICKNESS SPECIFIED ON SHEET S0.0 THE MATERIAL GAGE DESIGNATION IN THE PLAN SHALL BE USED AS REFERENCE ONLY.

GENERAL NOTES

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SET NAME

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CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GARY MAHONEY — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISON — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

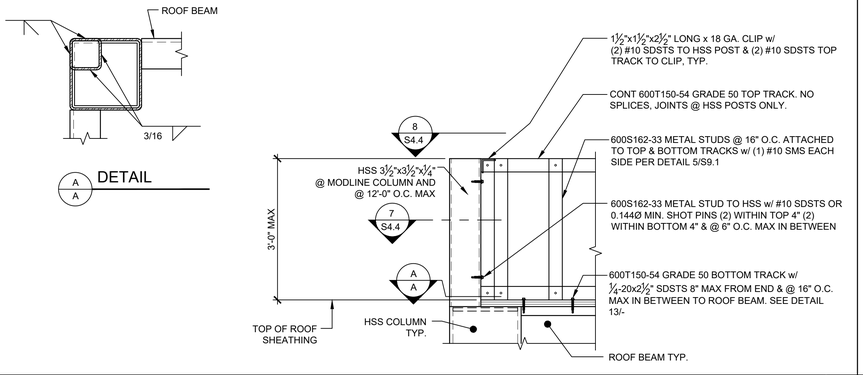
SHEET TITLE:

ROOF FRAMING
DETAILS
UPPER FLOOR

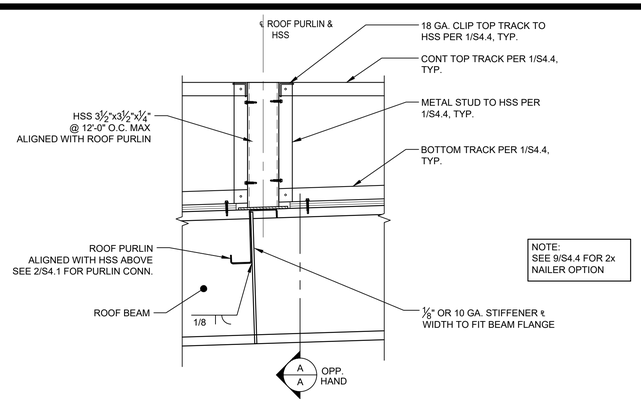
SHEET NUMBER:

S4.1

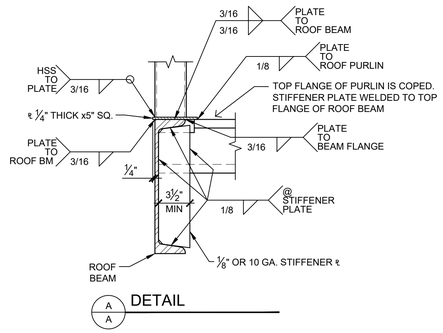
BID SET 10/01/2021

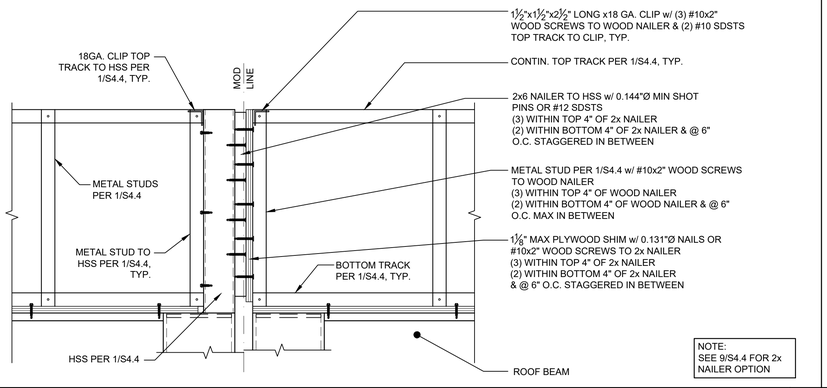


PARAPET @ CORNER — SCALE : 1 1/2"=1'-0" — 1



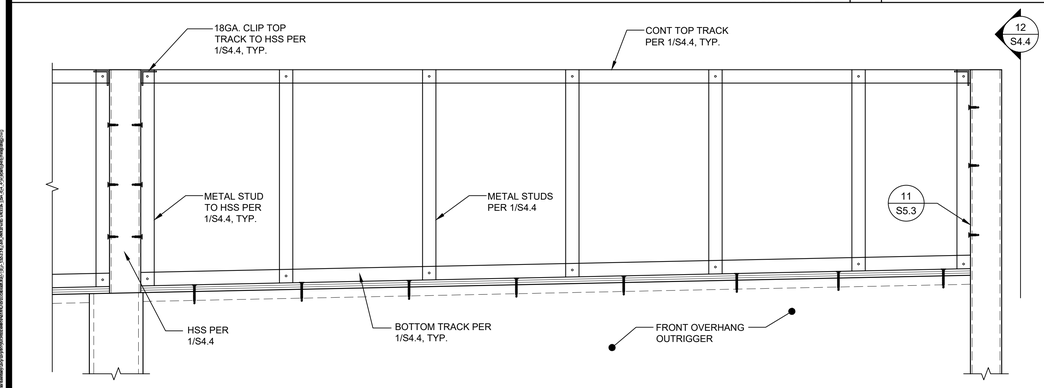
PARAPET @ LONGITUDINAL FRAMES — SCALE : 1 1/2"=1'-0" — 2



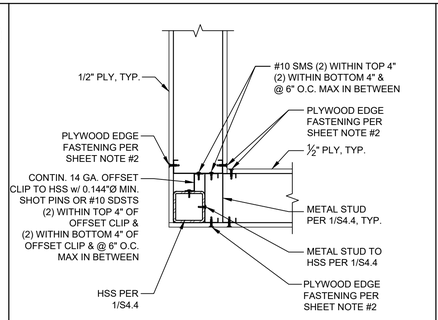


PARAPET @ MODLINE OVER TRANSVERSE FRAMES — SCALE : 1 1/2"=1'-0" — 3

NOT USED — 4

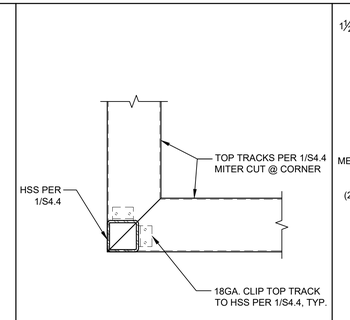


PARAPET AT FRONT OVERHANG — SCALE : 1 1/2"=1'-0" — 6

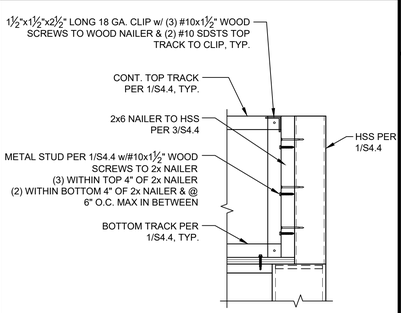


NOTES:
1. TOP OF CONTINUOUS 14GA. OFFSET CLIP SHALL BE 2" BELOW TOP OF HSS POST TO ALLOW FOR INSTALLATION OF 18 GA. TOP TRACK CLIP PER 1/S4.4.
2. SEE DETAIL 11/S4.4 FOR OPTIONAL CORNER FRAMING w/ WOOD NAILERS.

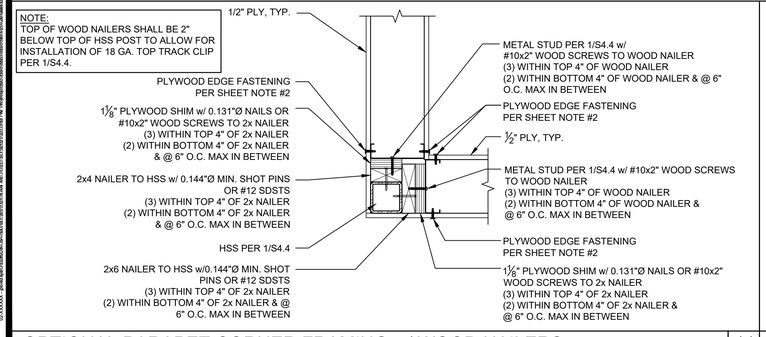
PARAPET CORNER FRAMING DETAIL — SCALE : 1 1/2"=1'-0" — 7



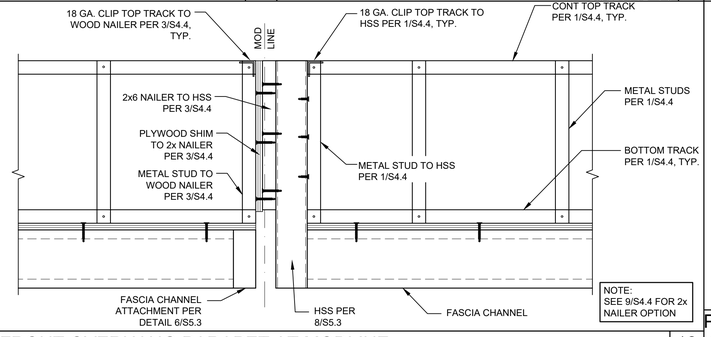
PARAPET TOP TRACK CORNER DETAIL — SCALE : 1 1/2"=1'-0" — 8



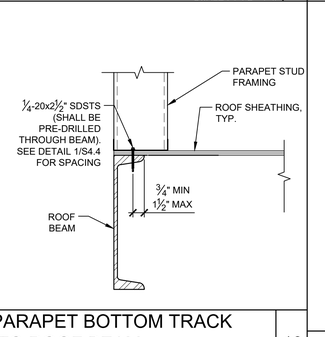
2x NAILER OPTION — SCALE : 1 1/2"=1'-0" — 9



OPTIONAL PARAPET CORNER FRAMING w/ WOOD NAILERS — SCALE : 1 1/2"=1'-0" — 11



FRONT OVERHANG PARAPET AT MODLINE — SCALE : 1 1/2"=1'-0" — 12



PARAPET BOTTOM TRACK TO ROOF BEAM — SCALE : 1 1/2"=1'-0" — 13

SHEET NOTES

NOTES:

1. ALL SHOT PINS AND SDSTS SHALL HAVE A CODE APPROVED EVALUATION REPORT.
2. PLYWOOD FASTENING: #10 S.T.S.M.S. COMPLYING w/ ASTM C1513, @ 6" O.C. EDGE & 12" O.C. FIELD

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

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ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — SIMON PATRICK GEORGANAS — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCO — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

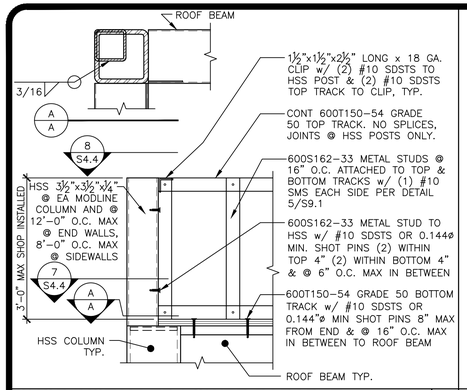
SHEET TITLE:

PARAPET DETAILS

SHEET NUMBER:

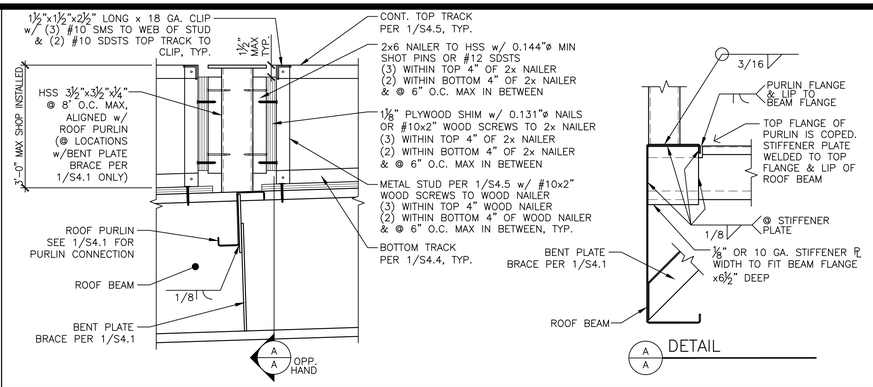
S4.4

BID SET 10/01/2021



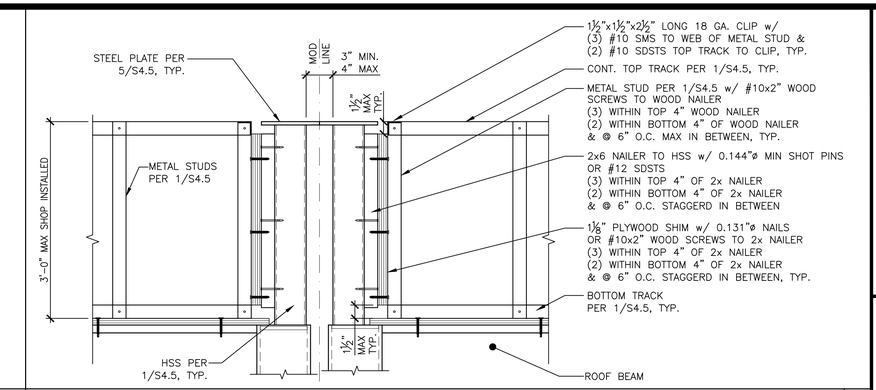
SHOP INSTALLED LOWER PARAPET @ CORNER 1

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



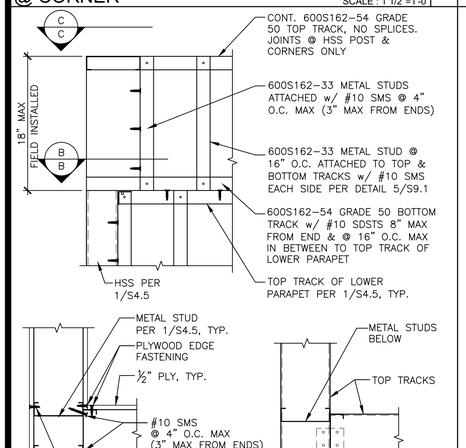
SHOP INSTALLED LOWER PARAPET @ SIDEWALL 2

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



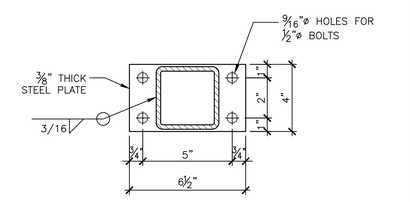
SHOP INSTALLED LOWER PARAPET DETAIL @ MODLINE 3

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



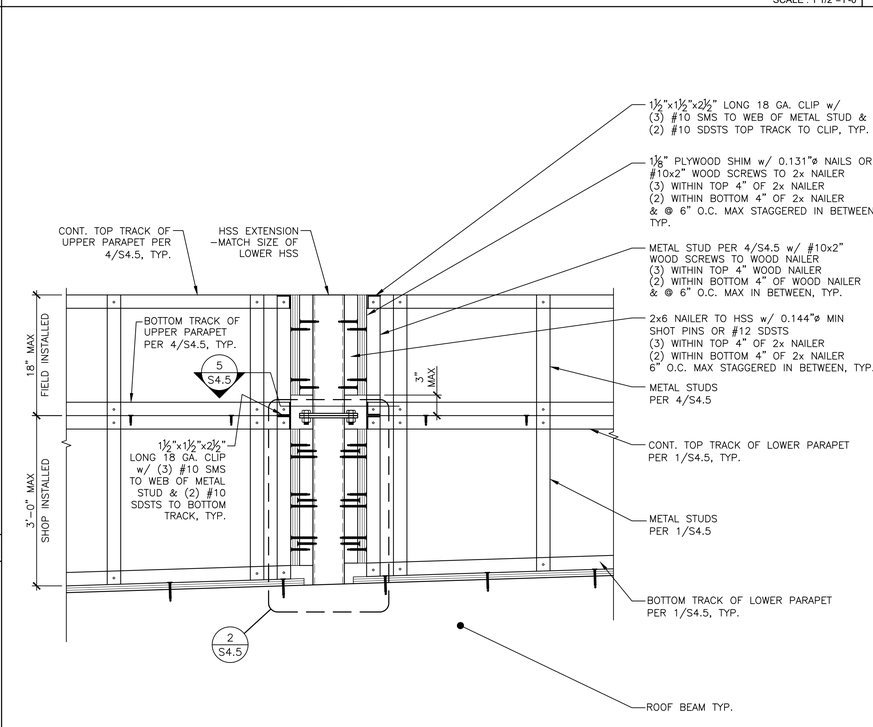
FIELD INSTALLED EXTENSION @ CORNERS 4

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



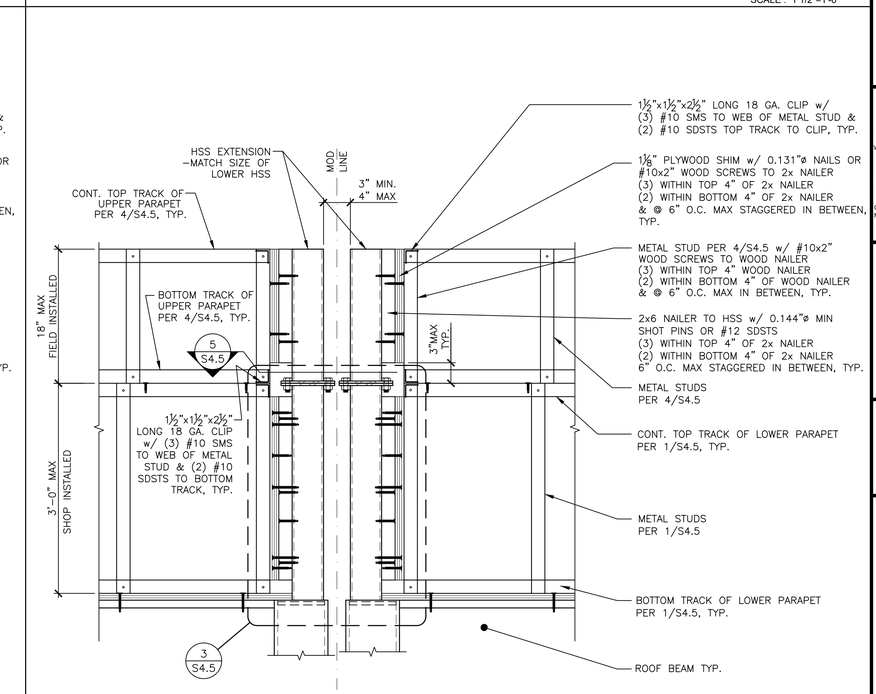
PARAPET EXTENSION COLUMN PLATE 5

SCALE : 3"=1'-0"



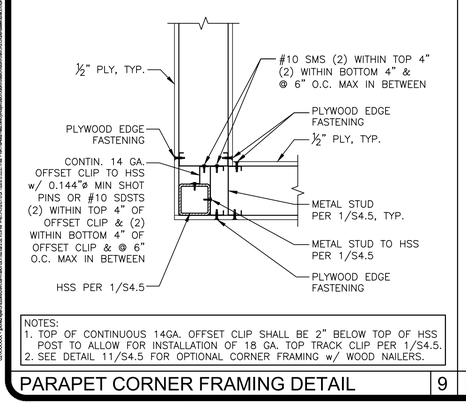
FIELD INSTALLED PARAPET EXTENSION @ SIDEWALL 6

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



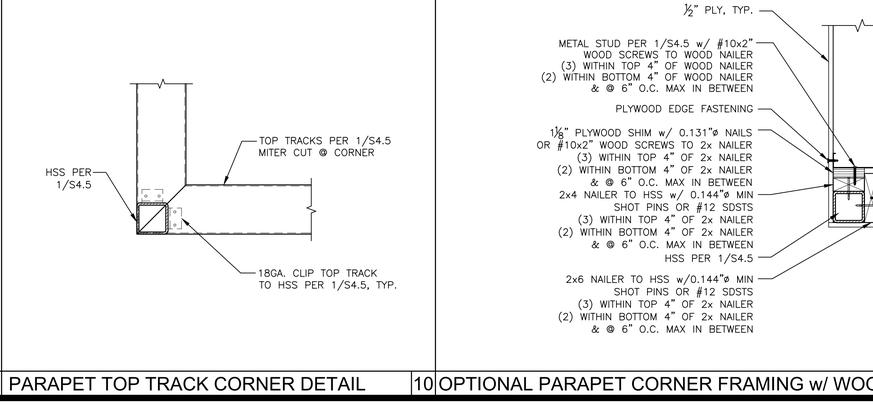
FIELD INSTALLED PARAPET EXTENSION @ MODLINES 7

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



NOTES:
1. TOP OF CONTINUOUS 14GA. OFFSET CLIP SHALL BE 2" BELOW TOP OF HSS POST TO ALLOW FOR INSTALLATION OF 18 GA. TOP TRACK CLIP PER 1/S4.5.
2. SEE DETAIL 11/S4.5 FOR OPTIONAL CORNER FRAMING w/ WOOD NAILERS.

PARAPET CORNER FRAMING DETAIL 9



PARAPET TOP TRACK CORNER DETAIL 10

NOTE:
1. TOP OF WOOD NAILERS SHALL BE 2" BELOW TOP OF HSS POST TO ALLOW FOR INSTALLATION OF 18 GA. TOP TRACK CLIP PER 1/S4.5.

OPTIONAL PARAPET CORNER FRAMING w/ WOOD NAILERS 11

NOTES:

1. ALL SHOT PINS AND SDDSTS SHALL HAVE A CODE APPROVED EVALUATION REPORT.
2. PLYWOOD FASTENING: #10 S.M.S. @ 6" O.C. EDGE & 12" O.C. FIELD
3. PARAPETS ARE NOT PERMITTED AT INTERIOR MODLINE BEAMS.

SHEET NOTES

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
ANTHONY PATRICK DEVANNEY
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D FRISCH
No. S3380
STRUCTURAL
STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	10/01/21
PROJECT NO:	1613-20

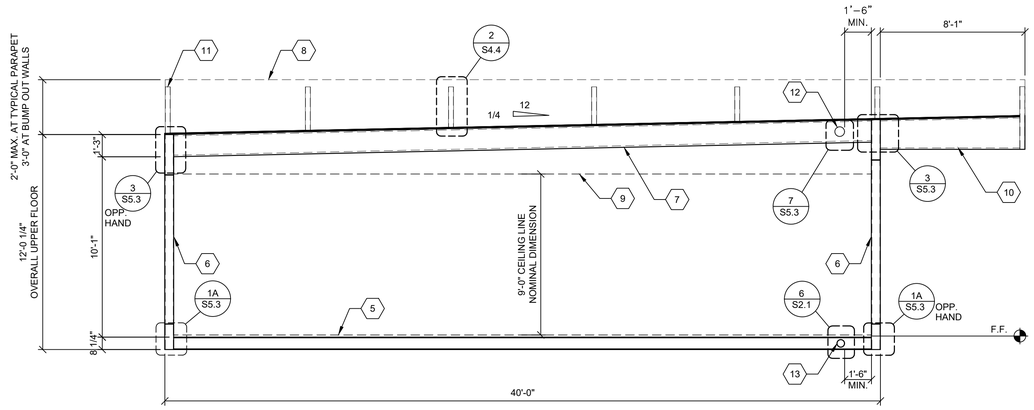
SHEET TITLE:

4'-6" MAX
HEIGHT
PARAPET DETAILS

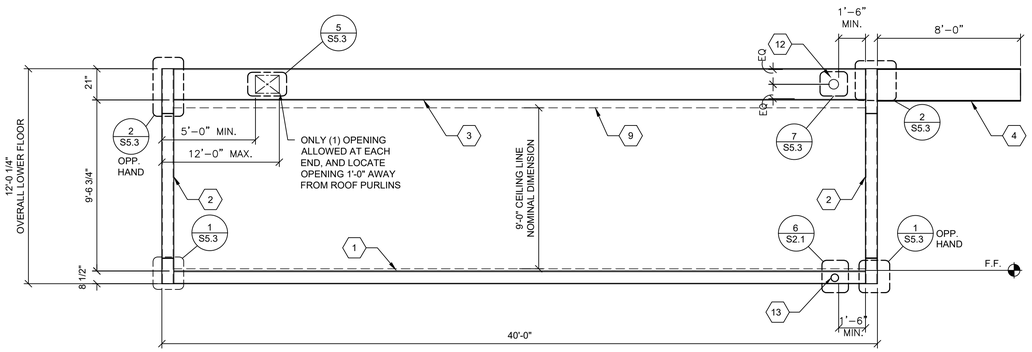
SHEET NUMBER:

S4.5

BID SET 10/01/2021



UPPER FLOOR LONGITUDINAL FRAME ELEVATION | 1



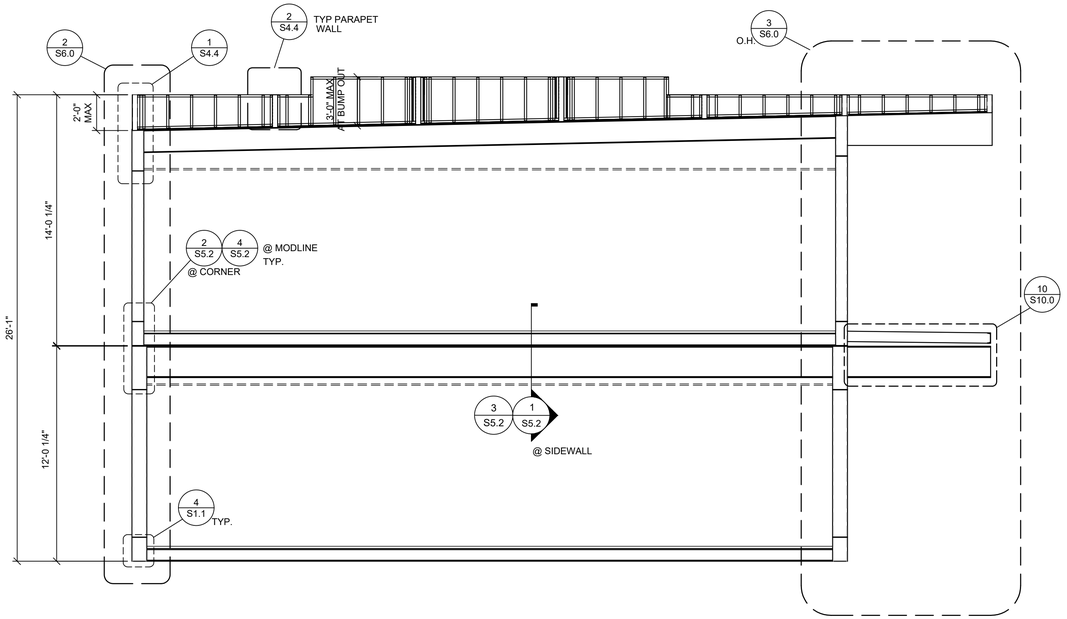
GROUND FLOOR LONGITUDINAL FRAME ELEVATION | SCALE:1/4"=1'-0" | 2

1. GROUND FLOOR FLOOR BEAM - SEE SCHEDULE BELOW
2. GROUND FLOOR HSS COLUMN - SEE SCHEDULE BELOW
3. GROUND FLOOR ROOF BEAM - SEE SCHEDULE BELOW
4. GROUND FLOOR ROOF OVERHANG OUTRIGGER BEAM - SEE SCHEDULE BELOW
5. UPPER FLOOR FLOOR BEAM - SEE SCHEDULE BELOW
6. UPPER FLOOR HSS COLUMN - SEE SCHEDULE BELOW
7. UPPER FLOOR ROOF BEAM - SEE SCHEDULE BELOW
8. PARAPET LINE
   (NOTE: PARAPETS NOT PERMITTED AT INTERIOR MODLINE BEAMS)
9. CEILING LINE
10. TAPERED 20"-22" DEEP x 14GA UPPER FLOOR FORMED OVERHANG OUTRIGGER CHANNEL - REFER TO S0.0
11. HSS 3 1/2x3 1/2x1/4 PARAPET COLUMN @ 12'-0" O.C. MAX SEE SHEETS S4.4 FOR DETAILS
    (NOTE: PARAPETS NOT PERMITTED AT INTERIOR MODLINES BEAMS)
12. 6"Ø MAX OPENING IN WEB OF ROOF BEAM WITHOUT WEB REINFORCING SPACE HOLES @ 48" O.C. MIN. HOLE CAN OCCUR @ ANY LOCATION ALONG LENGTH OF ROOF BEAM EXCEPT AS NOTED OTHERWISE ON FRAMING ELEVATION

    NOTE: IF HOLED ARE 3"Ø OR LESS, THEY MAY BE SPACED @ 24" O.C. MIN. w/ NO REINFORCEMENT REQUIRED
13. 4" Ø MAX OPENING IN WEB OF FLOOR BEAM WITHOUT WEB REINFORCEMENT PER DETAIL 6/S2.1 SPACED @ 48" O.C. MIN. HOLES MAY OCCUR @ ANY LOCATION ALONG LENGTH OF FLOOR BEAM WITH DIRECT FOUNDATION SUPPORT BELOW EXCEPT AS NOTED OTHERWISE ON FRAMING ELEVATION. OPENINGS ARE NOT ALLOWED WHERE BEAMS ARE SPANNING BETWEEN FOUNDATION OR ACROSS VENT OPENINGS

    NOTE: IF HOLED ARE 2"Ø OR LESS, THEY MAY BE SPACED @ 24" O.C. MIN.

KEY NOTES



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

	FLOOR BEAMS	COLUMNS	ROOF BEAMS	ROOF OVERHANG OUTRIGGER BEAM
UPPER FLOOR	W8x21	HSS 8x8x1/2	C15x33.9 (50 KSI)	PER KEYNOTE 10 ABOVE

	FLOOR BEAMS	COLUMNS	ROOF BEAMS	ROOF OVERHANG OUTRIGGER BEAM
GROUND FLOOR	W8x48	HSS 10x10x1/2	W21x62	W21x62

FRAME MEMBER SCHEDULE | 3B

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SET NAME

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CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ROBERT PATRICK DAVIDSON — No. C12631 — Ren. 8-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

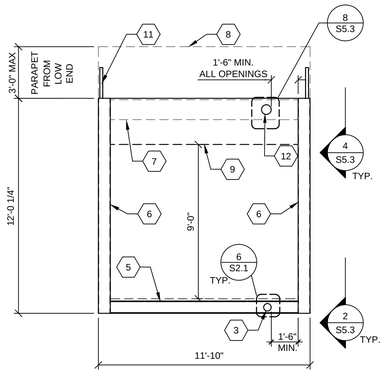
SHEET TITLE:

LONGITUDINAL
MOMENT FRAME
ELEVATIONS

SHEET NUMBER:

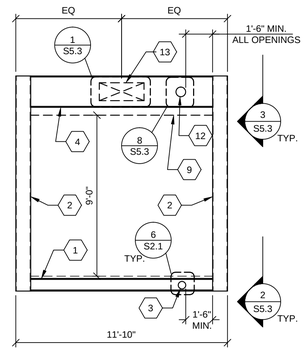
S5.0

BID SET 10/01/2021



TYPICAL END FRAME SECTION UPPER FLOOR

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

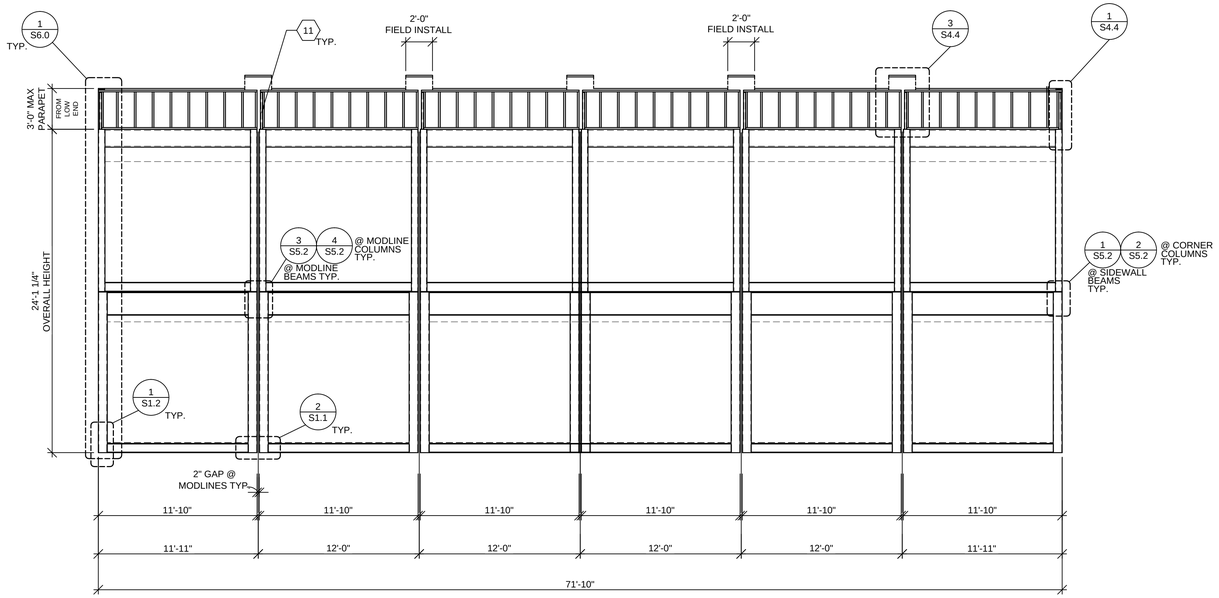


TYPICAL END FRAME SECTION GROUND FLOOR

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

1. GROUND FLOOR FLOOR BEAM - SEE SCHEDULE SHEET S5.0
2. GROUND FLOOR HSS COLUMN - SEE SCHEDULE SHEET S5.0
3. 4"Ø MAX OPENING IN WEB OF FLOOR BEAM WITHOUT WEB REINFORCEMENT PER DETAIL 6/S2.1 SPACED @ 48" O.C. MIN. HOLES MAY OCCUR @ ANY LOCATION ALONG LENGTH OF FLOOR BEAM WITH DIRECT FOUNDATION SUPPORT BELOW. EXCEPT AS NOTED OTHERWISE ON FRAMING ELEVATION. OPENINGS ARE NOT ALLOWED WHERE BEAMS ARE SPANNING BETWEEN FOUNDATIONS OR ACROSS VENT OPENINGS
4. GROUND FLOOR ROOF BEAM - SEE SCHEDULE SHEET S5.0
5. UPPER FLOOR FLOOR BEAM - SEE SCHEDULE SHEET S5.0
6. UPPER FLOOR HSS COLUMN - SEE SCHEDULE SHEET S5.0
7. UPPER FLOOR ROOF BEAM - SEE SCHEDULE SHEET S5.0
8. PARAPET LINE
9. CEILING LINE NOMINAL 9'-0"
10. NOT USED
11. HSS 3 1/2x3 1/2x1/4" PARAPET COLUMN @ 12'-0" O.C. MAX - SEE SHEETS S4.4 FOR DETAILS
12. 6"Ø MAX OPENING IN WEB OF ROOF BEAM WITHOUT WEB REINFORCING SPACE HOLES @ 48" O.C. MIN. HOLE CAN OCCUR @ ANY LOCATION ALONG LENGTH OF ROOF BEAM EXCEPT AS NOTED OTHERWISE ON FRAMING ELEVATION.
13. BEAM OPENING PER 1/S5.3

KEY NOTES



TRANSVERSE FRONT / REAR ELEVATION

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

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Ren. 3-31-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MA NHY D FROSCH
No. S3380
STRUCTURAL
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

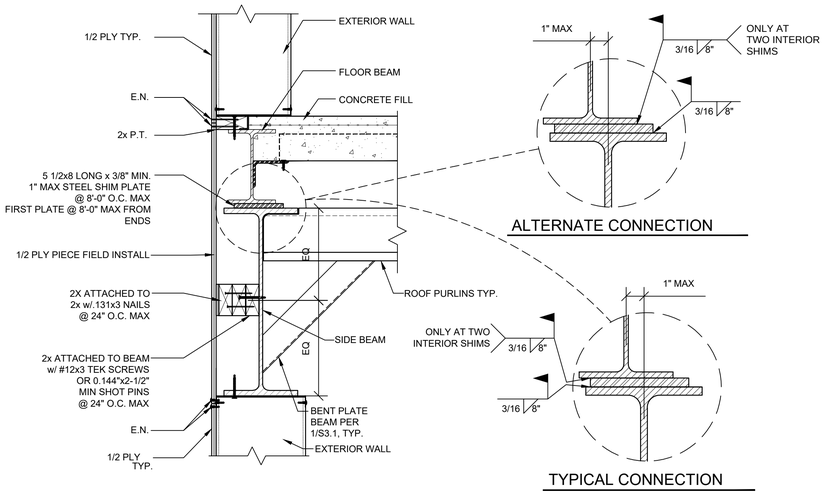
SHEET TITLE:

TRANSVERSE
MOMENT FRAME
ELEVATIONS

SHEET NUMBER:

S5.1

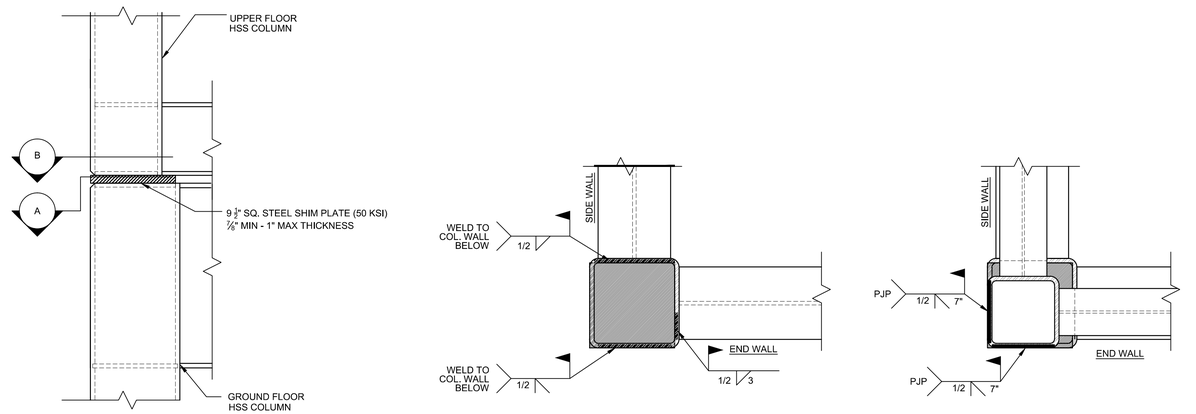
BID SET 10/01/2021



UPPER FLOOR TO GROUND FLOOR CONNECTION @ SIDES

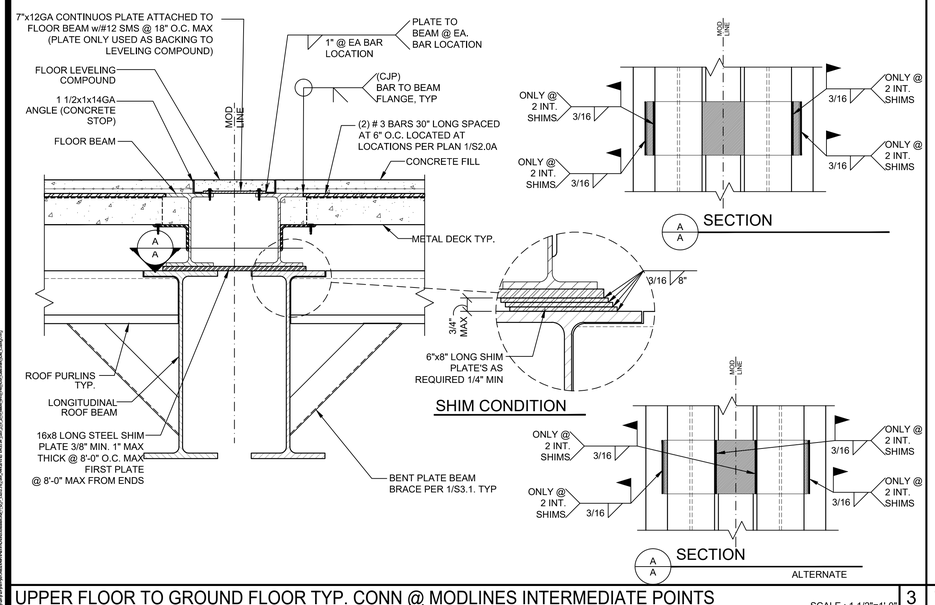
SCALE : 1 1/2"=1'-0" | 1

NOTE: SMAW PROCESS NOT PERMITTED



TYPICAL CONNECTION UPPER FLOOR COLUMN TO GROUND FLOOR COLUMN @ CORNERS

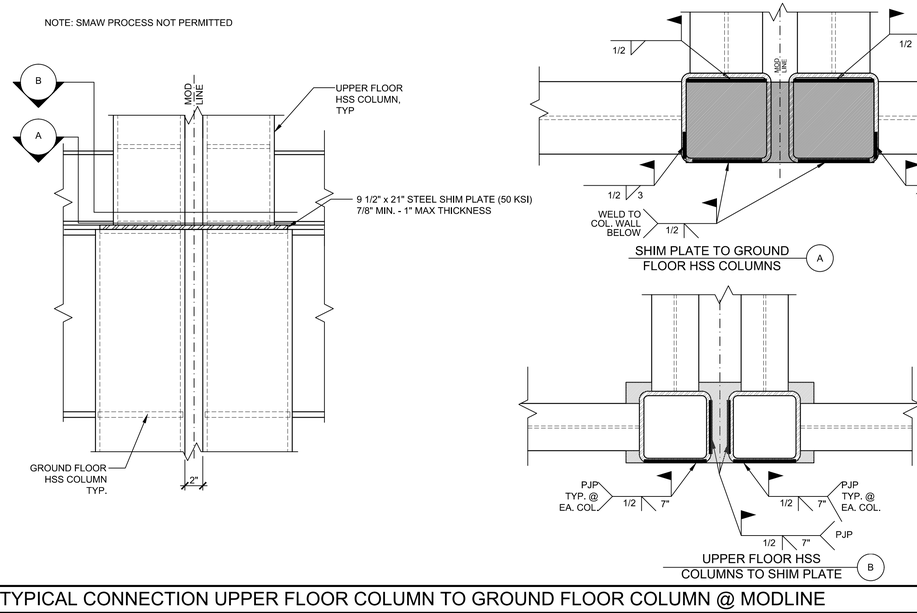
SCALE : 1 1/2"=1'-0" | 2



UPPER FLOOR TO GROUND FLOOR TYP. CONN @ MODLINES INTERMEDIATE POINTS

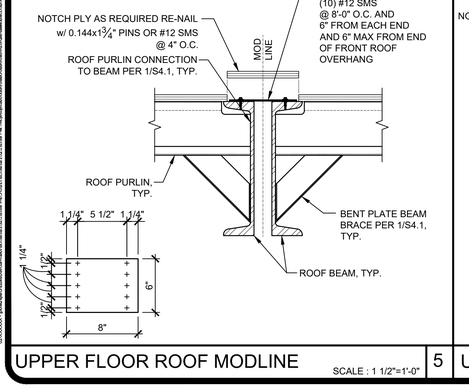
SCALE : 1 1/2"=1'-0" | 3

NOTE: SMAW PROCESS NOT PERMITTED



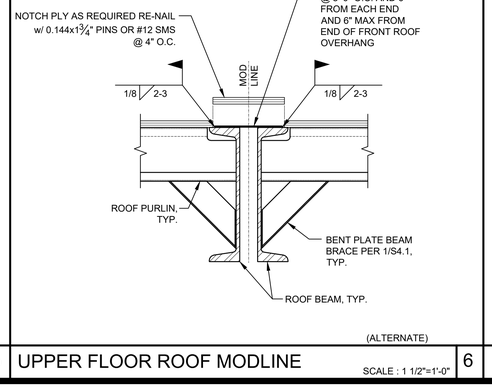
TYPICAL CONNECTION UPPER FLOOR COLUMN TO GROUND FLOOR COLUMN @ MODLINE

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



UPPER FLOOR ROOF MODLINE

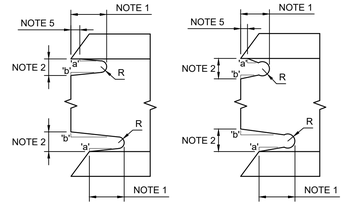
SCALE : 1 1/2"=1'-0" | 5



UPPER FLOOR ROOF MODLINE

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

1. FILLER METALS SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SEISMIC PROVISIONS.
2. WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH THE AISC SEISMIC PROVISIONS.
3. QUALITY CONTROL AND QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH THE AISC SEISMIC PROVISIONS.
4. WELD ACCESS HOLES SHALL BE IN ACCORDANCE WITH AISC 360-10, SECTION J1.6, AND SHALL BE CONSTRUCTED PER THE FOLLOWING DETAILS & NOTES.



NOTES: THESE ARE TYPICAL DETAILS FOR JOINTS WELDED FROM ONE SIDE AGAINST STEEL BACKING.

1) LENGTH: GREATER OF 1.5tw OR 1-1/2 IN. (38 MM)
2) HEIGHT: GREATER OF 1.0tw OR 3/4 IN. (19 MM) BUT NEED NOT EXCEED 2 IN. (50 MM)
3) R: 3/8 IN. MIN. (10 MM). GRIND THE THERMALLY CUT SURFACES OF WELD ACCESS HOLES IN HEAVY SHAPES AS DEFINED IN SECTIONS A3.1(c) AND (d) OF AISC 360-16.
4) SLOPE 'a' FORMS A TRANSITION FROM THE WEB TO THE FLANGE. SLOPE 'b' MAY BE HORIZONTAL.
5) THE BOTTOM OF THE TOP FLANGE IS TO BE CONTOURED TO PERMIT THE TIGHT FIT OF BACKING BARS WHERE THEY ARE TO BE USED.

THE WELDING PROCEDURE QUALIFICATION TEST RECORD AND WELDING PROCEDURE SPECIFICATION FOR THIS WELD SHALL BE PREPARED IN ACCORDANCE WITH AWS D1.1-15 (HOT-ROLLED), D1.3-08 (COLD-FORMED) & D1.8-16 AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND SUBMITTAL TO THE D.S.A. TYPICAL ALL DETAILS SHEET S5.3. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT.-LBS AT ZERO DEGREES F, AS DETERMINED BY AWS CLASSIFICATION.

REQUIREMENTS FOR MOMENT CONNECTIONS

SCALE : NOT TO SCALE | 7

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SITE SPECIFIC PROJECT NAME

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GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GOMEZ — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

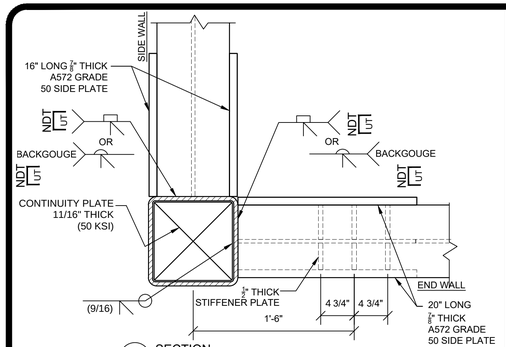
SHEET TITLE:

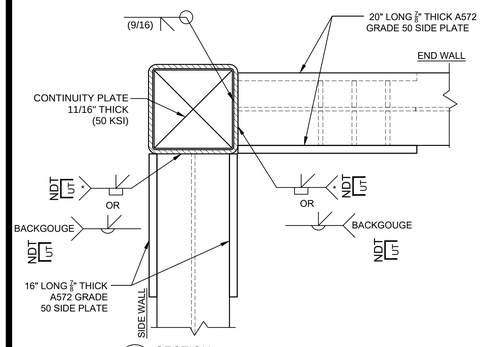
MOMENT FRAME
CONNECTION DETAILS

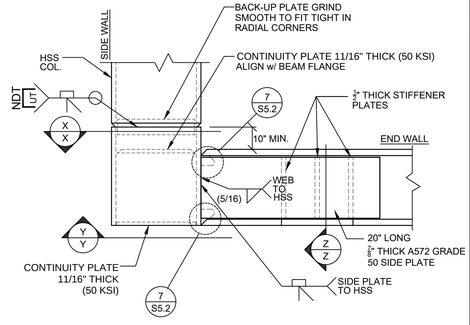
SHEET NUMBER:

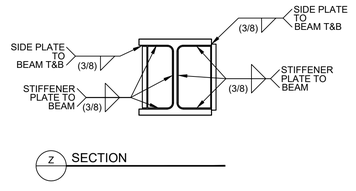
S5.2

BID SET 10/01/2021



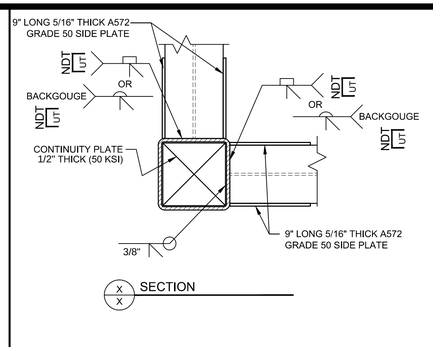


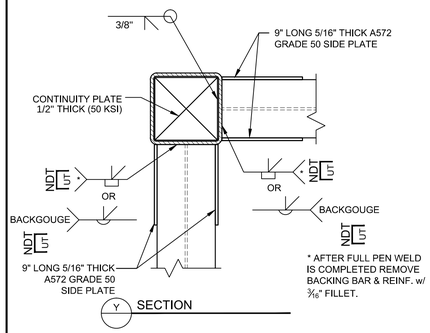


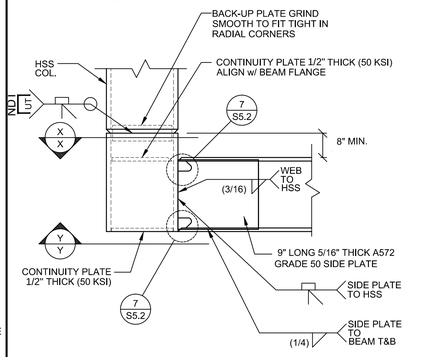


(GROUND FLOOR)

COLUMN TO FLOOR BEAM CONN. SCALE : 1 1/2"=1'-0" 1

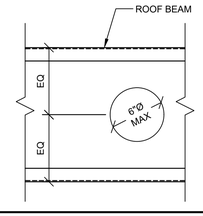




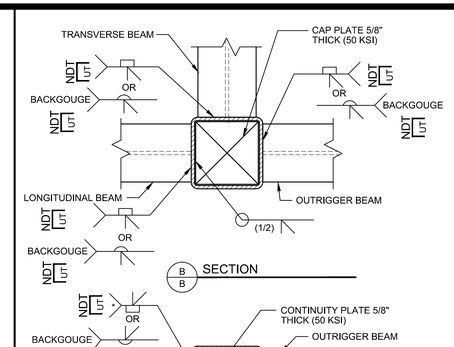


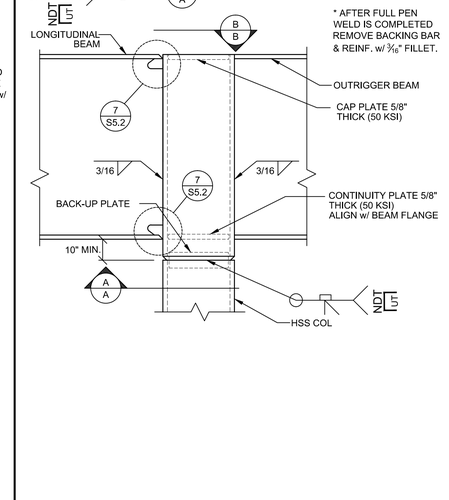
(UPPER FLOORS)

COLUMN TO FLOOR BEAM CONN. SCALE : 1 1/2"=1'-0" 1A



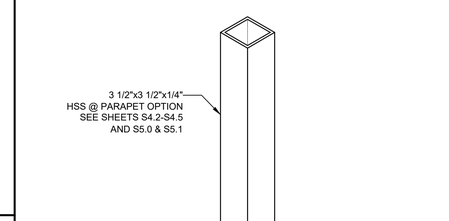
OPENING @ BEAM SCALE : 1 1/2"=1'-0" 7



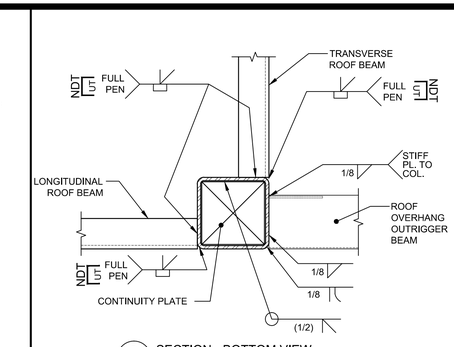


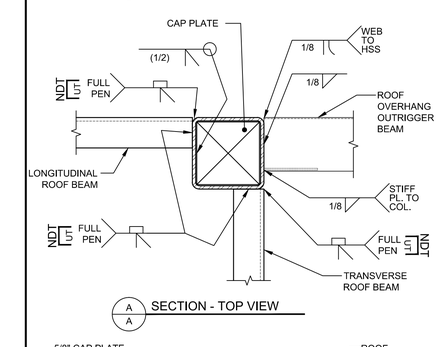
(GROUND FLOOR)

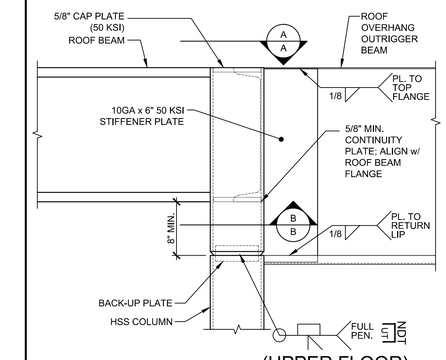
COLUMN TO ROOF BEAM CONN. SCALE : 1 1/2"=1'-0" 2



PARAPET COLUMN DETAIL AT OVERHANG CORNERS SCALE : NTS 8

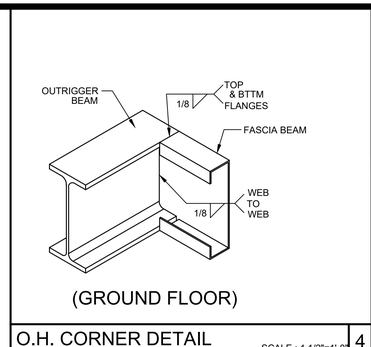






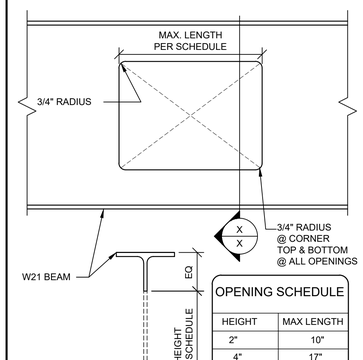
(UPPER FLOOR)

COLUMN TO ROOF BEAM CONN. SCALE : 1 1/2"=1'-0" 3



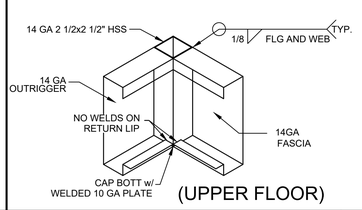
(GROUND FLOOR)

O.H. CORNER DETAIL SCALE : 1 1/2"=1'-0" 4



OPENING SCHEDULE	
HEIGHT	MAX LENGTH
2"	10"
4"	17"
6"	23"
8"	26"
10"	27"
12"	25"
14"	21"

OPENING @ GROUND FLOOR ROOF BEAMS SCALE : 1 1/2"=1'-0" 5



(UPPER FLOOR)

OVERHANG CORNER DETAIL SCALE : 1 1/2"=1'-0" 6

NOTE:
1. FOR REQUIREMENT OF GENERAL WELDS & MOMENT CONNECTIONS SEE SHEET S5.2.

2. REFER TO NON-DESTRUCTIVE TESTING NOTES FOR NON-DESTRUCTIVE TESTING REQUIREMENTS.

3. WHERE BEAM BOTTOM FLANGES ATTACH TO COLUMNS w/ COMPLETE JOINT PENETRATION GROOVE WELDS & WELD BACKING IS USED AT THE BOTTOM SURFACE OF THE BEAM FLANGE, SUCH BACKING SHALL BE REMOVED & THE ROOT PASS BACK-GOUGED, REPAIRED & REINFORCED w/ A MINIMUM 3/16" FILLET WELD

4. CONTINUITY PLATES MUST BE WELDED IN A HORIZONTAL POSITION. GMAW/FACM WELD PROCESS

GENERAL NOTES

NON-DESTRUCTIVE TESTING OF COMPLETE JOINT PENETRATION GROVE WELDS AT THE MOMENT-RESISTING BEAM-TO-COLUMN CONNECTIONS SHALL COMPLY WITH AISC 341-10 CHAPTER J PER CBC 1705A.2.1.

1. WELDS SUBJECT TO THE REQUIREMENTS OF NON-DESTRUCTIVE TESTING ARE NOTED ON THIS DRAWINGS WITH THE SYMBOL NDT.

2. ULTRASONIC TESTING (UT) SHALL BE PERFORMED ON 100% OF ALL WELDS DENOTED WELDS WITH THE SYMBOL NDT UT.

3. MAGNETIC PARTICLE TESTING (MT) SHALL BE PERFORMED ON 25% OF ALL WELDS REQUIRING NON-DESTRUCTIVE TESTING WHETHER OR NOT (UT) IS REQUIRED.

4. ULTRASONIC TESTING (UT) IS ONLY REQUIRED WHERE THE THICKNESS OF THE COLUMN IS 5/16" OR GREATER. UT IS NOT REQUIRED WHERE THE COLUMN THICKNESS IS LESS THAN 5/16".

5. ULTRASONIC TESTING (UT) IS NOT REQUIRED ON WELDS FROM STRUCTURAL STEEL CHANNEL BEAM FLANGES TO COLUMNS AS UT TESTING IS NOT APPROPPRIATE FOR SECTIONS WITH VARYING DEPTHS. MAGNETIC PARTICLE TESTING (MT) IS STILL REQUIRED.

NON-DESTRUCTIVE TESTING NOTES

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

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — BENJAMIN PATRICK GOMEZ — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — RAMANT D. PRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

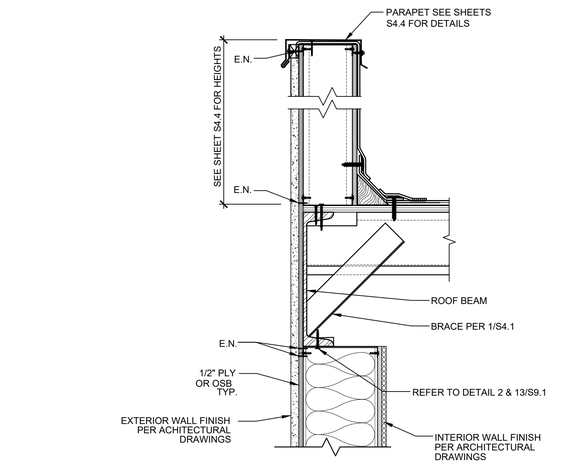
SHEET TITLE:

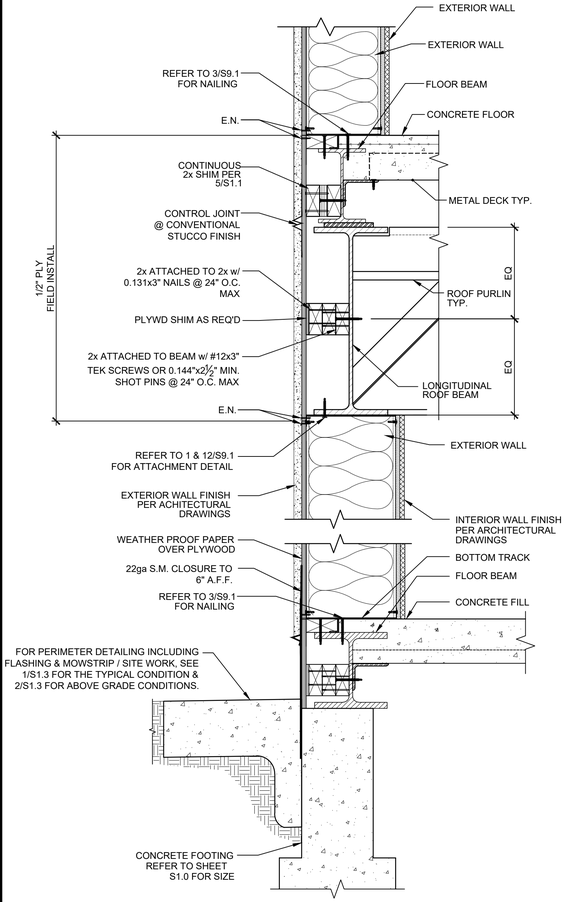
MOMENT FRAME
CONNECTION DETAILS

SHEET NUMBER:

S5.3

BID SET 10/01/2021





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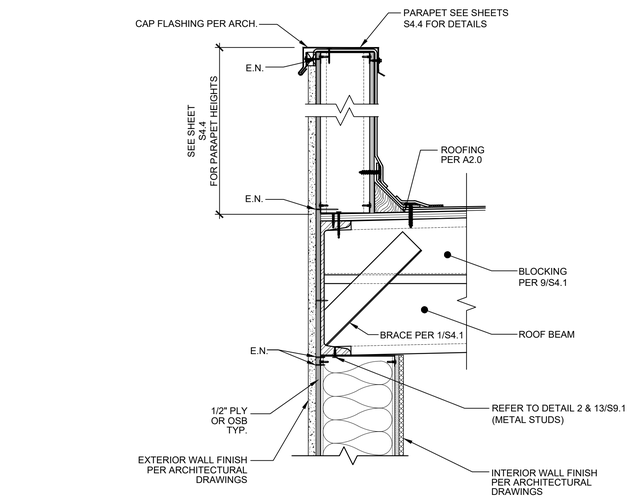
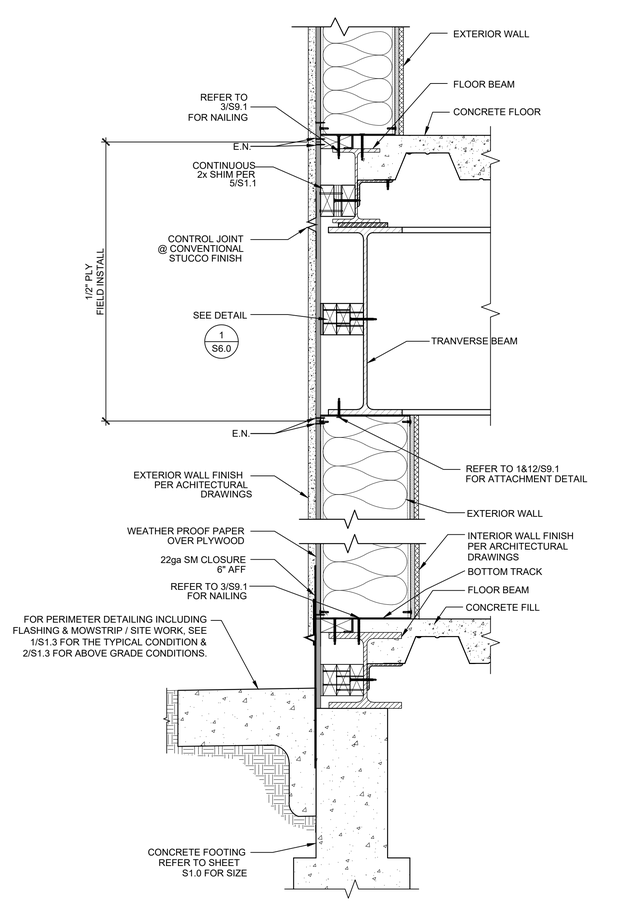
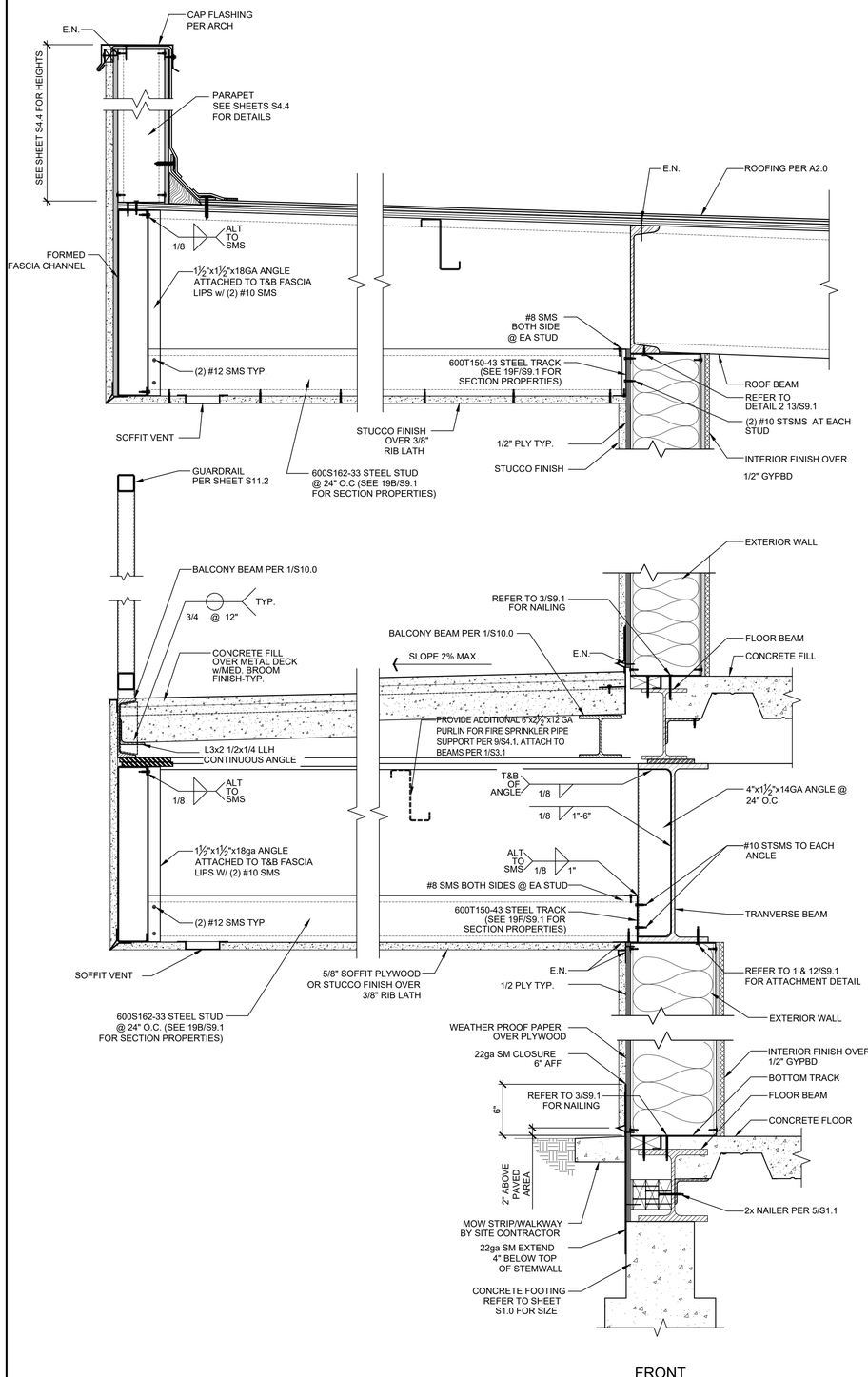




REAR



FRONT

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Phone (209) 825-1921
Fax (209) 825-7018
www.americanmodular.com

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK GARY MAHON — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — ALANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

BUILDING SECTIONS

SHEET NUMBER:

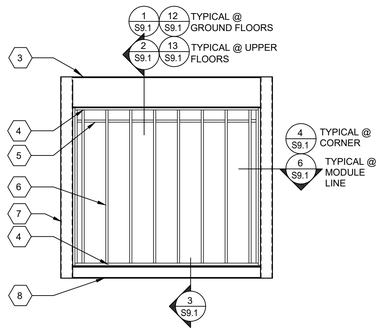
S6.0

BID SET 10/01/2021

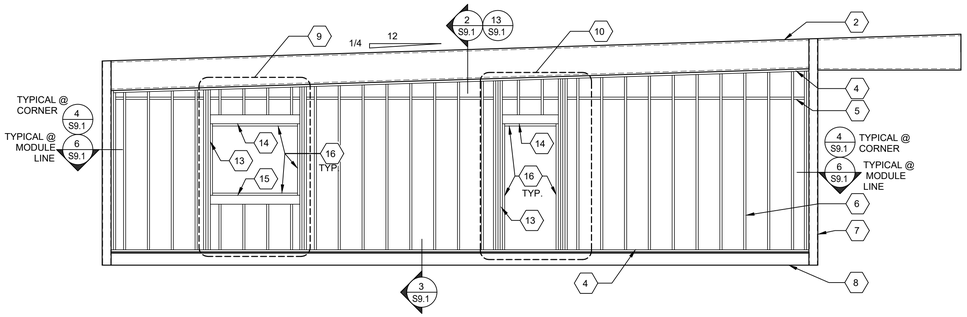
SIDE WALL SECTION — SCALE : 1 1/2"=1'-0" — 1

REAR END WALL SECTION — SCALE : 1 1/2"=1'-0" — 2

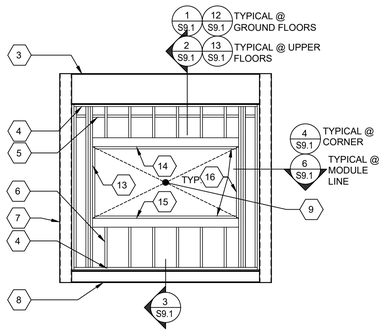
FRONT END WALL SECTION — SCALE : 1 1/2"=1'-0" — 3



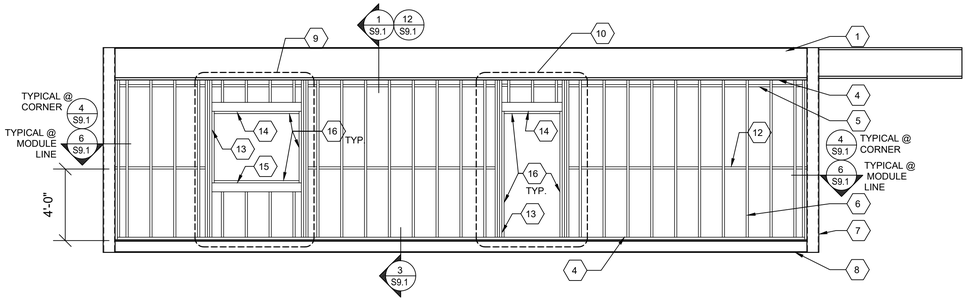
TYP. END WALL FRAMING w/ NO OPENINGS — SCALE : 1/4"=1'-0" — 1



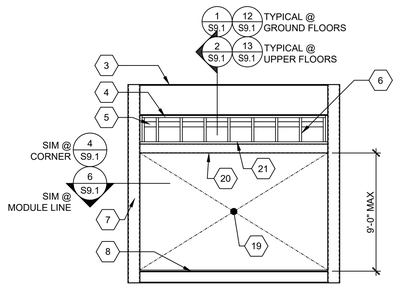
TYPICAL SIDE WALL FRAMING @ UPPER FLOOR — SCALE : 1/4"=1'-0" — 5



TYP. END WALL FRAMING w/ WINDOW — SCALE : 1/4"=1'-0" — 2



TYPICAL SIDE WALL FRAMING @ GROUND FLOOR — SCALE : 1/4"=1'-0" — 6

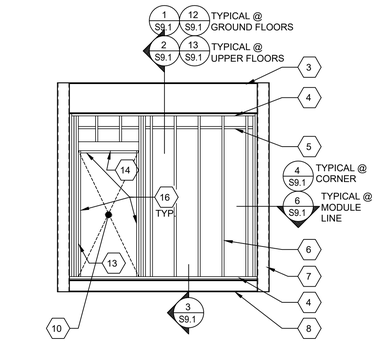


END WALL FRAMING w/ OPT. STOREFRONT — SCALE:1/4"=1'-0" — 3

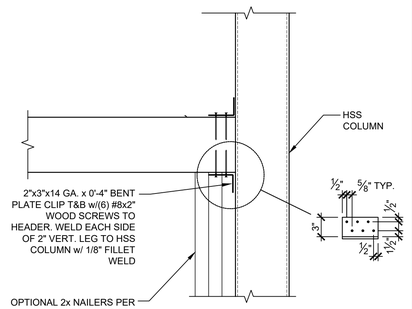
FINISH TYPE	FASTENER	SPACING	
		E.N.	F.N.
1/2" PLYWOOD SHEATHING CONFORMING TO PS1-09, APA RATED, 5 PLY 32/16, OR 1/2" O.S.B. PANELS EXPOSURE 1 WITH 7/8" STUCCO (PER A5.0)	PER ARCHITECTURAL SHEETS		

1. ALL SCREWS IN EXTERIOR APPLICATIONS TO BE GALVANIZED.

FINISH SCHEDULE — 7



TYP. END WALL FRAMING w/ DOOR — SCALE : 1/4"=1'-0" — 4



PSL HDR CONN. TO HSS COLUMN — SCALE : 1/4"=1'-0" — 8

EXTERIOR DOOR/WINDOW OPENINGS 6'-0" OR LESS						
	HEADER	ALTERNATE HEADER	WINDOW SILL	ALTERNATE WINDOW SILL	KING STUDS	ALTERNATE KING STUD
DETAIL	6/S9.2	11/S9.2	7/S9.2	12/S9.2	6/S9.2	11/S9.2

EXTERIOR DOOR/WINDOW OPENINGS GREATER THAN 6'-0" UP TO 10'-0"						
	HEADER	ALTERNATE HEADER	WINDOW SILL	ALTERNATE WINDOW SILL	KING STUDS	ALTERNATE KING STUD
DETAIL	1/S9.2	11/S9.2	2/S9.2	12/S9.2	1/S9.2	11/S9.2

INTERIOR DOOR/WINDOW OPENINGS						
	HEADER (6'-0" MAX OPENING)	ALTERNATE HEADER (10'-0" MAX OPENING)	WINDOW SILL (6'-0" MAX OPENING)	ALTERNATE WINDOW SILL (10'-0" MAX OPENING)	KING STUDS (6'-0" MAX OPENING)	ALTERNATE KING STUD (10'-0" MAX OPENING)
DETAIL	15/S9.2	11/S9.2	16/S9.2	12/S9.2	15/S9.2	11/S9.2

STUD/TRACK SCHEDULE			
		STUDS	TRACKS
(EXTERIOR WALLS)	LOWER FLOORS	1000162-33	1000150-43
(EXTERIOR WALLS)	UPPER FLOORS	800S162-33	800T150-43
(INTERIOR WALLS WITHOUT BOOKSHELVES OR CASEWORK)	BOTH FLOORS	362S125-30 362162-33[5]	362T125-30 362150-43[6]
(INTERIOR WALLS WITH BOOKSHELVES OR CASEWORK)	BOTH FLOORS	600S162-33	600T150-43

NOTES:
1. SEE 19/S9.1 FOR STUD AND TRACK PROPERTIES. LARGER STUDS AND TRACKS MAY BE USED FOR ARCHITECTURAL PURPOSES. TOP & BOTTOM TRACKS SHALL BE 43 MILS (18 GA) MIN. @ EXTERIOR WALLS, 30 MILS (20GA.) MIN. @ INTERIOR WALLS UNO.
2. STUD AND TRACK SIZES ARE MINIMUM.
3. ALL WALL STUDS SPACED AT 16" O.C. MAX U.N.O
4. AT WALL INTERSECTIONS, ATTACH END STUD TO CROSS WALL w/#10 SMS @ 12" O.C.
5. USE 362162-33 AT RESTROOM WALLS FOR ANCHORAGE AT RESTROOM ELEMENTS.
6. USE 362150-43 AT RESTROOM WALLS FOR ANCHORAGE AT RESTROOM ELEMENTS.

STUD / TRACK AND DOOR / WINDOW OPENING SCHEDULES — SCALE : 1/4"=1'-0" — 9

1 LONGITUDINAL GROUND FLOOR ROOF BEAM
2 LONGITUDINAL UPPER FLOOR ROOF BEAM
3 TRANSVERSE ROOF BEAM
4 STEEL TRACK PER STUD/TRACK SCHEDULE 9/-
5 STEEL BLOCKING SAME SIZE AS STEEL STUDS @ HORIZONTAL PLYWOOD EDGES - REFER TO DETAIL 17/S9.1 FOR CONNECTION AT EACH END OF BLOCKING TO STUD
6 STEEL STUDS PER STUD/TRACK SCHEDULE 9/- @ 16" O.C. TYP.
7 HSS COLUMN
8 PERIMETER FLOOR BEAM
9 WINDOW OPENING MAX 10'-0" WIDE (REFER TO OPENING SCHEDULE 9/S9.0 & 2/S9.0 FOR DETAILS)- SEE FLOOR PLANS FOR LOCATIONS
10 DOOR OPENING (REFER TO OPENING SCHEDULE 9/S9.0 & 4/S9.0 FOR DETAILS)- SEE FLOOR PLANS FOR LOCATIONS
11 NOT USED
12 20GA 1 1/2" WIDE STRAP AT INTERIOR AND EXTERIOR SIDE. ATTACH TO EACH STUD WITH (1) #10 SMS AND PROVIDE (1) BLOCK @ 8'-0" O.C. ATTACHED TO STUDS PER DETAIL 17/S9.1. ATTACH STRAP TO BLOCK w/ #10 SMS @ 4" O.C.
13 KING STUD PER OPENING SCHEDULES 9/-
14 WINDOW/DOOR HEADER PER OPENING SCHEDULES 9/-
15 WINDOW SILL PER OPENING SCHEDULES 9/-
16 OPTIONAL 2x WOOD TRIMMER FOR ATTACHMENT OF WINDOW/DOOR FRAME. ATTACH TO METAL STUDS w/ #8 SMS @ 8" O.C. MAX. STAGGERED.
17 NOT USED
18 NOT USED
19 FULL-WIDTH STOREFRONT OPENING (STOREFRONT BY OTHERS) MAX STORY DRIFT RATIO = 2.0%
20 HEADER @ OPTIONAL FULL-WIDTH STOREFRONT OPENING MAX LIVE LOAD DEFLECTION = 0".
SOLID 5 1/4"x7" (1.8E) PARALLAM PSL HEADER (ESR-1387) ATTACHED DIRECTLY TO HSS COLUMNS - SEE 8/-
21 STEEL TRACK PER 9/S9.0 w/#8x1½" WOOD SCREWS @ 16" O.C. TO PARALLAM PSL HEADER & #8x1" STSDS SCREWS @ 16" O.C. TO HSS HEADER.

KEY NOTES

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

SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK CONNOR — No. C12631 Ren. 8-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

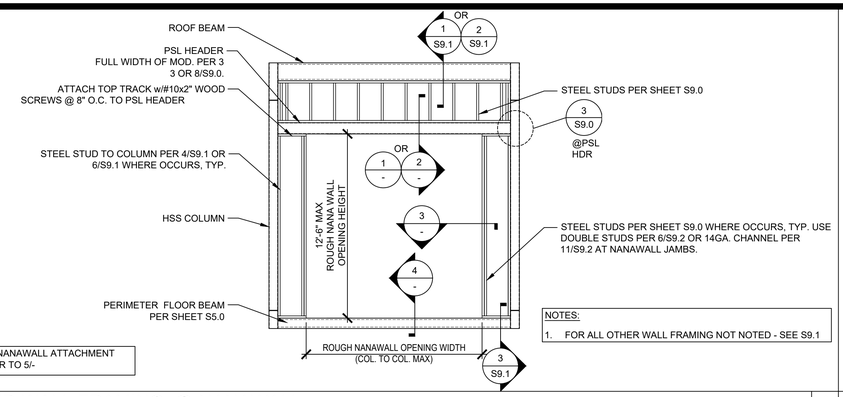
SHEET TITLE:

WALL FRAMING ELEVATIONS

SHEET NUMBER:

S9.0

BID SET 10/01/2021



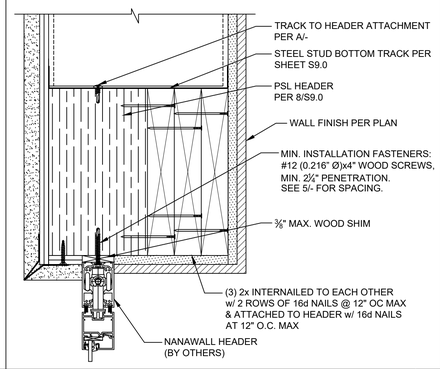
NOTES:

1. FOR ALL OTHER WALL FRAMING NOT NOTED - SEE S9.1

FOR NANAWALL ATTACHMENT
REFER TO 5/-

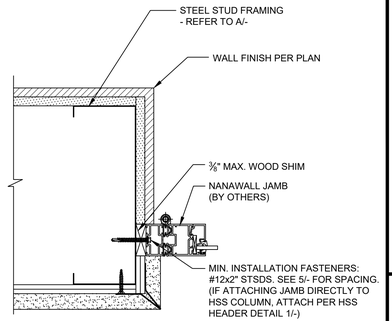
END WALL FRAMING @ NANAWALL

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



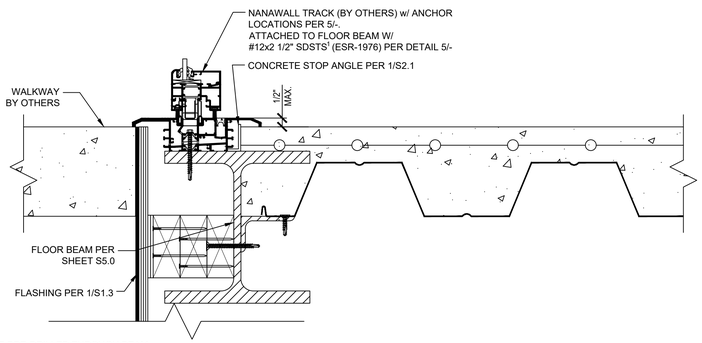
NANAWALL HEAD @ PSL DETAIL

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



NANAWALL JAMB DETAIL

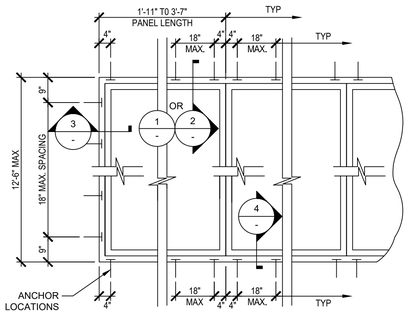
SCALE: 3" = 1'-0" | 3



1. SDSTS TO BE PRE-DRILLED THROUGH BEAM

NANAWALL SILL DETAIL

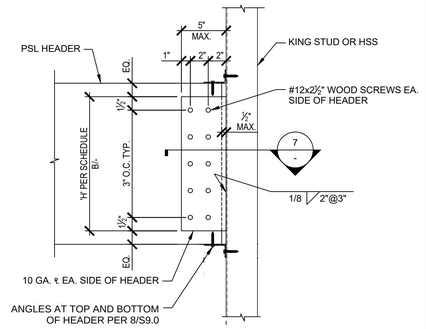
SCALE: 3" = 1'-0" | 4



NOTE:
IF SPACE BETWEEN THE TRACK AND HEADER IS GREATER THAN
⅜", SOLID WOOD BLOCKING MUST BE PROVIDED.

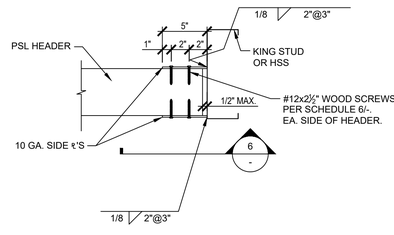
NANAWALL ANCHORAGE/FRAME

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



HEADER VIEW - FRONT VIEW

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



HEADER CONNECTION - TOP VIEW

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

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

1. MAX. INTERIOR NANAWALL WEIGHT = 6.0 PSF.
2. MAX. EXTERIOR NANAWALL WEIGHT = 8.0 PSF.
3. EXTERIOR NANAWALLS SHALL HAVE AN ALLOWABLE DESIGN WIND LOAD CAPACITY OF +/-30 PSF MIN.
4. NANAWALLS MAY BE TOP SUPPORTED FROM HEADER OR FLOOR SUPPORTED.
5. BOTTOM OF NANAWALLS SHALL BE LATERALLY SUPPORTED WITHIN FLOOR MOUNTED TRACK SYSTEM.
6. NANAWALLS SHALL BE FIXED AT ONE OR BOTH ENDS SUCH THAT STACKED CONDITION OCCURS AT ENDS OF WALL ONLY. STACKED NANAWALL SHALL NOT BE FREE TO SLIDE ALONG LENGTH OF SUPPORTING HEADER.

NANAWALL NOTES

20

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Fax (209) 825-7018
www.americanmodular.com

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT
ANDREW PATRICK O'HANLON
No. C12631
Ren. 3-31-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
STRUCTURAL
STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

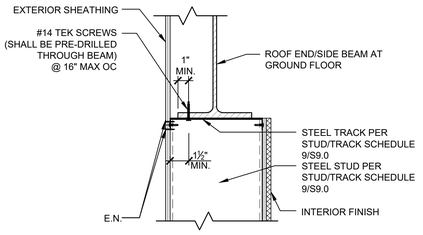
SHEET TITLE:

NANAWALL FRAMING
ELEVATIONS& DETAILS

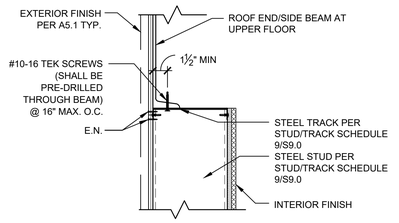
SHEET NUMBER:

S9.0A

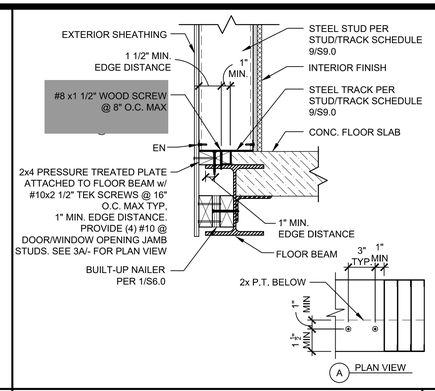
BID SET 10/01/2021



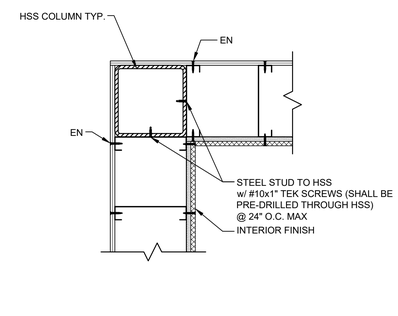
WALL TO ROOF BEAM DETAIL — SCALE : 1 1/2"=1'-0" — 1



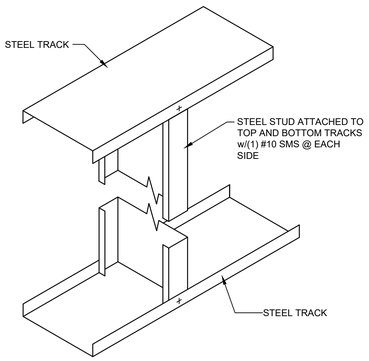
WALL TO ROOF BEAM DETAIL — SCALE : 1 1/2"=1'-0" — 2



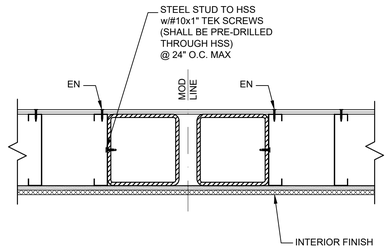
WALL TO FLOOR TYP. DETAIL — SCALE : 1 1/2"=1'-0" — 3



WALL TO COL TYP. DET @ CORNERS — SCALE : 1 1/2"=1'-0" — 4



TYP. STUD ATTACHMENT — SCALE : 1 1/2"=1'-0" — 5

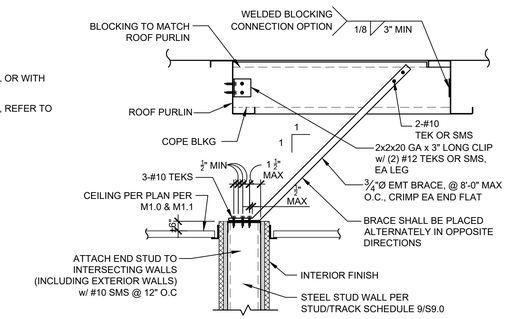


WALL TO COL TYP. DET @ MODLINES — SCALE : 1 1/2"=1'-0" — 6

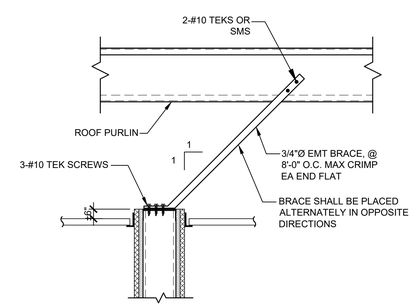
NOTES:

1. MAX LENGTH OF EMT BRACE = 5'-4" (1Ø EMT MAY EXTEND TO 7'-0") EMT RADIUS OF GYRATION = 0.309 IN.
2. SEE 11/- FOR OPTIONAL TOP OF WALL BLOCKING DETAIL
3. WALL MUST BE BRACED @ 8'-0" MAX BY EITHER AN INTERSECTING WALL OR WITH TOP PLATE BRACING TO ROOF FRAMING.
4. FOR BRACING OF PARTITION WALLS WITH CABINETS OR BOOKSHELVES, REFER TO DETAILS 14 OR 16/-.

INT WALL BRACING (BRACE PERPENDICULAR TO PURLIN OR PARALLEL TO BLOCKING) — 7

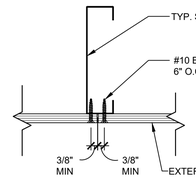


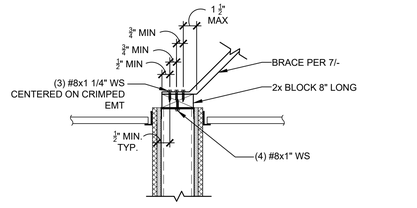
INT WALL BRACING (BRACE PARALLEL TO PURLIN) — SCALE : 1 1/2"=1'-0" — 8



NOTE:
SEE 7/- FOR NOTES & ADDITIONAL INFORMATION

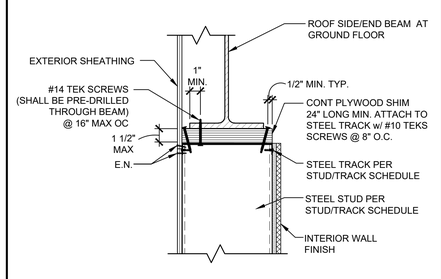
PLYWOOD JOINT — SCALE : 1 1/2"=1'-0" — 10



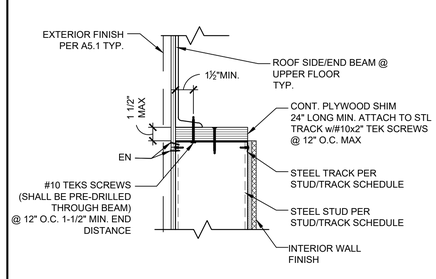


SEE 7/-, 8/-, & 9/- FOR ADDITIONAL DETAILS

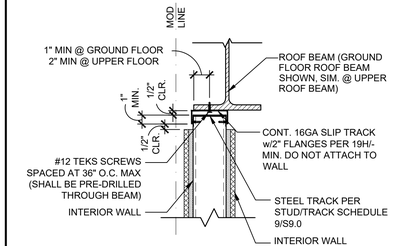
OPTIONAL BLOCKING @ INT WALL BRACING — SCALE : 1 1/2"=1'-0" — 11



WALL TO ROOF BEAM DET w / SHIM COND — SCALE : 1 1/2"=1'-0" — 12



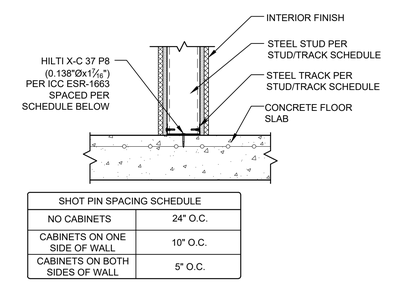
WALL TO ROOF BEAM DET w / SHIM COND — SCALE : 1 1/2"=1'-0" — 13



PROVIDE A MINIMUM OF 1/8" CLEARENCE BETWEEN SCREW HEADS AND SLIP TRACK FLANGES TO ALLOW MOVEMENT

NOTE:
GYPSUM BOARD SHALL NOT BE ATTACHED TO THE SLIP TRACK

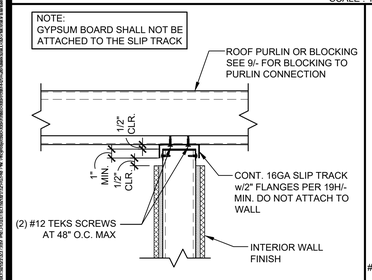
INT WALL ATTACHMENT @ MODLINE ROOF BEAM — SCALE : 1 1/2"=1'-0" — 14



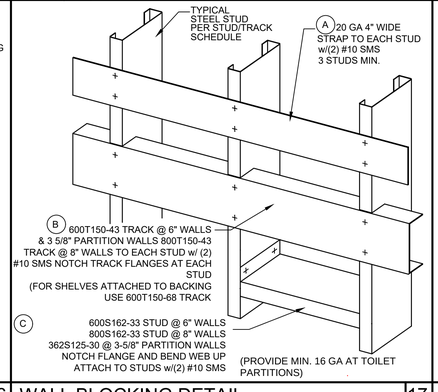
SHOT PIN SPACING SCHEDULE	
NO CABINETS	24" O.C.
CABINETS ON ONE SIDE OF WALL	10" O.C.
CABINETS ON BOTH SIDES OF WALL	5" O.C.

INTERIOR WALL CONN @ FLOOR — SCALE : 1 1/2"=1'-0" — 15

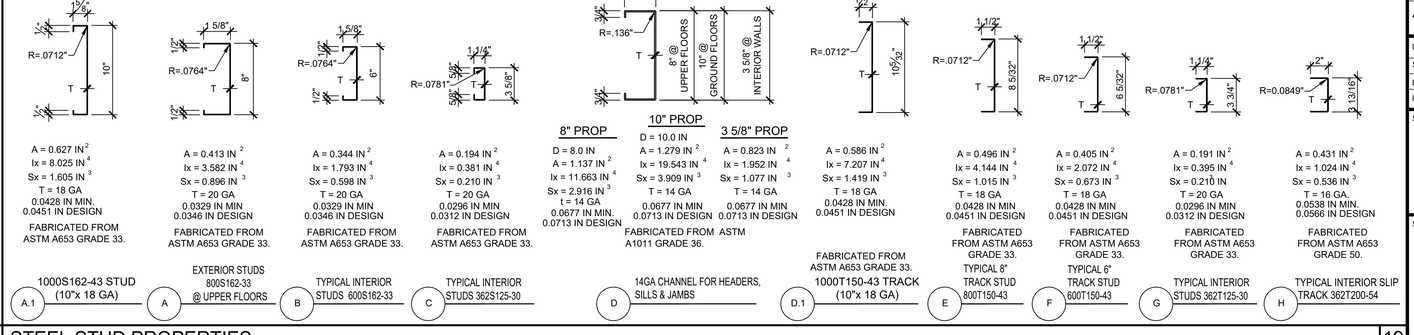
NOTE:
GYPSUM BOARD SHALL NOT BE ATTACHED TO THE SLIP TRACK



INT. WALL ATTACHMENT @ ROOF FRAMING — SCALE : 1 1/2"=1'-0" — 16



WALL BLOCKING DETAIL — N.T.S. — 17



STEEL STUD PROPERTIES — N.T.S. — 19

American Modular Systems
787 Spreckels Ave.,
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Phone (209) 825-1921
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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANTHONY PATRICK CHRISTIAN — No. C12631 — Ren. 8-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

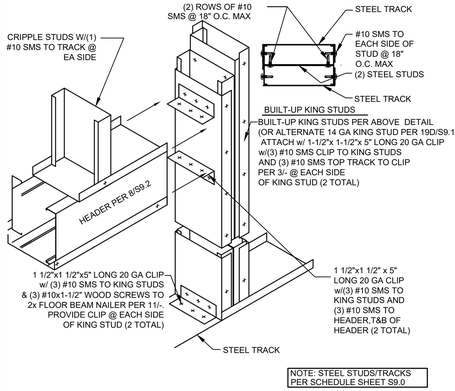
SHEET TITLE:

WALL FRAMING DETAILS

SHEET NUMBER:

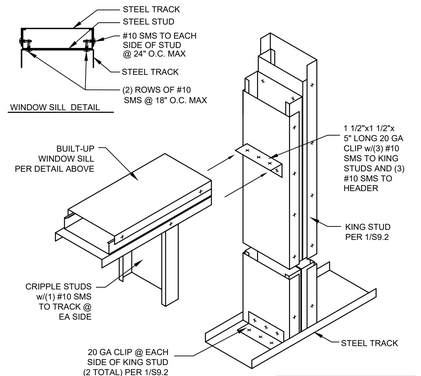
S9.1

BID SET 10/01/2021



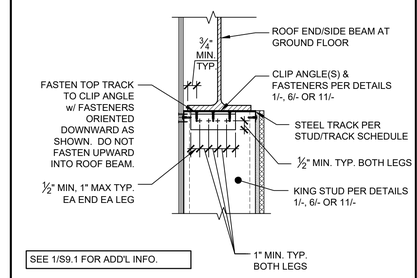
NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

DOOR/WINDOW HEADER DETAIL 1
GREATER THAN 6'-0" - 10' - 0" MAX OPENINGS (EXTERIOR WALLS) SCALE: N.T.S.



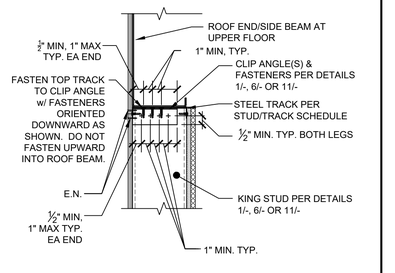
NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

WINDOW SILL DETAIL 2
GREATER THAN 6'-0" - 10' - 0" MAX OPENINGS (EXTERIOR WALLS) SCALE: N.T.S.



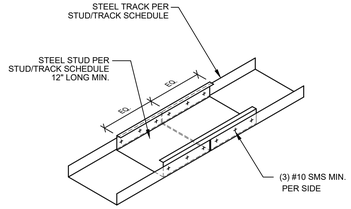
SEE 1/S9.1 FOR ADD'L INFO.

KING STUD TO ROOF BEAM DETAIL 3
@ GROUND FLOOR SCALE: 1-1/2" = 1'-0"



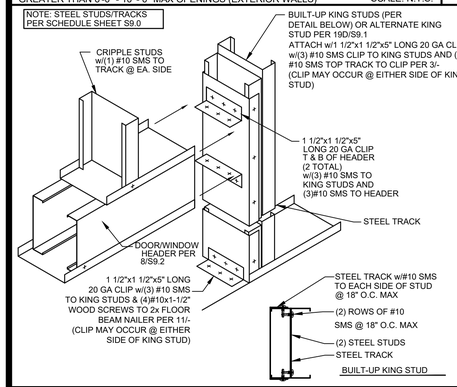
SEE 2/S9.1 FOR ADD'L INFO.

KING STUD TO ROOF BEAM DETAIL 4
@ UPPER FLOOR SCALE: 1-1/2" = 1'-0"

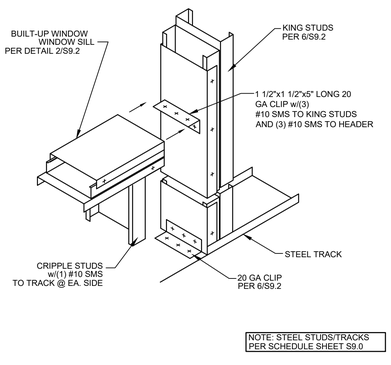


TRACK SPLICE DETAIL 5
SCALE: N.T.S.

NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

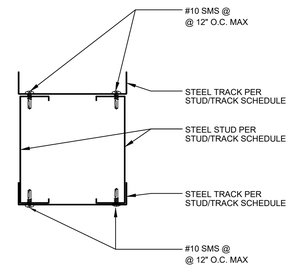


DOOR/WINDOW HEADER DETAIL 6
6'-0" OR LESS OPENINGS (EXTERIOR WALLS) SCALE: N.T.S.

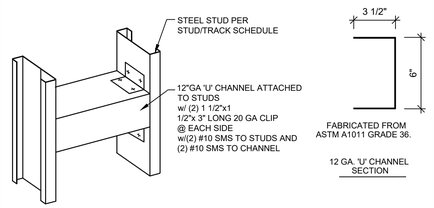


NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

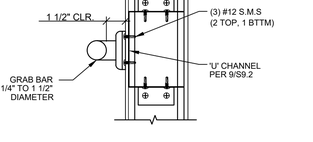
WINDOW SILL DETAIL 7
6'-0" OR LESS OPENINGS (EXTERIOR WALLS) SCALE: N.T.S.



DOOR / HEADER DETAIL 8
SCALE: N.T.S.



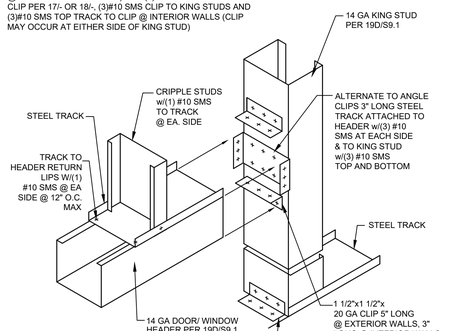
GRAB BAR BLOCKING DETAIL 9
SCALE: N.T.S.



GRAB BAR ATTACHMENT 10
SCALE: N.T.S.

KING STUD TOP CONNECTION

ATTACH w/ 1 1/2"x1 1/2"x 20 GA CLIP 5" LONG @ EXTERIOR WALLS, 3" LONG @ INTERIOR WALLS w/(5) #10 SMS CLIP TO KING STUD ((3) #10 @ OPENINGS 6'-0" OR LESS) AND (3) #10 SMS TOP TRACK TO CLIP PER 17/- OR 18/-, (3)#10 SMS CLIP TO KING STUDS AND (3)#10 SMS TOP TRACK TO CLIP @ INTERIOR WALLS (CLIP MAY OCCUR AT EITHER SIDE OF KING STUD)

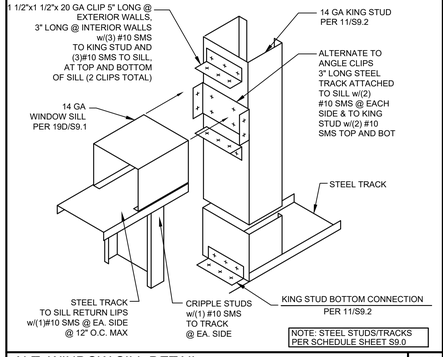


NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

KING STUD BOTTOM CONNECTION @ EXTERIOR WALLS:
ATTACH w/1 1/2"x 1 1/2"x5" LONG 20 GA. CLIP w/(3) #10 SMS TO KING STUD AND (3) #10x 1 1/2" WOOD SCREWS TO 2x FLOOR BEAM NAILER (CLIP MAY OCCUR AT EITHER SIDE OF KING STUD)

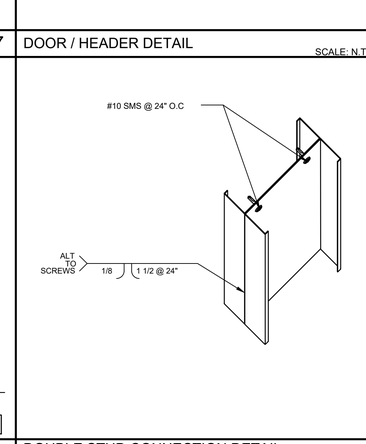
ALT. DOOR/WINDOW HEADER DETAIL 11
10'-0" MAX OPENINGS (EXTERIOR OR INTERIOR WALLS) SCALE: N.T.S.

KING STUD TOP CONNECTION PER 11/S9.2



NOTE: STEEL STUDS/TRACKS PER SCHEDULE SHEET S9.0

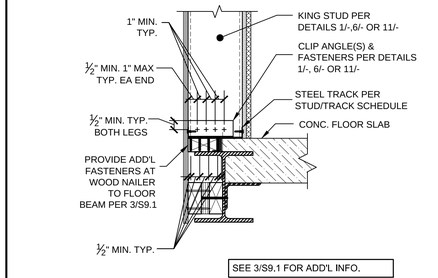
ALT. WINDOW SILL DETAIL 12
10'-0" MAX OPENINGS (EXTERIOR OR INTERIOR WALLS) SCALE: N.T.S.



DOUBLE STUD CONNECTION DETAIL 13
6'-0" OR LESS OPENINGS (INTERIOR WALLS) SCALE: N.T.S.

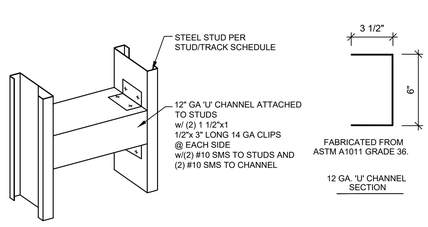
NOT USED 15

NOT USED 16



SEE 3/S9.1 FOR ADD'L INFO.

TYP. KING STUD TO FLOOR BEAM DETAIL 17
SCALE: 1-1/2" = 1'-0"



MONITOR BRACKET BLOCKING DETAIL 19

NOT USED 20

American Modular Systems
787 Spreckels Ave.,
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Phone (209) 825-1921
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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — GREGORY PATRICK DAVIDSON — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MAHNT D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

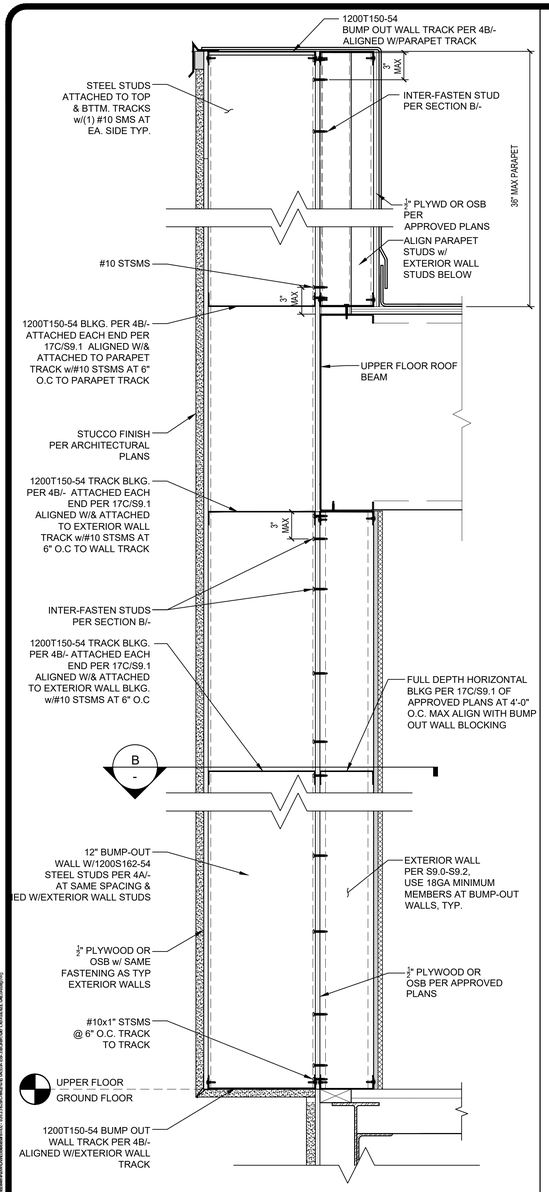
SHEET TITLE:

WALL FRAMING DETAILS

SHEET NUMBER:

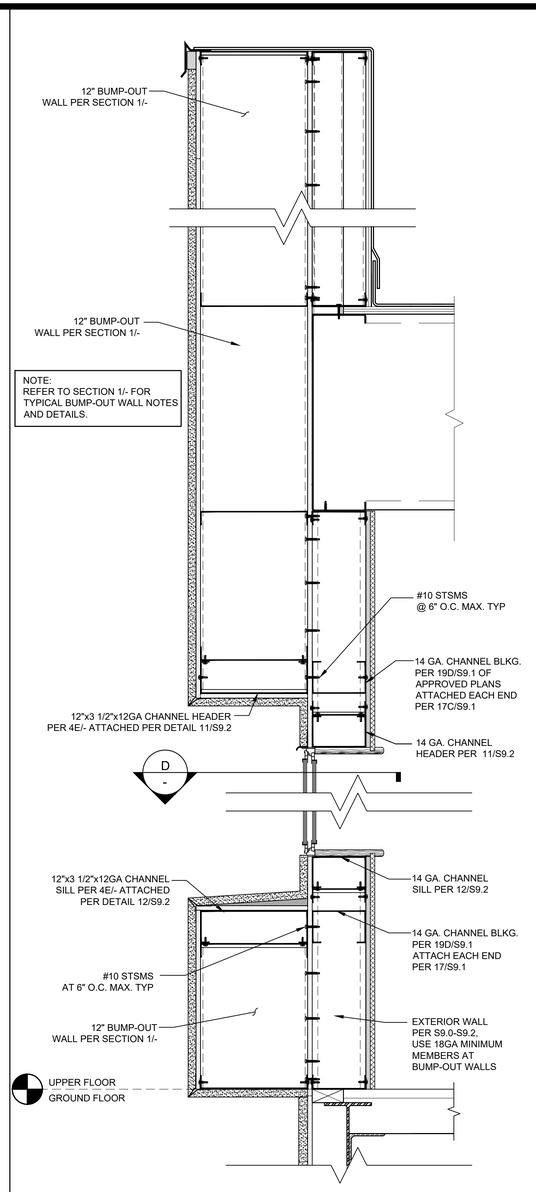
S9.2

BID SET 10/01/2021



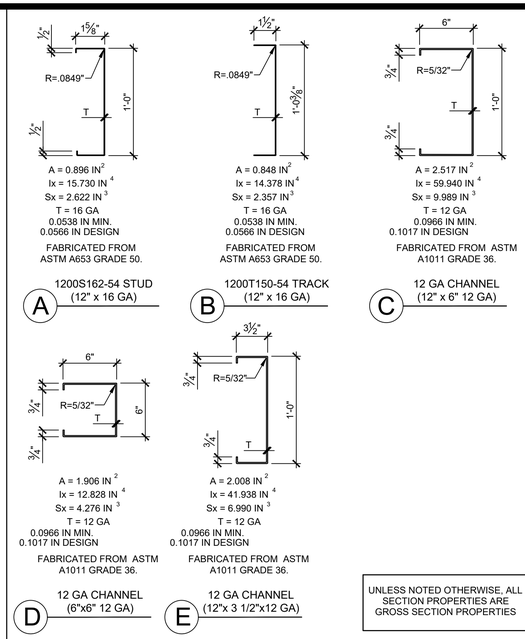
TYP. BUMPOUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — 1

NOT USED — SCALE: 1-1/2" = 1'-0" — 2



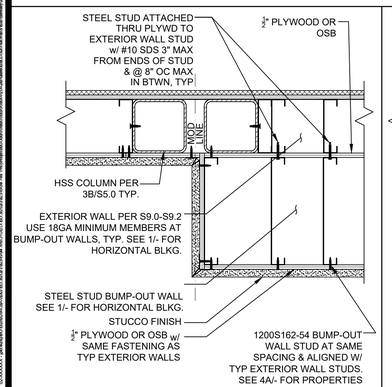
BUMPOUT WALL SECTION @ WINDOW — SCALE: 1-1/2" = 1'-0" — 3

NOT USED — SCALE: 1-1/2" = 1'-0" — 5

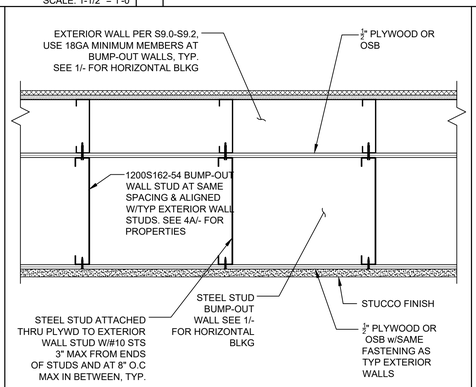


UNLESS NOTED OTHERWISE, ALL SECTION PROPERTIES ARE GROSS SECTION PROPERTIES

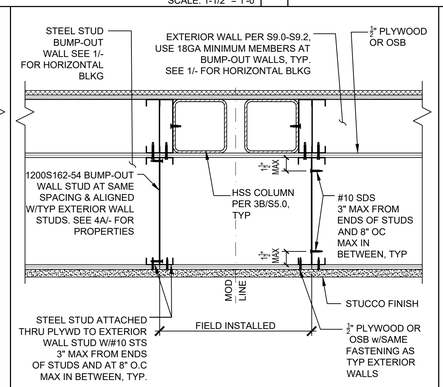
STEEL MEMBER PROPERTIES | 4



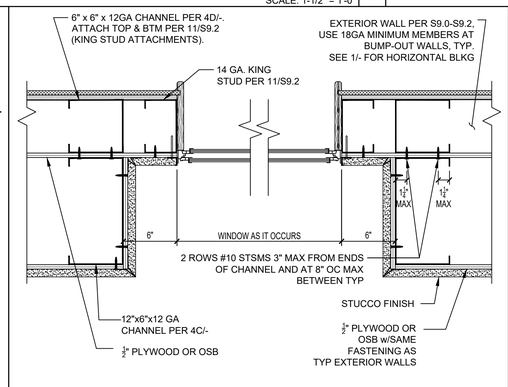
BUMP-OUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — A



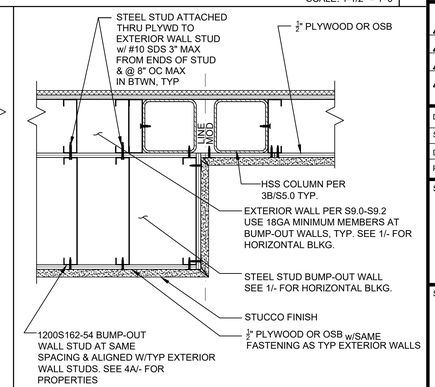
BUMP-OUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — B



BUMP-OUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — C



BUMP-OUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — D



BUMP-OUT WALL SECTION — SCALE: 1-1/2" = 1'-0" — E

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SET NAME

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CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
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MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — TIMOTHY PATRICK DOUGHERTY — No. C12631 — Ren. 9-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

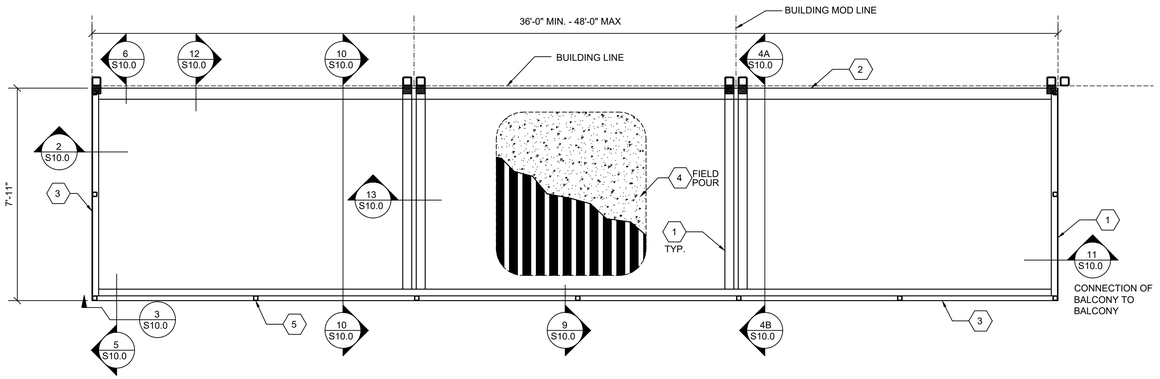
SHEET TITLE:

BUMP-OUT WALL
DETAILS

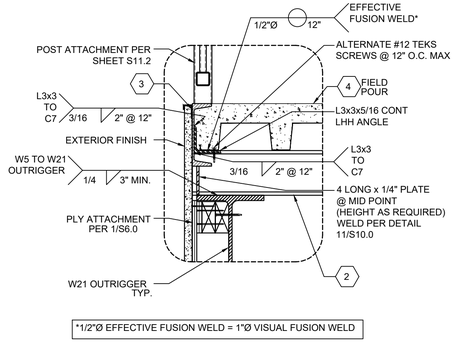
SHEET NUMBER:

S9.3

BID SET 10/01/2021

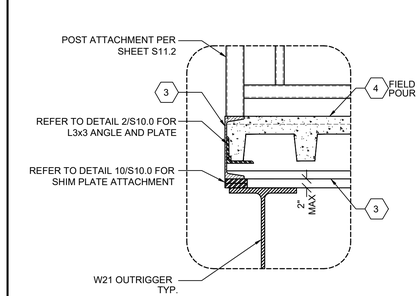


BALCONY FLOOR PLAN SCALE : 1 1/2"=1'-0" | 1

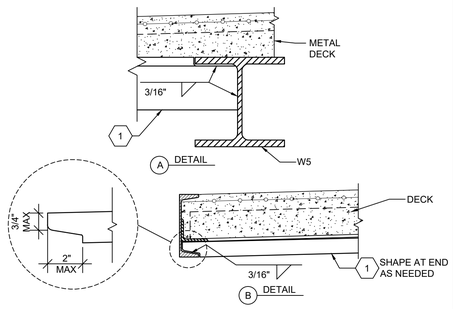


*1/2"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD

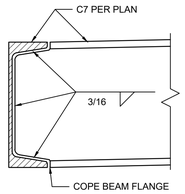
BALCONY CONNECTION @ ENDS SCALE : 1 1/2"=1'-0" | 2



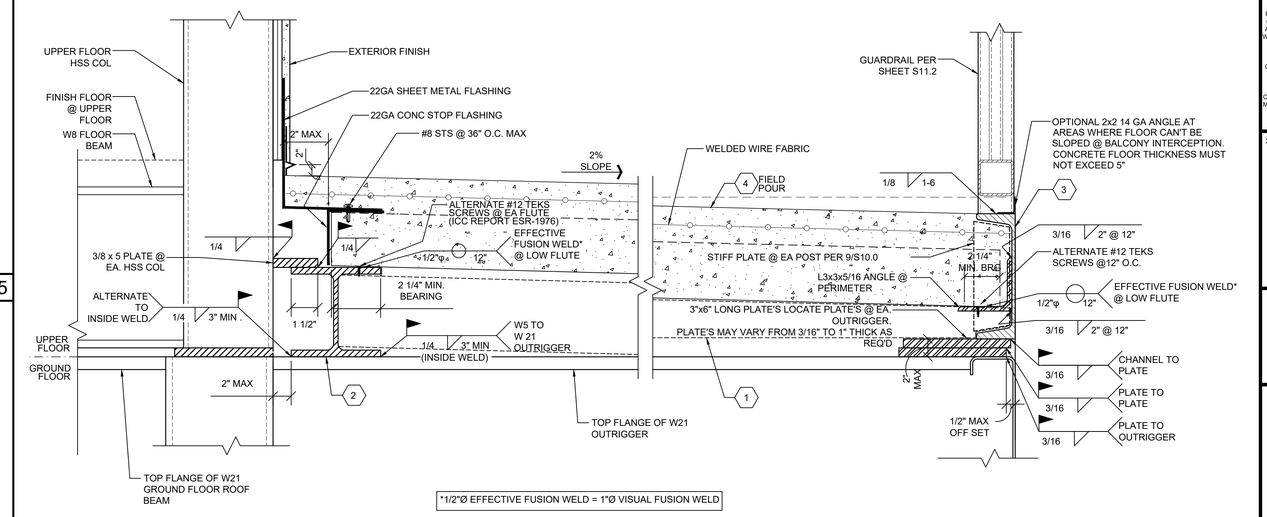
BALCONY CONNECTION @ END SCALE : 1 1/2"=1'-0" | 3



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

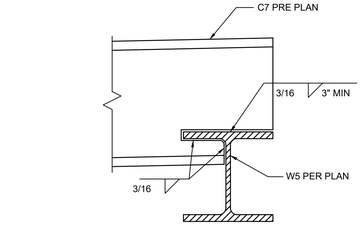


C7 CONNECTION DETAIL SCALE : 3"=1'-0" | 5

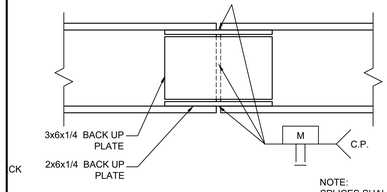


*1/2"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD

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

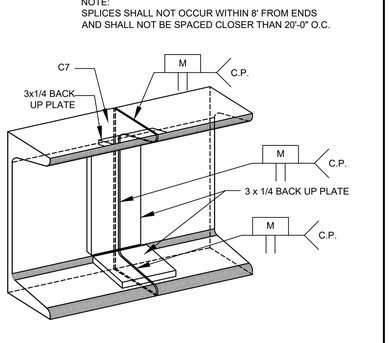


C7 CONNECTION DETAIL SCALE : 3"=1'-0" | 6

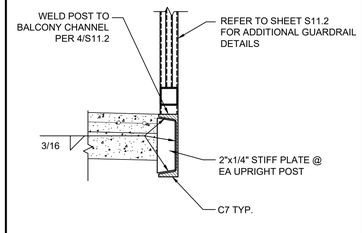


NOTE:
SPLICES SHALL NOT OCCUR WITHIN 8' FROM ENDS AND SHALL NOT BE SPACED CLOSER THAN 20'-0" O.C.

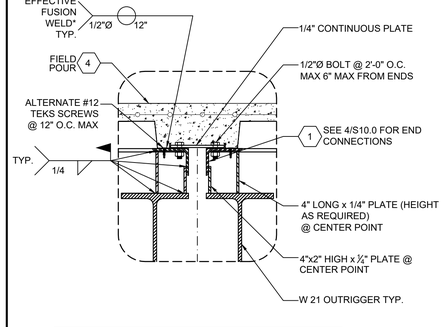
SPLICE DETAIL @ W5 SCALE : 3"=1'-0" | 7



SPLICE DETAIL @ C7 SCALE : 3"=1'-0" | 8

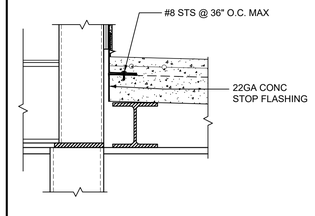


GUARDRAIL TO C7 CHANNEL SCALE : 1 1/2"=1'-0" | 9

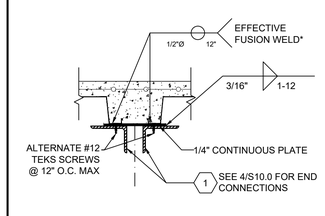


*1/2"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD

BALCONY TO BALCONY CONNECTION SCALE : 3"=1'-0" | 11



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



*1/2"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD

FLASHING DETAIL SCALE : 1 1/2"=1'-0" | 13

KEY NOTES

1. 4x3x5/16 LLH CONT. ANGLE
2. W5x16 BEAM
3. C7x9.8 (50 KSI)
   ALTERNATE C8x11.5 (36 KSI MIN.)
4. 2" LIGHT WEIGHT CONC FILL w/ MED. BROOM FINISH w/6x6/W1.4 x W1.4 WWF w/1'-0" LAP OVER ASC 18 GA. 3WxH OR 3WH DECK (5" TOTAL THICKNESS).
   SEE 4/S2.1 FOR METAL DECK PROPERTIES & ATTACHMENTS.
   ALTERNATE: 3 1/2" LIGHT WEIGHT CONC. FILL w/ MED. BROOM FINISH w/6x6/W1.4xW1.4 WWF w/1'-0" LAP OVER ASC 18 GA BH DECK (5" TOTAL THICKNESS). SEE 9/S11.2 FOR METAL DECK PROPERTIES & ATTACHMENTS.
5. 2x2 RAILING POST @ 6'-0" O.C. MAX. REFER TO SHEET S11.2 FOR RAILING PATTERN AND DETAILS (OMIT POST @ END OF ADDITIONAL BALCONY FLOOR IF IT OCCURS)

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK C. HUNTER — No. C12631 — Ren. 8-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. PRUSH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

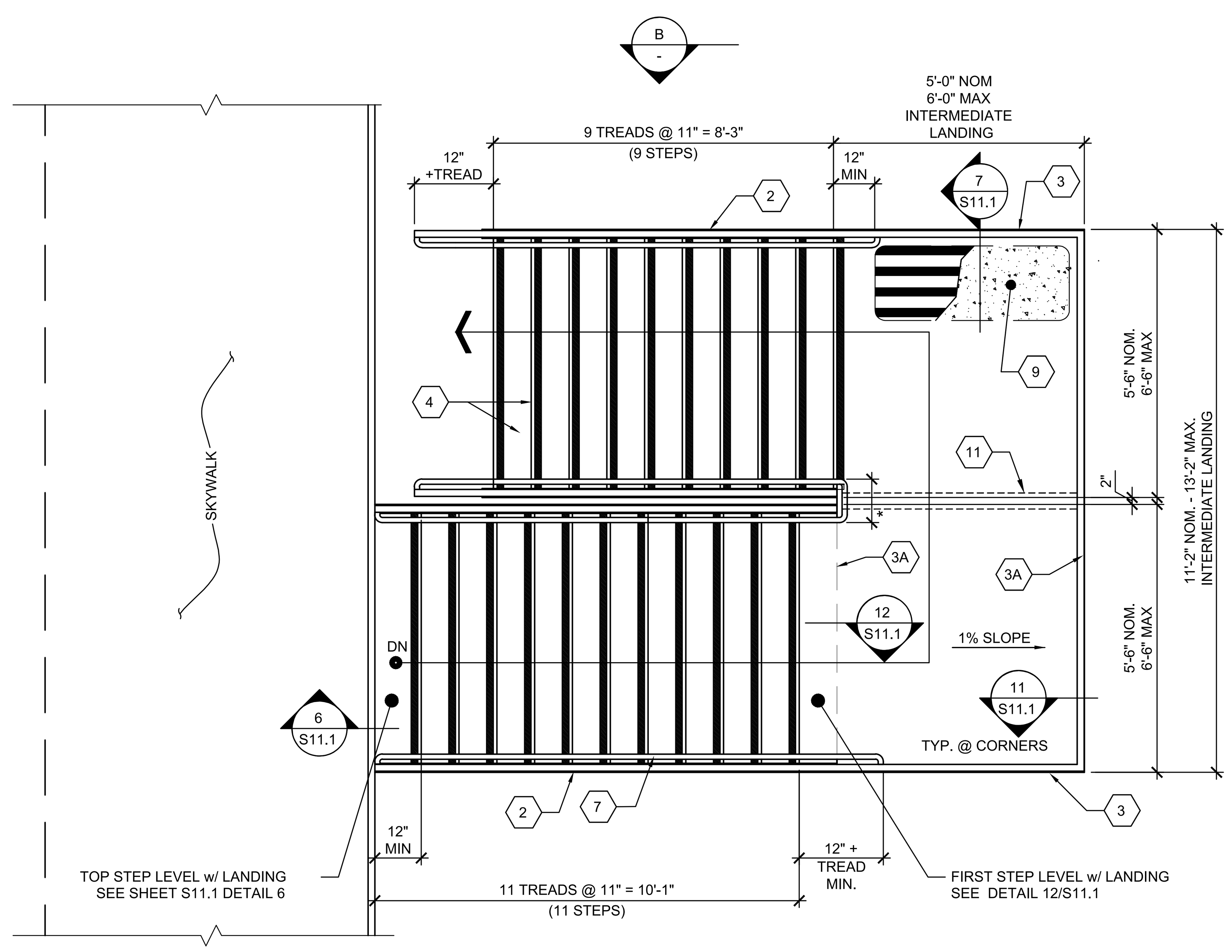
SHEET TITLE:

BALCONY FLOOR PLAN AND DETAILS

SHEET NUMBER:

S10.0

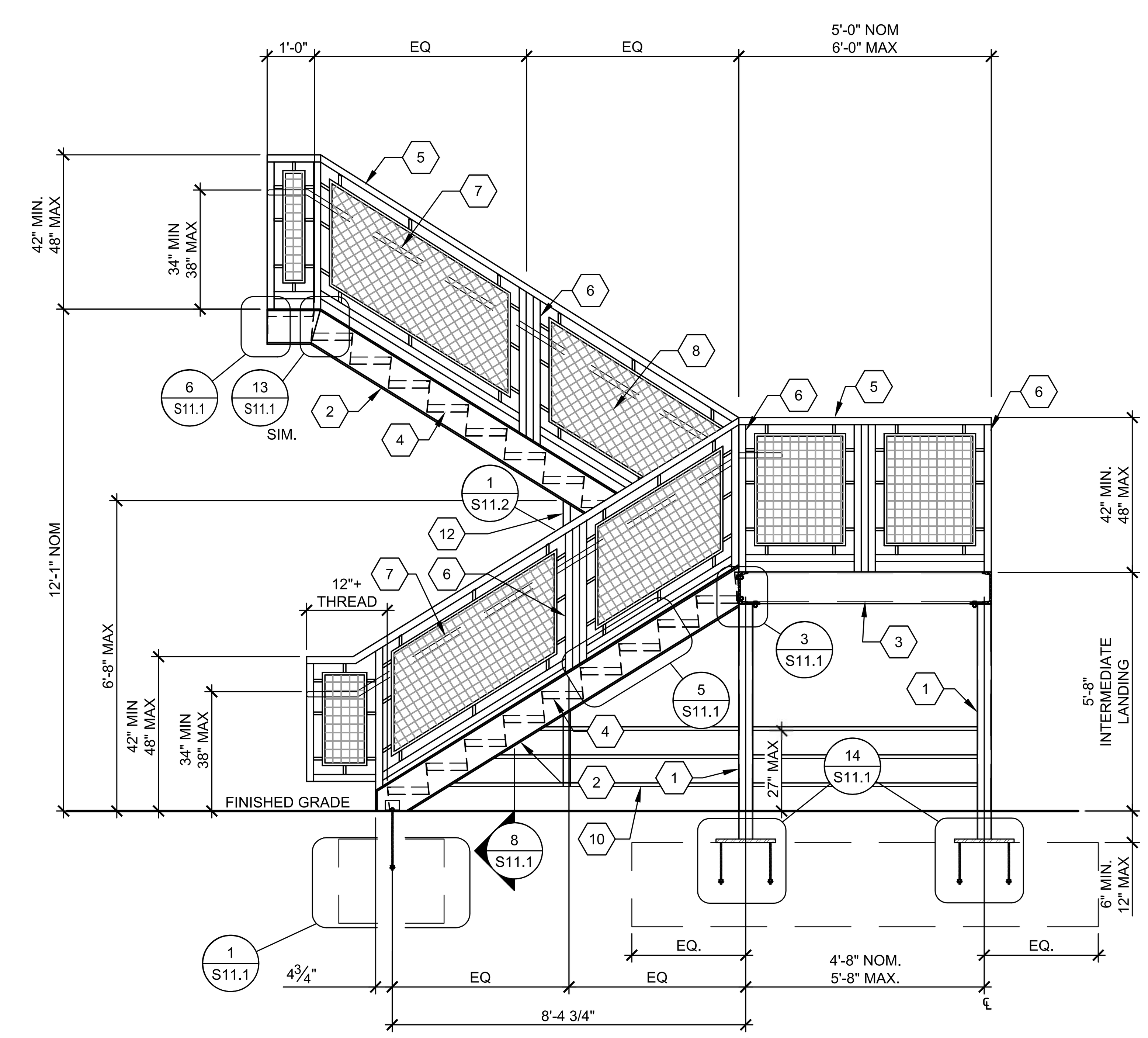
BID SET 10/01/2021



*NOTE: SLOPE HANDRAIL TO MAINTAIN HEIGHT.

STAIR PLAN

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



STAIR ELEVATION

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

1. HSS 5x5x5/16 COLUMN
2. C10x15.3 (36 KSI MIN.) STRINGER
3. C7x9.8 (36 KSI.) LANDING PERIMETER SHORT BEAM ALTERNATE C9x15 (36 KSI MIN.)
3A. C7x9.8 (50 KSI) LANDING PERIMETER LONG BEAM w/ MAXIMUM 11'-2" LONG SPAN
C9x13.4 (36 KSI MIN.) LANDING PERIMETER LONG BEAM w/ MAXIMUM 13'-2" LONG SPAN
4. 10 GA TREAD & RISER
5. 2x3x14 GA @ TOP & BOTTOM GUARDRAIL
6. 2X2 POST REFER TO SHEET S11.2 FOR RAILING DETAILS
7. 1 1/2"Ø HANDRAIL - SEE DETAILS 2&5/S11.2
8. METAL MESH PER 3/S11.2
9. 2" LIGHTWEIGHT CONCRETE FILL OVER METAL DECK PER 7/S11.1 w/MED. BROOM FINISH
10. 1" SQ. 14 GA CANE DETECTABLE RAILING- 27" MAX AFG PER DETAIL 8/S11.1
11. L4x3x5/16 LLH CENTERED UNDER BOTTOM DECK FLUTE CLOSEST TO THE CENTERLINE OF THE LOWER LANDING. ATTACH DECK TO ANGLE w/1/2"Ø EFFECTIVE PUDDLE WELDS* OR #12 TEKS SCREWS @ 12" O.C. MAX. CONNECT TO PERIMETER CHANNEL EACH END w/1/4"x2 1/2" OR 5/16"x2" FILLET WELD FROM VERTICAL LEG TO CHANNEL NOTCH AS NECESSAY.

   *1/2"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD
12. CANE DETECTABLE RAILING WHERE VERTICAL CLEARANCE IS LESS THAN 80" (PER C.B.C. SECTION 11B-307.4)

KEY NOTES

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PROJECT NO:	1614-20

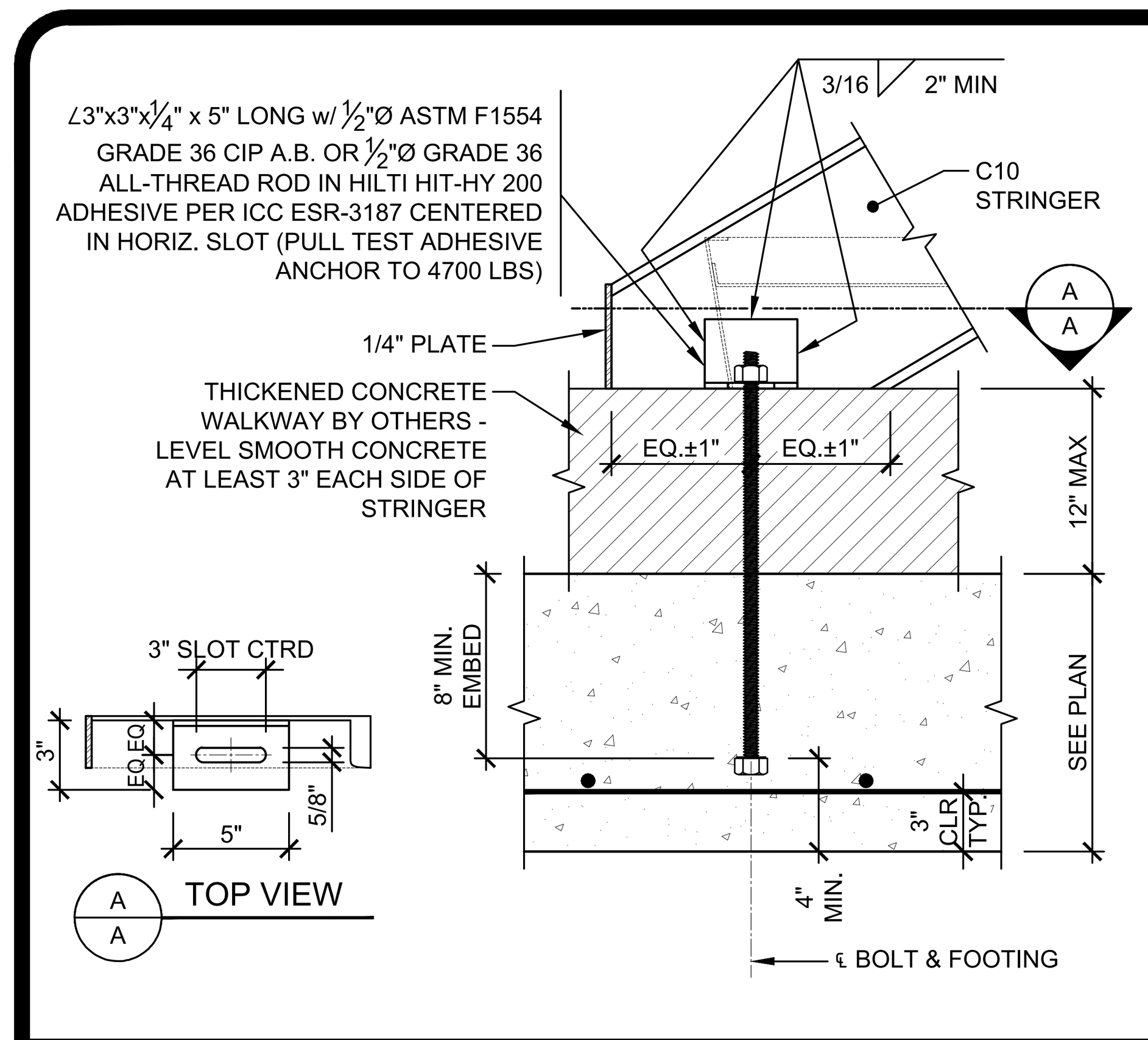
SHEET TITLE:

STAIR PLAN AND ELEVATION

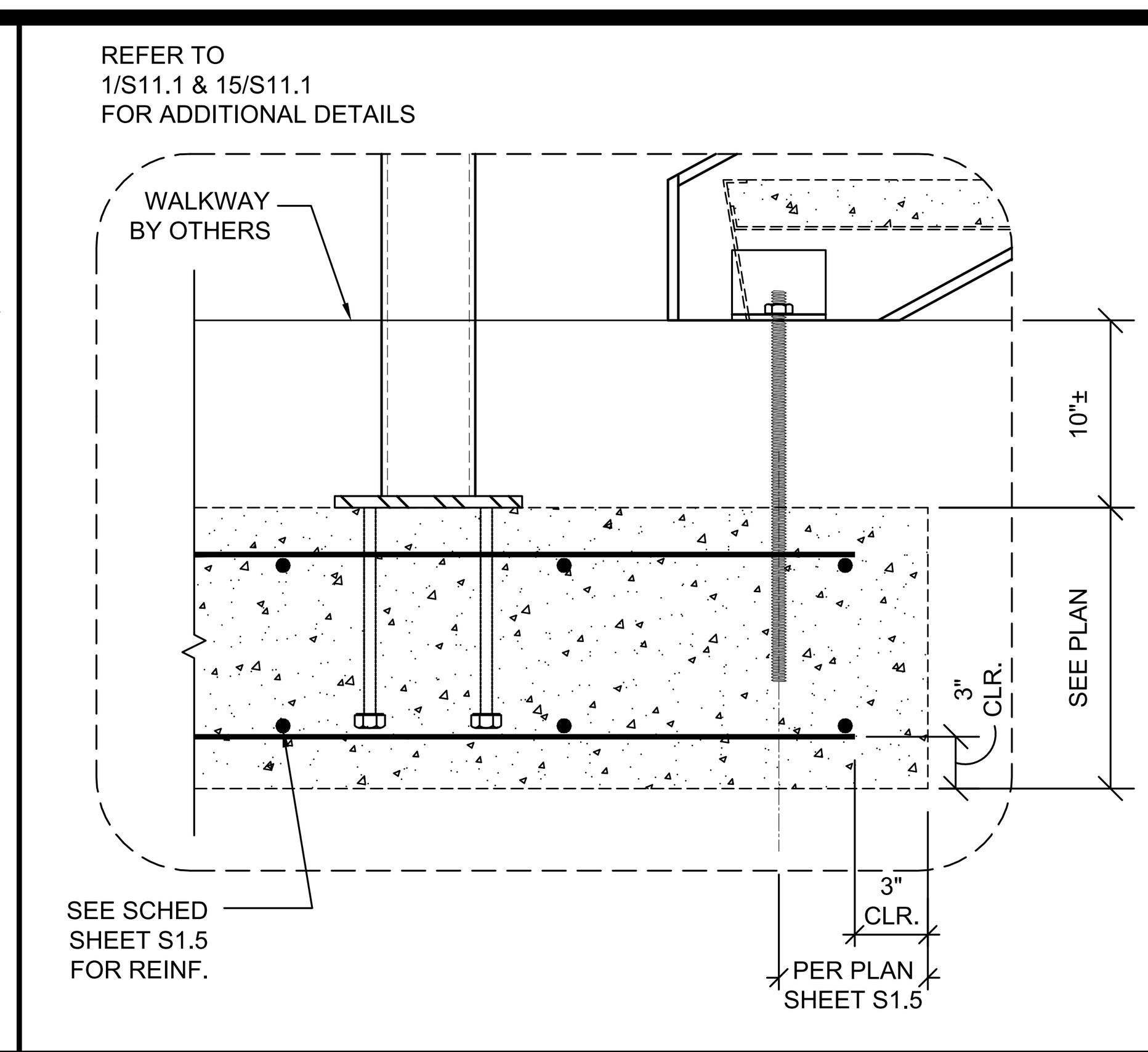
SHEET NUMBER:

S11.0

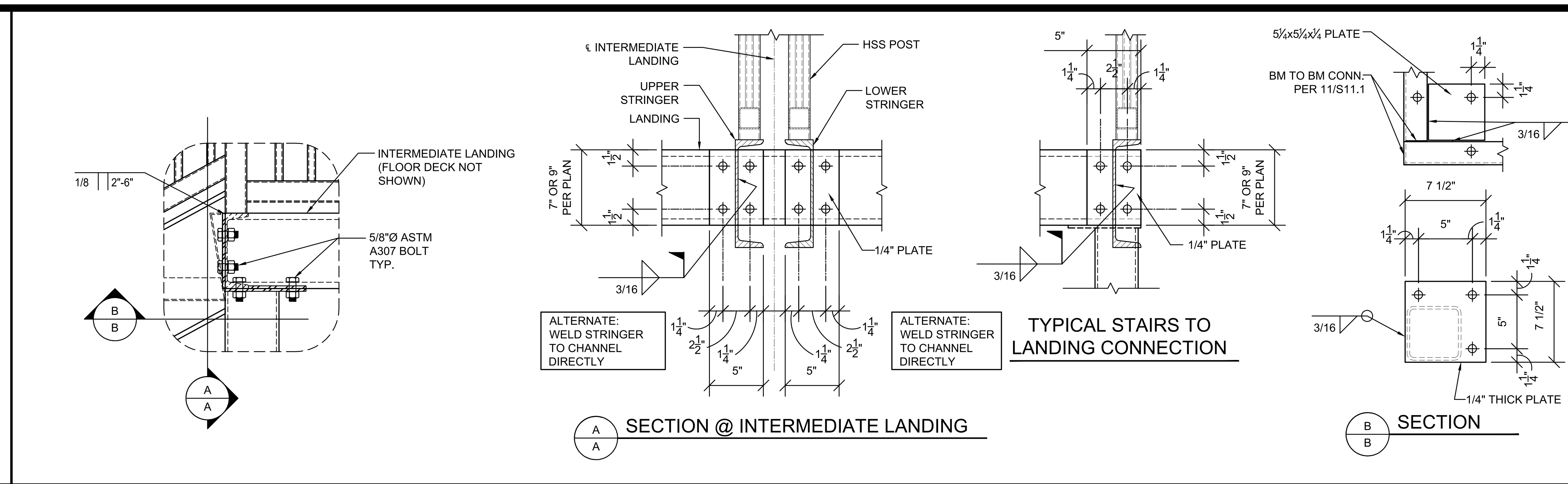
BID SET 10/01/2021



STAIR CONN @ FOOTING SCALE : 1 1/2"=1'-0" 1

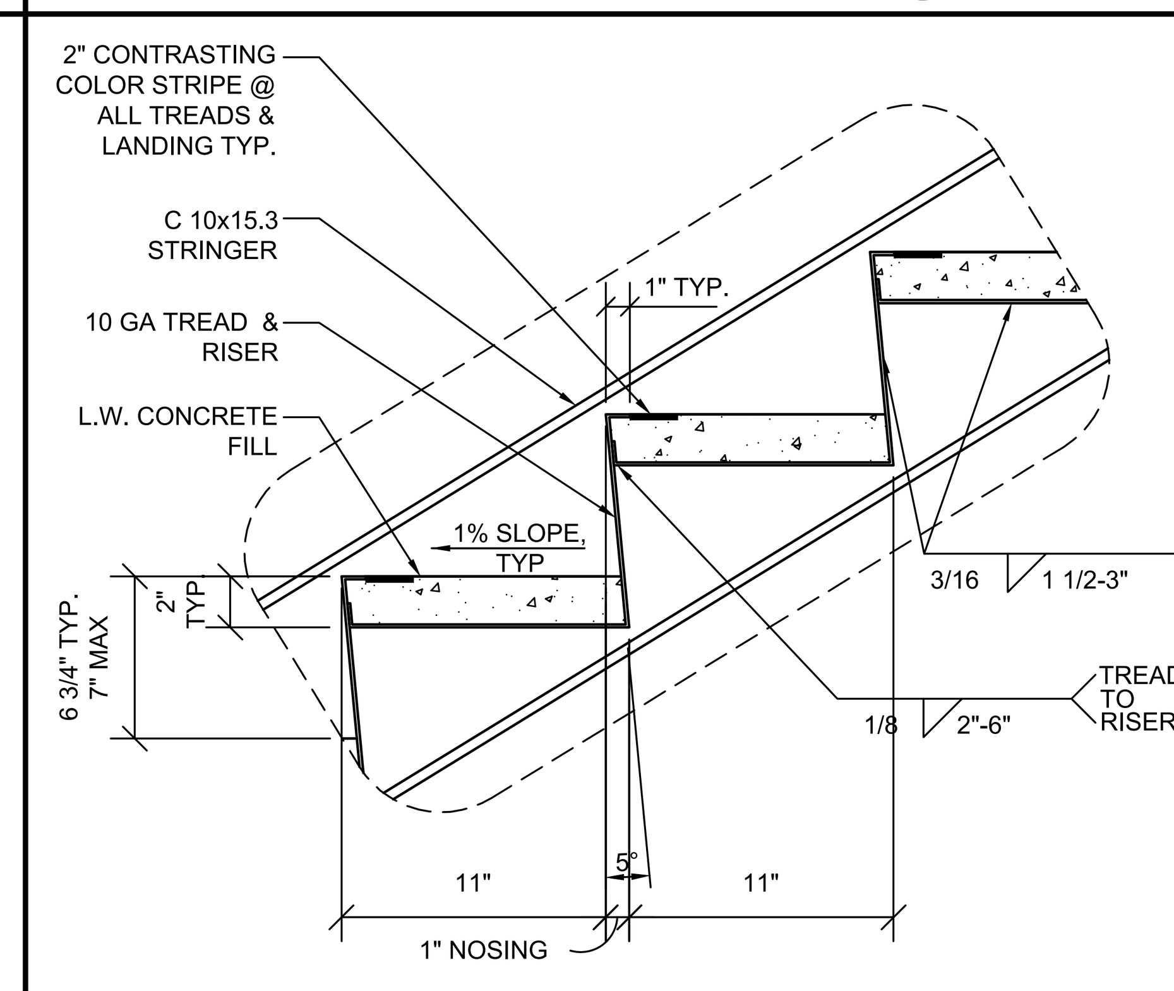


COMBINED FOOTING PAD CONDITION SCALE : 1 1/2"=1'-0" 2

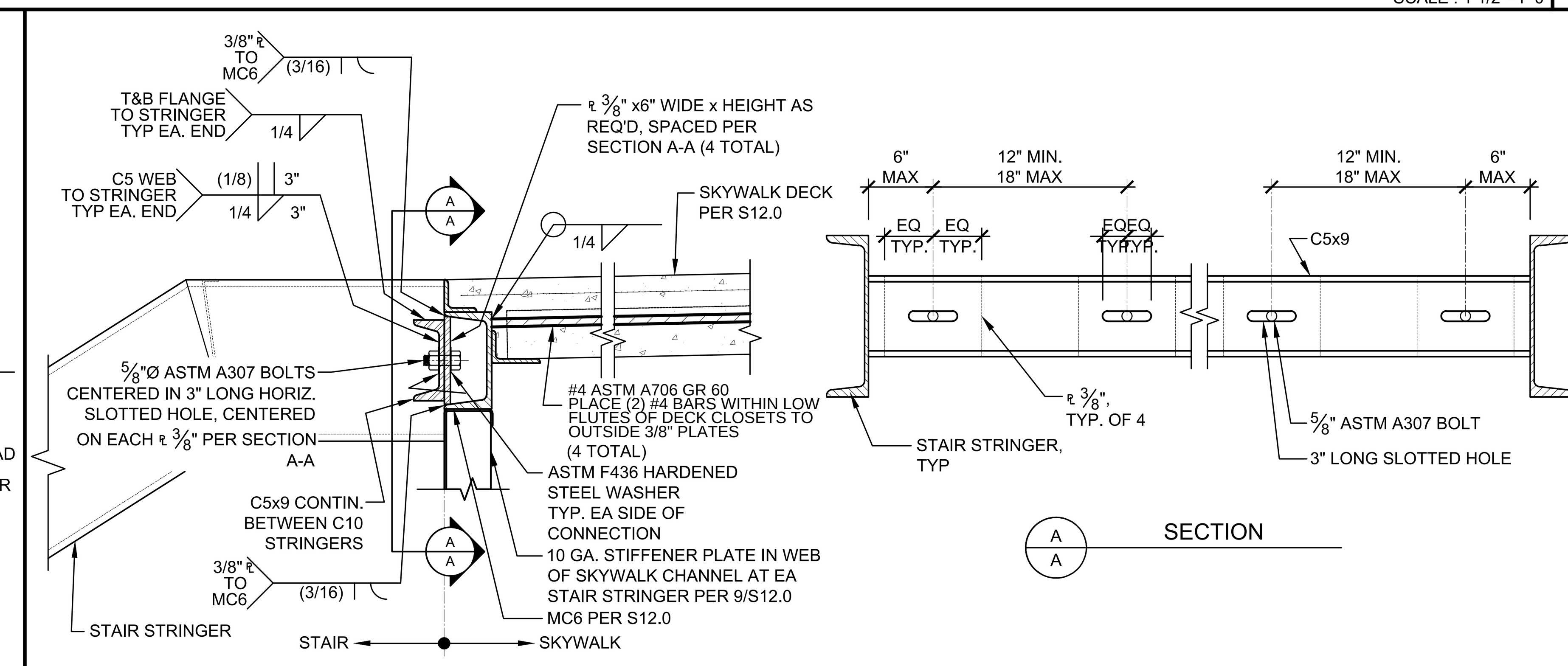


STAIR & COLUMNN CONNECTIONS @ INTERMEDIATE LANDINGS SCALE : 1 1/2"=1'-0" 3

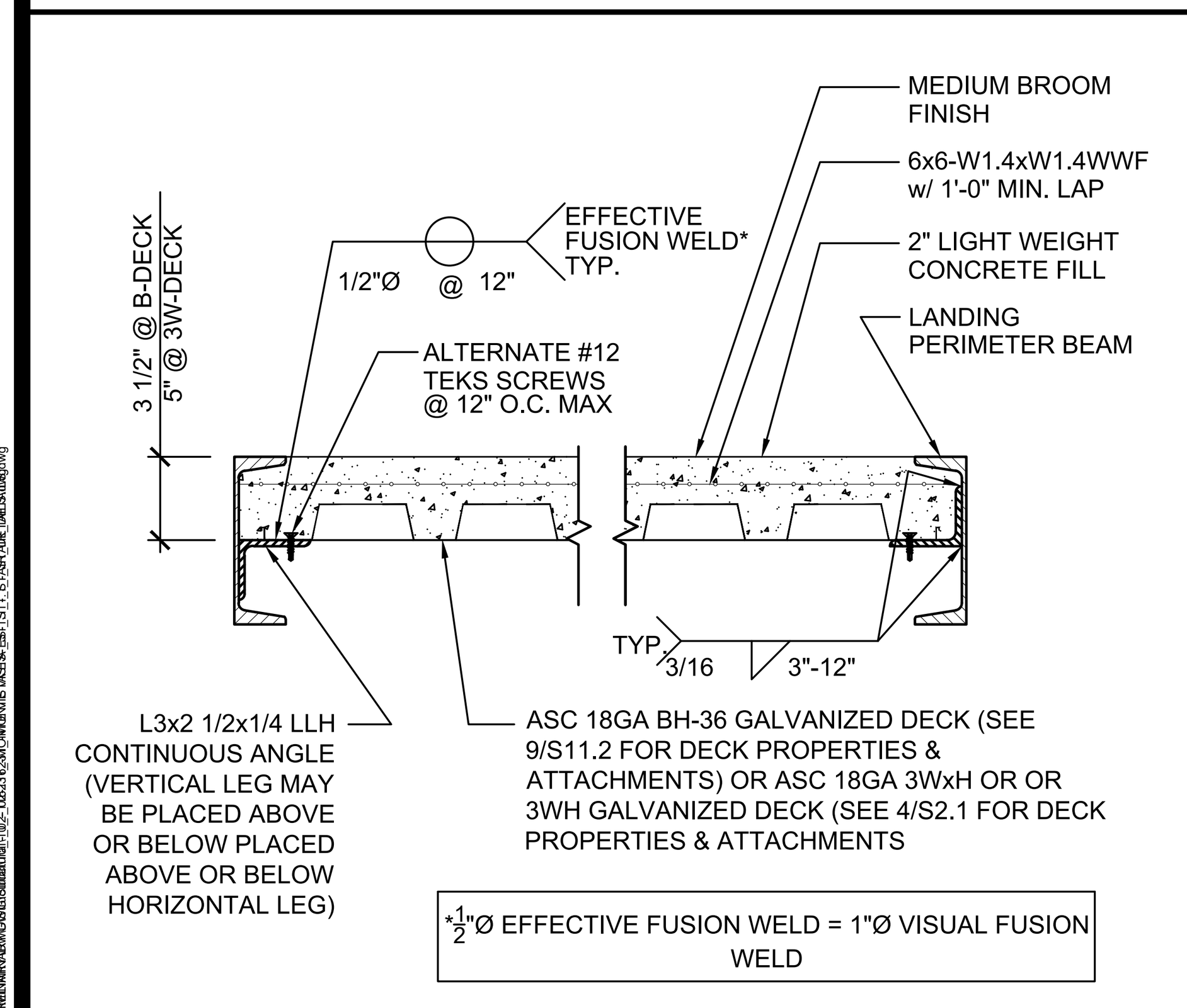
NOT USED 4



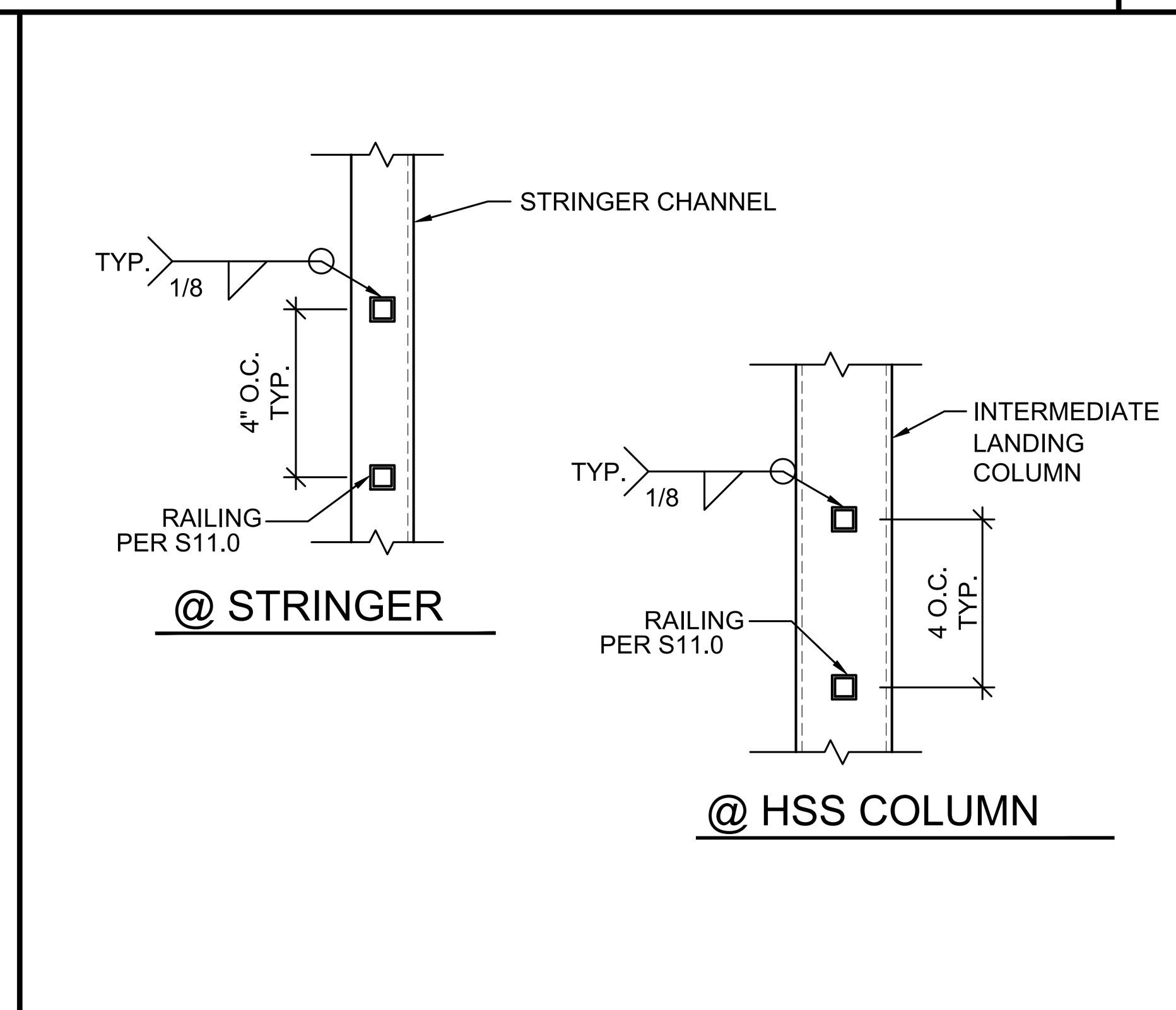
TREAD & RISER TYPICAL SECTION SCALE : 1 1/2"=1'-0" 5



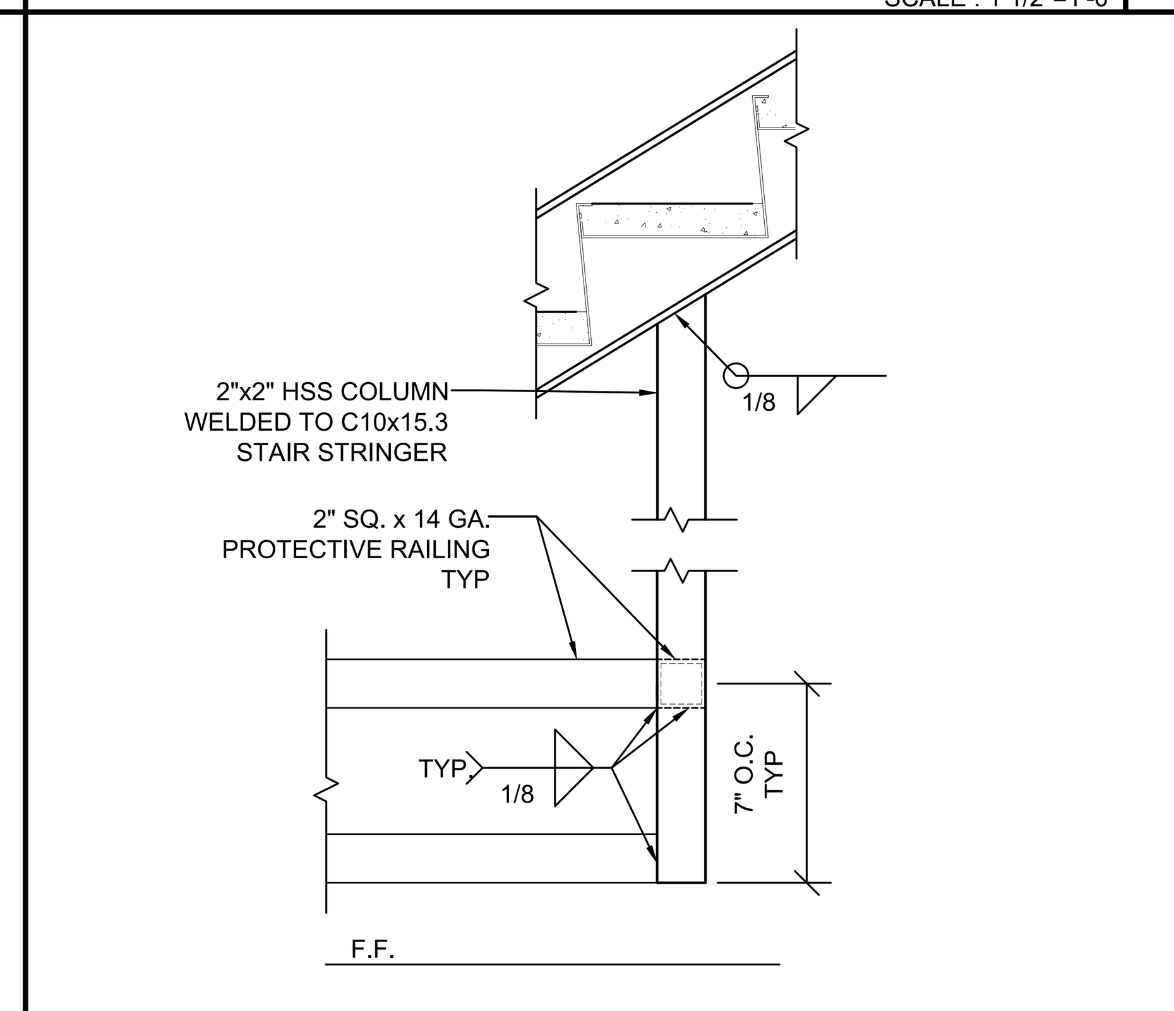
CONNECTION STAIRS TO SKYWALK SCALE : 1 1/2"=1'-0" 6



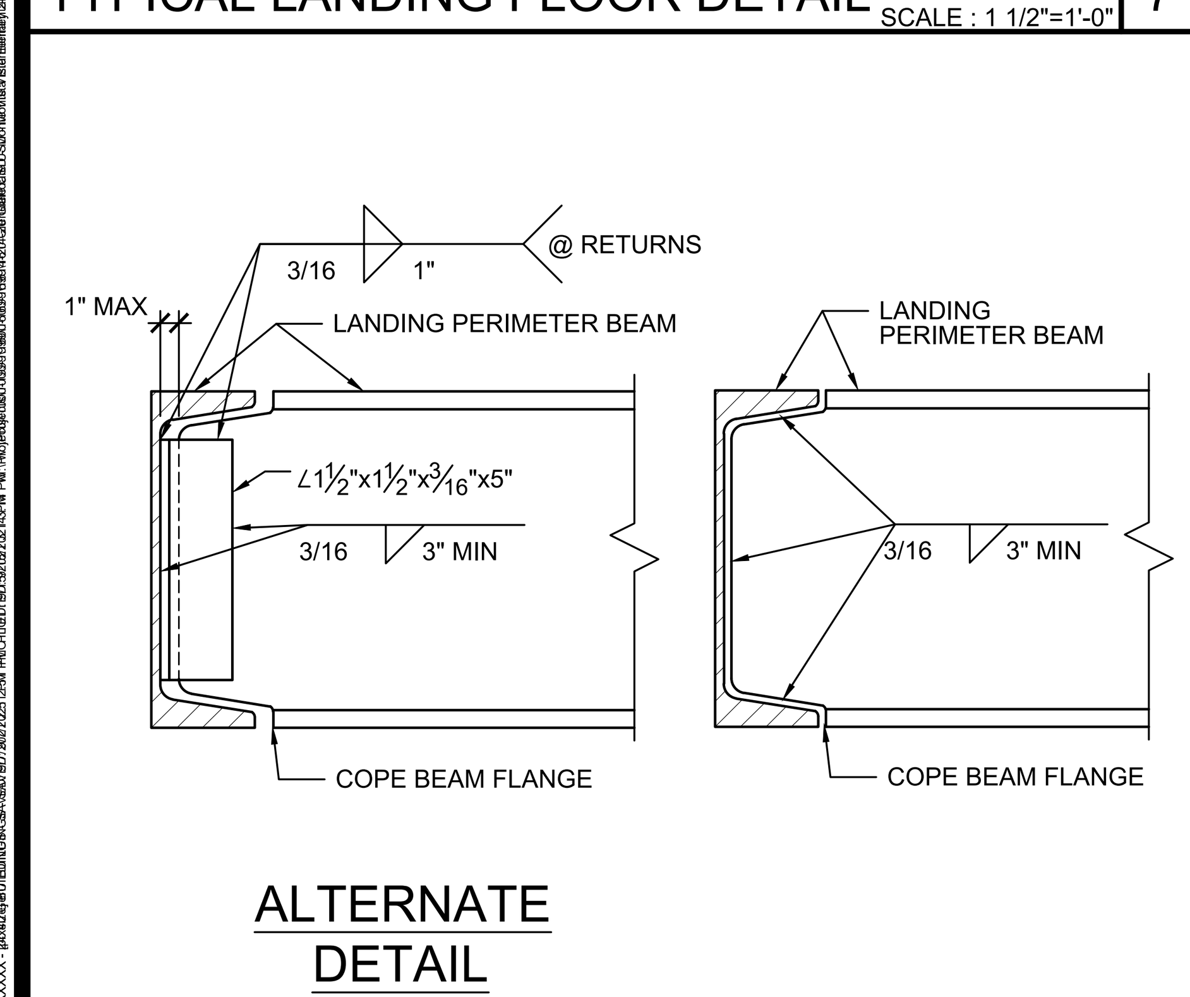
TYPICAL LANDING FLOOR DETAIL SCALE : 1 1/2"=1'-0" 7



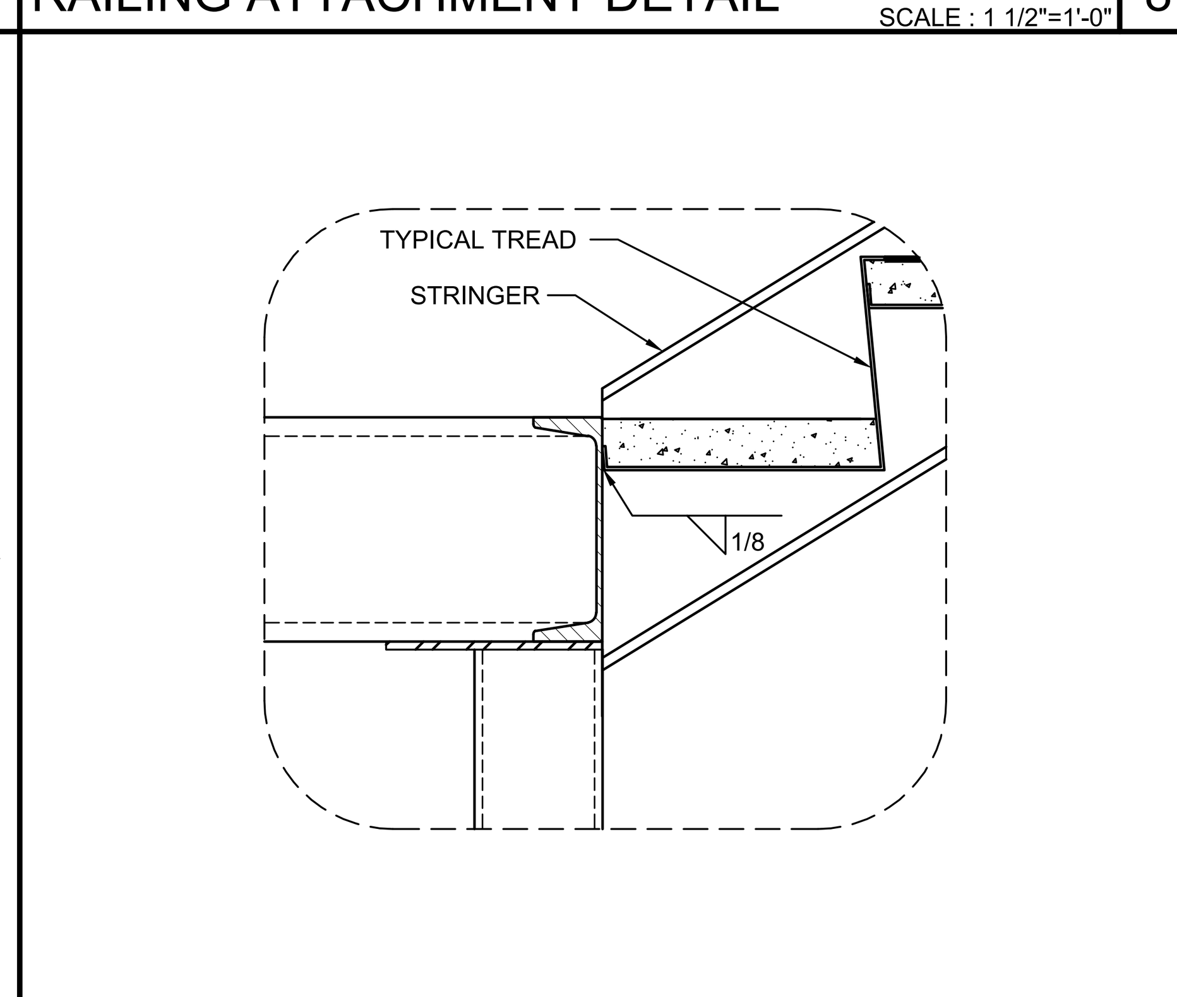
RAILING ATTACHMENT DETAIL SCALE : 1 1/2"=1'-0" 8



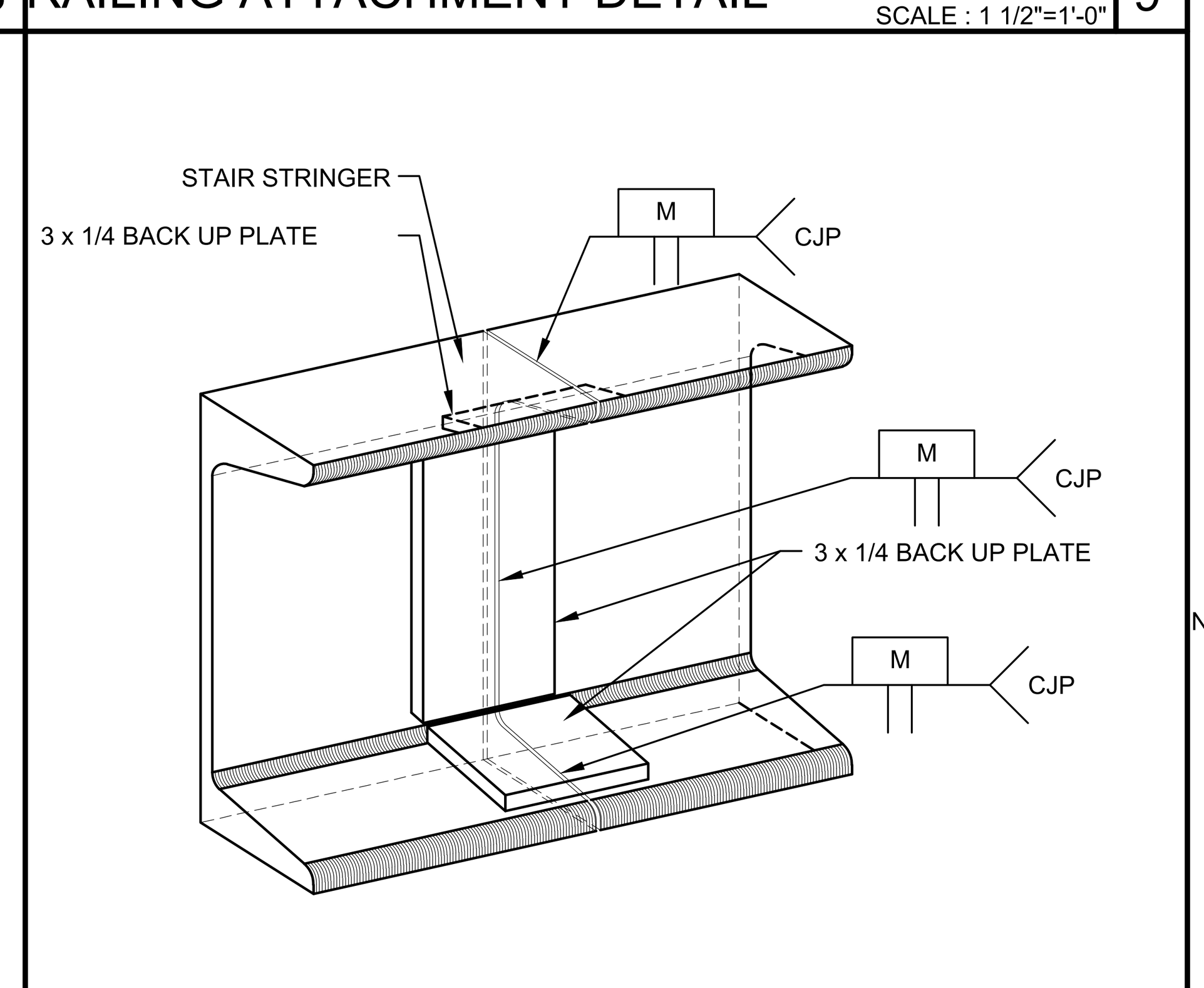
RAILING ATTACHMENT DETAIL SCALE : 1 1/2"=1'-0" 9



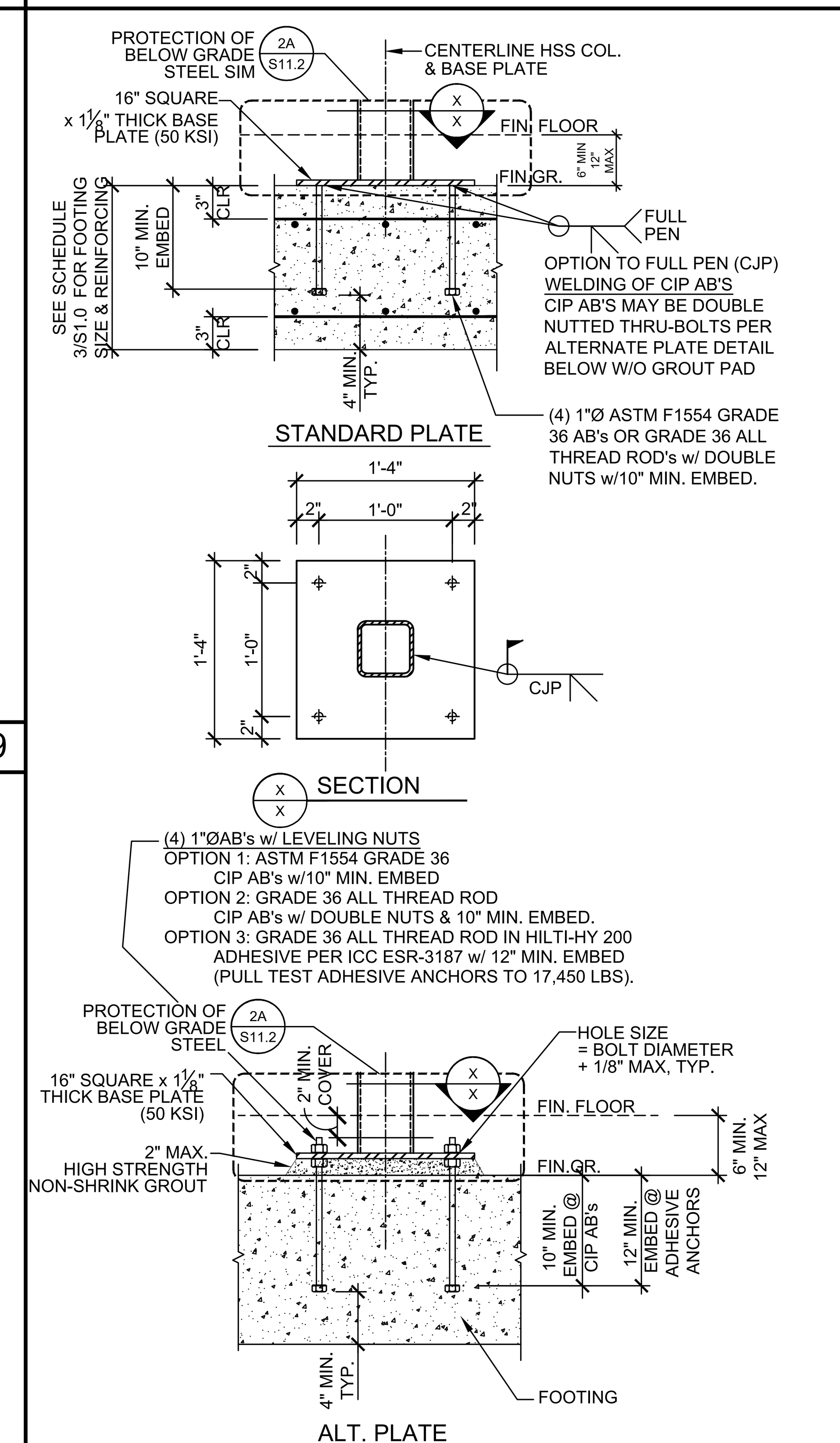
LANDING FLOOR WELDING DETAILS SCALE : 1 1/2"=1'-0" 11



CONNECTION DETAIL SCALE : 1 1/2"=1'-0" 12



STAIR STRINGER SPLICE DETAIL SCALE : N.T.S. 13



LOWER LANDING COL. CONN. @ FOOTING SCALE : 1"=1'-0" 14

NOT USED 15

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

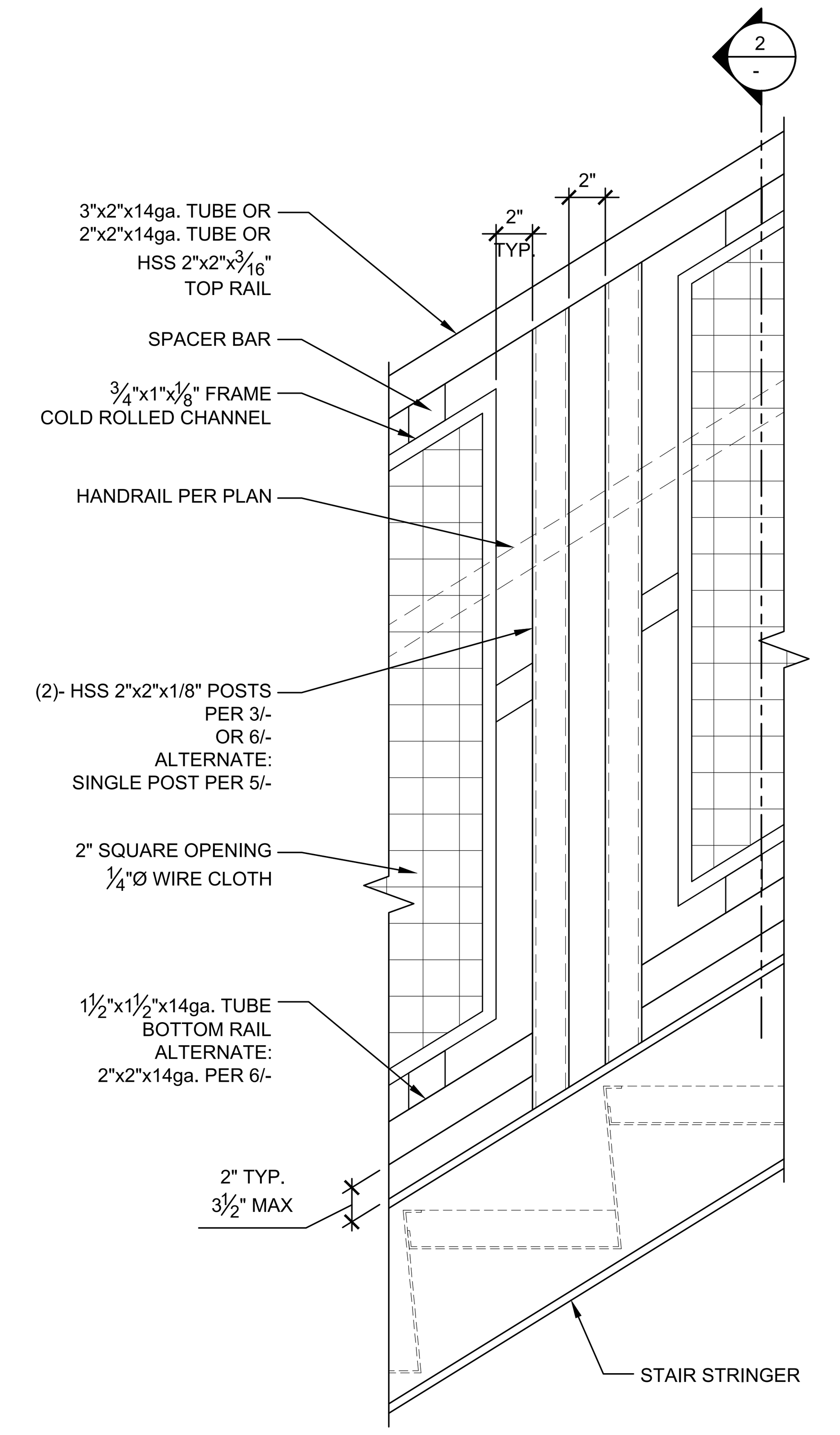
SHEET TITLE:

STAIR DETAILS

SHEET NUMBER:

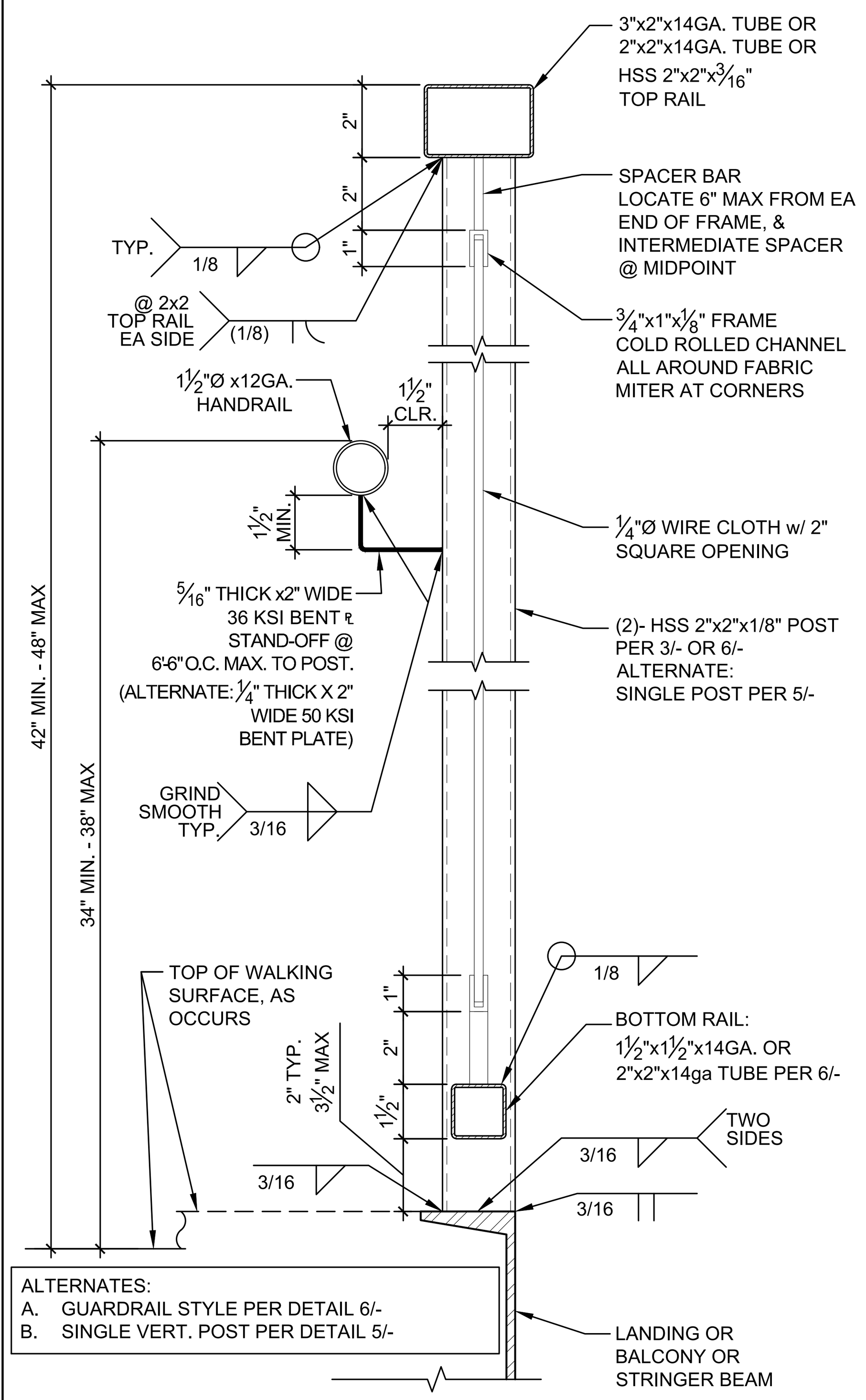
S11.1

BID SET 10/01/2021



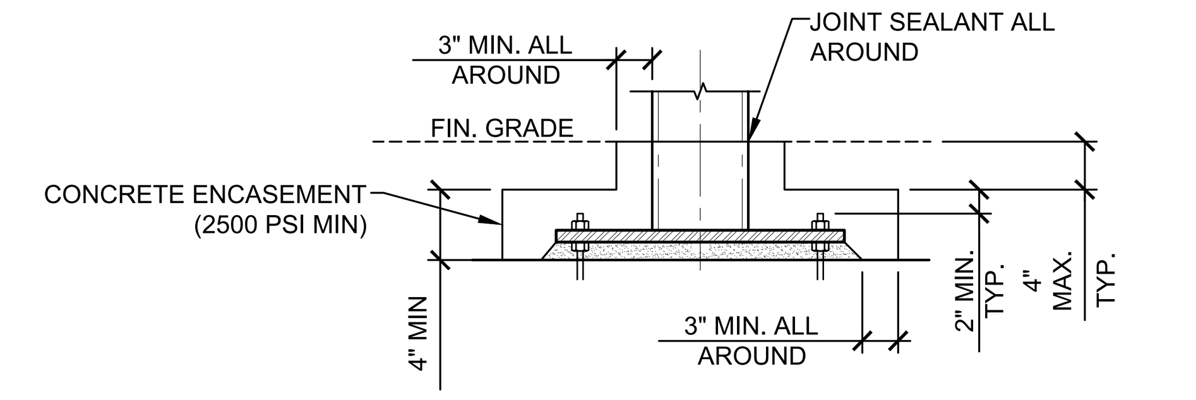
NOTE:
FOR ALL LIGHT GA MEMBERS, SEE SHEET NOTES FOR MATERIAL SPECS AND A/- FOR PROPERTIES.

GUARDRAIL @ STAIR
SCALE: 1-1/2" = 1'-0" | 1



NOTE:
FOR ALL LIGHT GA MEMBERS, SEE SHEET NOTES FOR MATERIAL SPECS AND A/- FOR PROPERTIES.

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

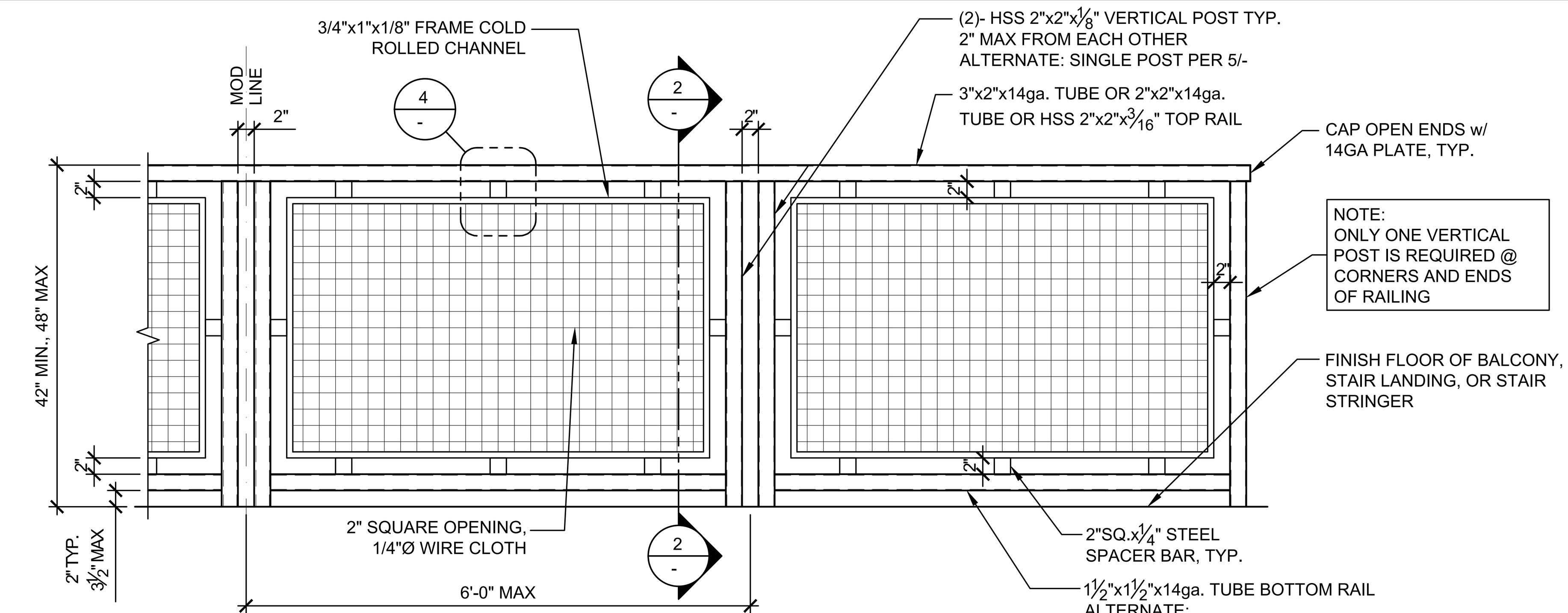


ALTERNATE TO ENCASING STEEL IN CONCRETE: HOT-DIP GALVANIZE ALL BELOW GRADE STEEL INCLUDING BASE PLATE, ANCHOR BOLTS, NUTS, WASHERS, BASE OF COLUMNS, ETC. (GALVANIZING OF COLUMN SHALL EXTEND 2" MIN. ABOVE GRADE)

PROTECTION OF BELOW GRADE STEEL DETAIL
SCALE: 1-1/2" = 1'-0" | 2A

1. HSS RAILS AND POSTS: ASTM A500 GRADE B, Fy = 46 KSI.
2. LIGHT GAUGE STEEL RAILS AND POSTS: MATERIAL STRENGTH SHALL BE 33 KSI MIN. w/ A MODULUS OF ELASTICITY OF 29,500 KSI ± 3%. ACCEPTABLE STEEL MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   - ASTM A1011 SS GRADE 33 (Fy=33 KSI)
   - ASTM A653 SS GRADE 33 (Fy=33 KSI)
   - ASTM A1008 SS GRADE 33 (Fy=33 KSI)
3. BASE METAL THICKNESS OF 14GA MATERIAL SHALL BE 0.0677" MIN (0.0713" DESIGN). BASE METAL THICKNESS OF 12GA MATERIAL SHALL BE 0.0966" MIN (0.1017" DESIGN)
4. SPECIFIED STEEL TUBE THICKNESSES ARE MINIMUM. THICKER TUBES MAY BE USED.
5. ALL STEEL SHALL BE GIVEN A RUST INHIBITIVE COATING.

SHEET NOTES



NOTE:
FOR ALL LIGHT GA MEMBERS, SEE SHEET NOTES FOR MATERIAL SPECS AND A/- FOR PROPERTIES.

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

3"x2"x14GA TUBE
- A = 0.675 IN²
- Sx = 0.567 IN³
- Ix = 0.850 IN⁴
- t = 0.068" IN MIN (0.0713" IN DESIGN)

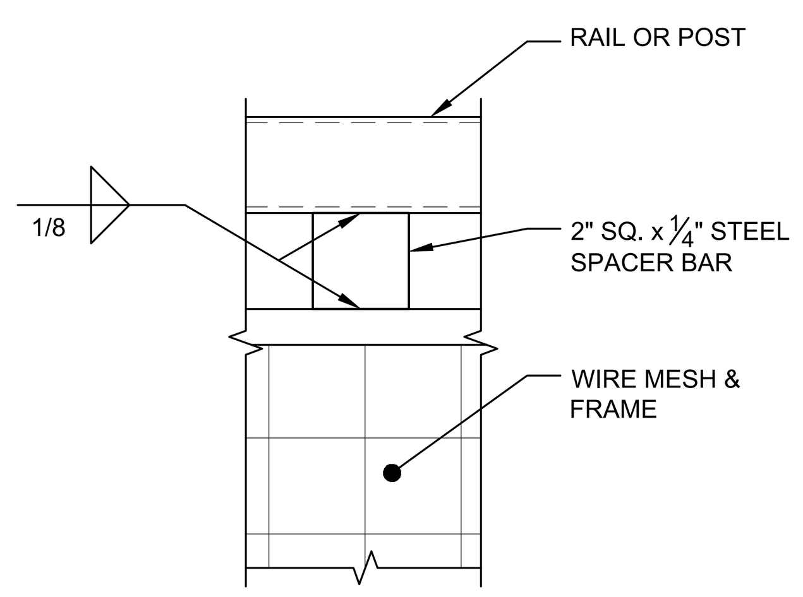
2"x2"x14GA TUBE
- A = 0.533 IN²
- Sx = 0.324 IN³
- Ix = 0.324 IN⁴
- t = 0.068" IN MIN (0.0713" IN DESIGN)

1-1/2"x1-1/2"x14GA TUBE
- A = 0.390 IN²
- Sx = 0.173 IN³
- Ix = 0.129 IN⁴
- t = 0.068" IN MIN (0.0713" IN DESIGN)

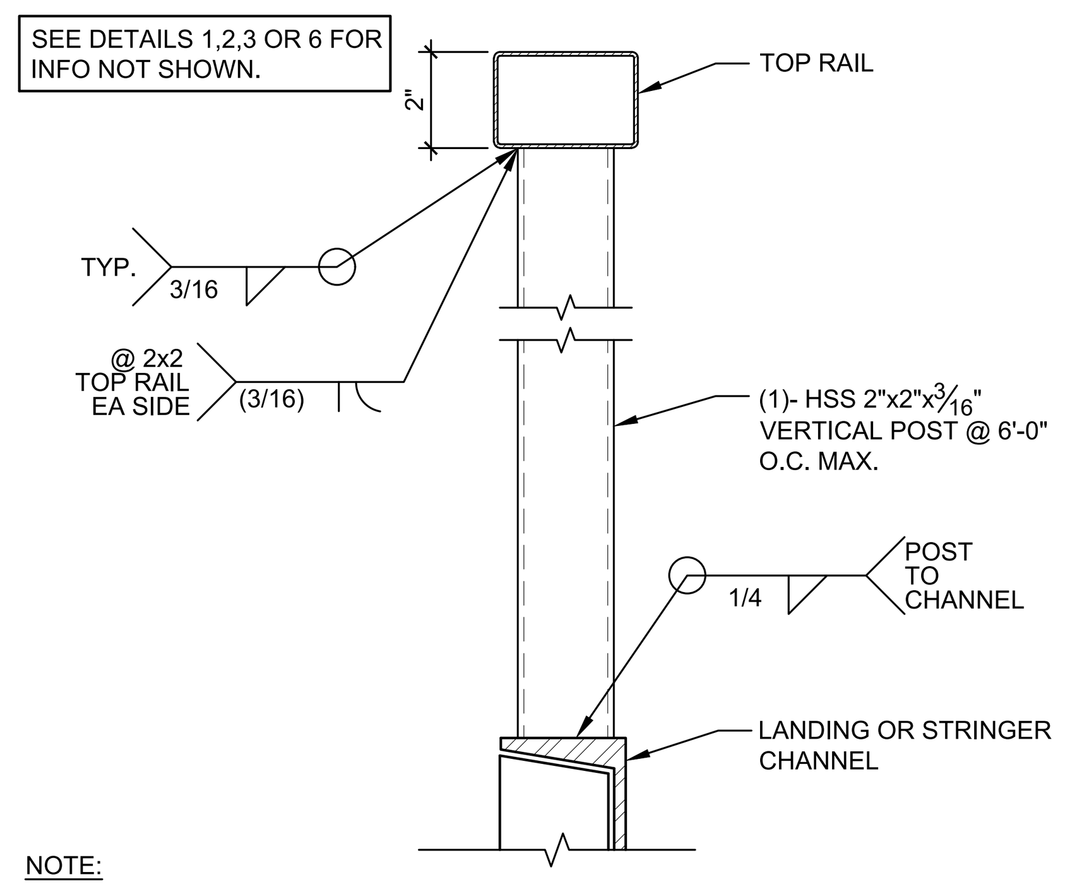
1 1/2"Øx12GA TUBE
- A = 0.447 IN²
- Sx = 0.146 IN³
- Ix = 0.110 IN⁴
- t = 0.0966" IN MIN (1.017" IN DESIGN)

ALL SECTION PROPERTIES ARE GROSS SECTION PROPERTIES

MEMBER PROPERTIES
A



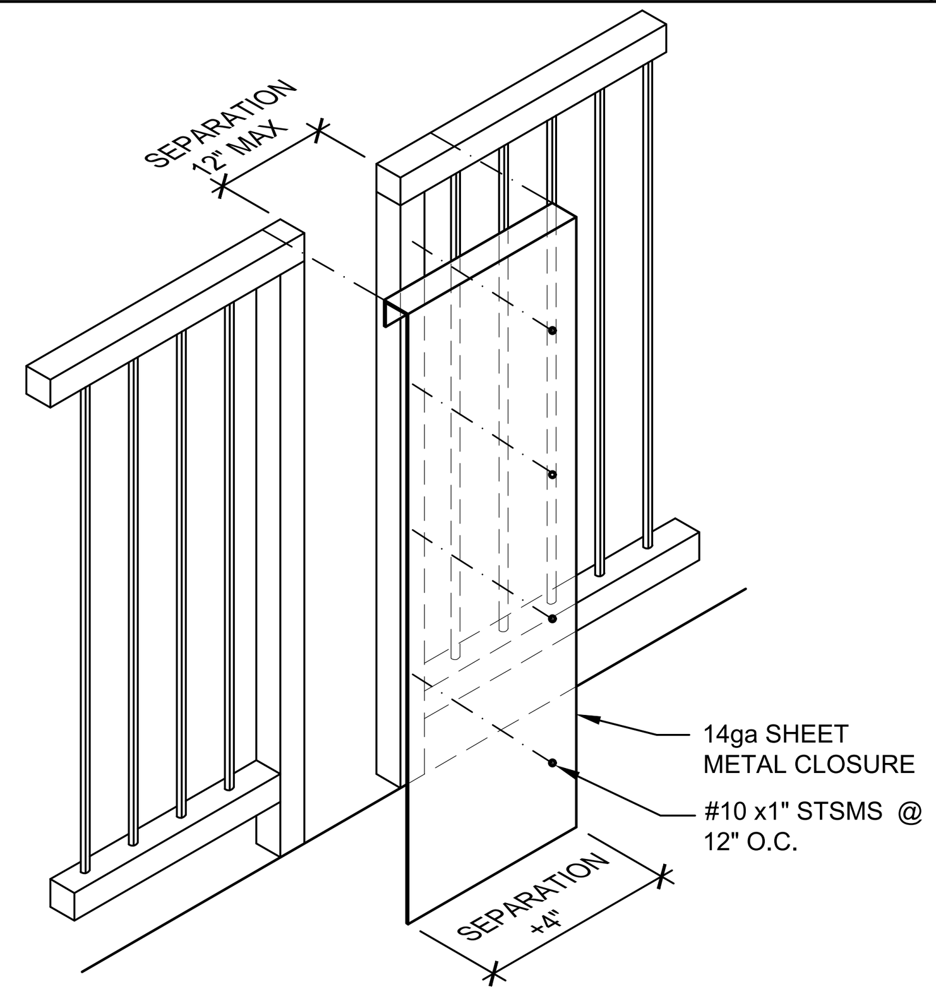
WIRE MESH TO RAIL OR POST
SCALE: 3" = 1'-0" | 4



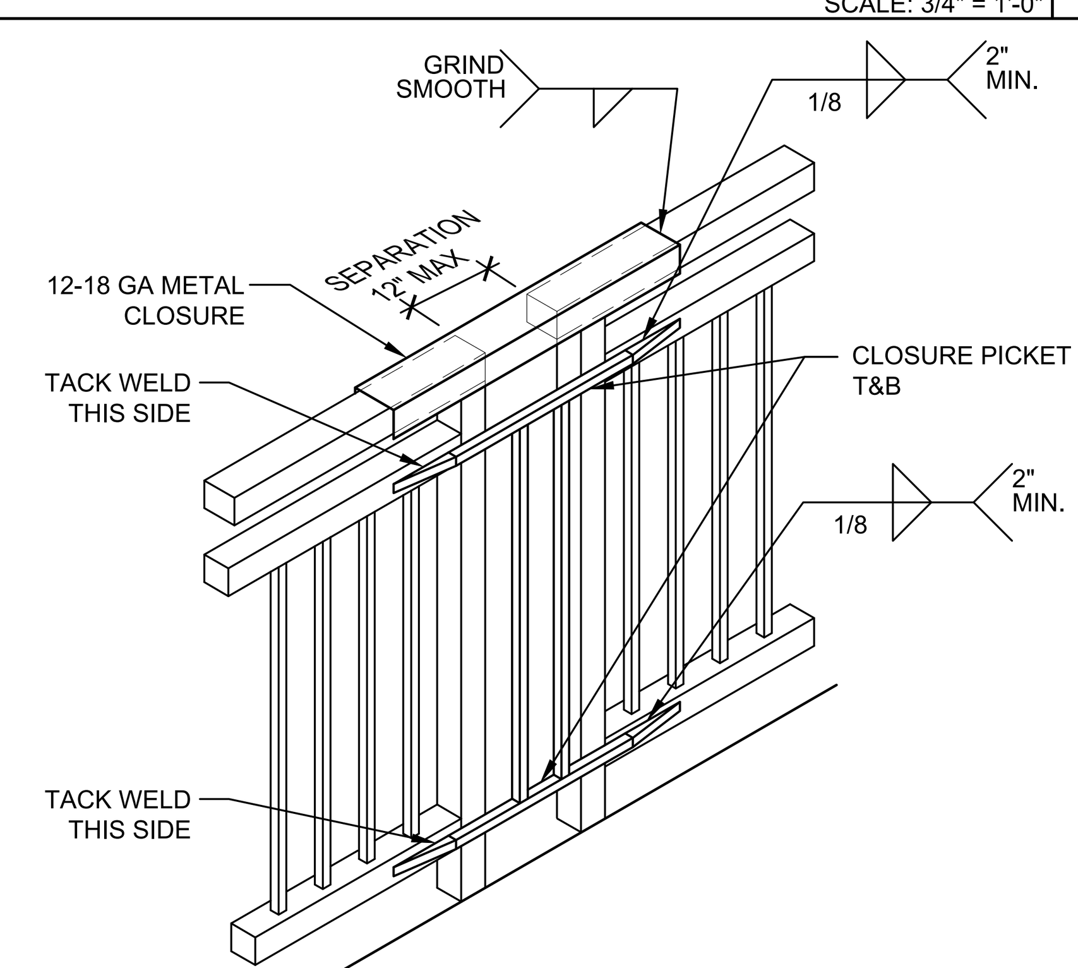
NOTE:
FOR ALL LIGHT GA MEMBERS, SEE SHEET NOTES FOR MATERIAL SPECS AND A/- FOR PROPERTIES.

ALTERNATE SINGLE POST CONNECTIONS
SCALE: 3/4" = 1'-0" | 5

NOT USED
6



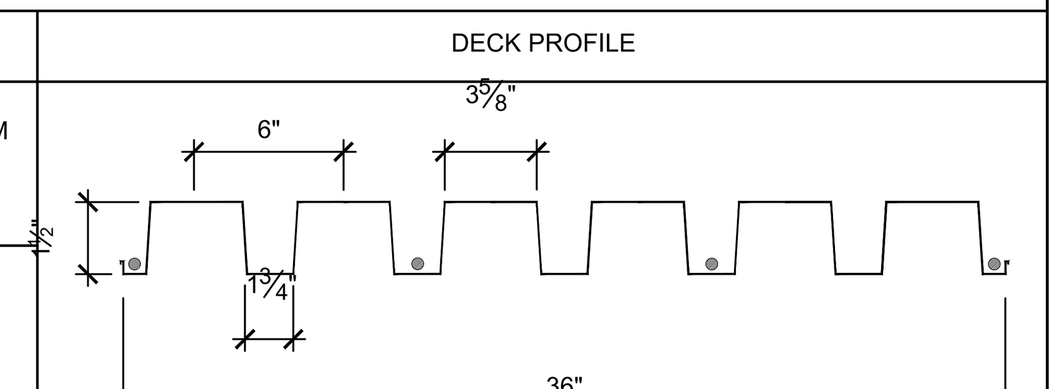
RAILING @ BLDG SEPARATION
N.T.S. | 7



ALT. RAILING @ BLDG SEPARATION
N.T.S. | 8

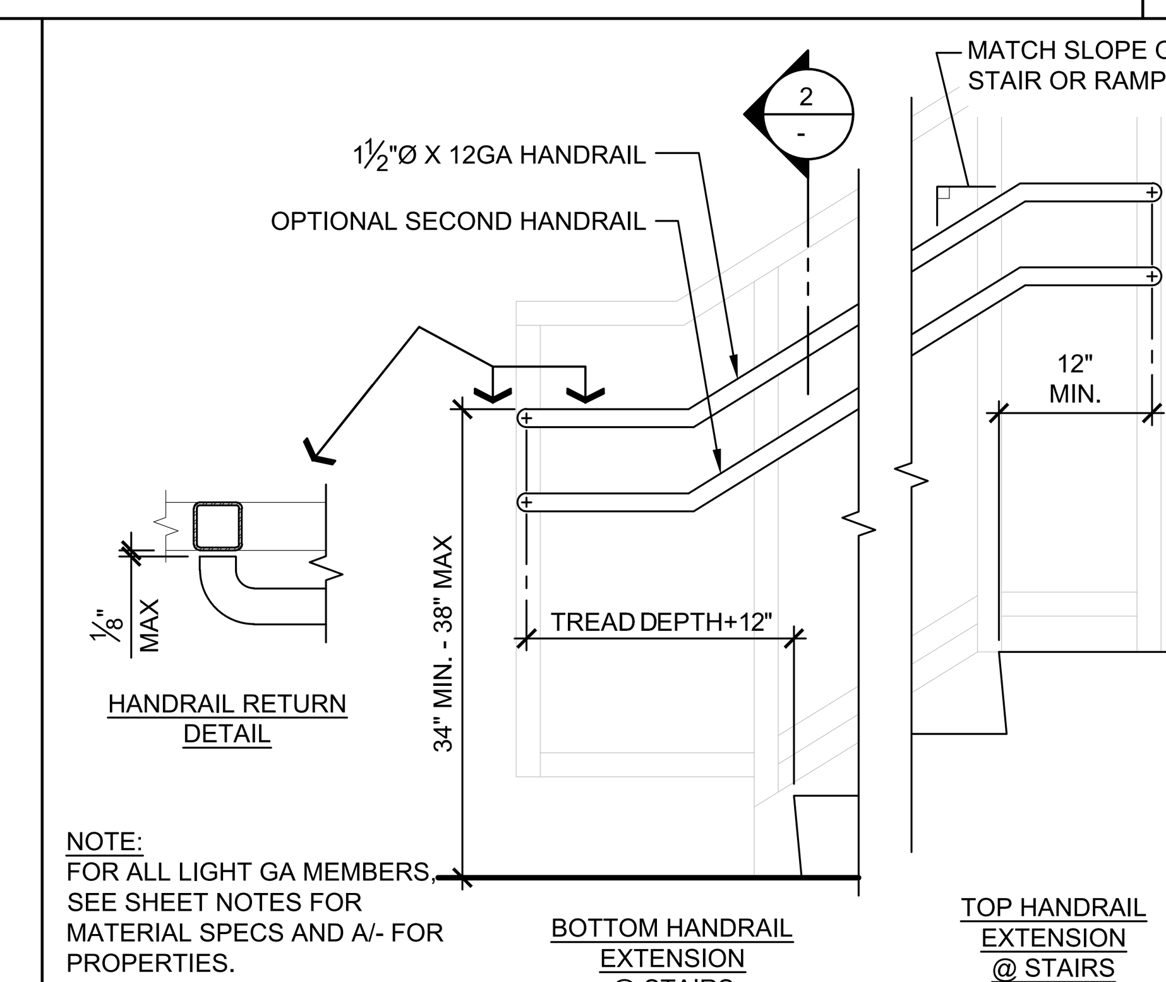
BH-36 METAL DECK PROPERTIES & PROFILE

PLAN DESIGNATION	DECK TYPE	MINIMUM PROPERTIES +S IN³	-S IN³	I IN⁴	ALLOW DIAPHRAGM SHEAR (8'-0" MAX SPAN)	DECK PROFILE
	1½"- 18GA ASC BH-36 GALV DECK PER IAPMO ER #329 (36" WIDE)	0.311	0.329	0.302	1664 PLF w/2" L.W.C. TOPPING (3½" TOTAL SLAB THICKNESS)	(4) ½"Ø EFFECTIVE PUDDLE WELDS* OR #12 TEKS SCREWS OR HILTI X-HSN (ESR-2197) 24 PAF's; (½"Ø EFFECTIVE PUDDLE WELDS* OR #12 TEKS SCREWS OR HILTI X-HSN (ESR-2197) 24 PAF's @ 12" O.C. MAX @ PARALLEL SUPPORTS); * ½"Ø EFFECTIVE PUDDLE WELDS = 1"Ø VISUAL PUDDLE WELD



SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 36" O.C. MAX.

BH-36 DECK PROFILE
9



NOTE:
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HANDRAIL EXTENSION DETAIL
10

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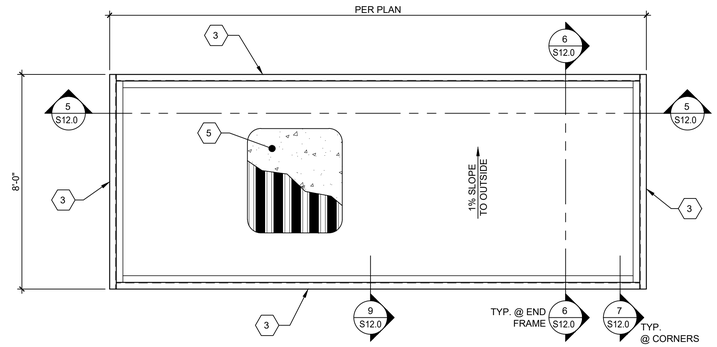
REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

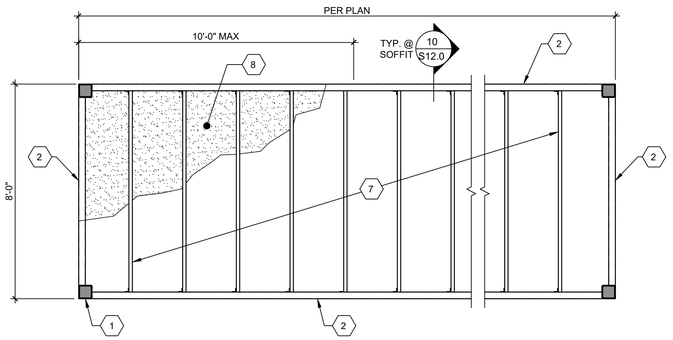
SHEET TITLE:
STAIR RAILING AND GUARDRAIL DETAILS

SHEET NUMBER:
S11.2

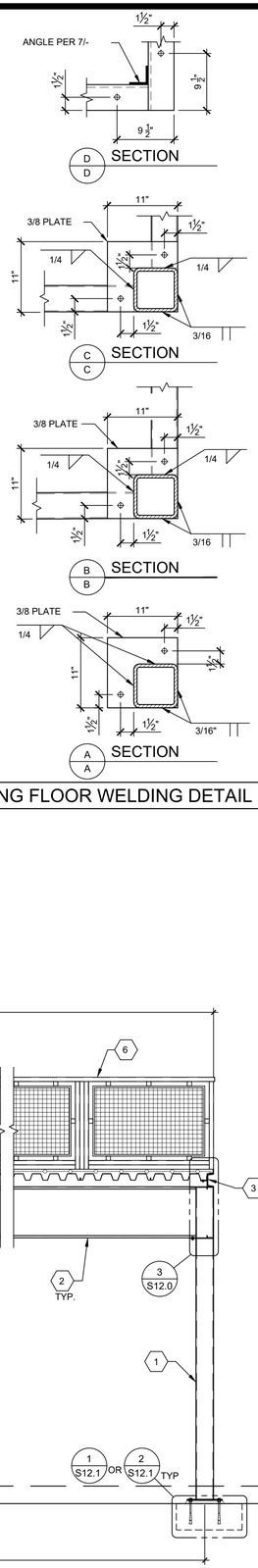
BID SET 10/01/2021



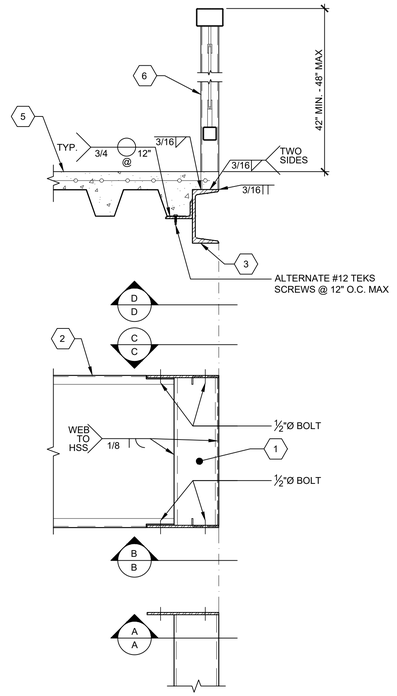
SKYWALK FLOOR FRAMING PLAN — SCALE: 3/8" = 1'-0" — 1



SKYWALK SOFFIT FRAMING PLAN — SCALE: 3/8" = 1'-0" — 2



LANDING FLOOR WELDING DETAIL — SCALE: 1-1/2" = 1'-0" — 3

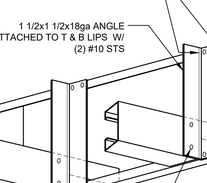


CORNER CONNECTION — SCALE: 1-1/2" = 1'-0" — 7

1. HSS 8x8x1/4 COL.
2. 23x3x10GA FORMED 'C' CHANNEL REFER TO S0.0
3. MC6x15.1 PERIMETER BEAM
4. NOT USED
5. 2" LIGHT WEIGHT CONCRETE FILL (w/MEDIUM BROOM FINISH) OVER 18 GA N-32 OR NH-32 DECK PER 3A/S12.1 OR 3B/S12.1 (OR 3W OR 3WH DECK, PER 4/S2.1)
6. GUARDRAIL PER SHEET S11.0
7. 600S162-33 STEEL STUDS SPACED @ 24" O.C.
8. STUCCO FINISH OVER 3/8" RIB METAL LATH

NOTE:
PROVIDE 7" MIN SEISMIC GAP BETWEEN SKYWALK-TO-BALCONY

KEY NOTES



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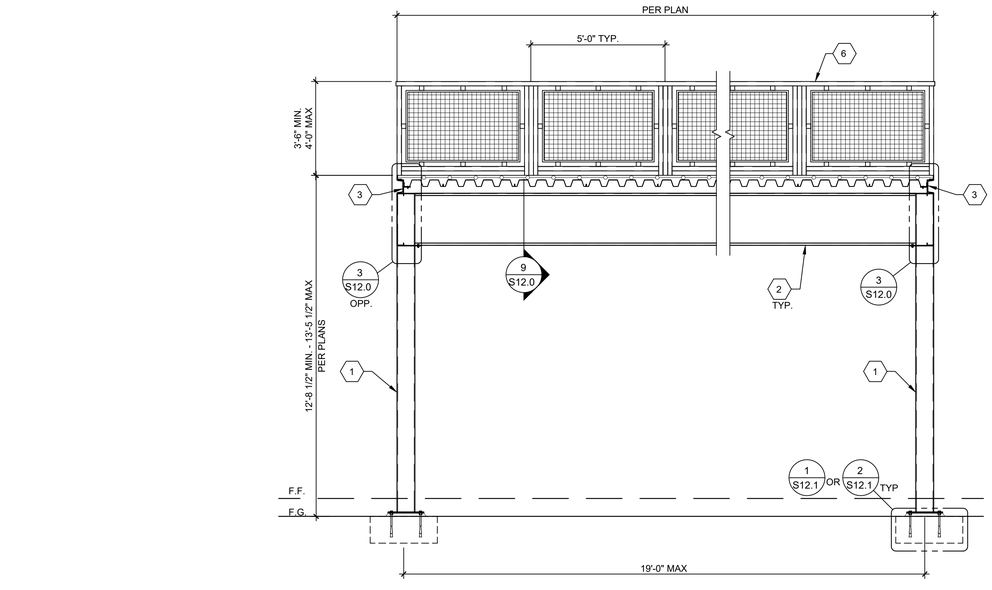
SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

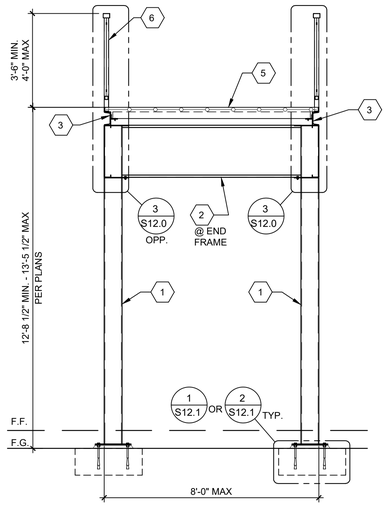


SKYWALK FRAME SECTION — SCALE: 3/8" = 1'-0" — 5

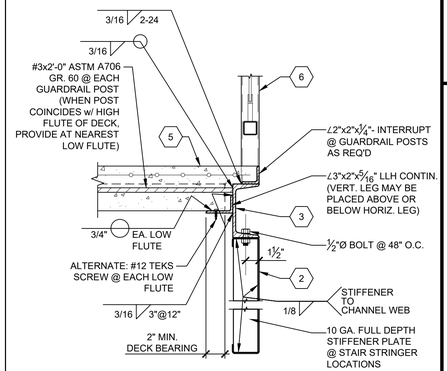
EXTERIOR PLASTER

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

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



SKYWALK END FRAME SECTION — SCALE: 3/8" = 1'-0" — 6



FLOOR FRAME SECTION CONN. — SCALE: 1-1/2" = 1'-0" — 9

SKYWALK SOFFIT ATTACHMENT — SCALE: 1-1/2" = 1'-0" — 10

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANDREW PATRICK HENRY — No. C12631 — Ren. 8-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCH — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

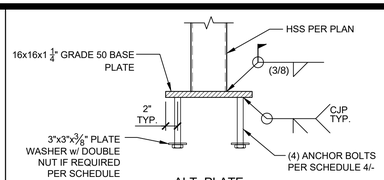
SKYWALK
FRAMING PLANS
AND DETAILS

SHEET NUMBER:

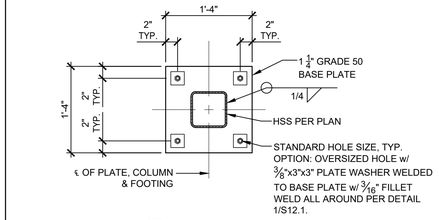
S12.0

BID SET 10/01/2021

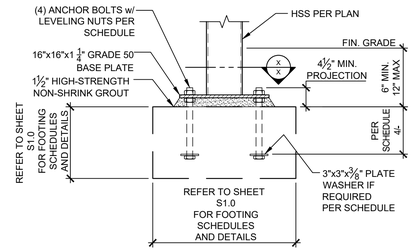
NOT USED | 1



ALT. PLATE



PLAN VIEW

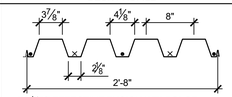


NOTES:
1. FOOTING DESIGN IS BASED ON ALLOWABLE SOIL BEARING PRESSURE =2000 PSF.
2. SEE SHEET S1.0 FOR CONCRETE AND REINFORCING NOTES.

BASE PLATE DETAILS — SCALE: 1" = 1'-0" | 2

N-32 & NH-32 METAL DECK PROPERTIES & PROFILE

PLAN SYMBOL	DECK TYPE	MINIMUM PROPERTIES					DECK PROFILE
		S_+ IN^3	S_- IN^3	I_+ IN^4	I_- IN^4	ALLOWABLE DIAPHRAGM SHEAR (8'-0" MAX SPAN)	
	3"-18ga ASC N-32 GALV DECK PER ICC ESR #2408 (32" WIDE)	0.693	0.734	1.155	1.275	1171 P.L.F. w/ 2" L.W.C. TOPPING (5" TOTAL SLAB THICKNESS)	
	3"-18ga ASC NH-32 GALV DECK PER IAPMO ER #0329 (32" WIDE)	0.661	0.715	1.121	1.275	1606 P.L.F. w/ 2" L.W.C. TOPPING (5" TOTAL SLAB THICKNESS)	

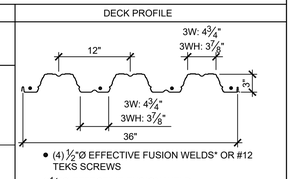


• (3) ½"Ø EFFECTIVE FUSION WELDS* OR #12 TEKS SCREWS
× (2) ADDITIONAL ½"Ø EFFECTIVE FUSION WELDS* OR #12 TEKS SCREWS @ NH-32 DECK
*½"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD
SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 36" O.C. MAX.

N-32 DECK PROFILE — NOT TO SCALE | 3A

3W & 3WH METAL DECK PROPERTIES & PROFILE

PLAN SYMBOL	DECK TYPE	MINIMUM PROPERTIES			DECK PROFILE
		S_{glot} IN^3/FT	I_g IN^4/FT	ALLOWABLE DIAPHRAGM SHEAR (8'-0" MAX SPAN)	
	3"-18ga ASC 3W GALV DECK PER ICC ESR #2408 (36" WIDE)	0.771	1.200	1517 P.L.F. w/ 2" L.W.C. TOPPING (5" TOTAL SLAB THICKNESS)	
	3"-18ga ASC 3WH GALV DECK PER IAPMO UES ER #0329 (36" WIDE)	0.704	1.113	1653 P.L.F. w/ 2" L.W.C. TOPPING (5" TOTAL SLAB THICKNESS)	



• (4) ½"Ø EFFECTIVE FUSION WELDS* OR #12 TEKS SCREWS
*½"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD
SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 36" O.C. MAX.

3W DECK PROFILE — NOT TO SCALE | 3B

SPREAD FOOTING PER 2/S12.1	ANCHOR BOLTS PER 2/S12.1				
CORNER COLUMN FOUNDATIONS	ANCHOR TYPE & GRADE	ANCHOR DIAMETER	ANCHOR EMBEDMENT	PLATE WASHER REQUIRED	PULL TEST
SIZE					
PER FOUNDATION PLANS	ASTM F1554 GRADE 36(Fy=36 KSI) CAST-IN-PLACE ANCHOR BOLT	1"	18"	YES	NOT REQUIRED
	GRADE 36(Fy=36 KSI) ALL-THREAD ROD CAST-IN-PLACE ANCHOR w/ DOUBLE NUTS	1"	18"	YES	NOT REQUIRED

SKYWALK BASE PLATE DETAILS AND ANCHOR BOLT SCHEDULE — SCALE: 1" = 1'-0" | 4

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANTHONY PATRICK GIMENEZ — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MANNY D. FRISCO — No. S3380 — STRUCTURAL — STATE OF CALIFORNIA

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

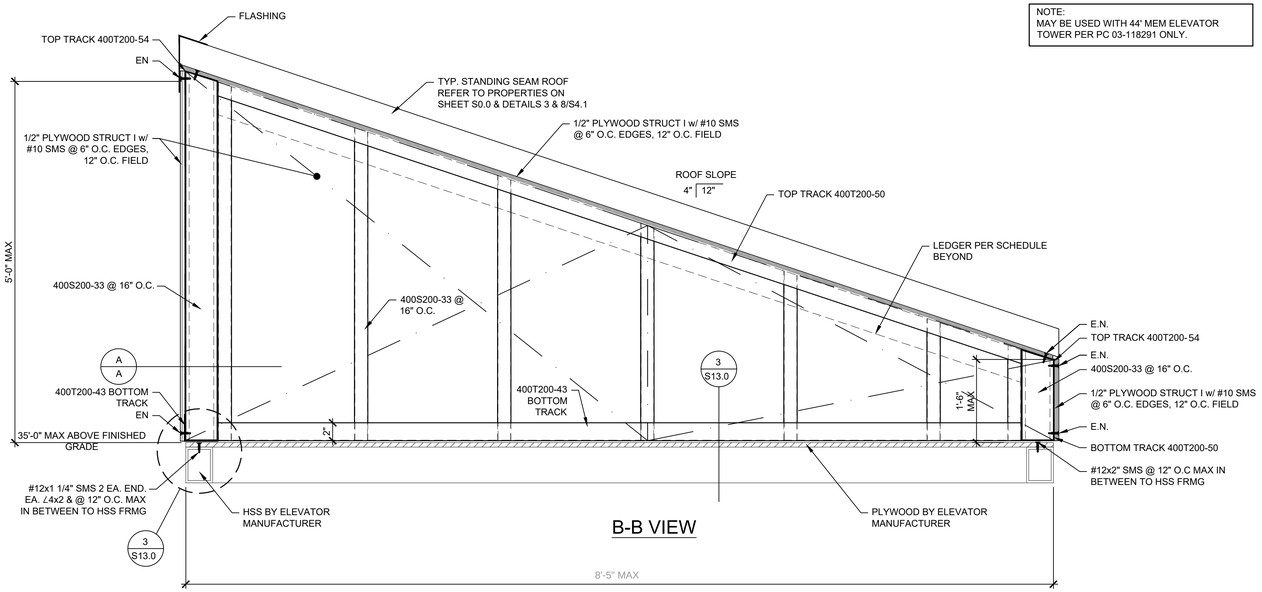
SKYWALK DETAILS

SHEET NUMBER:

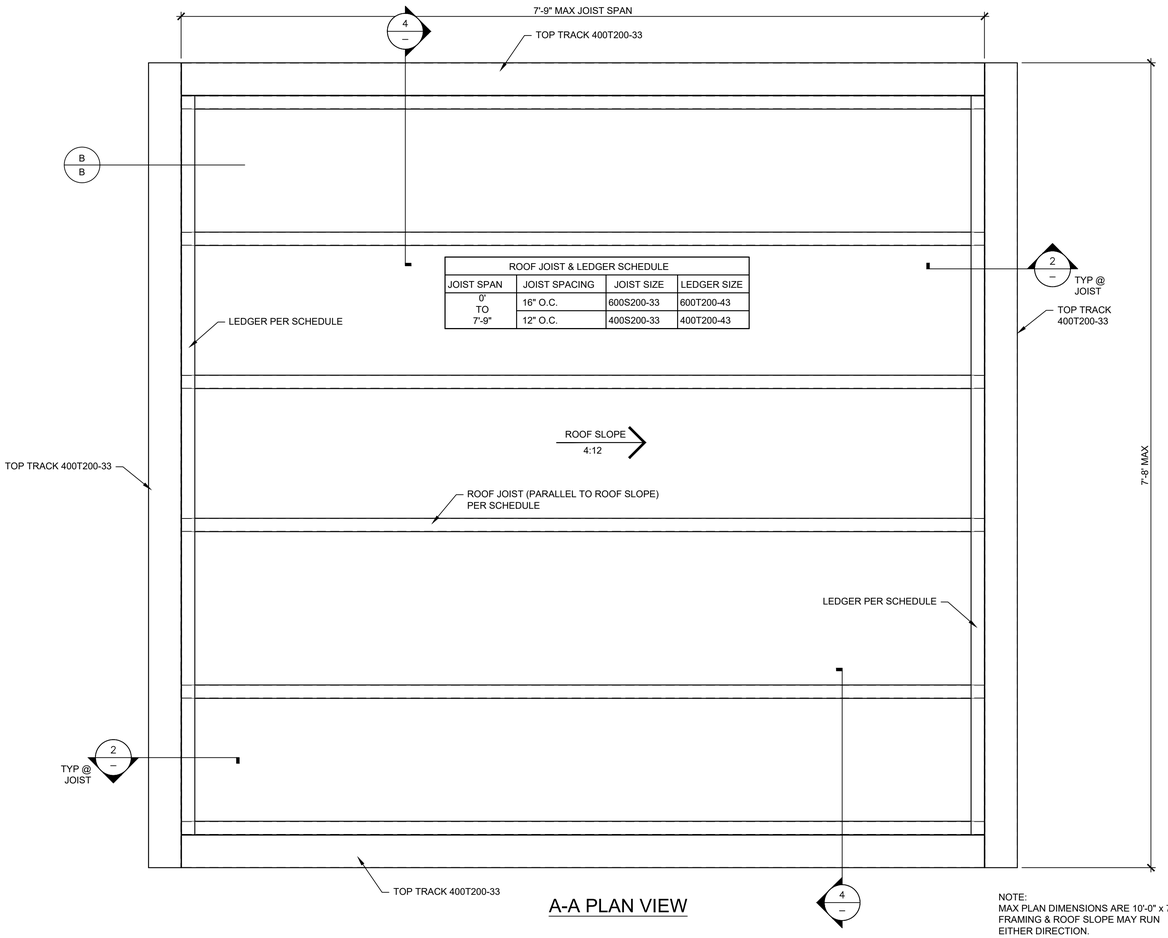
S12.1

BID SET 10/01/2021

NOTE:
MAY BE USED WITH 44' MEM ELEVATOR TOWER PER PC 03-118291 ONLY.



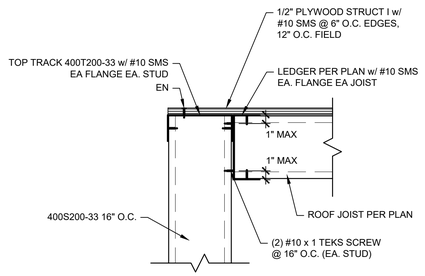
B-B VIEW



A-A PLAN VIEW

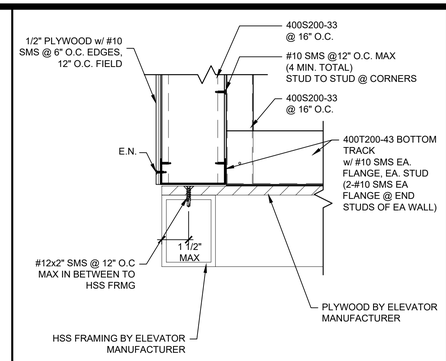
NOTE:
MAX PLAN DIMENSIONS ARE 10'-0" x 7'-8". ROOF FRAMING & ROOF SLOPE MAY RUN EITHER DIRECTION.

ELEVATOR SLOPE ROOF — NTS | 1

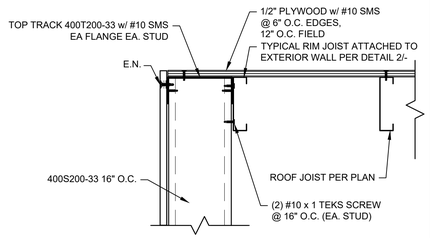


NOTE:
SEE DETAIL 4/S13.0 FOR
OPTIONAL ROOF OVERHANG

ROOF CONNECTION DETAIL — SCALE: 1 1/2" = 1'-0" | 2

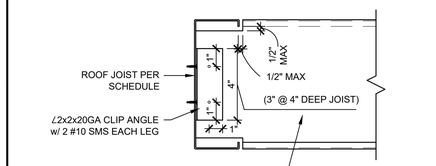


ROOF BASE CONNECTION DET — SCALE: 1 1/2" = 1'-0" | 3



NOTE:
SEE DETAIL 4/S13.0 FOR
OPTIONAL ROOF OVERHANG

SECTION — SCALE: 1 1/2" = 1'-0" | 4



ROOF BLOCKING DETAIL — SCALE: 1 1/2" = 1'-0" | 5

NOT USED | 6

NOT USED | 7

NOT USED | 8

NOT USED | 9

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

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ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

09/20/2021
RST#20203

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

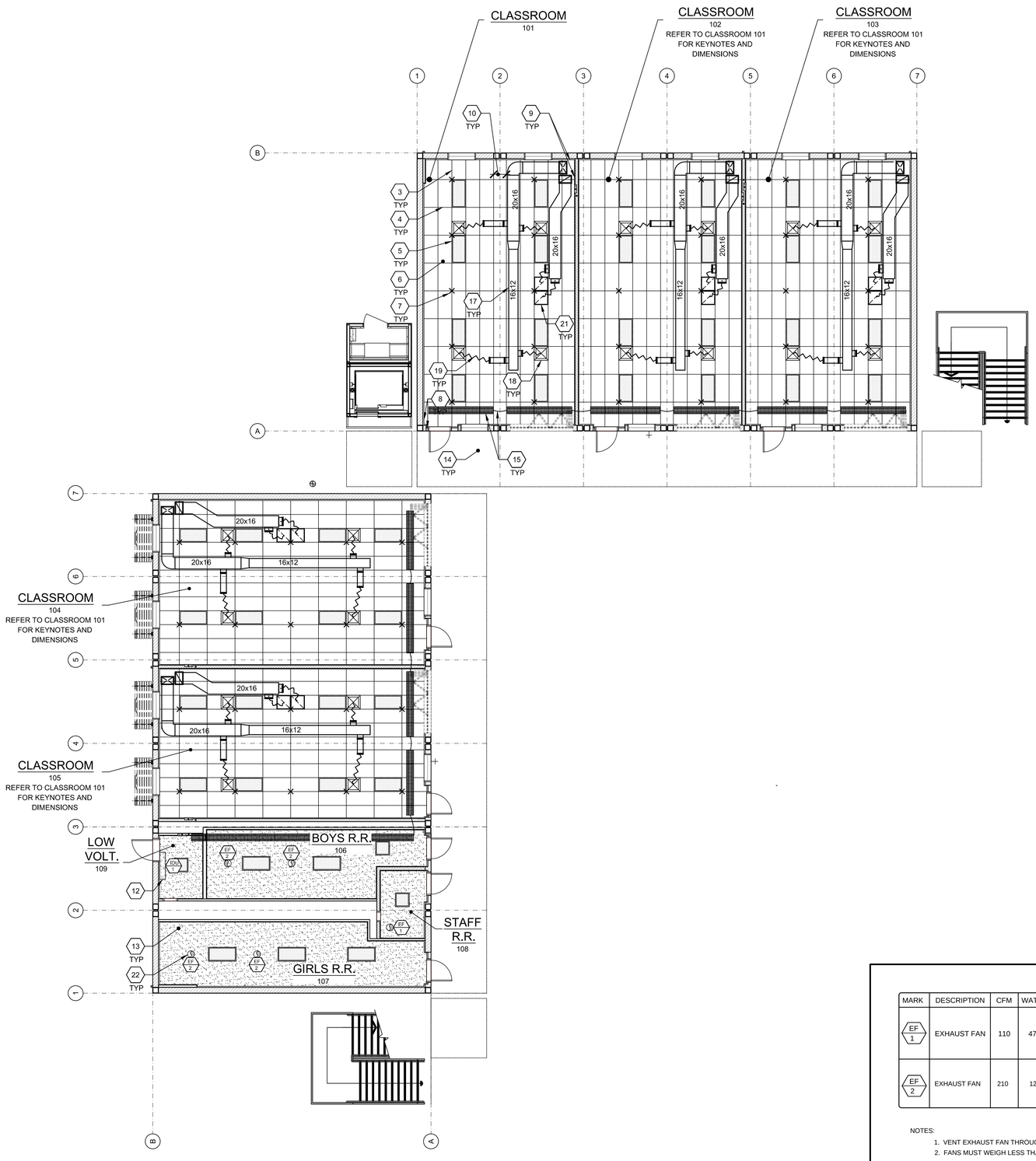
ELEVATOR SLOPE ROOF
FRAMING DETAILS

(FOR 44' MEM ELEVATOR TOWER PER PC 03-118291 ONLY)

SHEET NUMBER:

S13.0

BID SET 10/01/2021



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

GROUND FLOOR REFLECTED CEILING PLAN

1

1	NOT USED
2	THERMOSTAT (BY OTHERS)
3	MAIN RUNNER TYP.
4	CROSS RUNNER TYP.
5	INTERIOR LIGHT FIXTURE, REFER TO SHEET SHEET E1.0 FOR SPEC'S
6	CEILING HEIGHT @ 9'-0"
7	SPLAY WIRE BRACING ASSEMBLY, SEE 3/M1.4 FOR DETAILS
8	FIXED CEILING END
9	FREE CEILING END
10	CENTER SECTION THAT CROSSES MODULE LINE TO BE FIELD INSTALLED
11	NOT USED
12	MINI - SPLIT HVAC AIR HANDLER
13	GYPSUM BOARD CEILING PER DETAIL 8/ M1.6
14	STUCCO AT SOFFIT
15	CABLE TRAY AND CONDUIT- SEE ELECTRICAL PLANS
16	NOT USED
17	CONCEALED SUPPLY RIGID AIR DUCT ABOVE T-BAR CEILING - SEE 1/M1.4
18	TYPICAL 4-WAY SUPPLY AIR REGISTER LOCATION AND SIZE MAY VARY PER CEILING LAYOUT AND BUILDING SIZE - SEE1/M1.4 & 7/M1.5
19	FLEX DUCT - 5'-0" MAX - SEE PLAN FOR SIZES
20	NOT USED
21	RETURN AIR REGISTER - SEE 7/M1.5
22	EXHAUST FANS

KEY NOTES

MEP COMPONENT ANCHORAGE NOTES

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

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR110/220 VOLT RECEPTACLES HAVING A FLEXBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

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

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

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

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

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

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

MEP COMPONENT ANCHORAGE NOTES

1. AUTOMATIC SHUT-OFF IS NOT REQUIRED WHEN ALL OCCUPIED ROOMS SERVED BY THE AIR HANDLING EQUIPMENT HAVE DIRECT ACCESS TO THE EXTERIOR AND THE TRAVEL DISTANCE DOES NOT EXCEED 100 FT. PER CMC 608 EXCEPTION #2.
2. LIGHTING FIXTURE MAY BE INSTALLED ROTATED 90° FROM SHOWN TO MATCH T-GRID.

MARK	DESCRIPTION	CFM	WATTS	S.P.	VOLT/PH	
EF 1	EXHAUST FAN	110	47.3	.10"	120-1Ø	NUTONE AN110 CEILING MOUNTED 180W INPUT 10 LBS (OR EQUAL)
EF 2	EXHAUST FAN	210	127	.125"	120-1Ø	BROAN L200 CEILING MOUNTED 180W INPUT 23 LBS (OR EQUAL)

NOTES:
1. VENT EXHAUST FAN THROUGH ROOF.
2. FANS MUST WEIGH LESS THAN 75 LBS.

EXHAUST FAN SCHEDULE

GENERAL NOTES

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK C. HOWE
No. C12631
Ren. 9-31-21
STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

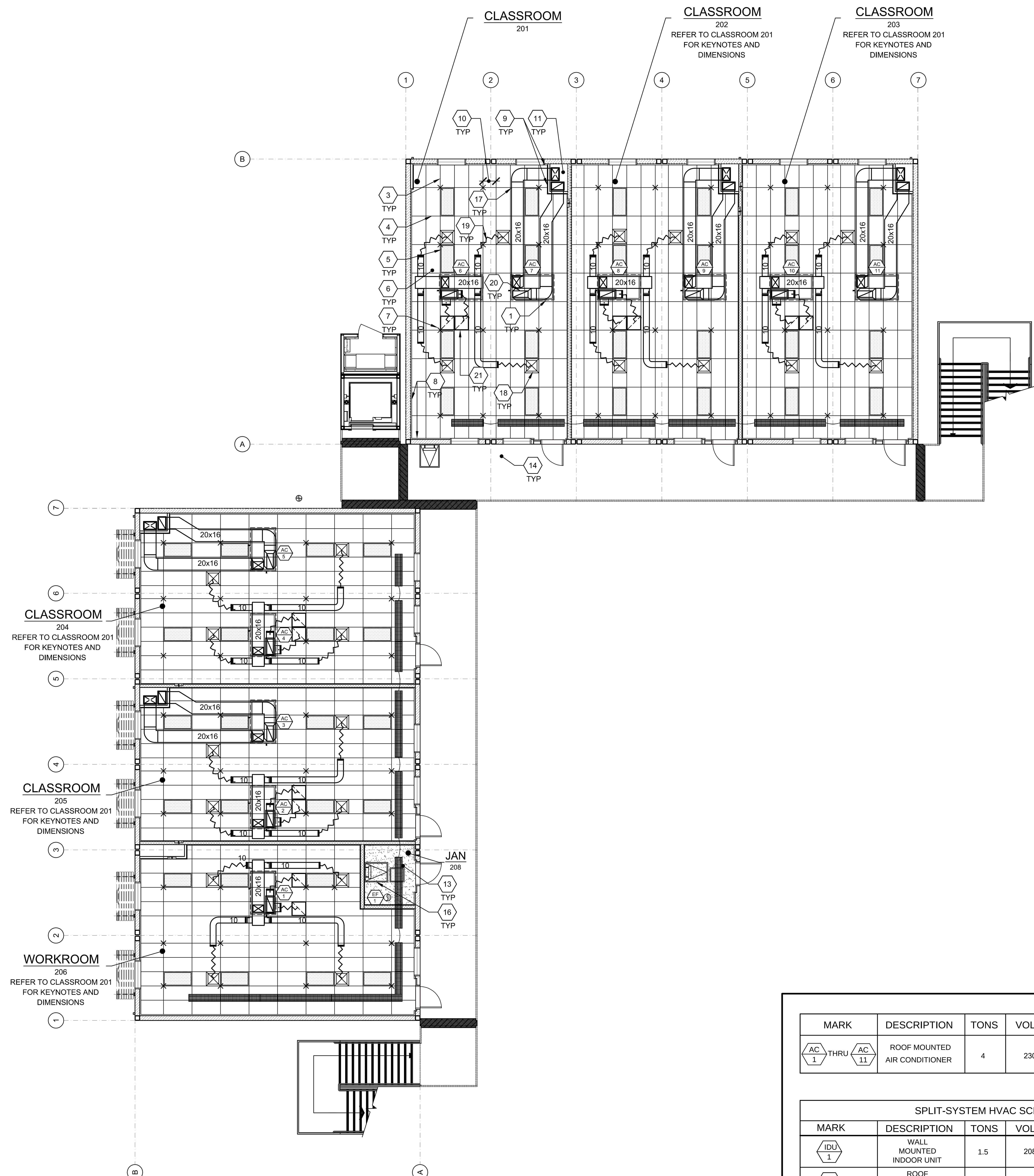
SHEET TITLE:

HVAC
GROUND FLOOR
REFLECTED CEILING PLAN

SHEET NUMBER:

M1.0

BID SET 10/01/2021



SECOND FLOOR REFLECTED CEILING PLAN

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

MARK	DESCRIPTION	TONS	VOLT/PHASE	MODEL	WEIGHT
AC 1 THRU AC 11	ROOF MOUNTED AIR CONDITIONER	4	230/208 - 1Ø	CARRIER 48GCLM05	559.0 LBS.

SPLIT-SYSTEM HVAC SCHEDULE

MARK	DESCRIPTION	TONS	VOLT/PHASE	MODEL	WEIGHT
IDU 1	WALL MOUNTED INDOOR UNIT	1.5	208/230 - 1Ø	CARRIER 40MAHBQ12XA3	25.0 LBS
ODU 1	ROOF MOUNTED OUTDOOR UNIT	1	208/230 - 1Ø	CARRIER 38MARBQ12AA3	80.0 LBS

HVAC SCHEDULE

1. ROOF MOUNT HVAC UNIT
2. THERMOSTAT (BY OTHERS)
3. MAIN RUNNER TYP.
4. CROSS RUNNER TYP.
5. INTERIOR LIGHT FIXTURE, REFER TO SHEET SHEET E1.0 FOR SPEC'S
6. CEILING HEIGHT @ 9'-0"
7. SPLAY WIRE BRACING ASSEMBLY, SEE 3/M1.4 FOR DETAILS
8. FIXED CEILING END
9. FREE CEILING END
10. CENTER SECTION THAT CROSSES MODULE LINE TO BE FIELD INSTALLED
11. UTILITY CHASE WALL ENCLOSURE
12. NOT USED
13. GYPSUM BOARD CEILING PER DETAIL 8/ M1.6
14. STUCCO AT SOFFIT
15. CABLE TRAY AND CONDUIT- SEE ELECTRICAL PLANS
16. ACCESS HATCH
17. CONCEALED SUPPLY RIGID AIR DUCT ABOVE T-BAR CEILING - SEE 1/M1.4
18. TYPICAL 4-WAY SUPPLY AIR REGISTER LOCATION AND SIZE MAY VARY PER CEILING LAYOUT AND BUILDING SIZE - SEE1/M1.4 & 7/M1.5
19. FLEX DUCT - 5'-0" MAX - SEE PLAN FOR SIZES
20. RETURN AIR AS PART OF UNIT
21. RETURN AIR REGISTER - SEE 7/M1.5

KEY NOTES

MEP COMPONENT ANCHORAGE NOTES

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

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR110/220 VOLT RECEPTACLES HAVING A FLEXBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

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

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

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

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

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

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

MEP COMPONENT ANCHORAGE NOTES

1. AUTOMATIC SHUT-OFF IS NOT REQUIRED WHEN ALL OCCUPIED ROOMS SERVED BY THE AIR HANDLING EQUIPMENT HAVE DIRECT ACCESS TO THE EXTERIOR AND THE TRAVEL DISTANCE DOES NOT EXCEED 100 FT. PER CMC 608 EXCEPTION #2.
2. LIGHTING FIXTURE MAY BE INSTALLED ROTATED 90° FROM SHOWN TO MATCH T-GRID.

GENERAL NOTES

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT
PATRICK ... No. C12631 Ren. 3-31-21
STATE OF CALIFORNIA

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REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

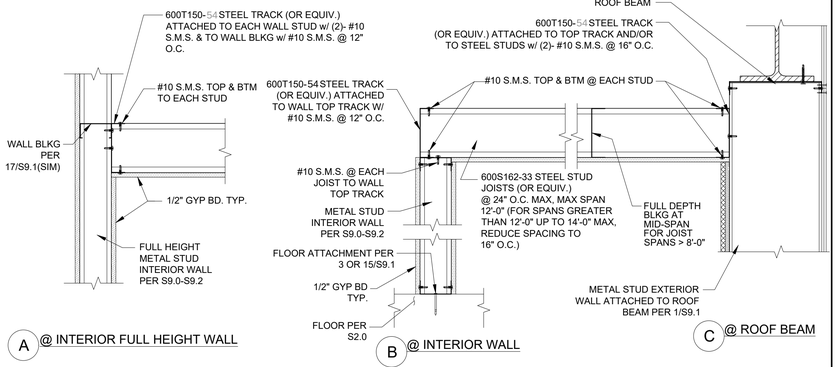
SHEET TITLE:

HVAC
UPPER FLOOR
REFLECTED CEILING PLAN

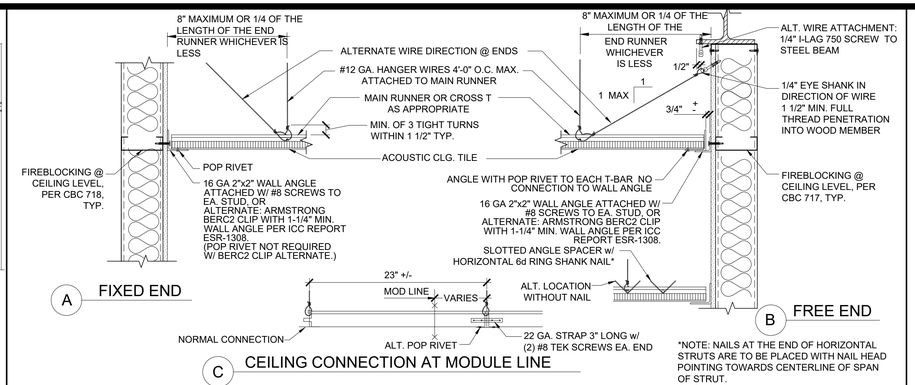
SHEET NUMBER:

M1.1

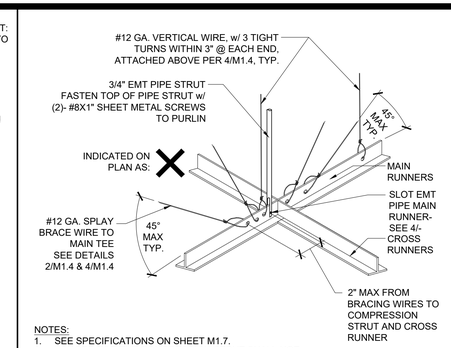
BID SET 10/01/2021



GYPSUM BOARD CEILING DETAIL w/STEEL STUDS | 1

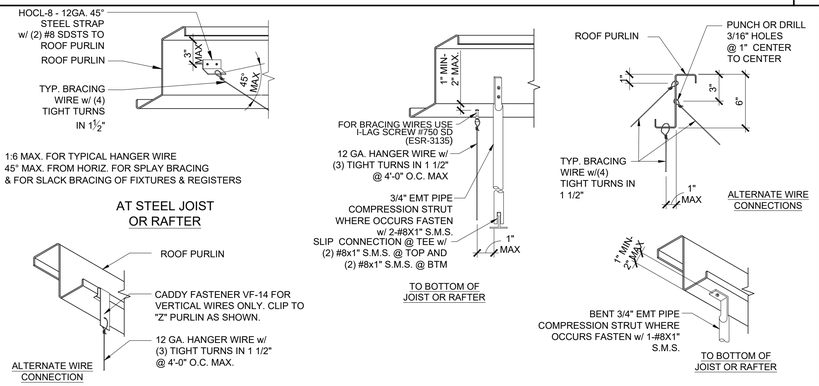


CEILING ATTACHMENTS DETAILS | SCALE : 1 1/2"=1'-0" | 2

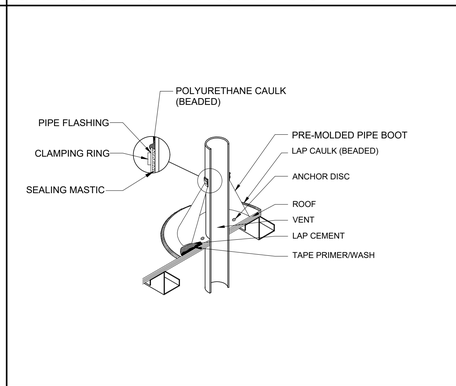


NOTES:
1. SEE SPECIFICATIONS ON SHEET M1.7.
2. HANGER FOR THE COMPRESSION STRUT SHALL NOT REPLACE THE VERTICAL HANGER.
3. SPLAYED BRACING WIRES - SEE SPECS ON M1.7

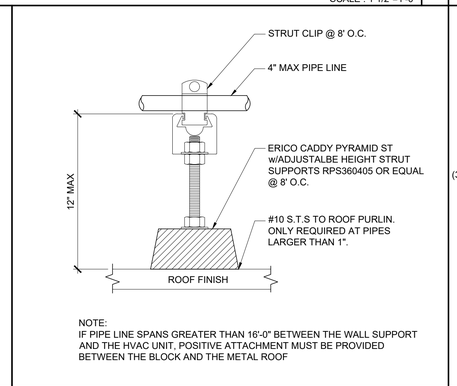
SPLAY WIRE DETAIL | SCALE : 1 1/2"=1'-0" | 3



CONNECTION TO PURLINS DETAIL | SCALE : 1 1/2"=1'-0" | 4

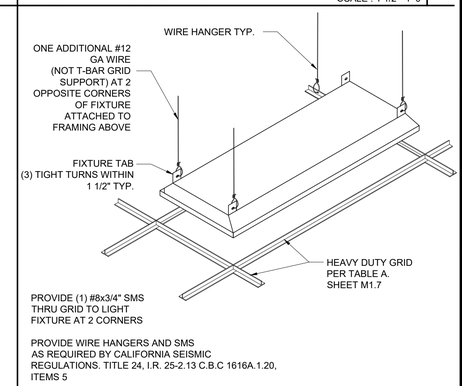


ROOF PENETRATION DETAIL | N.T.S. | 5

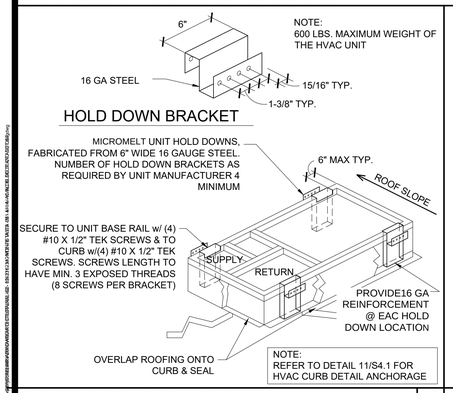


NOTE:
IF PIPE LINE SPANS GREATER THAN 16'-0" BETWEEN THE WALL SUPPORT AND THE HVAC UNIT, POSITIVE ATTACHMENT MUST BE PROVIDED BETWEEN THE BLOCK AND THE METAL ROOF

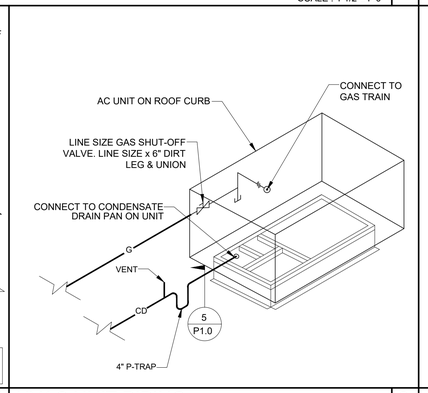
PIPE SUPPORT DETAIL | SCALE : 1 1/2"=1'-0" | 5A



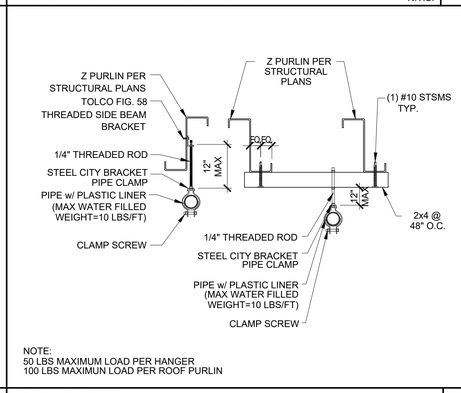
LIGHT FIXTURE ATTACH. DETAIL | SCALE : 1 1/2"=1'-0" | 6



ROOF CURB ELEVATION | N.T.S. | 7

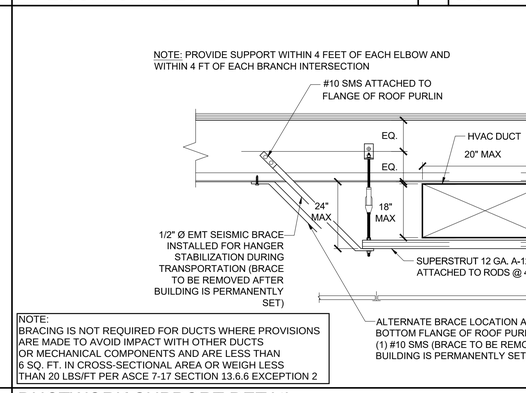


HVAC UNIT PIPING | N.T.S. | 8



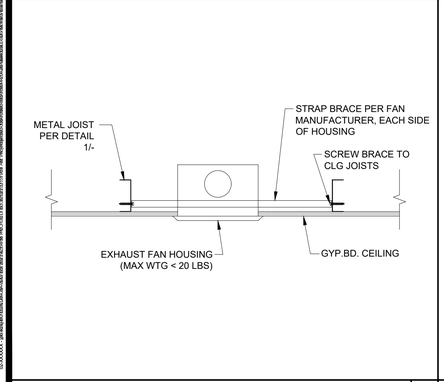
NOTE:
50 LBS MAXIMUM LOAD PER HANGER
100 LBS MAXIMUM LOAD PER ROOF PURLIN

PIPING DETAIL | N.T.S. | 9

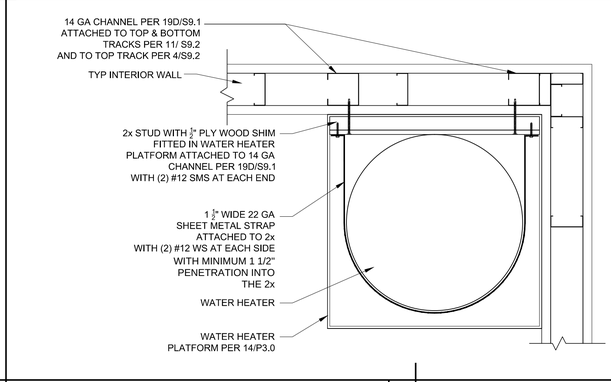


NOTE:
BRACING IS NOT REQUIRED FOR DUCTS WHERE PROVISIONS ARE MADE TO AVOID IMPACT WITH OTHER DUCTS OR MECHANICAL COMPONENTS AND ARE LESS THAN 6 SQ. FT. IN CROSS-SECTIONAL AREA OR WEIGH LESS THAN 20 LBS/FT PER ASCE 7-17 SECTION 13.6.6 EXCEPTION 2

DUCTWORK SUPPORT DETAIL | 10



EXHAUST FAN @ GYP. BD. CEILING MOUNT | 11

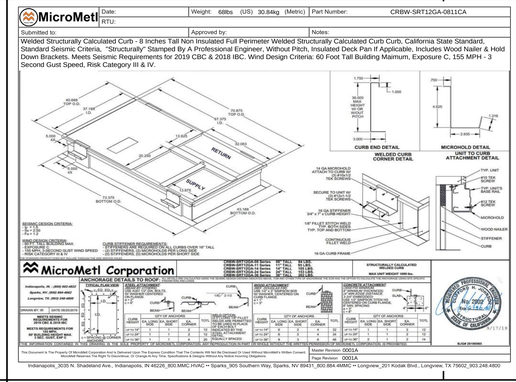


NOTE: PRESSURE RELIEF VALVE SHALL BE PLUMBED TO OUTSIDE/EXTERIOR OF BUILDING.

STRAPS SHALL BE AT POINTS WITHIN THE UPPER ⅓ AND LOWER ONE THIRD OF IT'S VERTICAL DIMENSIONS. AT LOWER POINT A MINIMUM DISTANCE OF 4" SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STAPPING PER CPC 2019 SECTION 507.2

MAX WATER HEATER WEIGHT = 400 LBS

WATER HEATER STRAP DETAIL | 13



ROOF CURB | 15

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANGELA PATRICK HOWE — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

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DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

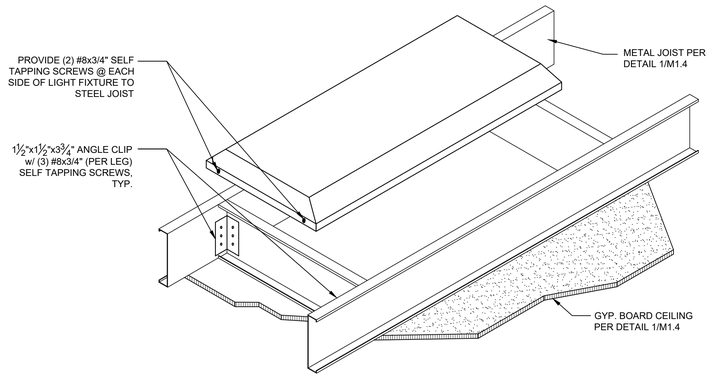
SHEET TITLE:

HVAC
BUILDING SECTION
AND DETAILS

SHEET NUMBER:

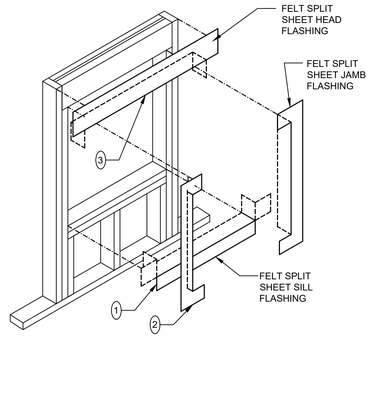
M1.4

BID SET 10/01/2021

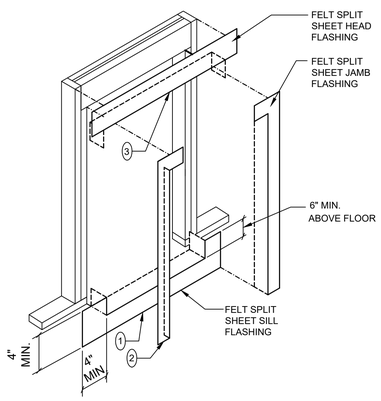


LIGHT FIXTURE ATTACHMENT DETAIL w/ METAL STUDS
GYPSUM BOARD CEILING OPTION

SCALE: N.T.S. | 1



WINDOW CONDITION

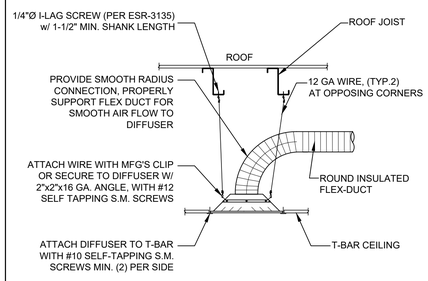


DOOR CONDITION

(#) = SEQUENCE OF ORDER

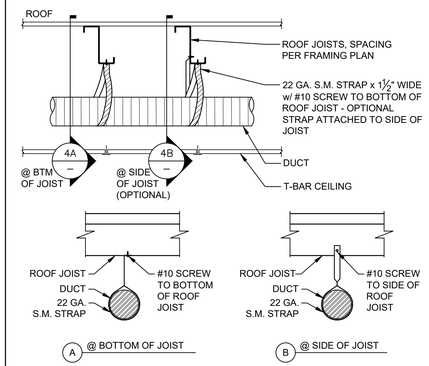
FLASHING AT WALL OPENINGS

SCALE: N.T.S. | 2



SUPPLY - RETURN DIFFUSER MOUNTING DETAIL

SCALE: N.T.S. | 3

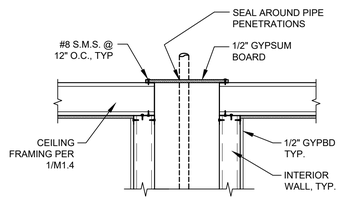


FLEX DUCTING SUPPORT DETAIL

SCALE: N.T.S. | 4

NOT USED

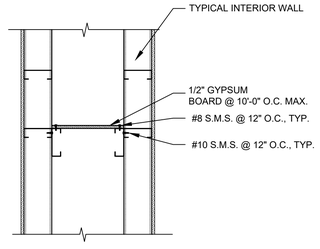
5



SECTION VIEW

FIRE BLOCK DETAIL @ PLUMBING CHASE

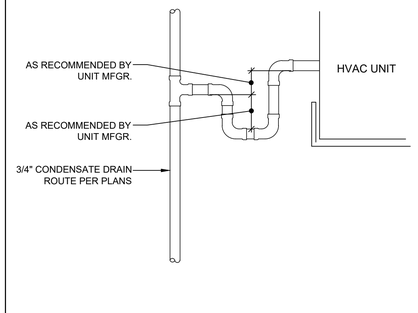
SCALE: N.T.S. | 6



PLAN VIEW

FIRE BLOCK DETAIL @ PLUMBING CHASE

SCALE: N.T.S. | 7



CONDENSATE DETAIL

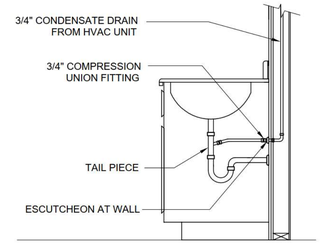
SCALE: N.T.S. | 8

NOT USED

9

NOT USED

9A



CONDENSATE DETAIL AT SINK CABINET

10

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ANDREW PATRICK O'BRIEN — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

CEILING & MECHANICAL DETAILS

SHEET NUMBER:

M1.5

BID SET 10/01/2021

METAL SUSPENSION SYSTEMS FOR LAY IN PANEL CEILING

1. CEILING GRID SYSTEMS IN SEISMIC ZONES D, E, F, MUST BE RATED "HEAVY DUTY", AS DEFINED BY ASTM C635. PROVIDE GRID COMPONENTS AS SPECIFIED IN TABLE A BELOW, OR APPROVED EQUAL. GRID METAL FRAMING PIECES SHALL BE DESIGNED TO CARRY A MEAN ULTIMATE TEST LOAD OF NOT LESS THAN 180 LBS. IN COMPRESSION AND TENSION, PER ASTM E580.

2. SUSPENSION WIRE SHALL BE CLASS 1 ZINC-COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641. WIRE SHALL BE #12 GAGE WITH SOFT TEMPER AND A MINIMUM TENSILE STRENGTH OF 70 KSI.

3. WHEN HANGER AND BRACING WIRES ARE ATTACHED TO CONCRETE ABOVE, TESTS PER D.S.A. IR 25-2.13 SECTION 6.8 MUST BE PERFORMED. POWER ACTUATED FASTENERS IN CONCRETE ARE NOT ALLOWED FOR BRACING WIRE.

4. 12 GA. (MINIMUM) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4'-0" x 4'-0 GRID SPACING, ATTACH TO MAIN RUNNER. SPLICES WILL NOT BE PERMITTED IN ANY HANGER WIRES UNLESS SPECIFICALLY APPROVED BY D.S.A.

5. PROVIDE 12 GA. HANGER WIRES WITHIN 8" OF THE ENDS OF ALL MAIN AND CROSS RUNNERS OR AT 1/4 OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, AT THE PERIMETER OF THE CEILING AREA.

6. PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO MAINTAIN HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1:6 OUT OF PLUMB ARE TO HAVE COUNTER-BRACED WIRES.

7. CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS. CEILING GRID MEMBERS SHOULD BE AT LEAST 3/4 INCH CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE AND A MINIMUM OF 3/4 INCH CLEAR OF WALL.

8. PERIMETER SUPPORT ANGLES SHALL BE AT LEAST 2 INCHES WIDE, OR USE PROPRIETARY ANGLES & SEISMIC CLIPS THAT HAVE A VALID EVALUATION REPORT.

9. AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A 16 GA. WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNERS MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNERS IS 8" OR LESS, THIS INTERLOCK IS NOT REQUIRED.

10. CEILING AREAS EXCEEDING 2,500 SQUARE FEET SHALL HAVE A SEISMIC SEPARATION JOINT.

11. EXPANSION JOINTS SHALL BE PROVIDED AT INTERSECTIONS OF CORRIDORS, LOBBIES AND OTHER SIMILAR AREAS.

12. PENETRATIONS THROUGH THE CEILING, SUCH AS FIRE SPRINKLERS, SHALL HAVE A 2 INCH OVERSIZED RING, SLEEVE OR ADAPTER TO ALLOW FREE MOVEMENT INDEPENDENT OF THE CEILING. ALTERNATE: A FLEXIBLE SPRINKLER FITTING THAT ALLOWS 1 INCH OF MOVEMENT CAN BE USED.

13. LATERAL FORCE BRACING IS REQUIRED FOR ALL CEILINGS, EXCEPT CEILING AREAS OF 144 SQUARE FEET OR LESS WITH PERIMETER WALLS THAT ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES. SPACING OF BRACING ASSEMBLIES MUST BE SHOWN ON THE PLANS.

14. LATERAL FORCE BRACING CONSISTS OF A SET OF 1 COMPRESSION STRUT AND FOUR #12 GA. SPLAYED BRACING WIRES, ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING:
    (A) FOR SCHOOL BUILDINGS, PLACE SETS OF SPLAY WIRES AT A SPACING NOT MORE THAN 8 FEET BY 12 FEET ON CENTER.
    (B) PROVIDE SPLAY WIRES AT LOCATIONS NOT MORE THAN 1/2 THE ABOVE SPACING FROM EACH PERIMETER WALL OR AT THE EDGE OF VERTICAL CEILING OFFSETS. THE SLOPE OF THESE WIRES SHOULD NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHOULD BE TAUT WITHOUT CAUSING THE CEILING TO LIFT. SPLICES IN BRACING WIRES ARE NOT PERMITTED WITHOUT SPECIAL D.S.A. APPROVAL.

15. COMPRESSION STRUTS SHALL BE ABLE TO RESIST THE VERTICAL PULL INDUCED BY BRACING WIRES, AND SHALL NOT BE MORE THAN 1:6 OUT OF PLUMB.

16. FASTEN HANGER WIRES WITH NOT LESS THAN 3 TIGHT TURNS WITHIN A DISTANCE OF 3 INCHES. FASTEN SPLAY WIRES WITH 4 TIGHT TURNS WITHIN A DISTANCE OF 1-1/2 INCHES. HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE WIRE ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE FORCES ACTING ON THE WIRE.

17. SEPARATE ALL CEILING HANGING AND BRACING WIRES AT LEAST 6 INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT ETC.

18. ATTACH ALL LIGHT FIXTURES AND AIR TERMINALS TO THE CEILING GRID RUNNERS WITH SCREWS OR APPROVED FASTENERS AS REQUIRED TO RESIST A HORIZONTAL FORCE EQUAL TO THE FIXTURES' WEIGHT. MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH LIGHT FIXTURE.

19. FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS WEIGHING LESS THAN 56 POUNDS MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM, BUT THEY MUST HAVE A MINIMUM OF TWO #12 GA. SLACK SAFETY WIRES ATTACHED AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. FIXTURES WEIGHING LESS THAN 10 POUNDS MAY HAVE AT LEAST ONE #12 GA. SLACK SAFETY WIRE.

20. LIGHT FIXTURES AND OTHER CEILING DEVICES WEIGHING MORE THAN 56 POUNDS SHALL BE INDEPENDENTLY SUPPORTED BY NO LESS THAN FOUR (4) TAUT #12 GAGE WIRES, ATTACHED TO THE STRUCTURE ABOVE. WIRES MUST BE ABLE TO SUPPORT FOUR (4) TIMES THE WEIGHT OF THE UNIT.

21. ALL LIGHT-WEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID PER SECTION 2.6.3 OF D.S.A. IR 25-2.13. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS SHALL HAVE A #12 GAUGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE PER SECTION 7.2.2 OF D.S.A. IR 25-2.13. DEVICES WEIGHING MORE THAN 20 LBS. SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE PER SECTION 7.3.4 OF D.S.A. IR 25-2.13.

22. PANELS THAT WEIGH MORE THAN 0.5 LBS/SQ.FT. (PSF), OTHER THAN MINERAL FIBER ACOUSTIC TILES, SHALL BE POSITIVELY ATTACHED TO CEILING SUSPENSION RUNNERS.

23. ACOUSTICAL PANELS SHALL BE 5/8" MINIMUM THICK, MINERAL FIBERBOARD OR VINYL-FACED FIBERGLASS, LAY-IN PANELS, SQUARE EDGE, ASTM FLAME SPREAD CLASS T, 24"x48" MODULAR SIZE, LIGHT REFLECTION 75% MINIMUM, NOISE REDUCTION COEFFICIENT OF 0.65 MINIMUM, MAXIMUM SMOKE DENSITY NOT TO EXCEED 450. FLAME SPREAD RATING MAXIMUM OF 200. PANELS ARE NOT ALLOWED TO SUPPORT ANY FIXTURE, TERMINAL OR DEVICE.

TABLE A - HEAVY DUTY GRID COMPONENTS

MANUFACTURER	MAIN TEE	H.D. 4' CROSS TEE	H.D. 2' CROSS TEE	RUNNER SPLICE DETAIL
DONN/USG	DX-26	DX-424	DX-216	N/A
ARMSTRONG	7301	XL7341	XL8320	N/A
CHICAGO/ROCKFON	200.01	1274.01	1202.01	N/A

NOTE: ALL GRID COMPONENTS SHALL BE BY THE SAME MANUFACTURER.

HVAC GENERAL NOTES

HEATING VENTILATING AND AIR CONDITIONING (HVAC)

1. HEAT PUMP: SINGLE PACKAGE WALL-MOUNTED AIR-TO-AIR ELECTRIC HEAT PUMP UNIT SHALL BE RATED IN ACCORDANCE WITH A.R.I. STANDARD 240-77. MAXIMUM AC SIZE FOR THIS BUILDING WILL BE A 5-TON UNIT. ALL UNITS SHALL BE 230/208 VOLT, 1 PHASE SYSTEM, UL TESTED & APPROVED OR COMPARABLE, AND MEET CURRENT ENERGY STANDARDS.
    A. THE SYSTEM SHALL MAINTAIN AN AUTOMATICALLY CONTROLLED INDOOR CLASSROOM TEMPERATURE OF 78 DEGREES F. WHEN THE OUTDOOR DRY BULB TEMPERATURE VARIES BETWEEN 100 DEGREES F. IN THE SUMMER.
    B. THE SYSTEM MUST MAINTAIN THE ABOVE TEMPERATURE WHEN THE DAMPER IS ADJUSTED TO USE APPROXIMATELY ONE-THIRD FRESH AIR.

2. DUCTWORK
    A. CONSTRUCT ALL DUCTWORK OF GALVANIZED SHEET METAL IN ACCORDANCE WITH C.M.C., ASHRAE GUIDE EQUIPMENT VOLUME, AND SMACNA LOW VELOCITY DUCT CONSTRUCTION MANUAL, LATEST EDITIONS. ALL DUCTWORK SHALL BE INSULATED WITH 1" THICK FIBERGLASS DUCT WRAP WITH VAPOR BARRIER. PROVIDE 1" DUCT ATTENUATION AT ALL DUCTWORK WITHIN 2'-0" OF HVAC UNIT.
    B. NON-METALLIC DUCTWORK OPTION: IN ACCESSIBLE CONCEALED PORTIONS OF DUCT SYSTEM, RIGID 1" FIBERGLASS OR INSULATED FLEX-DUCT WITH VAPOR BARRIER MAY BE SUBSTITUTED FOR SHEET METAL DUCTWORK. ALL DUCTWORK WITHIN 2'-0" OF THE HVAC UNIT AND ALL INTERFACE CONNECTIONS SHALL BE METAL. DUCTWORK AND REINFORCEMENT SHALL BE DESIGNED FOR 2" STATIC PRESSURE. REFERENCE BRANDS: OWENS-CORNING FIBERGLASS DUCTBOARD, 1" THICK, AND MICRO-AIRE TYPE 475. NON-METALLIC DUCTWORK SHALL CONFORM TO NFPA 90-A AND SMACNA CLASS 1 RATING.

3. AIR DUCT INSULATION AND LININGS SHALL COMPLY WITH FLAME SPREAD LESS THAN OR EQUAL TO 25, SMOKE GENERATION LESS THAN OR EQUAL TO 50.

4. SUPPLY AIR DIFFUSERS SHALL BE 675 CFM MAXIMUM, 12" ROUND. 1" FIBERGLASS OR FLEXDUCT DUCTWORK SPECIFICALLY DESIGNED TO PROVIDE AIR THERMAL COOLING SYSTEMS. 24"x8"x1" MICRO-AIRE TYPE #475 OWENS-CORNING, KNAUF, CERTAINTEED, OR EQUAL AND 90-B: UL #131 TEST, CLASS 1 RATING WITH "SMACNA".

5. REGISTERS AND DIFFUSERS: PROVIDE THREE (MINIMUM) 4-WAY THROW AIR DIFFUSERS AS MANUFACTURED BY CARNES, TITUS, HART AND COOLEY, METALAIRE, SHOEMAKER, BARBER-COLEMAN OR KRUEGER COMMERCIAL GRADE GRILLS AND REGISTERS.

6. AIR CONDITIONING CONTROLS: PROVIDE ELECTRONIC PROGRAMMABLE THERMOSTAT. THERMOSTAT SHALL HAVE THE FOLLOWING FUNCTIONS:
    A. 5 AND 2 WEEKDAY/WEEKEND PROGRAMMING DAYS WITH 4 SEPARATE TIME/TEMPERATURE SETTINGS FOR A 24-HOUR PERIOD.
    B. KEY BOARD LOCKOUT SWITCH.
    C. PROGRAMMABLE DISPLAY.
    D. 2-HOUR OVERRIDE MINIMUM.
    E. STATUS INDICATED LED'S.
    F. BATTERY BACK-UP.
    G. PROVIDE LOCKING CLEAR THERMOSTAT COVER WITH THERMOSTAT COVER WITH ACCESS HOLE FOR PROGRAM OVERRIDE. WHITE RODGERS IF92-371. MOUNT TOP OF BOX @ 48" A.F.F. MAX.

7. THERMAL INSULATION
    A. ROOF INSULATION: R-19 WITH 22 GA. WIRE @ 16" O.C. & R-1 TOP OF PURLINS.
    B. WALLS INSULATION: R-13 KRAFT FACED. (R-5 INSULATION OVER METAL FRAMED WALLS)
    C. NON-CONCRETE FLOORS INSULATION: R-13
    D. CONCRETE FLOORS INSULATION: N/A
    E. FLAME SPREAD AND SMOKE DEVELOPMENT SHALL CONFORM TO CALIFORNIA BUILDING CODE SEC. 720.

8. FACTORY-MADE AIR DUCTS
    A. FACTORY-MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL CONFORM TO THE REQUIREMENTS OF C.M.C. SECTION 601.0.
    B. EACH PORTION OF A FACTORY-MADE AIR DUCT SYSTEM SHALL BE IDENTIFIED BY THE MANUFACTURER WITH A LABEL OR OTHER SUITABLE IDENTIFICATION INDICATING COMPLIANCE WITH C.M.C. SECTION 601.0 AND ITS CLASS DESIGNATION. THESE DUCTS SHALL BE LISTED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING AND THE REQUIREMENTS OF C.M.C. SECTION 601.0.
    C. DUCT SUPPORT FLEX DUCT TO BE SUPPORTED WITH 1-1/2" WIDE x26 GA. GALV. STRAP @ MAX 6'-0" O.C. ATTACH TO RAFTER WITH TWO #8 S.M.S. @ EACH END.
    D. SUPPLY AIR PLENUM TO BE SUPPORTED WITH 1-1/2" WIDE x26 GA. GALV. STRAPS MINIMUM 2 PER PLENUM.
    E. SUPPLY AIR BOX AND DIFFUSERS TO BE SUPPORTED WITH (2) 12 GA. HANGER WIRES TO BOX @ OPPOSITE CORNERS.
    F. SUPPLY AIR BOX AND DIFFUSERS TO BE BRACED WITH (2) 12 GA. SLACK WIRES TO BOX @ OPPOSITE CORNERS. ATTACH SUPPLY AIR DIFFUSERS TO CEILING GRID TO RESIST A LATERAL LOAD EQUAL TO THE WEIGHT OF THE DIFFUSER AND SUPPLY AIR BOX WITH TWO #8 S.M.S.

9. FIREBLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
    A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES;
    B. AT THE CEILING AND FLOOR LEVELS;
    C. AND AT 10-FOOT (3048mm) INTERVALS BOTH VERTICAL AND HORIZONTAL.
    REFERENCE 2019 CBC SECTION 718.

10. THE INTERIOR ENVIRONMENT SHALL BE ASSEMBLED WITH PRODUCTS THAT CONTRIBUTE TO A HEALTHY INDOOR AIR QUALITY (IAQ). THE FOLLOWING SHALL COMPLY TITLE 24, PART 11 ("CAL-GREEN"), SECTION 5.504.4. (SEE SHEET N1.0, SECTION 9C "INTERIOR AIR QUALITY CONTROL")

11. HVAC FILTER
    A. FILTERS SHALL HAVE A "MINIMUM EFFICIENCY REPORTING VALUE" OF 8 (MERV 8) AND SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL, PER 2019 CEC SECTION 5.504.5.3.
    B. INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INCLUDING THE MERV RATING, PER 2019 CEC SECTION 5.504.5.3.1

HVAC SCHEDULES

BARD Q-TEC

HVAC CFM CHART

MODEL #	DESCRIPTION	MAX. CFM	UNIT WEIGHT (LBS.)	EER	COP	CLIMATE ZONE(S)
48GC	GAS/ELECTRIC	1600	559	10.0	3.0	1-13, 16

INSULATION SCHEDULE

INSULATION SCHEDULE

ZONE	WALL	ROOFS		FLOORS (NON-CONCRETE)	CONCRETE FLOORS
		BATTS	OTHER		
1-14, & 15	*R-13	**R-19	***R-1	R-13	-
16	*R-13	**R-19	***R-1	R-13	-

*R-5 RIGID INSULATION TO BE USED OVER METAL FRAMED WALLS
**R-19 w/ 22 GA WIRE @ 16" O.C.
***R-1 MAY BE ACHEIVED w/ POLYSTYRENE OR INSULATION TAPE APPLIED TO TOP FLANGE OF PURLINS, OR EQUAL.

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — ROGER PATRICK HOWE — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

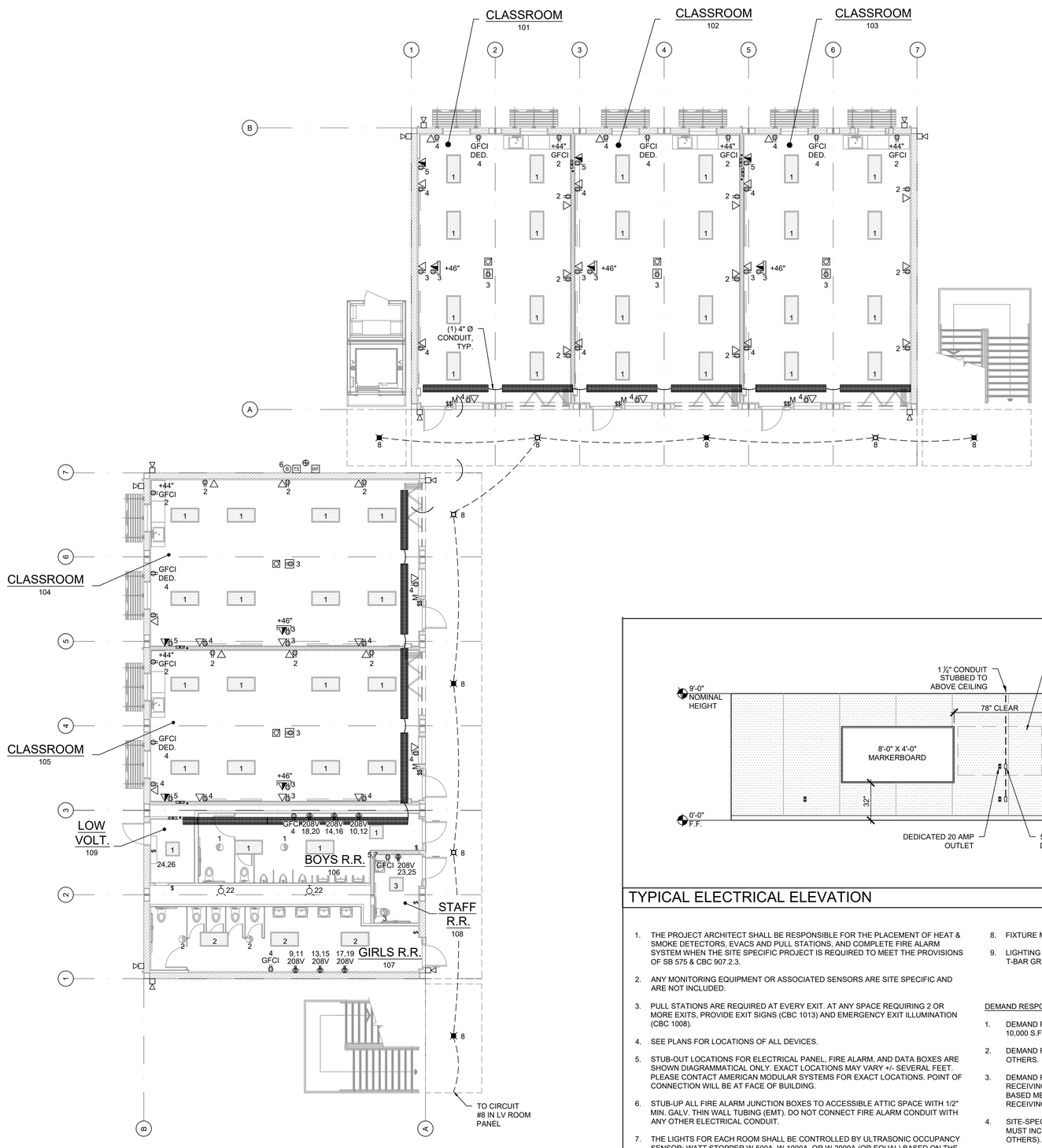
SHEET TITLE:

CEILING NOTE,
MECHANICAL NOTES &
SCHEDULES

SHEET NUMBER:

M1.7

BID SET 10/01/2021



GROUND FLOOR- ELECTRICAL PLAN

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

1

TYPICAL ELECTRICAL ELEVATION

1. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE PLACEMENT OF HEAT & SMOKE DETECTORS, EVACS AND PULL STATIONS, AND COMPLETE FIRE ALARM SYSTEM WHEN THE SITE SPECIFIC PROJECT IS REQUIRED TO MEET THE PROVISIONS OF SB 575 & CBC 907.2.3.
2. ANY MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED.
3. PULL STATIONS ARE REQUIRED AT EVERY EXIT. AT ANY SPACE REQUIRING 2 OR MORE EXITS, PROVIDE EXIT SIGNS (CBC 1013) AND EMERGENCY EXIT ILLUMINATION (CBC 1008).
4. SEE PLANS FOR LOCATIONS OF ALL DEVICES.
5. STUB-OUT LOCATIONS FOR ELECTRICAL PANEL, FIRE ALARM, AND DATA BOXES ARE SHOWN DIAGRAMMATICAL ONLY. EXACT LOCATIONS MAY VARY +/- SEVERAL FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS. POINT OF CONNECTION WILL BE AT FACE OF BUILDING.
6. STUB-UP ALL FIRE ALARM JUNCTION BOXES TO ACCESSIBLE ATTIC SPACE WITH 1/2" MIN. GALV. THIN WALL TUBING (EMT). DO NOT CONNECT FIRE ALARM CONDUIT WITH ANY OTHER ELECTRICAL CONDUIT.
7. THE LIGHTS FOR EACH ROOM SHALL BE CONTROLLED BY ULTRASONIC OCCUPANCY SENSOR: WATT STOPPER W-500A, W-1000A, OR W-2000A (OR EQUAL) BASED ON THE ROOM SIZE, IN CONJUNCTION WITH BI-LEVEL SWITCHING.

   EXCEPTION: SINGLE-STALL BATHROOMS LESS THAN 70 SQUARE FEET, AND CLOSETS LESS THAN 70 SQUARE FEET MAY USE COUNTDOWN TIMER SWITCHES WITH A MAXIMUM SETTING CAPABILITY OF TEN MINUTES TO COMPLY WITH THE AUTOMATIC SHUT-OFF REQUIREMENTS.
8. FIXTURE MOUNTING SHALL COMPLY WITH CALIFORNIA SEISMIC REGULATIONS.
9. LIGHTING FIXTURES MAY BE INSTALLED ROTATED 90° FROM SHOWN TO MATCH T-BAR GRID LAYOUT.

DEMAND RESPONSE CONTROLS

1. DEMAND RESPONSE CONTROLS ARE REQUIRED IN BUILDINGS LARGER THAN 10,000 S.F.
2. DEMAND RESPONSE CONTROLS WHERE REQUIRED ARE TO BE PROVIDED BY OTHERS.
3. DEMAND RESPONSE CONTROLS AND EQUIPMENT SHALL BE CAPABLE OF RECEIVING AND AUTOMATICALLY RESPONDING TO AT LEAST ONE STANDARD BASED MESSAGING PROTOCOL WHICH ENABLES DEMAND RESPONSE AFTER RECEIVING A DEMAND SIGNAL.
4. SITE-SPECIFIC PROJECTS WHICH REQUIRE DEMAND RESPONSE CONTROLS MUST INCLUDE THE SUBMISSION OF FORM NRCC-ELC-O1-E TO DSA (BY OTHERS).

GENERAL NOTES

- ELECTRICAL PANEL - MOUNT FLUSH WITH WALL FINISH, U.O.N.
- INCANDESCENT WALL MOUNTED INTERIOR LIGHT FIXTURE
- EXTERIOR LIGHT FIXTURE @ EACH DOOR, LED OR EQUAL (MAX 35W)
- EXTERIOR SOFFIT MOUNTED LIGHT FIXTURE ENERTRON MODEL 110BSH2X6LED-50 LOW PROFILE LED OR EQUAL (MAX 26W)
- EXTERIOR SOFFIT MOUNTED LIGHT FIXTURE ENERTRON MODEL 110BSH2X6LED-50 LOW PROFILE LED OR EQUAL (MAX 26W) WITH EMERGENCY 90 MINUTE MINIMUM BATTERY BACK-UP.
- UNCONTROLLED-DUPLEX WALL CONVENIENCE OUTLET - MOUNT @ +18" A.F.F. TO CENTERLINE, U.O.N.
- CONTROLLED-DUPLEX WALL CONVENIENCE OUTLET - MOUNT @ +18" A.F.F. TO CENTERLINE, U.O.N. - TO BE CONTROLLED BY OCCUPANCY SENSOR.
- FOURPLEX WALL OUTLET - MOUNT @ +18" A.F.F. TO CENTER LINE - U.O.N.
- WP/GFCI — WEATHER-PROOF GROUND FAULT CIRCUIT INTERRUPT OUTLET - MOUNT @ 18" A.F.F. TO CENTERLINE - U.O.N.
- GFCI — GROUND FAULT CIRCUIT INTERRUPT OUTLET - MOUNT @ 18" A.F.F. TO CENTERLINE - U.O.N.
- 208V — 120/208V DEDICATED OUTLET - COORDINATE INSTALLATION HEIGHT WITH SPECIFIC ITEM
- $ — CONTROLLED-SINGLE POLE LIGHT SWITCHES - MOUNT @ +46" A.F.F. MAX TO TOP OF BOX - HUBBELL PREMIUM, BRYANT HEAVY DUTY, OR LEVITON SPECIFICATIONS GRADE.
- $M — SINGLE POLE SWITCH - MOUNT @ +46" A.F.F. MAX TO TOP OF BOX - FOR MOTORIZED WINDOW
- T — THERMOSTAT - TOP OF BOX MOUNTED @ +46" A.F.F.
- J — JUNCTION BOX - SIZE / LOCATION A.F.F. / TYPE AS NOTED
- J — ELECTRICAL CROSSOVER - J-BOX - ABOVE CEILING - #1- 4"x1", #22- 4"x2"
- B — BOX FOR FIRE RISER BELL- PROVIDE (1) 4" SQ. BOX WITH DOUBLE DEVICE RING AND COVER @ 8'-9" TO CENTER OF BOX- INTERCONNECT WITH WITH FIRE RISER BELL BOX WITH (1) 3/4"Ø CONDUIT (DEVICE BY OTHERS)
- DATA/COMMUNICATION - OUTLET ONLY - 5" SQ BOX WITH SINGLE DEVICE RING AND COVER - MOUNT @ +18" A.F.F. TO CENTERLINE, U.O.N., AND PROVIDE A 3/4" CONDUIT STUBBED ABOVE CEILING - DEVICE BY OTHERS
- DATA/COMMUNICATION - OUTLET ONLY - 4" SQ BOX WITH SINGLE DEVICE RING AND COVER - MOUNT @ +18" A.F.F. TO CENTERLINE, U.O.N., AND PROVIDE A 3/4" CONDUIT STUBBED ABOVE CEILING - DEVICE BY OTHERS
- ULTRASONIC OCCUPANCY SENSOR - MOUNTED TO FINISH CEILING
- SECURITY CAMERA - OUTLET ONLY - PROVIDE (1) 4" SQ. BOX WITH SINGLE DEVICE RING AND COVER MOUNTED AT 10'-0" A.F.F. TO CENTER OF BOX WITH (1) 3/4" DIA CONDUIT STUBBED TO ABOVE CEILING - DEVICES BY OTHERS
- 2'x4' LED DROP IN FIXTURE, MODEL: LSI-SFP24 - 50 WATTS MAX OR EQUAL
- 2'x2' LED DROP IN FIXTURE, MODEL: LSI-SFP22 - 30 WATTS MAX OR EQUAL
- CONDUIT SLEEVE AT MODULE LINE- (1) 4" DIA AT GROUND FLOOR AND (3) 2" DIA AT UPPER FLOOR
- CABLE TRAY MODEL CF 105/300 EZ OR EQUAL INSTALL PER DETAIL 2/E1.3A
- TS — BOX FOR FIR RISER TAMPER SWITCH- PROVIDE (1) 4" SQ. BOX WITH DOUBLE DEVICE RING AND COVER @ 5'-5" TO CENTER OF BOX STUB TO ABOVE CEILING WITH (1) 3/4" Ø CONDUIT (DEVICE BY OTHERS)
- WF — BOX FOR FIRE RISER WATER FLOW SWITCH- PROVIDE (1) 4" SQ. BOX WITH DOUBLE DEVICE RING AND COVER WITH 120V FROM 20A DEDICATED BREAKER @ 5'-5" TO CENTER OF BOX INTERCONNECT WITH FIRE RISER BELL BOX WITH (1) 3/4" Ø CONDUIT (DEVICES BY OTHERS)
- EXTERIOR WALL MOUNTED LIGHT- INTERWIRE FROM DEDICATED BREAKER TO 4" SQUARE BOX IN ATTIC OF LOW ROOM ONLY, CONTROLS AND FINAL WIRING BY OTHERS, MOUNT AT 16'-0" A.F.F.

STANDARD ELECTRICAL SYMBOLS

ENERGY CONTROLS

1. DEMAND RESPONSE CONTROLS:
   REQUIREMENTS PER GENERAL NOTES.
2. AUTOMATIC DAYLIGHTING CONTROLS:
   NOT REQUIRED IN ROOMS WHERE COMBINED INSTALLED LIGHTING POWER IN COMBINED SKYLIT & PRIMARY DAYLIT ZONES ARE <120 WATTS.
3. ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) CONNECTION:
   PER TITLE 24 CODE, "AN EMCS MAY BE INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ONE OR MORE LIGHTING CONTROLS IF IT MEETS THE MINIMUM REQUIREMENTS". PC MAY CONTAIN OCCUPANCY SENSORS AND PHOTOCELL CONTROL LIGHTING, IN THAT CASE, AN EMCS IS NOT REQUIRED FOR THIS PC.

NOTE: ANT MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED.

ENERGY NOTES

American Modular Systems
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www.americanmodular.com

SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT — PATRICK CHEUNG — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

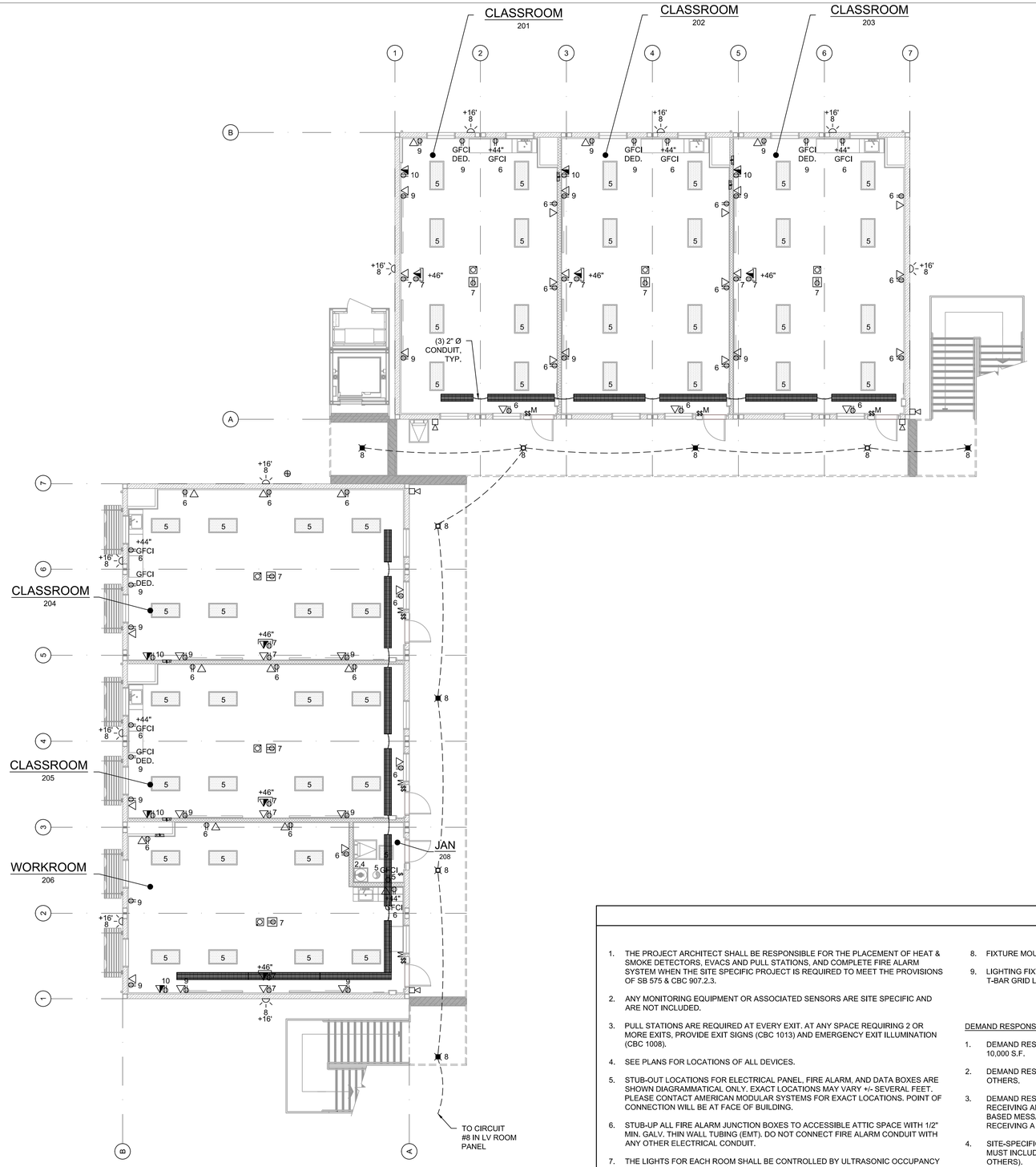
SHEET TITLE:

GROUND FLOOR
ELECTRICAL FLOOR PLAN

SHEET NUMBER:

E1.0

BID SET 10/01/2021



SECOND FLOOR- ELECTRICAL PLAN

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

1

- ELECTRICAL PANEL - MOUNT FLUSH WITH WALL FINISH, U.O.N.
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- EXTERIOR LIGHT FIXTURE @ EACH DOOR, LED OR EQUAL (MAX 35W)
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2. ANY MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED.
3. PULL STATIONS ARE REQUIRED AT EVERY EXIT. AT ANY SPACE REQUIRING 2 OR MORE EXITS, PROVIDE EXIT SIGNS (CBC 1013) AND EMERGENCY EXIT ILLUMINATION (CBC 1008).
4. SEE PLANS FOR LOCATIONS OF ALL DEVICES.
5. STUB-OUT LOCATIONS FOR ELECTRICAL PANEL, FIRE ALARM, AND DATA BOXES ARE SHOWN DIAGRAMMATICAL ONLY. EXACT LOCATIONS MAY VARY +/- SEVERAL FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS. POINT OF CONNECTION WILL BE AT FACE OF BUILDING.
6. STUB-UP ALL FIRE ALARM JUNCTION BOXES TO ACCESSIBLE ATTIC SPACE WITH 1/2" MIN. GALV. THIN WALL TUBING (EMT). DO NOT CONNECT FIRE ALARM CONDUIT WITH ANY OTHER ELECTRICAL CONDUIT.
7. THE LIGHTS FOR EACH ROOM SHALL BE CONTROLLED BY ULTRASONIC OCCUPANCY SENSOR: WATT STOPPER W-500A, W-1000A, OR W-2000A (OR EQUAL) BASED ON THE ROOM SIZE, IN CONJUNCTION WITH BI-LEVEL SWITCHING.

   EXCEPTION: SINGLE-STALL BATHROOMS LESS THAN 70 SQUARE FEET, AND CLOSETS LESS THAN 70 SQUARE FEET MAY USE COUNTDOWN TIMER SWITCHES WITH A MAXIMUM SETTING CAPABILITY OF TEN MINUTES TO COMPLY WITH THE AUTOMATIC SHUT-OFF REQUIREMENTS.
8. FIXTURE MOUNTING SHALL COMPLY WITH CALIFORNIA SEISMIC REGULATIONS.
9. LIGHTING FIXTURES MAY BE INSTALLED ROTATED 90° FROM SHOWN TO MATCH T-BAR GRID LAYOUT.

DEMAND RESPONSE CONTROLS

1. DEMAND RESPONSE CONTROLS ARE REQUIRED IN BUILDINGS LARGER THAN 10,000 S.F.
2. DEMAND RESPONSE CONTROLS WHERE REQUIRED ARE TO BE PROVIDED BY OTHERS.
3. DEMAND RESPONSE CONTROLS AND EQUIPMENT SHALL BE CAPABLE OF RECEIVING AND AUTOMATICALLY RESPONDING TO AT LEAST ONE STANDARD BASED MESSAGING PROTOCOL WHICH ENABLES DEMAND RESPONSE AFTER RECEIVING A DEMAND SIGNAL.
4. SITE-SPECIFIC PROJECTS WHICH REQUIRE DEMAND RESPONSE CONTROLS MUST INCLUDE THE SUBMISSION OF FORM NRCC-ELC-O1-E TO DSA (BY OTHERS).

ENERGY NOTES

ENERGY CONTROLS

1. DEMAND RESPONSE CONTROLS:
   REQUIREMENTS PER GENERAL NOTES.
2. AUTOMATIC DAYLIGHTING CONTROLS:
   NOT REQUIRED IN ROOMS WHERE COMBINED INSTALLED LIGHTING POWER IN COMBINED SKYLIT & PRIMARY DAYLIT ZONES ARE <120 WATTS.
3. ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) CONNECTION:
   PER TITLE 24 CODE, "AN EMCS MAY BE INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ONE OR MORE LIGHTING CONTROLS IF IT MEETS THE MINIMUM REQUIREMENTS". PC MAY CONTAIN OCCUPANCY SENSORS AND PHOTOCELL CONTROL LIGHTING, IN THAT CASE, AN EMCS IS NOT REQUIRED FOR THIS PC.

NOTE: ANT MONITORING EQUIPMENT OR ASSOCIATED SENSORS ARE SITE SPECIFIC AND ARE NOT INCLUDED.

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD

LICENSED ARCHITECT — REGISTERED PROFESSIONAL — PATRICK GOWEN — No. C12631 — Ren. 3-31-21 — STATE OF CALIFORNIA

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

REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	12/04/20
PROJECT NO:	1614-20

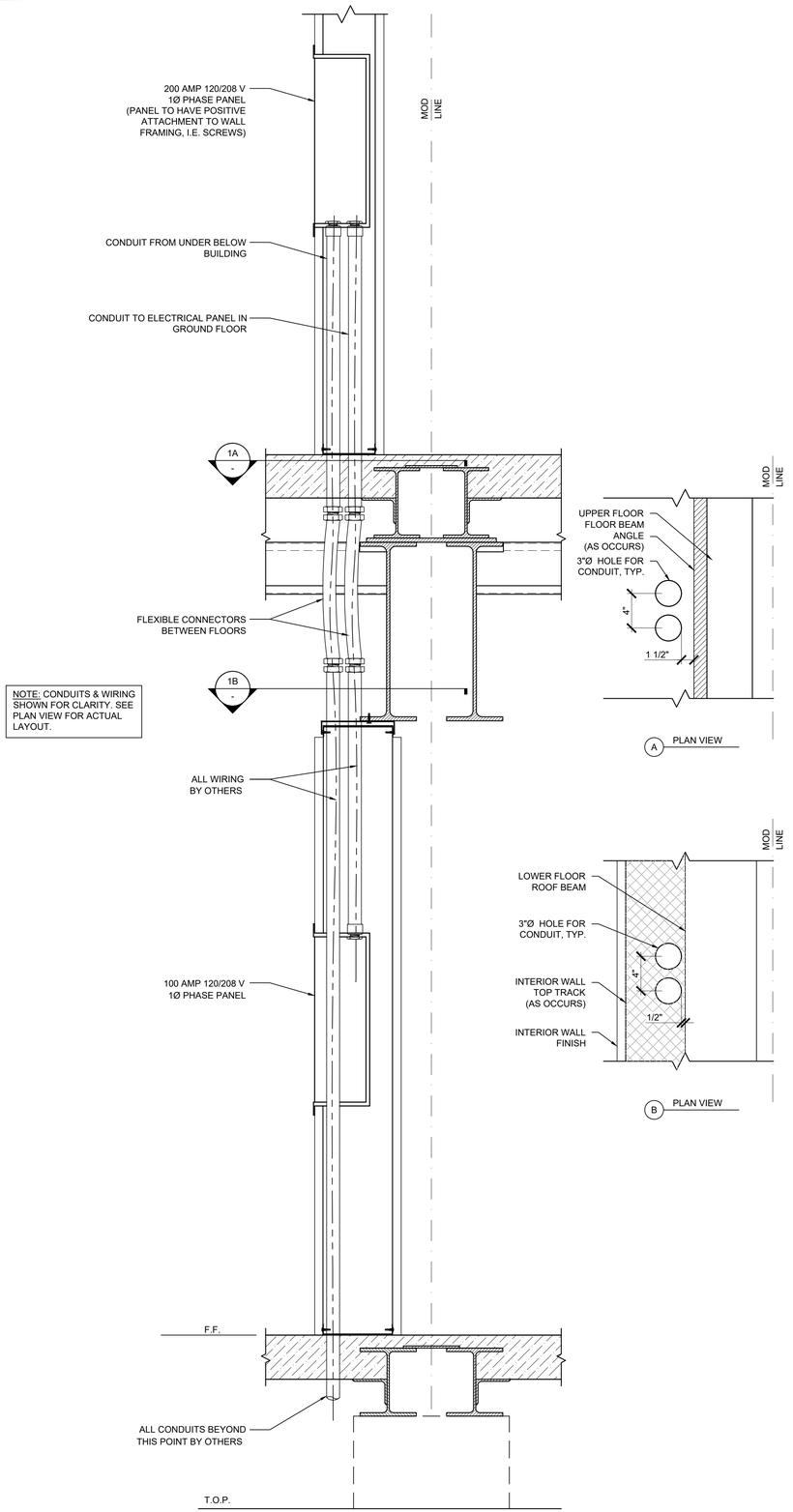
SHEET TITLE:

GROUND FLOOR
ELECTRICAL FLOOR PLAN

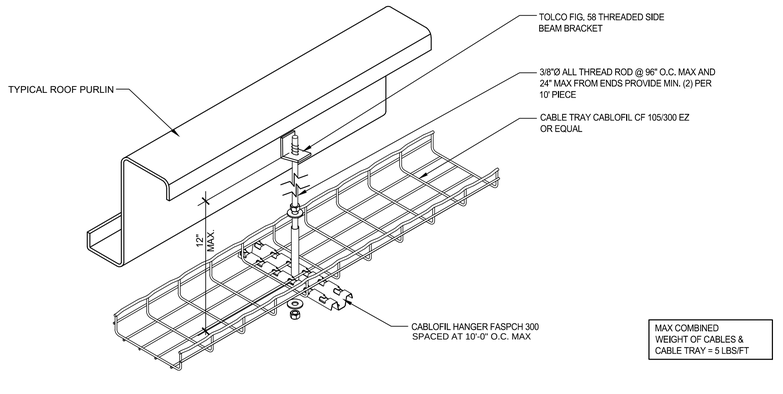
SHEET NUMBER:

E1.1

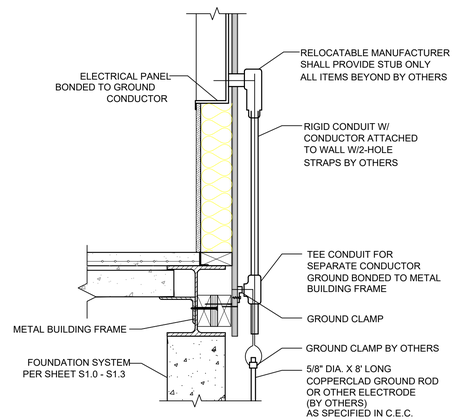
BID SET 10/01/2021



ELECTRICAL PANEL CONNECTION DETAIL — SCALE: 1 1/2"= 1' - 0" — 1



CABLE TRAY DETAIL — 2



SIZE OF CONDUCTORS SHALL COMPLY W/ C.E.C. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL & METAL BUILDING FRAME (CEC). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10' INTO THE SOIL IF AVAILABLE (CEC).

ELECTRICAL BOND MODULES TOGETHER W/ #8 CU @ MODLINE BY MANUFACTURER. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS (CEC) AS REQUIRED. GROUNDING DETAIL PER DSA IR E-1. INSPECTOR TO WITNESS GROUNDING TEST.

GROUNDING DETAIL — SCALE: 1 1/2" = 1' - 0" — 3

FIRE ALARM SYSTEM

1. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE AND THE CALIFORNIA BUILDING CODE.
2. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTINGS FOR EACH COMPONENT OF THE SYSTEM, HAVE BEEN APPROVED BY DSA.
3. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY.
4. JUNCTION BOXES - GALVANIZED SHEET METAL, SQUARE OR RECTANGULAR WITH BLANK COVERS. LOCATE ONE BOX AT REAR OF BUILDING NEAR MAIN ELECTRICAL PANEL @ +18" ABOVE FINISH FLOOR FOR FUTURE CONNECTION.
5. COVERS - INSTALL GASKETED, METAL, WATERPROOF, FINISH COVERS AT EXTERIOR LOCATIONS. INSTALL FINISH COVERS AT INTERIOR LOCATIONS.
6. THE AUTOMATIC ALARM SYSTEM SHALL BE INSTALLED, TESTED, AND MAINTAINED IN ACCORDANCE WITH THE STATE FIRE MARSHALL'S REGULATIONS (CBC SEC. 907.2.3) AND THE 2019 EDITION OF NFPA 72.
7. THE LOCATION OF AUTOMATIC DETECTORS, MANUAL STATIONS AND OTHER FIRE ALARM EQUIPMENT AND DEVICES, AS SHOWN ON PLAN, ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE SHOP DRAWINGS WHICH ARE REQUIRED FOR REVIEW AND APPROVAL.
8. ALARM-INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15 dBA ABOVE THE AVERAGE AMBIENT NOISE LEVELS OR 5dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5' ABOVE THE FLOOR. AMBIENT NOISE LEVELS MEANS THE LEVEL WHICH CAN NORMALLY BE EXPECTED WHEN THE FACILITY, BUILDING, ROOM, OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS (NFPA 72, SEC. 18.4.1).
9. THE ALARM SYSTEM SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING TWO FLASHES PER SECOND (2 HZ), NOR BE LESS THAN ONE FLASH EVERY SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED (NFPA 72, SEC. 18.5.3).
10. AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72, CHAPTER 26. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER. IF TESTING RESULTS DETERMINE FIRE ALARM AUDIBILITY DOES NOT MEET 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL FIRE ALARM SIGNALING DEVICES MAY BE REQUIRED BY THE ENFORCING AGENCY.

GENERAL NOTES

1. GROUNDING ELECTRODE CONDUCTOR SIZED PER CEC.
2. PROVIDE BONDS TO BLDG. STEEL & PANEL (#8 CU)
3. PANEL A LISTED FOR USE AS SERVICE EQUIPMENT.

ELECTRICAL NOTES:

1. ELECTRICAL SERVICE DROP AND CONNECTIONS SUPPLIED BY OTHERS.
2. MANUFACTURER TO PROVIDE STUB-OUT FROM BACK OF ELECTRICAL PANEL THROUGH THE EXTERIOR WALL OR TO BELOW FLOOR FOR RECEIVING EITHER UNDERGROUND OR OVERHEAD SERVICE & FITTING FOR GROUNDING CABLE.
3. ELECTRICAL PANEL BOARD SHALL BE RECESS MOUNTED INSIDE THE BUILDING, SIZED TO ACCOMMODATE ALL CONNECTED LOADS INCLUDING SPACES AS SHOWN. OVERCURRENT PROTECTIVE DEVICES IN THE PANEL BOARDS SHALL HAVE ADEQUATE SHORT CIRCUIT INTERRUPTING CAPACITY. ALL BUSES INCLUDING BUS SHALL BE COPPER OR ALUMINUM.
4. CLOCK - 12" DIAL CLOCK ON CLOCK OUTLET.
   A. CLOCK SHALL BE GENERAL ELECTRIC MODEL 2912 129V 60 CYCLE
   B. CLOCK OUTLET SHALL BE BRYANT #2828 OR EQUAL WITH SEPARABLE HANGING CLIP & APPD RECEPT.
5. THE H.V.A.C. UNIT FEEDER CIRCUIT - PANEL CIRCUIT BREAKER, FEEDER WIRE, UNIT DISCONNECT AND FUSES (WHERE USED) - IS TO BE COORDINATED WITH THE NAME PLATE DATA AT THE TIME OF MANUFACTURE. H.V.A.C. UNITS HAVING KVA RATINGS LARGER THAN THAT INDICATED ON THIS PANEL SCHEDULE WILL NOT BE ALLOWED TO BE INSTALLED ON THIS BUILDING.
6. IF 60 DEGREES C WIRE IS TO BE USED IN THIS INSTALLATION, CALCULATIONS DEMONSTRATING AMPACITY SHALL BE PROVIDED ON THE DRAWING.

DEMAND RESPONSE CONTROLS

1. DEMAND RESPONSE CONTROLS ARE REQUIRED IN BUILDINGS LARGER THAN 10,000 S.F.
2. DEMAND RESPONSE CONTROLS WHERE REQUIRED ARE TO BE PROVIDED BY OTHERS.
3. DEMAND RESPONSE CONTROLS AND EQUIPMENT SHALL BE CAPABLE OF RECEIVING AND AUTOMATICALLY RESPONDING TO AT LEAST ONE STANDARD BASED MESSAGING PROTOCOL WHICH ENABLES DEMAND RESPONSE AFTER RECEIVING A DEMAND SIGNAL.
4. SITE-SPECIFIC PROJECTS WHICH REQUIRE DEMAND RESPONSE CONTROLS MUST INCLUDE THE SUBMITTION OF FORM NRCC-ELC-O1-E TO DSA (BY OTHERS).

GENERAL NOTES

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SET NAME

(2) 72'x40' 2 STORY
CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — PATRICK C. JOHNSON — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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

REVISIONS

1	
2	
3	
4	

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

ELECTRICAL NOTES
& DETAILS

SHEET NUMBER:

E1.2

BID SET 10/01/2021

Panel:	A-1			PHASE:		VOLTS:		MAIN (AMPS):			BUSS (AMPS):			LOCATION:		FEED:				MOUNTING:
				SINGLE		120/208		40			100			INTERIOR		TOP - FROM PANEL ABOVE				RECESSED
OBJECT DESCRIPTION	WATTS PER	QTY	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT #	LEG A	LEG B	CKT #	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	QTY	WATTS PER	OBJECT DESCRIPTION
CLASSROOM LIGHTS	50	8		400		20	1	#12	1	X		2	#12	1	20	720			4	180	RECEPTS
MONITOR OUTLET	380	1			380	20	1	#12	3		X	4	#12	1	20		900		5	180	RECEPTS
DED. RECEPT	360	1		360		20	1	#12	5	X		6	#12	1	20	180			1	180	FIRE BELL ATCLER 104
					0				7		X	8					0				
				0					9	X		10				0					
					0				11		X	12					0				
				0					13	X		14				0					
					0				15		X	16					0				
				0					17	X		18				0					
					0				19		X	20					0				
				0					21	X		22				0					
					0				23		X	24					0				
				0					25	X		26				0					
					0				27		X	28					0				
				0					29	X		30				0					
	LEG TOTALS			760	380											900	900	LEG TOTALS			
LCL=0+2940=2940																					
TOTAL WATTS: 2940								LEG BALANCE: 12.9%										TOTAL AMPS: 12.25			

LOAD PANEL CALCULATIONS- TYPICAL LOWER CLASSROOM 1

Panel:	ELECTRICAL ROOM			PHASE:		VOLTS:		MAIN (AMPS):			BUSS (AMPS):			LOCATION:		FEED:				MOUNTING:
				SINGLE		120/208		100			125			INTERIOR		BOTTOM - BELOW FLOOR				RECESSED
OBJECT DESCRIPTION	WATTS PER	QTY	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT #	LEG A	LEG B	CKT #	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	QTY	WATTS PER	OBJECT DESCRIPTION
BOYS R.R. LIGHTS/EXHAUST	550	1		550		20	1	#12	1	X		2	#12	1	20	550			1	550	GIRLS R.R. LIGHTS/EXHAUST
STAFF R.R. LIGHTS/EXHAUST	150	1			150	20	1	#12	3		X	4	#12	1	20		180		1	180	GFCI GIRLS R.R.
WATER HEATER	900	1		900		20	2	#12	5	X		6	#12	1	20	720			4	180	ELECT ROOM REC
-	900	-			900	-	-	-	7		X	8	#12	2	20		701		15	26	SOFFIT/EXT. LIGHTS
HAND DRYER G/R LS R.R.	745	1		745		20	2	#12	9	X		10	#12	2	20	745			1	745	HAND DRYER BOYS R.R.
-	745	-			745	-	-	-	11		X	12	-	-	-		745		-	745	-
HAND DRYER G/R LS R.R.	745	1		745		20	2	#12	13	X		14	#12	2	20	745			1	745	HAND DRYER BOYS R.R.
-	745	-			745	-	-	-	15		X	16	-	-	-		745		-	745	-
HAND DRYER G/R LS R.R.	745	1		745		20	2	#12	17	X		18	#12	2	20	745			1	745	HAND DRYER BOYS R.R.
-	745	-			745	-	-	-	19		X	20	-	-	-		745		-	745	-
GFCI BOYS R.R.	180	1		180		20	1	#12	21	X		22	#12	1	20	200			2	100	PLUMBING CHASE LIGHTS
HAND DRYER STAFF R.R.	745	1			745	20	2	#12	23		X	24	#12	2	15		1560		1	1560	MINI SPLIT UNIT
-	745	-		745		-	-	-	25	X		26	-	-	-	1560			-	1560	-
					0				27		X	28					0				
				0					29	X		30				0					
	LEG TOTALS			4610	4030											5265	4676	LEG TOTALS			
LCL=0+18581=18581																					
TOTAL WATTS: 18581								LEG BALANCE: 6.3%										TOTAL AMPS: 77.42			

LOAD PANEL CALCULATIONS- LOW VOLTAGE ROOM 2

Panel:	TYPICAL UPPER CLASSROOM			PHASE:		VOLTS:		MAIN (AMPS):			BUSS (AMPS):			LOCATION:		FEED:				MOUNTING:
				SINGLE		120/208		200			225			INTERIOR		BOTTOM - BELOW FLOOR				RECESSED
OBJECT DESCRIPTION	WATTS PER	QTY	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT #	LEG A	LEG B	CKT #	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	QTY	WATTS PER	OBJECT DESCRIPTION
HVAC UPPER FLOOR	4160	1	X	4160		50	2	#6	1	X		2	#6	2	50	4160		X	1	4160	HVAC LOWER FLOOR
-	4160	-	X		4160	-	-	-	3		X	4	-	-	-		4160	X	-	4160	-
CLASSROOM LIGHTS	50	8		400		20	1	#12	5	X		6	#12	1	20	900			5	180	RECEPTS
MONITOR OUTLET	380	1			380	20	1	#12	7		X	8	#12	1	20		360		2	180	HVAC RECEPT
RECEPTS	180	4		720		20	1	#12	9	X		10	#12	1	20	0			1	360	DED. RECEPT
					0				11		X	12					0				
				0					13	X		14				0					
					0				15		X	16	#8	2	40		1300		1	1300	ELECTRICAL PANEL AT GROUND FLOOR
				0					17	X		18	-	-	-	1280			1	1280	-
					0				19		X	20					0				
				0					21	X		22				0					
					0				23		X	24					0				
				0					25	X		26				0					
					0				27		X	28					0				
				0					29	X		30				0					
	LEG TOTALS			5280	4540											6340	5820	LEG TOTALS			
LCL=4160+21980=26140																					
TOTAL WATTS: 26140								LEG BALANCE: 5.7%										TOTAL AMPS: 108.92			

LOAD PANEL CALCULATIONS - TYPICAL UPPER CLASSROOM 3

Panel:	WORKROOM			PHASE:		VOLTS:		MAIN (AMPS):			BUSS (AMPS):			LOCATION:		FEED:				MOUNTING:
				SINGLE		120/208		100			125			INTERIOR		BOTTOM - BELOW FLOOR				RECESSED
OBJECT DESCRIPTION	WATTS PER	QTY	LCL	WATTS A	WATTS B	BRK	POLE	WIRE SIZE	CKT #	LEG A	LEG B	CKT #	WIRE SIZE	POLE	BRK	WATTS A	WATTS B	LCL	QTY	WATTS PER	OBJECT DESCRIPTION
HVAC UPPER FLOOR	4160	1	X	4160		50	2	#6	1	X		2	#10	2	30	1500			1	1500	WATER HEATER
-	4160	-	X		4160	-	-	-	3		X	4	-	-	-		1500		-	1500	WATER HEATER
WORKROOM LIGHTS	50	7		350		20	1	#12	5	X		6	#12	1	20	900			5	180	RECEPTS
RECEPTS	180	3			540	20	1	#12	7		X	8	#12	1	20		360		2	180	HVAC RECEPT
RECEPTS	180	4		720		20	1	#12	9	X		10	#12	1	20	0			1	180	DED RECEPT
SPARE		1			1	20	1	#12	11		X	12	#12	1	20		430		1	430	JANITOR'S ROOM
				0					13	X		14				0					
					0				15		X	16									
				0					17	X		18				0					
					0				19		X	20					0				
				0					21	X		22				0					
					0				23		X	24					0				
				0					25	X		26				0					
					0				27		X	28					0				
				0					29	X		30				0					
	LEG TOTALS			5230	4701											2400	2290	LEG TOTALS			
LCL=2080+14621=16701																					
TOTAL WATTS: 16701								LEG BALANCE: 4.4%										TOTAL AMPS: 69.59			

NOTE:
FIRE ALARM DEDICATED CIRCUIT SHALL BE IDENTIFIED WITH A RED MARKED DISCONNECT WITH LOCK-ON CAPABILITY (NFPA 72 10.6.5.2)

LOAD PANEL CALCULATIONS - WORKROOM 4

FIRE ALARM SYSTEM

1. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE AND THE CALIFORNIA BUILDING CODE.
2. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTINGS FOR EACH COMPONENT OF THE SYSTEM, HAVE BEEN APPROVED BY DSA.
3. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY.
4. JUNCTION BOXES - GALVANIZED SHEET METAL, SQUARE OR RECTANGULAR WITH BLANK COVERS. LOCATE ONE BOX AT REAR OF BUILDING NEAR MAIN ELECTRICAL PANEL @ +18" ABOVE FINISH FLOOR FOR FUTURE CONNECTION.
5. COVERS - INSTALL GASKETED, METAL, WATERPROOF, FINISH COVERS AT EXTERIOR LOCATIONS. INSTALL FINISH COVERS AT INTERIOR LOCATIONS.
6. THE AUTOMATIC ALARM SYSTEM SHALL BE INSTALLED, TESTED, AND MAINTAINED IN ACCORDANCE WITH THE STATE FIRE MARSHALL'S REGULATIONS (CBC SEC. 907.2.3) AND THE 2019 EDITION OF NFPA 72.
7. THE LOCATION OF AUTOMATIC DETECTORS, MANUAL STATIONS AND OTHER FIRE ALARM EQUIPMENT AND DEVICES, AS SHOWN ON PLAN, ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE SHOP DRAWINGS WHICH ARE REQUIRED FOR REVIEW AND APPROVAL.
8. ALARM-INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15 dBA ABOVE THE AVERAGE AMBIENT NOISE LEVELS OR 5dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5' ABOVE THE FLOOR. AMBIENT NOISE LEVELS MEANS THE LEVEL WHICH CAN NORMALLY BE EXPECTED WHEN THE FACILITY, BUILDING, ROOM, OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS (NFPA 72, SEC. 18.4.1).
9. THE ALARM SYSTEM SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING TWO FLASHES PER SECOND (2 HZ), NOR BE LESS THAN ONE FLASH EVERY SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED (NFPA 72, SEC. 18.5.3).
10. AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72, CHAPTER 26. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER. IF TESTING RESULTS DETERMINE FIRE ALARM AUDIBILITY DOES NOT MEET 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL FIRE ALARM SIGNALING DEVICES MAY BE REQUIRED BY THE ENFORCING AGENCY.

GENERAL NOTES

1. GROUNDING ELECTRODE CONDUCTOR SIZED PER CEC.
2. PROVIDE BONDS TO BLDG. STEEL & PANEL (#8 CU)
3. PANEL A LISTED FOR USE AS SERVICE EQUIPMENT.

ELECTRICAL NOTES:

1. ELECTRICAL SERVICE DROP AND CONNECTIONS SUPPLIED BY OTHERS.
2. MANUFACTURER TO PROVIDE STUB-OUT FROM BACK OF ELECTRICAL PANEL THROUGH THE EXTERIOR WALL OR TO BELOW FLOOR FOR RECEIVING EITHER UNDERGROUND OR OVERHEAD SERVICE & FITTING FOR GROUNDING CABLE.
3. ELECTRICAL PANEL BOARD SHALL BE RECESS MOUNTED INSIDE THE BUILDING, SIZED TO ACCOMMODATE ALL CONNECTED LOADS INCLUDING SPACES AS SHOWN. OVERCURRENT PROTECTIVE DEVICES IN THE PANEL BOARDS SHALL HAVE ADEQUATE SHORT CIRCUIT INTERRUPTING CAPACITY. ALL BUSES INCLUDING BUS SHALL BE COPPER OR ALUMINUM.
4. CLOCK - 12" DIAL CLOCK ON CLOCK OUTLET.
   A. CLOCK SHALL BE GENERAL ELECTRIC MODEL 2912 129V 60 CYCLE
   B. CLOCK OUTLET SHALL BE BRYANT #2828 OR EQUAL WITH SEPARABLE HANGING CLIP & APPD RECEPT.
5. THE H.V.A.C. UNIT FEEDER CIRCUIT - PANEL CIRCUIT BREAKER, FEEDER WIRE, UNIT DISCONNECT AND FUSES (WHERE USED) - IS TO BE COORDINATED WITH THE NAME PLATE DATA AT THE TIME OF MANUFACTURE. H.V.A.C. UNITS HAVING KVA RATINGS LARGER THAN THAT INDICATED ON THIS PANEL SCHEDULE WILL NOT BE ALLOWED TO BE INSTALLED ON THIS BUILDING.
6. IF 60 DEGREES C WIRE IS TO BE USED IN THIS INSTALLATION, CALCULATIONS DEMONSTRATING AMPACITY SHALL BE PROVIDED ON THE DRAWING.

DEMAND RESPONSE CONTROLS

1. DEMAND RESPONSE CONTROLS ARE REQUIRED IN BUILDINGS LARGER THAN 10,000 S.F.
2. DEMAND RESPONSE CONTROLS WHERE REQUIRED ARE TO BE PROVIDED BY OTHERS.
3. DEMAND RESPONSE CONTROLS AND EQUIPMENT SHALL BE CAPABLE OF RECEIVING AND AUTOMATICALLY RESPONDING TO AT LEAST ONE STANDARD BASED MESSAGING PROTOCOL WHICH ENABLES DEMAND RESPONSE AFTER RECEIVING A DEMAND SIGNAL.
4. SITE-SPECIFIC PROJECTS WHICH REQUIRE DEMAND RESPONSE CONTROLS MUST INCLUDE THE SUBMITTION OF FORM NRCC-ELC-O1-E TO DSA (BY OTHERS).

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SET NAME

(2) 72'x40' 2 STORY CLASSROOM BUILDINGS

SITE SPECIFIC PROJECT NAME

GLENDALE USD
GLENOAKS
ELEMENTARY SCHOOL

MANUFACTURER PROFESSIONAL OF RECORD ON PC

LICENSED ARCHITECT — GREGORY PATRICK KNOX — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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

REVISIONS

1
2
3
4

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

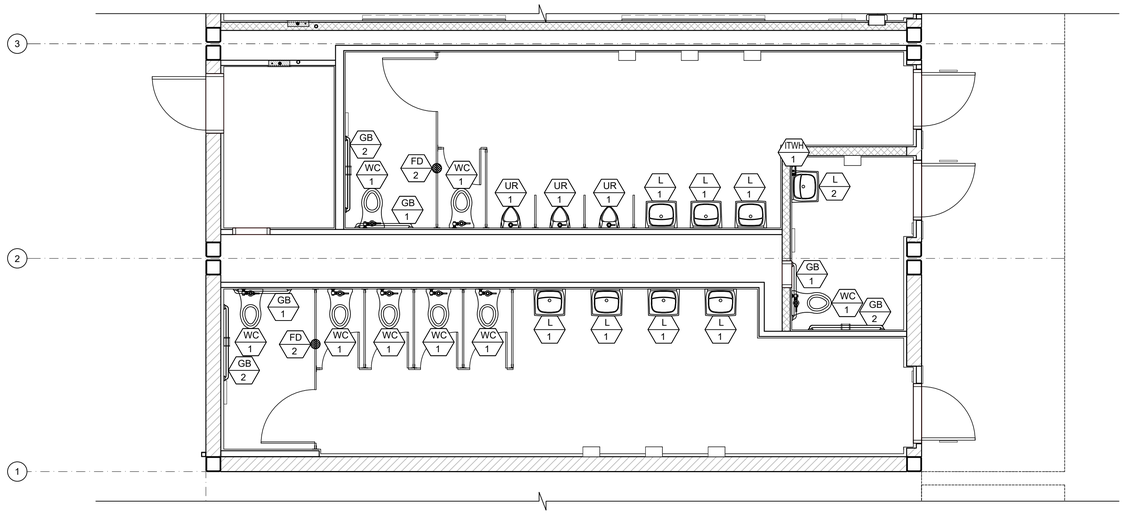
SHEET TITLE:

ELECTRICAL NOTES & DETAILS

SHEET NUMBER:

E1.3

BID SET 10/01/2021

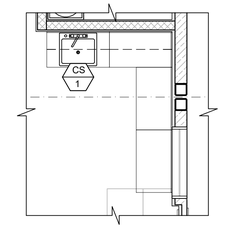


BOYS, GIRLS & STAFF R.R. PLUMBING PLAN — SCALE : 1/4"=1'-0" — 1

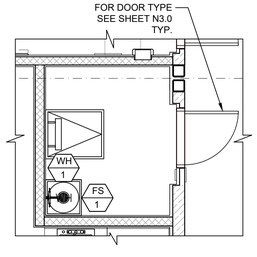
MARK	FIXTURE[1]	TYPE AT KINDERGARTEN	TYPE AT ELEMENTARY	TYPE AT ADULT	REMARKS
WC 1 (2)	WATER CLOSET	CANNOT USE	WALL MOUNT TYPE KOHLER 'KINGSTON' MODEL K-4325 OR EQUAL. LOWEST AT 15" A.F.F. - FLOW RATE OF 1.28 G.P.F.	WALL MOUNT TYPE KOHLER 'KINGSTON' MODEL K-4325 OR EQUAL. LOWEST AT 15" A.F.F. - FLOW RATE OF 1.28 G.P.F.	FLUSH VALVE ZURN MODEL Z6000AV-HET - 1.28 G.P.F OR EQUAL. LOCATE AS SPECIFIED ON FLOOR PLANS. MOUNT ACCESSIBLE FIXTURES PER SCHEDULE 7/P2.0.
L 1	BOYS/GIRLS LAVATORY	KOHLER 'KINGSTON' MODEL K-2007-0			BOYS/GIRLS RESTROOM- TOUCHLESS FAUCET SLOAN MODEL SF-2150-4-BDM OR EQUAL - COLD WATER ONLY - SINGLE SPOUT MOUNT AS SPECIFIED IN FLOOR PLANS. MOUNT ACCESSIBLE FIXTURES PER SCHEDULE 7/P2.0 - FLOW RATE OF 0.5 G.P.M.
L 2	ADULT LAVATORY	KOHLER 'KINGSTON' MODEL K-2005-0			ADULT RESTROOM - TOUCHLESS FAUCET SLOAN MODEL SF-2150-4-BDM OR EQUAL HOTCOLD WATER - 4" ON CENTER HOLE. MOUNT AS SPECIFIED IN FLOOR PLANS. MOUNT ACCESSIBLE FIXTURES PER SCHEDULE 7/P2.0 - FLOW RATE OF 0.5 G.P.M.
UR 1	URINAL	WALL MOUNT TYPE KOHLER MODEL DEXTER K-5452-ET-0 OR EQUAL FLOW RATE = 0.125 gpf			FLUSH VALVE ZURN MODEL Z6003-ULF (0.125gpf) OR EQUAL. MOUNT AS SPECIFIED IN FLOOR PLANS. MOUNT ACCESSIBLE FIXTURES PER SCHEDULE 7/P2.0
M 1	MIRROR	WALL MOUNT TYPE BOBRICK MODEL B165 18X30 OR EQUAL			MOUNT AS SPECIFIED IN FLOOR PLANS. MOUNT ACCESSIBLE MIRROR PER SCHEDULE 7/P2.0
GB 1	36" GRAB BARS	WALL MOUNT TYPE CREATIVE SPECIALTIES INTERNATIONAL MODEL 8736 & 8748 (1 1/4" CONCEALED SCREW 36"& 48") OR EQUAL			18 GA. 304 STAINLESS STEEL SATIN FINISH MOUNT AS SPECIFIED IN FLOOR PLANS AND PER SCHEDULE 7/P2.0. (STRUCTURAL STRENGTH OF GRAB BARS 250# MIN.)
GB 2	48" GRAB BARS				
iTWH 1	INSTANT-TEMP WATER HEATER	CHRONOMITE INSTANT-TEMP WATER HEATER MODEL M20L/240 INSTANT SINGLE PHASE 104"			CHRONOMITE MODEL M20L/208 OR EQUAL
FS 1	CUSTODIAN SINK	FLORESTONE FLOOR SINK MOLDED MOP RECEPTORS MODEL MSR-2424 W/ 3" DRAIN OR EQUAL			ZURN 843-MI-RC OR EQUAL
FD 2	FLOOR DRAIN	CONCRETE FLOOR DRAIN ZURN MODEL P415-CC W/ STANDARD GRATE ZURN 33160-002 OR EQUAL			LOCATE AS SPECIFIED ON FLOOR PLANS. (FLOOR DRAIN TO BE USED ON CONCRETE ONLY.)
CS 1	CLASSROOM SINK	JUST MODEL CRA-ADA-1928-A-GR OR EQUAL			FAUCET - ZERN MODEL Z2871-B4-XL W/WRIST BLADES. LOCATE AS SPECIFIED ON FLOOR PLANS. MOUNT ACCESSIBLE FIXTURES PER SCHEDULE 7/P2.0
WH 1	WATER HEATER	RHEEM 20 GALLON ELECTRIC WATER HEATER MODEL PROE20-1-RH-POU 240 VOLT SINGLE PHASE			(MAX WATER HEATER WEIGHT) PER 6/M1.4 OR 1/P.20
HB 1	HOSE BIBB	RECESSED HOSE BIBB WOODFORD MODEL B75CH OR EQUAL			LOCATE AS SPECIFIED ON FLOOR PLANS.

NOTES:
1. ALL WATER FIXTURES MUST MEET REQUIREMENTS OF CAL-GREEN TITLE 24, PART 11, SECTION 5.303.3 "WATER CONSERVING PLUMBING FIXTURES & FITTINGS".

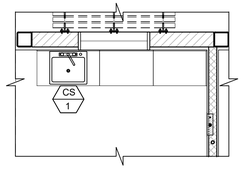
PLUMBING FIXTURE SCHEDULE



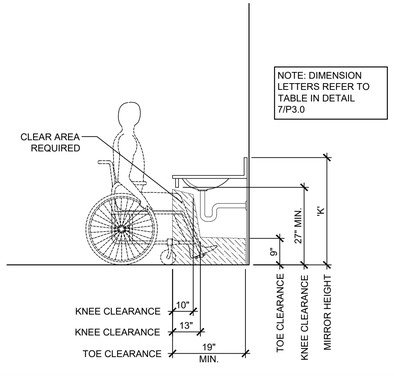
TYP. WORKROOM SINK PLAN — SCALE : 1/4"=1'-0" — 3



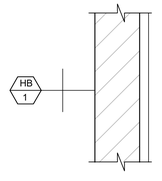
JANITORS ROOM PLAN — 4



TYP. CLASSROOM SINK PLAN — SCALE : 1/4"=1'-0" — 5



ACCESIBLE CLASSROOM SINK — NOT TO SCALE — 6



TYP. HOSE BIBB — SCALE: 3/4" = 1'-0" — 7

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SET NAME

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LICENSED ARCHITECT — PATRICK CHAN — No. C12631 — Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	03/15/21
PROJECT NO:	1613-20

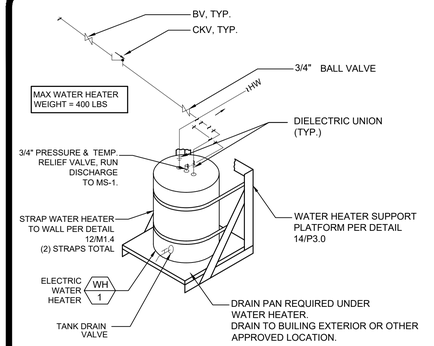
SHEET TITLE:

RESTROOM OPTION
PLUMBING PLANS
& FIXTURE SCHEDULE

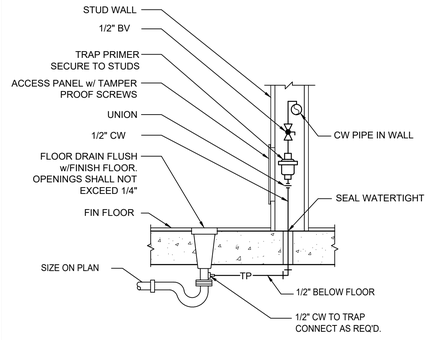
SHEET NUMBER:

P1.0

BID SET 10/01/2021

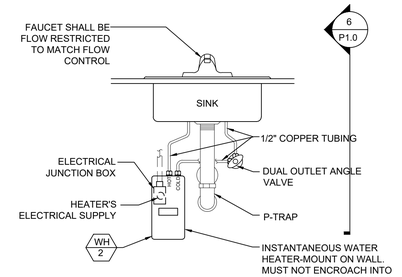


WATER HEATER SUPPORT DETAIL — SCALE : 3"=1'-0" — 1



TRAP PRIMER DETAIL — SCALE : 3"=1'-0" — 2

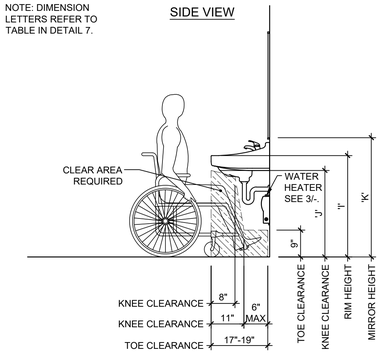
NOTE:
INSULATE WATER SUPPLY AND DRAIN PIPING AT ACCESSIBLE LAVATORIES WITH "TRUEBRO® LAV GUARD 2" OR "TRUEBRO® SOFT GUARD PLUS" SHIELDS



INSTANT WATER HEATER DETAIL — SCALE : 3"=1'-0" — 3

NOTE: DIMENSION LETTERS REFER TO TABLE IN DETAIL 7.

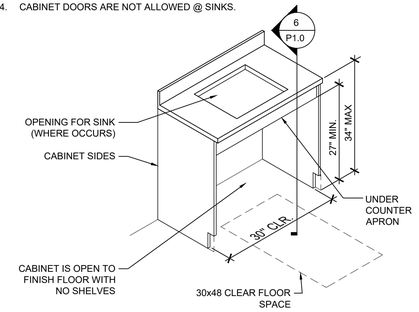
SIDE VIEW



LAVATORY CLEARANCES — SCALE: 1/2" = 1'-0" — 4

NOT USED — N.T.S. — 5

NOTES:
1. MODIFY BASE AS SHOWN FOR ADULT WHEELCHAIR ACCESS.
2. CABINET IS FOR ADULT USE ONLY.
3. ALL EXTERIOR SURFACES TO BE PLASTIC LAMINATE.
4. CABINET DOORS ARE NOT ALLOWED @ SINKS.



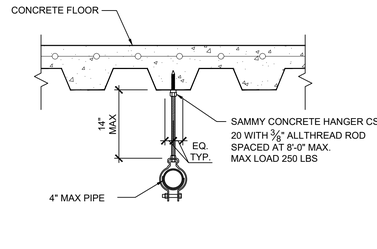
ACCESSIBLE CABINET ELEVATION — N.T.S. — 6

HEIGHTS FOR ACCESSIBLE FEATURES IN TOILET FACILITIES

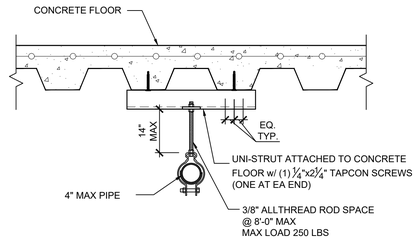
	FIXTURE & MEASUREMENT POINT	AGES 9-12	AGES 13 -ADULT	NOTES
A	TOILET, CENTERLINE FROM FACE OF WALL	15" TO 18" SUGGESTED	17" MIN. TO 18" MAX.	
B	TOILET, TOP OF SEAT HEIGHT	15" TO 17" SUGGESTED	17" MIN. TO 19" MAX.	
C	TOILET, TOP OF FLUSH CONTROLS	36" MAX.	44" MAX.	FLUSH CONTROLS SHALL BE LOCATED ON OPEN SIDE OF TOILET.
D	GRAB BAR, TOP OF BAR	25" TO 27" SUGGESTED	33" MIN. TO 36" MAX.	
E	TOILET PAPER DISPENSER, HEIGHT TO OUTLET	17" TO 19" SUGGESTED	19" MIN.	CENTERLINE OF DISPENSER OUTLET SHALL BE BETWEEN 7" TO 9" IN FRONT OF THE TOILET. OUTLET OF DISPENSER MUST BE BELOW GRAB BAR. DISPENSER (INCLUDING FULL TOILET PAPER ROLL) MUST NOT ENCROACH INTO REQ'D GRAB BAR CLEARANCE.
F	TOILET SEAT COVER, HEIGHT TO TOP OF OUTLET	32" TO 36" SUGGESTED	40" MAX.	
G	URINAL, LIP HEIGHT	15" TO 17" SUGGESTED	17" MAX.	
H	URINAL, HEIGHT OF FLUSH HANDLE	36" MAX.	44" MAX.	
I	LAVATORY, HEIGHT TO HIGHEST POINT AT FRONT OF LAV. OR COUNTER	31" MAX.	34" MAX.	
J	LAVATORY, VERTICAL KNEE CLEARANCE	24" MIN.	29"-27" OVER THE 8" DEPTH SHOWN	
K	MIRROR (ABOVE LAVATORY OR COUNTERTOP), LOWEST POINT OF REFLECTIVE SURFACE	32" TO 36" SUGGESTED	40" MAX.	MIRROR NOT LOCATED ABOVE LAVATORY OR COUNTERTOP SHALL BE MOUNTED SO THAT LOWEST EDGE OF REFLECTING SURFACE IS 35" MAX. ABOVE FINISH FLOOR.
L	DISPENSERS, DRYERS, HEIGHT TO TOP OF OUTLET, HANDLE OR OPERATING MECHANISM (WHICHEVER IS HIGHEST)	32" TO 36" SUGGESTED	40" MAX	
M	LO DRINKING FOUNTAIN, HEIGHT TO BUBBLER	32" TO 36" SUGGESTED	36" MAX.	
N	HI DRINKING FOUNTAIN, HEIGHT TO BUBBLER	SAME AS ADULT	38" MIN. TO 43" MAX.	

NOTES:
1. THIS TABLE AND RELATED DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF CALIF. TITLE 24 (2019 C.B.C. SECTION 11B-601) AND IS SHOWN HERE ONLY AS AN AID FOR CONSTRUCTION AND INSTALLATION.
2. ACCESSORIES ARE NOT IN MANUFACTURER'S SCOPE OF WORK.
3. DIMENSIONS GIVEN ARE FROM FINISH FLOOR, UNLESS OTHERWISE NOTED.
4. NOT ALL ITEMS LISTED MAY OCCUR IN THE PROJECT.
5. HEIGHTS CHOSEN FOR CHILDREN'S WATER CLOSETS & ACCESSORIES SHALL BE CONSISTENTLY APPLIED FOR THE AGE GROUP.

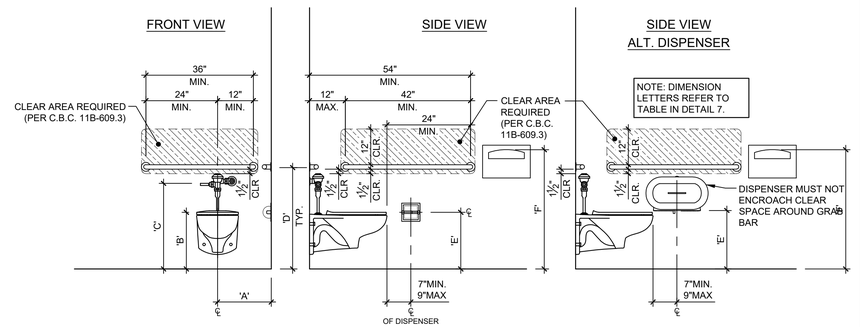
ACCESSIBLE HEIGHTS — N.T.S. — 7



PIPE HANGING SUPPORT — N.T.S. — 8

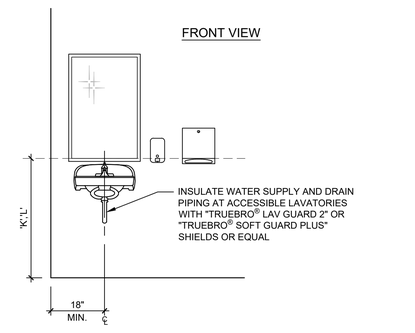


PIPE HANGING SUPPORT — N.T.S. — 9



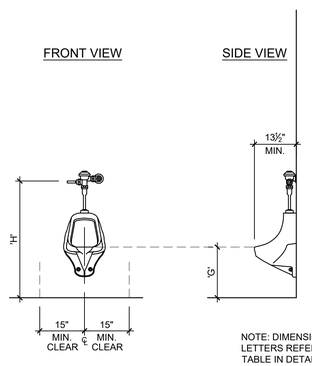
NOTE: DIMENSION LETTERS REFER TO TABLE IN DETAIL 7.

ACCESSIBLE TOILET AND ACCESSORIES — SCALE: 1/2" = 1'-0" — 11



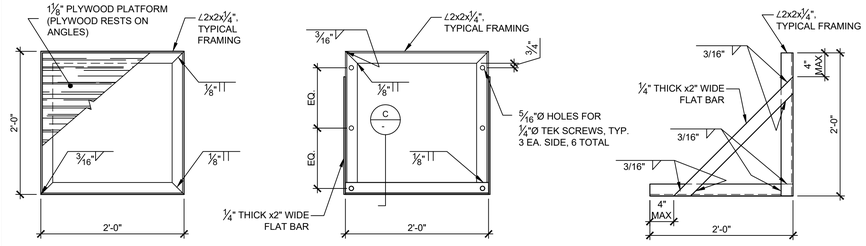
NOTE: DIMENSION LETTERS REFER TO TABLE IN DETAIL 7.

LAVATORY & ACCESSORIES — SCALE: 1/2" = 1'-0" — 12



NOTE: DIMENSION LETTERS REFER TO TABLE IN DETAIL 7.

ACCESSIBLE URINAL — SCALE: 1/2" = 1'-0" — 13



ATTACHMENT TO STEEL STUD WALL
ATTACH TO 14 GA CHANNEL PER 19D/S9.1 w/ (3) #14 STSDS EACH SIDE.
MAY BE ATTACHED TO EXTERIOR WALL OR INTERIOR PARTITION WALL.

MAX WATER HEATER WEIGHT = 400 LBS

WATER HEATER PLATFORM DETAIL — SCALE: 1" = 1'-0" — 14

NOT USED — 15

GENERAL NOTES

1. DWV PIPING SHALL BE ABS PLASTIC OR CAST IRON.
2. COLD WATER SUPPLY SHALL BE TYPE L COPPER.
3. MIN SLOPE SHALL NOT BE LESS THAN 1/4" PER FOOT. 4" PIPE OR LARGER SHALL BE PERMITTED TO HAVE A SLOPE OF NO LESS THAN AN 1/8" PER FOOT
4. VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM (AND AT LEAST 3 FT. ABOVE) ANY WINDOW, DOOR, AIR INTAKE OR VENT SHAFT IN EVERY DIRECTION FROM ANY LOT LINE; EXTEND 6" ABOVE THE ROOF

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LICENSED ARCHITECT — PATRICK GLENN HANNA — No. C12631 Ren. 3-31-23 — STATE OF CALIFORNIA

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REVISIONS

DRAWN BY:	AH
SCALE:	AS NOTED
DATE:	07/05/21
PROJECT NO:	1614-20

SHEET TITLE:

PLUMBING DETAILS
& ACCESSIBLE DETAILS

SHEET NUMBER:

P3.0

BID SET 10/01/2021

DSA–OVERHEAD FIRE SPRINKLER SYSTEM GENERAL NOTES

1. A COPY OF THE ORIGINAL, PREVIOUSLY APPROVED DSA UNDERGROUND PIPING PLANS OR OTHER WATER SUPPLY COMPONENTS, SUCH AS WATER TANKS, FIRE PUMPS, ETC., FOR THE PROJECT SHALL BE INCLUDED IN ALL AUTOMATIC FIRE SPRINKLER DEFERRED SUBMITTAL PLAN PACKAGES. ALL DEVIATIONS FROM THE PREVIOUSLY APPROVED PLANS SHALL BE JUSTIFIED AND SUBMITTED TO DSA VIA THE CHANGE ORDER PROCESS AS APPLICABLE. UNDERGROUND PIPING SIZE IS NOT THE RESPONSIBILITY OF DSA, AND THE ARCHITECT OF RECORD SHALL ASSUME FULL LIABILITY FOR UNDERSIZED PIPING SHOULD THE FINAL DESIGN OF THE FIRE SPRINKLER SYSTEM REQUIRE LARGER PIPING, ADDITIONAL WATER SUPPLY, FIRE PUMPS, OR OTHER EQUIPMENT OR ITEMS.
2. 2019 NFPA–13, SEC. 16.4.1.1: THE DESIGNER SHALL INDICATE ON THE PLANS, ALL PIPING SUBJECT TO FREEZING (WHERE WATER TEMPERATURE CANNOT BE MAINTAINED ABOVE 40–DEGREES FAHRENHEIT) AND PROVIDE APPROVED PROTECTION.
3. 2019 NFPA–13 SEC. 6.10.2.1.1: UNDERGROUND MAINS AND LEAD–IN CONNECTIONS TO SYSTEM RISERS SHALL BE COMPLETELY FLUSHED BEFORE CONNECTION IS MADE TO THE OVERHEAD SPRINKLER PIPING. WHERE UNDERGROUND PIPING IS FLUSHED AND NOT IMMEDIATELY CONNECTED TO THE OVERHEAD PIPING, THE RISER SHALL BE CAPPED OR OTHERWISE PROTECTED TO PREVENT DEBRIS, DIRT, OR ANIMALS FROM ENTERING INTO THE UNDERGROUND PIPING. (THIS MUST BE WITNESSED BY THE PROJECT INSPECTOR.)
4. PROVIDE (WET SIGNED) WATER FLOW TEST INFORMATION NO MORE THAN 12 MONTHS OLD, AND INDICATE THE LOCATIONS AND HEIGHT ELEVATION(S) OF THE TEST RESIDUAL FLOW HYDRANTS. WATER FLOW TEST INFORMATION MUST BE PROVIDED BY, OR WITNESSED BY, THE LOCAL WATER PERVAYOR, UTILITY COMPANY OR LOCAL FIRE DEPARTMENT. (2016 CFC, 508.4)
5. ARCHITECT OF RECORD (AOR), MECHANICAL ENGINEER (ME) AND FIRE PROTECTION CONTRACTOR (C–16) SHALL AFFIX THEIR SEAL, STAMP AND SIGN ALL SUBMITTALS, OR PROVIDE DOCUMENTATION PER DSA IR–18.
6. 2019 NFPA–13 SEC. 16.2.7.5 AND SEC. 16.2.7.6: PROVIDE A SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH, AND NO FEWER THAN SIX (6) SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATING IN EACH PROTECTED AREA FOR SYSTEMS LESS THAN 300 SPRINKLERS (12 SPARE SPRINKLER HEADS FOR SYSTEMS OF 300 TO 1,000 SPRINKLERS.)
7. 2019 NFPA–13 SEC. 16.12.5.8.1: SIGNAGE SHALL BE PROVIDED AS REQUIRED.
8. 2019 NFPA–13 SEC. 18.6.3: THE END (LAST) SPRINKLER ON EACH LINE SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT.
9. 2019 NFPA–13 FIGURE 6.10.1: A COPY OF THE COMPLETED AND SIGNED "CONTRACTOR'S MATERIAL & TEST CERTIFICATE FOR UNDERGROUND PIPING" SHALL BE INCLUDED WITH THE SUBMITTAL.
10. 2019 NFPA–13 SEC. 6.10.2.2.1: ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200–PSI, OR 50–PSI IN EXCESS OF SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS. (TEST TO BE WITNESSED BY PROJECT INSPECTOR.)
11. 2019 NFPA–13 FIGURE 28.1: SPRINKLER CONTRACTOR SHALL COMPLETE AND SIGN THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR THE ABOVE GROUND PIPING. THIS FORM SHALL BE GIVEN TO THE PROJECT INSPECTOR WHO WILL FORWARD IT TO DSA FOR FILING IN PROJECT RECORDS.
12. 2019 NFPA–13 SEC. 28.5.1: A PERMANENT HYDRAULIC CALCULATION DESIGN INFORMATION PLACARD SHALL BE ATTACHED TO EACH RISER.
13. 2019 NFPA–13 SEC. 28.2.3.1: THE SPRINKLER FLOW SWITCH SHALL BE TESTED TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS OPENED, AN ALARM WILL SOUND NO MORE THAN 90–SECONDS AFTER THE INITIAL FLOW. (TEST TO BE WITNESSED BY THE PROJECT INSPECTOR.)
14. 2019 CBC, SEC. 903.4.1: THE MAIN FIRE ALARM PANEL VALVE MONITORING, WATER–FLOW AND TROUBLE SIGNALS SHALL BE DISTINCTLY DIFFERENT, AND SHALL AUTOMATICALLY BE TRANSMITTED TO AN APPROVED CENTRAL STATION MONITORING COMPANY.
15. 2019 NFPA–13 SEC. 16.17: AND 2016 CBC, 903.4.2: THE FLOW SWITCH SHALL BE CONNECTED TO AN APPROVED EXTERIOR ALARM BELL OR OTHER AUDIBLE ALARM DEVICE (SIZE NOT MANDATED BY CODE) AT EACH RISER. APPROVED IDENTIFICATION SIGNS STATING "SPRINKLER FIRE ALARM–WHEN ALARM SOUNDS CALL 911/FIRE DEPARTMENT" SHALL BE INSTALLED ON THE EXTERIOR ALARM BELL.
16. 2016 CBC, SEC. 904.4.3: CONNECTIONS TO PROTECTED PREMISES AND SUPERVISING STATION FIRE ALARM SYSTEMS SHALL BE TESTED TO VERIFY PROPER IDENTIFICATION AND TRANSMISSION OF ALARM SIGNALS FROM AUTOMATIC FIRE EXTINGUISHING SYSTEMS. (TEST TO WITNESSED BY PROJECT INSPECTOR.)
17. 2016 CBC, 903.4.2 AND 2019 NFPA–13 SEC. 16.14.2.1 THRU SEC. 8.17.4.2.4: THE INSPECTOR'S TEST VALVE LOCATION SHALL BE INSTALLED DOWNSTREAM OF THE ALARM DEVICE (WATERFLOW SWITCH). THE PIPE SIZE SHALL BE NO LESS THAN 1–INCH, WITH A SMOOTH BORE, CORROSION RESISTANT ORIFICE, PROVIDING EQUIVALENT FLOW OF THE SMALLEST ORIFICE OF THE SPRINKLER TYPES INSTALLED ON THE SYSTEM. THE DISCHARGE SHALL BE TO THE EXTERIOR OF THE BUILDING.
18. CCR TITLE–19 (PUBLIC SAFETY), ARTICLE 906 (A): A LABEL OF THE SELF–ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION (FDC) OR ON THE RISER FOR THE FIRE SPRINKLER SYSTEM, INDICATING THE DATE OF THE INSTALLATION AND/OR THE DATE SERVICE WAS PERFORMED, AND THE LICENSE NUMBER OF THE PERSON PERFORMING THE SERVICE WORK.

GENERAL NOTES

1. THIS PLAN DETAILS THE FIRE SPRINKLER SYSTEM FOR:
   GLENOAKS E.S. 2–STORY
   2015 EAST GLENOAKS BLVD
   GLENDALE, CA
2. BUILDING CONSTRUCTION TYPE: VB
3. BUILDING OCCUPANCY: E
4. BUILDING AREA: (2 FLOORS) 72' X 40' = 5,760 sq. ft.
   (2 FLOORS) 72' X 40' = 5,760 sq. ft.
   CORRIDOR 2,304 sq. ft.
5. ALL DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13––2019 EDITION.
6. SYSTEM IS DESIGNED FOR LIGHT HAZARD OCCUPANCY @0.10 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE AREA + 100 GPM OUTSIDE HOSE STREAM ALLOWANCE. (AREA REDUCED PER NFPA–13, WITH USE OF QUICK RESPONSE HEADS.) BELOW CEILING SPRINKLERS ARE @ MAXIMUM 225 SQ.FT. SPACING. ATTIC SPRINKLERS ARE AT MAX. 168 SQ.FT. SPACING.
7. MAIN FITTING NOTES:
   A. ALL SPRINKLER MAIN PIPING 2"–4" TO BE SCH.10 PER NFPA–13
   B. ALL MAIN OUTLETS TO BE UL LISTED (GROOVED AND OR FEMALE THREADED FOR MECH. TEES)
   C. WELDING TO BE PERFORMED I.A.W. NFPA–13, IF REQUIRED.
   D. ALL MAIN FITTINGS TO BE ROLL–GROOVED.
   E. ALL MAIN COUPLINGS TO BE ROLL–GROOVED, NON–FLEXIBLE, UNO.
8. BRANCH LINE FITTING NOTES:
   A. BRANCH LINE PIPING (THREADED) 1"–2" TO BE THREADED SCH–30 OR 40 PER NFPA–13, WITH STANDARD WEIGHT (125 LB.) SCREWED CAST OR DUCTILE IRON FITTINGS.
9. CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS AND FLOORS. HOLES SHALL BE 2" LARGER THAN THE DIAMETER FOR 1" TO 3" AND 4" LARGER THAN THE DIAMETER FOR PIPES 4" AND LARGER.
10. ALL FIRE SPRINKLER SYSTEM EQUIPMENT TO BE UNDERWRITER LABORATORY (UL) LISTED AND CONSISTENT WITH NFPA–13.
11. ALL PIPE HANGERS TO BE IN ACCORDANCE WITH NFPA–13 AND DWG.–DETAILS.
12. ALL SWAY (EARTHQUAKE) BRACING SIZE, LOCATION, SPACING, AND CONNECTIONS TO BE IN ACCORDANCE WITH NFPA–13, SEE DETAIL AND ZONE OF INFLUENCE CALCULATIONS FOR INFORMATION ON SPACING, BRACE TYPE, AND ATTACHMENT METHOD.
13. ALL ARM–OVERS TO BE 1" X 0–4" UNLESS NOTED OTHERWISE.
14. ON THE END HANGER, ATR SHALL BE TIGHTENED DOWN AGAINST THE TOP OF PIPE TO PREVENT MOVEMENT.
15. SPRINKLERS SHOWN IN ACOUSTICAL CEILINGS TILES ARE NOT NECESSARILY IN CENTER OF TILE.
16. ALL ELECTRICAL WIRING AND MONITORING OF ALARMS AND/OR SUPERVISORY SWITCHES ASSOCIATED WITH THE FIRE SPRINKLER SYSTEM TO BE PERFORMED BY OTHERS, PRIOR TO FINAL INSPECTION.
17. UPON COMPLETION OF THE INSTALLATION A 200 PSI HYDRO TEST FOR 2–HRS WILL BE PROVIDED FOR INSPECTION.
18. UNDERGROUND PIPING SHALL BE FLUSHED PER NFPA–13, PRIOR TO CONNECTION TO SPRINKLER SYSTEMS.
19. D & B FIRE EXTENT OF WORK TO BE AT BASE OF RISER––(SEE RISER DETAIL)
20. A SPARE HEAD BOX WITH HEADS AND WRENCH SHALL BE PROVIDED AT EACH RISER.
21. UPON COMPLETION, THE FOLLOWING SHALL BE PROVIDED TO OWNER: COMPLETED CONTRACTORS MATERIAL & TEST CERTIFICATE: COPY OF NFPA–25.
22. DEVIATIONS FROM APPROVED PLANS SHALL REQUIRE PERMISSION OF THE AUTHORITY HAVING JURISDICTION (NFPA–13–2019 EDITION, SECTION 27.1.2)

SEE SHEET FS–2 FOR ZONE OF INFLUENCE OUTLINE

PIPE SCH.	PIPE SIZE, LENGTH, QUANTITY, LBS./FT.	WEIGHT OF WATER FILLED PIPE	COMBINED WEIGHT OF ALL PIPE IN ZONE (Wp)	Cp VALUE	ADJUSTED ASSIGNED LOAD
10	2½"(5.89) X 48'	283 LBS.	283 LBS.	(1.03)	291 LBS.
		PERCENTAGE(15) FOR FITTINGS AND DEVICES:			44 LBS.
				TOTAL LOAD:	335 LBS. (Fp)

LONGITUDINAL BRACE ⇄ — LATERAL BRACE

EARTHQUAKE BRACE CALCULATIONS
(Ss) VALUE 2.149
ZONE OF INFLUENCE CALCULATIONS (PER 2019 NFPA 13–TABLE 18.5.9.3)

PIPE SCH.	PIPE SIZE, LENGTH, QUANTITY, LBS./FT.	WEIGHT OF WATER FILLED PIPE	COMBINED WEIGHT OF ALL PIPE IN ZONE (Wp)	Cp VALUE	ADJUSTED ASSIGNED LOAD
10	2½"(5.89) X 24'	141 LBS.			
40	1¼"(2.93) X 19'	56 LBS.			
40	1" (2.05) X 138'	283 LBS.	480 LBS.	(1.03)	494 LBS.
		PERCENTAGE(15) FOR FITTINGS AND DEVICES:			74 LBS.
				TOTAL LOAD:	568 LBS. (Fp)

EARTHQUAKE BRACE CALCULATIONS
ASSIGNED LOAD: ADJUSTED (SEE ZONE OF INFLUENCE CALCULATIONS ABOVE)

SPRINKLER MAIN SIZE	MAX. BRACE SPACING	ADJUSTED ASSIGNED LOAD
2½"	24' LAT. – 48' LONG.	568 LBS. (Fp)

BRACE SPACING: TABLE 18.5.11.8(B)

BRACE PIPE SIZE	MAX LENGTH	MAX BRACE ANGLE	MAX HORIZ. LOAD
1"	7'–0"	59° FROM VERT.	1310 LBS.

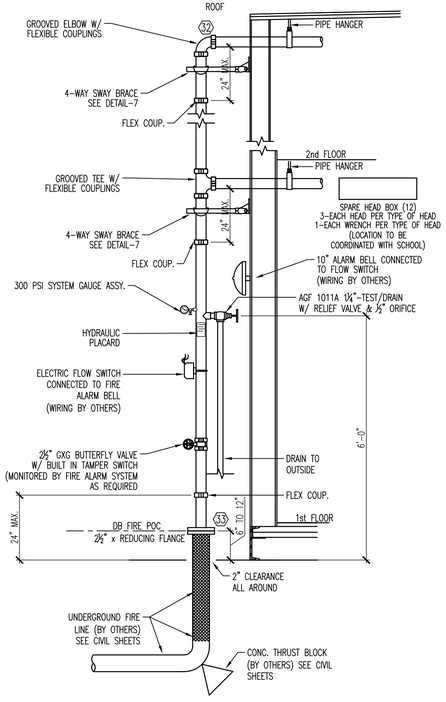
FASTENER SIZE: TABLE 18.5.12.1 ← PER STEEL CONN. & ANGLE OF BRACE

FASTENER SIZE/TYPE	BRACE ANGLE (DIAGRAM)	MAX ASSIGNED LOAD
½"X 1½" HEX BOLT	45°–59° FROM VERT.(FIG.E)(STEEL CONN.)	2050 LBS.

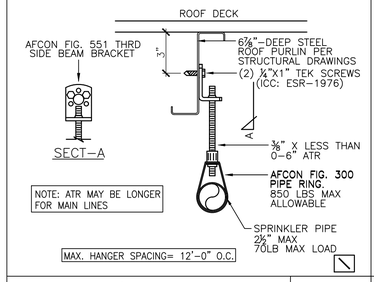
SEISMIC BRACE ATTACHMENT
STRUCTURAL ATTACHMENT FITTING BRACING SYSTEM
MAKE: AFCON MODEL: 077
LISTED LOAD RATING: 2015 ADJUSTED LOAD RATING PER 18.5.11.8: 1612 (.8)
SWAY BRACE (PIPE ATTACHMENT) FITTING:
MAKE: AFCON MODEL: 001/020
LISTED LOAD RATING: 800 ADJUSTED LOAD RATING PER 18.5.11.8: 640 (.8)

HANGER/RESTRAINT NOTE

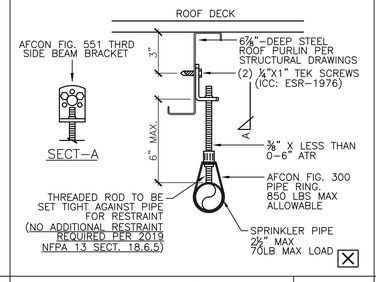
** LATERAL BRACING IS NOT REQUIRED ON PIPES INDIVIDUALLY SUPPORTED BY RODS LESS THAN 6" LONG, PER 2019 NFPA–13, SECT–18.6.5
** THE END OF LINE RESTRAINT DETAIL #2 ON THIS PLAN WILL RESTRAIN END SPRINKLER AGAINST EXCESSIVE VERTICAL MOVEMENT, AND LATERAL MOVEMENT IS LIMITED BY THE SHORT RODS (6" OR LESS) WHICH MEET THE ABOVE EXCEPTION FOR LATERAL BRACING. NO ADDITIONAL BRACING OR SPLAY WIRE IS REQUIRED ON BRANCH LINES.



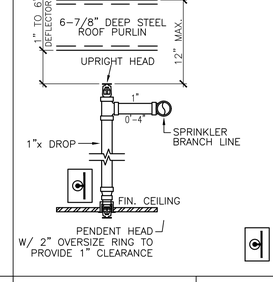
2½" ASR



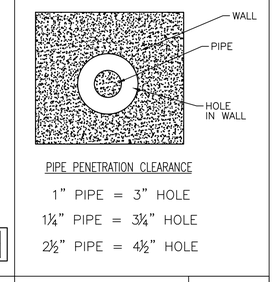
TYPICAL MAIN/BRANCH LINE HANGER | DETAIL–1



END OF LINE HANGER/RESTRAINT | DETAIL–2

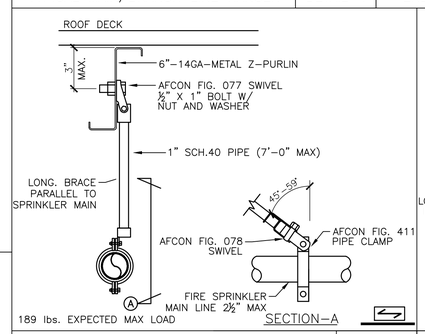


UP & DOWN HEADS | DETAIL–3

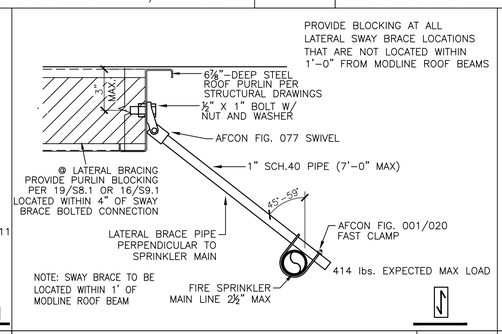


PIPE PENETRATION CLEARANCE
1" PIPE = 3" HOLE
1¼" PIPE = 3¾" HOLE
2½" PIPE = 4½" HOLE

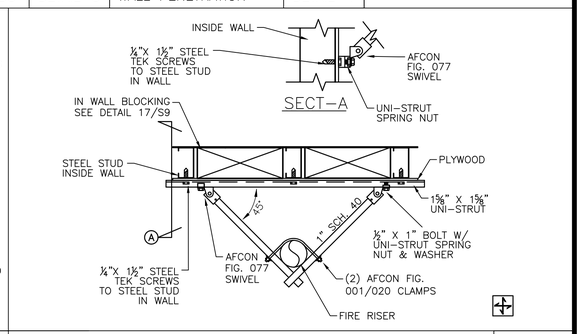
WALL PENETRATION | DETAIL–4



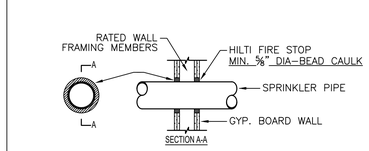
LONGITUDINAL SWAY BRACE | DETAIL–5



LATERAL SWAY BRACE | DETAIL–6



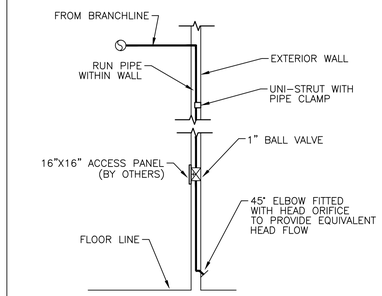
4–WAY SWAY BRACE | DETAIL–7



HILTI SYSTEM NO. W–L–1054

SEE DETAIL #4 THIS SHEET FOR HOLE SIZES

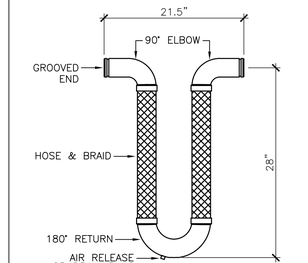
HILTI SYSTEM NO. W–L–1054 | DETAIL–9



MANUAL AIR VENTING PER NFPA 13 8.1.5

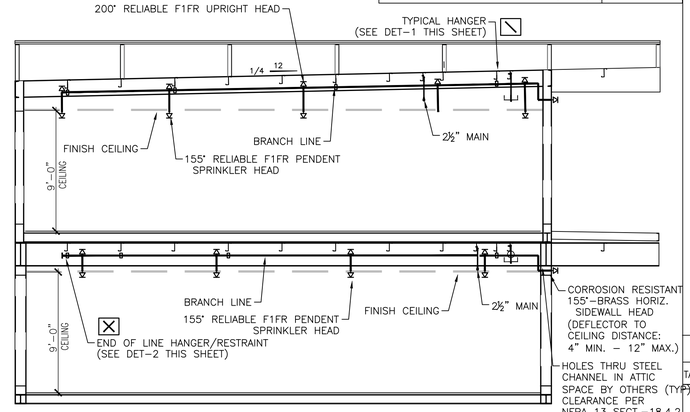
IN–WALL INSPECTORS TEST DETAIL

INSPECTORS TEST DETAIL | DETAIL–11

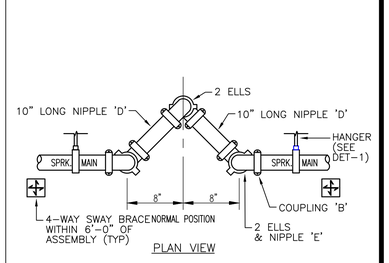


METRA–FLEX FIRE LOOP

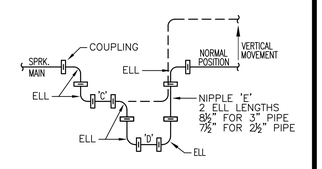
SEISMIC CONNECTION (ALT.) | DETAIL–8B



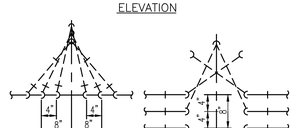
BUILDING CROSS SECTION - A
SCALE: 3/16" = 1'–0"



PLAN VIEW



ELEVATION



LONGITUDINAL VIEW
LONGITUDINAL MOVEMENT
HORIZONTAL VIEW
LATERAL MOVEMENT

SEISMIC CONNECTION | DETAIL–8

TABLE 10.2.4.2.1(a) Sprinkler Head Protection area & spacing for Light Hazard

CONSTRUCTION TYPE:	SYSTEM TYPE:	MAXIMUM PROTECTION AREA	MAXIMUM SPACING
NON–COMBUSTIBLE UNOBSTRUCTED	HYDRO CALC'D	225sq.ft.	15 ft.
COMBUSTIBLE UNOBSTRUCTED	HYDRO CALC'D	225sq.ft.	15 ft.

WATER FLOW INFO.	
STATIC:	125 PSI
RESIDUAL:	110 PSI
FLOW:	1,680 GPM
INFORMATION FROM:	
SOUTH PASADENA WATER DEPT DATED: 7–8–2020	

- HYDRAULIC CALC. REFERENCE POINT
- 4–WAY SWAY BRACE
- LONG./LAT. SWAY BRACE
- FIRE RISER
- TYP. HANGER
- END OF LINE HANGER/RESTRAINT

HANGER LEGEND

UNDERGROUND FIRE MAIN
- NEW UNDERGROUND PIPING
- EXISTING UNDERGROUND PIPING
- POST INDICATOR VALVE (PIV)
- KEY VALVE
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT

AUTHORITY HAVING JURISDICTION

	DATE:	BY:	REVISIONS:
1			
2			
3			
4			
5			

LICENSED FIRE SPRINKLER CONTRACTOR & FIRE PROTECTION CONTRACTOR
Class C-16
License # 410294
Expires 8-2021
STATE OF CALIFORNIA

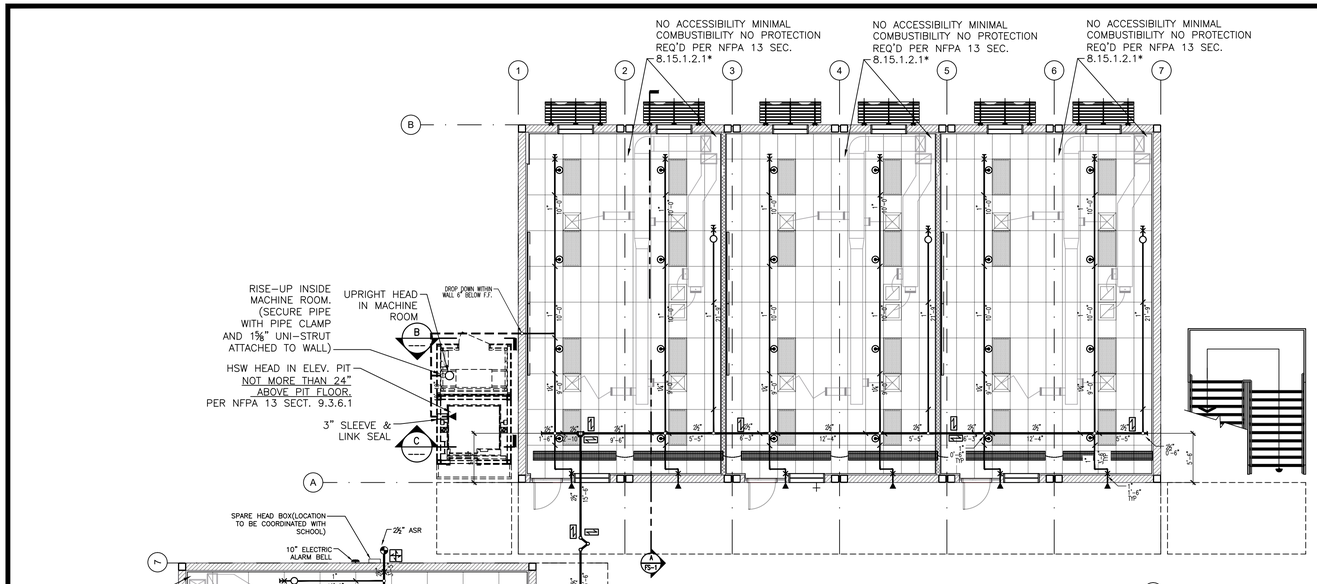
American Modular Systems, Inc.
787 Spreckels Ave. Manteca, CA 95336
Phone (209) 825-1921 - Fax (209) 825-7018
americanmodular.com

FIRE PROTECTION, INC.
1623 LEESON LANE CORONA, CALIFORNIA 92879
(951) 737–9965 FAX (951) 737–6860 LICENSE NO C16–410294

TITLE: FIRE SPRINKLER COVER SHEET:
GLENOAKS E.S. 2–STORY
2015 GLENOAKS BLVD
GLENDALE, CA,

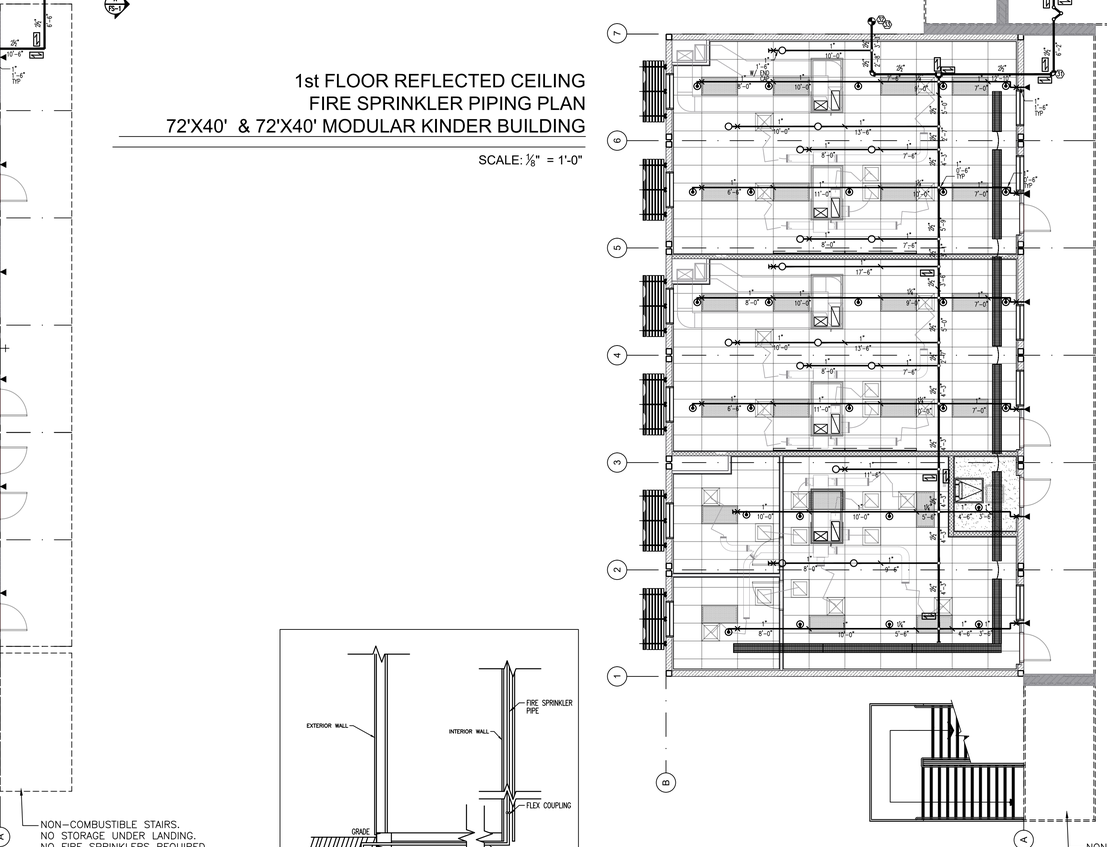
JOB NO.:	
SCALE:	AS NOTED
DRAWN BY:	AR/PM
DATE:	03/2021
SHEET NO.:	FS–1

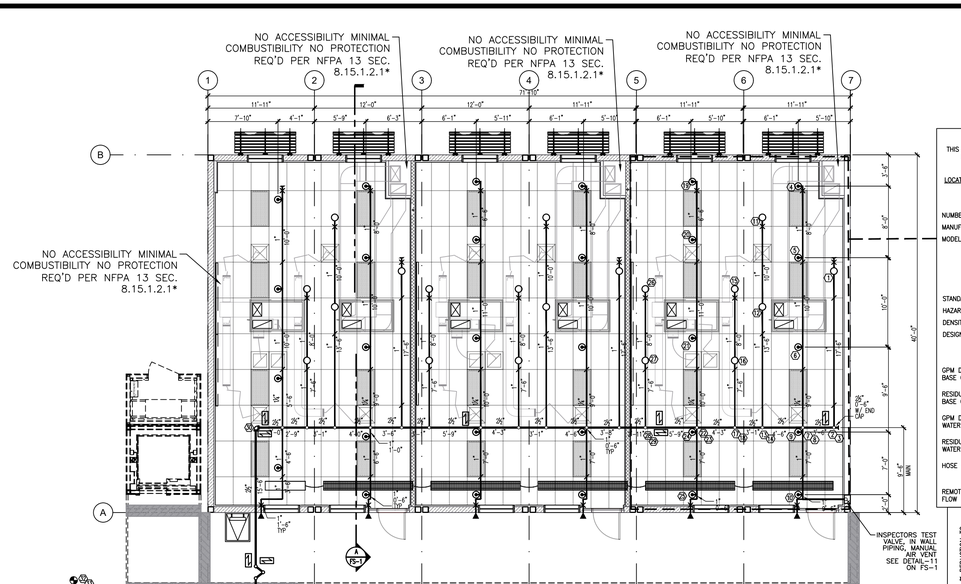
BID SET 10/01/2021



1st FLOOR REFLECTED CEILING FIRE SPRINKLER PIPING PLAN 72'X40' & 72'X40' MODULAR KINDER BUILDING

SCALE: ⅛" = 1'-0"





2nd FLOOR REFLECTED CEILING FIRE SPRINKLER PIPING PLAN 72'X40' & 72'X40' MODULAR KINDER BUILDING

HYDRAULIC SYSTEM

THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM

LOCATION	SEE PLAN

SPRINKLER INFORMATION

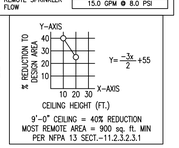
NUMBER OF FLOWING SPRINKLERS	17
MANUFACTURER	RELIABLE
MODEL	F1FR
	155° QUICK RESPONSE
	1/2" ORIFICE 5.6 K-FACTOR

BASIS OF DESIGN

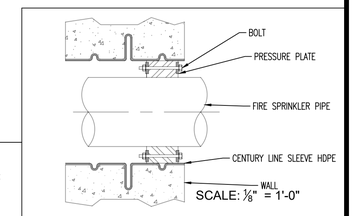
STANDARD	NFPA 13, 2019 EDITION
HAZARD GROUP	LIGHT HAZARD GROUP
DENSITY	.10 GPM/SQ.FT.
DESIGN AREA OF DISCHARGE	960 SQ.FT.

SYSTEM DEMAND

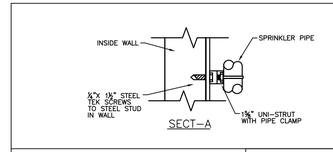
GPM DEMAND AT THE BASE OF THE RISER	327.2 GPM
RESIDUAL PRESSURE AT THE BASE OF THE RISER	71.5 PSI
GPM DEMAND AT THE WATER SUPPLY SOURCE	427.2 GPM
RESIDUAL PRESSURE AT THE WATER SUPPLY SOURCE	74.1 PSI
HOSE STREAM ALLOWANCE	0 GPM INSIDE 100 GPM OUTSIDE 100 GPM TOTAL
REMOTE SPRINKLER FLOW	15.0 GPM @ 8.0 PSI



9'-0" CEILING = 40% REDUCTION
MOST REMOTE AREA = 900 sq. ft. MIN PER NFPA 13 SECT.-11.2.3.2.3.1

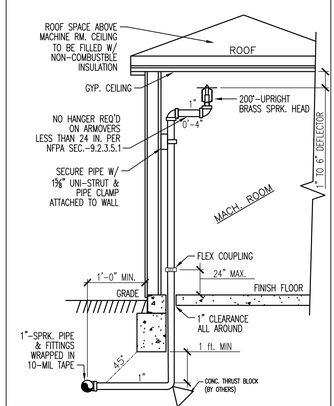


LINK SEAL MODEL NO. LS300-S-4
CENTURY LINE SLEEVE MODEL NO CS-10-20-1

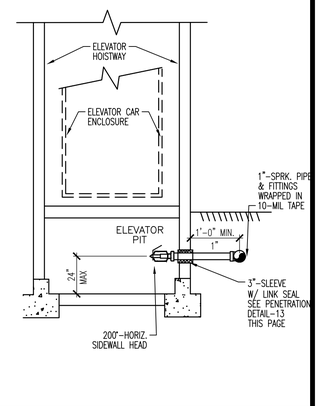


UNISTRUT PIPE ATTACHMENT

ELEVATOR PIT LINK SEAL | DETAIL-13



MACHINE ROOM | SECTION-B



UNDERGROUND PIPE FROM FS SYSTEM

WATER FLOW INFO.	
STATIC:	103 PSI
RESIDUAL:	35 PSI
FLOW:	1,519 GPM
INFORMATION FROM:	
GLENDALE FIRE DEPT. DATED: 11-18-2020	

- HYDRAULIC CALC. REFERENCE POINT
- 4-WAY SWAY BRACE
- LONG./LAT. SWAY BRACE
- FIRE RISER
- TYP. HANGER
- END OF LINE HANGER/RESTRAINT

HANGER LEGEND

UNDERGROUND FIRE MAIN
- NEW UNDERGROUND PIPING
- EXISTING UNDERGROUND PIPING
- POST INDICATOR VALVE (PIV)
- KEY VALVE
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT

FIRE SPRINKLER HEAD LEGEND

SYM.	MAKE AND MODEL	K-FAC	SIZE	TEMP	TYPE	FINISH	CANOPY	QTY.
○	RELIABLE F1FR	5.6	½"	200°	UPRIGHT	BRASS	N/A	145
●	RELIABLE F1FR	5.6	½"	155°	PENDENT	CHROME	CHR. RECESSED	107
◀	RELIABLE F1FR	5.6	½"	155°	HSW	BRASS	401 CANOPY	24
◉	DENOTES UP OVER DOWN HEAD SYMBOL							
							TOTAL SPRINKLER HEADS THIS SHEET	276

AUTHORITY HAVING JURISDICTION

	DATE:	BY:	REVISIONS:
1			
2			
3			
4			
5			

LICENSED FIRE SPRINKLER CONTRACTOR FIRE PROTECTION Class C-16 License # 410294 License C-16 Expires 8-2021 STATE OF CALIFORNIA

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

FIRE PROTECTION, INC.
1623 LEESON LANE, CORONA, CALIFORNIA 92879
(951) 737-9965 FAX (951) 737-6860 LICENSE NO C16-410294

TITLE: FIRE SPRINKLER LAYOUT/PIPING PLAN: 2-STORY

GLENOAKS E.S. 2-STORY
2015 EAST GLEANOAKS BLVD
GLENDALE, CA

JOB NO.:	
SCALE:	AS NOTED
DRAWN BY:	AR/PM
DATE:	03/2021
SHEET NO.:	FS-2

BID SET 10/01/2021

MODULAR ELEVATOR

DSA PROCEDURE 07-01

DESCRIPTION	DESIGN VALUES
DEAD & LIVE LOADS	
-	
ALLOWABLE SOIL PRESSURE	
DD+LL (CONCRETE FOOTING)	SEE TABLE 1/S3
DD+LL+SEISMIC (CONCRETE FOOTING)	SEE TABLE 1/S3
ROOF SNOW LOAD	
ROOF SNOW LOAD: SEE TABLE 6 NOTE ON S4	45 PSF
WIND DESIGN	
TOPOGRAPHIC FACTOR, K_{ZT} (1MIN)	1.0
[X] DIRECTIONAL PROCEDURE ASCE 7-10 CHAPTER 27 PART 1	FOR MWFRS
EXPOSURE CATEGORY COEFFICIENT, K_z	1.07 AT 60 FT
-	

SITE SPECIFIC ITEM	PC DESIGN LOAD OR DESIGN PARAMETERS		SITE SPECIFIC LOAD (TO BE FILLED IN BY ARCHITECT/ENGINEER)
EMBELLISHMENT WEIGHT	FIRST LEVEL	600#	
	INTER-MEDIATE	600#	
	TOP	600#	
	ROOF	1200#	

SIGNATURE OF SITE APPLICATION ARCHITECT OR ENGINEER

STRUCTURAL SHEET INDEX:

SHEET S1 COVER SHEET
SHEET S1A TESTING & INSPECTION CRITERIA
SHEET S2 GENERAL NOTES & ABBREVIATIONS

SHEET S3 FOUNDATION PIT PLAN

SHEET S3.1A FOUNDATION DETAILS FOR MAX 44'–0" TOWER HEIGHT

SHEET S4 HOISTWAY ROOF PLAN
SHEET S4.1 HOISTWAY & ROOF DETAILS

SHEET S5A–1 HOISTWAY PLAN & ELEVATIONS– MAX 44'–0" TOWER HEIGHT
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SHEET S5.1 HOISTWAY DETAILS
SHEET S5.2 MISCELLANEOUS DETAILS
SHEET S5.3 HOISTWAY WALL PANELS

SHEET S6 MACHINE ROOM FRAMING PLAN & DETAILS (PARTIAL MACHINE ROOM)
~~SHEET S6A MACHINE ROOM FRAMING PLAN & DETAILS~~

SHEET S7 RAIL & POWER UNIT DETAILS

SHEET VT1 ELEVATOR DATA
SHEET VT2 ELEVATOR LAYOUT (PARTIAL MACHINE ROOM)
~~SHEET VT2A ELEVATOR LAYOUT~~
SHEET VT3 ELEVATOR CAB
SHEET VT4 ACCESS COMPLIANCE

NUMBER OR LETTER IDENTIFYING PLAN, SECTION, ELEVATION OR DETAIL

OR #/–

SHEET NUMBER WHERE PLAN, SECTION, ELEVATION OR DETAIL IS LOCATED. A DASH INDICATES THAT THE PLAN, SECTION, ELEVATION OR DETAIL OCCURS ON THE SAME SHEET FROM WHICH IT IS BEING REFERENCED.

APPLICABLE CODES:

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2017
2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.

2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2012 INTERNATIONAL BUILDING CODE VOLUMES 1 – 3 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 ELEVATOR AND CONVEYING CODE CBC CHAPTER 30

2016 CALIFORNIA BUILDING CODE CBC CHAPTER 11B
(2015 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2014 UNIFORM MECHANICAL CODE AND 2015 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, PART 6, TITLE 24 C.C.R.

2013 SAFETY CODE FOR ELEVATORS AND ESCALATORS (ASME A17.1–2013)

2016 INTERNATIONAL FIRE CODE

2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
(2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.

TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

TITLE 8 C.C.R., CH4, SUB–CH6–ELEVATOR SAFETY ORDERS

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS	2016 Edition with 2016 California Amendments
NFPA 14	STANDPIPE SYSTEMS (CALIFORNIA AMENDED)	2016 Edition with 2016 California Amendments
NFPA 17a	WET CHEMICAL SYSTEMS	2016 Edition
NFPA 20	STATIONARY PUMPS	2016 Edition
NFPA 24	PRIVATE FIRE MAINS (CALIFORNIA AMENDED)	2016 Edition with 2016 California Amendments
NFPA 72	NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED)	2016 Edition with 2016 California Amendments
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2016 Edition
ASME 17.1/CSAB44	ELEVATOR STANDARD	2016 Edition with A17.1 a/CSA B44a–08 addenda

REFERENCE CODE SECTIONS FOR NFPA STANDARDS – 2016 CBC CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

NOTES TO PLAN REVIEWER AND DESIGN PROFESSIONAL:

1. All DRAWING ARE TO BE SUBMITTED WITH THE FOLLOWING EXCEPTIONS:
   A. SUBMIT S5A BASED ON SITE SPECIFIC TOWER HEIGHT.
2. WHERE OPTIONS ARE NOTED, DESIGN PROFESSIONAL SHALL INDICATE OPTION CHOSEN. WHERE APPROVED BY DSA. AND IN A TWO–STORY BUILDING OR STRUCTURE WITH STAIRS THAT WILL ACCOMMODATE THE CARRYING OF A GURNEY. ELEVATORS ARE NOT REQUIRED TO ACCOMMODATE A GURNEY.
3. PC IS NOT APPROVED FOR STOCKPILE AND FLOOD ZONE, DETAILS THAT ARE NOT APPLICABLE TO SPECIFIC PROJECT ARE TO BE CROSSED OUT.
4. SPRINKLER REQUIREMENTS TO BE INCLUDED AS PART OF THE SITE APPLICATION DRAWINGS.
5. ELEVATOR CANNOT BE SET WITHOUT A SITE SPECIFIC APPLICATION. ALSO, THESE SITE SPECIFIC APPLICATIONS MUST INCLUDE THE FOLLOWING:
   - SEISMIC JOINT BETWEEN BUILDING & ELEVATOR TOWER. SEE TOWER DISPLACEMENTS ON SHEET S5 & S5A
   - SPECIFICATIONS AND DETAILS FOR ROOFING
   - FINISHES (SEE NOTE ON SHEET S4)
   - FLASHING
   - ELECTRICAL
6. RATING OF CONSTRUCTION PER CBC 3002.1. PROJECT ARCHITECT TO DETERMINE CONSTRUCTION TYPE.
7. SITE SPECIFIC ARCHITECT/ENGINEER OF RECORD TO SIGN AND STAMP THE PROJECT SPECIFIC FORM DSA 103.
8. SITE SPECIFIC ITEMS NOTED ON SHEET S4 ARE TO BE SHOWN ON SITE SPECIFIC DRAWINGS.
9. SITE SPECIFIC SOILS REPORT IS REQUIRED WHERE A SOILS PRESSURE GREATER THAN 1500 PSF IS CHOSEN.
10. SITE SPECIFIC ARCHITECT/ENGINEER TO PROVIDE A MINIMUM 1/4" PER FOOT ROOF SLOPE.
11. WHERE SNOW LOAD OPTION IS CHOSEN, PROVIDE A ROOF JOIST DESIGN FOR DRIFT OR PROVIDE A 20' – 0" SEPARATION DISTANCE BETWEEN THE ROOF AND ADJACENT STRUCTURE OR TERRAIN FEATURE. SEE TABLE 6 NOTE ON SHEET S4.
12. PER CBC 3002.4A ALL BUILDINGS OR STRUCTURES TO BE PROVIDED WITH NO LESS THAN ONE MEDICAL EMERGENCY SERVICE ELEVATOR.
13. WHERE APPROVED BY AHJ, AND IN A TWO–STORY BUILDING OR STRUCTURE WITH STAIRS THAT WILL ACCOMMODATE THE CARRYING OF A GURNEY. ELEVATORS ARE NOT REQUIRED TO ACCOMMODATE A GURNEY.
14. FOR ELEVATORS WHERE HOISTWAY PROTECTION IS REQUIRED. HOISTWAY TO BE PROVIDED WITH SHAFT CONSTRUCTION IN ACCORDANCE WITH CBC 713.
15. CONSTRUCTION TYPE, OCCUPANCY CLASSIFICATION, BUILDING HEIGHT SHALL BE DETERMINED DURING SITE PLACEMENT DRAWING SUBMITTAL IN CONJUNCTION WITH THE BUILDING THAT THIS MODULAR ELEVATOR EQUIPMENT'S STRUCTURE WILL SERVE.
16. FOR MAXIMUM CLADDING LOAD, SEE NOTE ON SHEET S4.

DESIGN CRITERIA (2016 CBC):

OCCUPANCY
CATEGORY II

ELEVATOR CAR WEIGHT = 4000 LBS
ELEVATOR CAR CAPACITY = 4000 LBS MAX (2500 LBS AT HW-1)

GRAVITY ROOF LOADS
ROOF LIVE LOAD ..... 20 PSF (REDUCIBLE) TYP
ROOF DEAD LOAD ..... 20 PSF MAX

SNOW LOADS
☒ STD Pg = 20 PSF
☐ OPT Pg = 45 PSF

LATERAL LOADS
WIND
EXPOSURE C
WIND SPEED ..... 110 MPH
IMPORTANCE FACTOR I 1.0
INTERNAL PRESSURE COEFFICIENT ..... GC_{pi} = ± 0.18 (ENCLOSED)
COMPONENTS & CLADDING (DESIGNED BY OTHERS) ASCE 7-10 METHOD 1, λ= 1.53 (44 FT ELEVATOR)
ROOF ..... + 14.0 PSF OR -84 PSF (44')
CLADDING ..... ± 44.0 PSF (44')

SEISMIC
V = EQUIVALENT LATERAL FORCE PROCEDURE BASE SHEAR (STRENGTH DESIGN)
V = C_SW = 0.513W (STRENGTH)
* $C_S = \frac{S_{DS}}{(R/I)}$ = 0.513

MAX BASE SHEAR
44 FT ELEV
V_X = 19.2K
V_Y = 19.2K

BASIC SEISMIC-FORCE-RESISTING SYSTEM:
ORDINARY STEEL CONCENTRICALLY BRACED FRAMES AND LIGHT-FRAME (COLD-FORMED STEEL) WALL SYSTEMS USING FLAT STRAP BRACING

ORDINARY BRACED FRAME
R = 3.25
I_e = 1.0
Ω_o = 2
ρ = 1.3
C_d = 3.25

SITE CLASS = D
* S_s = 2.5 Fa = 1.0 S_{DS} = 1.67
S_1 = 2.0 Fv = 1.5 S_{D1} = 2.0

SEISMIC DESIGN CATEGORY: E

LIGHT-FRAME (COLD-FORMED STEEL) WALL SYSTEMS USING FLAT STRAP BRACING
R= 4
I = 1.0
Ω_o= 2.0
ρ = 1.3
C_d = 3.5

*FOR STRUCTURES LESS THAN 5 STORIES TALL: THIS STRUCTURE MAY BE LOCATED AT ANY SITE WITH AN S_S LESS THAN 2.50. THE HEIGHT OF THE STRUCTURE SHALL BE LIMITED SUCH THAT THE PERIOD SHALL NOT EXCEED 0.5 SEC. PER SECTION 12.8.2.1 & UPPER LIMIT OF TABLE 12.8-1 OF ASCE 7-10 THE FOLLOWING TABLE HAS BEEN DERIVED.

S_{01}	C_U	HEIGHT (FT) MAX
0.2 < S_{01} ≤ 0.3	1.5	44'-0"

FLOOD DESIGN
ELEVATOR / BUILDING NOT APPROVED FOR FLOOD HAZARD AREA.

SPECIAL LOADS
NONE APPLICABLE

PROJECT DATA INTERIOR OR EXTERIOR INSTALLATION
OCCUPANCY CLASSIFICATION ..... □ A, □ B, ☒ E

CONSTRUCTION TYPE .....
□ V-A 1 HR
☒ V-B (NON-RATED) SEE NOTE 3
□ II-A - 1 HR
□ II-B - N (NON-RATED)
□ III-A - 1 HR
□ III-B - N (NON-RATED)

SERVE UP TO 2 STORIES AND HAVE UP TO 4 STOPS. OR UP TO TWO STORIES AND HAVE UP TO 4 STOPS
SHAFT CONSTRUCTION IN ACCORDANCE WITH CBC 713.4. FOR CONSTRUCTION TYPES II-A, II-B, III-A, V-A, V-B ELEVATORS IN SHAFTS TO BE IN 1HR SHAFT CONSTRUCTION IS NOT INSTALLED IN A BUILDING AND/OR OPENING BETWEEN FLOORS IS PERMITTED TO BE WITHOUT SHAFT ENCLOSURE BY CBC 712.1, SHAFT ENCLOSURE NOT REQUIRED. ELEVATOR ENCLOSURE TO COMPLY WITH ASME A.17.1
ELEVATOR BUILDING AREA ..... 88 SQ FT (APPROX)
MODULAR EQUIPMENT ROOM AREA ..... 85 SQ FT (APPROX)
FIRE SPRINKLERS ..... NOT PART OF THE PC APPROVAL. SPRINKLER REQUIREMENTS TO BE INCLUDED IN THE SITE APPLICATION DRAWINGS. SPRINKLERS NOT REQUIRED WHERE ALL PROVISIONS OF CBC 3006.4.1 ARE MET SPRINKLERS AT TOP OF THE SHAFT NOT REQUIRED PER NFPA 13 SECTION 8.15.5.6.

NOTES:
☒ THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
☒ THIS DRAWINGS, PAGE OF SPECIFICATIONS / CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY MEM, AND
2. COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT
3. LOCATION OF ELEVATOR IS TO COMPLY WITH CBC CHAPTERS 3, 5, 6, 7, 10 AND 30 AND SITE SPECIFIC PROVISIONS. (BUT NOT LIMITED TO)
4. ANY FIRE ALARM SUBMITTAL SHALL COMPLY WITH 2016 CBC SECTION 907.3.3; 3006.5 AND NFPA 72 AS AMENDED BY DSA/SFM. FIRE ALARM PROVIDED BY OTHERS.
5. CONSTRUCTION DOCUMENTS FOR SITE-SPECIFIC APPLICATION TO DSA SHALL INCLUDE A COPY OF THE DSA-103 FORM FOR STRUCTURAL TEST AND SPECIAL INSPECTIONS.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344 OF TITLE 24, PART 2. (TITLE 24, PART 1, SECTION 4-317)

MEM S AND VT DRAWINGS HAVE BEEN REVIEWED AND ACCEPTED.

SIGNATURE OF THE ARCHITECT/ENGINEER — DATE 03-23-21

C12631 — LICENSE NUMBER — EXPIRATION DATE 03-31-23

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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

MEM INC
MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

FILE NO. PC-MEM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018

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

SHEET NAME:
COVER SHEET

SHEET NO:
S1

BID SET 10/01/2021

DSA-103 Issued 12/30/2016

List of Required Structural Tests & Special Inspections - 2016 CBC

INCREMENT #

DSA File No.: PC-MEM
Application No.: 03-118291
Date Submitted:
Revised:
Revised:

School Name: **MODULAR ELEVATOR MANUFACTURING** | District: **PC**

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A.
NOTE: This form is also available for projects submitted for review under the 2007, 2010, and 2013 CBC.

INSTRUCTIONS: Click a plus sign (+) before any category or subcategory to reveal additional tests and special inspections. A shaded box indicates a test or special inspection that may be required, depending on the scope of the construction and other issues. A shaded box can be clicked indicating your selection of that test. **Note:** A minus (-) on a category or subcategory heading indicates that it can be collapsed. However, any selections you may have made will be cleared. Click on the "COMPILE" button to show only the tests and inspections finally selected.
For more information on use of this form, see DSA-103.INSTR.

Note: References are to the 2016 edition of the California Building Code (CBC) unless otherwise noted.

REQUIRED	TEST OR SPECIAL INSPECTION	TYPE+	PERFORMED BY+	CODE REFERENCE AND NOTES
-	**SOILS**			
-	**1. GENERAL:**	**Table 1705A.6**		
X	a. Verify that: • site has been prepared properly prior to placement of controlled fill and/or excavations for foundations, • foundation excavations are extended to proper depth and have reached proper material, and • materials below footings are adequate to achieve the design bearing capacity.	**Periodic**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
-	**2. COMPACTED FILLS:**	**Table 1705A.6**		
X	b. Verify use of proper materials, densities and inspect lift thicknesses, placement, and compaction during placement of fill.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
X	c. Test compaction of fill.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
-	**5. RETAINING WALLS:**			
X	a. Placement of soil reinforcement, drainage devices, and backfill.	**Continuous**	**GE**	Placement, compaction and inspection of backfill per Section **1705A.6.1** for fills supporting foundations (see Section 2 above).
X	c. Concrete retaining walls.	Provide tests and inspections per CONCRETE section below.		
-	**CONCRETE**	**Table 1705A.3, ACI 318-14 Sections 26.12 & 26.13**		
-	**7. CAST IN PLACE CONCRETE**			
	Material Verification and Testing:			
X	a. Verify use of required design mix.	**Periodic**	**SI***	**Table 1705A.3 Item 5, 1910A.1** (1909.2.3*); * To be performed by qualified batch-plant inspector and concrete sampling technician
X	b. Identify, sample, and test reinforcing steel.	**Test**	**LOR**	**1910A.2** (1909.2.4*); ACI 318-14 Section 26.6.1.2. DSA IR 17-10
X	c. During concrete placement, fabricate specimens for strength tests,perform slump and air content tests, and determine the temperature of the concrete.	**Test**	**LOR**	**Table 1705A.3 Item 6**, ACI 318-14 Sections 26.5 & 26.12
X	d. Test concrete (f'_c)	**Test**	**LOR**	**1905A.1.16** (1909.3.7*); ACI 318-14 Section 26.12.
	Inspection:			
X	e. Batch plant inspection ◉ Continuous ○ Periodic	**See Notes**	**SI**	Default of "**Continuous**" per **1705A.3.3**. If approved by DSA, batch plant inspection may be reduced to "**Periodic**" subject to requirements in Section **1705A.3.3.1** or eliminated per **1705A.3.3.2**. (See Appendix for exemptions.)
X	f. Inspect placement of formwork, reinforcing steel, embedded items and concrete. Inspect curing and form removal.	**Continuous**	**SI**	
-	**11. POST-INSTALLED ANCHORS:**			
X	a. Inspect installation of post-installed anchors	**See Notes**	**SI***	**Table 1705A.3 Item 4a (Continuous) & 4b (Periodic)** (see Appendix for exemptions). ACI 318-14 Sections 17.8 & 26.13 * May be performed by the project inspector when specifically approved by DSA.
X	b. Test post-installed anchors.	**Test**	**LOR**	**1910A.5** (1909.2.7*), (See Appendix for exemptions.)
+	**MASONRY**	**TMS 402-13/ACI 530-13/ASCE 5-13 Table 3.1.3 & TMS 602-13/ACI 530.1-13/ASCE 6-13 Table 5**		
-	**STEEL, ALUMINUM**	**Table 1705A.2.1, AISC 303-10, AISC 360-10, AISC 341-10, AISC 358-10, AISI S100-07/S2-10**		
-	**17. STRUCTURAL STEEL, COLD-FORMED STEEL, AND ALUMINUM USED FOR STRUCTURAL PURPOSES**			
	Material Verification:			
X	a. Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements, • Material sizes, types and grades comply with requirements.	**Periodic**	*	**2203A.1** (2203.1*), **Table 1705A.2.1 Item 3a-3c;** AISI S100-07/S2-10 Section A2.1 & A2.2, AISI S200-12 Section A3, AISI S220-11 Section A4. * By special inspector or qualified technician when performed off-site.
X	b. Test unidentified materials	**Test**	**LOR**	**2203A.1** (2203.1*).
X	c. Examine seam welds of HSS shapes	**Periodic**	**SI**	DSA IR 17-3.
	Inspection:			
X	e. Verify and document steel fabrication per DSA approved construction documents.	**Periodic**	**SI**	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).
-	**19. WELDING:**			**1705A.2.5, Table 1705A.2.1 Items 4 & 5;** DSA IR 17-3, AWS D1.1 and AWS D1.8 for structural steel, AWS D1.2 for Aluminum, AWS D1.3 for cold-formed steel, AWS D1.4 for reinforcing steel. (See Appendix for exemptions.)
	Verification of Materials, Equipment, Welders, etc:			
X	a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.	**Periodic**	**SI**	DSA IR 17-3.
X	b. Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	DSA IR 17-3.
X	c. Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.
-	**19.1 SHOP WELDING:**			
X	b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Item 5a.5 & 5a.6.** Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.
-	**20. NONDESTRUCTIVE TESTING:**			
X	a. Ultrasonic	**Test**	**LOR**	**1705A.2.1 & 1705A.2.3** AISC 360-10 N3.2, AISC 341-10 J6.2, AWS D1.1, D1.8, ANSI/AWS QC 1-96, SNT-TC-1A, DSA IR 17-3
-	**23. ANCHOR BOLTS, ANCHOR RODS, & OTHER STEEL:**			
X	a. Anchor Bolts and Anchor Rods	**Test**	**LOR**	IR 17-11 Sample and test anchor bolts and anchor rods not readily identifiable.
X	**c. Shop welding: Inspect welding of structural cold-formed steel**			
+	**WOOD**			
-	**OTHER**			
X	**28. High Strength Threaded Rod**	**Test**		2212A.1

List of required verified report(s):

1 Soils testing and Inspection: Geotechnical Verified Report - Form DSA-293
2 All Structural Testing: Laboratory Verified Report - Form DSA-291
3 Concrete Batch Plant Inspection: Laboratory Verified Report - Form DSA-291, or, for independently contracting SI, Special Inspection Verified Report - Form DSA-292
4 Shop Welding Inspection: Laboratory Verified Report - Form DSA-291, or, for independently contracting SI, Special Inspection Verified Report - Form DSA-292

KEY to Columns	
1 Type -	**2 Performed By -**
Continuous – Indicates that a continuous special inspection is required	**GE** – Indicates that the special inspection is to be performed by a registered geotechnical engineer or his or her authorized representative
Periodic – Indicates that a periodic special inspection is required	**LOR** – Indicates that the test or inspection is to be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See section 4-335, 2013 CCR Title 24, Part 1.
Test – Indicates that a test is required	**SI** – Indicates that the special inspection is to be performed by a special inspector

DSA-103
(Issued 12-30-16)

+ In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community colleges, per 2013 CBC Sec. 1.9.2.2.

FORM DSA-103 NOTES

THE EXAMPLE FORM DSA-103 SHOWN ON THIS SHEET IS FOR ILLUSTRATION PURPOSED ONLY TO ASSIST IN THE COMPLETION OF FUTURE PROJECT-SPECIFIC FORM DSA-103'S. A FORM DSA-103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PRE-CHECK IS BEING INCORPORATED INTO AND THE EXAMPLE FORM DSA-103 IS TO BE CROSSED OUT ON THIS DRAWING.

INSPECTION NOTES:

GENERAL:
IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 108 OF THE 2016 CBC, THE OWNER SHALL EMPLOY A DSA APPROVED SPECIAL INSPECTOR TO PERFORM SPECIAL INSPECTIONS & TESTS AS INDICATED IN DSA FORM NO. DSA 103

1. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AGENCY WHICH IS IN THE EMPLOYMENT OF THE SCHOOL DISTRICT.
2. ALL SPECIAL INSPECTION & TESTING AGENCIES SHALL BE QUALIFIED PER ASTM E329, APPROVED BY DSA AND SHALL SUPPLY ALL OF THEIR OWN TESTING EQUIPMENT.
3. PROVIDE INSPECTION REPORTS TO DSA, OWNER, ARCHITECT AND ENGINEER WITHIN TWO WEEKS OF PERFORMANCE OF INSPECTION OR TEST.
4. REFER TO CHAPTER 17A OF THE CODE FOR OTHER REQUIRED SPECIAL INSPECTIONS AND TESTS NOT LISTED IN THE SCHEDULE ON DSA FORM NO. DSA 103. FOR EXAMPLE, SPRAY APPLIED FIRE-RESISTANT MATERIALS PER CBC 1705A.13.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO SEE THAT THE TESTS AND INSPECTIONS ARE PERFORMED. JOB SITE VISITS BY STRUCTURAL ENGINEER DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS.
6. WHERE THE CONTRACTOR CHOOSES TO USE AN APPROVED ALTERNATIVE MEANS FOR FASTENING OR ANCHORING MATERIALS THAT REQUIRE SPECIAL FIELD INSPECTION, SUCH AS FIELD WELDING, ADHESIVE OR EXPANSION ANCHORS, ETC. ALL ADDITIONAL SPECIAL INSPECTION AND TESTING COSTS SHALL BE PAID BY THE SCHOOL DISTRICT AND DEDUCTED FROM THE CONTRACT AMOUNT.
7. ADDITIONAL PAYMENTS AT CUSTOMARY AND PREVAILING WAGE RATES WILL BE REQUIRED IN RESPONSE TO INSPECTION REQUESTS IF NO DEFICIENCIES ARE FOUND.
8. ADDITIONAL PAYMENTS AT CUSTOMARY AND PREVAILING WAGE RATES WILL BE REQUIRED FOR ADDITIONAL WORK PERFORMED BY THE STRUCTURAL ENGINEER IN RESPONSE TO INSPECTION REQUESTS IF NO DEFICIENCIES ARE FOUND.
9. INSPECTION BY PROJECT INSPECTOR. THE SCHOOL BOARD MUST PROVIDE FOR AND REQUIRE COMPETENT, BY A DSA APPROVED INSPECTOR SATISFACTORY TO THE ARCHITECT OR REGISTERED ENGINEER IN GENERAL RESPONSIBLE CHARGE OF OBSERVATION OF THE WORK OF CONSTRUCTION, TO ANY ARCHITECT OR REGISTERED ENGINEER DELEGATED RESPONSIBILITY FOR A PORTION OF THE WORK, AND TO DSA. THE COST OF PROJECT INSPECTION SHALL BE PAID FOR BY THE SCHOOL BOARD. AN INSPECTOR SHALL NOT HAVE ANY CURRENT EMPLOYMENT RELATIONSHIP WITH ANY ENTITY THAT IS A CONTRACTING PARTY FOR THE CONSTRUCTION.
10. DSA APPROVAL OF THE IN-PLANT INSPECTOR SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF FABRICATION.
11. FOR ELEVATOR TOWERS THAT ARE MANUFACTURED IN-PLANT, THE IN-PLANT INSPECTOR SHALL ATTACH A COMPLETED AND SIGNED VERIFIED REPORT (FORM DSA-6) INSIDE EACH TOWER. THE VERIFIED REPORT SHALL INDICATE THE MANUFACTURER'S NAME AND THE SERIAL NUMBER FOR EACH TOWER AS WELL AS THE DSA FILE AND APPLICATION NUMBERS.
12. THE LOCATION OF THE IDENTIFICATION LABEL FOR TOWERS THAT ARE MANUFACTURED IN-PLANT PER 6/S5 AND 7/S5. THE LABELS SHALL SHOW THE DSA APPLICATION NUMBER UNDER WHICH THE BUILDING CONSTRUCTION WAS AUTHORIZED, THE MANUFACTURER OR BUILDER'S NAME, THE SERIAL NUMBER, THE DESIGN CLIMATE ZONES (PER TILE 24, PART 6, SECTION 143 (a)8), THE DESIGN LIVE LOADS FOR THE ROOF, AND THE DESIGN WIND SPEED AND EXPOSURE CATEGORY. THE LOCATION OF THE IDENTIFICATION LABELS SHALL BE SHOWN ON THE PRE-CHECKED BUILDING PLANS.
13. DESIGN MIX NOT REQUIRED FOR NON-SHRINK GROUT.
14. A PROJECT EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, C.C.R.; IN-PLANT-RBIP OR CLASS 1 SITE: CLASS 2. AN INSPECTOR WHO IS SPECIALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.

NO.	DATE	

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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

MEM INC
MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
TESTING AND INSPECTION CRITERIA

SHEET NO:
S1A

BID SET 10/01/2021

STRUCTURAL ABBREVIATIONS

@	AT
L	ANGLE
ABV	ABOVE
AB	ANCHOR BOLTS
AC	ASPHALTIC CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
ADDNL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
AISC	AMERICAN INSTITUTE FOR STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECT/ ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BEV	BEVELED
BLW	BELOW
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
BO	BY OTHERS
BOC	BOTTOM OF CONCRETE
BOF	BOTTOM OF FOOTING
BOTT	BOTTOM
BRCG	BRACING
BRG	BEARING
BRG ℘	BEARING PLATE
BTW	BETWEEN
BYD	BEYOND
C	CAMBER
CBC	CALIFORNIA BUILDING CODE
CCR	CALIFORNIA CODE OF REQULATIONS
CC	CENTER TO CENTER
CE	CIVIL ENGINEER
CG	CENTER OF GRAVITY
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CLG	CEILING
℄	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE / COORDINATION
CP	COMPLETE PENETRATION
CTR	CENTER
CTRD	CENTERED
DBG	DISTANCE BETWEEN GUIDES
DBL	DOUBLE
DEPR	DEPRESSED
DIA (Ø)	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DSA	DIVISION OF THE STATE ARCHITECT
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING CONDITION
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EN	EDGE NAILING/EDGE FASTENING
EOS	EDGE OF SLAB
EOR	ENGINEER OF RECORD
EQ (=)	EQUAL
ES	EACH SIDE
EW	EACH WAY
EB	EXPANSION BOLT
EQUIP	EQUIPMENT
EXTR	EXTERIOR
FAB	FABRICATE
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FHWS	FLAT HEAD WOOD SCREW
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
f'm	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF MASONRY
FN	FIELD NAILING/FIELD FASTENING
FND	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRMG	FRAMING
FT (')	FOOT/FEET
FTG	FOOTING
Fy	SPECIFIED YIELD STRENGTH OF REIFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI
GA	GAUGE
GALV	GALVANIZED
GL	GLUE LAMINATED LUMBER
GRD	GRADE
GT	GROUT
GWB	GYPSUM WALLBOARD
HC	HANDICAP
HD	HOLDOWN
HDR	HEADER
HK	HOOK
HORIZ	HORIZONTAL
HT	HEIGHT
HSB	HIGH STRENGTH BOLT (A325)
HSS	HOLLOW STRUCTURAL SECTION
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IN (")	INCH
INTR	INTERIOR

INFO	INFORMATION
JST	JOIST
JT	JOINT
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LG	LONG
LGTH	LENGTH
LONG	LONGITUDINAL
LS	LONG SCREW
LSL	LAMINATED STRAND LUMBER
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MB	MACHINE BOLT
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEM	MODULAR ELEVATOR MANUFACTURER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MER	MODULAR ELEVATOR ROOM
MEZZ	MEZZANINE
MFR	MANUFACTURER
MN	MINIMUM
MISC	MISCELLANEOUS
MLB	MICROLAM BEAM
MRD	METAL ROOF DECK
MTL	METAL
(N)	NEW
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO. (#)	NUMBER OR POUNDS
NOM	NOMINAL
NS&FS	NEARSIDE & FARSIDE
NSG	NON SHRINK GROUT
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSB	ORIENTED STRAND BORAD
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
OWJ	OPEN WEB JOIST
OPG	OPENING
OPP	OPPOSITE
OH	OPPOSITE HAND
PCC	PRECAST CONCRETE
PC	PIPE COLUMN
PCF	PER CUBIC FOOT
PERP	PERPENDICULAR
℘	PLATE
PLWD	PLYWOOD
PN	PERIMETER NAILING
PP	PARTIAL PENETRATION
PSI	POUNDS PER SQUARE INCH
PSF	PER SQUARE INCH
PSG	PARALLEL SHRINK GROUT
PSL	PARALLEL STRAND LUMBER
PTDF	PRESSURE TREATED DOUG FIR
PT	POINT
R	RADIUS
REINF	REINFORCING/REINFORCEMENT
REQ	REQUIRED
RJ	ROOF JOIST
RR	ROOF RAFTER
SAD	SEE ARCHITECTURAL DRAWINGS
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDST	SELF-DRILLING SELF-TAPPING
SE	STRUCTURAL ENGINEER
SEIS JT	SEISMIC JOINT
SHT	SHEET
SHTHG	SHEATHING
SHRWL	SHEARWALL
SIM	SIMILAR
SJ	SHRINKAGE JOINT
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SM	SHEET METAL
SMS	SHEET METAL SCREWS
SOG	SLAB ON GRADE
SP	STRUCTURAL PANELING
SPCG	SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STAG	STAGGER
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUC	STRUCTURAL
SYM	SYMMETRICAL
T24	TITLE 24 CALIFORNIA CODE
THRD	THREAD OR THREADED
THK	THICK/THICKNESS
TN	TOE NAIL
T.O.	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING/ TOP OF FRAMING
T.O. SLAB	TOP OF SLAB
TOT	TOTAL
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRAN	TRANSVERSE
TS	(SEE HSS)
TYP	TYPICAL
T&B	TOP & BOTTOM
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
URM	UNREINFORCED MASONRY
USS	UNITED STATE STANDARD
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WDW	WINDOW
WF	WIDE FLANGE
WP	WORK POINT
WRT	WITH RESPECT TO
WS	WOOD SCREW
WT	WEIGHT/STRUCTURAL TEE
WWF	WELDED WIRE FABRIC

CONCRETE:

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE CODE PER GENERAL NOTES.
2. CONCRETE SHALL BE PLACED IN ACCORDANCE WITH TITLE 24 AND ASTM C94 AND ACI STANDARD 304. IN ADDITION, MAXIMUM FREE FALL OF CONCRETE SHALL BE 4' - 0".
3. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATORS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND INTO CORNERS OF FORMS.
4. THE MINIMUM 28 DAY STRENGTH SHALL BE PER MIX DESIGN SCHEDULE.
5. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
6. CONCRETE AGGREGATES: NATURAL SAND AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
7. MINERAL ADMIXTURES SHALL COMPLY WITH ASTM C618.
8. LIQUID ADMIXTURES SHALL COMPLY WITH THE FOLLOWING:
   A. WATER REDUCERS .... ASTM C494 TYPE A
   B. MID-RANGE WATER REDUCERS .... ASTM C494 TYPE A & F
   C. NON-CHLORIDE ACCELERATORS .... ASTM C494 TYPE C OR C & E
   D. RETARDING ADMIXTURES .... ASTM C494 TYPE B OR B & D
9. GENERAL:
   A. NO PIPES OR DUCT SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
   B. REFER TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ALL MOULDS, GROOVES, ORNAMENTS, CLIPS, ETC. TO BE CAST IN CONCRETE.
10. ALL CONSTRUCTION JOINTS SHALL BE MADE ROUGH IN ACCORDANCE WITH CODE SECTION 1906.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE LAITANCE, DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE.
11. REMOVE ALL DEBRIS AND EXCESS WATER FROM THE FORMS BEFORE PLACING ANY CONCRETE.
12. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED AND FREE OF EXCESSIVE SCALE, RUST, DIRT, GREASE, OIL OR ANY OTHER SUBSTANCES THAT WILL IMPAIR BOND WITH CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
13. NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE CONCRETED.
14. CONTRACTOR SHALL PREPARE AND SUBMIT CONCRETE MIX DESIGNS FOR ELEVATOR PIT AND EQUIPMENT ROOM SLAB TO THE ARCHITECT OF RECORD FOR REVIEW PRIOR TO PLACEMENT OF ANY CONCRETE. CONCRETE MIX DESIGNS SHALL BE PER CBC SECTION 1905A. CALCIUM CHLORIDE OR ADMIXTURES WHICH ADD CHLORIDES ARE NOT PERMITTED.
15. SEE REINFORCING STEEL NOTES FOR REINFORCING STEEL REQUIREMENTS.
16. GROUT MIX SHALL BE AS PER MANUFACTURER'S SPECIFICATIONS (6000 PSI MIN).

MIX DESIGN SCHEDULE

TYPE	USE CLASS	STRENGTH " f'c " MIN @ 28 DAYS (PSI)	CONCRETE UNIT WEIGHT (PCF)	MAX AGGREGATE SIZE (IN)	MAX [5] SLUMP (IN)	MAX WATER TO CEMENT RATIO (%)	FLY ASH [7] REPLACEMENT (%)
A	SLAB ON GRADE	3000	150	1"±1/4"	4"±1"	.40	15% MIN 25% MAX
B	FOUNDATIONS	3000	150	1"±1/4"	4"±1"	.50	15% MIN 25% MAX
C	WALLS	3000	150	1"±1/4"	4"±1"	.50	15% MIN 25% MAX

FOOTNOTES:
1. ADD WATER REDUCING ADMIXTURES PER SPECIFICATIONS FOR PLACING.
2. FOR HOT WEATHER CONCRETING REFER TO ACI 305R.
3. FOR COLD WEATHER CONCRETING REFER TO ACI 306R.
4. OTHER ADMIXTURES SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND TESTING LABORATORY UPON CONCRETE MIX DESIGN SUBMITTAL.
5. SLUMPS SHALL NOT EXCEED 8"± 1-1/2" WHEN USING MID-RANGE WATER REDUCERS.
6. ADDITIONAL WATER SHALL NOT BE ADDED TO THE CONCRETE ONCE THE TRUCK LEAVES THE BATCH PLANT.
7. MIX DESIGN SHALL NOT BE PROPORTIONED WITHOUT FIELD EXPERIENCE OR TRIAL MIXTURES PER ACI 318 SECTION 5.4 WHEN USING MORE THAN 15% FLY ASH REPLACEMENT BY WEIGHT.

COLD-FORMED STEEL FRAMING

1. ALL 43 MIL AND 33 MIL STUDS SHALL BE 33,000 PSI MIN. YIELD STRESS STEEL OF STANDARD STRUCTURAL QUALITY. ALL OTHER MATERIAL SHALL BE 50,000 PSI MIN YIELD STRESS.
2. COLD-FORMED STEEL SECTIONS SHALL CONFORM WITH THE REQUIREMENTS OF ASTM A653 SS GRADE 33 OR GRADE 50.
3. ALL MEMBERS SHALL BE CUT SQUARELY OR AS REQUIRED, FITTED AND SEATED PROPERLY TO ABUTTING MEMBERS. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED AT FLANGES OR WEBS OF TRACKS.
4. PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.
5. FASTENING OF COMPONENTS SHALL BE WITH TEK SCREWS OR EQUIVALENT SELF-DRILLING, SELF-TAPPING SCREWS OR WELDING. SCREWS OR WELD SIZES SHALL BE SHOWN ON THE DRAWINGS.
6. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.3.
7. STUD AND TRACK DESIGNATIONS ARE BASED ON STEEL STUD MANUFACTURER'S ASSOCIATION, ICC-ES EVALUATION REPORT ESR-3064P.
8. SEE ICC-ES EVALUATION REPORT ER-4943P FOR TYPICAL STEEL STUD INSTALLATION.
9. FOR STUD SIZE AND LOCATION, SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
10. PUNCH-OUT WEB SECTIONS SHALL NOT BE WITHIN 12" OF THE END OF A COLD-FORMED STEEL MEMBER SUCH AS, BUT NOT LIMITED TO, STUDS OR JOISTS.
11. GAUGE DESIGNATIONS OF PLATES, STRAPS, TRACKS, STUDS AND ANGLES ARE MINIMUMS. THICKER GAUGE ELEMENTS MAY BE USED.
12. SHEET METAL SCREW (SMS) SIZES ARE MINIMUMS. LARGER SCREW SIZES MAY BE USED.

FOUNDATIONS: (BY GENERAL CONTRACTOR)

1. FOUNDATION DESIGN IS BASED ON SOIL STRATA THAT IS UNDISTURBED, NON-ORGANIC NATIVE SOIL, CLASS 5 (CODE MINIMUM WITHOUT SOILS REPORT) AS PER CBC CHAPTER 18A AND TABLE 1804A.2, WITH A NET BEARING CAPACITY OF 1500 PSF AT 12" BELOW GRADE. FOUNDATIONS SHALL BEAR ON FIRM FOUNDATION SOIL STRATA AS APPROVED BY THE BUILDING OFFICIAL. EXPANSIVE, ORGANIC, LOOSE OR SOFT SOILS SHALL NOT BE UTILIZED FOR SUPPORT OF FOOTINGS OR SLABS ON GRADE. THE ENGINEER IS NOT RESPONSIBLE FOR SETTLEMENT DUE TO SOFT SOILS OR EFFECTS DUE TO EXPANSIVE SOILS. IT IS THE OWNER'S RESPONSIBILITY TO INSURE COMPLIANCE WITH THESE REQUIREMENTS.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SHORE AND BRACE AS REQUIRED. SEE SAFETY NOTES FOR ADDITIONAL INFORMATION.
3. ALL FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. FOUNDATIONS MAY BE PLACED IN NEAT EXCAVATIONS PROVIDED FOOTINGS ARE INCREASED 2" IN WIDTH, SEE TYPICAL EXCAVATION DETAIL 11/S3.1.
4. EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS AND LOOSE SOIL. STANDING WATER SHALL BE REMOVED PRIOR TO CONCRETE PLACEMENT.
5. BOTTOMS OF ALL FOUNDATIONS SHALL BE LEVEL.
6. CONTRACTOR SHALL CHECK FOOTING FORMS TO VERIFY THAT THEY SQUARE & PLUMB. THE CONTRACTOR SHALL ALSO VERIFY THAT ALL INSERTS & EMBEDS ARE IN THEIR CORRECT LOCATION & ORIENTATION PRIOR TO PLACING CONCRETE.
7. FOR FOUNDATION CONDITIONS NOT SHOWN ON THESE PLANS, THE FOUNDATIONS MAY BE DESIGNED BY THE ENGINEER OF RECORD AND APPROVED BY DSA. ALLOWABLE BEARING AND SLIDING VALUES MAY BE USED FROM A SOILS REPORT IF PROVIDED, OR PER CBC CHAPTER 18A AND TABLE 1806A.2 IF NO SOILS REPORT IS PROVIDED.

REINFORCING STEEL:

1. REINFORCING SHALL CONFORM TO ASTM A615 - GRADE 60 UNO.
2. NO REINFORCING BARS ARE TO BE WELDED UNLESS SPECIFICALLY DETAILED IN CONTRACT DOCUMENTS. ALL BARS SO DETAILED TO BE WELDED SHALL BE ASTM A706 BARS.
3. ALL REBAR TO BE WELDED SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED TESTING LABORATORY. CONTRACTOR MUST FURNISH TO THE LABORATORY MILL CERTIFICATES SHOWING CHEMICAL ANALYSIS. ALL PREHEATING AND WELDING SHALL BE DONE BY WELDERS CERTIFIED TO WELD REINFORCING BARS IN ACCORDANCE WITH AWS D1.4-05 STANDARDS.
4. E80xx ELECTRODE SHALL BE USED FOR ALL REBAR WELDING.
5. TACK WELDING TO REBAR IS STRICTLY PROHIBITED.
6. WIRE FABRIC SHALL CONFORM TO ASTM A185. WELDED WIRE FABRIC SHALL BE LAP SPLICED TWO SQUARES MIN EACH DIRECTION.
7. REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH ACI 315.
8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH .... 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER, BUT PLACED IN FORMS .... 2"
   C. SLAB (ON GROUND) .... POSITION IN CENTER OF SLAB, UNO.
9. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
10. A. ALL BARS SHALL HAVE A CLASS B MINIMUM SPLICE LAP UNLESS OTHERWISE NOTED. SEE REINFORCEMENT LAP SPLICES TABLE.
    B. DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH THE SAME SIZE REINFORCING. UNO.

REINFORCEMENT LAP SPLICE LENGTHS (IN INCHES)

f'c = 3000 PSI AT 28 DAYS										
SPLICE CLASS	REINFORCEMENT LOCATION	REINFORCEMENT SIZE (GR60, UNO)								
		#3	#4	#5	#6	#7	#8	#9	#10	#11
A	TOP	21	28	36	43	62	71	80	89	98
	OTHER	16	22	27	33	48	55	62	68	75
B	TOP	28	37	46	56	81	93	104	116	131
	OTHER	21	28	36	43	62	71	80	91	101

FOOTNOTES:
1. TABLE ABOVE BASED ON UNCOATED REINFORCING.
2. TOP REINFORCING IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT.
3. FOR BARS WITH COVER LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING LESS THAN 2 BAR DIAMETERS, INCREASE LAP SPLICE BY 100%

STRUCTURAL STEEL:

1. FABRICATION, ERECTION AND MATERIALS SHALL CONFORM WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND 2016 CBC.
2. STRUCTURAL STEEL SHAPES AND CONNECTORS SHALL CONFORM TO THE FOLLOWING:
   A. TUBE STEEL (UNO) .... ASTM A500, GRADE B (Fy = 46 KSI)
   B. PIPE COLUMNS .... ASTM A53, TYPES E OR S, GRADE B (Fy = 35 KSI)
   C. ANGLES, CHANNELS, BARS & MISCELLANEOUS SHAPES .... SHALL BE GRADE 50
   D. PLATES .... ASTM A529, A572 OR A1011, GRADE 50
   E. MACHINE BOLTS .... ASTM A307
   F. HIGH STRENGTH BOLTS (HSB) .... ASTM A325-N (UNO)
   G. HARDENED STEEL WASHERS .... ASTM F436
   H. ANCHOR BOLTS .... ASTM F1554 GRADE 105 UNO (HEAD OR LOCKNUT)
3. SPLICING STRUCTURAL MEMBERS WHERE NOT DETAILED ON THE DRAWING IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AND DSA.
4. EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE MACHINE BOLTS.
5. FOR ALL HIGH STRENGTH BOLTS, HARDENED WASHERS SHALL BE PROVIDED UNDER THE TURNING ELEMENT OF BOLT FOR TORQUING AS REQUIRED.
6. HOLES FOR MACHINE BOLTS SHALL BE DRILLED AND OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16".
7. COLUMN BASE PLATE ANCHOR BOLT HOLES MAY BE OVERSIZED IN ACCORDANCE WITH AISC 360 AND TABLE 14-2 OF THE 14TH EDITION OF THE STEEL CONSTRUCTION MANUAL, WITH HEAVY HEX NUTS OR PLATE WASHERS UNDER BASE PLATE.
8. USE STANDARD AISC GAGE AND PITCH FOR BOLTS EXCEPT AS OTHERWISE NOTED.
9. "SLIP CRITICAL" BOLTED CONNECTIONS:
   A. "SLIP CRITICAL" CONNECTIONS (A325SC DESIGN VALUES WITH SPECIAL INSPECTION) ARE REQUIRED WHERE INDICATED.
   B. THE SPECIAL INSPECTOR MUST BE PRESENT DURING THE ENTIRE INSTALLATION AND TIGHTENING OPERATION OF "SLIP CRITICAL" CONNECTIONS.
10. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). ER705-6 WELDING WIRE MAY BE USED FOR NON-FULL PENETRATION WELDS, THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND STRUCTURAL WELDING CODE- STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1: D1.8 LATEST REVISION). SEE SITE SPECIFIC DSA FORM 103 FOR WELDING INSPECTION REQUIREMENT. SUBMIT ALL WELDING PROCEDURES AND SPECIFICATIONS TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO BEGINNING FABRICATION.
11. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360-10, SECTION J2.2b.
12. PROVIDE 3" MINIMUM CONCRETE COVERAGE ON ALL STEEL BELOW GRADE.
13. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS ARE PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.
14. NON-SHRINK GROUT: A PREMIXED NON-METALLIC FORMULA WITH NO CHLORIDES HAVING THE FOLLOWING CHARACTERISTICS:
    A. FLOWABLE MIX AT TIME OF PLACEMENT
    B. NO SHRINKAGE AFTER PLACEMENT
    C. COMPRESSIBLE STRENGTH OF 5000 PSI (MINIMUM) AT 7 DAYS
    D. CONFORMS TO ASTM C1107 (GRADE C)
15. TEMPORARILY STABILIZE ELEVATOR HISTORY TO PREVENT LATERAL DISPLACEMENT BEFORE ADDING VERTICAL LOAD. PLACE NON-SHRINK GROUT (EMBCO 636, RAPIDEST CEMENTALL OF APPROVED EQUAL) UNDER ALL BASE PLATES AND ALLOW TO SET PER MANUFACTURER'S RECOMMENDATIONS BEFORE REMOVING LATERAL STABILIZATION.
16. THICKNESS DIMENSIONS OF HSS ARE MINIMUMS. THICKER HSS MEMBERS UP TO 1/2" MAX MAY BE USED.

GENERAL NOTES

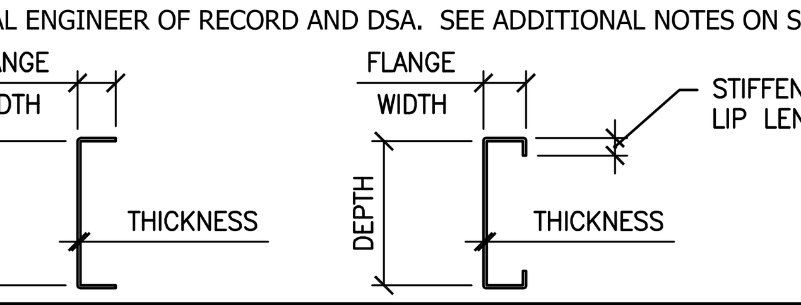
1. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
2. TYPICAL NOTES AND DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS.
3. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2016 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. WITH LATEST REVISIONS AND REFERRED TO HERE AS "THE CODE", AND OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. IF CONFLICTS OCCUR BETWEEN DRAWINGS AND SPECIFICATIONS, THE MOST EXPENSIVE MATERIALS OR METHODS SHALL PREVAIL. STRUCTURAL ENGINEER SHALL BE NOTIFIED OF CONFLICTS AND THAT PORTION OF WORK SHOULD NOT PROCEED UNTIL CONFLICT IS RESOLVED.
6. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
7. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
8. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND / OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
9. HEAVY EQUIPMENT, CRANES AND MATERIAL STOCKPILES SHALL NOT BE LOCATED ON OR ADJACENT TO SHORING.
10. SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE, OR DETAILS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. FOR A SUBSTITUTION TO BE REVIEWED THE CONTRACTOR SHALL AGREE & COMPLY WITH THE FOLLOWING:
    A. THE CONTRACTOR SHALL BE BILLED ON A TIME AND MATERIALS BASIS FOR THE REVIEW OF THE SUBSTITUTION WITH NO GUARANTEE OF APPROVAL.
    B. VERIFY THAT THE SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.
    C. THE CONTRACTOR SHALL ALSO PAY FOR CHANGES TO DESIGN, WHICH INCLUDES BUT IS NOT LIMITED TO; ENGINEERING DESIGN, DETAILING, APPROVAL AGENCY PROCESS AND CONSTRUCTION COST CAUSED BY THE REQUESTED SUBSTITUTION.
    D. THE PROPOSED SUBSTITUTION IS TO HAVE NO ADVERSE AFFECT ON OTHER TRADES, THE CONSTRUCTION SCHEDULE, OR THE SPECIFIED WARRANTY REQUIREMENTS.
11. NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN ADVANCE OR SHOWN ON THESE DRAWINGS.
12. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DIMENSIONS AND ELEVATIONS MUST BE VERIFIED WITH ARCHITECTURAL DRAWINGS. IN THE EVENT OF A CONFLICT, THE STRUCTURAL ENGINEER AND ARCHITECT ARE TO BE NOTIFIED IMMEDIATELY. DRAWING SCALES GIVEN ARE APPROXIMATE - DO NOT SCALE PLANS OR DETAILS.
13. SITE VISITS BY STRUCTURAL ENGINEER SHALL NOT BE IN LIEU OF INSPECTIONS.
14. SEE ARCHITECTURAL DRAWINGS FOR FOLLOWING:
    - SIZE AND LOCATION OF ALL DOOR OPENINGS.
    - SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES AND DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
    - FLOOR AND ROOF FINISHES.
    - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
15. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THE FOLLOWING:
    - PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENING, ETC EXCEPT AS SHOWN OR NOTED.
    - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALL OR SLABS.
    - CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
    - SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOTOR MOUNTS.
16. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATION SHALL BE MADE BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338. PART 1, TITLE 24, C.C.R.
17. INSTALLATION MUST COMPLY WITH REQUIREMENTS OF CBC CHAPTER 30 INCLUDING, BUT NOT LIMITED TO:
    - 3002.3 - EMERGENCY SIGNS
    - 3002.4.4A - ELEVATOR RECALL
    - 3002.4.5-7A - SIGNAGE
    - 3002.4 - ELEVATOR TO ACCOMMODATE AMBULANCE STRETCHER
    - 3002.5 - EMERGENCY DOORS
    - 3003 - EMERGENCY OPERATIONS
    - 3006 - MACHINE ROOMS.

SAFETY NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
2. THE STRUCTURAL ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
3. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING FOR VERTICAL AND / OR LATERAL LOADS, SHORING AND LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER WILL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

CLADDING:

THE DESIGNS OF THE STRUCTURAL SYSTEMS FOR THESE ELEVATORS BASED ON A MAXIMUM TOTAL WEIGHT FOR EXTERIOR CLADDING OF 400 LBS PER VERTICAL FOOT OF THE ENTIRE SHAFT FOR ALL MATERIALS EXTERIOR OF THE EXTERIOR SURFACE OF WALL STUDS AND CORNER COLUMNS, INCLUDES WEIGHT OF WALL STUDS, COLUMNS, HORIZONTAL BEAMS, 2- LAYERS OF 5/8" GYPSUM WALL BOARD INSIDE AND OUTSIDE AND EXTERIOR ARCHITECTURAL FINISH. IF ANY COMBINATION OF TOTAL EXTERIOR CLADDING WEIGHTS EXCEEDS 400 LBS PER VERTICAL FOOT BY MORE THAN 40 LBS PER VERTICAL FOOT OF THE SHAFT, THE STRUCTURAL DESIGN OF THE ELEVATOR SHAFT STRUCTURAL SYSTEM AND FOUNDATION MUST BE REVIEWED BY THE MEM STRUCTURAL ENGINEER OF RECORD AND DSA. SEE ADDITIONAL NOTES ON SHEET S4.



STRUCTURAL SECTION PROPERTIES

SSMA DESIGNATION	GAUGE	Fy (KSI)	FLANGE WIDTH (in)	DESIGN THICKNESS (in)	INSIDE RADII (in)	DEPTH (in)	STIFFENING LIP LENGTH (in)	GROSS A (in^2)	EFFECTIVE Sx (in^3)	EFFECTIVE Ix (in^4)	INTENDED USE
350S162-43	18	33	1 5/8"	0.0451	0.0712	3 1/2	0.5	0.334	0.357	0.654	STUDS
350S162-54	16	50	1 5/8"	0.0566	0.0849	3 1/2	0.5	0.415	0.426	0.804	STUDS
350S162-68	14	50	1 5/8"	0.0713	0.1069	3 1/2	0.5	0.515	0.549	0.985	STUDS
362S162-43	18	33	1 5/8"	0.0451	0.0712	3 5/8	0.5	0.340	0.372	0.710	STUDS
362S162-54	16	50	1 5/8"	0.0566	0.0849	3 5/8	0.5	0.415	0.426	0.804	STUDS
362S162-68	14	50	1 5/8"	0.0713	0.1069	3 5/8	0.5	0.422	0.576	0.873	STUDS
400S162-43	18	33	1 5/8"	0.0451	0.0712	4	0.5	0.357	0.417	0.892	STUDS
400S162-54	16	50	1 5/8"	0.0566	0.0849	4	0.5	0.443	0.498	1.098	STUDS
400S162-68	14	50	1 5/8"	0.0713	0.1069	4	0.5	0.550	0.648	1.346	STUDS
350T150-43	18	33	1 1/2"	0.0451	0.0712	3 1/2	N/A	0.293	0.243	0.531	TRACK OR JOIST
350T150-54	16	50	1 1/2"	0.0566	0.0849	3 1/2	N/A	0.367	0.332	0.712	TRACK OR JOIST
350T150-68	14	50	1 1/2"	0.0713	0.1069	3 1/2	N/A	0.462	0.459	0.957	TRACK OR JOIST
362T150-43	18	33	1 1/2"	0.0451	0.0712	3 5/8	N/A	0.298	0.255	0.574	TRACK OR JOIST
362T150-54	16	50	1 1/2"	0.0566	0.0849	3 5/8	N/A	0.374	0.349	0.769	TRACK OR JOIST
362T150-68	14	50	1 1/2"	0.0713	0.1069	3 5/8	N/A	0.471	0.449	0.993	TRACK OR JOIST
400T150-43	18	33	1 1/2"	0.0451	0.0712	4	N/A	0.315	0.293	0.719	TRACK OR JOIST
400T150-54	16	50	1 1/2"	0.0566	0.0849	4	N/A	0.396	0.399	0.960	TRACK OR JOIST
400T150-68	14	50	1 1/2"	0.0713	0.1069	4	N/A	0.498	0.513	1.237	TRACK OR JOIST

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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

MEM INC
MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
GENERAL NOTES AND ABBREVIATIONS

SHEET NO:
S2

BID SET 10/01/2021

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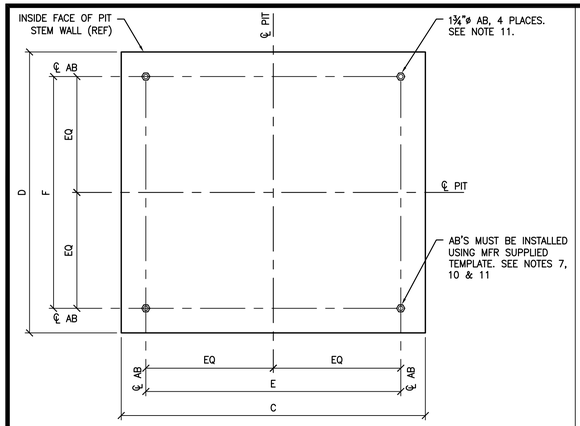
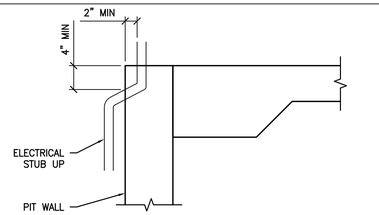
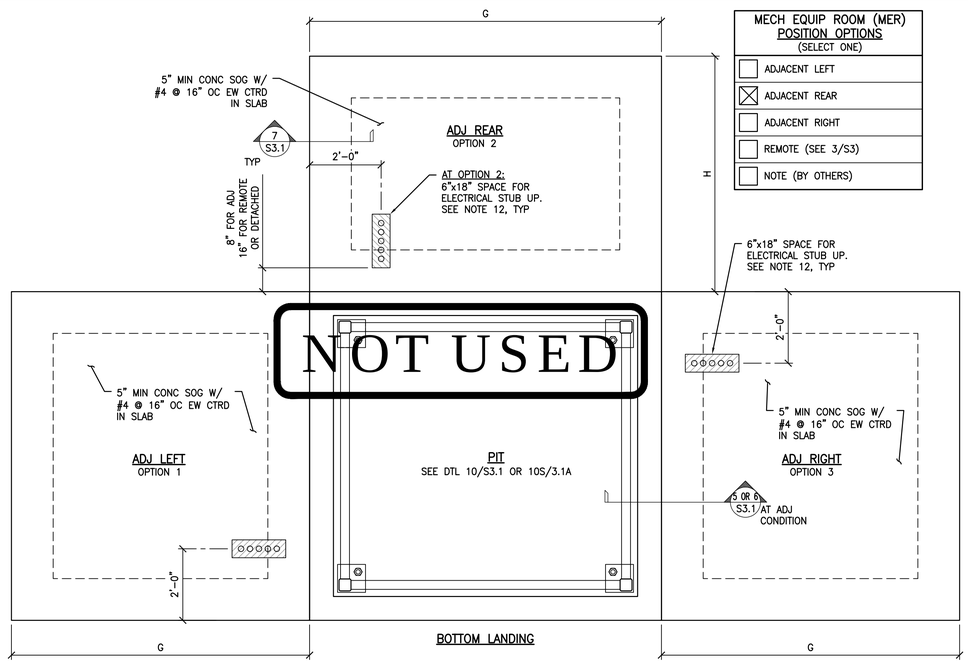


NOTE:
SEE TABLE 2/S3 FOR DIMS

ANCHOR BOLT LAYOUT PLAN
5 / S3 NTS



ELECTRICAL STUB UP DETAIL
4 / S3 NTS



NOT USED

MECH EQUIP ROOM (MER) POSITION OPTIONS (SELECT ONE)
☐ ADJACENT LEFT
☒ ADJACENT REAR
☐ ADJACENT RIGHT
☐ REMOTE (SEE 3/S3)
☐ NOTE (BY OTHERS)

NOTES:
1. EQUIP ROOM SLAB MUST BE LEVEL. NO SLOPE ALLOWED
2. REMOTE OPTION 4 SHOWN ADJ SIM.
3. SEE TABLE 3/S3 FOR DIMS
4. SEE DTL 1/S6 FOR EQUIP ROOM PLAN

EQUIPMENT ROOM SLAB LOCATION PLAN
2 / S3 NTS

HOISTWAY SELECTION (SELECT ONE HOISTWAY & ONE ELEVATOR MODEL)				
HOISTWAY SIZE (APPROX INSIDE CLR)	☐ HW-1 7'-6"W x 6'-10"D	☒ HW-2 8'-6"W x 6'-10"D	☐ HW-3 9'-2"W x 6'-10"D	
ELEVATOR MODEL R = REVERSE OPG G = CBC 2016 GURNEY COMPLIANT	☐ 2000R	☐ 2500R	☐ 3000 R/G	
	☐ 2500	☐ 3000	☐ 3500 G	
		☒ 3500 G	☐ 4000	

REFERENCE TABLE 1, 1/VT/3 FOR ELEVATOR SIZES

TABLE 1 – PIT SLAB DIMS			
SOIL PROPERTIES		REQ DIMS	
ALLOWABLE* NET BEARING PRESSURE AT 12" (PSF)	ALLOWABLE* PASSIVE PRESSURE (PCF)	A	B
		☒ 44'-0" HOISTWAY HT	
☐ 1500 (1)	100	16'-4"	16'-8"
☒ 2000 (2)	150	15'-6"	15'-6"
☐ 3000 (2)	200	15'-0"	15'-6"
☐ 4000 (2)	400	14'-6"	15'-0"

* BASIC UNFACTORED ALLOWABLE VALUE AT 12" MIN DEPTH BLW UNDISTURBED GROUND SURFACE
(1) VALUE ALLOWED FOR DEAD + LIVE LOADS IF NO SOILS REPORT
(2) VALUE ALLOWED FOR DEAD + LIVE LOADS WHEN JUSTIFIED BY A SOIL REPORT

TABLE 2 – PIT DIMS & AB LOCATIONS				
DIMS	DESCRIPTION	☐ HW-1	☒ HW-2	☐ HW-3
C	CLEAR PIT	8'-6"	9'-6"	10'-2"
D	CLEAR PIT	7'-10 1/4"	7'-10 1/4"	7'-10 1/4"
E	AB	7'-1 1/2"	8'-1 1/2"	8'-9 1/2"
F	AB	6'-5 3/4"	6'-5 3/4"	6'-5 3/4"

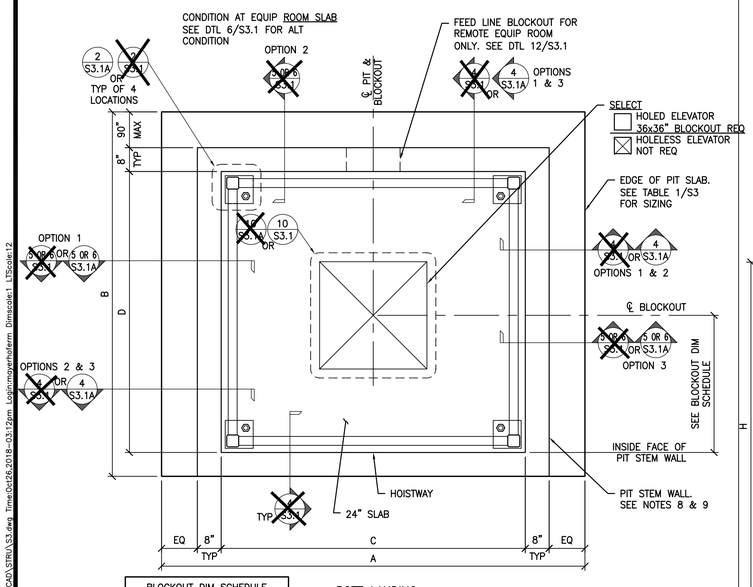
TABLE 3 – EQUIP ROOM SLAB DIMS					
POSITION	☐ OPT 1 SIDE / ☐ OPT 3 SIDE	☐ OPT 2 REAR NOTE: FOR REMOTE EQUIP ROOM, ADD 5" TO "H" DIM"			☐ OPT 4 REMOTE
	ALL	☐ HW-1	☒ HW-2	☐ HW-3	ALL (MIN)
G	8'-4"	9'-10"	10'-10"	11'-6"	8'-4"
H	9'-2 1/4"	6'-7"	6'-7"	6'-7"	7'-8"

TABLE 3A – MIN EQUIP ROOM SLAB DIMS					
POSITION	☐ OPT 1 SIDE / ☐ OPT 3 SIDE	☒ OPT 2 REAR NOTE: FOR REMOTE EQUIP ROOM, ADD 5" TO "H" DIM"			
	ALL	☐ HW-1	☒ HW-2	☐ HW-3	
G	5'-7"	5'-7"	5'-7"	5'-7"	
H	9'-2 1/4"	9'-10"	10'-10"	11'-6"	

TABLE 3A – POST-INSTALLED ANCHORS TO CONC								
MFR	ANCHOR TYPE	ANCHOR DIA (IN)	MIN EFFECTIVE EMBEDMENT (IN)[1,4]	MIN NOMINAL EMBEDMENT (IN)	MIN EDGE/END DISTANCE (IN)[2]	INSTALLATION TORQUE (FT-#)[1]	NOMINAL APPLIED SHEAR LOAD[3]	ICC-ES ESR
HILTI	KB-TZ	3/8	2	2 5/16	4	25	200	1917
HILTI	KB-TZ	5/8	4	4 7/16	7	60	200	1917
HILTI	KWIK HUS EZ	3/8	2.5	3 1/4	4	40	200	3027
HILTI	KWIK HUS EZ	5/8	3.88	5	7	85	200	3027
SIMPSON STRONGTIE	STRONG-BOLT 2	3/8	2 1/2	2 7/8	4	30	200	3037
SIMPSON STRONGTIE	STRONG-BOLT 2	5/8	4 1/2	5.125	7	80	200	3037
SIMPSON STRONGTIE	TITEN HD	3/8	2.4	3 1/4	4	50	200	2713
POWERS	POWER-STUD+SD1	3/8	2	2 3/8	4	20	200	2818
POWERS	POWER-STUD+SD1	5/8	4	4 5/8	7	80	200	2818

1. PER ICC-ES ESR
2. PER DESIGN DRAWINGS, NOT ICC-ES ESR
3. APPLIED TOWARDS NEAREST FREE EDGE OF CONCRETE.
4. APPLIED TOWARDS NEAREST FREE EDGE OF CONCRETE SUBSTRATE IS SUFFICIENTLY THICK W/ RESPECT TO THE AMCHOR EMBEDMENT SO AS NOT TO BE INFLUENCE TO THE CONNECTOPN

NOTES:
1. FOUNDATION CONSTRUCTION TO BE PERFORMED BY OTHERS & IS NOT PART OF THE ELEVATOR CONTRACTOR'S WORK.
2. EQUIP ROOM IS OPTIONAL & MAY BE PROVIDED BY OTHERS.
3. GROUNDING OF STRUCTURES BY OTHERS.
4. EQUIP ROOM SLAB MAY EXTEND BEYOND DIMS SHOWN. THICKENED FTGS BLW EQUIP ROOM WALLS TO CONFORM TO DIMS SHOWN ON DTL 7/S3.1
5. PIT SLAB MAY EXTEND BYD EXTR FACE OF WALL ON SIDES SHOWN, SEE TABLE 1 ON SHT S3 FOR SLAB SIZE.
6. ARCH OR SEOR TO DETERMINE IF SOIL NET BEARING PRESSURES GREATER THAN 1500 PSF (UNFACTORED) & LATERAL PASSIVE RESISTANCE PRESSURES GREATER THAN 100 PCF (UNFACTORED) ARE ALLOWABLE. PIT SLAB AS SHOWN IN TABLE 1 ON SHT S3 FOR 1500 PSF BEARING PRESSURE & 100 PCF PASSIVE PRESSURE SHALL BE USED IF AN ACCEPTABLE SOIL INVESTIGATION REPORT IS NOT AVAILABLE THAT RECOMMENDS GREATER SOIL RESISTANCE VALUES.
7. AB TEMPLATE MUST BE PROVIDED BY ELEVATOR CONTRACTOR. RESPONSIBILITY FOR PROPER AB PLACEMENT IS BY OTHERS.
8. PIT STEM WALLS MAY BE POSITIONED TO SUIT JOBSITE CONDITIONS AT ANY POSITION WITHIN THE CONFINES OF THE PIT SLAB
9. FLUSH PIT SLAB TO STEM WALL CONDITION MAY OCCUR AT ANY WALL. MAX CONDITION MAY OCCUR ON TWO WALLS.
10. AB TEMPLATE TO BE CTRD IN PIT
11. TIE BOTT OF AB'S TO REBAR PRIOR TO POURING SLAB TO MAINTAIN PLUMB.
12. POSITION STUB UP NEXT TO WALL THAT WILL BE ADJ TO THE HOISTWAY. FOR REMOTE MACHINE ROOM, POSITION NEXT TO WALL OPPOSITE MACHINE ROOM DOOR. SEE DTL 12/S3.1 FOR FEEDLINE BLOCKOUT
13. ALL GT TO BE RAPID SET CEMENT ALL-HIGH STRENGTH NSG OR EQ & CONFORM TO ASTM-C-1107.

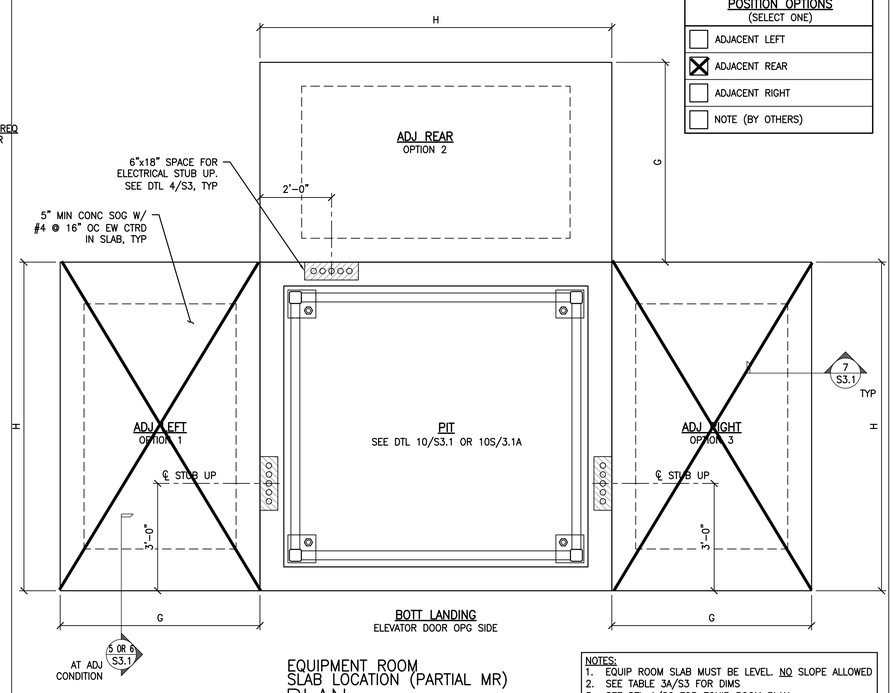


BLOCKOUT DIM SCHEDULE	
INLINE DOORS	3'-4"
FRONT & BACK DOORS	3'-11"

BOTT LANDING
ELEVATOR DOOR OPG SIDE

NOTES:
1. SEE TABLES 1/S3 & TABLE 2/S3 FOR DIMS.
2. SEE PLAN 4/S3 FOR AB LOCATIONS.
3. SEE PLAN 2/S3 FOR OPTION SELECTED.

PIT FOUNDATION PLAN
3 / S3 NTS



MECH EQUIP ROOM (MER) POSITION OPTIONS (SELECT ONE)
☐ ADJACENT LEFT
☒ ADJACENT REAR
☐ ADJACENT RIGHT
☐ NOTE (BY OTHERS)

NOTES:
1. EQUIP ROOM SLAB MUST BE LEVEL. NO SLOPE ALLOWED
2. SEE TABLE 3A/S3 FOR DIMS
3. SEE DTL 1/S6 FOR EQUIP ROOM PLAN

EQUIPMENT ROOM SLAB LOCATION (PARTIAL MR) PLAN
1 / S3 NTS

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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DATE 11/3/2018
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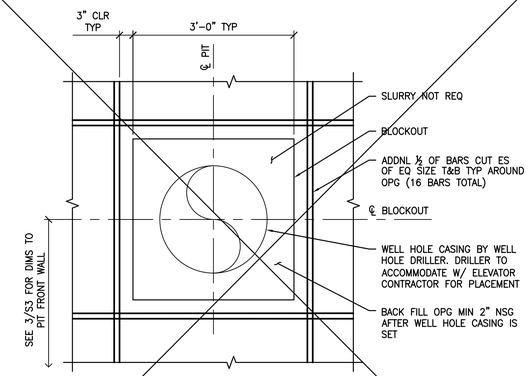
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
FOUNDATION PIT PLAN

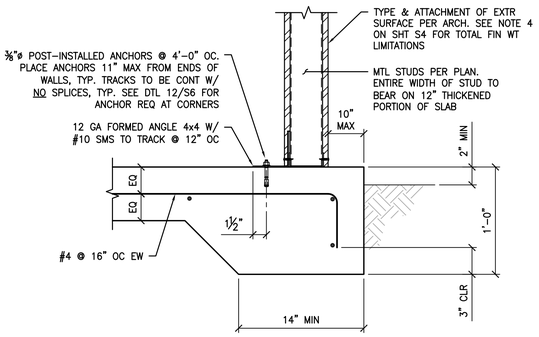
SHEET NO:
S3

BID SET 10/01/2021



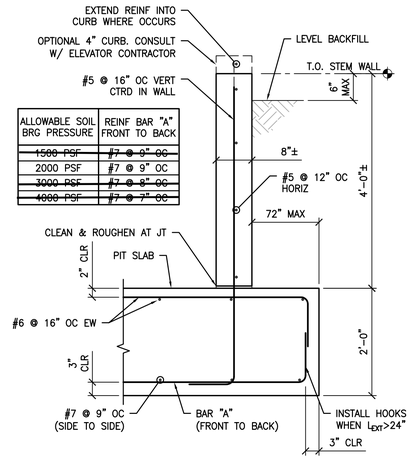
PIT SLAB BLOCKOUT BACK FILL (IF REQ) DETAIL

10 S3.1A NTS



EQUIP ROOM WALL DETAIL

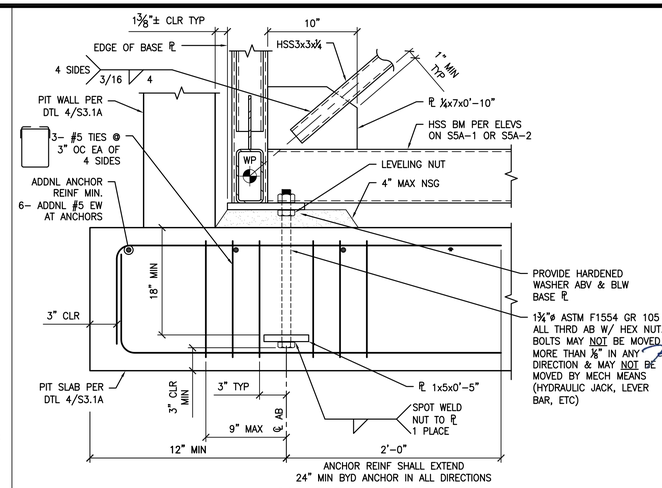
7 S3.1A NTS



ALLOWABLE SOIL BRG PRESSURE	REINF BAR "A" FRONT TO BACK
~~1500 PSF~~	~~#7 @ 9" OC~~
2000 PSF	#7 @ 9" OC
~~3000 PSF~~	~~#7 @ 8" OC~~
~~4000 PSF~~	~~#7 @ 7" OC~~

PIT WALL SECTION

4 S3.1A NTS



CONNECTION AT PIT DETAIL

1 S3.1A NTS

TYP EXCAVATION DETAIL

11 S3.1A NTS

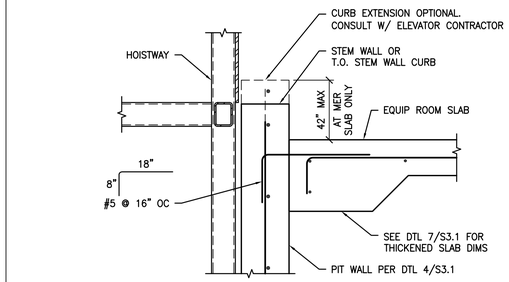
TIE & STIRRUP HOOKS	
REBAR	'D'
#3 – #5	4 x 'db'
#6 – #8	6 x 'db'

FOOTNOTES:
1. 'D' = DIA OF BEND
2. 'db' = DIA OF REBAR

BENDS & HOOKS	
REBAR	'D'
#3 – #8	6 x 'db'
#9 – #11	8 x 'db'
#14 – #18	10 x 'db'

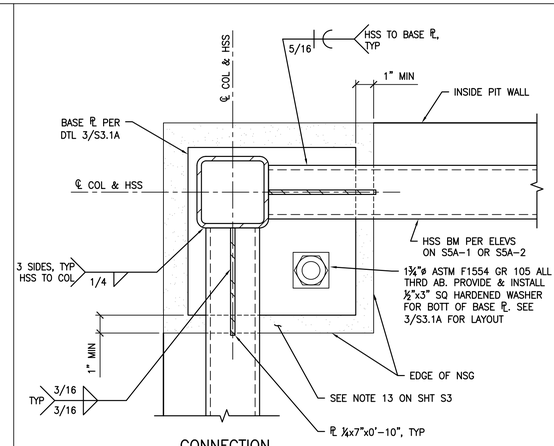
MIN REBAR BENDS DETAIL

8 S3.1A NTS



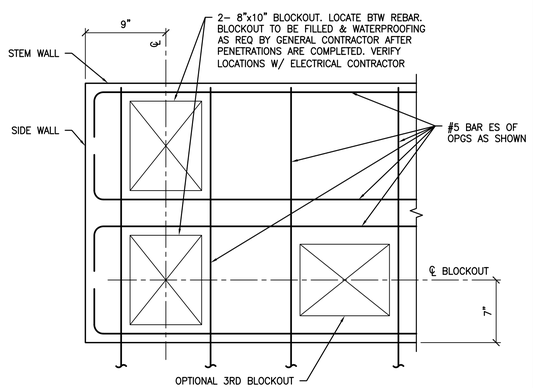
REINF CONN AT MER DETAIL

5 S3.1A NTS



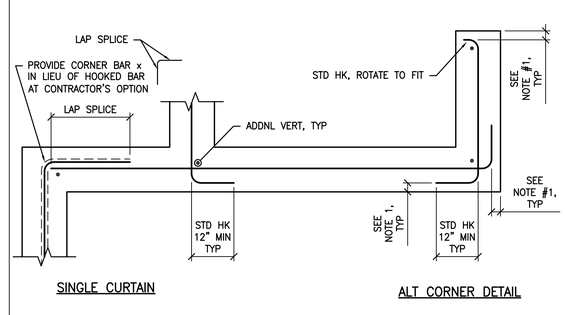
CONNECTION DETAIL

2 S3.1A NTS



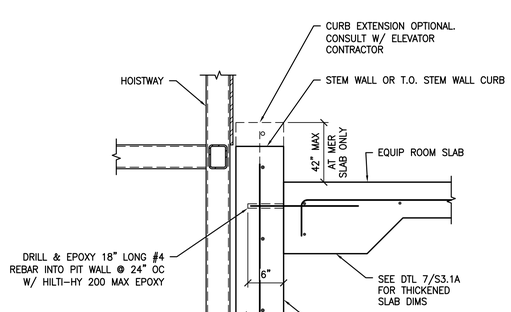
FEEDLINE BLOCKOUT DETAIL

12 S3.1A NTS



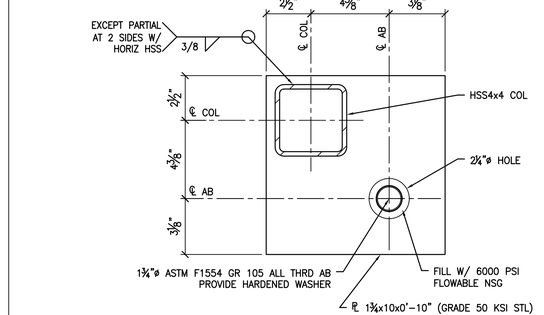
TYP REINF SPLICES DETAIL

9 S3.1A NTS



ALT REINF CONN AT MER DETAIL

6 S3.1A NTS



BASE PLATE DETAIL

3 S3.1A NTS

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO:	16093
DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM

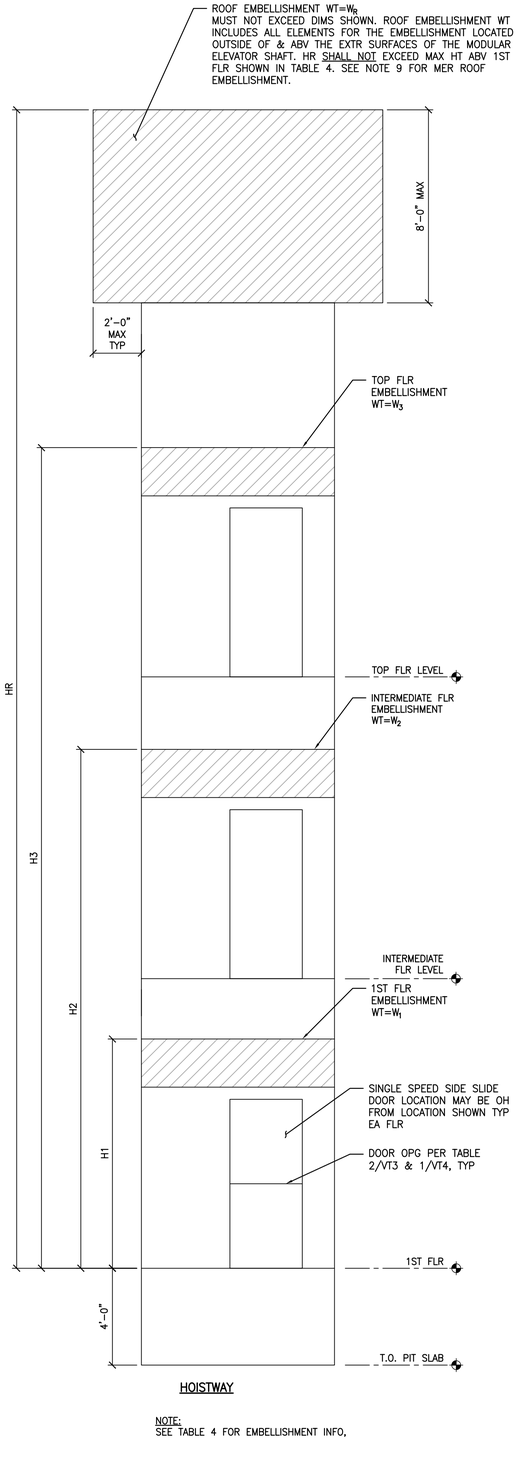
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018

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

SHEET NAME:
FOUNDATION DETAILS
MAX 44'-0"
TOWER HEIGHT

SHEET NO:
S3.1A

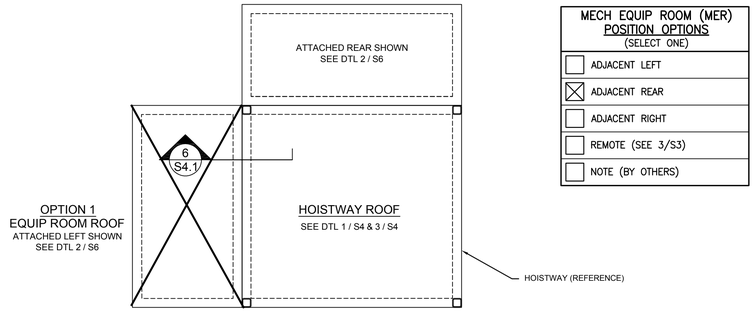
BID SET 10/01/2021



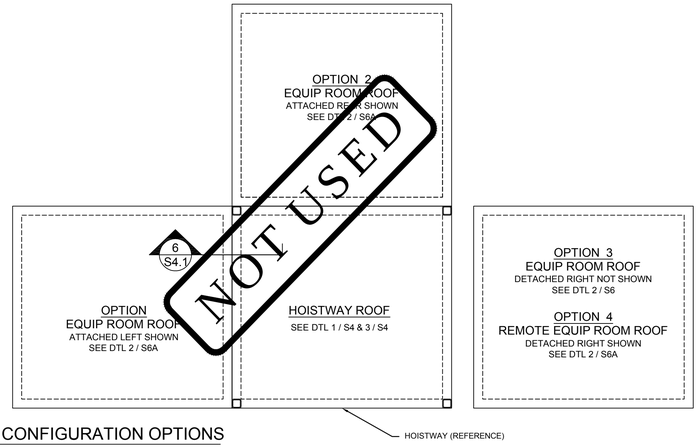
HOISTWAY

NOTE:
SEE TABLE 4 FOR EMBELLISHMENT INFO,

4/S4 EMBELLISHMENT LAYOUT
NTS



MECH EQUIP ROOM (MER) POSITION OPTIONS (SELECT ONE)
☐ ADJACENT LEFT
☒ ADJACENT REAR
☐ ADJACENT RIGHT
☐ REMOTE (SEE 3/S3)
☐ NOTE (BY OTHERS)



2/S4 ROOF PLAN CONFIGURATION OPTIONS
NTS

TABLE 4 – HOISTWAY EMBELLISHMENT			
EMBELLISHMENT LEVEL	MAX HT ABV 1ST FLR (FT)	MAX HT ABV 1ST FLR (FT)	MAX EMBELLISHMENT WEIGHT (LB)
	54' TOWER	44' TOWER	SEE NOTE 4 & 8 BLW
FIRST	H1 = 10	H1 = 10	600
INTERMEDIATE	H2 = 30	H2 = NA	600
TOP	H3 = 43	H3 = 30	600
ROOF	HR = 58	HR = 48	1200

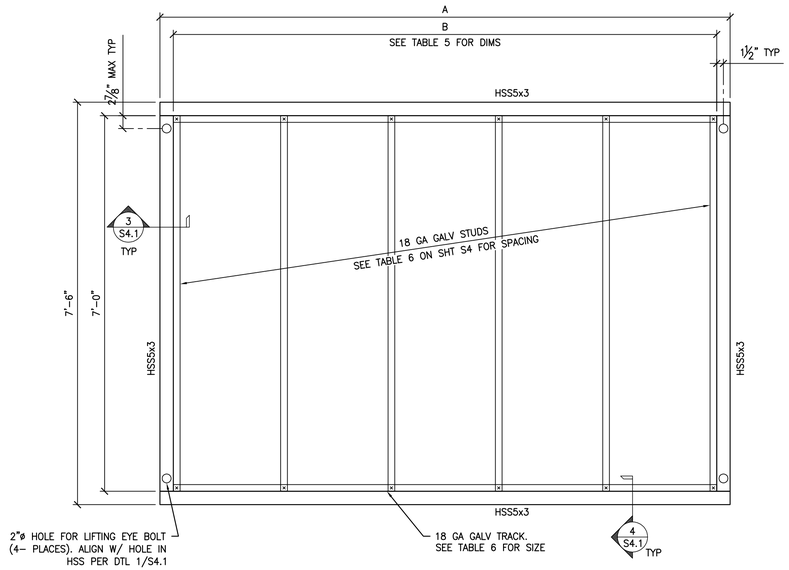
TABLE 5 – ROOF DIMENSIONS			
	☐ HW–1	☒ HW–2	☐ HW–3
A	8'–0"	9'–3"	9'–11"
B	7'–6 1/4"	8'–6 1/4"	9'–2 1/4"

TABLE 6 – JOIST SIZING					
SELECT	ROOF LOAD (PG <=)	SPACING	SIZE	SSMA DESIGNATIONS	USE
HOISTWAY ROOF & EQUIP ROOM ROOF JOIST & TRACK SELECTOR – SPAN = 7'–0"					
☒	20 PSF	@ 16" OC	3 1/2	350S162–43	JOIST
	45 PSF *	@ 16" OC	3 1/2	350S162–43	JOIST
	45 PSF *	–	3 1/2	350T150–43	RIM TRACK
EQUIP ROOM ROOF JOIST & TRACK SELECTOR – SPAN = 9'–6" MAX					
☒	20 PSF	@ 12" OC	3 1/2	350S162–43	JOIST
	45 PSF *	@ 12" OC	3 1/2	350S162–54	JOIST
	45 PSF *	–	3 1/2	350T150–43	RIM TRACK
☐	45 PSF *	–	3 1/2	350T150–54	RIM TRACK

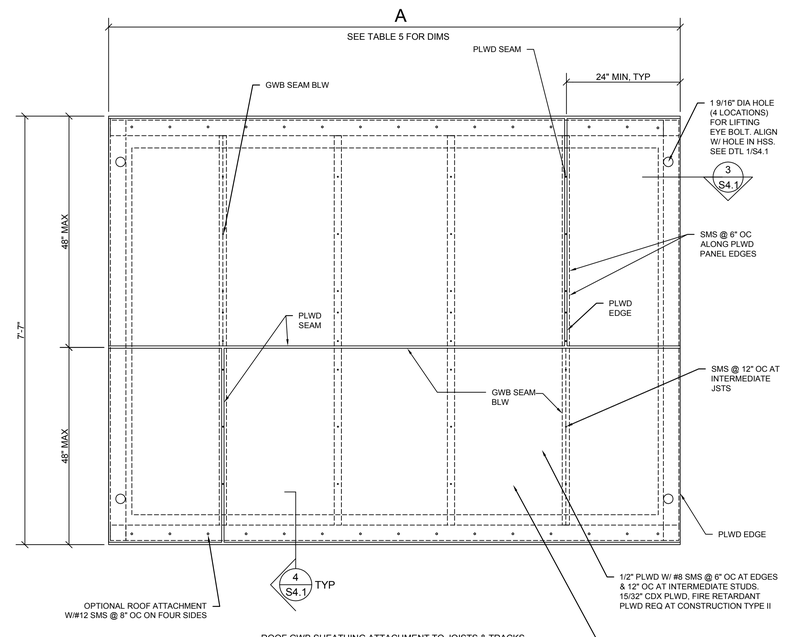
TABLE 6 NOTE:
* MAX ROOF SNOW LOAD INCLUDING DRIFT LOADS

ITEMS TO BE PROVIDED BY SITE APPLICATION ARCHITECT AND / OR ENGINEER OF RECORD

1. ATTACHMENTS OF FINISH MATERIAL BY OTHERS.
2. EMBELLISHMENTS (FOR MAIN ELEVATOR SHAFT ONLY) MUST ATTACH TO STRUC STL COLS & BMS ONLY & NOT TO LIGHT GAUGE MEMBERS. THIS RESTRICTION DOES NOT APPLY TO WALL FINISHES.
3. MAX TOTAL WT OF EXTR WALL FIN = 400 LBS PER FT, SEE "HEAVY CLADDING NOTE ON SHT S2.
4. 3 1/2" STUD WALL CONSTR OPTIONS ARE FIRE–RATED CONSTR, SEE 1/S5.3. 5/8" GWB TYPE X APPLIED TO INTR & EXTR, PARALLEL OR AT RIGHT ANGLES TO STUDS OR STUCCO ON EXTR & 5/8" GWB APPLIED TO INTR. ALL GWB ATTACHED W/ 1" TYPE S DRYWALL SCREWS 8" OC ON VERT EDGES & 12" OC ON INTERMEDIATE STUDS PER UL DESIGN NO. 419 OR U434.
5. FIRE–RATED CONSTR MAY NOT BE REQ WHEN THE ELEVATOR SHAFT DOES NOT PENETRATE FLRS, WHERE THE OPNGS DO NOT ENTER DIRECTLY INTO ANOTHER STRUCTURE & WHEN THE SHAFT IS LOCATED FURTHER THAN 10'–0" FROM A PROPERTY LINE, PER CBC 712.1.
6. EXTR FIN & FLASHING DTLS TO BE SPECIFIED BY PROJECT ARCH AND ARE BY OTHERS. HORIZ REVEAL / JT SHALL BE PROVIDED AT LOCATION OF HORIZ HSS IN EXTR FIN.
7. APPROVAL FOR SPECIFIC EMBELLISHMENT CONFIGURATION MUST BE OBTAINED ON SITE SPECIFIC APPLICATION.
8. CALCULATIONS ASSUME A MAX OF 20 PSF TOTAL WALL WT, INCLUDING CLADDING. EMBELLISHMENT WTS ARE IN ADDITION TO THE WALL WT.
9. MODULAR EQUIP ROOM ROOF EMBELLISHMENT TO MEET SAME DIMENSION RESTRICTIONS AS ELEVATOR SHAFT ROOF EMBELLISHMENT EXCEPT MAX HT IS 4'–0" & MAX WT IS 600 LBS. CONSTRUCTION & ATTACHMENT OF EMBELLISHMENT TO MACHINE ROOM IS NOT PART OF THIS PROJECT & IT IS SUBJECT TO THE LIMITATIONS SHOWN ON THIS NOTE 12.
10. MAX FLR EMBELLISHMENT PROJECTION IS 3'–0" FROM FACE OF HOISTWAY WALL.
11. 2–HOUR FIRE–RATED WALL ASSEMBLY WILL CONSIST OF 2 LAYERS OF 5/8" THK TYPE X FIRE–RATED GWB INSIDE & OUTSIDE OF TOWER UTILIZING 3 1/2" STUDS. ASSEMBLY IS BASED UPON U.L. DESIGN NO. U419.
12. SECONDARY FRMG SHALL BE PROVIDED TO SUPPORT EMBELLISHMENT. ATTACHMENT OF SECONDARY FRMG TO HORIZ HSS OR MTL STUD IS NOT PERMITTED. THIS WORK IS NOT PART OF THIS APPLICATION.



3/S4 HOISTWAY ROOF FRAMING PLAN
NTS
SEE TABLE 5 FOR DIMENSIONS



ROOF GWB SHEATHING ATTACHMENT TO JOISTS & TRACKS

MIN SMS SIZE IS #8 X1" FLAT OR HEX HEAD W/ A MIN HEAD DIA OF 0.292 INCHES, UNO.

1/S4 HOISTWAY ROOF SHEATHING PLAN
NTS
SEE TABLE 5 FOR DIMENSIONS

NO.	DATE	REVISION

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REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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PRE-CHECK (PC) DOCUMENTS
2016 CBC CODE
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PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

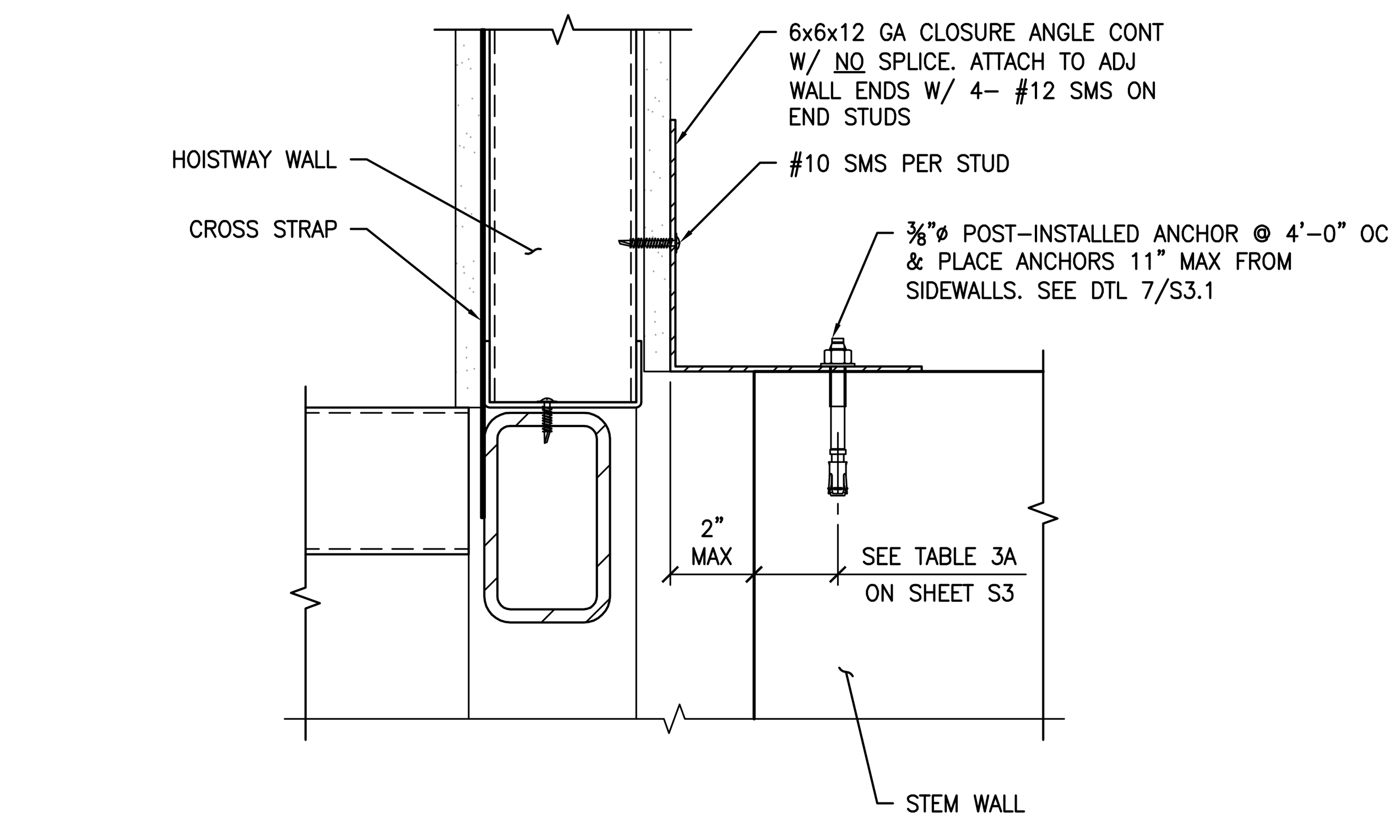
FILE NO. PC-MEM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

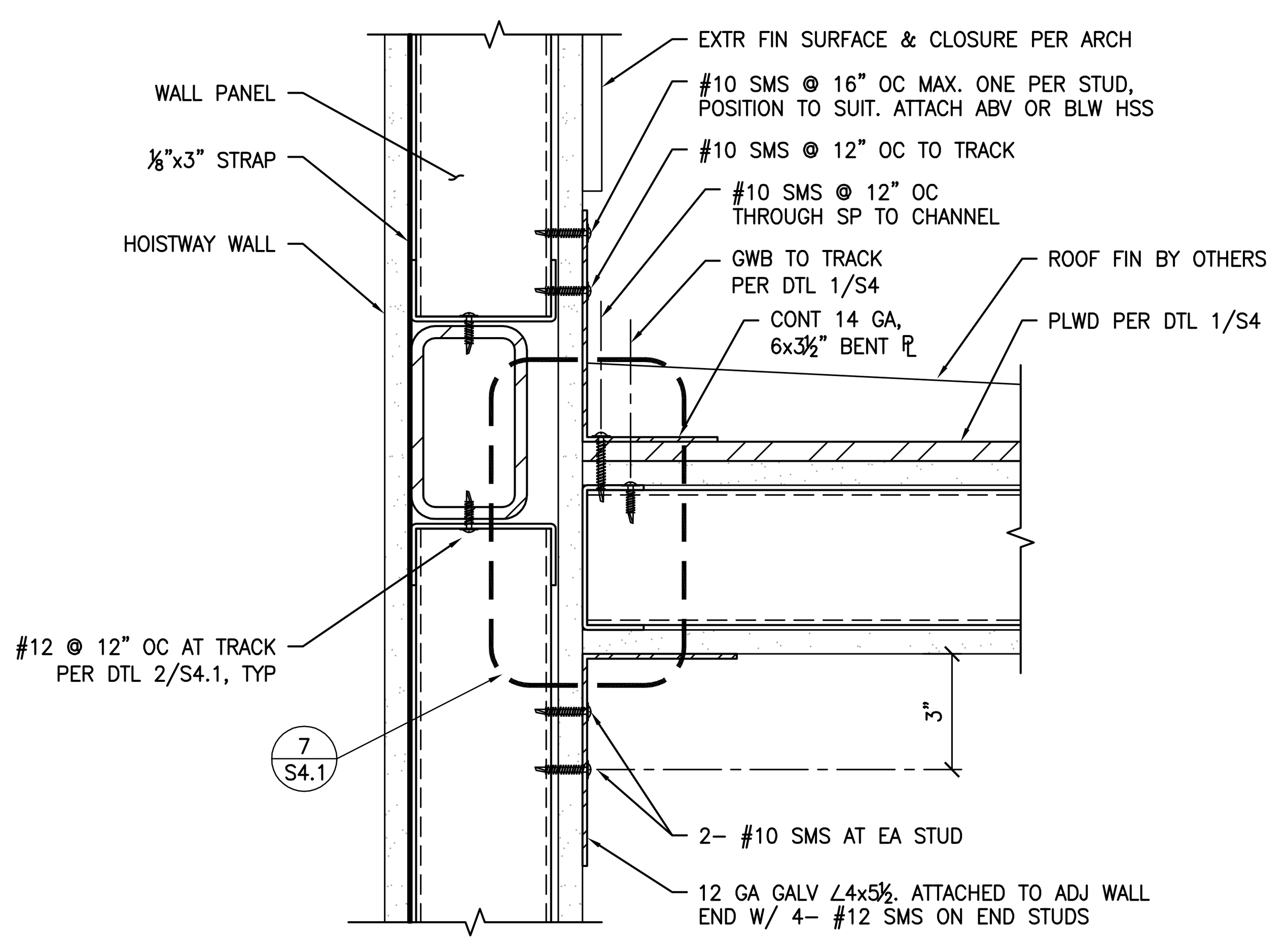
SHEET NAME:
HOISTWAY ROOF PLAN

SHEET NO:
S4

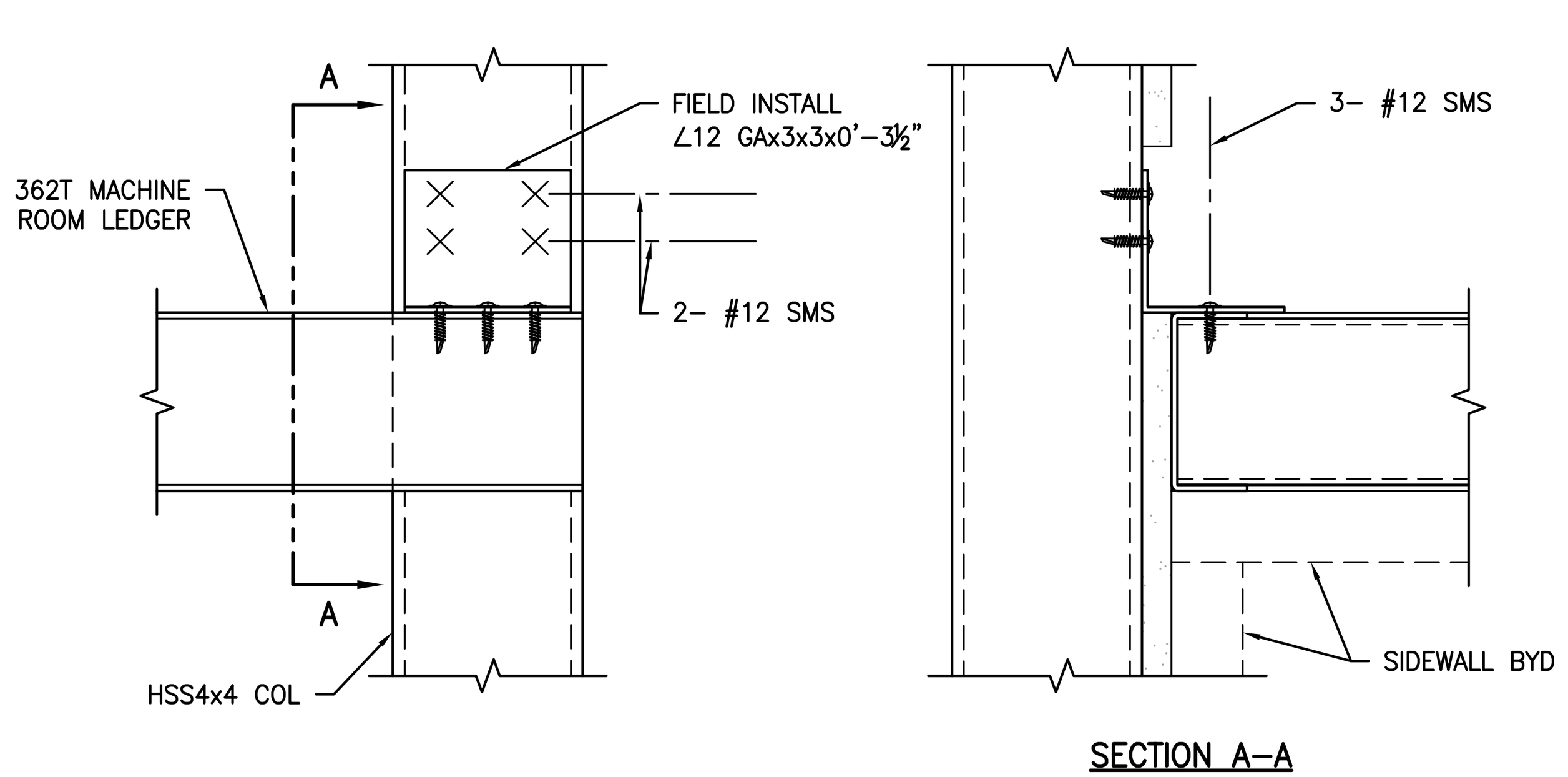
BID SET 10/01/2021



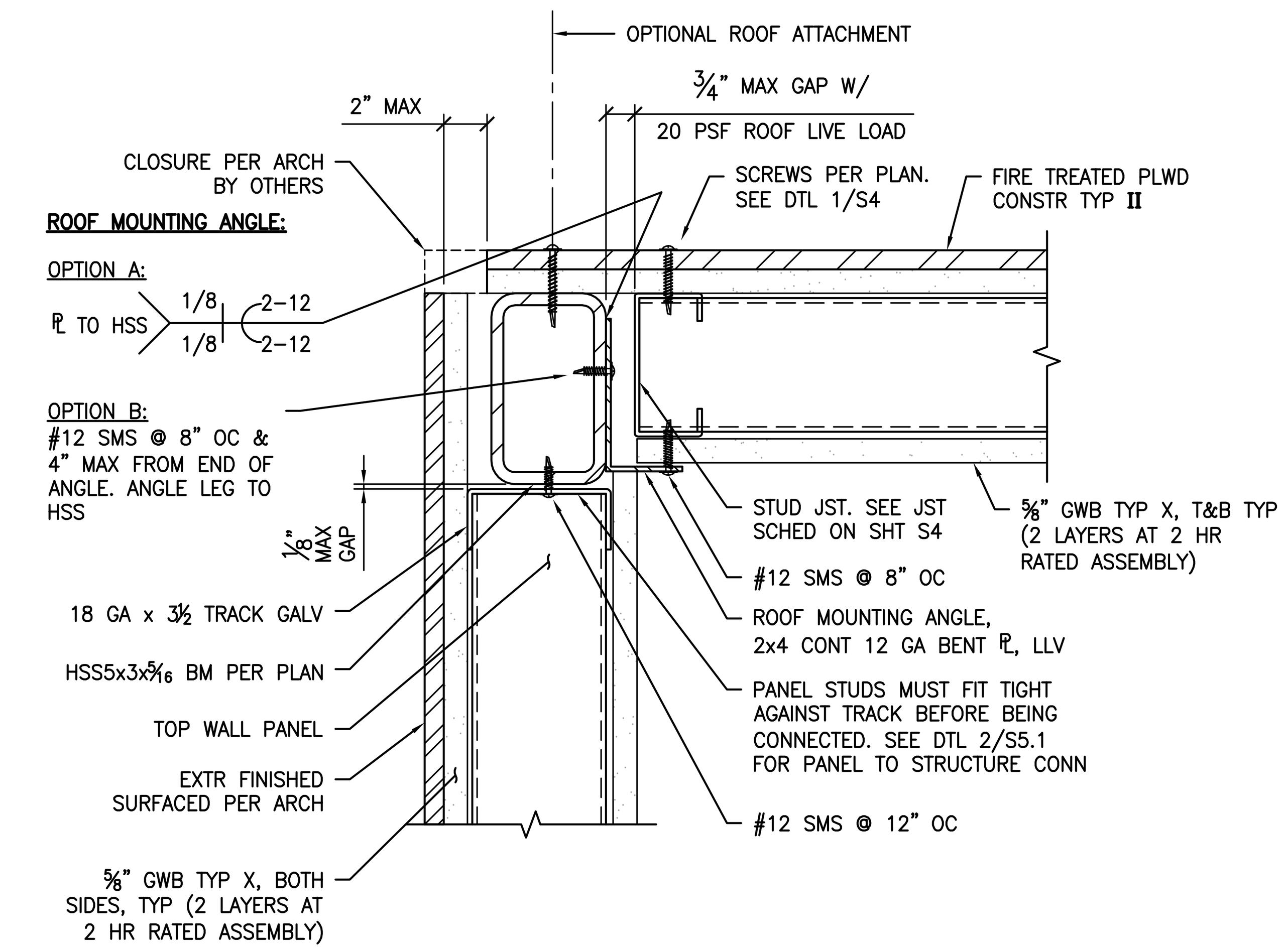
ATTACHED EQUIP ROOM FLR CONN
5 / S4.1 DETAIL
3" = 1'-0"



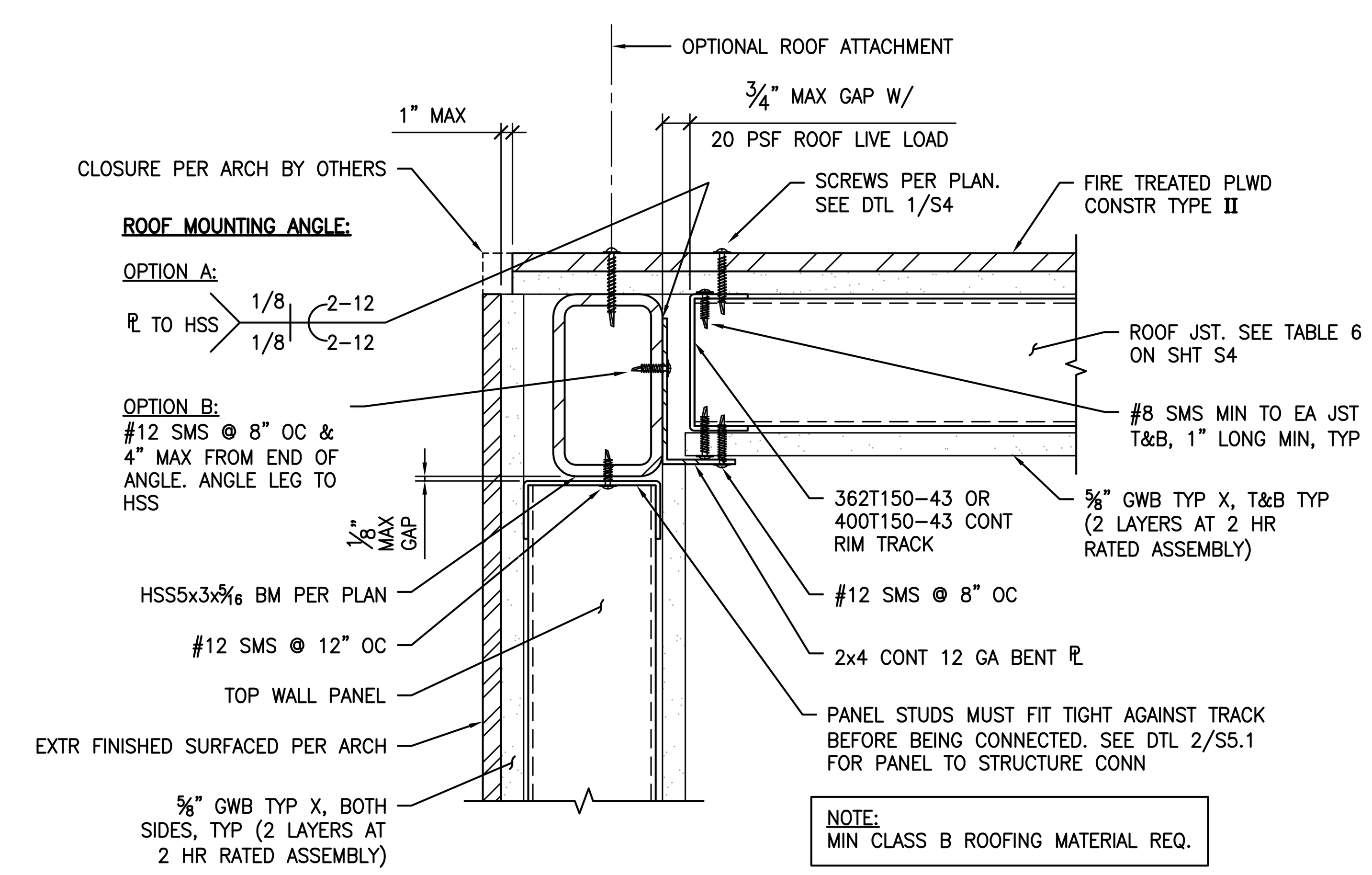
ATTACHED EQUIP ROOM ROOF CONN
6 / S4.1 DETAIL
3" = 1'-0"



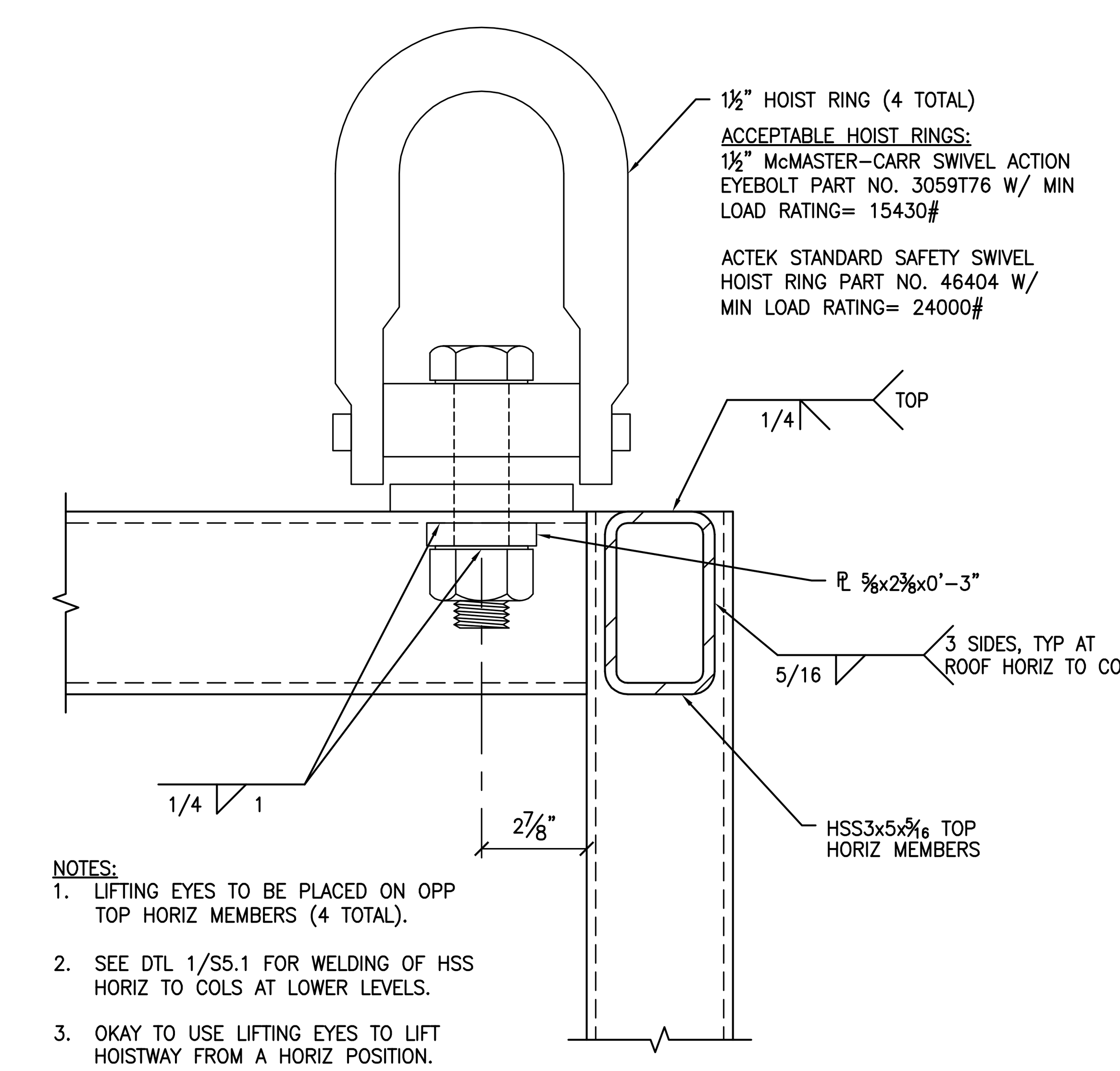
7 / S4.1 DETAIL
3" = 1'-0"



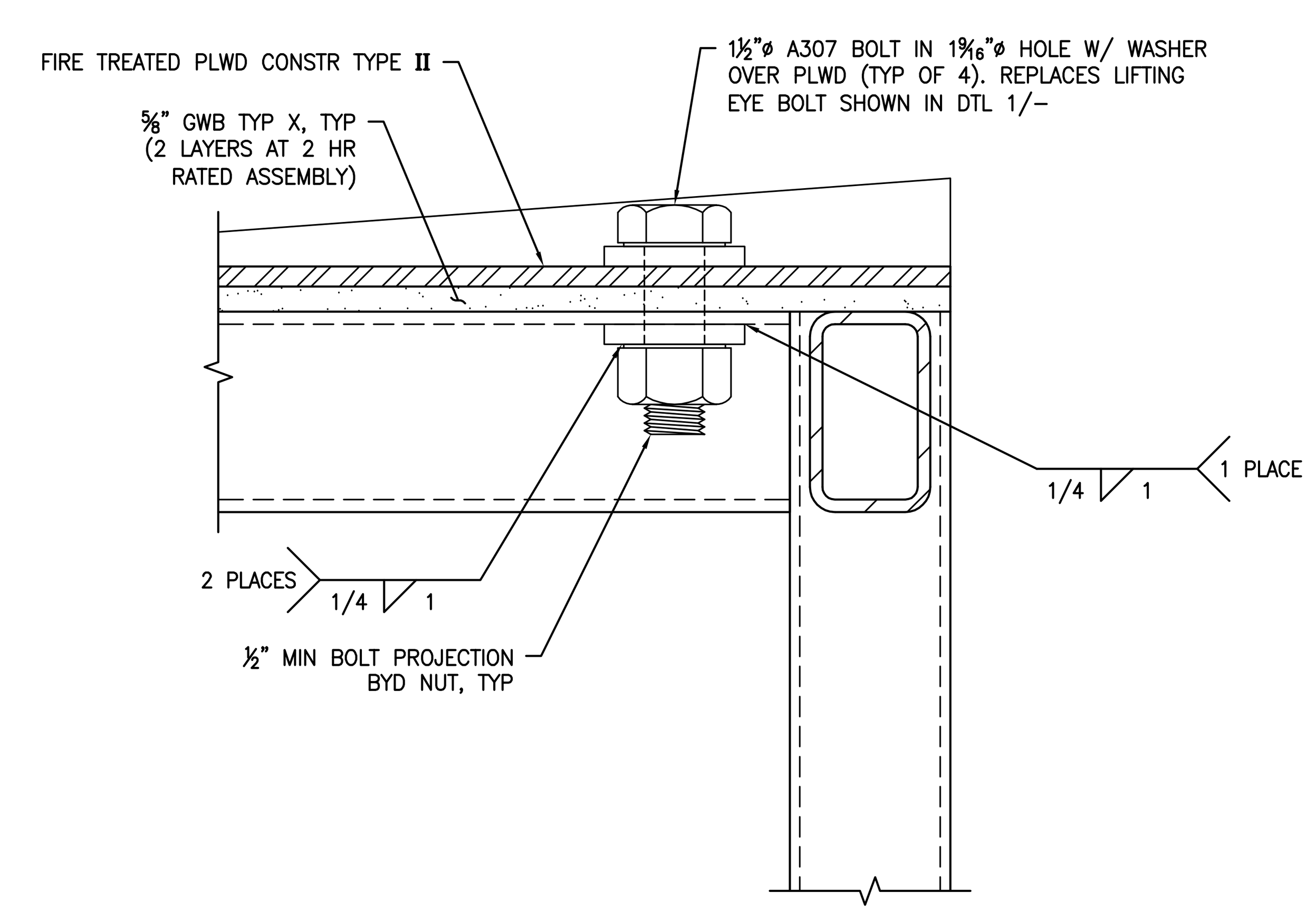
HOISTWAY ROOF AT SIDE WALL
3 / S4.1 DETAIL
3" = 1'-0"



HOISTWAY ROOF AT END WALL
4 / S4.1 DETAIL
3" = 1'-0"



HOISTWAY LIFTING EYE
1 / S4.1 DETAIL
3" = 1'-0"



HOISTWAY ROOF BOLTING
2 / S4.1 DETAIL
3" = 1'-0"

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER Kenneth A. Luttrell No. 1418 Structural Engineer STATE OF CALIFORNIA

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

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DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MH
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT CODE: 2016 A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
HOISTWAY & ROOF DETAILS

SHEET NO:
S4.1

BID SET 10/01/2021

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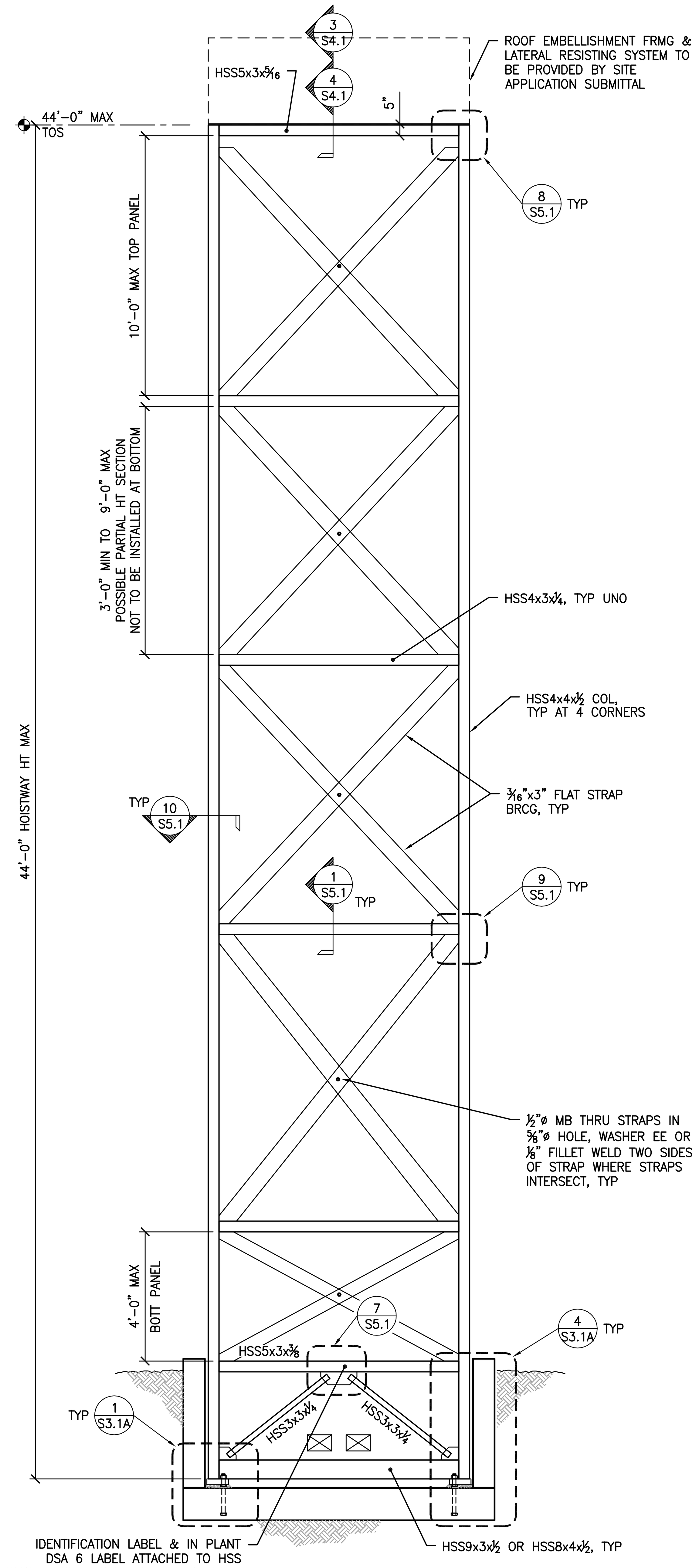
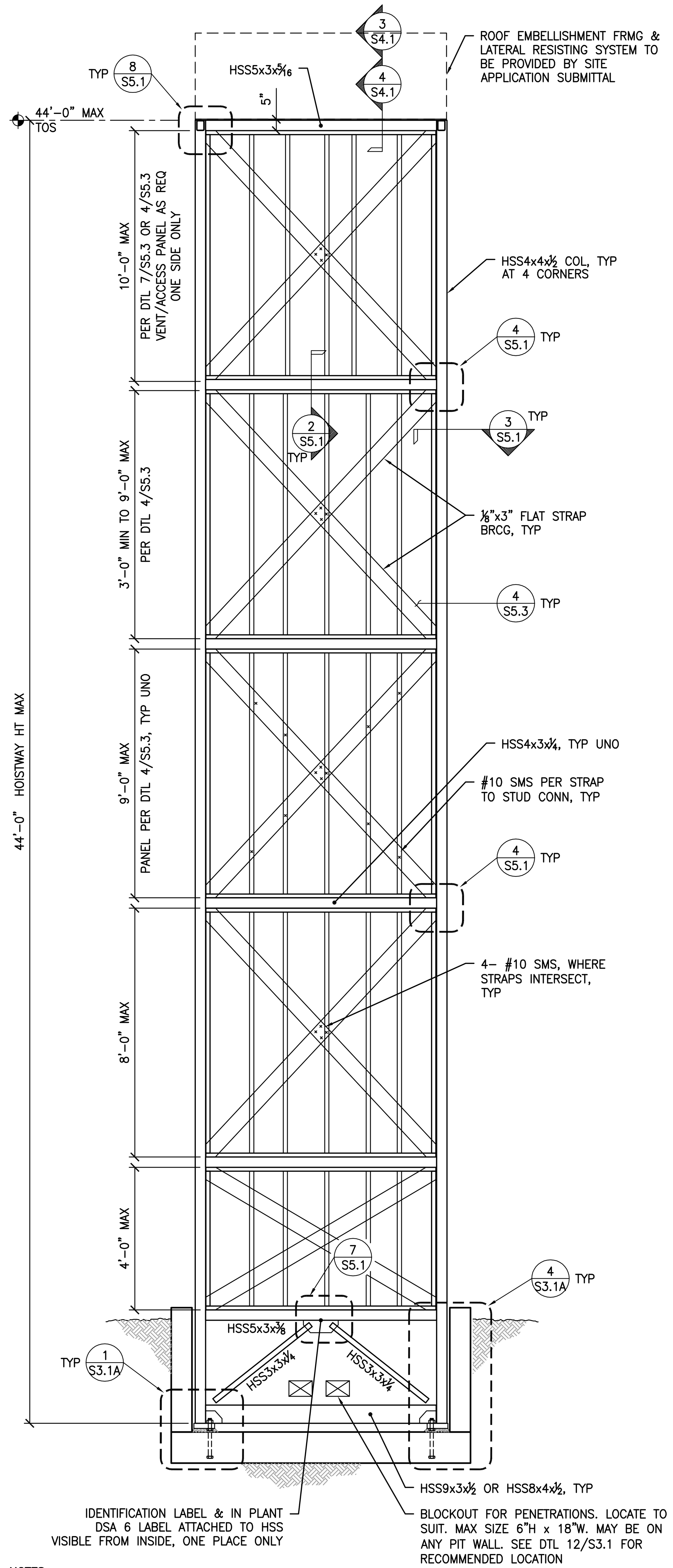


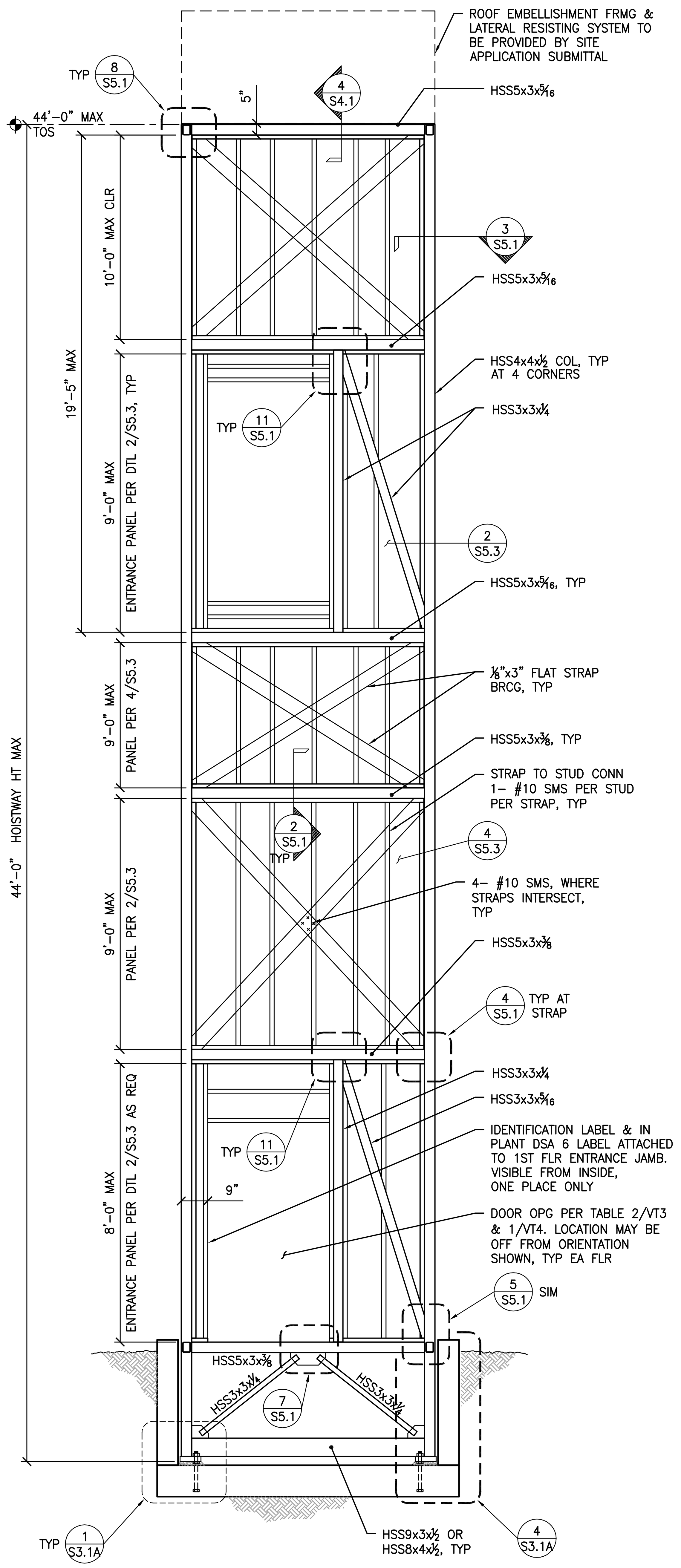
NOTES:
1. GLASS WALL TO BE PROVIDED & INSTALLED BY OTHERS, SEE NOTES ON SHT S4.
2. WALL CONFIGURATION CAN BE UTILIZED ON ANY NON-ENTRANCE SIDE OF HOISTWAY.
3. PANEL ARRANGEMENT TO SUIT HOISTWAY HT & FLR LEVELS.
4. FOR MAX DISPLACEMENT, SEE SCHED 3/S5A.
5. FOR RATED HOISTWAY WALLS, SEE ELEV 6/S5A.
6. ELEVS OF HORIZ HSS ON ALL SIDES EXCEPT FACE A, THE FRONT ENTRANCE SIDE, SHALL BE THE SAME.

HOISTWAY WALL – NON-RATED WALL ELEVATION
7/S5A NTS MAX 44'-0" TOWER HT FOR 26'-0" TRAVEL



NOTES:
1. WALL CONFIGURATION CAN BE UTILIZED ON ANY NON-RATED OR GLASS WALL CONDITION SEE ELEV 7/S5A.
2. FOR NON-RATED OR GLASS WALL CONDITION SEE ELEV 7/S5A.
3. ELEVS OF HORIZ HSS ON ALL SIDES EXCEPT FACE A, THE FRONT ENTRANCE SIDE, SHALL BE THE SAME.

HOISTWAY WALL – RATED SIDE WALLS ELEVATION
6/S5A NTS MAX 44'-0" TOWER HT FOR 26'-0" TRAVEL

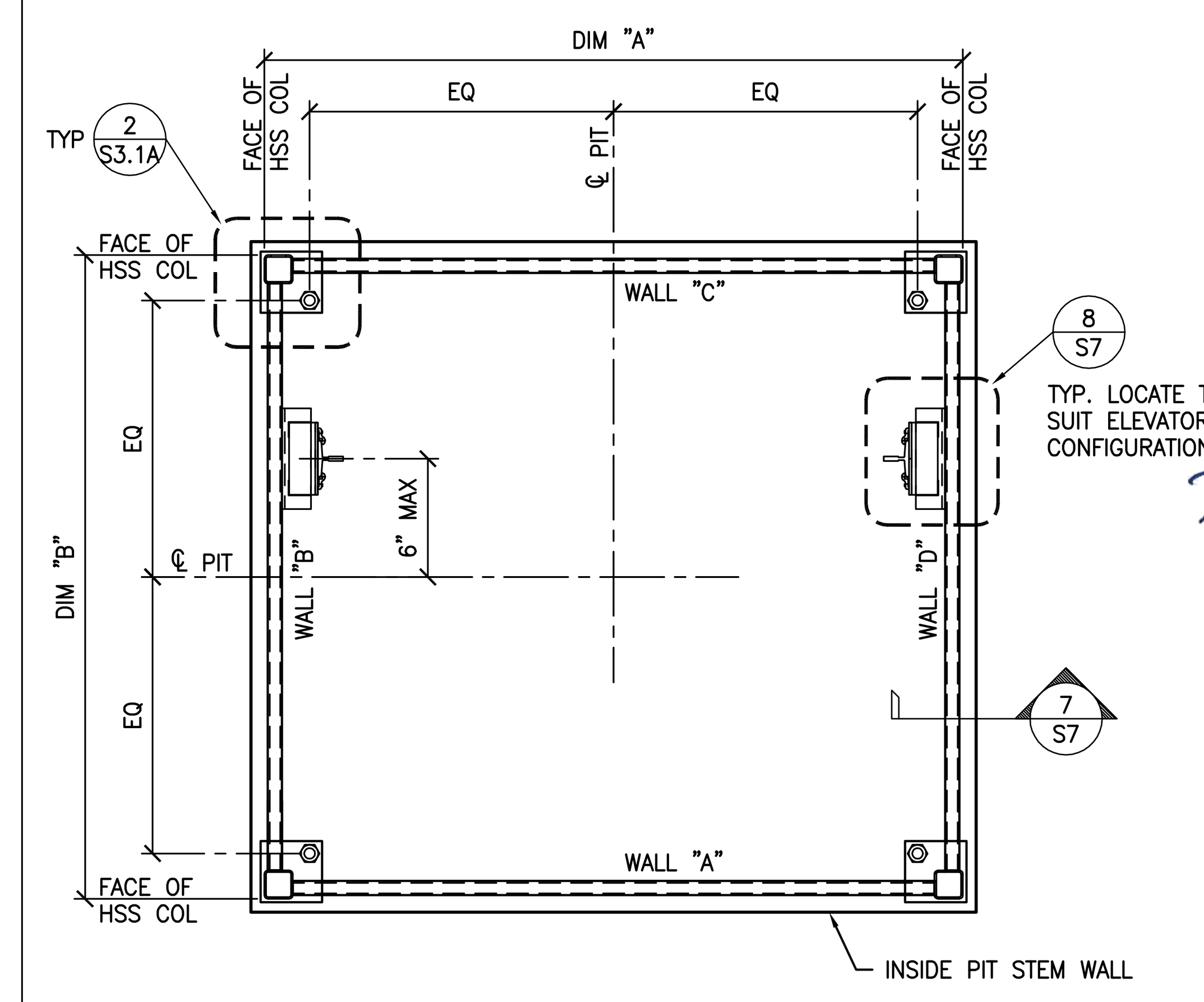


NOTE:
PANEL ARRANGEMENT TO SUIT HOISTWAY HT & FLR LEVELS.

HOISTWAY WALL W/ ENTRANCE END WALL ONLY ELEVATION
5/S5A NTS MAX 44'-0" TOWER HT FOR 26'-0" TRAVEL

TABLE 7A – WALL DIMS			
	☐ HW-1	☒ HW-2	☐ HW-3
DIM A	8'-2¼"	9'-2¼"	9'-10¼"
DIM B	7'-6½"	7'-6½"	7'-6½"

NOTE:
FOR WALL TYPE SELECTION, SEE TABLE 7 ON DTL 2/S5.



HOISTWAY PLAN
1/S5A 1/2" = 1'-0"

TABLE 7 – WALL SELECTOR			
WALL	ENTRANCE 5/S5	TYP 6/S5	NON-RATED 7/S5
A	☒	☐	☐
B	☐	☒	☐
C	☐	☒	☐
D	☐	☒	☐

NOTES:
1. SELECT ONLY ONE (1) WALL TYPE PER SIDE. ENTRANCE WALLS MAY NOT BE ADJ.
2. ARCH TO FILL OPEN BOXES AS APPLICABLE.
3. DTL 5/S5A DOES NOT APPLY AT FACES B, C OR D.

WALL SELECTOR
2/S5A NTS

MAX DISPLACEMENT		
STORY	WIND	SEISMIC ∂x
ROOF	0.4"	4.1"

NOTE:
ELEVATOR TOWER SHALL BE SEPARATED FROM ADJ STRUCTURE SUCH THAT THE DISTANCE IS EQ TO THE SQ ROOT OF THE SUM OF THE SQUARES OF ∂x FOR BOTH STRUCTURES PER SECTION 12.8.6.

DISPLACEMENT SCHEDULE
3/S5A NTS

HOISTWAY NOTES:
1. STUDS ARE NOT REQ WITHIN THE PIT.
2. EXCEPT FOR ENTRANCE PANEL, IF THE CLR DIM BTW HORIZ HSS MEMBERS IS REQ TO BE > 9'-0", THEN AN ADDNL HORIZ MEMBER IS REQ MIDWAY BTW THE HSS MEMBERS SHOWN IN THE ELEV, W/ FLAT STRAP BRCG IN EA BAY.
3. FOR ENTRANCE PANEL ONLY, IF THE CLR DIM BTW HORIZ HSS MEMBERS FOR PANELS ABV THE THRESHOLD OF THE 2ND OPG IS REQ TO BE > 9'-0", THEN AN ADDNL HORIZ MEMBER IS REQ BTW THE HSS MEMBERS SHOWN IN THE ELEV, W/ FLAT STRAP BRCG IN EA BAY, & A VERT HSS MEMBER IS REQ NEXT TO THE DOORWAY. MAX PANEL HT FOR PANELS ABV THE 2ND LEVEL SHALL BE 10'-0".
4. VENTING OF HOISTWAY AS PER 2016 CBC SECTION 3004 SHAFTS HOUSING ELEVATORS EXTENDING THRU MORE THAN TWO FLR LEVELS SHALL BE VENTED TO THE OUTSIDE. THE AREA OF THE VENT SHALL NOT BE LESS THAN 3.5% OF THE AREA OF THE ELEVATOR SHAFT, PROVIDED A MIN OF 3 SQ FT PER ELEVATOR IS PROVIDED (BY OTHERS).
5. IF LANDING BRIDGE OR LANDING AWNING IS REQ, SEE SHT S5.2.
6. COLS TO BE CONT FOR FULL HT. NO SPLICES ALLOWED.
7. ELEVATORS SERVE TWO STORIES OR LESS, SHAFT CONSTR NOT REQ IF COMPLIANT W/ CBC 712.1, OTHERWISE, SHAFT CONSTRUCTION PROVIDED PER 713.4.

HOISTWAY NOTES
4/S5A NTS

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
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PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

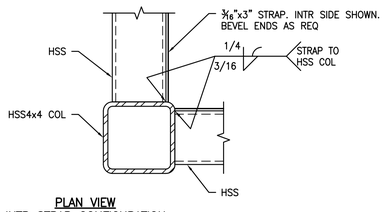
SHEET NAME:
HOISTWAY PLAN & SECTIONS
MAX 44'-0" TOWER HT

SHEET NO:
S5A-1

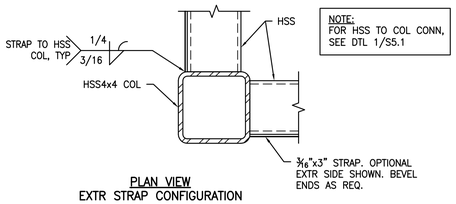
BID SET 10/01/2021

L:\Jobs16\16093 MEM 2016 CBC PC\ACAD\STRU\S5A-1.dwg Time:Nov01,2018-03:08pm Login:camacho Dimscale:1 LTScale:12

STRAP POSITION SELECTOR NON–RATED WALL ONLY		
☒ INTERIOR	☒ SIDE WALL	☒ END WALL
☐ EXTERIOR	☐ SIDE WALL	☐ END WALL



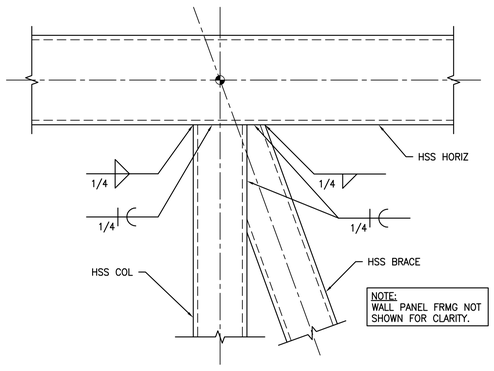
PLAN VIEW
INTR STRAP CONFIGURATION



PLAN VIEW
EXTR STRAP CONFIGURATION
(OPTIONAL)

NOTE:
FOR HSS TO COL CONN, SEE DTL 1/S5.1

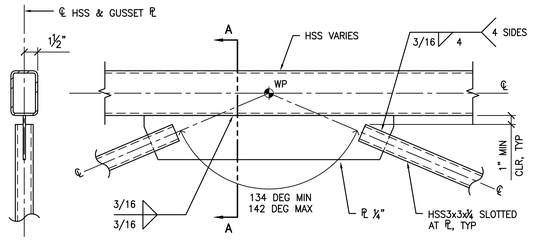
COL AT NON–RATED WALL
DETAIL
10 / S5.1 NTS



DOOR PANEL BRACE CONN
DETAIL
11 / S5.1 3" = 1'–0"

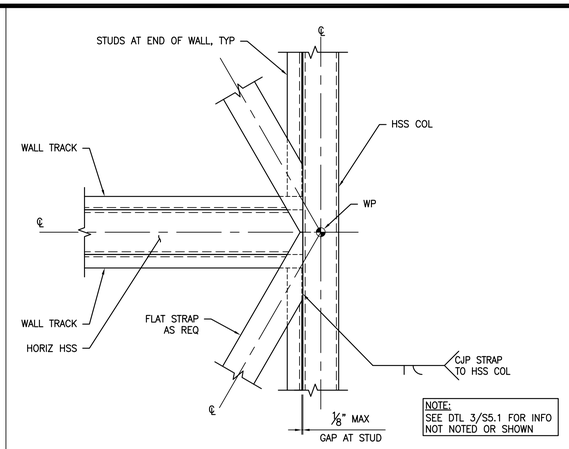
NOT USED

DETAIL
12 / S5.1

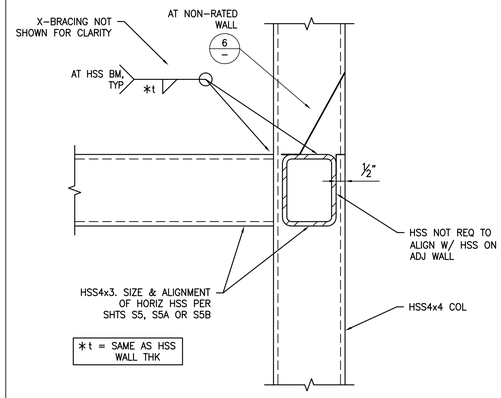


SECTION A–A

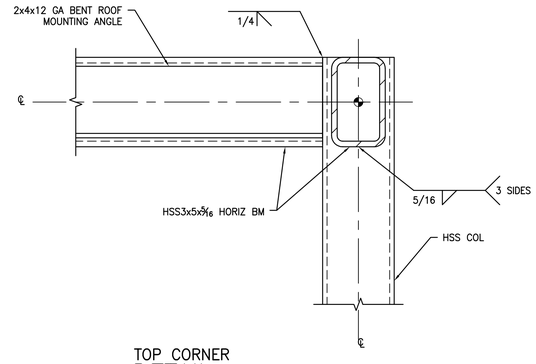
DIAG BRACES
DETAIL
7 / S5.1 1 1/2" = 1'–0"



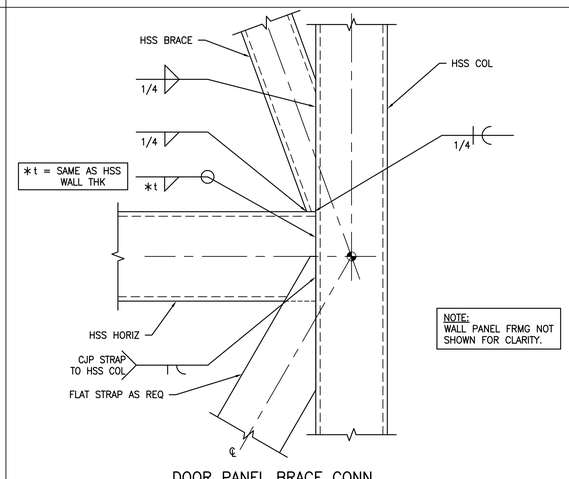
BRACE TO STL FRAME
DETAIL
4 / S5.1 1 1/2" = 1'–0"



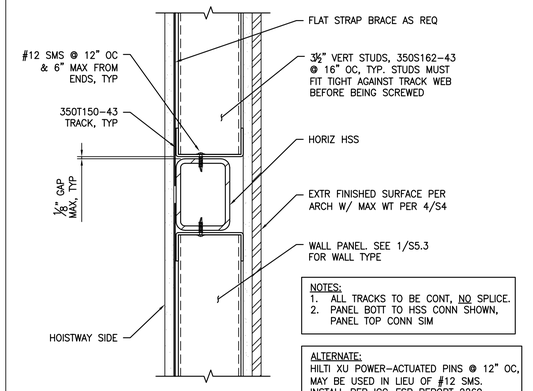
HORIZ HSS TO COL
DETAIL
1 / S5.1 3" = 1'–0"



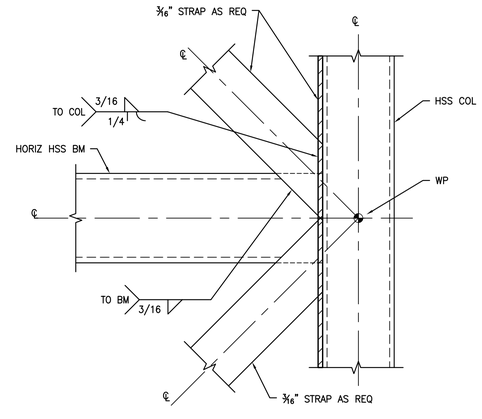
TOP CORNER
DETAIL
8 / S5.1 3" = 1'–0"



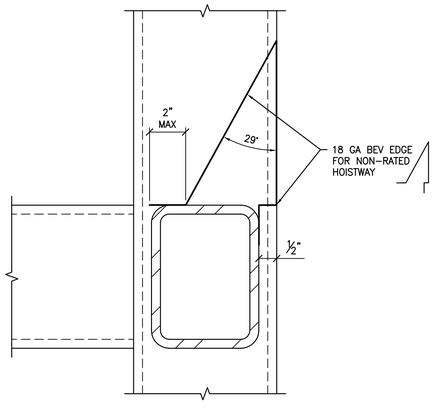
DOOR PANEL BRACE CONN
DETAIL
5 / S5.1 3" = 1'–0"



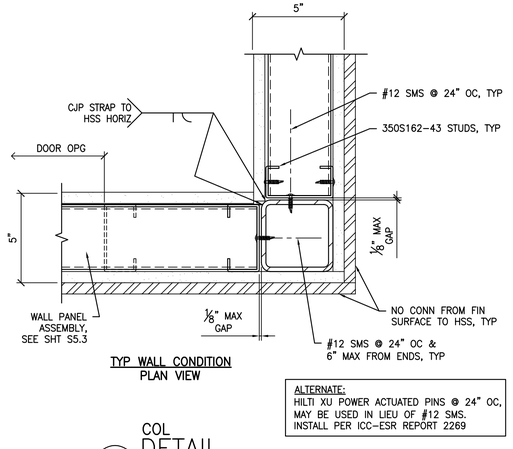
PANEL CONN
DETAIL
2 / S5.1 3" = 1'–0"



DIAG BRACE CONN
NON RATED WALL
DETAIL
9 / S5.1 3" = 1'–0"



NON–RATED WALL
DETAIL
6 / S5.1 6" = 1'–0"



TYP WALL CONDITION
PLAN VIEW

ALTERNATE:
HILTI XU POWER ACTUATED PINS @ 24" OC, MAY BE USED IN LIEU OF #12 SMS. INSTALL PER ICC–ESR REPORT 2269

COL
DETAIL
3 / S5.1 3" = 1'–0"

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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MODULAR ELEVATOR MANUFACTURING

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P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

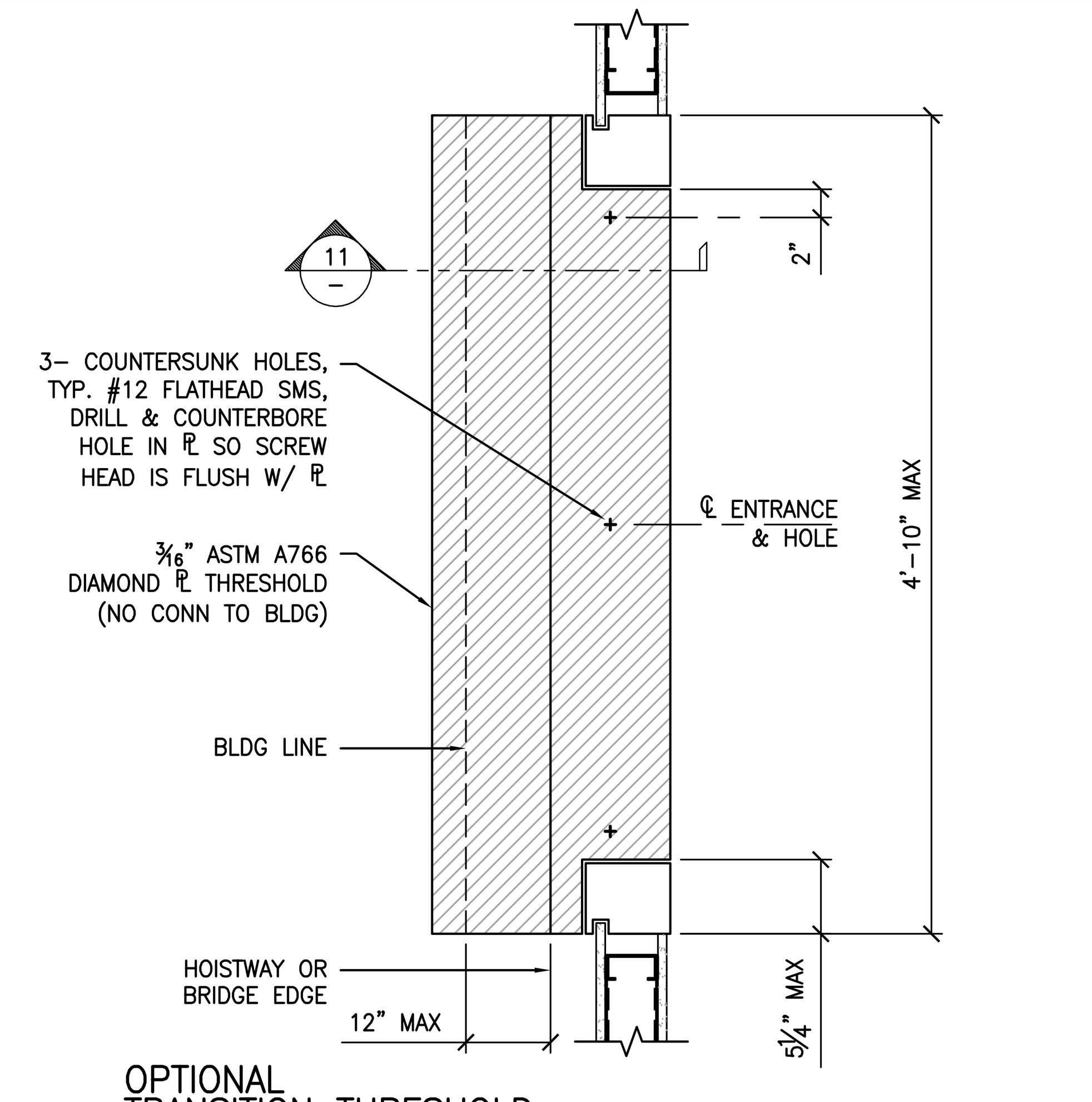
PROJECT NO:	16093
DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS ER SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

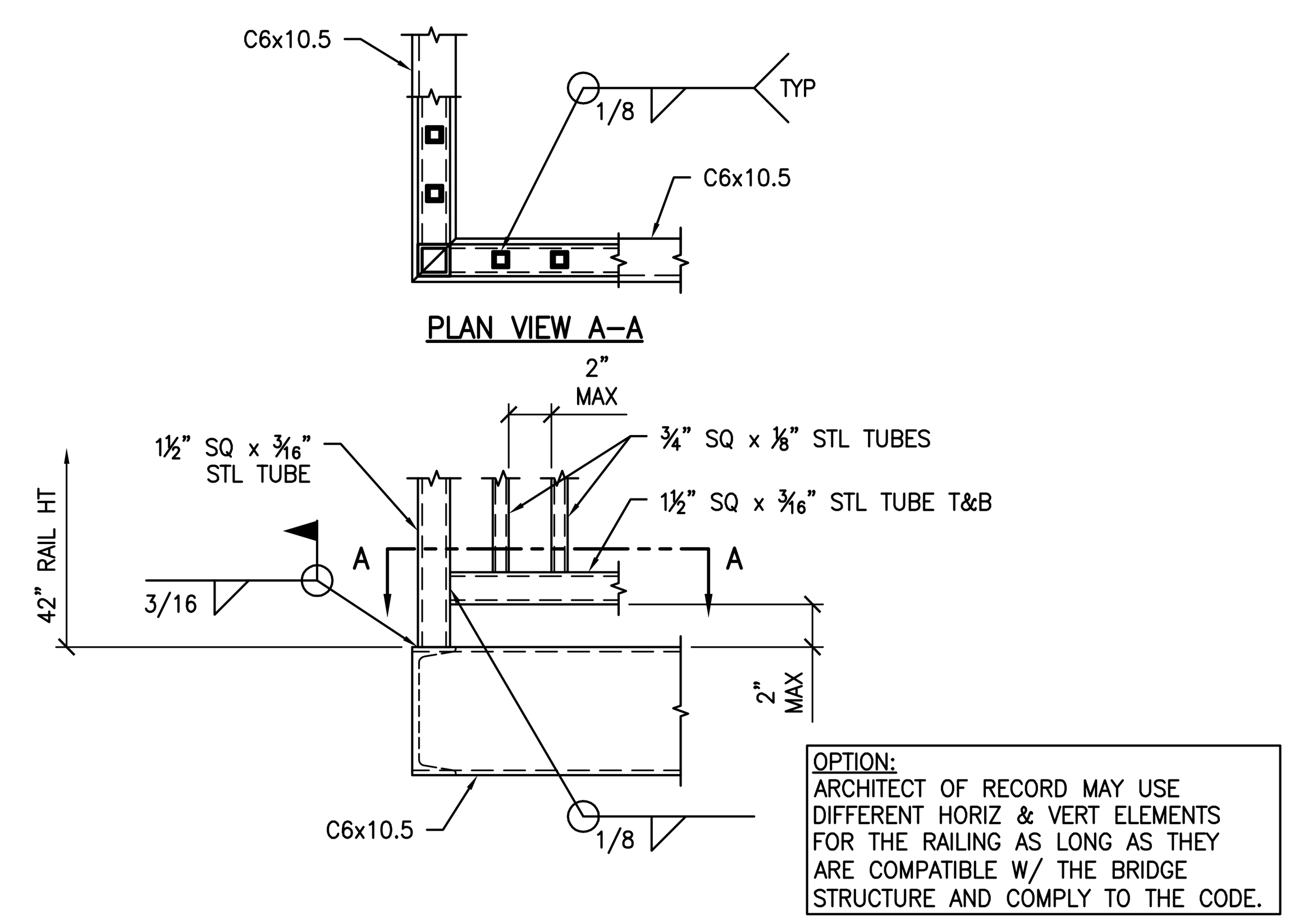
SHEET NAME:
HOISTWAY DETAILS

SHEET NO:
S5.1

BID SET 10/01/2021



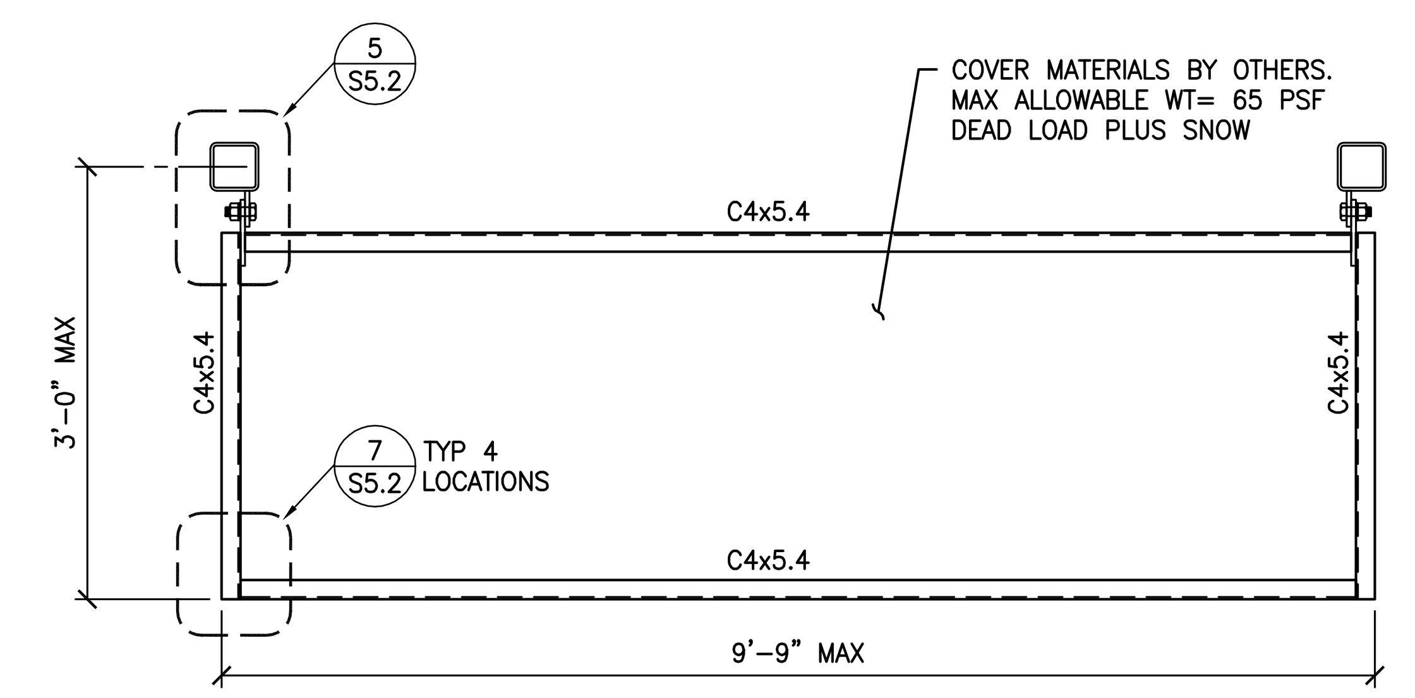
OPTIONAL TRANSITION THRESHOLD DETAIL
10 / S5.2 1" = 1'–0"



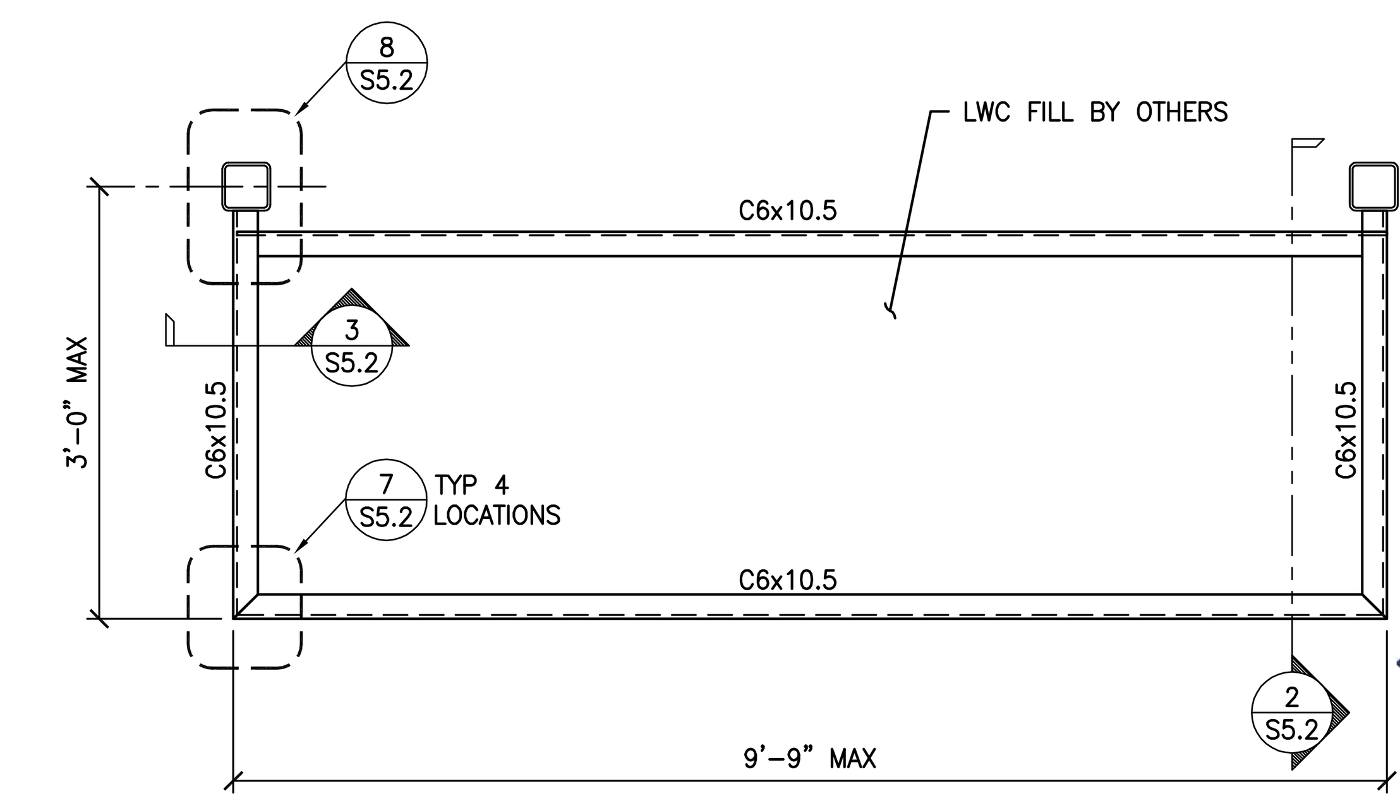
DETAIL
7 / S5.2 1 1/2" = 1'–0"

COVER OPTIONS (COVERS PROVIDED BY OTHERS):

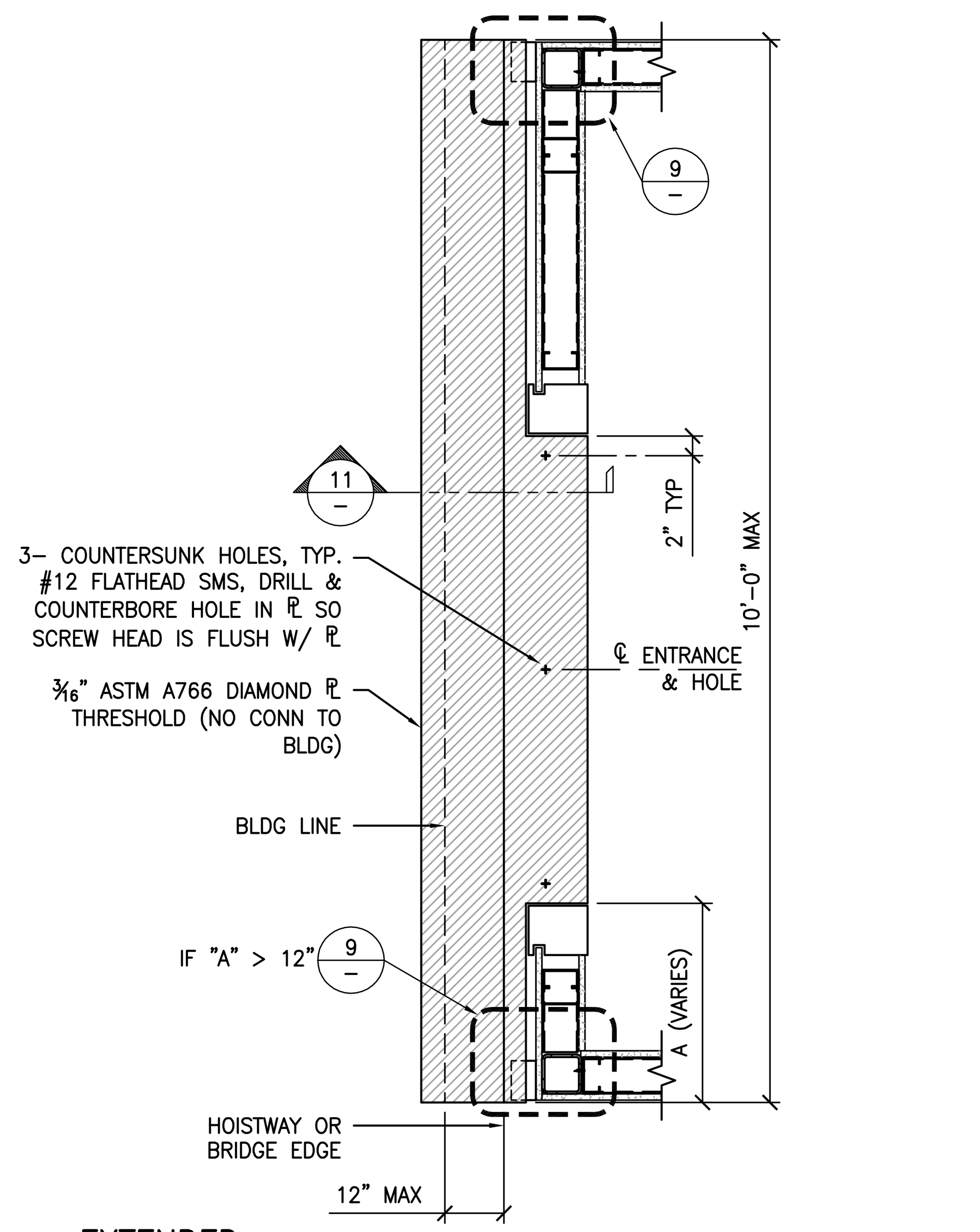
1. USE 5/8" PLWD ON TOP SPANNING FRONT–TO–BACK W/ NO INTR SUPPORTS IF CLG FIN IS NOT PROVIDED.
2. USE 1/2" PLWD ON TOP SPANNING SIDE–TO–SIDE W/ A DBL 4" GA–MTL JST SPANNING SIDE–TO–SIDE, A SINGLE 4" JST CANNOT BE USED TO SPAN THE FULL WIDTH OF THE CANOPY.
3. USE 1/2" PLWD ON TOP OF 4" MTL JSTS SPACED 24" OC SPANNING FRONT–TO–BACK.



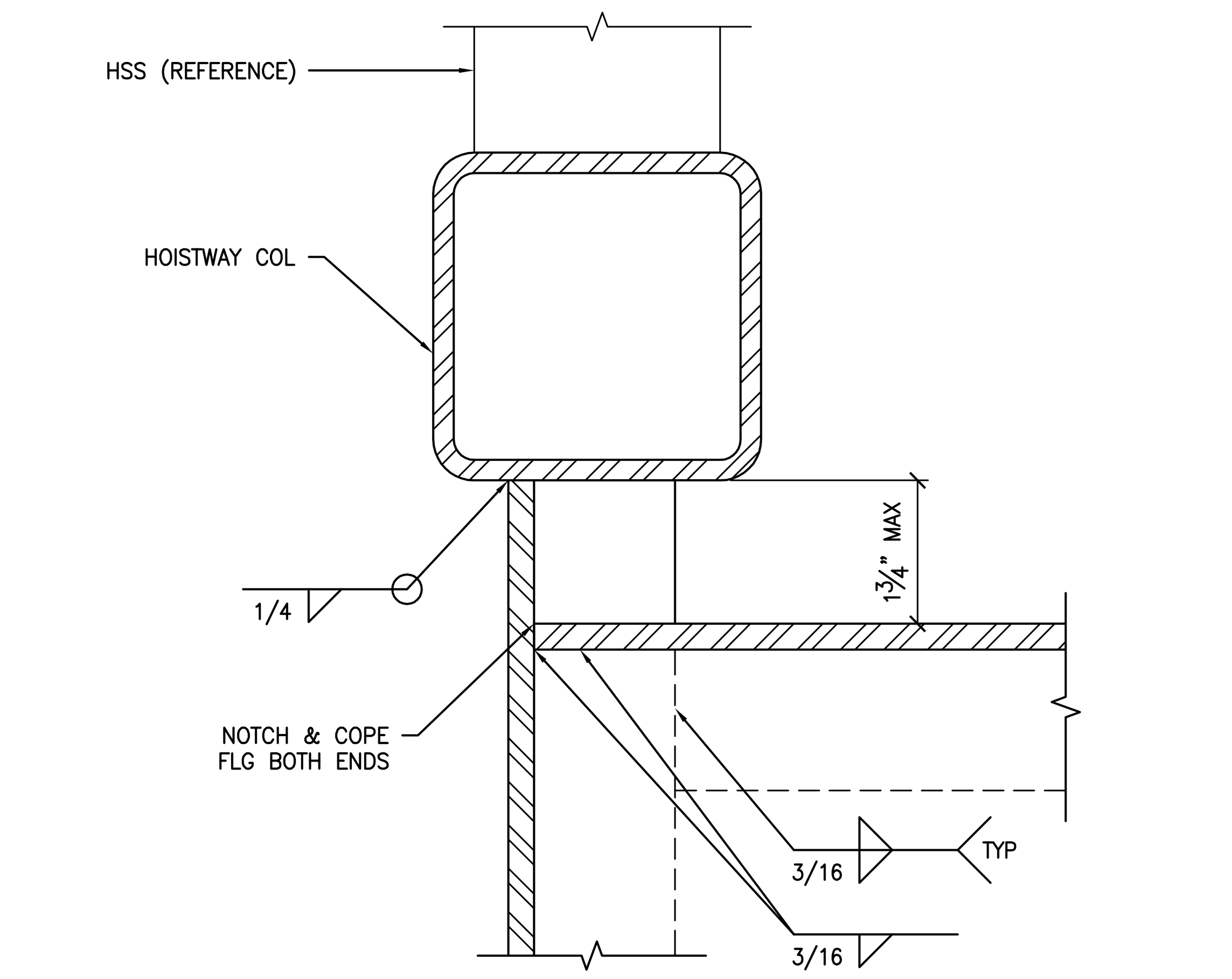
OPTIONAL AWNING FRAMING PLAN
4 / S5.2 3/4" = 1'–0"



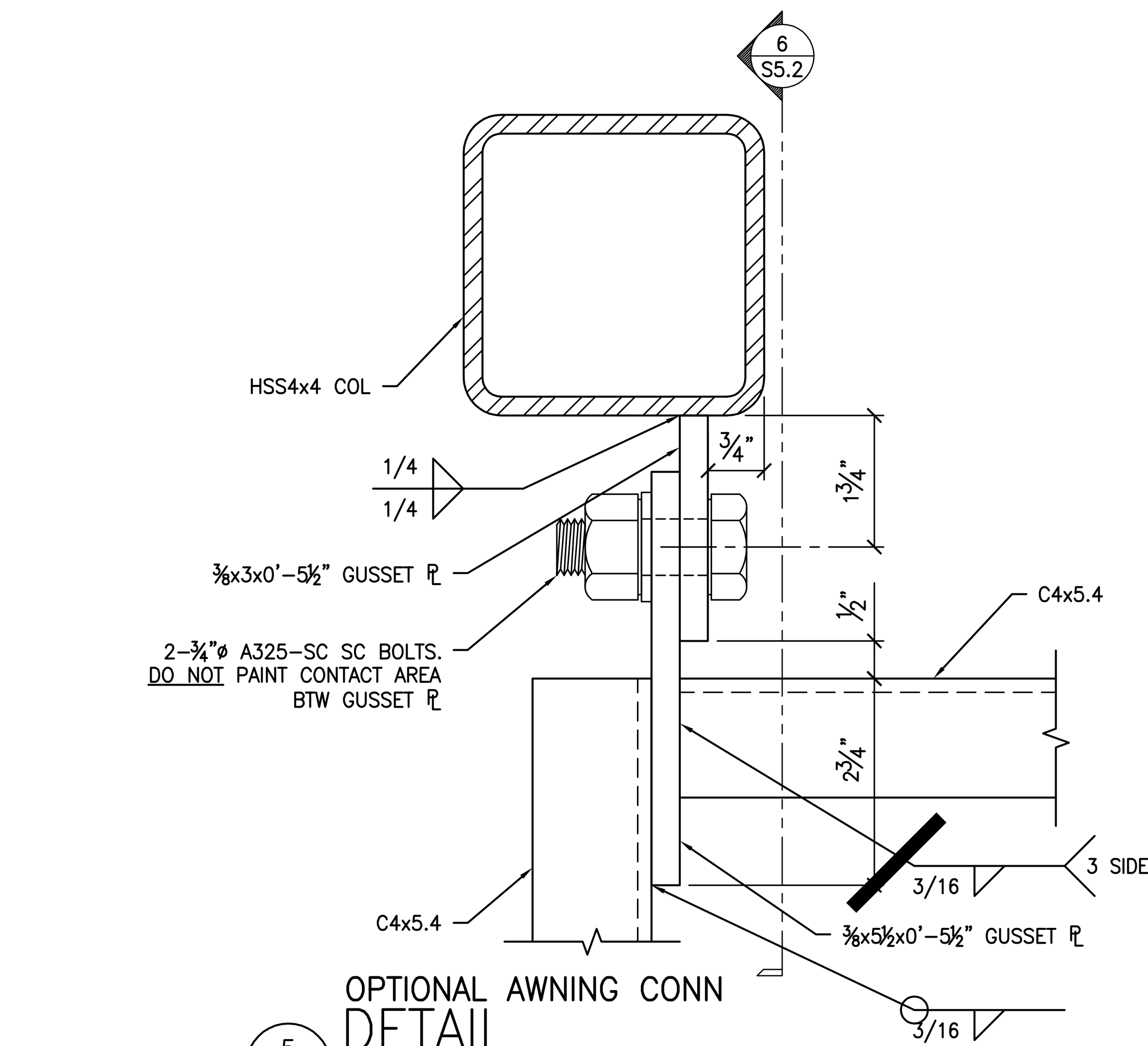
OPTIONAL BRIDGE PLAN
1 / S5.2 3/4" = 1'–0"



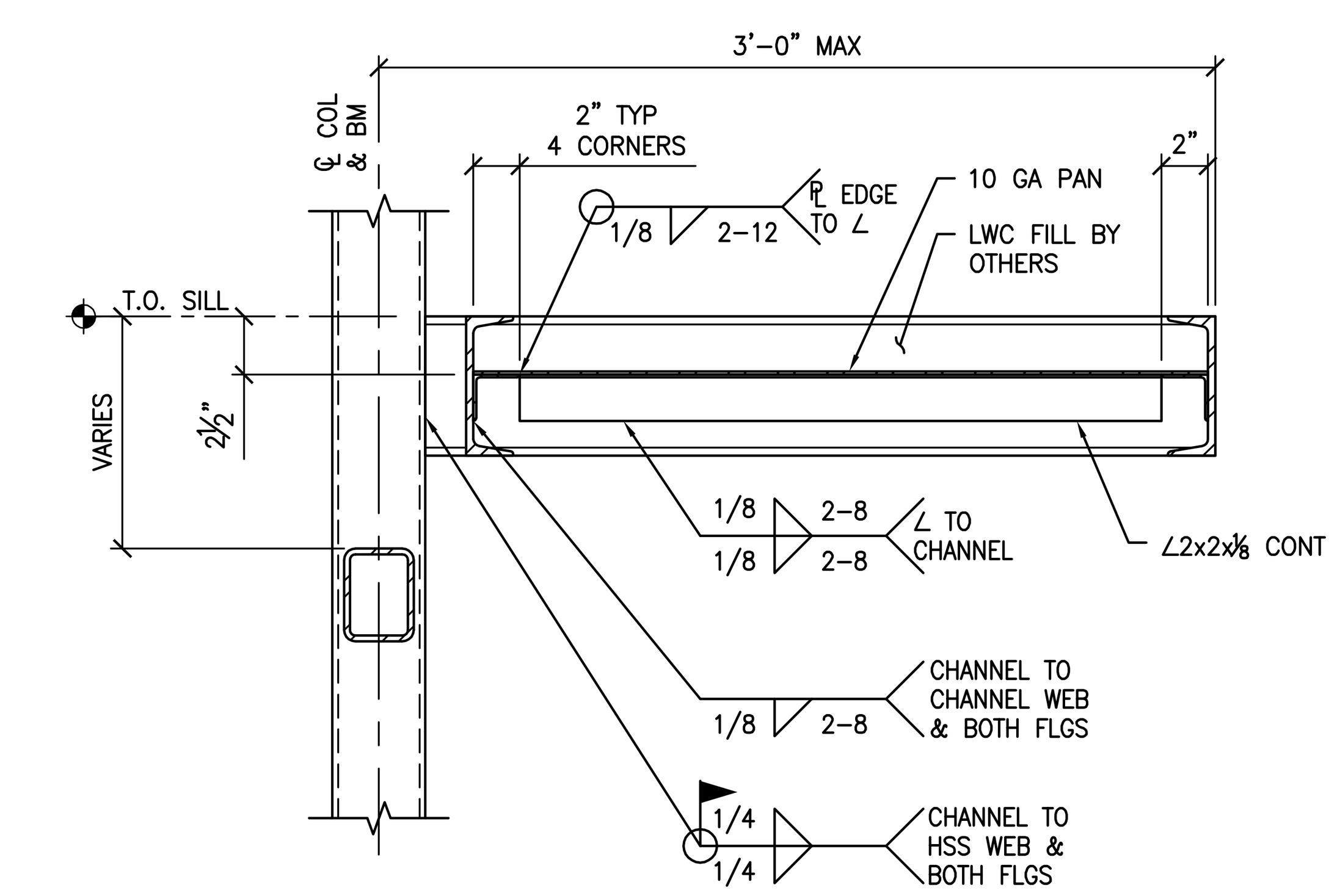
EXTENDED TRANSITION THRESHOLD DETAIL
10A / S5.2 3/4" = 1'–0"



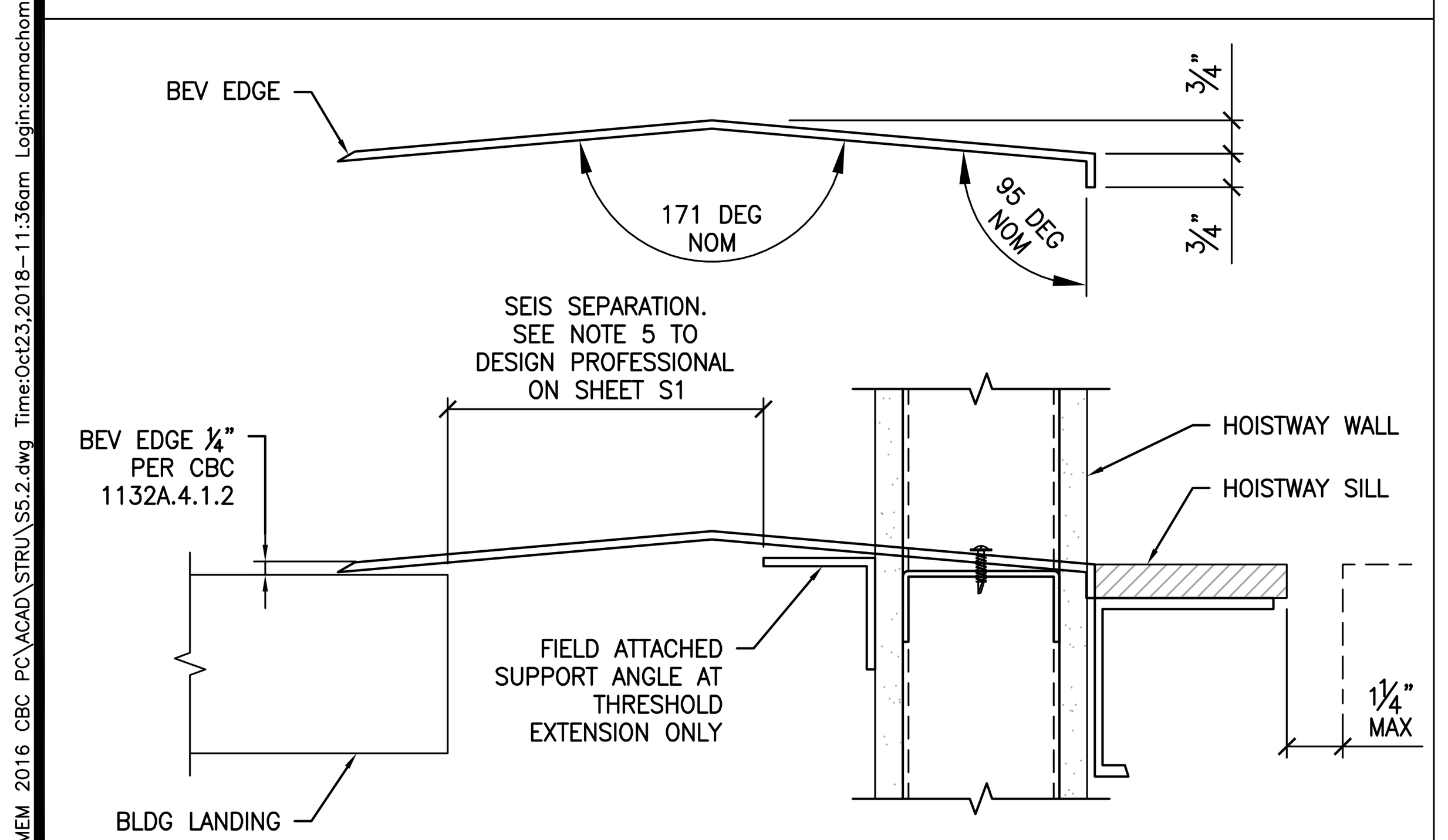
BRIDGE CONN DETAIL
8 / S5.2 6" = 1'–0"



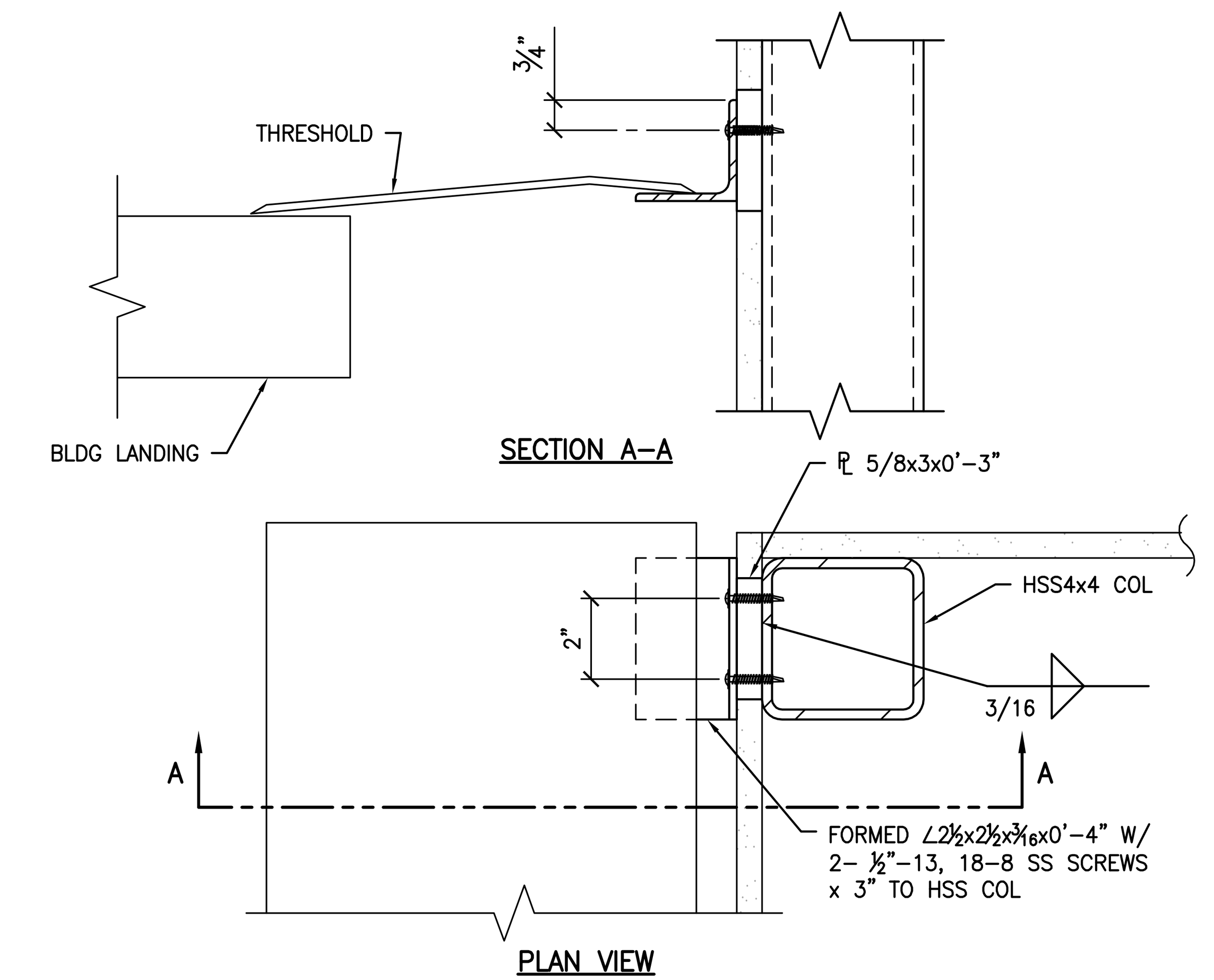
OPTIONAL AWNING CONN DETAIL
5 / S5.2 6" = 1'–0"



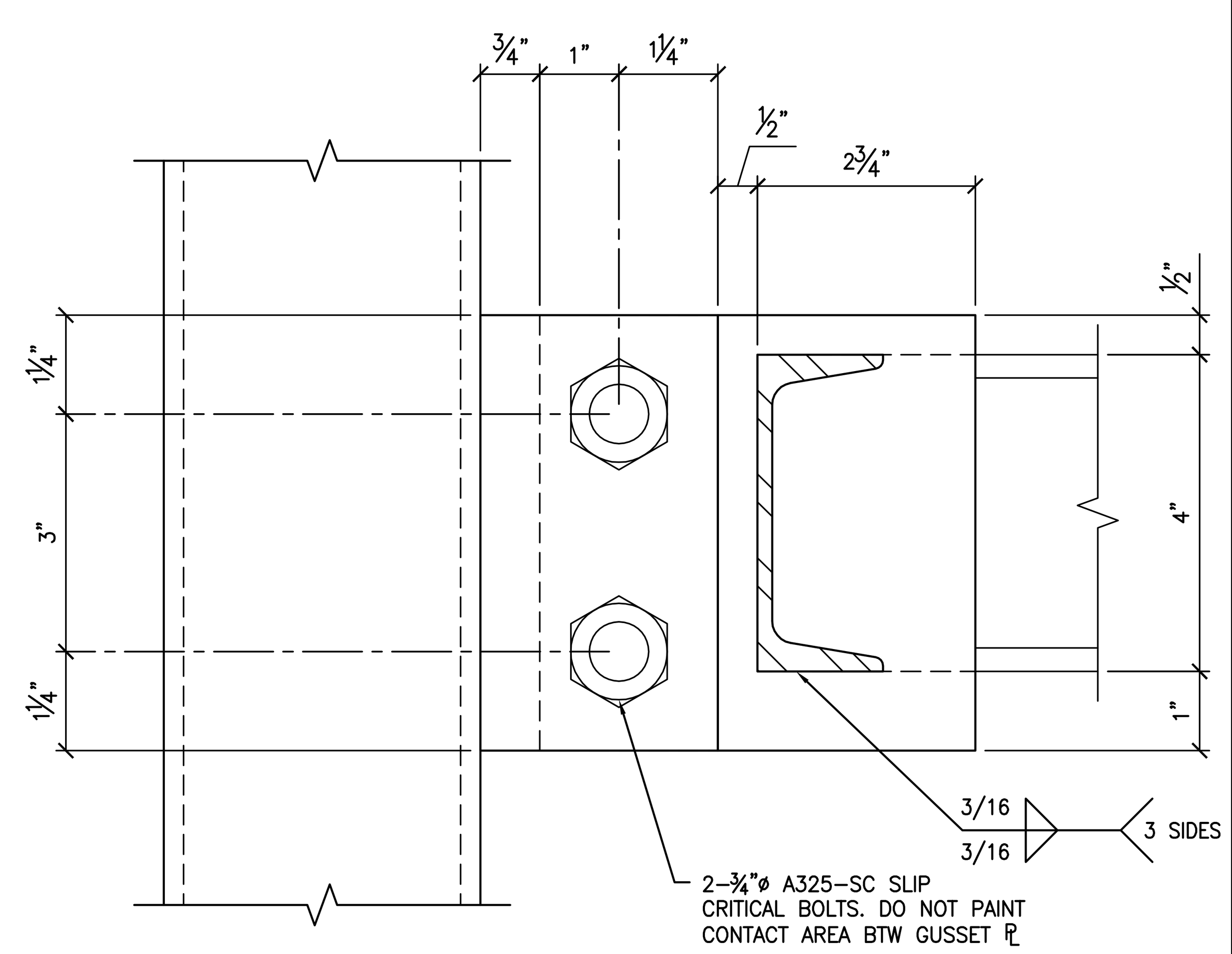
BRIDGE SECTION DETAIL
2 / S5.2 1 1/2" = 1'–0"



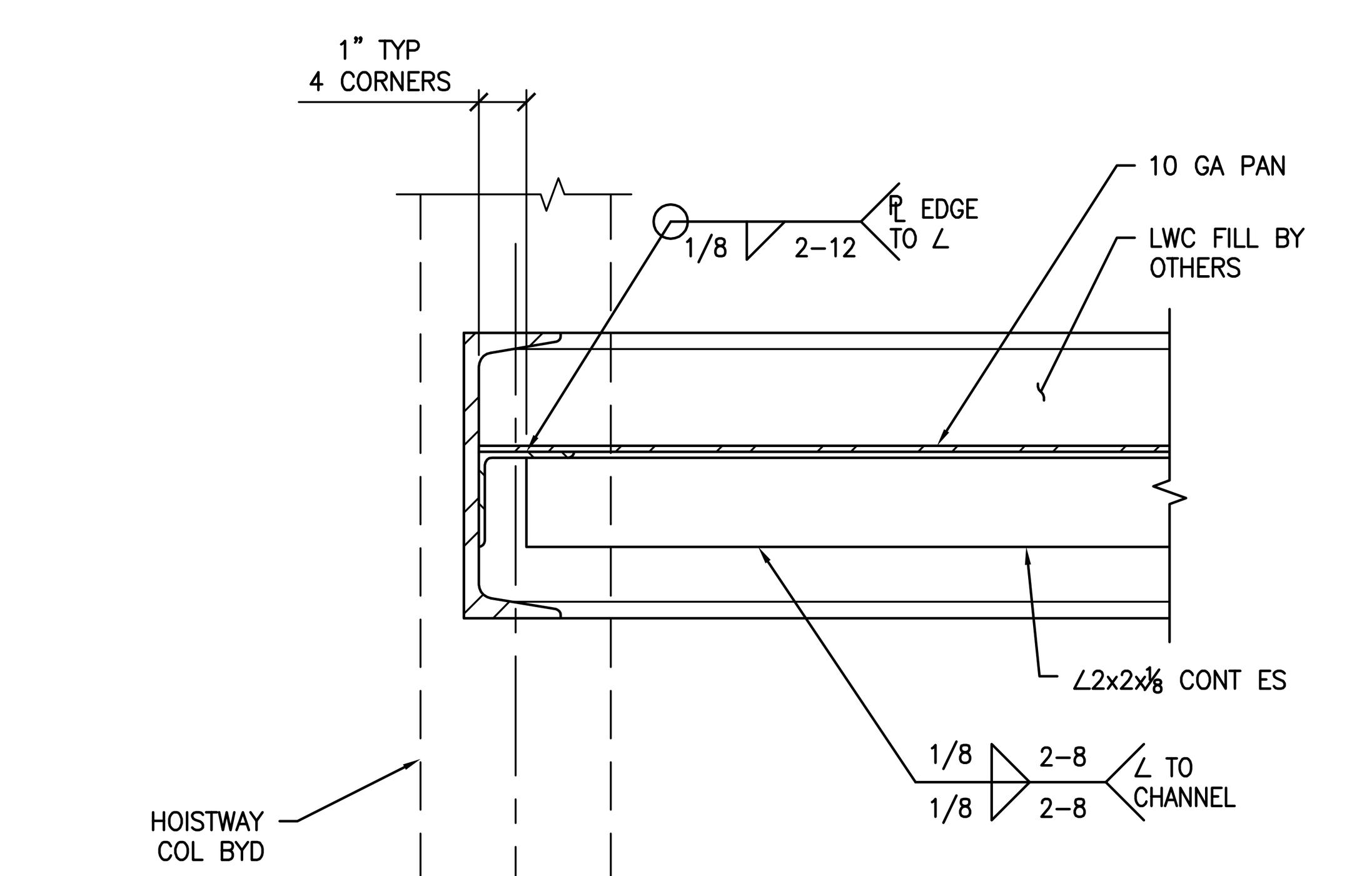
TRANSITION THRESHOLD DETAIL
11 / S5.2 3" = 1'–0"



TRANSITION THRESHOLD DETAIL
9 / S5.2 3" = 1'–0"



OPTIONAL AWNING CONN SECTION DETAIL
6 / S5.2 6" = 1'–0"



OPTIONAL BRIDGE SECTION DETAIL
3 / S5.2 3" = 1'–0"

L:\Jobs16\16093 MEM 2016 CBC PC\ACAD\STRU\S5.2.dwg Time:Oct23,2018–11:36am Login:camachom Dimscale:1 LTScale:6

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER Kenneth A. Luttrell No. 1418 Structural Engineer STATE OF CALIFORNIA

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

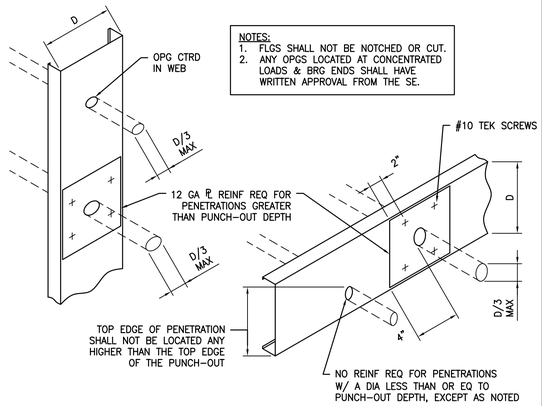
PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT CODE: 2016 A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME: MISCELLANEOUS DETAILS

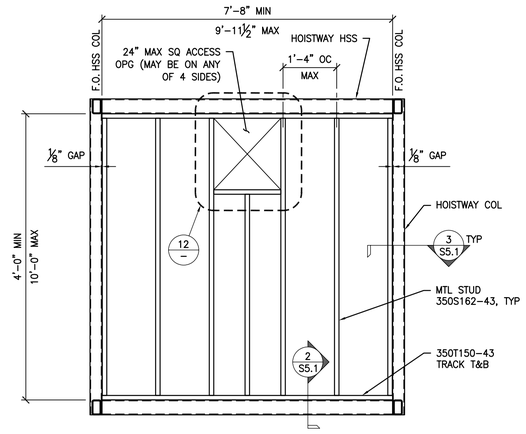
SHEET NO: S5.2

BID SET 10/01/2021

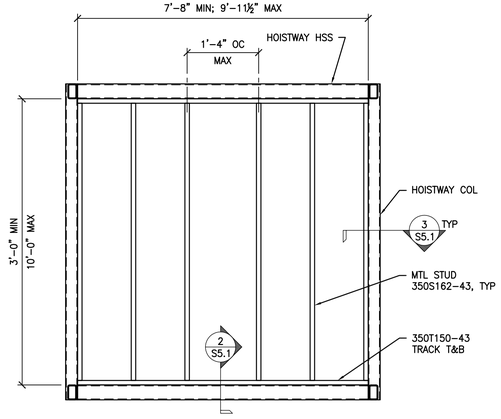


NOTES:
1. FLGS SHALL NOT BE NOTCHED OR CUT.
2. ANY OPGS LOCATED AT CONCENTRATED LOADS & BRG ENDS SHALL HAVE WRITTEN APPROVAL FROM THE SE.

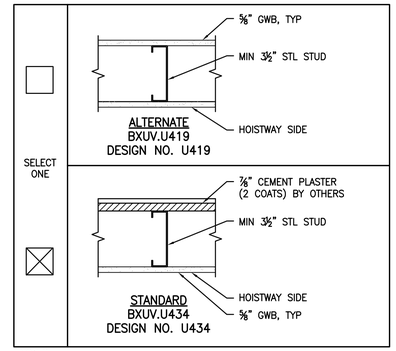
PENETRATION DETAIL
10 / S5.3 NTS



HOISTWAY VENT/ACCESS PANEL ELEVATION
7 / S5.3 1/2" = 1'-0"



HOISTWAY WALL PANEL ELEVATION
4 / S5.3 1/2" = 1'-0"



NOTES:
1. SEE SHT S5 OR SHT S5A FOR NON-RATED WALL CONDITION.
2. ALL ENTRANCE WALLS MUST BE FIRE RATED, TYP.
3. SEE TABLE ON 2/S5 FOR WALL SELECTOR.
4. PANELS VIEWED FROM INSIDE OF HOISTWAY.
5. 2-HOUR FIRE RATED ASSEMBLY WILL CONSIST OF TWO LAYERS OF ⅝" TYPE X GWB INSIDE & OUTSIDE OF TOWER UTILIZING 3½" STUDS. ASSEMBLY IS BASED UPON UL DESIGN NO. U419.

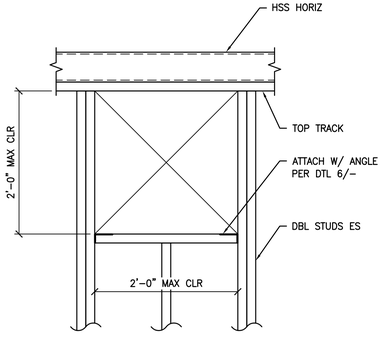
ONE HOUR RATED WALL TYPES
1 / S5.3 NTS

PENETRATION HORIZ HSS DETAIL
11 / S5.3 1 1/2" = 1'-0"

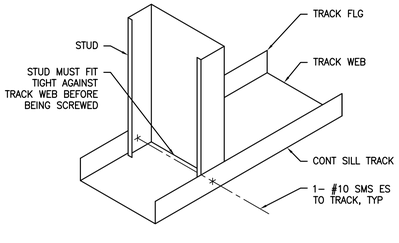
DOOR ENTRANCE TRACK ASSEMBLY DETAIL
8 / S5.3 NTS

PIT LADDER DETAIL
5 / S5.3 1" = 1'-0"

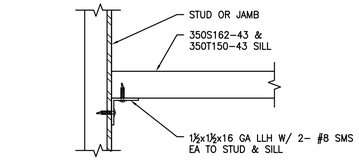
HOISTWAY ENTRANCE ELEVATION
2 / S5.3 1/2" = 1'-0"



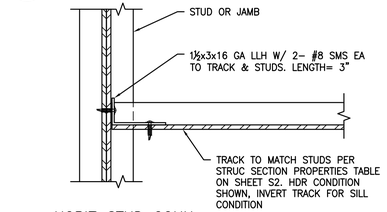
WALL OPENING FOR VENT/ACCESS PANEL DETAIL
12 / S5.3 1" = 1'-0"



STUD TO TRACK CONN DETAIL
9 / S5.3 NTS



DOOR ENTRANCE TRACK CONN DETAIL
6A / S5.3 3" – 1'-0"



HORIZ STUD CONN DETAIL
6 / S5.3 3" – 1'-0"

NOT USED

DETAIL
3 / S5.3

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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

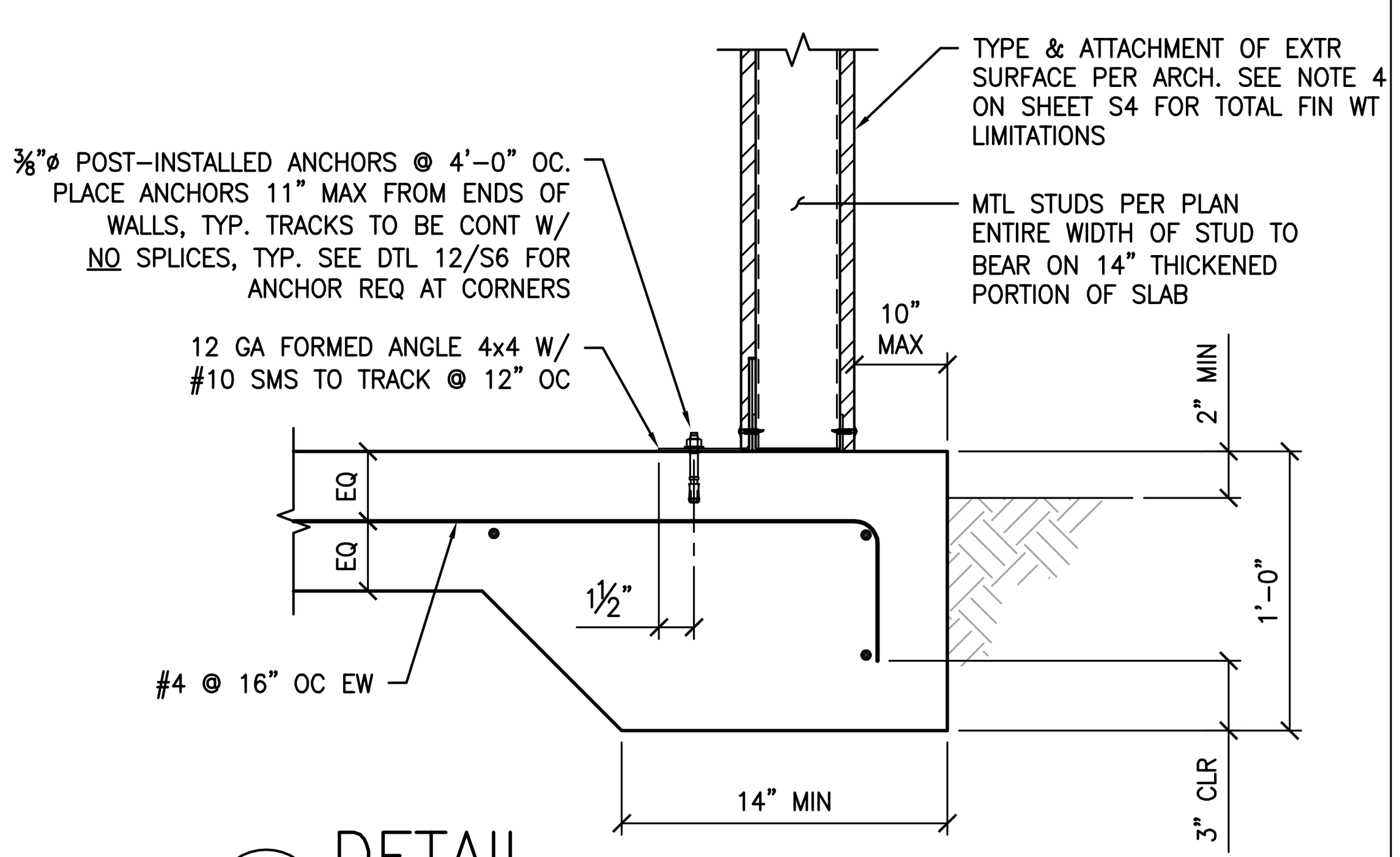
PROJECT NO:	16093
DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

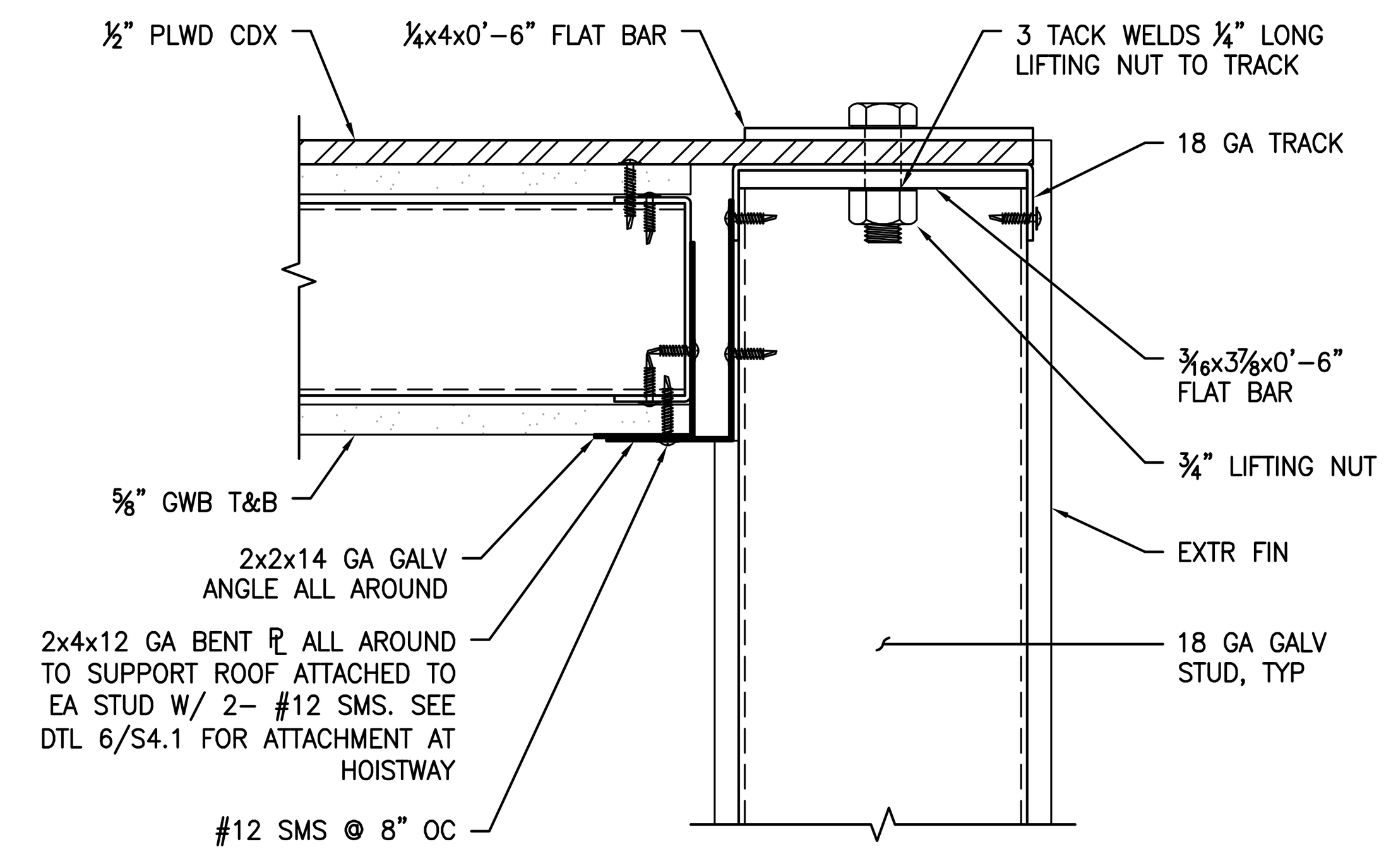
SHEET NAME:
HOISTWAY WALL PANELS

SHEET NO:
S5.3

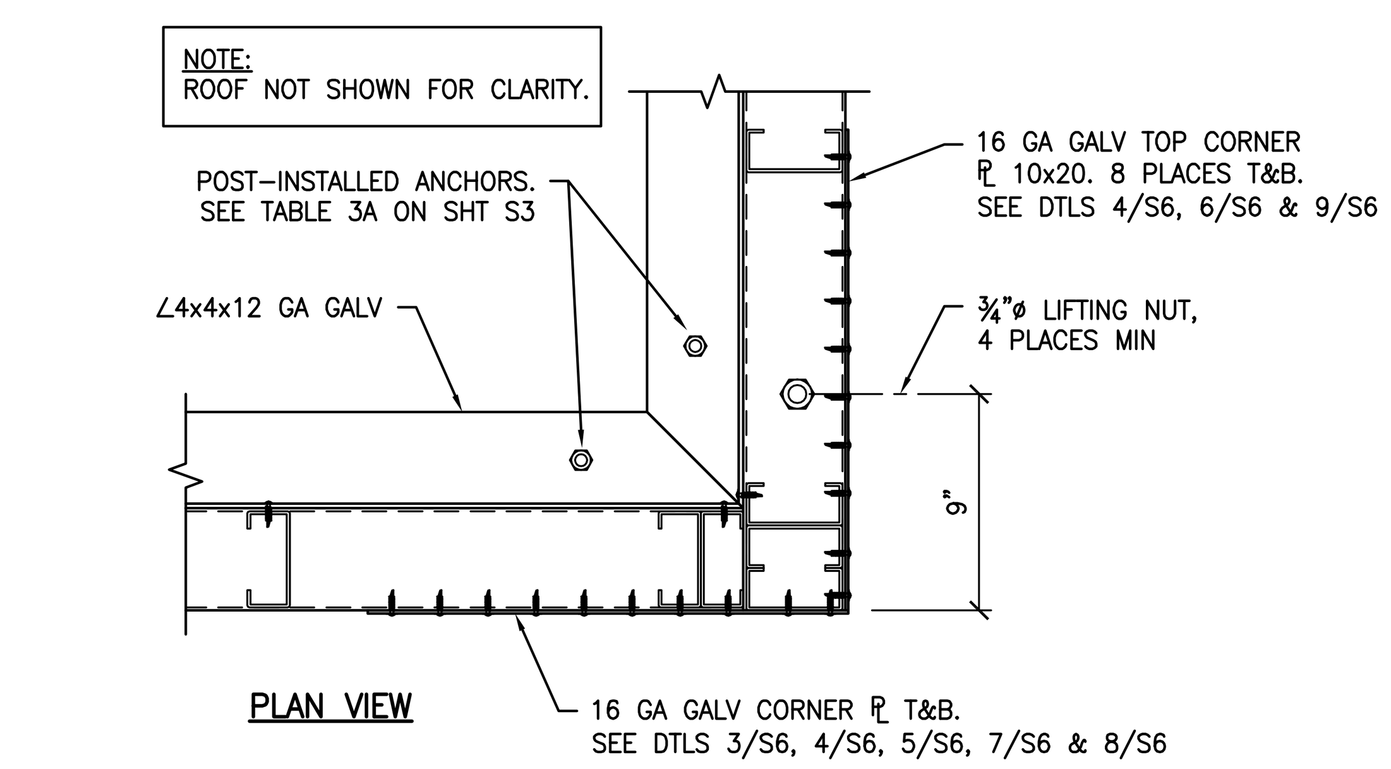
BID SET 10/01/2021



10 S6 DETAIL
NTS



ROOF TO WALL CONN
11 S6 DETAIL
NTS

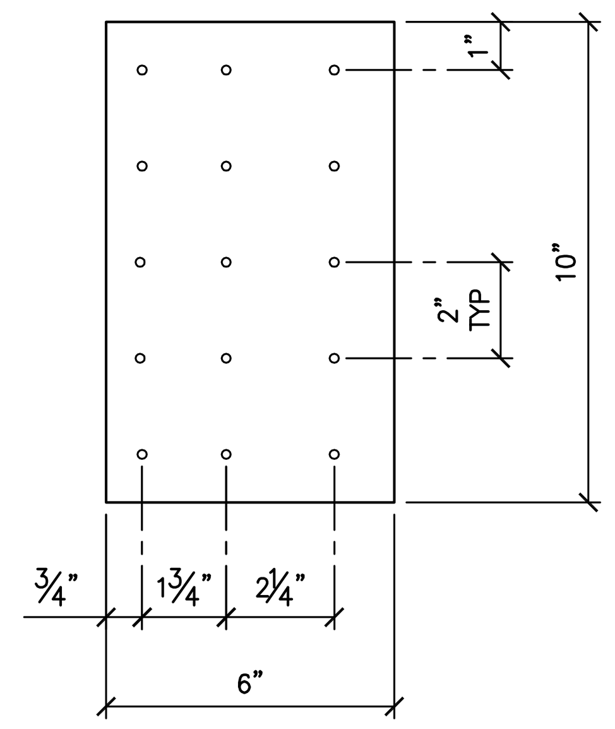


CORNER CONN
12 S6 DETAIL
NTS

NOTES:
1. FIRE-RETARDANT PLWD IS REQ FOR TYPE II CONSTR.
2. IF 15/32" CDX PLWD IS ATTACHED ON 3 SIDES (EXCEPT DOORWAY) DIRECTLY TO STUDS W/ #8 SMS @ 6" OC AT PLWD PANEL EDGES & 12" OC AT INTERMEDIATE MEMBERS, THEN FLAT STRAP BRCG IS NOT REQ.

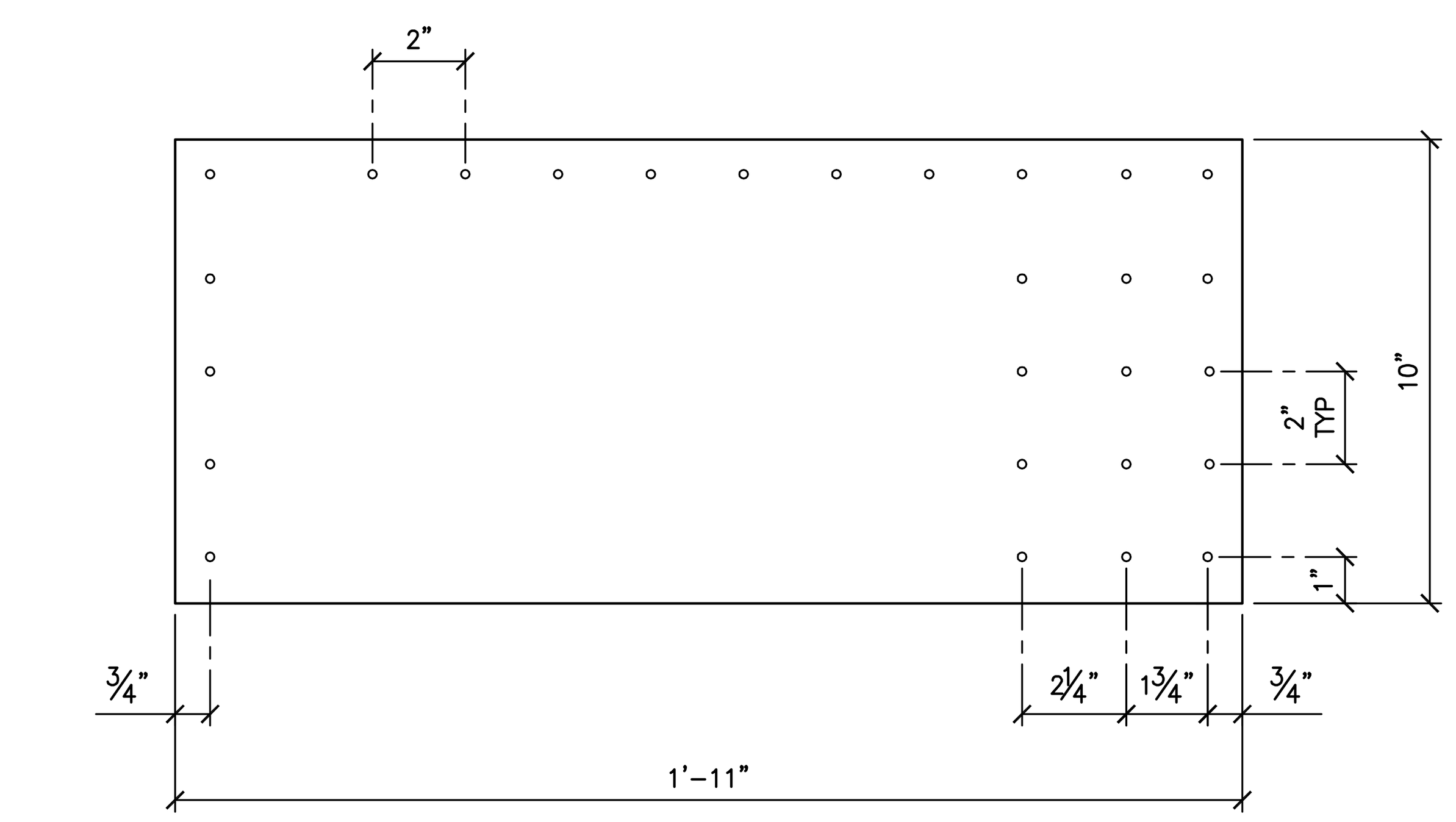
TABLE 8 EQUIP ROOM DIMS

	☐SIDE	☐REAR (HW1)	☒REAR (HW2)	☐REAR (HW3)
MA (MAX)	7'-6 1/4"	8'-2 1/4"	9'-2 1/4"	9'-10 3/4"
MB	6'-6 3/4"	7'-6"	8'-6"	9'-2"



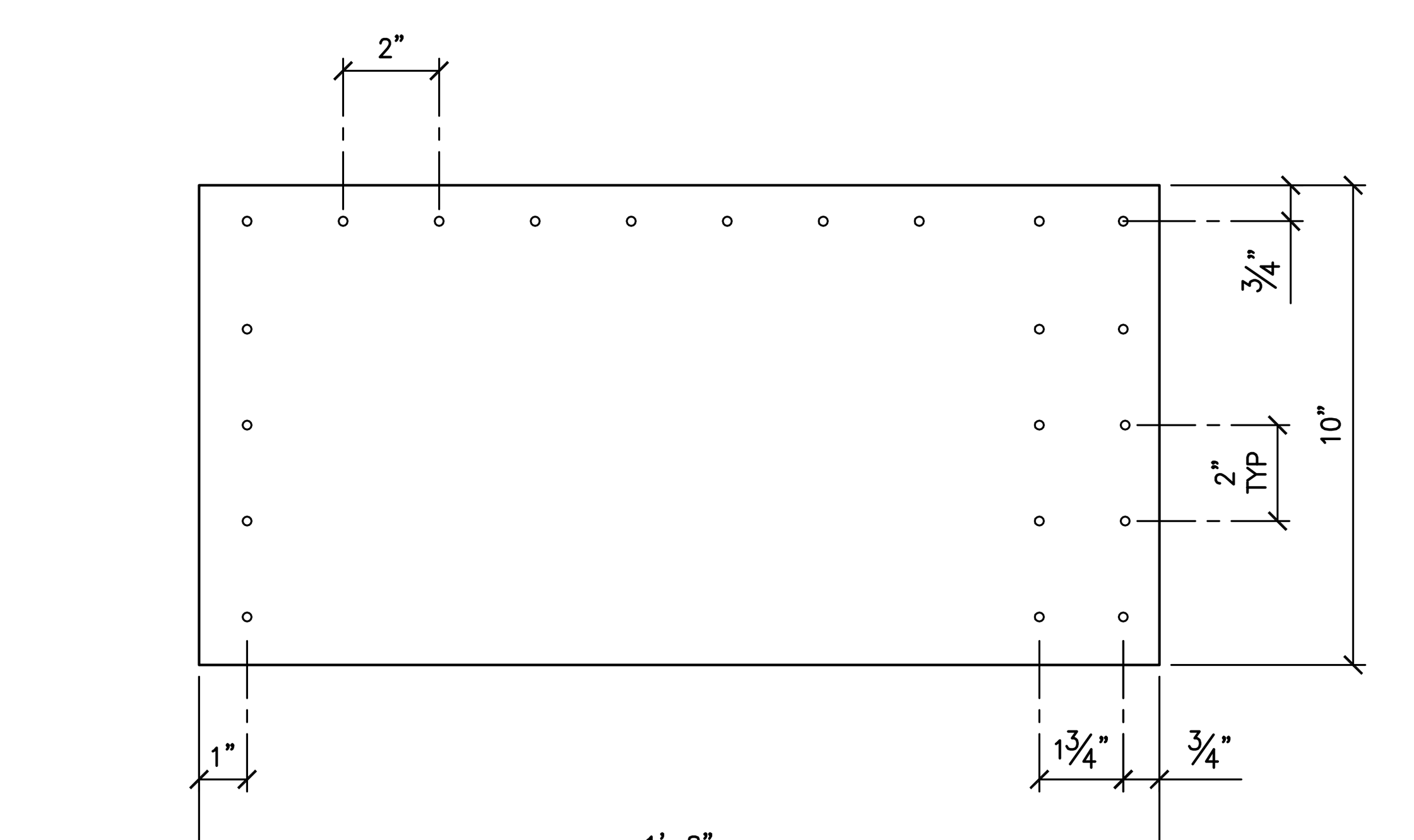
NOTE:
ATTACH GUSSET TO STUDS & TRACK W/ 15- #10 SMS MIN, TYP.

16 GA GALV CORNER PLATE
7 S6 DETAIL
3" = 1'-0"



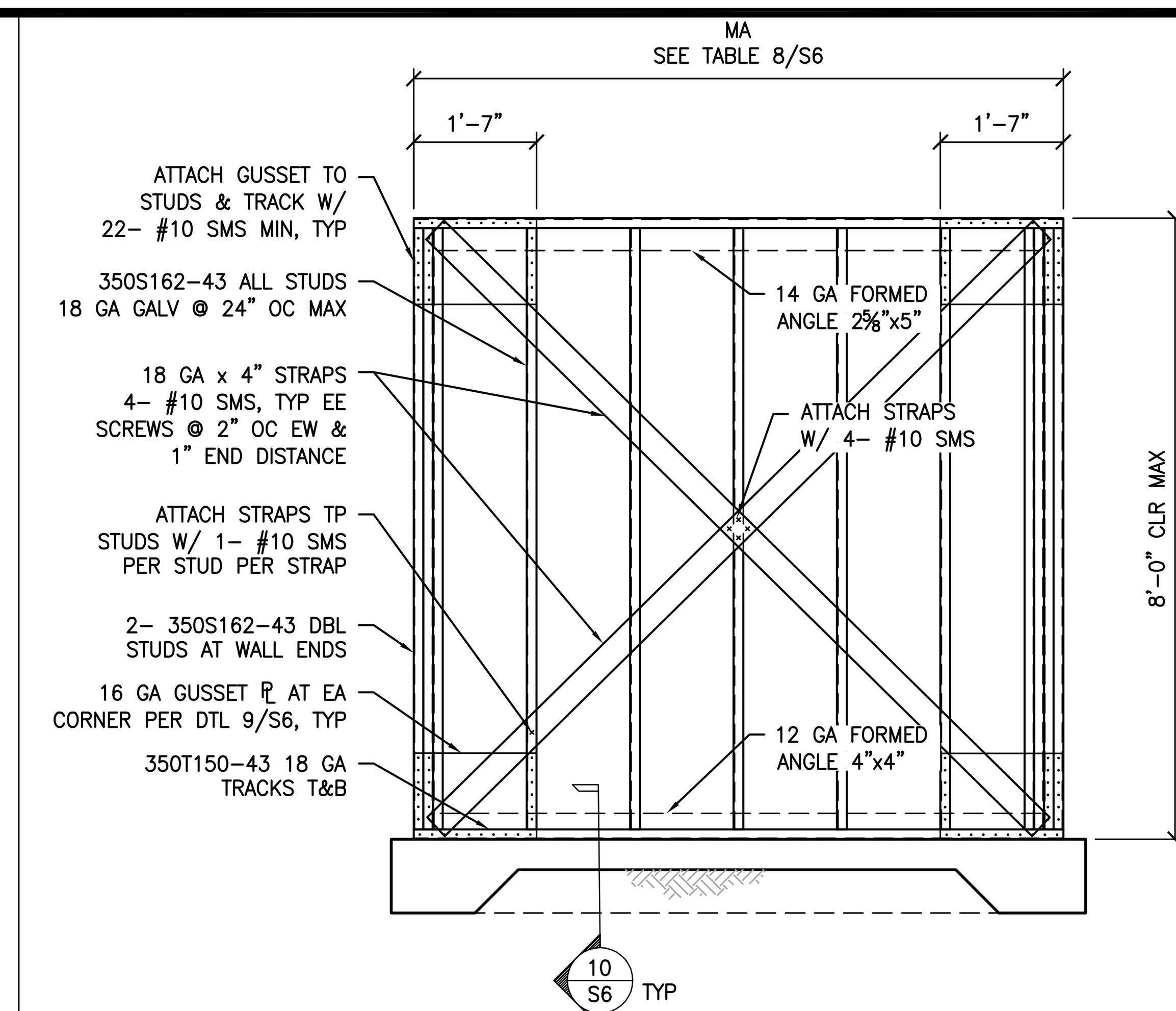
NOTE:
ATTACH GUSSET TO STUDS & TRACK W/ 27- #10 SMS MIN, TYP.

16 GA GALV CORNER PLATE
8 S6 DETAIL
3" = 1'-0"

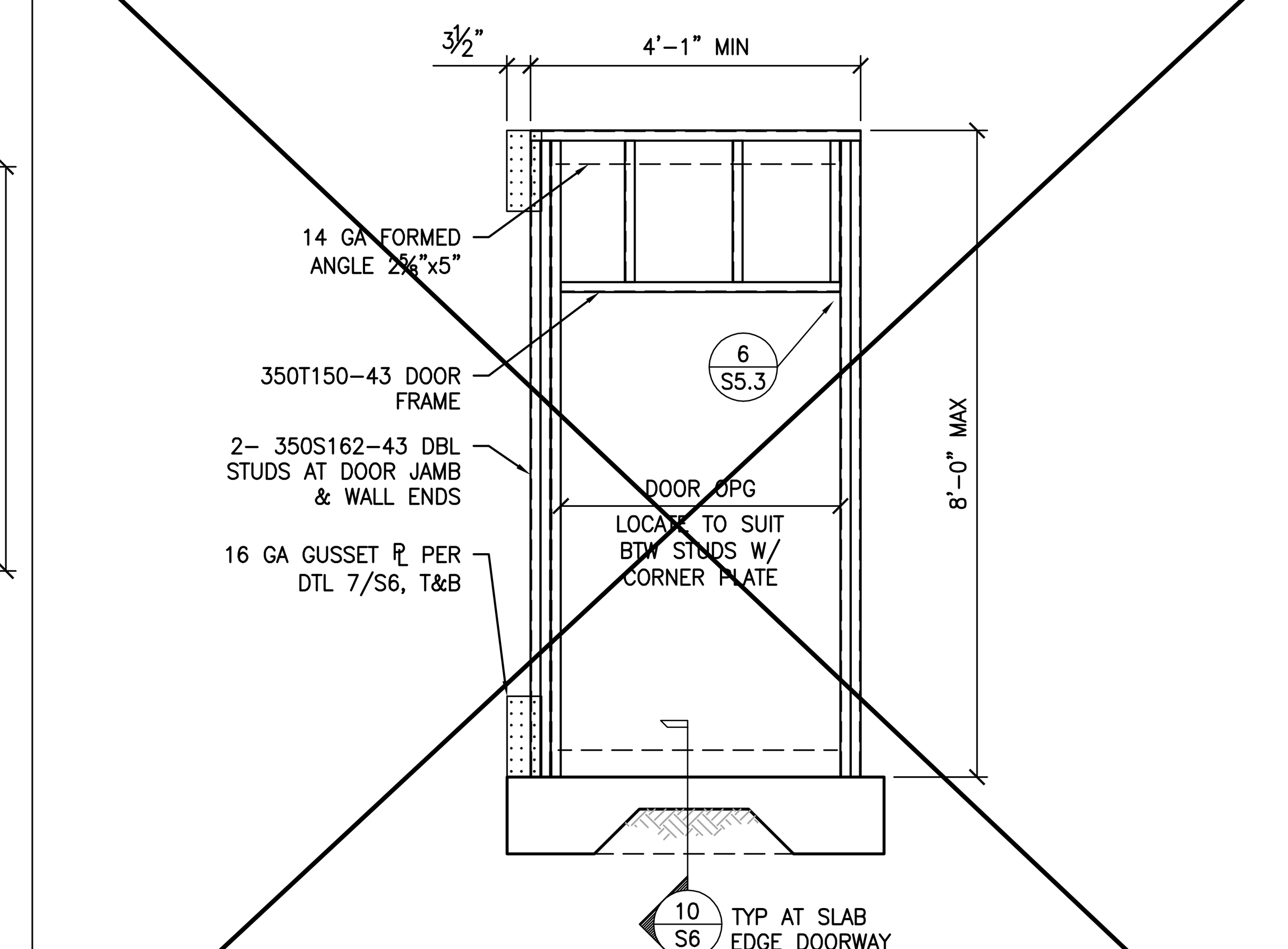


NOTE:
ATTACH GUSSET TO STUDS & TRACK W/ 22- #10 SMS MIN, TYP.

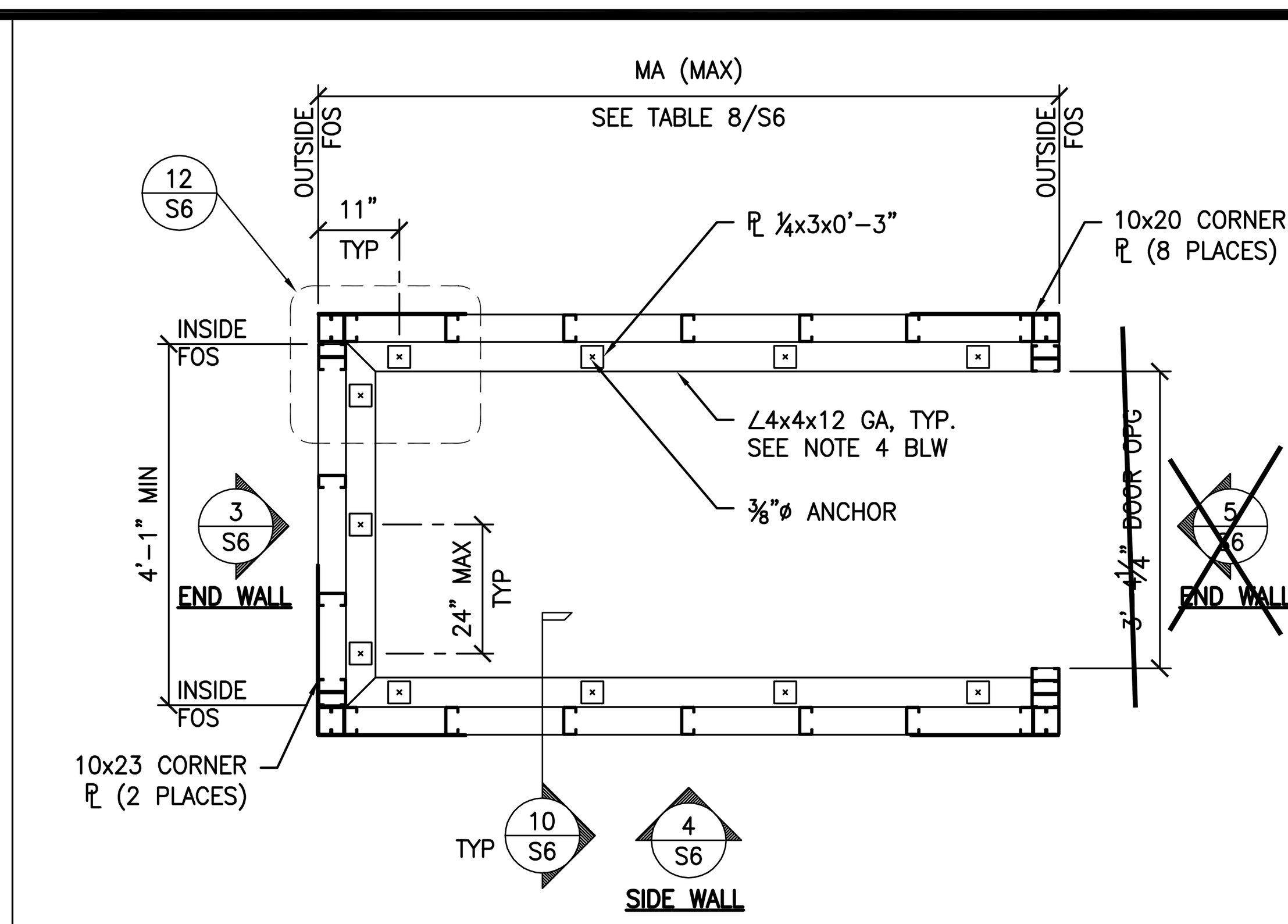
16 GA GALV CORNER PLATE
9 S6 DETAIL
3" = 1'-0"



SIDE WALL
4 S6 ELEVATION
1/2" = 1'-0"

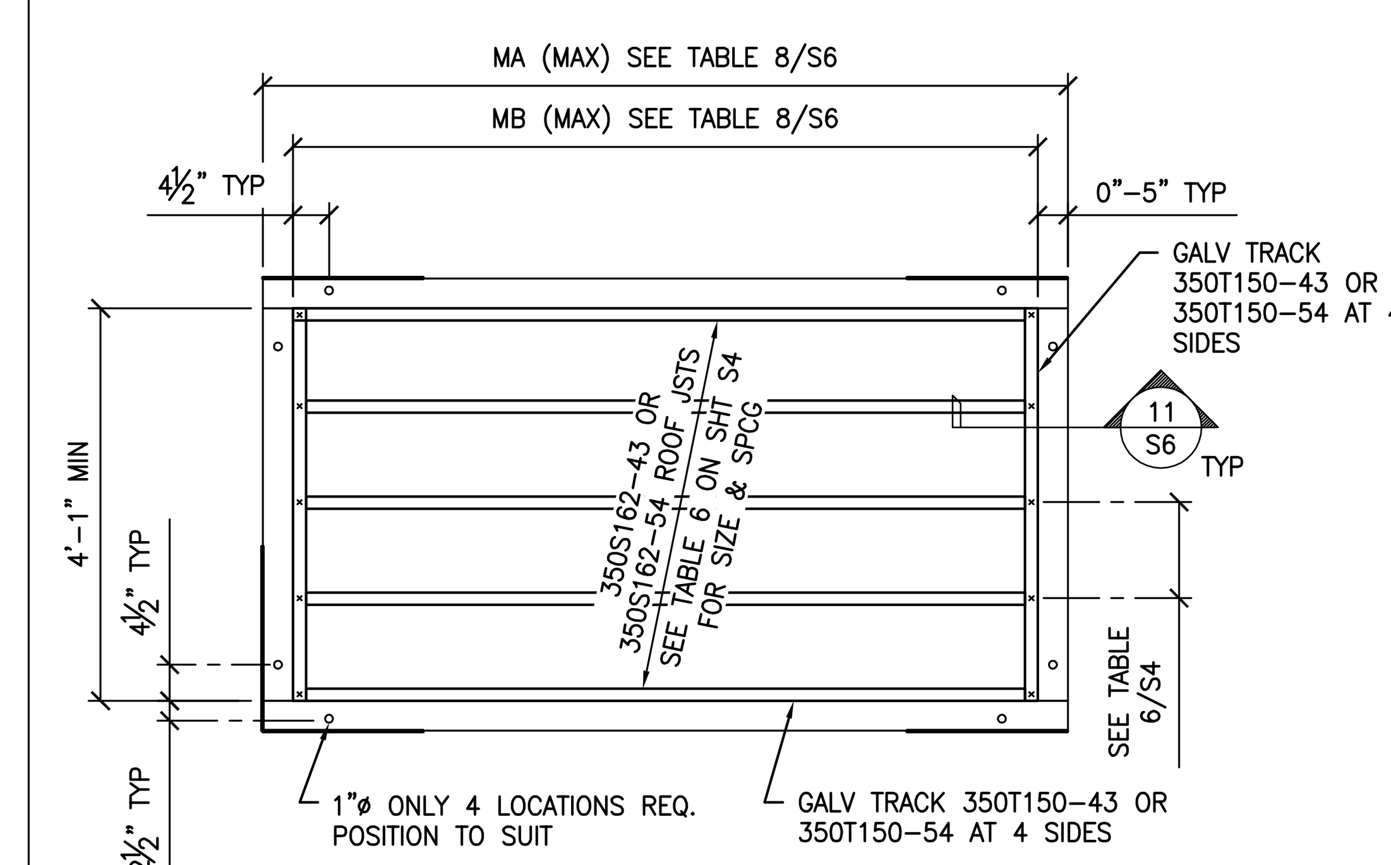


END WALL W/ DOOR
5 S6 ELEVATION
1/2" = 1'-0"



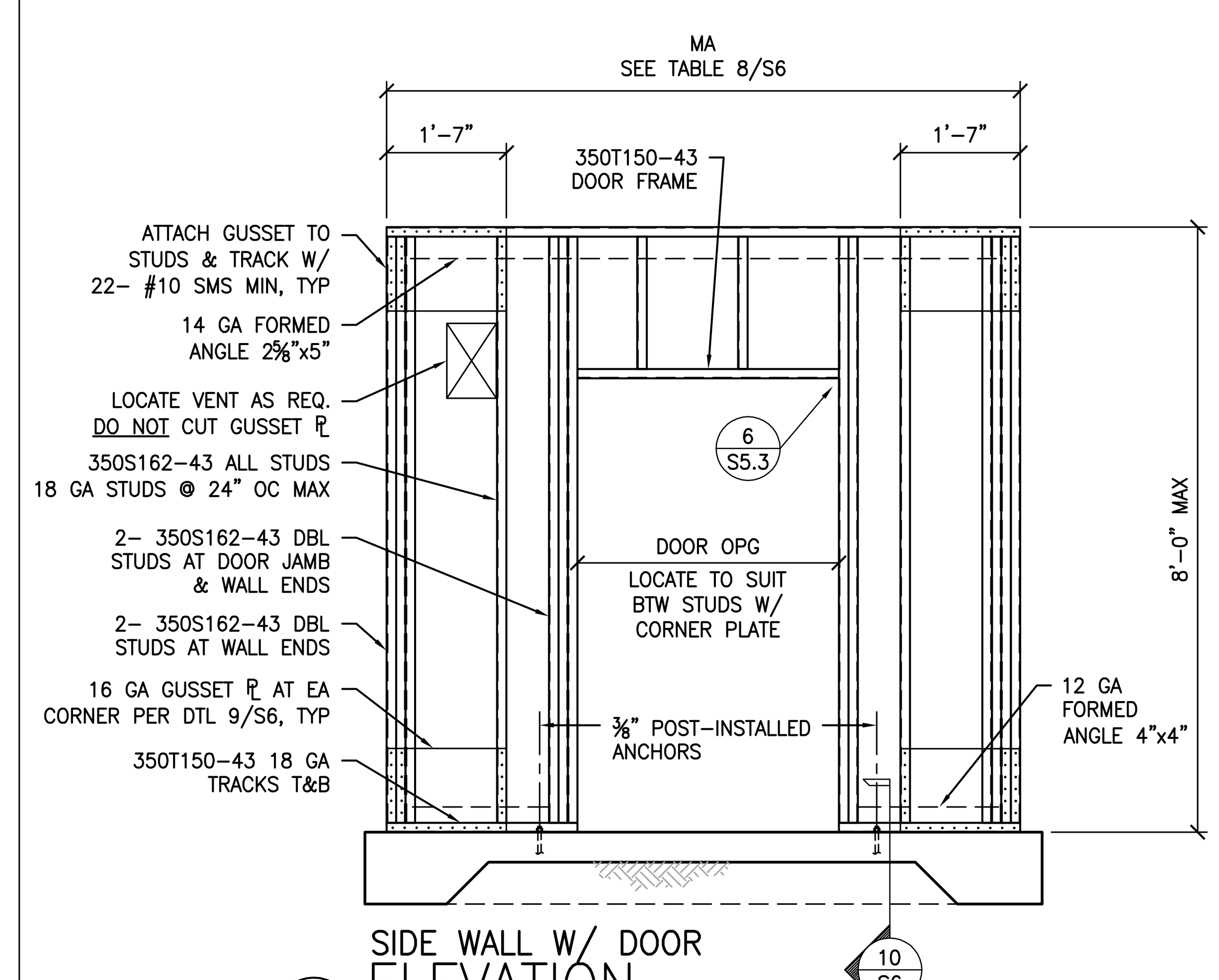
NOTES:
1. DETACHED SHOWN. FOR ADJACENT EQUIP ROOM, DELETE APPROPRIATE WALL & COORD W/ DTL 7/S4.1.
2. ONE (1) DOOR PER MER. LOCATION BASED ON PUMP UNIT CLEARANCE.
3. DOOR MAY OCCUR ON EITHER SIDE OR END WALL.
4. FOR ATTACHED EQUIP ROOM FLR ANGLE IS REPLACED AT SIDE ADJ TO ELEVATOR W/ ∠6x6x12 GA. SEE DTL 5/S4.1
5. SEE 1/S5.3 FOR WALL TYPE.

EQUIP ROOM
1 S6 PLAN
NTS

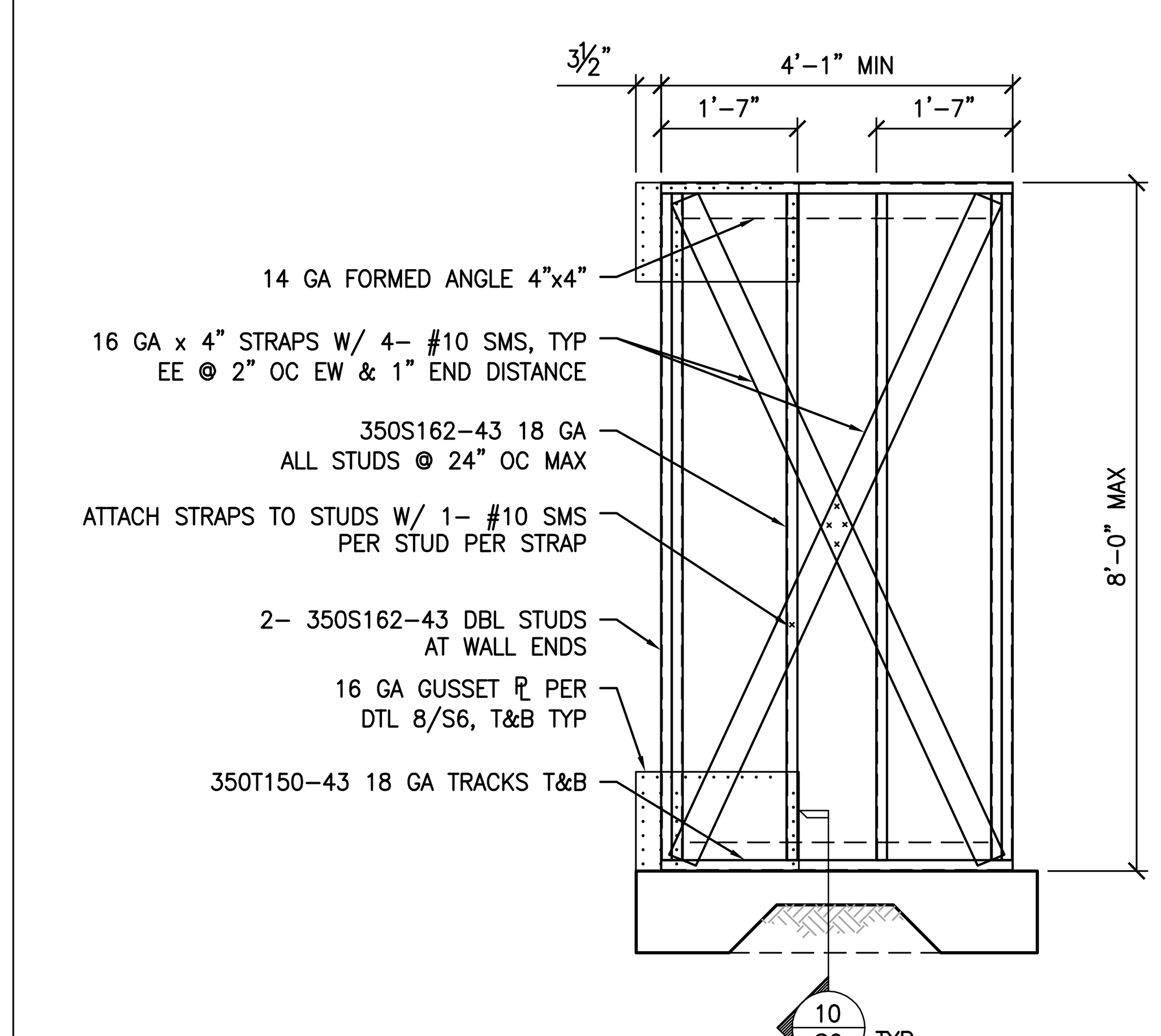


NOTES:
1. ½" PLWD & ⅝" GWB NOT SHOWN FOR CLARITY.
2. FOR TYP ROOF CONSTR, SEE TABLE 1/S4 & 3/S4
3. SEE NOTE 10 ON SHT S4 FOR ROOF EMBELLISHMENT

EQUIP ROOF
2 S6 FRAMING PLAN
NTS



SIDE WALL W/ DOOR
6 S6 ELEVATION
3" = 1'-0"



END WALL
3 S6 ELEVATION
NTS

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
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Structural Engineer
STATE OF CALIFORNIA

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PROJECT NO: 16093
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DRAWN BY: MTC

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DATE 11/3/2018
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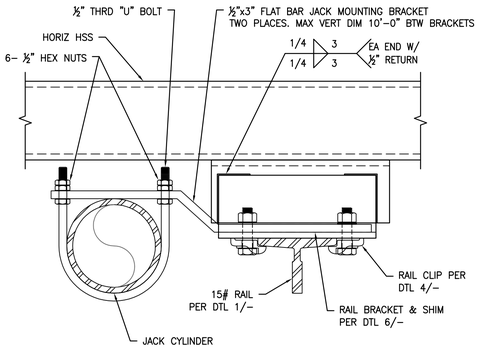
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

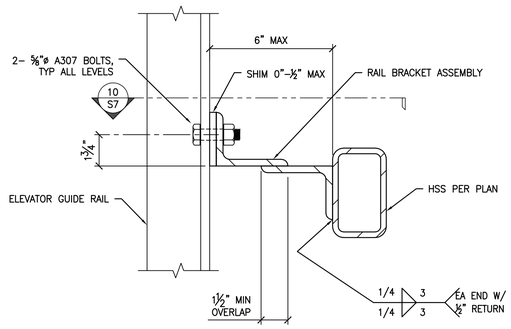
SHEET NAME:
MACHINE ROOM FRAMING PLAN & DETAILS (PARTIAL MACHINE ROOM)

SHEET NO:
S6

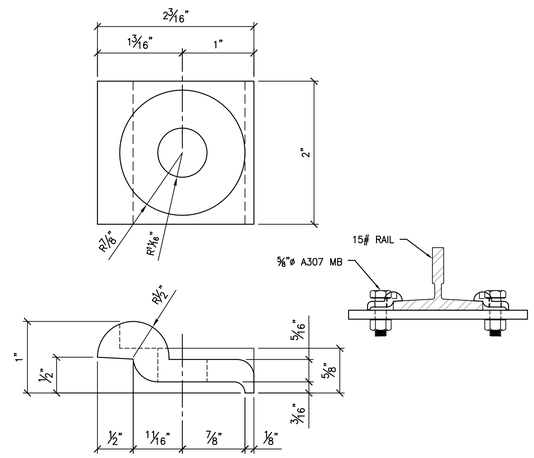
BID SET 10/01/2021



HOLELESS JACK BRACKET DETAIL
10/S7 NTS



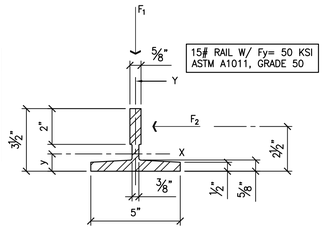
RAIL BRACKET CONN DETAIL
7/S7 3" = 1'-0"



RAIL CLIP DETAIL
4/S7 NTS

MAX SEISMIC REACTION		
ELEVATOR CAPACITY	4000 LBS MAX	
	NORMAL	SEISMIC
F1	287	2212
F2	140	962

NOTE: BASED UPON 15# RAILS.
MAX RAIL BRACKET SPCG = 9'-4".



15# RAIL W/ Fy= 50 KSI
ASTM A1011, GRADE 50

TYPE RAIL	AREA	AXIS X-X				AXIS Y-Y		
		DISTANCE TO BACK OF FLG	MOMENT OF INERTIA	SECTION MODULUS	RADIUS OF GYRATION	MOMENT OF INERTIA	SECTION MODULUS	RADIUS OF GYRATION
15#	4.44	y	I	s	r	I	s	r
		0.97	4.77	1.89	1.04	5.53	2.21	1.11

NOTE: MAX BRACKET SPCG 9'-4"

#15 RAIL SECTION DETAIL
1/S7 3" = 1'-0"

NO.	DATE	REVISION

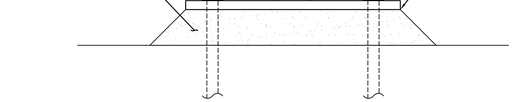
S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

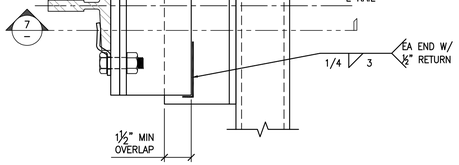
THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

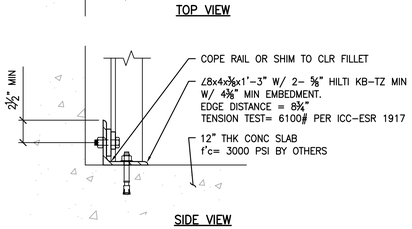


HOLELESS JACK UNIT TO GROUND CONNECTION DETAIL
11/S7 NTS



NOTE:
BRACKET WIDTH MAY BE ADJUSTED TO ALLOW FOR VARIATION IN HOISTWAY, HOWEVER, MIN ANGLE OVERLAP MUST BE MAINTAINED AS NOTED.

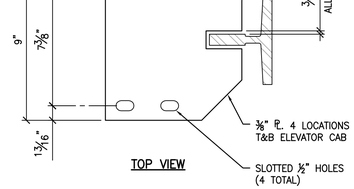
RAIL BRACKET CONN DETAIL
8/S7 3" = 1'-0"



TOP VIEW

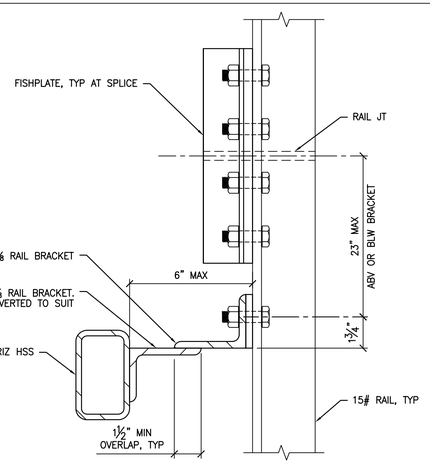
SIDE VIEW

~~OPTIONAL~~ FLR BRACKET DETAIL
5/S7 1 1/2" = 1'-0"

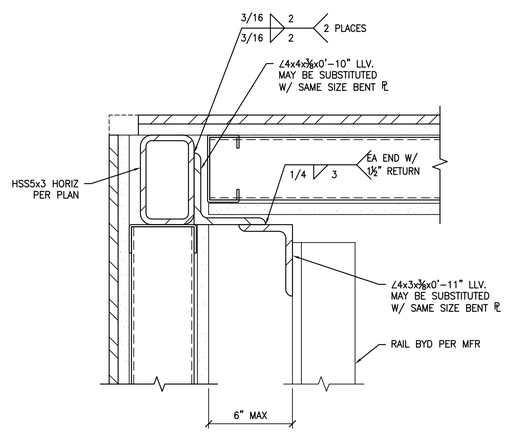


TOP VIEW

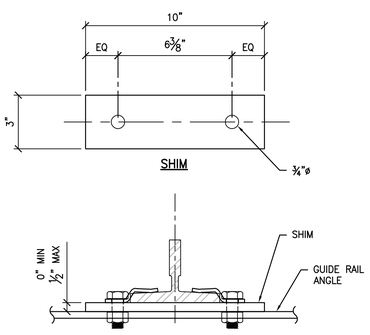
RAIL RETAINER PLATE DETAIL
2/S7 3" = 1'-0"



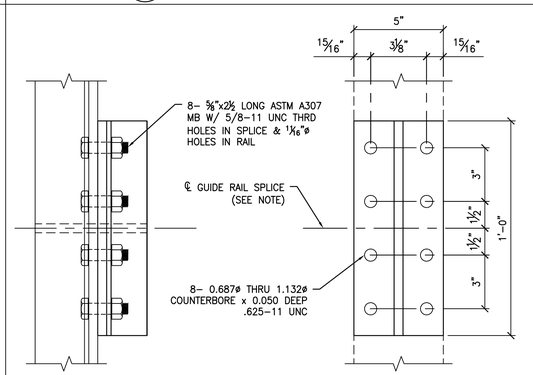
RAIL SPLICE DETAIL
12/S7 3" = 1'-0"



TOP RAIL BRACKET DETAIL
9/S7 3" = 1'-0"



RAIL CLIP CONN DETAIL
6/S7 3" = 1'-0"



SIDE VIEW FRONT VIEW

NOTES:
1. MACHINE ENDS OF RAIL WEB FOR ¼" TONGUE & MATCHING GROOVE CENTRALLY LOCATED IN THE WEB AT THE SPLICE.
2. MACHINE BACKS OF RAIL FLGS AT ℄ LOCATION.

FISHPLATE DETAIL
3/S7 3" = 1'-0"

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

PROJECT NO:	16093
DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

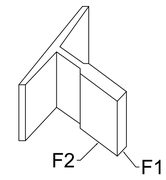
SHEET NAME:
RAIL & POWER UNIT DETAILS

SHEET NO:
S7

BID SET 10/01/2021

THE FOLLOWING REQUIREMENTS ARE TO BE PROVIDED BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED :

1. Setting of anchor bolts and sleeves, plumb and level GC MUST utilize the setting template provided by Elevator Contractor. GC must insure that anchor bolts and sleeves are properly secured to avoid movement during concrete pour, are clean of all debris prior to setting of the hoistway, and are positioned as per plans and verified.
2. Any concrete coring, if required, of the pit walls for feedline and electrical conduit penetrations. Coring to be performed AFTER hoistway is set in place. All water proofing.
3. Any grouting of the sills or hoistway frames, if required.
4. Machine room slab and foundation as required.
5. All Electrical service to the elevator machine room. All electrical must comply with the current version of the California Electric Code (CEC) and / or the National Electric Code (NEC) as they apply for new elevator installations. GC shall provide the following:
   a. Electrical service to the machine room and connection to the disconnect must be stubbed out in the proper location within machine room.
   b. All electrical wiring, including low voltage wiring, within the machine room must be EMT or rigid conduit.
   c. Electrical service to elevator motor as indicated on the elevator drawings. (See elevator layout drawings).
   d. 110 V 20 amp dedicated service for elevator car
   e. 110 V 20 amp dedicated service for the hoistway.
   f. 110 V 20 amp dedicated service for machine room circuit
   g. Dedicated telephone line to the machine room terminated at a jack, and live. (Ring down features are not acceptable.) GC is responsible for submitting the telephone number to be programmed into elevator telephone system, and the actual telephone number of the dedicated telephone line for the elevator.
   h. Smoke detector in machine room with one set of normally closed dry contacts for the elevator.
   i. Fire signaling device at each landing with one set of normally closed dry contacts (egress floor must be “closed” contacts) for the elevator, wired back to the machine room and must be operational.
   j. Grounding of the hoistway and equipment room structures including grounding and lightening rods.
6. The machine room cannot be used for the storage of ANY items.
7. All trenching from machine room to pit. Trench must be 18” - 24” wide. Trenching is required for ALL remote machine room applications. All trenching must be done prior to the pouring of the machine room slab, piping will be run in trench from machine room location to outside of the pit wall and terminated until elevator is set. If elevator can be set prior to machine room pad being poured then full run can be completed in trench from hoistway to the machine room.
8. Underground secondary pipe containment (double wall pipe) drainage point to be provided at point convenient to piping system and with services at that drainage point for leak detection devices. (If required.)
9. Leak detection signaling device to be located within 10’ of actual detection device. (If required.)
10. All back filling. Back filling must be coordinated with the elevator contractor after all feedlines and conduits have been installed and tested.
11. Access to the hoistway for other trades is not included. Stand-by time shall be considered an additional cost and billed at elevator rates.
12. Electrical, plumbing or mechanical equipment may not be placed or run in the hoistway or machine room unless approved by Elevator Contractor.
13. All inspections and fees for any government mandated factory inspections. Arrangements must be made prior to production commencement.
14. GC shall be responsible for insuring that at time of delivery the site will be ready for setting of the elevator
    a. All forms are removed from the pit
    b. Pit dry.
    c. Anchor bolts are clean and sleeves clear of debris.
    d. Crane access available.
15. GC to insure that pit is kept in a dry condition and structure is protected from inclement weather. Damaged materials and / or extra labor resulting from water shall be an extra cost to the elevator contract.
16. Execution of crane company’s waiver of liability forms.
17. GC shall be responsible for any damage resulting from driving crane onto site, being set onto the site and during the placement of the elevator hoistway. This includes, but not limited to damage to: Trees, any conrete, curbs, driveways, walkways, lawns, asphalt, gates, fences and underground utilities.
18. GC is responsible for appropriate site access for crane set and equipment delivery. A minimum 70-foot working radius is required for the crane. This includes but is not limited to:
    a. Traffic control
    b. Special provisions related to power lines, trees, occupied buildings, FAA permits, etc.
    c. Any and all fencing removal and replacement for crane and truck access.
    d. All removal must be done prior to arrival of crane on site.
    e. Any and all vegetation removal or trimming for crane and truck access to elevator final destination.
    f. Protection to all concrete, asphalt, curbs, walkways, building and underground structures, landscaping affected by crane and truck access and set.
19. Unless otherwise noted: Crane set of elevator is based elevator set taking place mid-week mornings between 7:00 AM and 11:00 AM with 70-ton crane.
20. Structural attachment of hoistway to existing structure. (if required)
21. Removal of any obstructions necessary to install the equipment.
22. Site gurney compliance via stairs or other means, if required.
23. Installation of any building expansion joints, if required.
24. For holed elevators only, the cost for drilling the wellhole is based upon four (4) hours of drilling; utilizing a standard truck mounted drilling rig and drilling through normal soil conditions. GC is responsible to provide free, unobstructed access to the site for our truck mounted drill rig. Free access means adequate and unrestricted access to the pit as required for the move-in of equipment for the purpose of drilling the cylinder well. Should driller encounter any obstruction, including but not limited to rock, boulder, water, quicksand or any other unusual soil condition or should driller be required to utilize any special tools, an additional cost will be added to the Contract. Any costs beyond drillers standard drilling shall be considered as a result of conditions beyond the reasonable control of Elevator Contractor. & those additional costs will be charged back to the GC. All drilling spoils are to be removed.
25. Cab flooring and appropriate sub-flooring.
26. Vent in machine room. Machine room temperature shall not be lower than 40 degrees Fahrenheit or exceed 104 degrees Fahrenheit or exceed manufacturer’s recommendations.
27. Venting of hoistway (only applicable for elevators with more than two stops).
28. Sprinklers, or heat sensors in the machine room and / or hoistway (if required). If sprinklers are provided, the shunt trip devices must also be provided.
29. Flashing between structures at locations including, but not limited to, the: pit, slab, modular equipment room roof and hoistway. These locations must be detailed and provided for water tightness.
30. “ABC” type fire extinguisher in machine room.
31. Exterior finish of the hoistway and machine room.
32. Exterior and interior painting or finishing.
33. Parapets, downspouts, scuppers, embellishments as well as any other modifications beyond details shown on manufacture’s shop drawings .
34. Finished roofing.
35. Verification of correctness of placement of elevator pit is by others. Elevator company is to install elevator in pit provided by others.



MAXIMUM SEISMIC REACTION		
ELEVATOR CAPACITY	4000 LBS. MAX	
	NORMAL	SEISMIC
F1	287	2212
F2	140	962
BASED UPON 15# RAILS GR 50.		
MAX RAIL BRACKET SPACING = 9'-4"		

MAX FORCES ON PIT FLOOR

LOCATION	FORCE IN LBS.
AT JACK (BOTH)	13,740
AT EA. BUFFER	14,740

BUFFERS ARE LOCATED APPROX. 12" FROM ℄ OF JACK UNIT IN A LINE PARALLEL TO WIDTH OF HATCH

MAXIMUM ALLOWABLE SPECIFICATION & DATA	
MODEL	ALL
CAPACITY (LBS)	4000
HOISTWAY MODEL	ALL
TYPE	PASSENGER
OPERATION	SIMPLEX COLLECTIVE
LOADING	CLASS A
POWER SUPPLY	208 - 480 VOLTS / 3 PH / 60 HZ
MOTOR STARTER	VARIES
CONTROL TYPE	MICROPROCESSOR
DOOR OPERATOR	GAL MOVFR II
SPEED (FPM)	100 - 150 FPM
LANDINGS	2 TO 7
OPENINGS	4 FRONT / 3 REAR
TRAVEL	37'-9" MAX
CROSSHEAD	C5 X 9#
STILE	C8 X 11.5#
PLANK	C6 X 10.5#
GUIDE RAILS	15# (Fy= 50 KSI)
PLATFORM SIZE (INCHES)	92" X 72"
PLATFORM THICKNESS	3.25 INCHES
FINISHED FLOOR THICKNESS	0.25 INCHES
GUIDE SHOES	SLIDING SWIVEL
BUFFERS (QTY)	SPRING (2)
RATING:	10655 LBS EACH
STROKE:	2.5 INCHES
WEIGHTS	
HOISTWAY DOOR	275
CAR DOOR	275
PISTON WEIGHT (MAXIMUM)	1200
CAR WEIGHT	4000
GROSS WEIGHT (MAXIMUM)	9000
PRESSURE & FLOW	
STATIC PRESSURE (PSI)	235
WORKING PRESSURE : (PSI)	500
G.P.M.	124
PUMP UNIT	
MOTOR HP	50
MOTOR RPM	3400
FULL LOAD AMPS	150
STARTING AMPS	307
PUMP	TO SUIT
PUMP RPM	1800
VALVE	TO SUIT
VALVE VOLTAGE	120 VOLTS
FEED PIPE SIZE	SIZE TO SUIT. SCHED. 80
HYDRAULIC JACKS	
TYPE	ALL TYPES
PLUNGER O.D	6.5"
PLUNGER LENGTH	40'-0"
CYLINDER O.D.	8.63"
CYLINDER WALL THICKNESS	0.801"
CYLINDER LENGTH	40'-0"
TOP OVERTRAVEL	24"
BOTTOM OVERTRAVEL	11"
MACHINE ROOM	
POSITION	ATTACHED OR REMOTE
HOISTWAY ENTRANCE	
TYPE	SINGLE SLIDE OR 2 SPEED
SIZE	4'0" X 8'-0"
DOOR WEIGHT	275
CAB	
STYLE	METAL
HEIGHT	10'-0"
CAR DOOR OPERATION	SINGLE SLIDE OR 2 SPEED
SIGNALS	
HALL	PER CODE. SEE 7/VT4
CAR	PER CODE. SEE 8/VT4

NOTE:TABLE ABOVE SHOWS MAXIMUM VALUES ALLOWED. FOR SPECIFIC JOB VALUES SEE THE SD-1 SUBMITTAL DRAWING.

ALL SPECIFIED ITEMS SHOWN ARE RECOMMENDED AND "OR EQUAL" PRODUCTS MAY BE SUBSTITUTED.

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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MEM Inc
MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

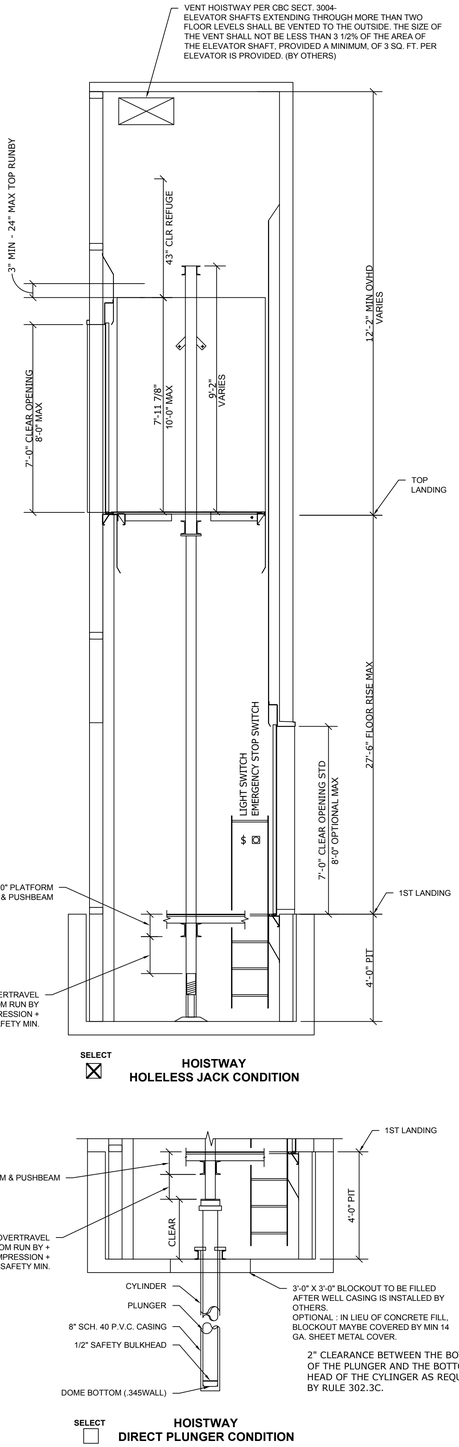
FILE NO. PC-MEM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
ELEVATOR DATA

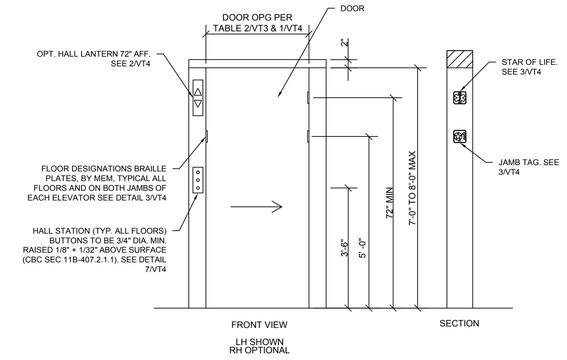
SHEET NO:
VT1

BID SET 10/01/2021

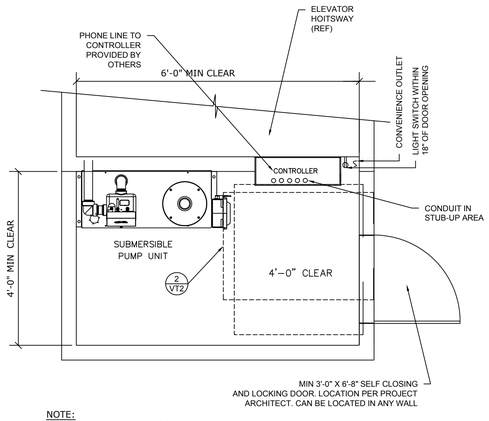


6 / VT2 HOISTWAY SECTION
NTS

NOTE:
THIS DETAIL DEPICTS ELEVATOR COMPONENTS ONLY. SEE STRUCTURAL DRAWINGS FOR FOUNDATION & HOISTWAY.

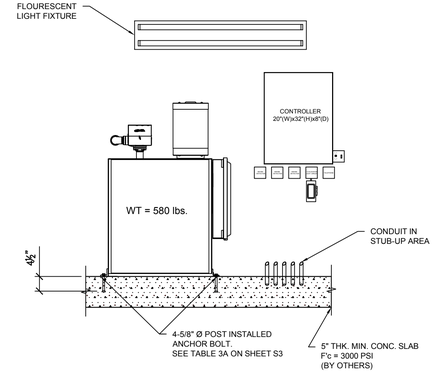


5 / VT2 HOISTWAY ENTRANCE
NTS

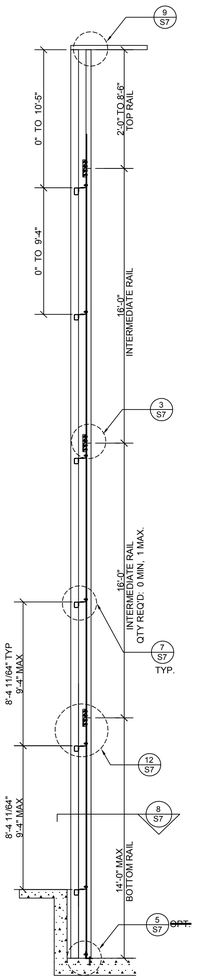


NOTE:
PUMP UNIT LOCATION TBD.

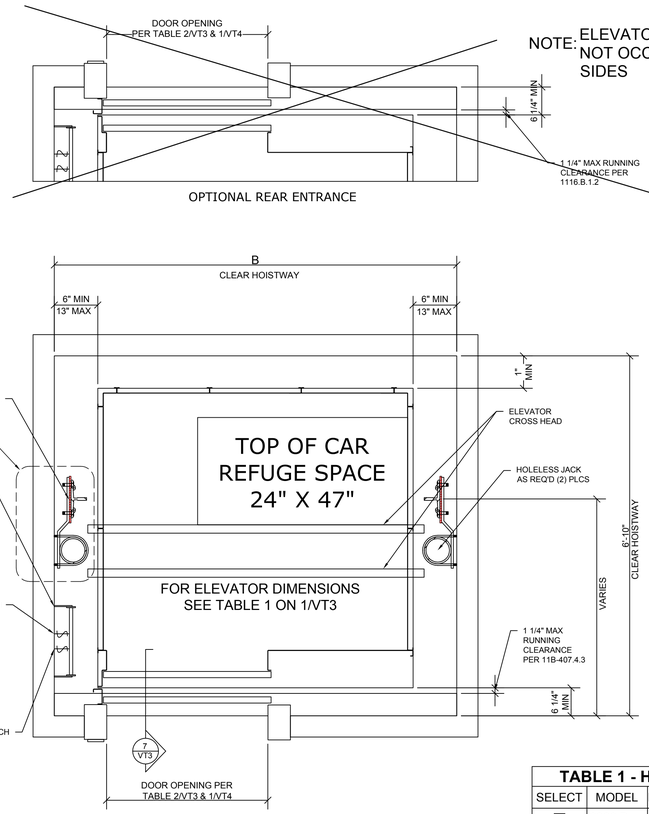
3 / VT2 EQUIPMENT ROOM PLAN
NTS



2 / VT2 TANK UNIT CONNECTION
NTS



4 / VT2 RAIL - BRACKET LAYOUT
NTS



NOTE: ELEVATOR ENTRANCES MAY NOT OCCUR ON ADJACENT SIDES

NOTE: LEFT HAND SIDE OPENING SHOWN. RIGHT HAND SIDE OPENING OPPOSITE.

1 / VT2 PLAN VIEW
NTS

TABLE 1 - HOISTWAY SELECTOR

SELECT	MODEL	HOISTWAY	A	B
☐	2000 R	HW-1	6'-10"	7'-6"
☐	2500	HW-1	6'-10"	7'-6"
☐	2500 R	HW-2	6'-10"	8'-6"
☐	3000	HW-2	6'-10"	8'-6"
☐	3000 GR	HW-3	6'-10"	9'-2 1/2"
☒	3500 G	HW-2	6'-10"	8'-6"
☐	3500	HW-3	6'-10"	9'-2 1/2"
☐	4000	HW-3	6'-10"	9'-2 1/2"
☐	4000 MAX	CUSTOM SIZE TO SUIT		
G-GURNEY COMPLIANT PER 3002.4A				
R-REVERSE OPENING				

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
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PRE-CHECK (PC) DOCUMENTS
2016 CBC CODE
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

PROJECT NO:	16093
DATE:	10/19/2018
ENGINEERED BY:	KAL
DRAWN BY:	MTC

FILE NO. PC-MEM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018

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

SHEET NAME:
ELEVATOR LAYOUT (PARTIAL MACHINE ROOM)

SHEET NO:
VT2

BID SET 10/01/2021

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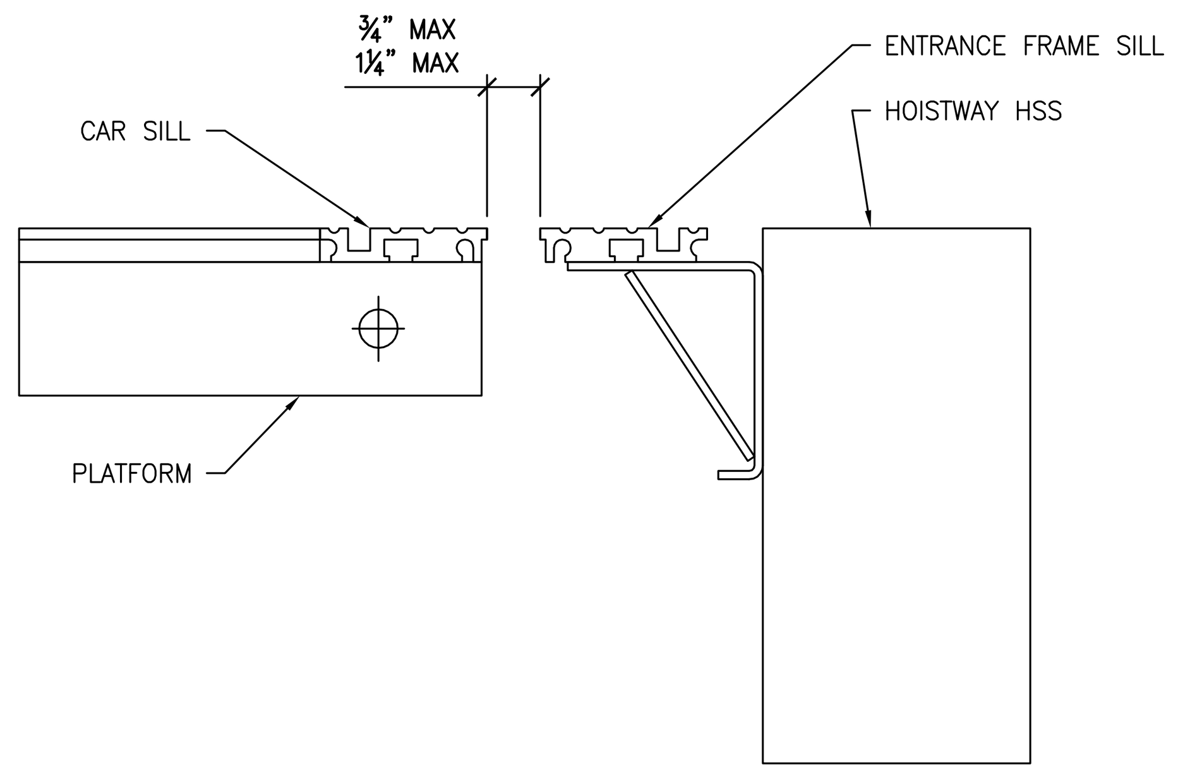
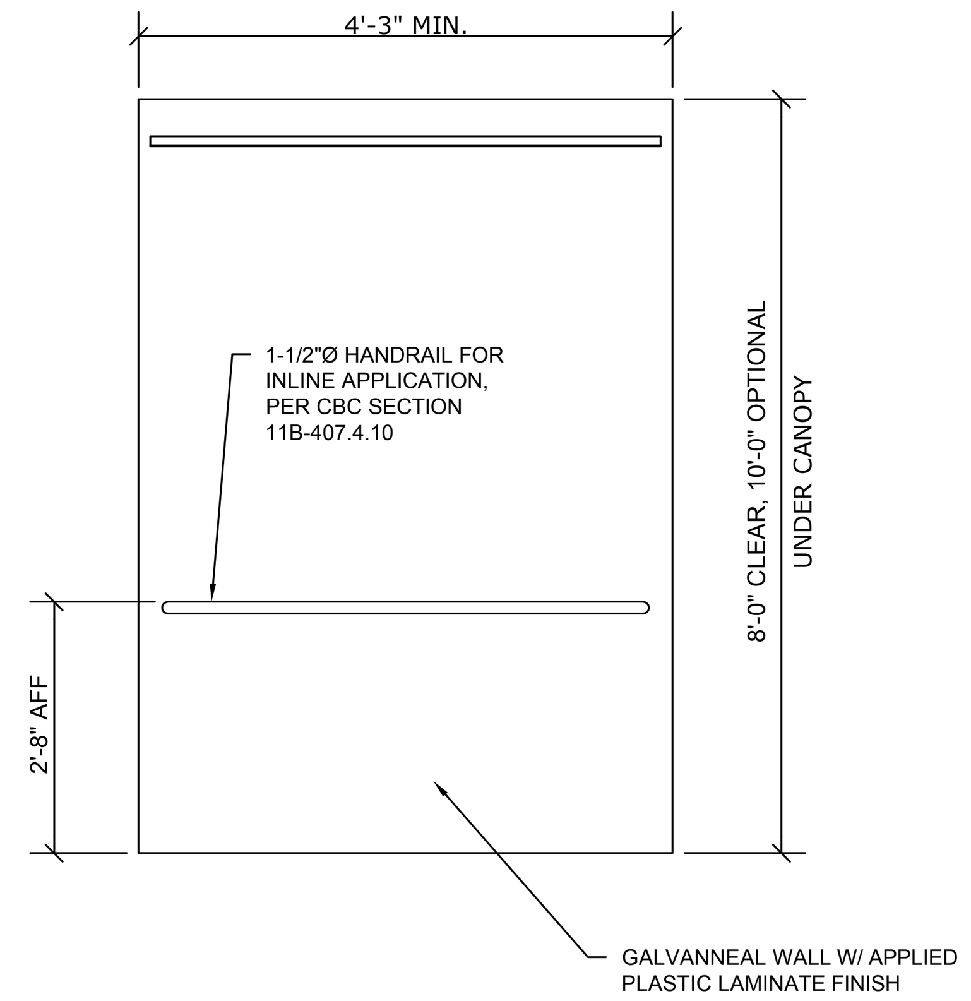
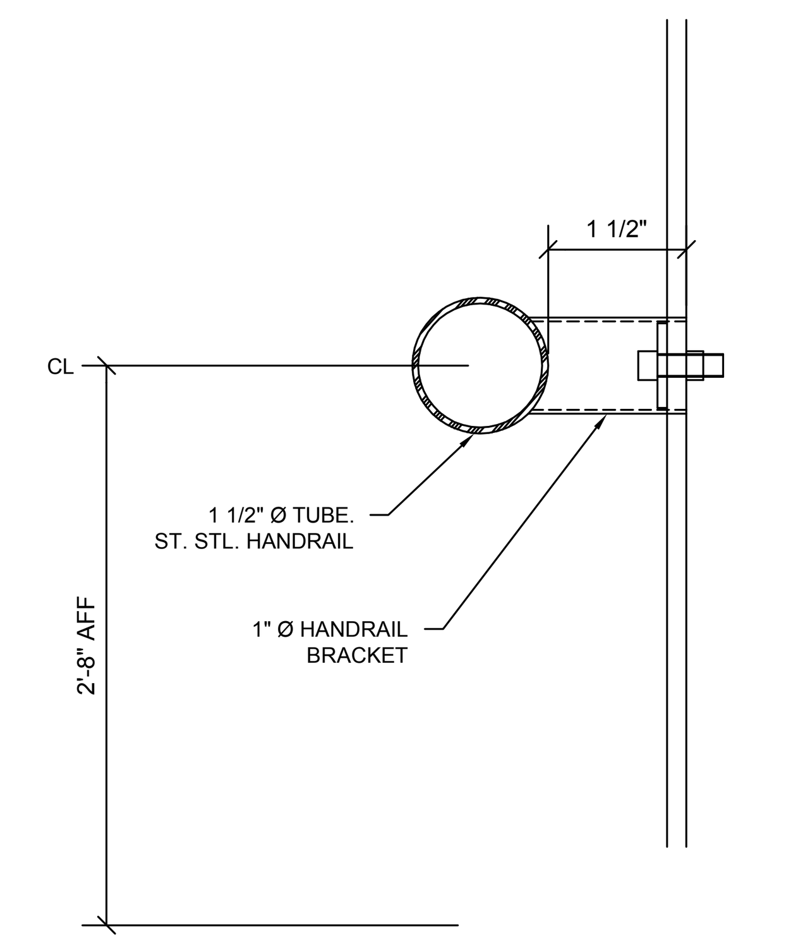


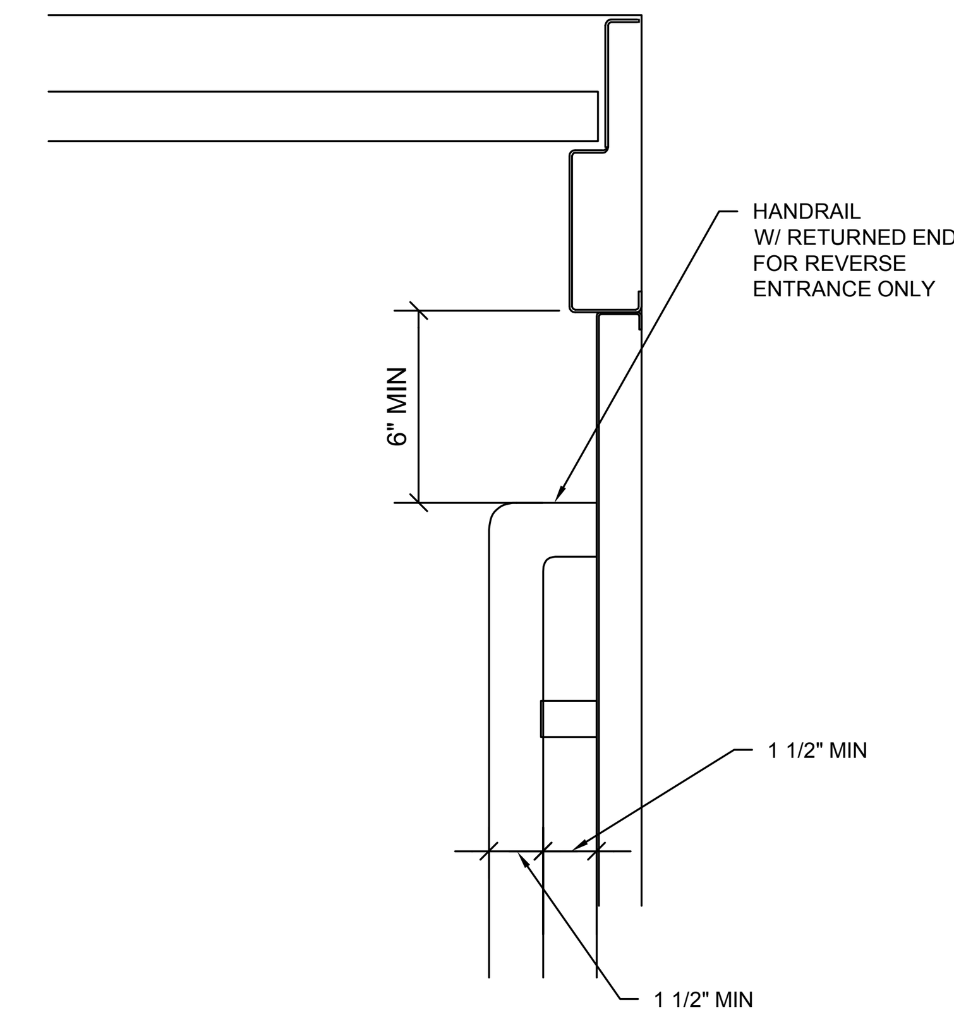
7 VT3 CAR & HALL SILLS DETAIL
NTS



4 VT3 REAR WALL
NTS

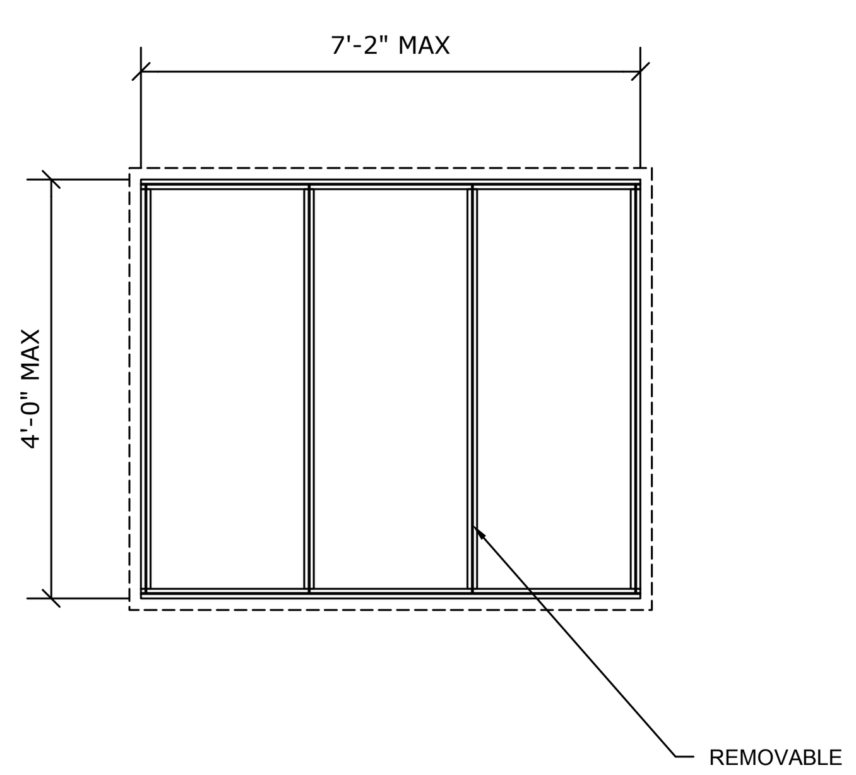


1B VT3 SECTION TRU HANDRAIL
NTS

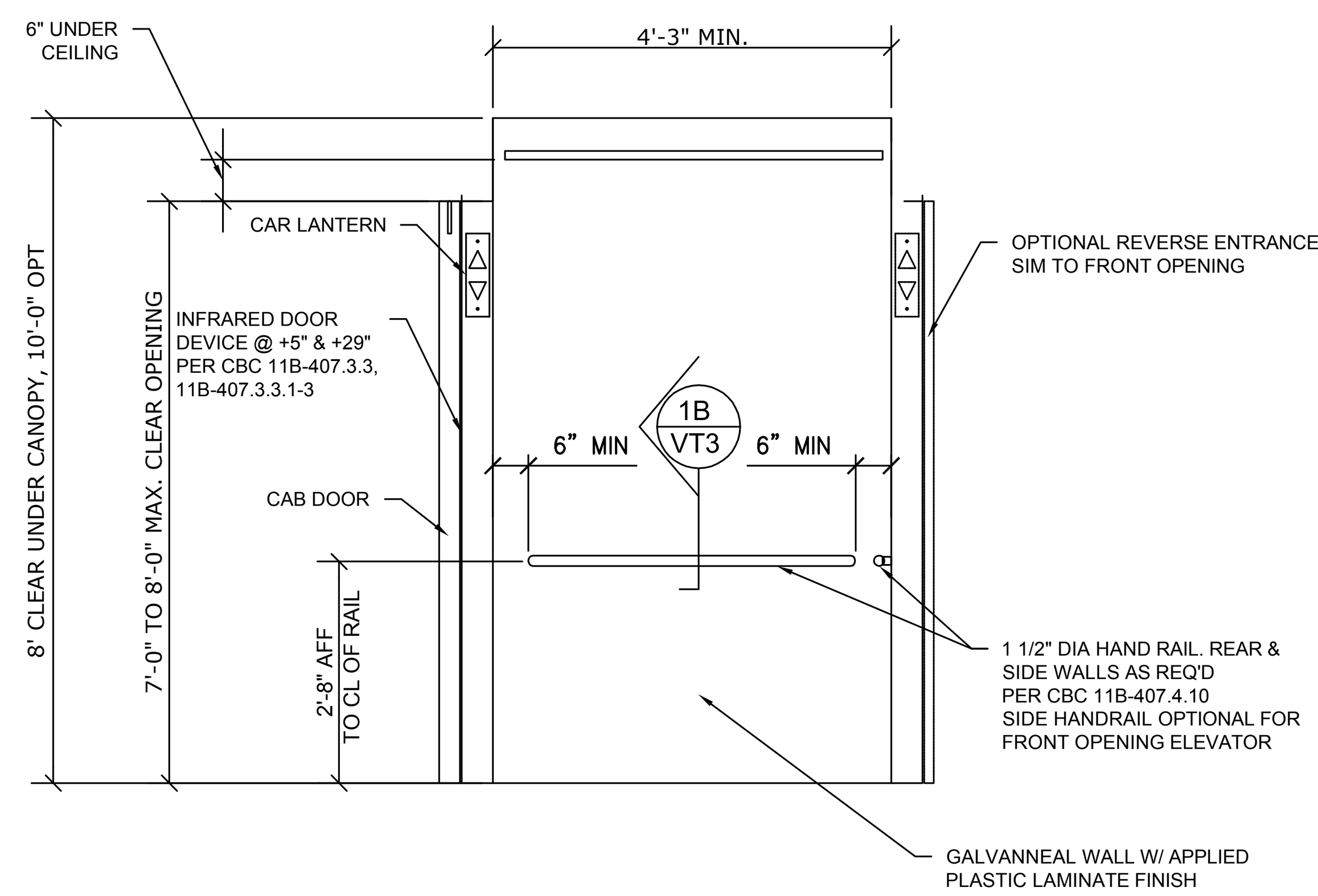


1A VT3 PLAN: HANDRAIL AT RETURNED END
NTS

NOTE: DIMENSIONS TO SUIT OVERALL CAB ENCLOSURE DIMENSIONS

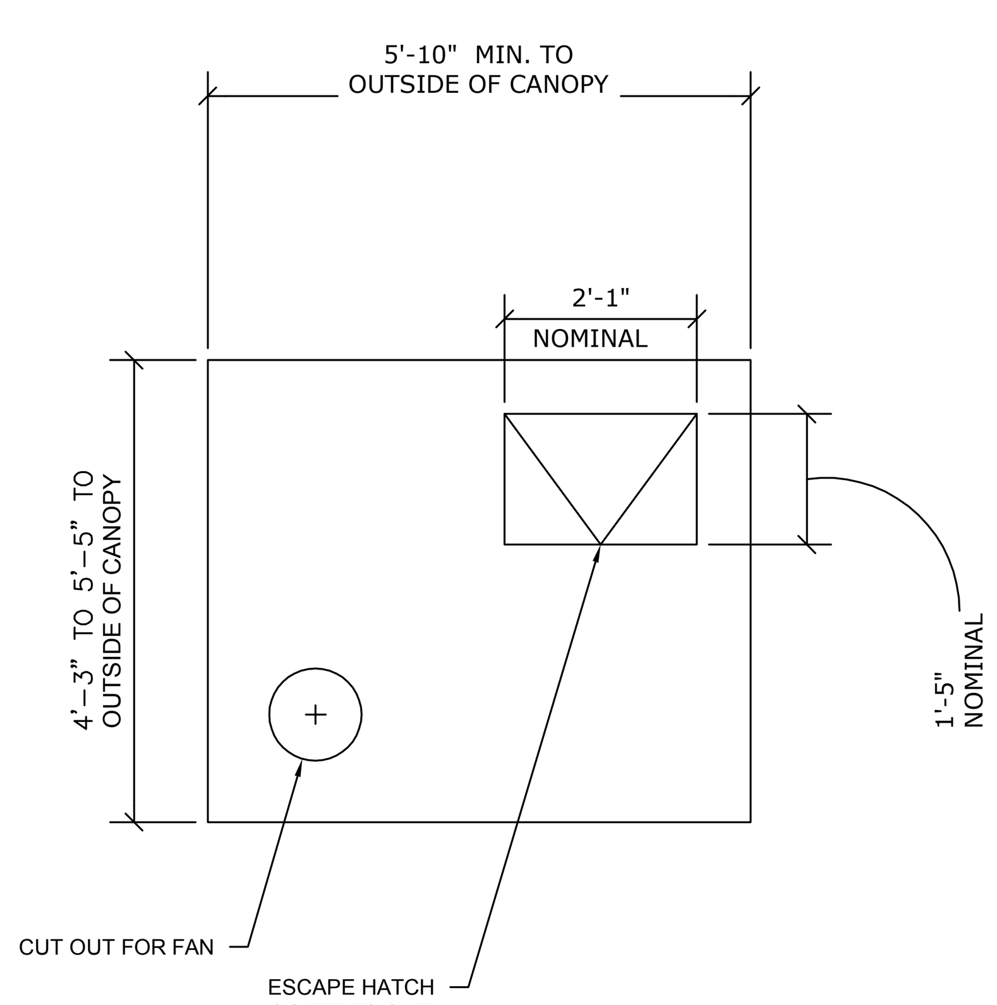


6 VT3 T-BAR CEILING FRAME FOR ELEVATOR CAR
NTS



3 VT3 SIDE WALL
NTS

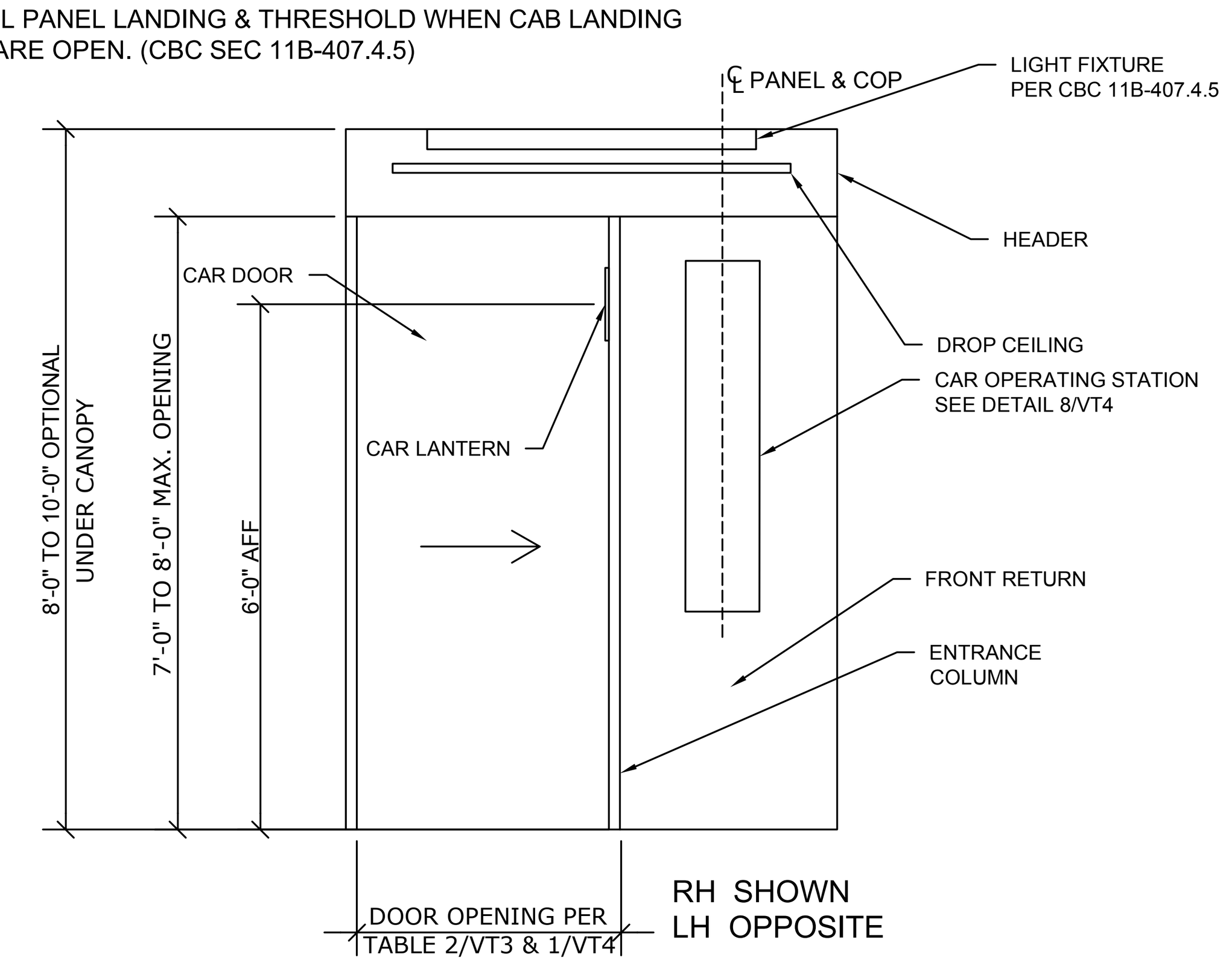
NOTE: DIMENSIONS TO SUIT OVERALL CAB ENCLOSURE DIMENSIONS



5 VT3 ELEVATOR CANOPY
NTS

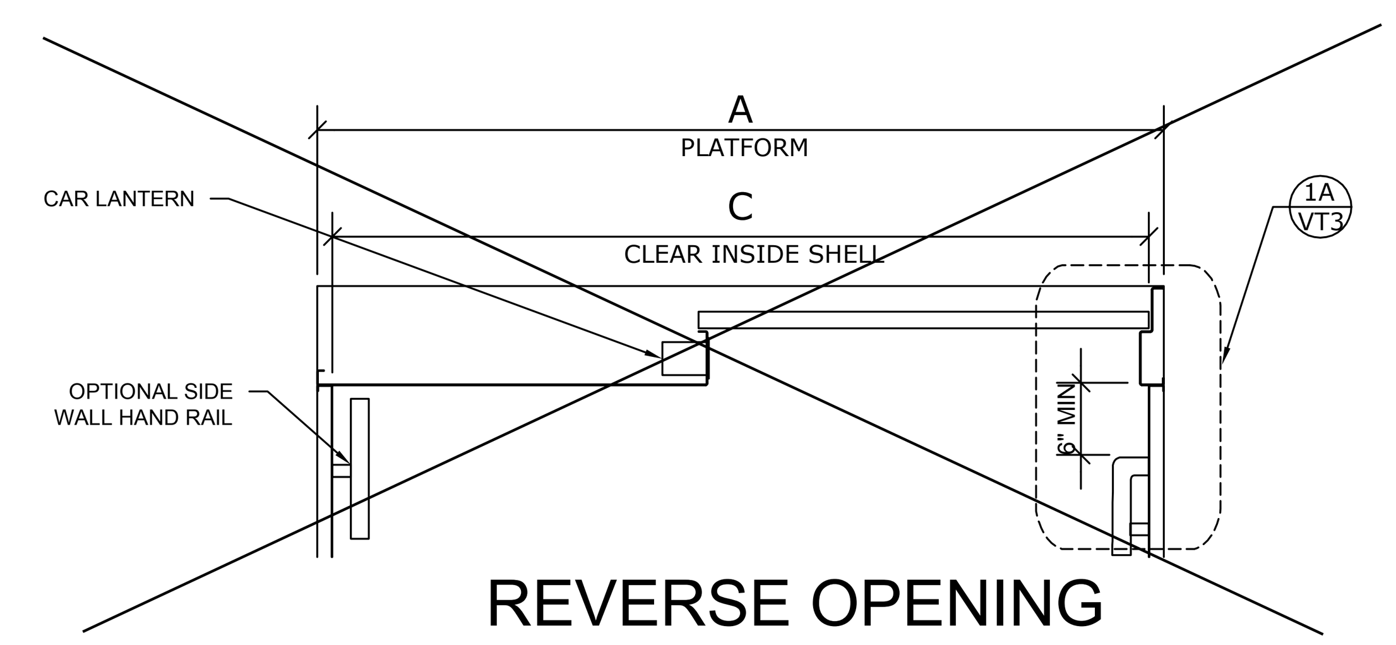
NOTES:

1. REAR RETURN FOR REVERSE ENTRANCE SIMILAR
2. LIGHT FIXTURE TO PROVIDE A MINIMUM OF 5 FOOT CANDLES AT CONTROL PANEL LANDING & THRESHOLD WHEN CAB LANDING DOORS ARE OPEN. (CBC SEC 11B-407.4.5)

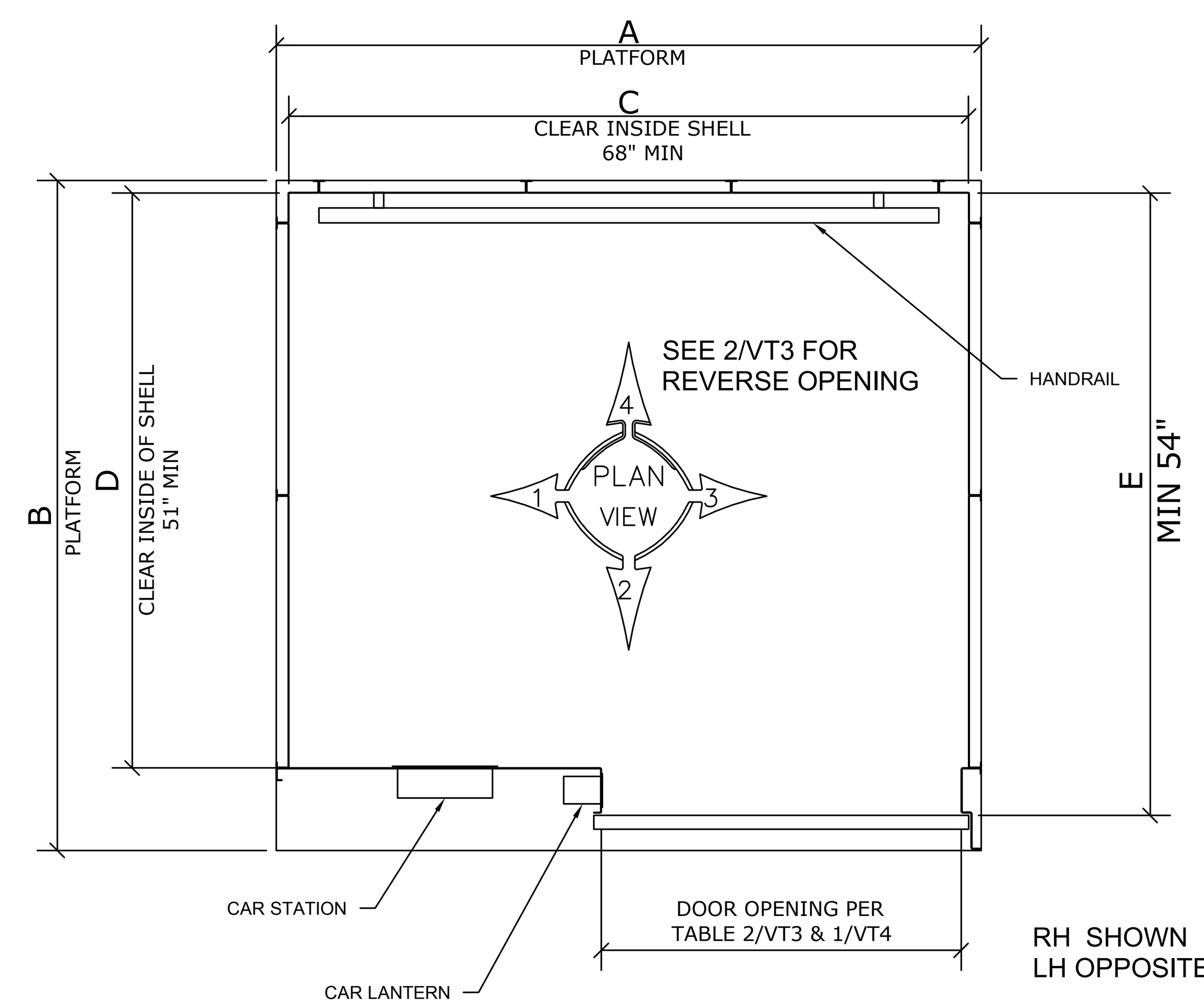


2 VT3 FRONT RETURN WALL
NTS

TABLE 2 - ELEVATOR DIMENSIONS									
		ELEVATORS	PLATFORM		INSIDE CLEAR MIN.			MAX AREA	SINGLE SPEED SIDE SLIDE OPN AS PER CBC 3002.4 11B-407.3 MIN DIM
SELECT ONE	HW SIZE		A	B	C	D	E		
☐	HW1	2000 R	5'-10 1/2"	5'-9"	5'-8"	4'-3 3/4"	4'-7 3/4"	24.9 sq ft	36"
☐	HW1	2500	5'-10 1/2"	5'-8 3/4"	5'-8"	4'-10 1/4"	5'-2 3/4"	28.2 sq ft	36"
☐	HW2	2500 R	6'-10 1/2"	5'-9"	6'-8"	4'-3 3/4"	4'-7 3/4"	29.3 sq ft	36"
☐	HW2	3000	6'-10 1/2"	5'-8 3/4"	6'-8"	4'-10 1/4"	5'-2 3/4"	33.2 sq ft	42"
☐	HW3	3000 GR	7'-5 1/2"	5'-9"	7'-3"	4'-3 3/4"	4'-7 3/4"	31.9 sq ft	42"
☒	HW2	3500 G	6'-10 1/2"	6'-0"	6'-8"	5'-3"	5'-7 1/2"	35.0 sq ft	42"
☐	HW3	3500 G	7'-5 1/2"	6'-0"	7'-3"	5'-3"	5'-7 1/2"	38.1 sq ft	42"
☐	HW3	4000	8'-0"	6'-0"	7'-6"	5'-3"	5'-7 1/2"	44.3 sq ft	42"
☐	HW3	4000 MAX	CUSTOM SIZE TO SUIT					44.3 sq ft	



REVERSE OPENING



FRONT OPENING
SINGLE SPEED SIDE SLIDE

1 VT3 PLAN
NTS

MANUFACTURING NOTES

1. STRIKE JAM AND HEADER: STAINLESS STEEL
2. CAR DOORS: 16 GA GALVANNEAL, PRIMED FINISH OR STAINLESS STEEL
3. ENTRANCE COLUMN: 16 GA STAINLESS STEEL.
4. SIDE & REAR WALL PANELS: 16 GA GALVANNEAL WITH AN APPLIED PLASTIC LAMINATE ON THE INTERIOR, OR 16 GA STAINLESS STEEL.
5. CANOPY: 16 GA GALVANNEAL, REFLECTIVE WHITE FINISH ONLY REQUIRED ON THE INSIDE OF CAB, NO PRIME ON THE OUTSIDE
6. CEILING: T-BAR WITH CEILING PANELS
7. HANDRAIL: 1 1/2: ROUND HANDRAIL
8. CAR SILL: ALUMINUM WITH A NATURAL FINISH PER 7/VT3
9. VENTILATION: FAN AND VENT SLOTS IN THE BASE OF THE CAB.
10. CAR DOORS ARE PRE DRILLED FOR DOOR EQUIPMENT
11. LIGHTING: FLOURESCENT STRIP LIGHTS
12. ALL MATERIAL FOR CAR ENCLOSURES SHALL MEET THE REQUIREMENTS OF ASME A17.1, SECT. 204.2.

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER
Kenneth A. Luttrell
No. 1418
Structural Engineer
STATE OF CALIFORNIA

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MODULAR ELEVATOR MANUFACTURING

MODULAR ELEVATOR MANUFACTURING, INC.
P.O. BOX 3998
CHATSWORTH, CA. 91313
800-755-9359

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

PROJECT NO: 16093
DATE: 10/19/2018
ENGINEERED BY: KAL
DRAWN BY: MTC

FILE NO. PC-MEM
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 03-118291
AC MF FLS EB SS MC/MK
DATE 11/3/2018
PRE-CHECK (PC) DOCUMENT
CODE: 2016
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SHEET NAME:
ELEVATOR CAB

SHEET NO:
VT3

BID SET 10/01/2021

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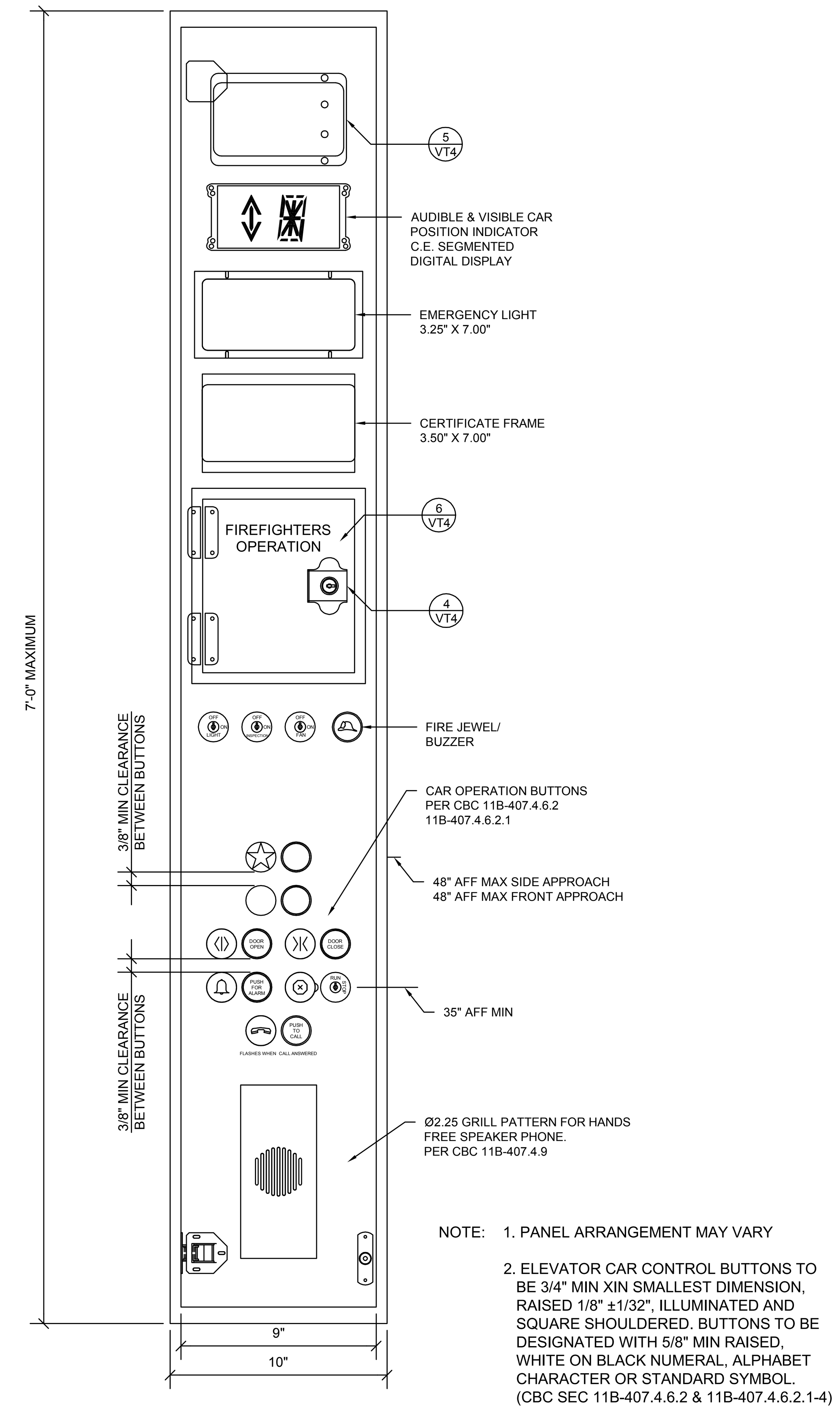
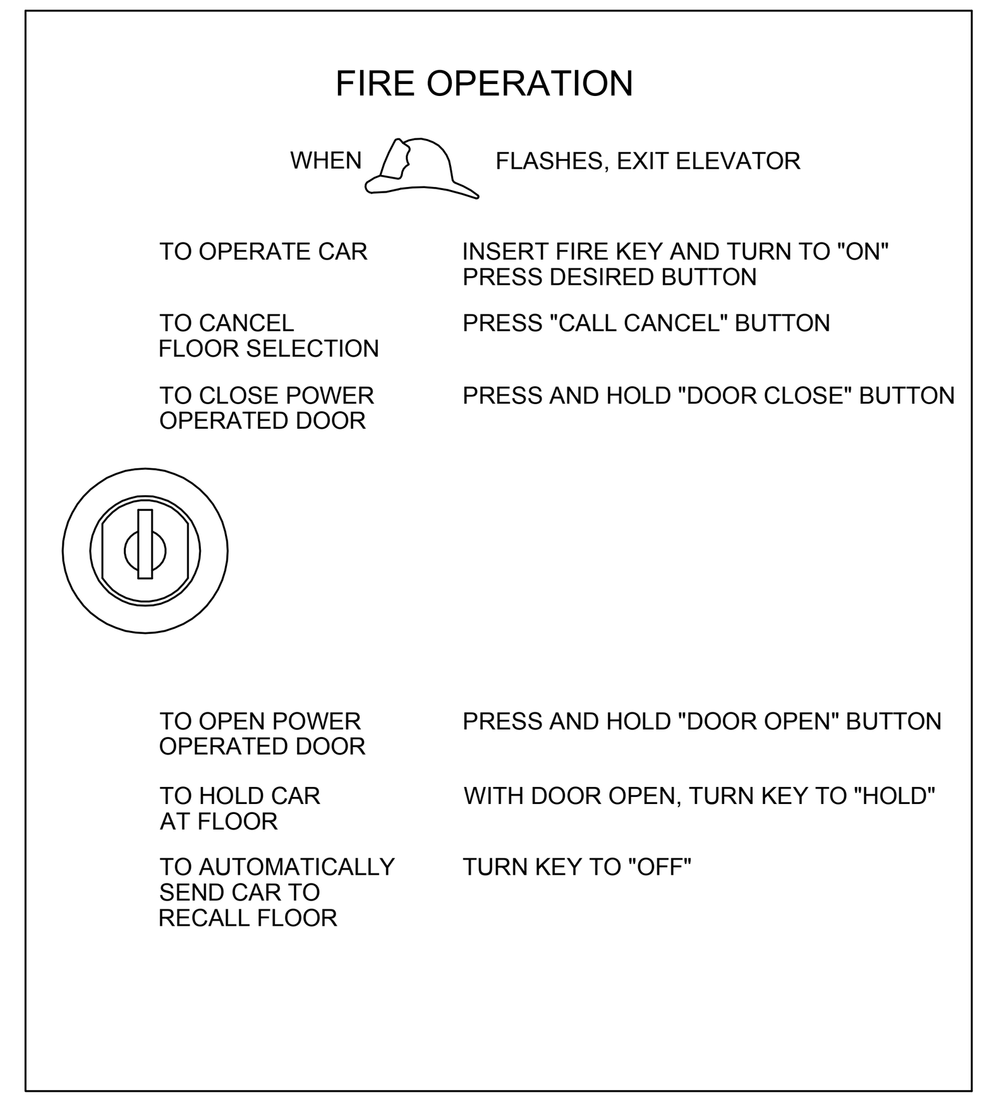


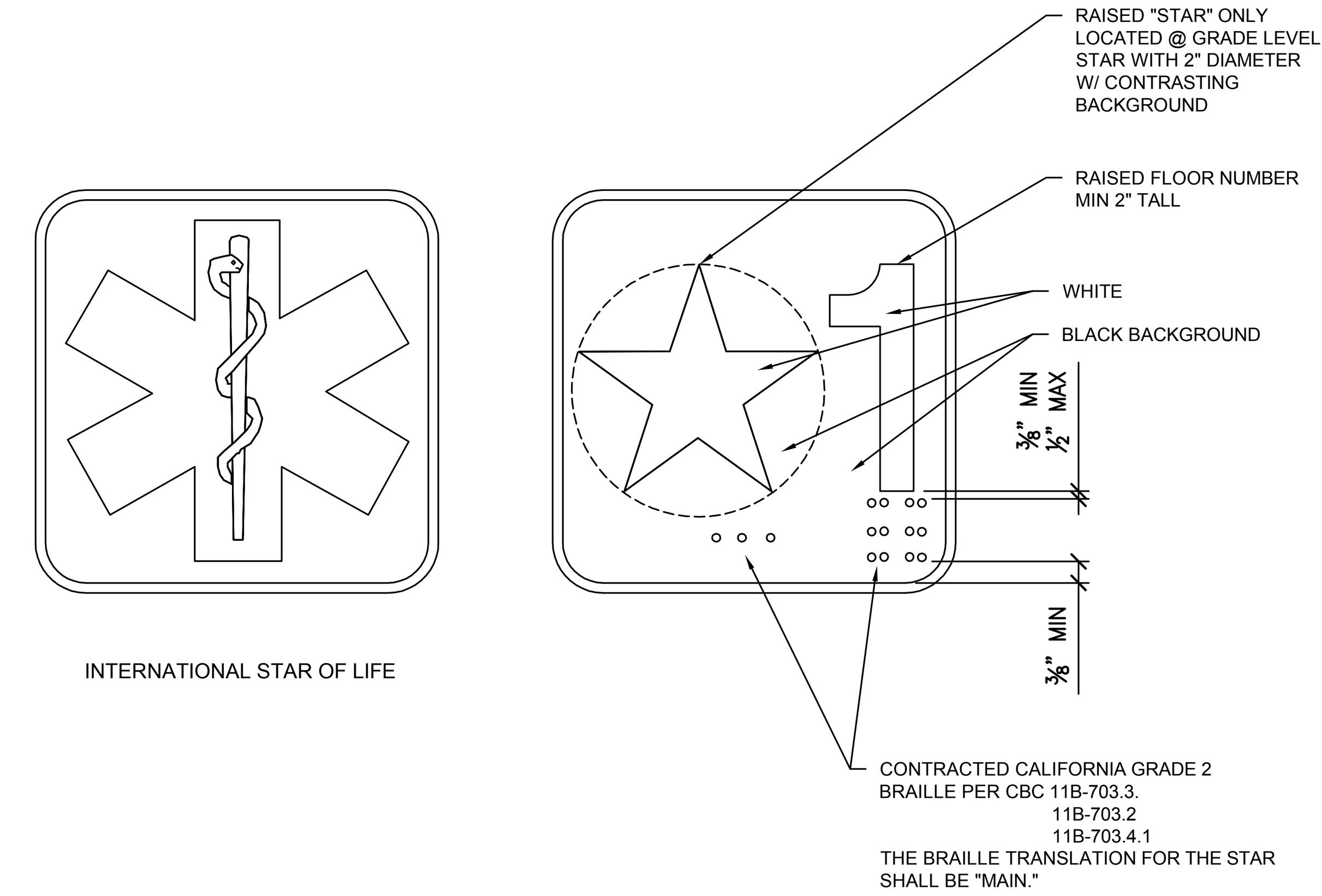
NOTE: 1. PANEL ARRANGEMENT MAY VARY

2. ELEVATOR CAR CONTROL BUTTONS TO BE 3/4" MIN XIN SMALLEST DIMENSION, RAISED 1/8" ±1/32", ILLUMINATED AND SQUARE SHOULDERED. BUTTONS TO BE DESIGNATED WITH 5/8" MIN RAISED, WHITE ON BLACK NUMERAL, ALPHABET CHARACTER OR STANDARD SYMBOL. (CBC SEC 11B-407.4.6.2 & 11B-407.4.6.2.1-4)

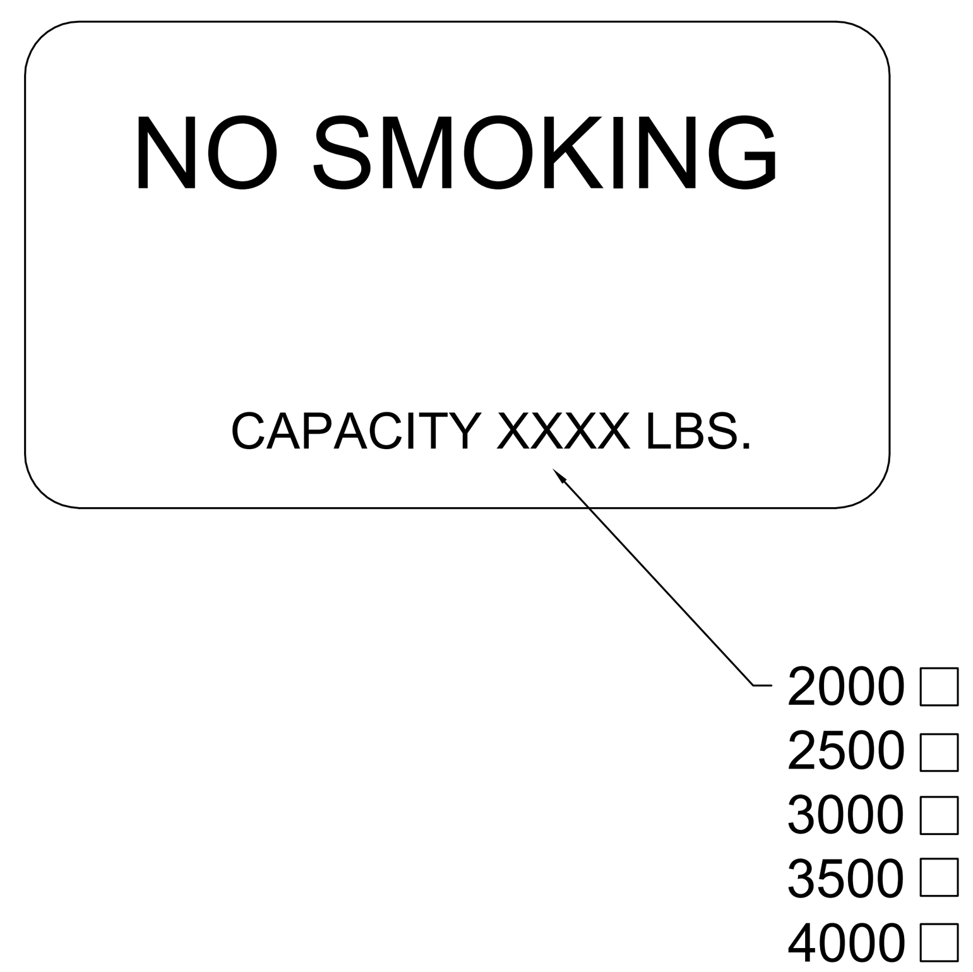
8 / VT4 CAR OPERATING STATION NTS



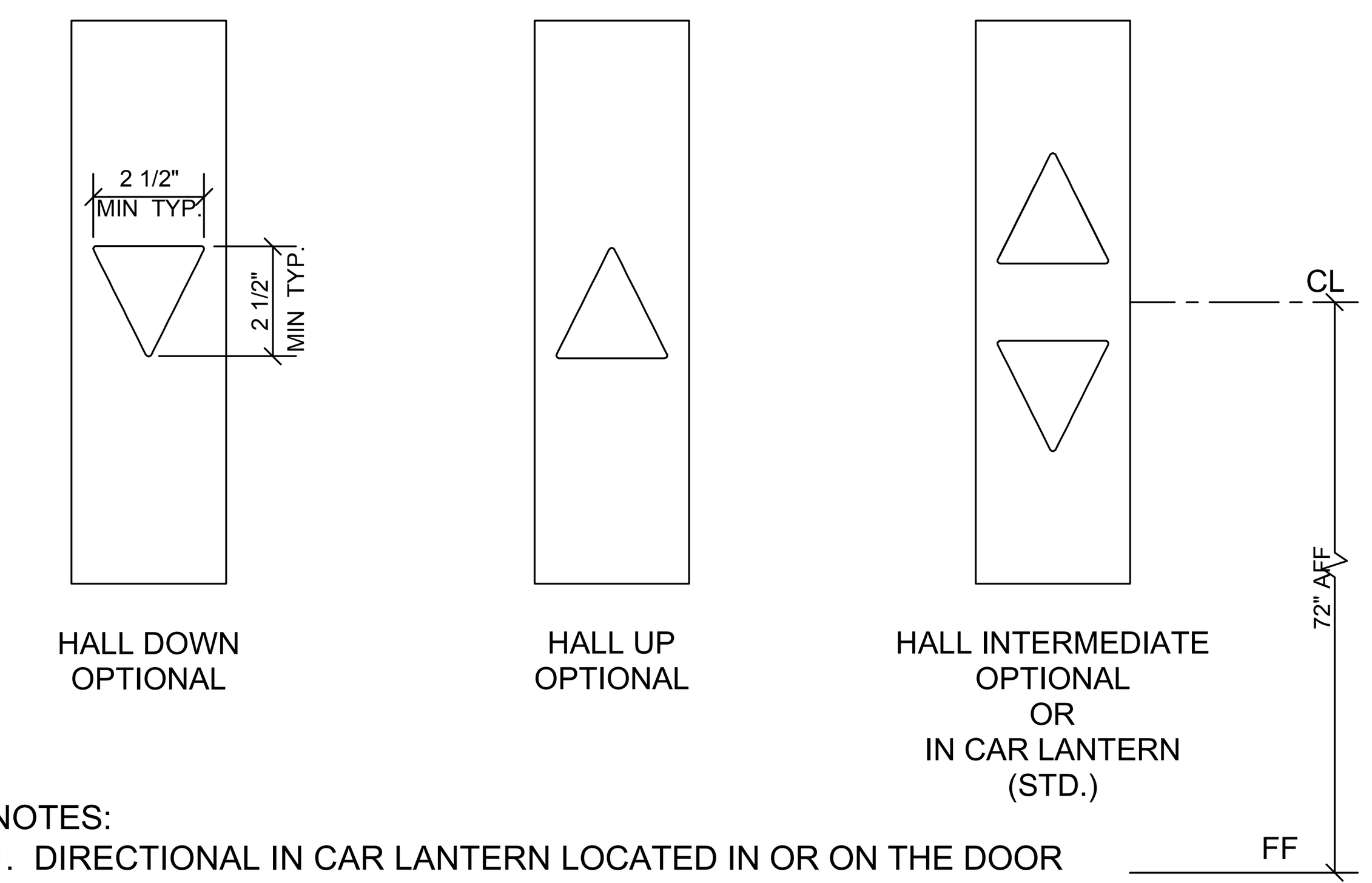
6 / VT4 ANSI PHASE II INSERT NTS



3 / VT4 JAMB TAGS NTS



5 / VT4 SIGNAGE NTS



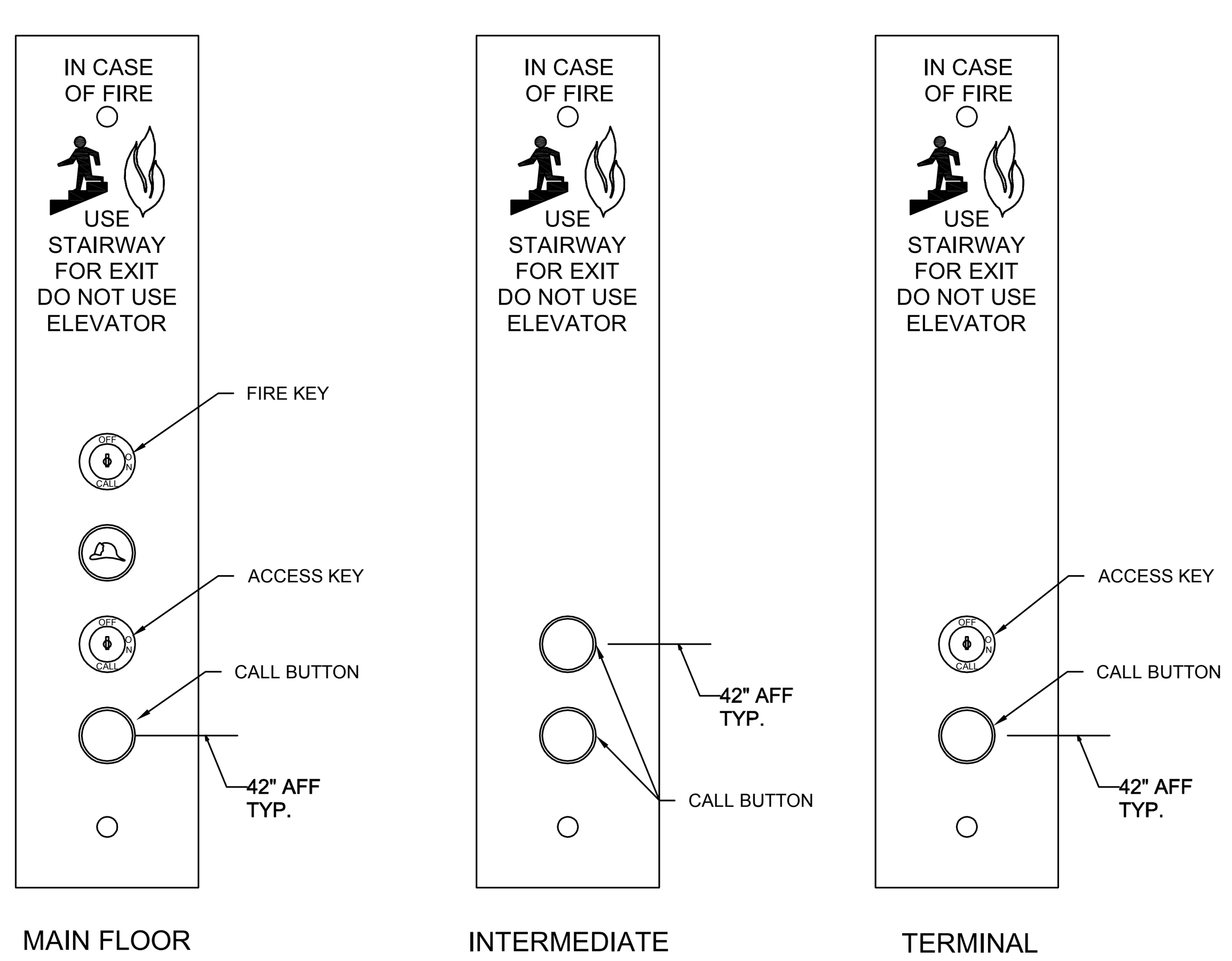
NOTES:

1. DIRECTIONAL IN CAR LANTERN LOCATED IN OR ON THE DOOR JAMB VISIBLE FROM HALL STATION WITH DOOR OPEN. 2 1/2" MIN IN THE SMALLEST DIRECTION WITH AUDIBLE SIGNAL PER CBC 11B-407.2.2.1-3

2. EITHER HALL LANTERNS OR CAR LANTERN SHALL BE PROVIDED.

2 / VT4 LANTERNS NTS

PLAN LOCATOR	PASSENGER ELEVATOR REQUIREMENTS Chapter 11B, 2016 California Building Code
VT3	General - 11B-407.1 • Elevators shall be passenger elevator as classified as ASME A17.1. and shall comply with 11B-407 and with ASME A17.1. • Elevator operation shall be automatic. • When the only elevators provided for use by public and employess are combinations passenger and freight elevators, they chall compy with 11B-407 and ASME A17.1.
VT4	Elevator landing requirements - 11b-407.2 • Call controls - Where elevator call buttons or keypads are provided, they shall comply with 11C.407.2.1 and 11B-309.4.. • Height - Call buttons or keypads shall be located within one of the reach ranges specified in 11B-308, measured to the centerline of the highest operable part. • Size and shape - call buttons shall have square shoulders, be 3/4 inch minimum in the smallest dimension and shall be raised 1/8 inch plus or minus 1/32 inch above surrounding surface. The buttons shall be activated by a mechanical motion that is detectable. • Clear floor or ground space - A clear floor or ground space complying with 11B-305 shall be provided at call controls. • Location - The call button that designates the up direction shall be located above the call button that designates the down direction. • Signals - Call buttons shall have visible signals that will activate when each call is registered and will extinguish when each call is answered. Call buttons shall be internally illuminated with a white light over the entire surface of the button.
VT4	Hall signals - Hall signals, including in-car signals, shall comply with 11B-407.4.2.2. • Visible and audible signals - A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call and the car's directions of travel. Where in-car signals are provided, they shall be visible from the floor area adjacent to the hall call buttons. • Visible signals - Visible signal fixtures shall be centered at 72 inches minimum above the finish floor or ground. The visible signal elements shall be a minimum 2½ inches wide. Signals shall be visible from the floor area adjacent to the hall call button. • Audible signals - Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciations that indicate the direction of elevator car travel. Audible signals shall have a frequency of 1500 Hz maximum. Verbal annunciations shall have a frequency of 300 Hz minimum and 3000 Hz maximum. The audible signal and verbal annunciator shall be 10dB minimum above ambient, but shall not exceed 80 dB, measured at the hall call buttons.
3/VT4	Hoistway Signs - Signs at elevator hoistway shall comply with 11B-407.2.3. • Floor designation - Floor designations shall be provided on both jambs of elevator hoistway entrances. Floor characters shall be provided in both raised characters and braille. Raised characters shall be 2 inches high. A raised star, placed to the left of the floor designation, shall be provided on both jambs at the main entry level. The outside diameter of the star shall be 2 inches and all points shall be of equal length. Raised characters, including the star shall be white on a black background. Braille complying with 11B-703.3 shall be placed below the corresponding raised characters and the star. The Braille translation for the star shall be "MAIN". Applied plates are acceptable if they are permanently fixed to the jamb. • Car designation - Destination-Oriented elevators shall provide tactile car identification complying with 11B-703.2 and 11B-703.4.1 on both jambs of the hoistway immediately below the floor designation. Car designations shall be provided in both raised characters and Braille.Raised characters shall be 2 inches high. Raised characters shall be white on a black background. Braille complying with 11B-703.3 shall be placed below the corresponding raised characters. Applied plates are acceptable if they are permanently fixed to the jamb.
3/VT3 1 / VT4	Elevator door requirements - 11B-407.3 • Type - Elevator doors shall be the horizontal sliding type. Car gates shall be prohibited. • Operation - elevator hoistway and car doors shall open and close automatically. • Reopening device - Elevator doors shall be provided with reopening device complying with 11B-407.3.3 that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. • Height - The device shall not require physical contact to be activated, although contact is permitted to occur before the door reverses. • Contact - The device shall not require physical contact to be activated, although contact is permitted to occur before the door reverses. • Duration - Door reopening devices shall remain effective for 20 seconds minimum. • Door and signal timing - the minimum acceptable time from notification that a car is answering a call or notification of the car assigned at the means for the entry of destination information until the doors of that car start to close shall be calculated from the following equation: T= D/(1.5 ft/s) or T= D/(455mm/s) = 5 seconds minimum where T equals the total time in seconds and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60 inches directly in front of the farthest call button controlling that car to the centerline of the hoistway door. • Door delay - Elevator doors shall remain fully open in response to a car call for 5s minimum. • Width - The width of elevator doors shall comply with Table 11B-407.4.1
VT3	Elevator car requirements - 11B-407.4 • Car dimension - Inside dimensions of elevator cars and clear width of elevator doors shall comply with Table 407.4.1. CBC 3002.4.3A where required. • Floor surfaces - Floor surfaces in elevator cars shall comply with 11B-302 and 11B-303. • Platform to hoistway clearances - The clearance between the car platform sill and the edge of any hoistway landing shall be 11/4 inches minimum. • Leveling - Each car shall be equipped with a self-levling feature that will automatically bring and maintain the car at floor landings within a tolerance of 1/2 inch under rated loading to zero loading condition. • Illumination - the level of illumination at the car controls, platform, car threshold and car landing sill shall be 5 floor candles minimum. • Elevator car controls - Where provided, they shall comply with 11B-407.4.6 and 11B-309.4. • Location - Controls shall be located within reach ranges specified in 11B-308. • Buttons - Car control buttons with floor designations shall comply with the following: • Size and Shape - Buttons shall have square shoulders, be 3/4 inch minimum in the smallest dimension and shall be raised 1/8 inch plus or minus 1/32 inch above surrounding surface. • Arrangement - Buttons shall be arranged with numbers in ascending order. When two or more columns of buttons are provided, they shall read from left to right. • Illumination - Car control buttons shall be illuminated. • Operation - Car control buttons shall be activated by a mechanical motion that is detectable. • Keypads - Car control keypads shall be in a standard telephone keypad arrangement and shall comply with 11B-407.4.7.2. • Emergency controls - Emergency controls shall comply with 11V-407.4.6.4. • Height - Emergency controls shall have their centerlines 35 inches minimum to 48 inches maximum, 11B-308,, above the finish floor. • Location - emergency controls, including the emergency alarm, shall be grouped at the bottom of the panel.
8/VT4	Designations and indicators of car controls - shall comply with 11B-407.4.7. • Buttons - Car control buttons shall comply with 11B-407.4.7.1. • Type - Control buttons shall be identified by raised characters or symbols, on a black background, complying wth 11B-703.2 and Braille complying with 11B-703.3. • Location - Raised characters or symbols and Braille designations shall be placed immediately to the left of the control button to which the designations apply. • Symbols - the control button for the emergency stop, alarm, door open, door close, main entry floor, and phone, shall be identified with raised symbols and Braille as shown in Table 11B-407.4.7.1.3. • Visible indicators - buttons with floor designations shall be provided with visible indicators to show that a call has been registered. The visible indication shall extinguish when the car arrives at the designated floor. • Button Spacing - a minimum clear space of 3/8 inch or other suitable means of separation shall be provided between rows of control buttons. • Keypads - Keypads shall be identified by characters complying with 11B-703.5 and shall be centered on the corresponding keypad button. The num,ber five key shall have a single raised dot. The dot shall be 0.118 inch to 0.120 inch base diameter and in other aspects comply with Table 11B-703.3.1.
1/VT4	Car position indicators - Audible and visible car position indicators shall be provided in elevator cars. • Visible indicators shall comply with 11B-407.4.8.1. • Size - Characters shall be 1/2 inch high minimum. • Location - Indicators shall be located above the car control panel or above the car. • Floor arrival - As the car passes a floor when a car stops at at floor served by the elevator, the corresponding character shall illuminate. • Destination indicators - In destination-oriented elevators, a display shall be provided in the car with visible indicators to show car destinations. • Audible indicators shall comply with 11B-407.4.8.2. • Signal type - The signal shall be an automatic verbal annunciator which announces the floor at which the car is about to stop. • Signal level - the verbal annunciator shall be 10dB minimum above ambien, but shall not exceed 80 dB, measured at the annunciator. • Frequency - The verbal annunciator shall have a frequency of 300 Hz minimum to 3000 Hz maximum. • Emergency communication - Emergency two-way communication systems shall comply with 11B-308. Raised symbols or characters, white in a black background, and Braille shall be provided adjacent to the device and shall comply with 11B-703.2 and 11B-703.3. Emergency two-way communciation systems between the elevator and a point outside the hoistway shall comply with ASME A17.1.
1A/VT3 1B/VT3	Support Rail - Support rails shall be provided on at least one wall of the car. • Location - Clearance between support rails and adjacent surfaces shall be 1 1/2 inches minimum. Top of support rails shall be 31 inches minimum to 33 inches maximum above the floor of the car. The ends of the support rail shall be 6 inches maximum from adjacent walls. • Surfaces - Support rails shall be smooth and any surface adjacent to them shall be free of sharp or abrasive elements. • Structural strength - Allowable stresses shall not be exceeded for materials used when vertical or horizontal forces of 250 pounds is applied at any point on the support rail, fastener, mounting device or supporting structure.



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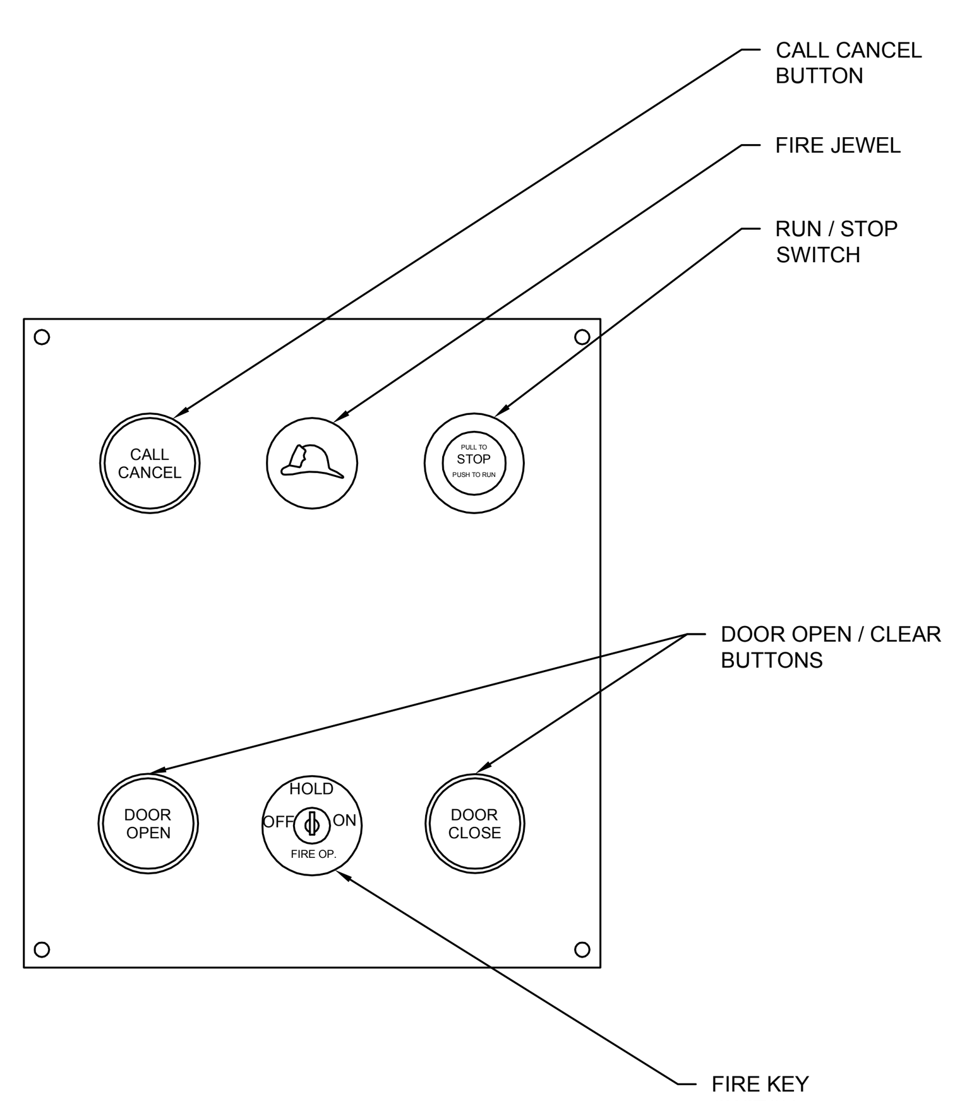
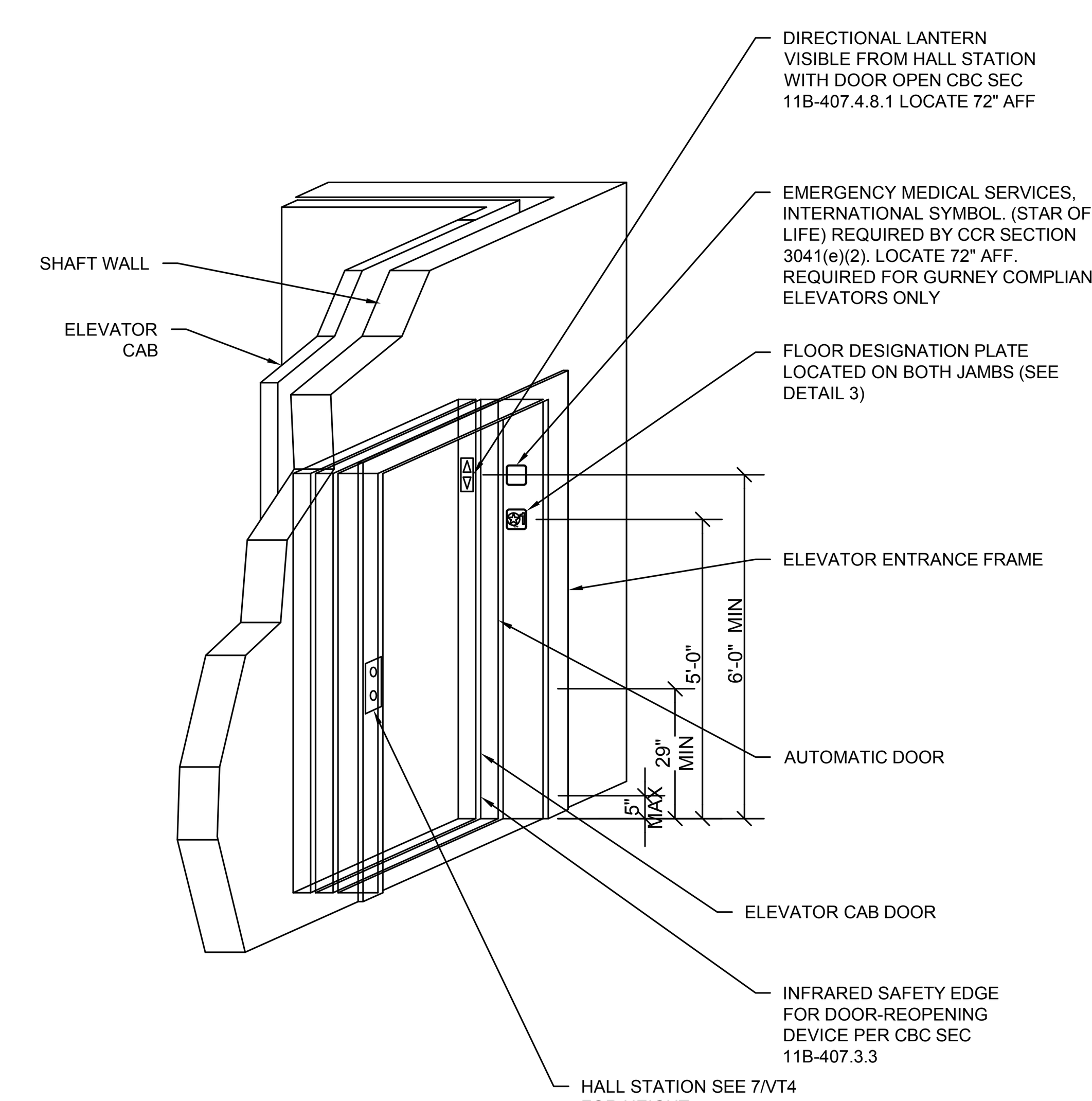
7 / VT4 HALL STATION NTS



4 / VT4 FIRE PANEL NTS



1 / VT4 ACCESS COMPLIANCE NTS

NO.	DATE	REVISION

S.E. PC APPROVAL

REGISTERED PROFESSIONAL ENGINEER Kenneth A. Luttrell No. 1418 Structural Engineer STATE OF CALIFORNIA

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SHEET NAME: ACCESS COMPLIANCE

SHEET NO: VT4

BID SET 10/01/2021