

MESA ELEMENTARY SCHOOL

409 S. BARRANCA ST. WEST COVINA, CA 91791

COVID 19- COVINA VALLEY DISTRICT HVAC REPLACEMENT

100% CONSTRUCTION DOCUMENTS

11/04/2022

DLR GROUP PROJECT NUMBER: 75-22605-00

DSA APPLICATION #
A# 03-122232

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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. 03-122232 File No. 19-25)

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

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

I FIND THAT: ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET FOR EACH DISCIPLINE (SEE SHEET INDEX FOR LIST OF DISCIPLINES) THIS DRAWING OR PAGE

ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

05/05/2022
SIGNATURE DATE
ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE
JESSE MILLER
PRINT NAME
C-32306 10/31/2023
LICENSE NUMBER EXPIRATION DATE

ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

SIGNATURE DATE
ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK
PRINT NAME
LICENSE NUMBER EXPIRATION DATE

SCOPE OF WORK

SCOPE OF WORK SHALL BE AS FOLLOWS:

EXISTING HVAC SYSTEM REPLACEMENT AT CLASSROOM BUILDINGS AND MPR

APPLICABLE CODES

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
(2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
(2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE (CESC), PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS
(PER 2019 CBC PART 2 CH 35)
NOTE: CALIFORNIA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

NFPA 13	- STANDARD FOR INSTALLATION OF SPRINKLERS SYSTEMS (CA AMENDED)	2016 ADDITION
NFPA 14	- STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED)	2016 ADDITION
NFPA 17	- STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS	2017 ADDITION
NFPA 17A	- STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS	2017 ADDITION
NFPA 20	- STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	2017 ADDITION
NFPA 22	- STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION	2015 ADDITION
NFPA 24	- STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED)	2016 ADDITION
NFPA 72	- NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED)	2016 ADDITION
NFPA 80	- STANDARD FOR FIRE DOORS AND OTHER OPENINGS PROTECTIVE	2016 ADDITION
NFPA 2001	- STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED)	2016 ADDITION
UL 300	- STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2010)
UL 464	- AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES	2003 ADDITION
UL 521	- STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 ADDITION
UL 1971	- STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 (R2010)
ICC 300	- STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS	2017 ADDITION

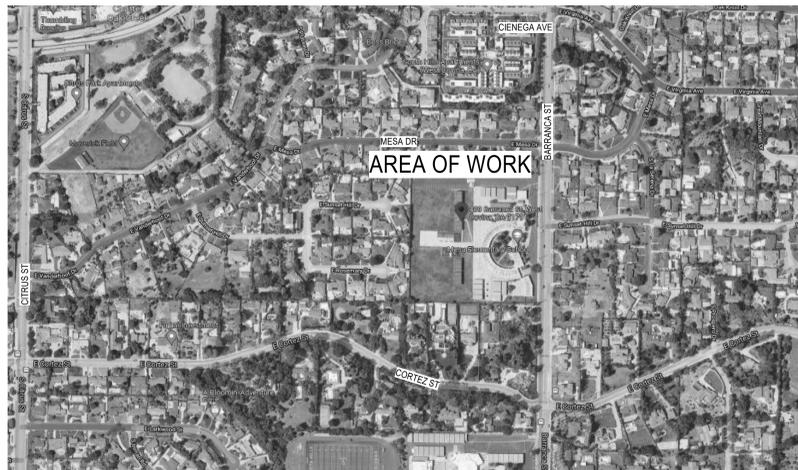
DESIGN ANALYSIS DATA

- WIND DESIGN CRITERIA (CBC 1603A.1.4) - STRUCTURAL DESIGN PARAMETERS
 - RISK CATEGORY: II
 - WIND DESIGN SPEED: V=110 MPH
 - WIND EXPOSURE CATEGORY: B (PER ASCE 7-16)
- EARTHQUAKE DESIGN CRITERIA (CBC 1603A.1.5)
 - SEISMIC DESIGN CATEGORY: E OR F
 - SITE CLASS: D
 - S_s = 1.675
 - S₁ = 0.91
 - S₂ = 2.01
 - S₃ = null
 - S₄ = null
 - S₅ = 1.34
 - S₆ = null
 - I_e (IMPORTANCE FACTOR) = 1.25
 - F_p (CONTROLLING HOR. SEISMIC FORCE) = 2089.48 LBS
- DESIGN LOAD BEARING VALUES OF SOILS (CBC 1603A.1.6)
 - ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF
 - ALLOWABLE LATERAL BEARING PRESSURE: 100 PSF MIN.

DSA GENERAL NOTES

- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA), AS REQUIRED BY SECTION 4-338(b), PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), NOT WITHSTANDING OTHER PROVISIONS OF THE PROJECT SPECIFICATIONS. COMPLY WITH ALL PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR), SECTION 4-338, FOR ALL ADDENDUM AND CONSTRUCTION CHANGE DOCUMENTS.
- CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY ALL THE FOLLOWING: ARCHITECT OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT, AND STRUCTURAL ENGINEER OF RECORD OR DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE).
- SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS (ACCESSIBILITY, STRUCTURAL ENGINEER, AND FIRE/SAFETY) SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH DSA IR A-6 AND SECTION 4-338(d), PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY MATERIALS, SYSTEMS OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA.
- A DSA-CERTIFIED PROJECT INSPECTOR WITH CLASS 3 CERTIFICATION, EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE ARCHITECT AND BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE PROJECT INSPECTOR ARE DEFINED IN SECTION 4-342, CALIFORNIA BUILDING ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
- A DSA-ACCEPTED TESTING LAB, EMPLOYED BY THE DISTRICT (OWNER), SHALL CONDUCT ALL REQUIRED TESTS AND INSPECTIONS OF THE WORK.
- THE DSA-CERTIFIED PROJECT INSPECTOR AND DSA-ACCEPTED TESTING LAB SHALL BE EMPLOYED AND PAID BY THE OWNER (DISTRICT) AND APPROVED BY ALL OF THE FOLLOWING: ARCHITECT OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT, STRUCTURAL ENGINEER OF RECORD, AND DIVISION OF THE STATE ARCHITECT (DSA). THE INSPECTOR OF RECORD FOR THIS PROJECT SHALL BE CLASS 3 OR BETTER.
- ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- A DSA-ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- 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)
- FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL SUBMITTAL 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 DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT. (IF THIS PROJECT HAS NO DEFERRED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH.)
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.
- LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS TEST TECHNICIAN (ATT).
- MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.
- ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OR RECORD OR THE OWNER'S AGENT.
- A LISTING OF CERTIFIED ATT CAN BE FOUND AT [HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TESTING-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE](https://www.energy.ca.gov/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TESTING-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE)
- THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.
- PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.
- 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. (IF THIS PROJECT HAS NO DEFERRED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH.)
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

VICINITY MAP



PROJECT DIRECTORY

OWNER
COVINA VALLEY UNIFIED SCHOOL DISTRICT
519 E. BADILLO ST.
COVINA, CA 91723
CONTACT: BRIAN JOHNSON
PH: 626-974-7000
BJOHNSON@CVUSD.ORG

STRUCTURAL ENGINEER
DLR GROUP
700 FLOWER ST 22ND FLOOR
LOS ANGELES, CA 90017
CONTACT: DANNY AHKHAM
PH: 213.800.9400
DAHKHAM@DLRGROUP.COM

ELECTRICAL ENGINEER
DLR GROUP
700 FLOWER ST 22ND FLOOR
LOS ANGELES, CA 90017
CONTACT: NORMAN PATENA
PH: 213.800.9400
NPATENA@DLRGROUP.COM

MECHANICAL ENGINEER
DLR GROUP
700 FLOWER ST 22ND FLOOR
LOS ANGELES, CA 90017
CONTACT: TONG FANG (DONNA) ZHAO
PH: 213.444.0610
DZHAO@DLRGROUP.COM

ARCHITECT
DLR GROUP
700 S. FLOWER ST.
LOS ANGELES, CA 90017
CONTACT: JESSE MILLER
PH: 213.800.9400
JMILLER@DLRGROUP.COM



MESA ELEMENTARY SCHOOL
COVID 19- COVINA VALLEY DISTRICT HVAC REPLACEMENT
409 S. BARRANCA ST. WEST COVINA, CA 91791

100% CONSTRUCTION DOCUMENTS
11/04/2022
REVISIONS

75-22605-00
DSA A#03-122232
DSA File #: 19-25
COVER SHEET

G0.1

GENERAL ABBREVIATIONS

#	NUMBER
&	AND
@	AT
ADA	AMERICANS WITH DISABILITY ACT
ADON	ADDITION OR ADDITIONAL
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BSMT	BASEMENT
CL	CENTER LINE
CLG	CEILING
CM	CENTIMETER
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
D	DEPTH
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DI	DIAMETER
DM	DIMENSION
DIV	SPECIFICATION DIVISION
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXST	EXISTING
EXT	EXTERIOR
FN	FINISHED
FL	FLOOR
FT	FEET
FUT	FUTURE
GC	GENERAL CONTRACTOR
GOVT	GOVERNMENT
H	HEIGHT
HORIZ	HORIZONTAL
HIZ	HIGHT
h.	THAT IS
IBC	INTERNATIONAL BUILDING CODE
INT	INCH
INT	INTERIOR
LB(S)	POUND(S)
M	THOUSAND
M	METER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OVHD	OVERHEAD
PAR	PARALLEL
PENT	PENTHOUSE
PLYWD	PLYWOOD
QTY	QUANTITY
REQ(D)	REQUIRE(D)
REV	REVISION(S)
RM	ROOM
RND	ROUND
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SM	SMILAR
SPEC	SPECIFICATION(S)
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
TEMP	TEMPORARY
TYP	TYPICAL
UNEX	UNEXCAVATED
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
WTH	WITH
W/O	WITHOUT

ARCHITECTURAL ABBREVIATIONS

A/E	ARCHITECT/ENGINEER
AB	AIR BARRIER
ABS	ASBESTOS
ACC	ADA ACCESSIBLE
ACR	ACRYLIC
ACT	ACOUSTIC CEILING TILE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
ADJT	ADJACENT
ADMIN	ADMINISTRATION
AEC	AUTOMATED EXTERNAL DEBRILLATORS
AL	ALUMINUM
ALUM	ALUMINUM
AP	ACCESS PANEL
APC	ACOUSTIC PANEL CEILING
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
AWP	ACOUSTIC WALL PANEL
B.O.	BOTTOM OF
B/S	BABY CHANGING STATION
BD	BOARD
BLK	BLOCK
BLKG	BLOCKING
BLKHD	BULKHEAD
BM(S)	BEAM(S)
BT	BOTTOM
BRDG	BRIDGE
BRG	BEARING
BRKT	BRACKET
BT	BATHUB
BTWN	BETWEEN
CAB	CABINET
CB	CHALKBOARD
CER	CERAMIC
CF	CUBIC FEET
CFI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFMF	COLD-FORMED METAL FRAMING
CG	CLEAR FLOAT GLASS
CI	CAST IRON
CL	CLEAR INSULATING GLASS
CLP	CAST IN PLACE
CJ	CONTROL JOINT
CJA	CONTROL JOINT ABOVE
CLS	CLOSE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATIONS
COMPR	COMPRESSIBLE
CONF	CONFERENCE
CONFIG	CONFIGURATION
CORR	CORRIDOR
CP	COVER PLATE
CPT	CARPET
CR	CHAIR RAIL
CS	COUNTERSINK
CSTJ	CONSTRUCTION JOINT
CSWK	CASWORK
CT	CERAMIC TILE
CTG	CLEAR TEMPERED FLOAT GLASS
CU	CLEAR TEMPERED INSULATING GLASS
CJ	COMBINER
CJ	COMBINATION UNIT
CV	CONDOR VENDOR
CY	CUBIC YARD
CYL	CYLINDER
DB	DECIBEL
DBL	DOUBLE
DC	DUST COLLECTOR
DEPR	DEPRESSION (ON)ED
DEPT	DEPARTMENT
DET	DETENTION
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DIAG	DIAGONAL
DIFG	DAMP PROOFING
DR	DOOR
DSN	DOWNPOUT NOZZLE
DW	DISHWASHER
DWL(S)	DRAWEL(S)
DWR	DRAWER
EB	EXPANSION BOLT
EE	EACH END
EEW	EMERGENCY EYE WASH
EEWS	EMERGENCY EYE WASH SHOWER
EFF	EFFICIENCY
EJ	EXPANSION JOINT
ELAS	ELASTOMERIC
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENTR	ENTRANCE
ERF	EPOXY RESIN FLOORING
ENHS	ENERGY USE INTENSITY
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXP	EXPANSION
EXP	EXPOSED
F	FABRIC
F.O.	FACE OF
FAB	FABRICATED
FB	FACE BRICK
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIG	FIGURE
FIX	FIXTURE
FLASH	FLASHING
FLEX	FLEXIBLE
FLG	FLOORING
FLM	FULL LENGTH MIRROR
FLUOR	FLUORESCENT
FO	FINISH OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FCW	FACE OF WALL
FP	FIRE PROOFING
FR	FIRE RESISTANT
FRP	FIBERGLASS REINFORCED PANEL
FRT	FIRE RESISTANCE TREATED
FS	FLOOR SINK
FSS	FOLDING SHOWER SEAT
FTG	FOOTING
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
G	GROUT
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GD	GARBAGE DISPOSAL
GEN	GENERAL
GFA	GROSS FLOOR AREA
GL	GLUE LAMINATED
GLASS	GLASS
GMP	GUARANTEED MAXIMUM PRICE
GR	GRADUAL
GR	GRADE
GRS	GALVANIZED RIGID STEEL
GWB	GYPSPUM WALL BOARD
GYP	GYPSPUM
HC	HOLLOW CORE
HD	HAND DRYER
HDF	HIGH DENSITY FIBERBOARD
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HR	HOUR
HR	HANDRAIL
HS	HARDWARE SET
HSS	HOLLOW STRUCTURAL SHAPE
HVAC	HEATING VENTILATING AND AIR CONDITIONING
I&W	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IF	INSIDE FACE
IP	INSULATED INFILL PANEL GLASS
IJ	ISOLATION JOINT
IJS	IN JUST SPACE
INC	(INCLUDING)
INSUL	INSULATION
JAN	JANITOR
JBE	JOIST BEARING ELEVATION
JUNCT	JUNCTION
JFB	JOINT FILLER BOARD
JST	JOIST
JNT	JOINT
KCJ	KEYED CONSTRUCTION JOINT
KD	KNOCKDOWN
KH	KITCHEN HOOD
KIT	KITCHEN
L	ANGLE
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LBR	LUMBER
LDG	LOADING
LF	LINEAR FOOT
L	LENGTH (LONG)
LG	LAMINATED GLASS
LN	LINEAR
LNO	LINOLEUM
LKR	LOCKER
LOC	LOCATION
LONG	LONGITUDINAL
LSC	LIFE SAFETY CODE
LTG	LIGHTING
LTV	LOUVER
LVT	LUXURY VINYL TILE
MAG	MAGNETIC
MAINT	MAINTENANCE
MAN	MANUAL
MAS	MASONRY
MATL	MATERIAL
MB	MOP BASIN
MBD	MARKER BOARD
MBH	MOPBROOM HOLDER
MC	MEDICINE CABINET
MEMB	MEMBRANE
MH	MANHOLE
MRS	MIRROR WITH SHELF
MTD	MOUNTED
MTG	MOUNTING
MUL	MULLION
NC	NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOM	NOMINAL
O to O	OUT TO OUT
OA	OVERALL
OCFI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OP(S)	OPENING(S)
OSHA	OPERATIONAL SAFETY AND HEALTH ADMINISTRATION
OTB	OPEN TO BELOW
OVFL	OVERFLOW
P	PAINT
PAN B	PANIC BOLT
PB	PARTICLE BOARD
PC	PRECAST CONCRETE
PCD	PAPER CUP DISPENSER
PCT	PORCELAIN CERAMIC TILE
PD	PANIC DEVICE
PERF	PERFORATED
PERP	PERPENDICULAR
PG	PATTERN GLASS
PIC	PORTABLE INSTRUMENT CONNECTION
PIG	PATTERN INSULATING GLASS
PL	PLATE
PL	PROPERTY LINE
PL	PLASTIC LAMINATE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECTOR (ION)
PS	PROJECTION SCREEN
PT	POINT
PT	POINT OF TANGENCY
PTD	PAPER TOWEL DISPENSER
PTDR	COMBINATION TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWL	SOUND POWER LEVEL
QT	QUARRY TILE
QTR RND	QUARTER ROUND
R	RISER
RAD	RADIUS
RB	RUBBER BASE
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFL	REFLECTED
REM	REMOVABLE
RESIL	RESILIENT
RF	RESILIENT FLOORING
RF	RUBBER FLOOR
RFM	RECESSED FLOOR MAT
RH	ROBE HOOK
R&C	ROUGH IN AND CONNECT
S	SINK
SAT	SPRAYED ACOUSTIC TREATMENT
SAW	SOUND ABSORBING WALL UNITS
SB	SPLASH BLOCK
SC	SOLID CORE
SC	SHOWER CURTAIN
SCD	SEAT COVER DISPENSER
SCH	SHOWER CURTAIN HOOK
SCR	SHOWER CURTAIN ROD
SCT	STRUCTURAL CLAY TILE
SD	SOAP DISPENSER
SECY	SECRETARY
SF	SQUARE FEET
SG	SPANDREL GLASS
SGL	SINGLE
SH	SHOWER
SHM	SECURITY HOLLOW METAL
SJANT	SEALANT
SM	SHEET METAL
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SPL	SOUND PRESSURE LEVEL
SQ	SQUARE
SS	SOLID SURFACE
SSA	STORM SHELTER AREA
SSS	STAINLESS STEEL SHELF
SST	STAINLESS STEEL
ST	STONE
ST	STAIR
STAGD	STAGGERED
STC	SOUND TRANSMISSION CLASS
STR	STRINGER
SUBFL	SUBFLOOR
SURF	SURFACE
SUSP	SUSPENDED
SVF	SHEET VINYL FLOORING
T	TREAD
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TAN	TANGENT
TB	TOWEL BAR
TBD	TACK BOARD
TCP	TOILET COMPARTMENT PARTITION
TERR	TERRAZZO
TFF	TINTED FLOAT GLASS
TG	TEMPERED GLASS
TH	THRESHOLD
THK	THICKNESS
TI	TENANT IMPROVEMENT
TIG	TINTED INSULATING GLASS
TMR	TILT MIRROR UNIT
TOIL	TOILET
TOP	TOP OF PAVING
TRANS	TRANSVERSE
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
TTG	TINTED TEMPERED FLOAT GLASS
TTIG	TINTED TEMPERED INSULATING GLASS
TW	TACK WALL
UL	UNDERWRITERS LABORATORIES
UR	URINAL
US	UTILITY SHELF
UTIL	UTILITY
VB	VAPOR BARRIER
VB	VINYL BASE
VCB	VENTED COVE BASE
VF	VINYL FLOOR
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VP	VENEER PLASTER
VPT	VINYL TILE
VWC	VINYL WALL COVERING
W	WIDE
WB	WALL BASE
WC	WATER CLOSET
WC	WALL COVERING
WCL	WATER CLOSET/LAVATORY COMBINATION
WD	WOOD
WDF	WOOD FLOORING
WDF	WINDOW
WD	POLISHED WIRE GLASS
WI	WROUGHT IRON
WOM	WALK OFF MAT
WR	WASTE RECEPTACLE
WRB	WEATHER RESISTANT BARRIER
WW	WARM WHITE
WWF	WELED WIRE FABRIC
YD	YARD

GENERAL SYMBOLS

	DETAIL NUMBER		EARTH
	CROSS REFERENCE SHEET NUMBER		GRAVEL
	BUILDING ELEVATION		SAND
	INTERIOR ELEVATION		CONCRETE
	WALL SECTION		PRECAST CONCRETE
	DETAIL REFERENCE		STEEL
	BUILDING SECTION		STONE
	SHEET NOTE		CONCRETE MASONRY UNIT
	REFERENCE KEYNOTE		BRICK VENEER
	COLUMN GRID LINE		STEEL (LARGE SCALE)
	ROOM NAME		GYM FLOOR
	ROOM NUMBER NAME		WOOD (CONTINUOUS BLOCKING)
	REVISION NUMBER		WOOD (NON-CONTINUOUS BLOCKING)
	LEVEL ELEVATION		WOOD (TRIM/FINISH)
	FINISH FLOOR ELEVATION		GLASS
	SPOT ELEVATION		SHINGLES
			PLYWOOD (LARGE SCALE)
			GYPSUM WALL BOARD
			BLANKET INSULATION
			RIGID INSULATION
			SPRAY FOAM INSULATION
			MINERAL WOOL INSULATION
			PROTECTION BOARD
			CARPET (LARGE SCALE)
			ACOUSTIC TILE (LARGE SCALE)
			TILE (LARGE SCALE)

SITE SYMBOLS

	PROPERTY LINE		AREA INLET
	LOT LINE		CURB INLET
	EASMENT LINE		MANHOLE
	BUILDING LINE, EXISTING		HEAD WALL
	BUILDING LINE, NEW WOOD OPENING AND STRUCTURAL STOOP		FLARED END
	PRIMARY CONTOUR, EXISTING		CLEAN OUT
	PRIMARY CONTOUR, NEW		CAP
	SECONDARY CONTOUR, EXISTING		THRUST BLOCK
	SECONDARY CONTOUR, NEW		VALVE
	SLOPE, PAVEMENT		POST INDICATOR VALVE
	DRAINAGE DITCH OR SWALE		REDUCER
	STREET CENTERLINE		FIRE HYDRANT
	CURB, THICKENED EDGE		POWER POLE
	CURB, EXISTING		LIGHT POLE
	CURB, NEW		TELEPHONE MANHOLE
	PAVING CONTRACTION JOINT		TELEPHONE BOX
	PAVING KEYED CONSTRUCTION JOINT		SPRINKLER HEAD, 360°
	PAVING TIED CONSTRUCTION JOINT		SPRINKLER HEAD, 270°
	PAVING EXPANSION JOINT		SPRINKLER HEAD, 180°
	FENCE, SECURITY		SPRINKLER HEAD, 90°
	FENCE, BARBED WIRE		QUICK COUPLING
	FENCE, CHAIN LINK		TREE, EXISTING DECIDUOUS
	FENCE, WOOD		TREE, EXISTING CONIFER
	SEED LIMIT		SHADE TREE
	SOD LIMIT		ORNAMENTAL TREE
	FOUNDATION DRAIN, NON-PERFORATED		DECIDUOUS TREE
	FOUNDATION DRAIN, PERFORATED		SHRUB
	SUBDRAIN, PERFORATED		CLIPPED SHRUB
	SANITARY SEWER		
	FORCE MAIN		
	WATER		
	FIRE		
	GAS		
	HPS		
	M		

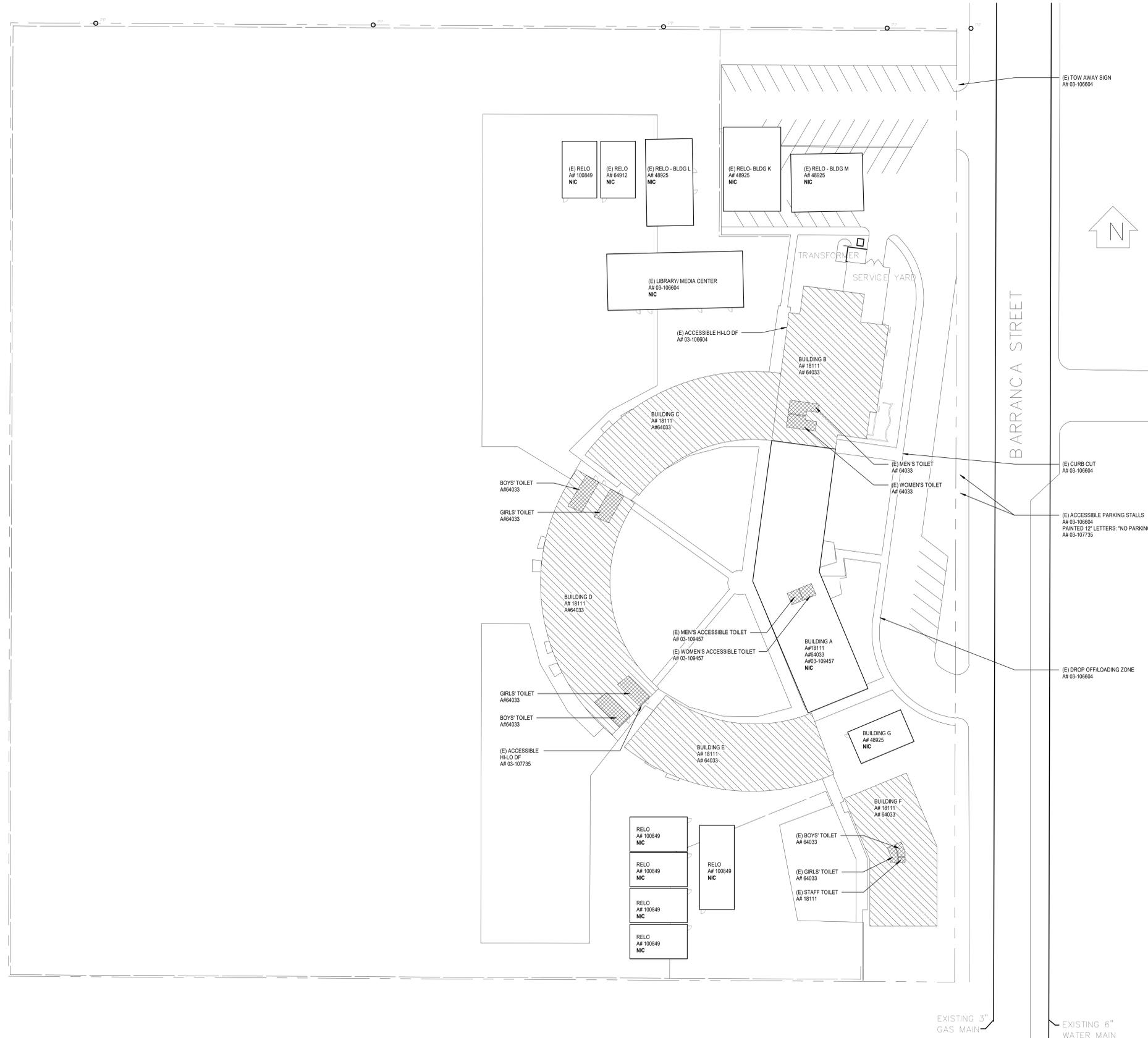
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3
4
5

DSA CERTIFICATION LIST

APPLICATION #	FILE #	APPROVAL YEAR	NOTE
03-18111	19-25	1999	ORIGINAL CAMPUS BUILDINGS
03-64033	19-25	1996	MODERNIZATION
03-105033	19-25	2001	RELOCATION OF (4) CLASSROOMS BUILDINGS (AR04-102490)
03-109457	19-25	2006	ALTERATION TO ADMIN. BLDG (A)
03-106604	19-25	2006	SITE IMPROVEMENTS/LIB RELOCATABLE BUILDING
03-107111	19-25	2006	RELOCATION OF (4) CLASSROOM BUILDINGS (PC04-104801)
03-107735	19-25	2008	CONSTRUCTION OF (4) CLASSROOM BUILDINGS
03-117500	19-25	2016	RELOCATION OF (4) CLASSROOMS BUILDINGS STOCKPILE
03-117122	19-25	2017	(4) SOLAR PANEL STRUCTURE (PC02-113544)

SITE LEGEND

-  EXISTING BUILDING - NOT IN SCOPE
-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



ARCHITECTURAL SITE PLAN
SCALE: 1" = 30'-0"
NORTH

DLR Group
© DLR Group

ARCHITECT
JESSE MILLER
No. C-22306
10/31/2023
STATE OF CALIFORNIA



MESA ELEMENTARY SCHOOL
COVID-19 - COVINA VALLEY DISTRICT HVAC REPLACEMENT
409 S. BARRANCA ST. WEST COVINA, CA 91791

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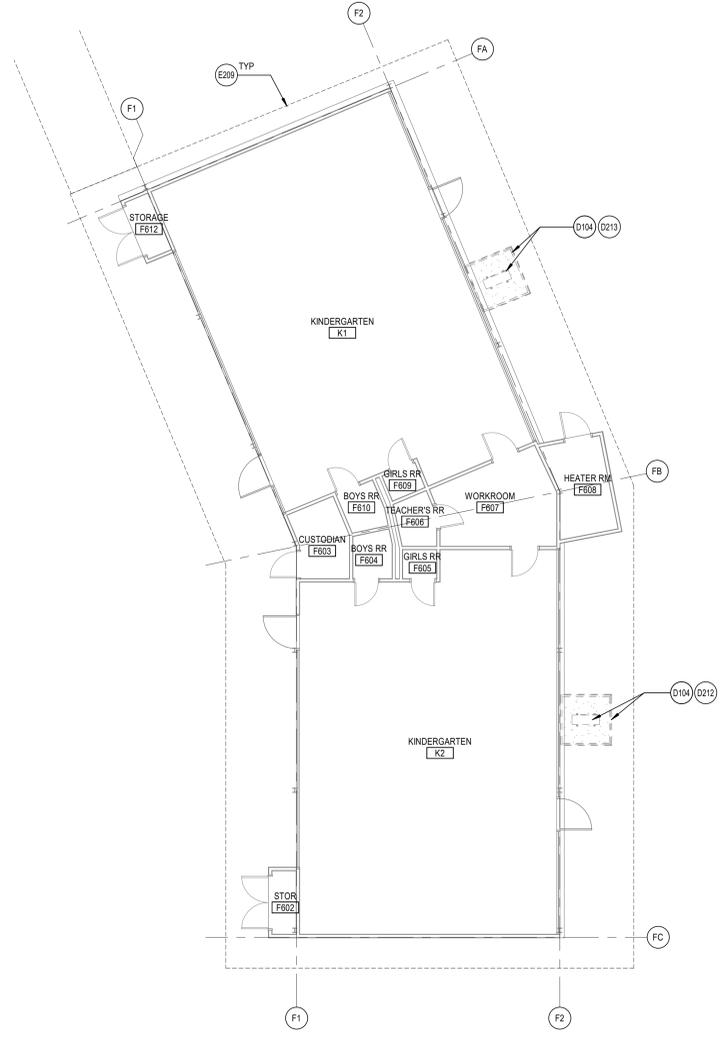
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DSA A#03-122232
DSA File #: 19-25
ARCHITECTURAL
SITE PLAN

A1.1

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BUILDING B FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING F FLOOR PLAN
SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

D104	REMOVE (E) MECHANICAL EQUIP., EQUIP. CONC. PAD, & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DWG.
D212	REMOVE (E) ROOF DRAINS, TYP. THROUGHOUT
D213	REMOVE (E) CHAIN LINK GUARD

GENERAL ARCHITECTURAL NOTES

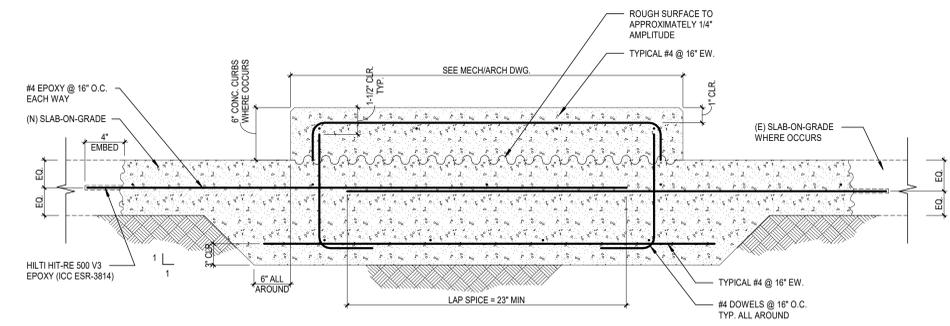
- ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
- SCRIBE (E) GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.

DEMOLITION GENERAL NOTES

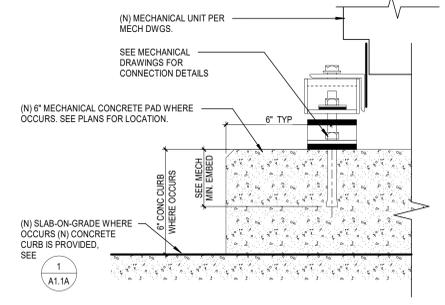
DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

THE CONTRACTOR SHALL:

- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
- COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
- CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
- MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
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- PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
- CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
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- WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
- WHERE PLASTER/STUCCO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



1 TYPICAL MECH. EQUIPMENT ON CONCRETE PAD AT (E) SLAB-ON-GRADE
SCALE: 1 1/2" = 1'-0"



4 MECH. ANCHORAGE AT CONC. CURB
SCALE: 3" = 1'-0"



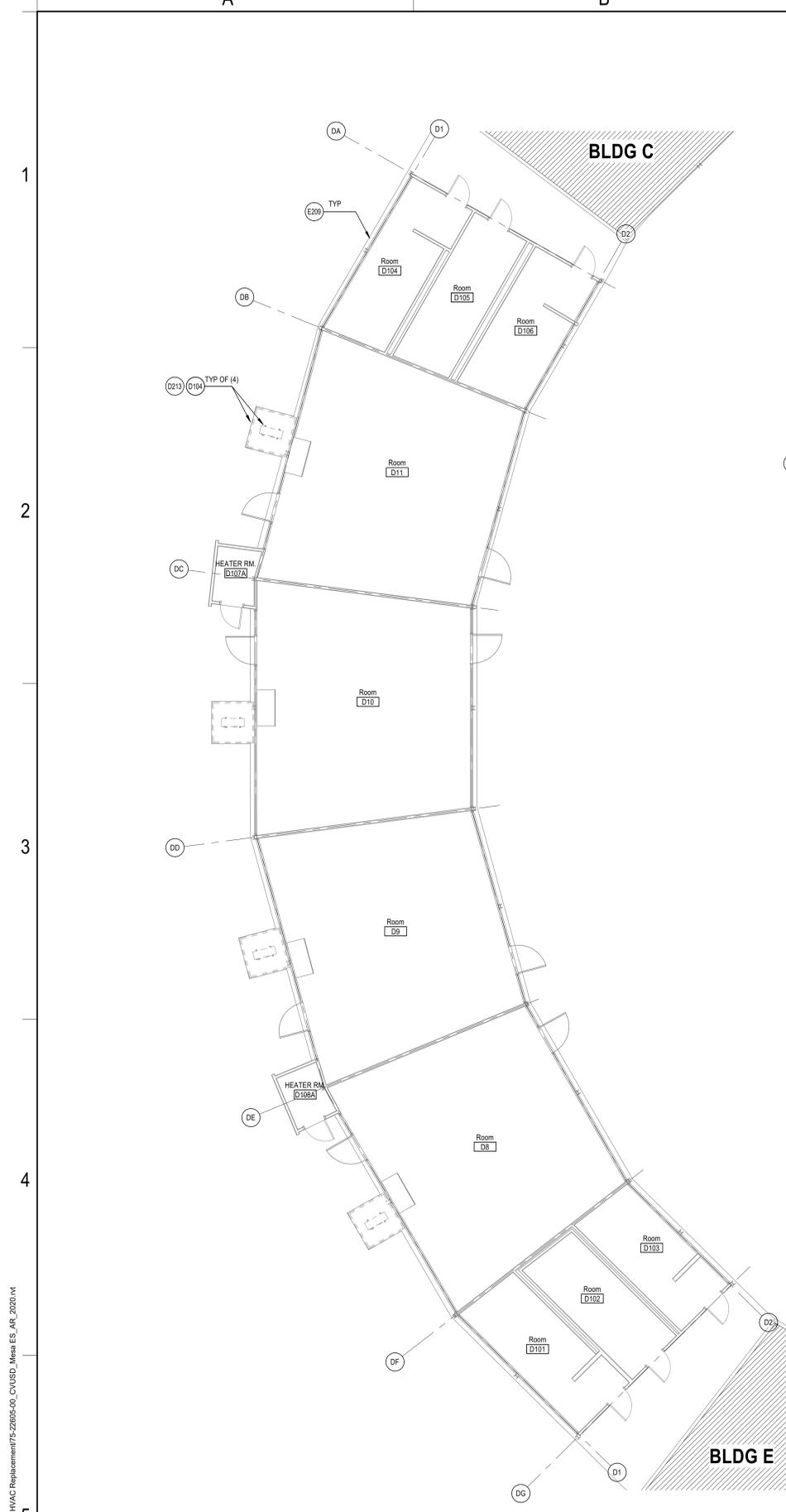
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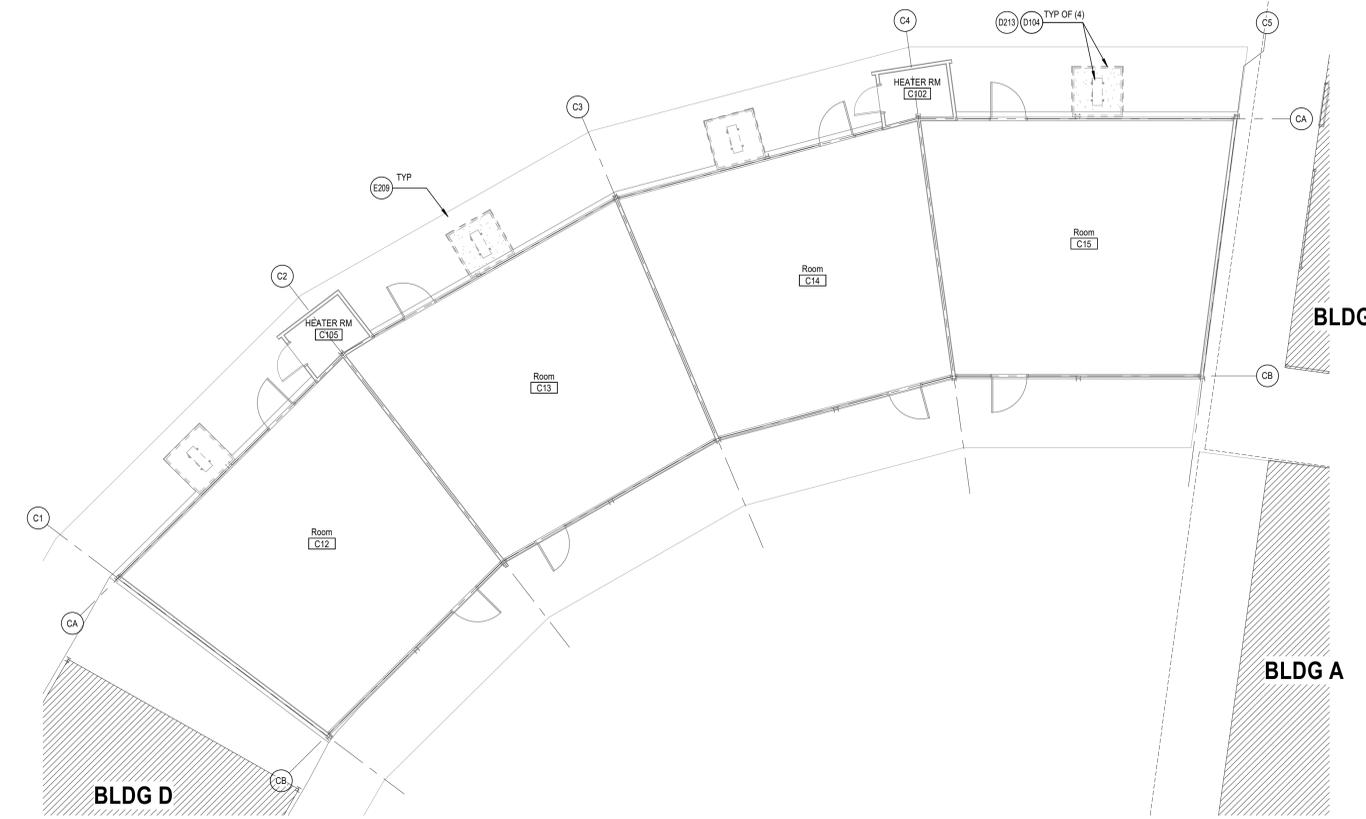
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DSA File #: 19-25
**BUILDINGS B & F
FLOOR PLAN**

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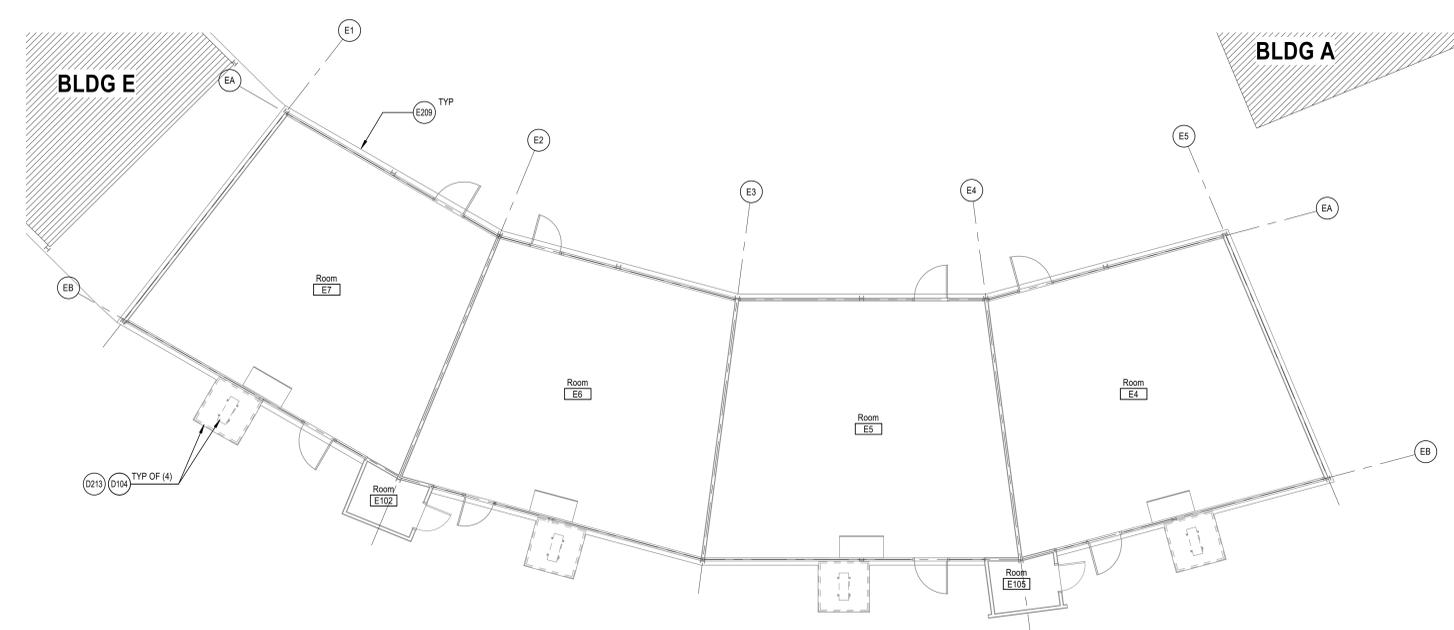
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BUILDING D FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING C FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING E FLOOR PLAN
SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

D104	REMOVE (E) MECHANICAL EQUIP., EQUIP. CONC. PAD, & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DWG.
D213	REMOVE (E) CHAIN LINK GUARD

- GENERAL ARCHITECTURAL NOTES**
- ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
 - SCRIBE (E) GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.

DEMOLITION GENERAL NOTES

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

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 - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
 - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
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 - WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
 - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



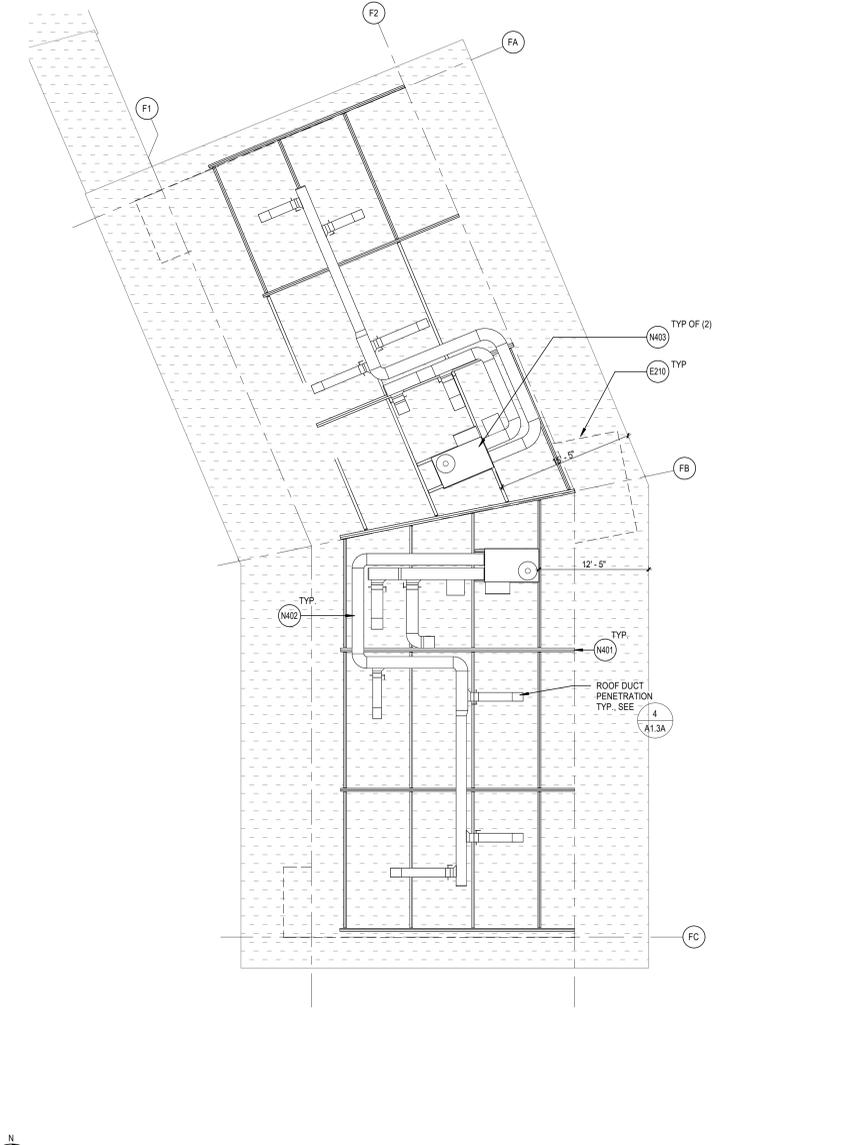
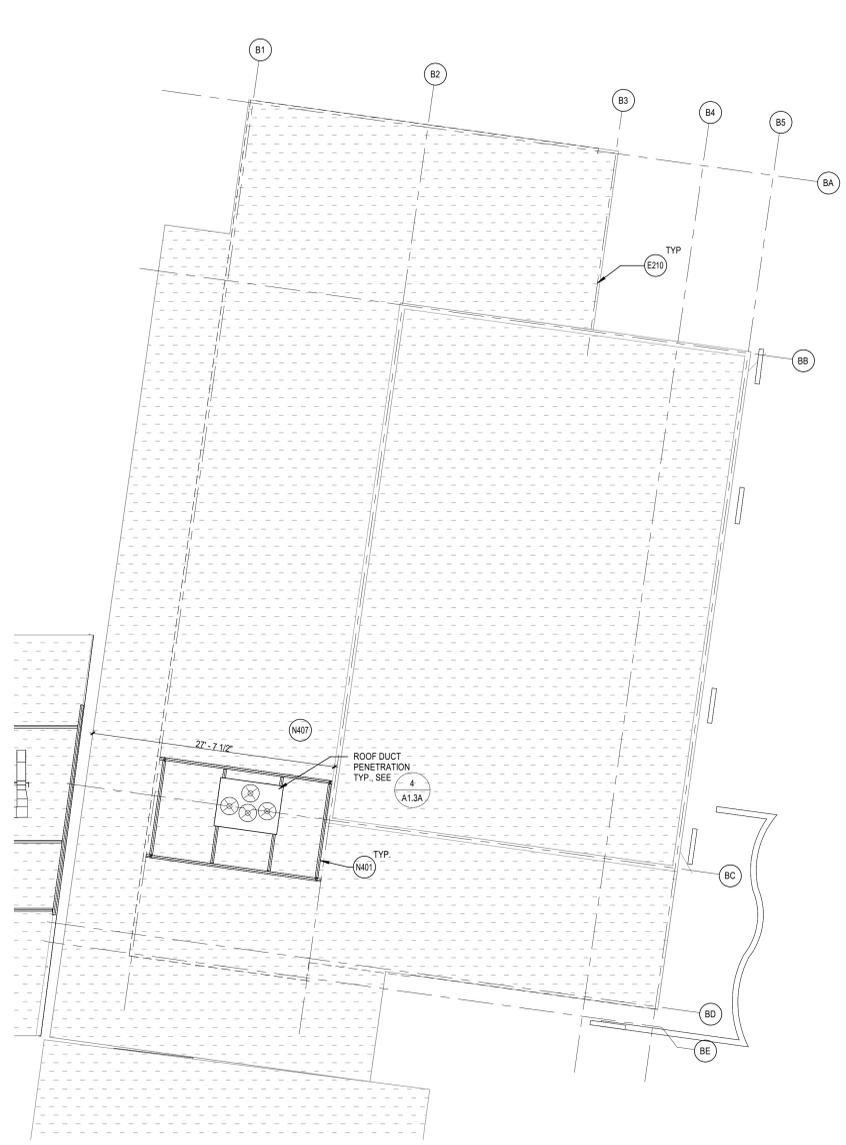
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DSA File #: 19-25
**BUILDINGS C, D
AND E FLOOR
PLANS**

A1.1B

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REFERENCE KEYNOTES

E210	LINE OF (E) BLDG BELOW SHOWN DASHED
N401	NEW STRUCTURAL POST AND BEAM SUPPORT FRAMING. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
N402	NEW DUCTWORK. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
N403	(N) MECHANICAL UNITS ATTACHED TO THE (E) UNIT CURB. SEE MECHANICAL DRAWING SHEET M1.3B & M1.3D.

ROOF PLAN GENERAL NOTES

A. COORDINATE THE SIZE AND LOCATION OF ROOF DUCT PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL, ELECTRICAL, AND STRUCTURAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.

B. COORDINATE (N) DRAINS, CURBS, SUPPORTS FOR MECHANICAL AND STRUCTURAL DRAWINGS.

DEMOLITION GENERAL NOTES

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

THE CONTRACTOR SHALL:

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B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.

C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.

D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.

E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.

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H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.

I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.

J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.

K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.

L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.

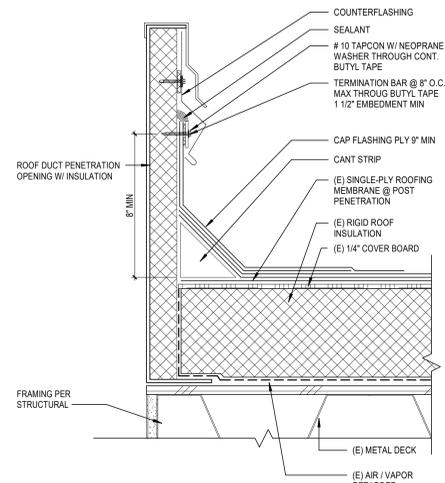
M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.

N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.

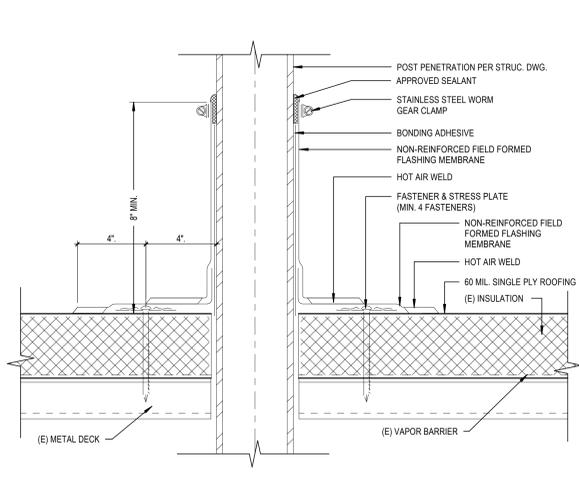
O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.

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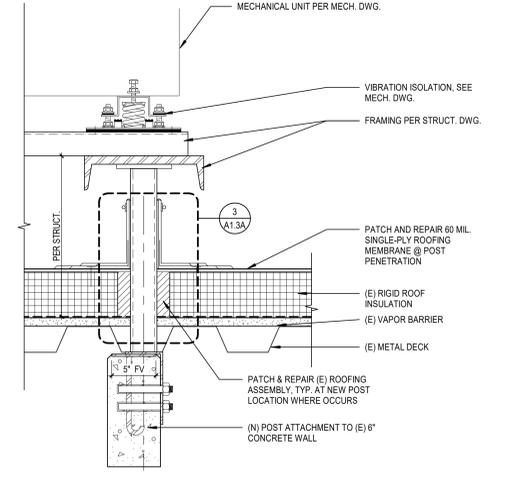
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4 TYPICAL MECH. DUCT PENETRATION FLASHING
A1.3A SCALE: 3" = 1'-0"



3 FIELD FABRICATED PIPE FLASHING
A1.3A SCALE: 12" = 1'-0"



5 MECH UNIT/DUCT SUPPORT @ STEEL BEAM
A1.3A SCALE: 1 1/2" = 1'-0"



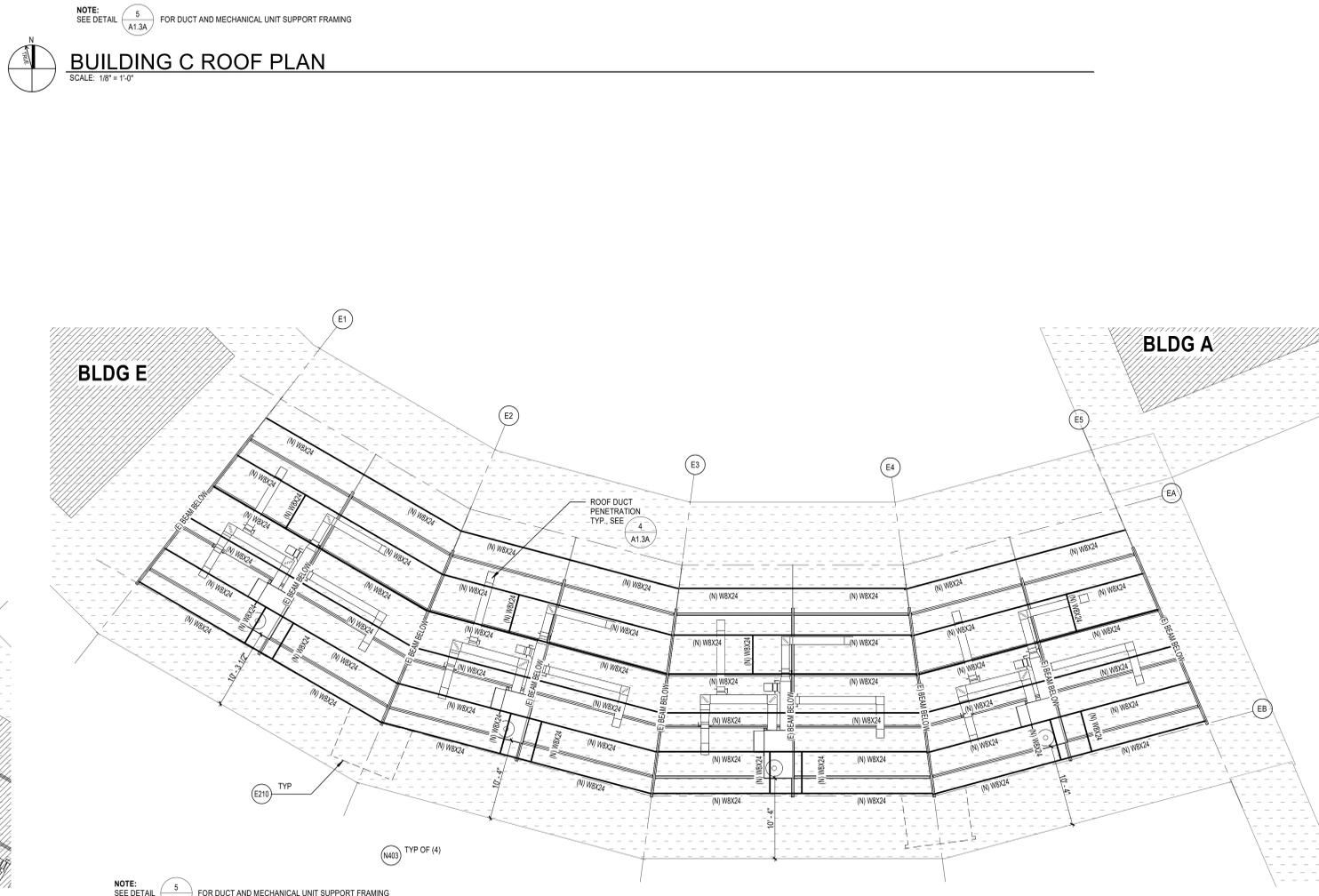
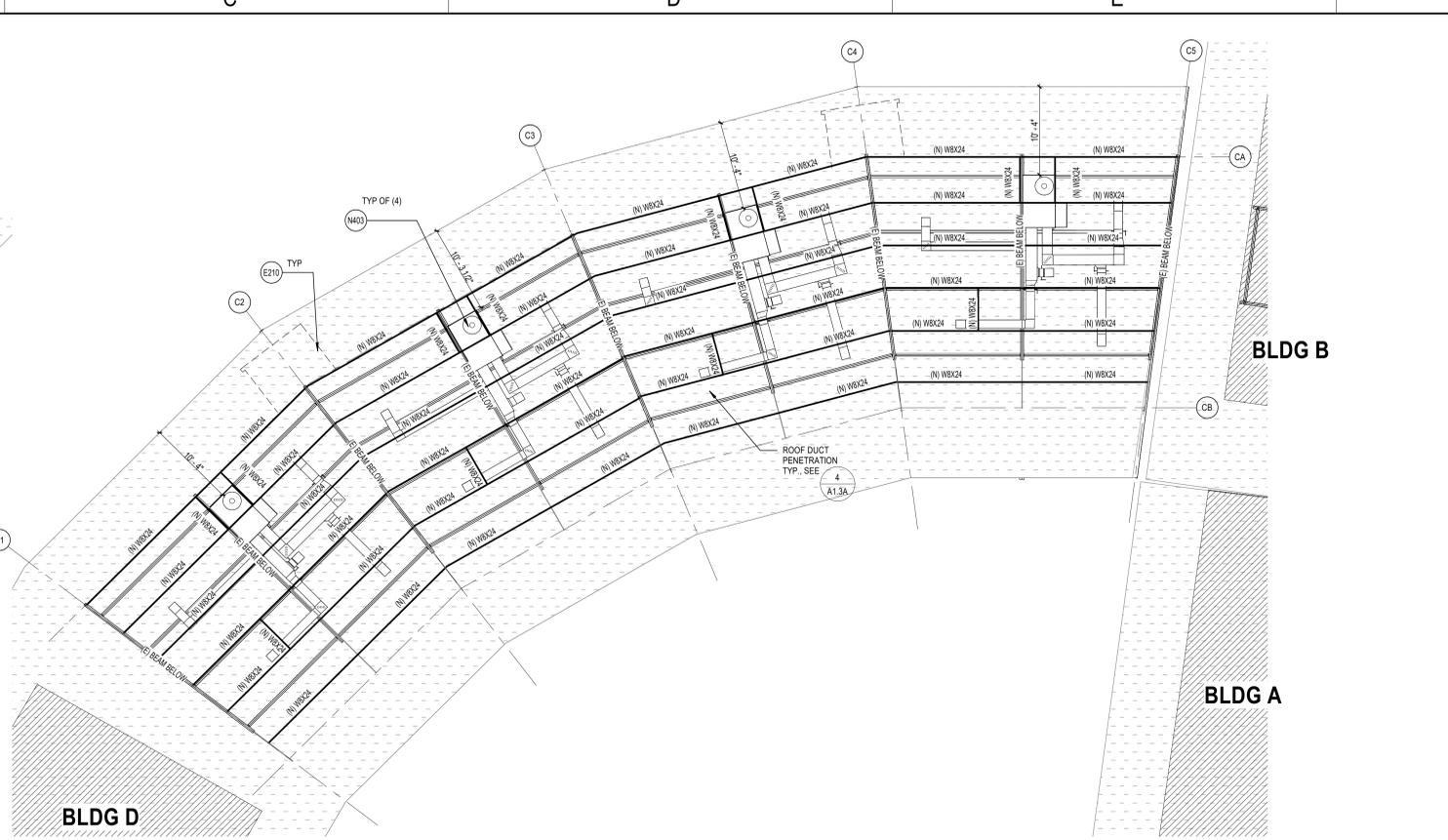
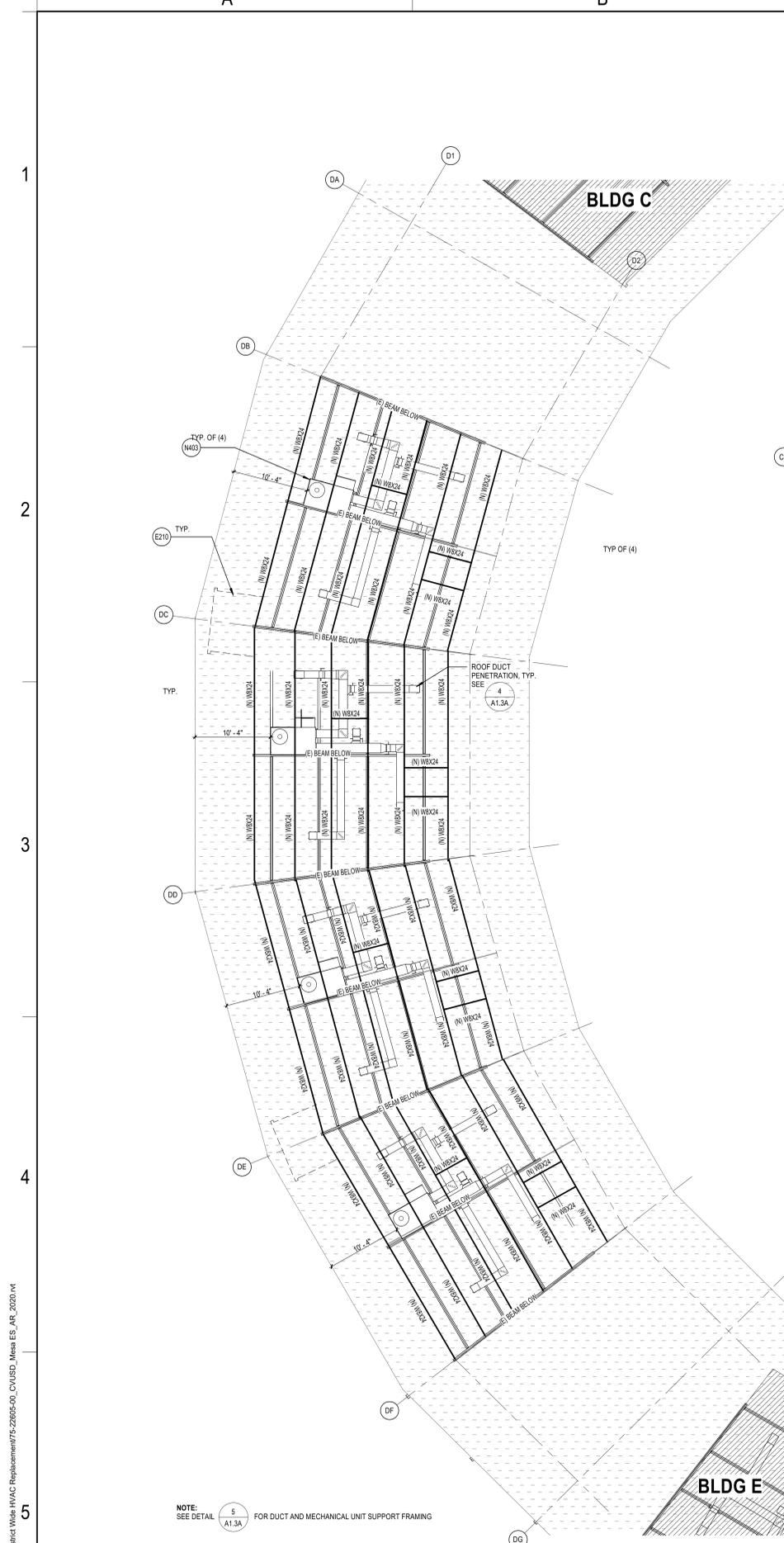
MESA ELEMENTARY SCHOOL
COVID 19- COVINA VALLEY DISTRICT HVAC REPLACEMENT
409 S. BARBARCA ST. WEST COVINA, CA 91791

100% CONSTRUCTION DOCUMENTS
11/04/2022 REVISIONS

75-22605-00
DSA A#03-122232
DSA File #: 19-25
BUILDINGS B & F ROOF PLANS

A1.3A

Autodesk Docs/75-22605-00_CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Mesa ES_AR_2023.rvt
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REFERENCE KEYNOTES

- E210 LINE OF (E) BLDG BELOW SHOWN DASHED
- N403 (N) MECHANICAL UNITS ATTACHED TO THE (E) UNIT CURB. SEE MECHANICAL DRAWING SHEET M1.3B & M1.3D

ROOF PLAN GENERAL NOTES

- A. COORDINATE THE SIZE AND LOCATION OF ROOF DUCT PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL, ELECTRICAL, AND STRUCTURAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- B. COORDINATE (N) DRAINS, CURBS, SUPPORTS FOR MECHANICAL AND STRUCTURAL DRAWINGS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
 - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
 - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
 - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
 - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
 - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
 - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
 - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
 - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
 - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
 - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
 - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
 - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
 - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
 - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCHFINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
 - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCHFINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



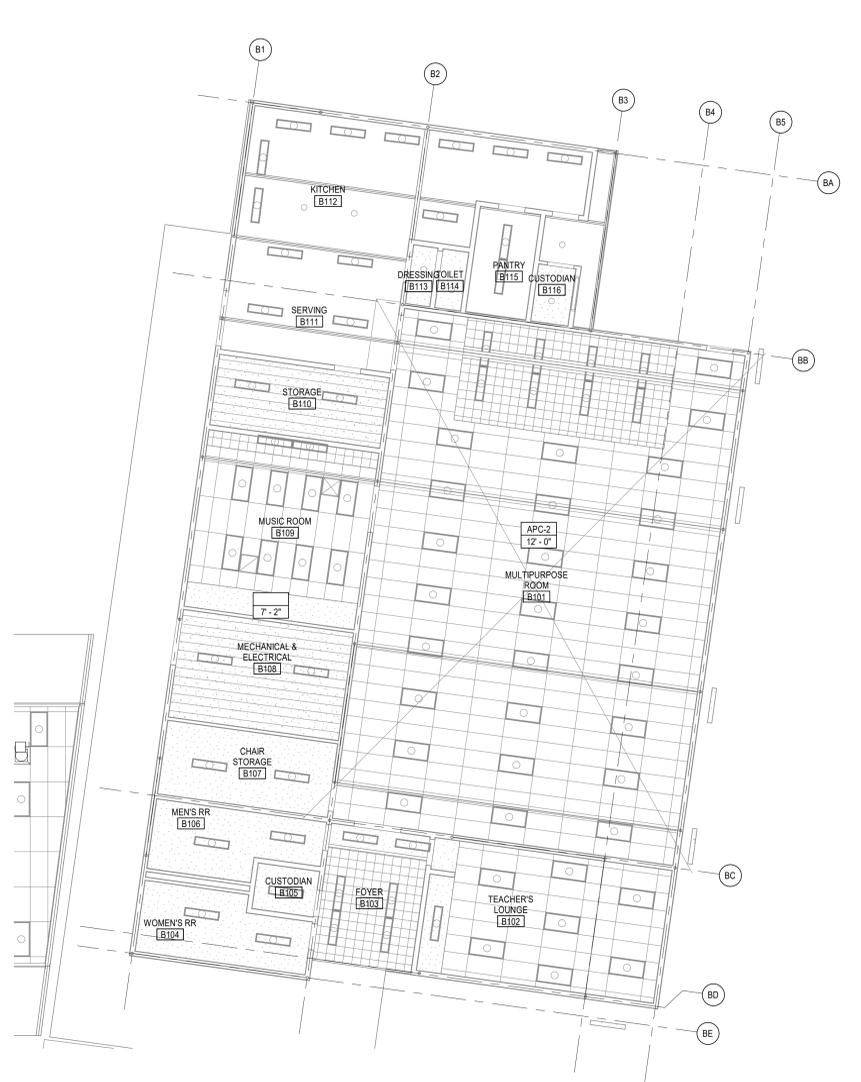
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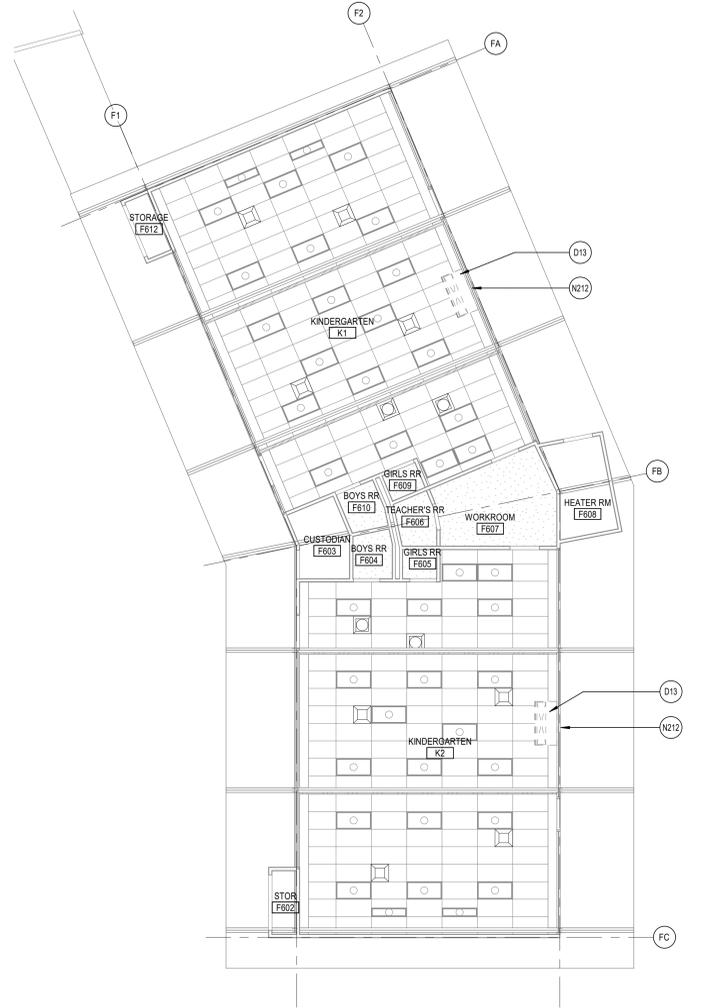
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DSA File #: 19-25
**BUILDINGS C, D
AND E ROOF
PLAN**

A1.3B

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BUILDING B REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



BUILDING F REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

- D13 REMOVE (E) CEILING MOUNTED FAN COIL UNIT - SEE MECHANICAL DRAWINGS
- N212 REPLACE (E) INFLUENCE PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT

REFLECTED CEILING PLAN GENERAL NOTES

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE
- C. (E) CEILING HEIGHTS ARE TO REMAIN UNO. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM
- D. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT
- E. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS
- F. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
 - a. FACE OF FINISHED WALL
 - b. FACE OF FINISHED BULKHEADS
 - c. CENTERLINE OF COLUMNS
 - d. CENTERLINE OF TEES
- G. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

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 - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES
 - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
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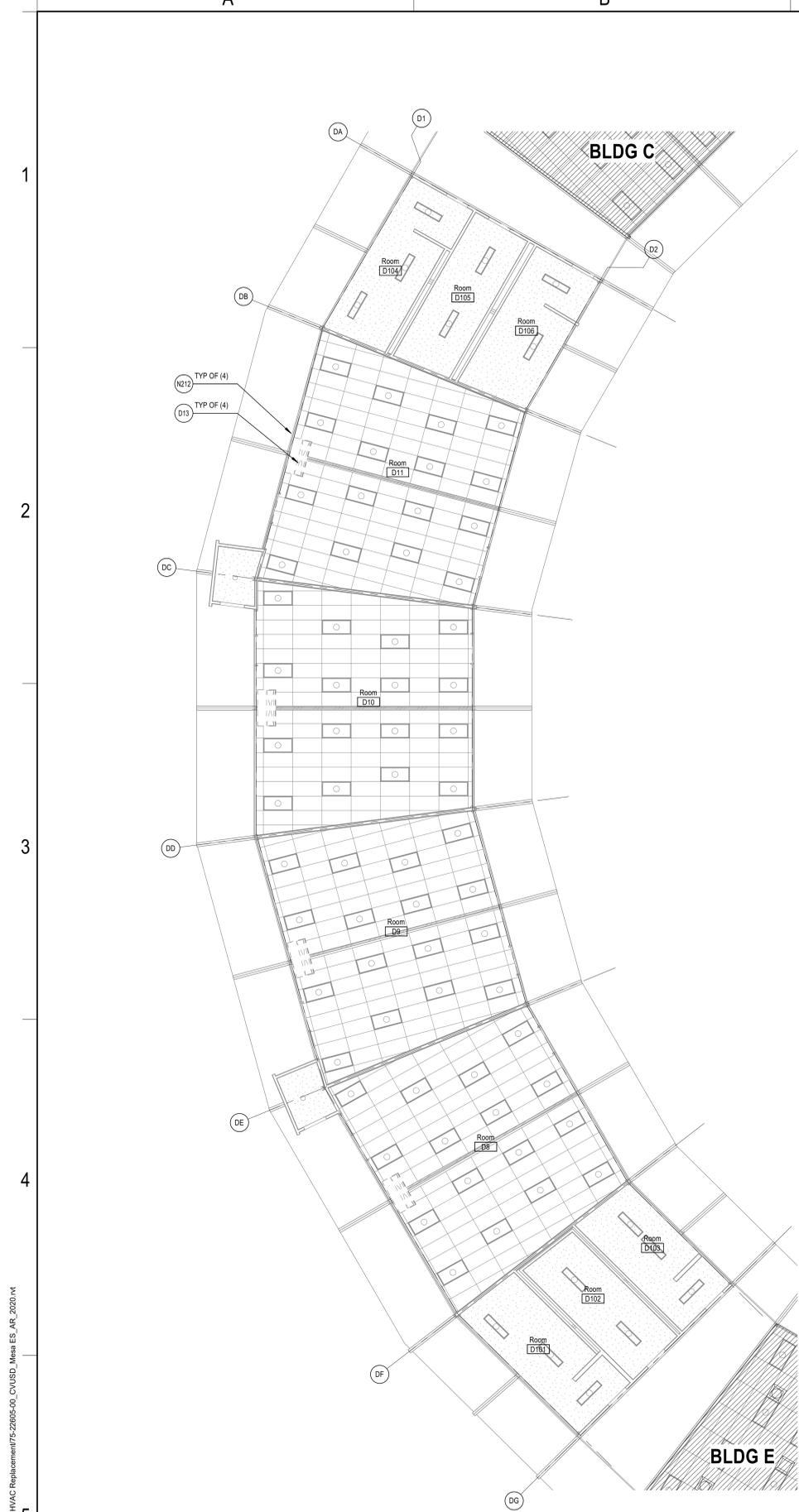


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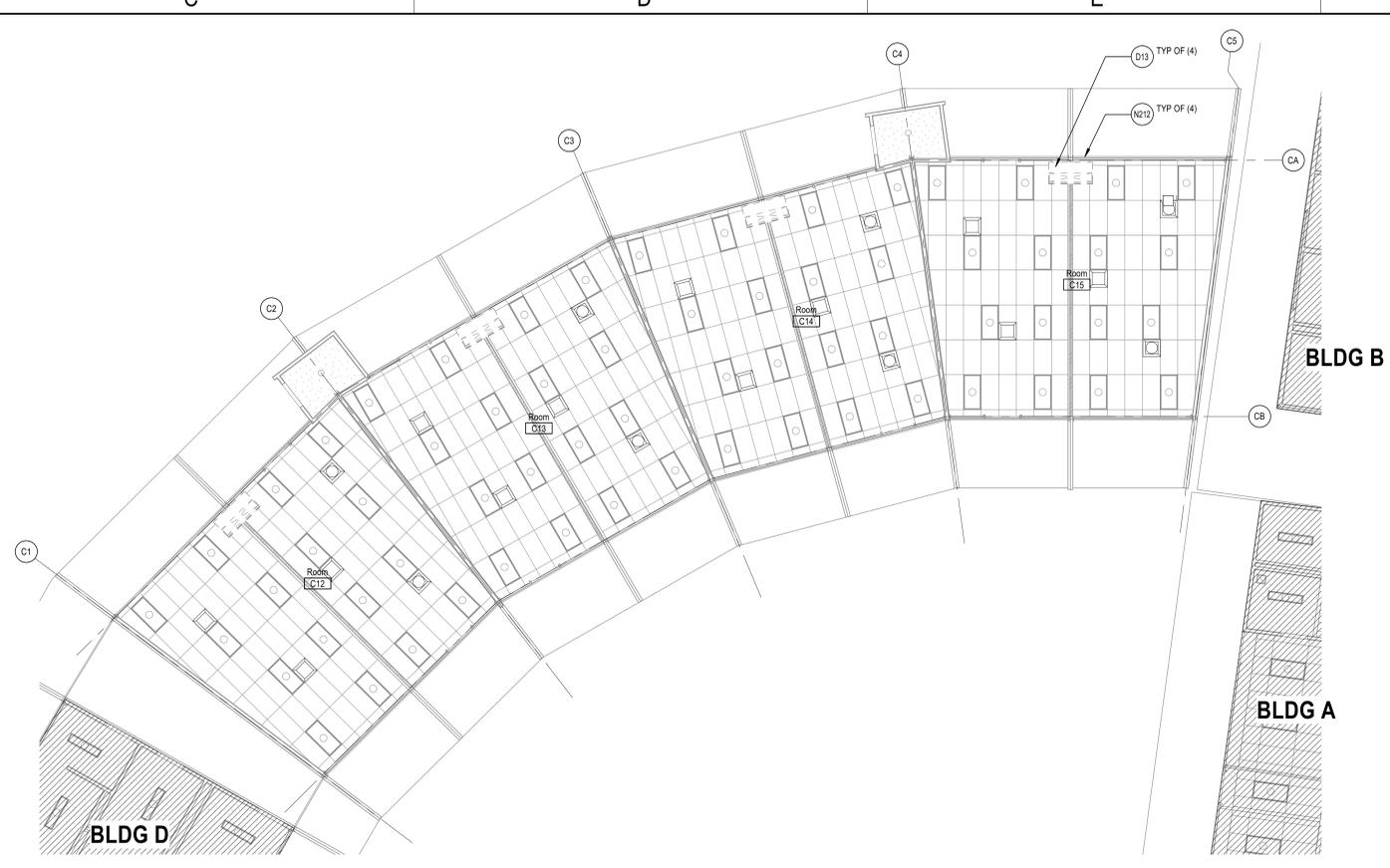
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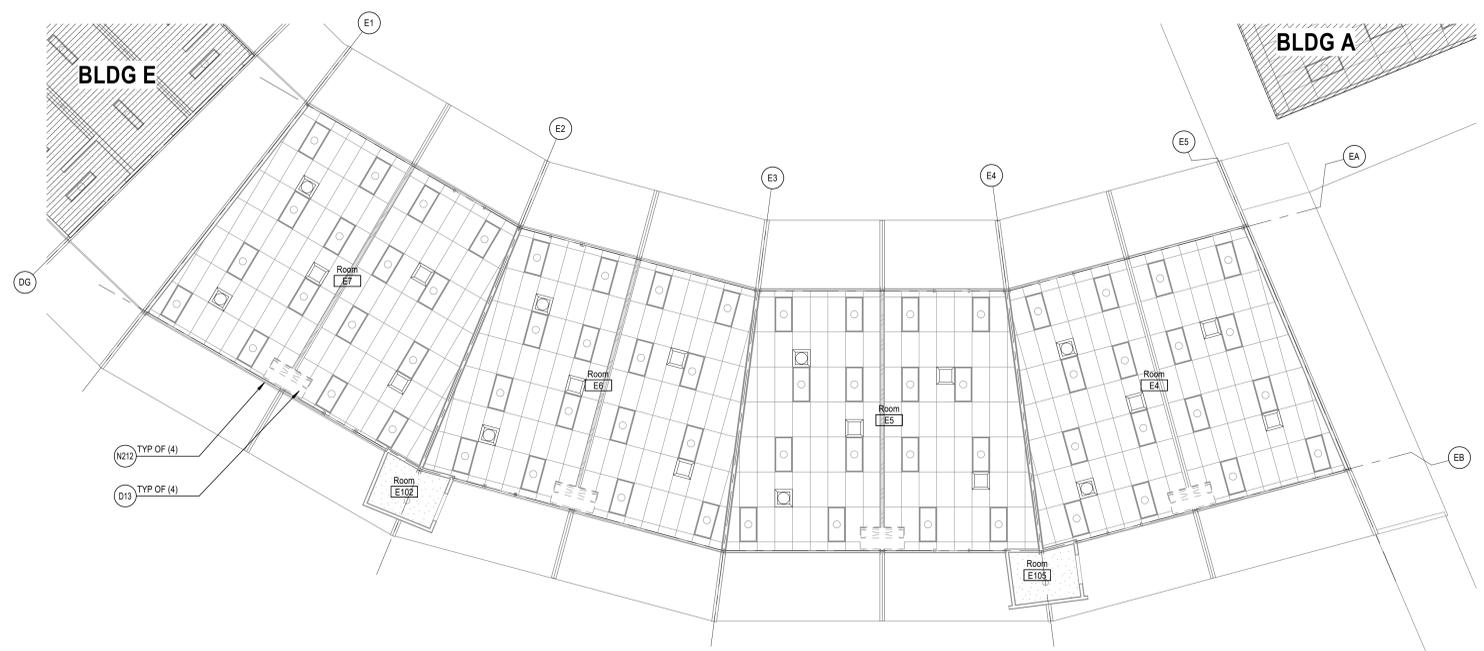
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BUILDING D REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



BUILDING C REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



BUILDING E REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

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DLR Group
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REGISTERED ARCHITECT
JESSE W. LEFF
No. C-22306
10/31/2023
STATE OF CALIFORNIA



MESA ELEMENTARY SCHOOL
COVID 19- COVINA VALLEY DISTRICT HVAC REPLACEMENT
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GENERAL

- THE DRAWINGS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUINING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE RESEARCH, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, GUINING, TEMPORARY SUPPORTS, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS. SEQUENCES OF CONSTRUCTION, OR CONSTRUCTION TECHNIQUES USED TO PERFORM THE WORK, OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PROGRAM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTIONS AS TO SAFETY PRECAUTIONS AND PROGRAMS. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS.
- CONTRACTOR IS TO ESTABLISH AND VERIFY OPENINGS AND INSERTS FOR ITEMS TO BE INSTALLED BY OTHER TRADES PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND CONSTRUCTION.
- CONSTRUCTION MATERIAL AND EQUIPMENT LOADS PLACED ON THE STRUCTURE DURING THE CONSTRUCTION PROCESS SHALL NOT EXCEED THE DESIGN LIVE LOAD OF THE STRUCTURE NOTED IN THESE DRAWINGS. THE ENGINEER SHALL NOT BE RESPONSIBLE TO INVESTIGATE, NOR APPROVE, THE STRUCTURE FOR CONSTRUCTION MATERIAL OR EQUIPMENT LOADING. ERECTION OR CONSTRUCTION LOADS ARE NOT TO BE APPLIED UNTIL PROPER STRUCTURAL FRAMING CONNECTIONS ARE MADE, AND ALL TEMPORARY BRACING IS IN PLACE. THE CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY BRACING OF THE STRUCTURE WHERE NECESSARY FOR CONSTRUCTION LOADS.
- DETAILS THAT ARE NOTED AS "TYPICAL OR TYP" ON DETAIL TITLES ARE TO BE APPLIED TO THE PROJECT CONSTRUCTION AS GENERAL CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. THESE DETAILS ARE NOT CUT AT ALL LOCATIONS WHERE THEY OCCUR, AND THEY MAY NOT BE CUT AT ALL WHERE NO SPECIFIC DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR CONDITIONS ELSEWHERE ON THE PROJECT, SUBJECT TO APPROVAL OF THE ENGINEER.
- DO NOT SCALE DRAWINGS. CONTRACTOR IS TO VERIFY ALL DIMENSIONS RELATIVE TO ARCHITECTURAL OR OTHER TRADES DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
- WHERE DISCREPANCIES OCCUR BETWEEN GENERAL NOTES, PLANS, DETAILS, AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS GOVERN, UNLESS APPROVED OTHERWISE BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND SPECIFICATIONS. THE CONTRACTOR SHALL ESTABLISH AND VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHANGES, HANGERS, INSERT ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK, DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECK, ETC) WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- IF THE ENGINEER'S SEAL AND SIGNATURE IS NOT AFFIXED TO THESE DRAWINGS, THESE DRAWINGS ARE INTENDED FOR PRELIMINARY PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.

DESIGN CRITERIA

- ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THESE DRAWINGS, SPECIFICATIONS, AND THE CODES, RULES AND REGULATIONS OF THE 2019 CALIFORNIA BUILDING CODE (CBC), AS ADOPTED AND AMENDED BY THE CITY OF COVINA, CA HEREAFTER REFERRED TO AS THE BUILDING CODE.
- MATERIAL SPECIFIC DESIGN STANDARDS LISTED IN THESE GENERAL NOTES ARE THE VERSION REFERENCED BY THE BUILDING CODE. IF NOT REFERENCED BY THE BUILDING CODE, USE THE LATEST EDITION APPROVED BY THE AUTHORITY HAVING JURISDICTION ON THE DATE OF THE PERMIT ISSUANCE.
- RISK CATEGORY III
- EXISTING DEAD LOADS
ROOF - TOTAL 15 PSF (INCLUDES STRUCTURE SELF WEIGHT)
- EXISTING LIVE LOADS
ROOF LIVE LOAD 20 PSF
- WIND LOADS
BASIC WIND SPEED (3 SECOND GUST), V 101 MPH
NOMINAL WIND SPEED, V₅₀ 79 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC FACTOR, K_{zt} 1.0
AIR DENSITY FACTOR, K_e 1.0
INTERNAL PRESSURE COEFFICIENT, GC_p +/- 0.18
- SEISMIC LOADS
SITE LATITUDE 34.0570
SITE LONGITUDE -118.295
SITE CLASS D
IMPORTANCE FACTOR, I 1.25
MAPPED SPECTRAL RESPONSE ACCELERATIONS S_s = 1.973
S₁ = 0.701
DESIGN SPECTRAL RESPONSE ACCELERATIONS S₁ = 1.978
S_{0.1} = 0.794
SEISMIC DESIGN CATEGORY D
EXISTING SEISMIC FORCE RESISTING SYSTEM:
UNIT S, C, D, E & F STEEL MOMENT FRAME (REMAIN UNALTERED)
UNIT B STEEL CONCENTRICALLY BRACED FRAMES (REMAIN UNALTERED)

POST-INSTALLED ANCHORS

- UNO, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE, EPOXY, SHOT-PIN, SCREW AND UNDERCUT.
- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED.
- CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING, DAMAGED OR MISPLACED CAST-IN-PLACE ANCHORS.
- CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS.
- MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONING (WHERE OCCURS), ETC. USE NON-DESTRUCTIVE TESTING TO LOCATE PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO THE EXISTING CONCRETE OR MASONRY. FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS.
- ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE ICCES REPORTS, INCLUDING, BUT NOT LIMITED TO, ALL ANCHOR SPACINGS, EMBEDMENTS AND EDGE DISTANCES.
- SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO USE. CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT, SUBSTITUTIONS WILL BE EVALUATED BY HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE BUILDING CODE FOR SEISMIC USES. LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS, ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE AND INSTALLATION TEMPERATURES.
- EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "H". ALL ANCHORS SHALL HAVE EMBEDMENT NOTED OR EMBEDMENT AS REQUIRED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.
- IF THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE ENGINEER.
- ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST.
- INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 308.1 PROOF OF QUALITY CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
- EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
a. HELIX RWK BOLT T22 CONCRETE ANCHORS (ICC ESR-426)
b. DEWALT POWER-STUD-SD1 (ICC ESR-2818), POWER-STUD -SD2 (ICC ESR-2502)
c. SIMPSON STRONG-TIE STRONG-BOLT T WEDGE ANCHORS (ICC ESR-3027)
- SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
a. HELIX HUS-EZ SCREW ANCHOR (ICC ESR-3027)
b. HELIX HUS-EZ SCREW ANCHOR (ICC ESR-3889)
c. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-2713)
- ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
a. HELIX HY-200 SAFE SET SYSTEM ADHESIVE ANCHORS (ESR-3187) (FAST CURE APPLICATIONS)
b. HELIX RE-200 V3 ADHESIVE ANCHORS (ESR-3814)
c. HELIX RE-100 ADHESIVE ANCHORS (ICC ESR-3829) (STANDARD CURE APPLICATIONS)
d. DEWALT AC208+ ADHESIVE ANCHORS (ICC ESR-4027) (FAST CURE APPLICATIONS)
e. DEWALT PURE 100+ ADHESIVE ANCHORS (ICC ESR-3288) (STANDARD CURE APPLICATIONS)
f. SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHOR SYSTEM (ESR-4057)
g. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (APMO USES ESR-263)
h. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ESR-2508) (STANDARD CURE APPLICATIONS)
- ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE WITH A MIN. AGE OF 21 DAYS.
- MASONRY CELLS SHALL BE FULLY GROUTED AND CURED FOR INSTALLATION OF POST-INSTALLED ANCHORS.
- USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT CORE DRILL FOR ANCHOR HOLES WITHOUT ENGINEER APPROVAL.
- PROVIDE GALVANIZED CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS-STEEL TYPE 304 OR 316 AT EXTERIOR / DAMP INTERIOR LOCATIONS. ANCHORS SHALL BE CLEAN AND FREE OF DEBONDING SUBSTANCES.
- PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.
- ADHESIVE / EPOXY ANCHORS ON THIS PROJECT ARE NOT DESIGNED TO SUPPORT OR INTENDED TO RESIST SUSTAINED TENSION LOADS.

STRUCTURAL STEEL

- FABRICATOR QUALIFICATIONS: FABRICATOR SHALL BE AISC CERTIFIED OR AN "APPROVED FABRICATOR" IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE A.H.I. IN LIEU OF THE PREVIOUS. FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE INSPECTION/TESTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S PREMISES TO MEET BUILDING CODE REQUIREMENTS. AT THE COMPLETION OF WORK, FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE ARCHITECT AND A.H.I. STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.
- STRUCTURAL STEEL SHAPES AND CONNECTING COMPONENTS SHALL CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS UNO:
FOLLOWING MATERIAL SPECIFICATIONS:
WIDE FLANGE SHAPES ASTM A992, F_y = 50 KSI
HOLLOW STRUCTURAL SECTIONS (HSS) RECTANGULAR & SQUARE ROUND ASTM A500, GRADE C, F_y = 50 KSI
ASTM A500, GRADE C, F_y = 46 KSI
ASTM A53, GRADE B, F_y = 35 KSI
ASTM A36, F_y = 36 KSI
ASTM F3125, GRADE A32N
ASTM F1554, GRADE 55 WELDABLE (S1)
MACHINE BOLTS ASTM A307
ASTM A36
STEEL PIPE OTHER STEEL SHAPES AND PLATES HIGH STRENGTH STRUCTURAL BOLTS COLUMN ANCHOR ROOFS MACHINE BOLTS THREADED RODS WELDING ELECTRODES DEFORMED BAR ANCHORS (DBA) WELDED HEADED STUDS (WHS) WELDED THREADED STUDS (WTS) ASTM A490, F_y = 70 KSI
ASTM A108, F_y = 65 KSI
ASTM A108, F_y = 65 KSI
- CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. ELEMENTS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR TEMPORARY LOADING DURING CONSTRUCTION. INVESTIGATION OF THE STRUCTURAL ELEMENTS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STABILITY.
- COLUMNS AND BEAMS WITH BASE, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILLED ENDS.
- NON-METALLIC, NON-SHRINK, CHLORIDE FREE GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PRE-MIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF ASTM C1107. THE 28 DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE TWICE THE FOUNDATION REQUIRED CONCRETE COMPRESSIVE STRENGTH, 5,000 PSI MINIMUM.
- UNO, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. STAINLESS AND WEATHERING STEELS, WHERE APPLICABLE, ARE EXEMPT FROM THIS REQUIREMENT.
- COAT STEEL BELOW GRADE WITH COLD-APPLIED ASPHALT EMULSION PER ASTM D1187.
- ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10. REFER TO DRAWINGS FOR LOCATIONS OF AESS.
- WHERE CONNECTIONS ARE NOTED TO BE SLIP CRITICAL (EXAMPLE: A325-S16), BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRE-TENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC APPROVED METHODS. SLIP CRITICAL BOLTS SHALL HAVE CLASS "A" FINISH SURFACES.
- ALL BOLTS (HIGH STRENGTH ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL NUTS AND WASHERS. NUTS AND WASHERS FOR HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A563 AND TO ASTM F436, RESPECTIVELY.
- WELDING PROCEDURES, ELECTRODES, AND WELDER QUALIFICATIONS SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE D1.1, AISC STANDARDS, AND LOCAL CODE REQUIREMENTS.
- ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS. UNO, WHERE SHOWN, FIELD WELDING SHALL BE USED. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT THEIR DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE ALL WELDING USING AWS A2.4 SYMBOLS.
- WHERE CONTINUOUS ANGLES OR BENT PLATES ARE INDICATED, PROVIDE A CONTINUOUS BUTT WELD OR FULL PENETRATION WELD AT THE SPlice POINTS. UNO, THE STEEL FABRICATOR MAY SUBSTITUTE AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL.
- COORDINATE WITH ALL OTHER TRADES WHICH STEEL INTERACTS. THIS INCLUDES BUT IS NOT LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS.

SUBMITTALS

- THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION/ERECTION/INSTALLATION. THESE ITEMS ARE IN ADDITION TO ANY SUBMITTAL REQUIREMENTS SPECIFIED ON THESE PLANS OR IN THE PROJECT SPECIFICATIONS.

ITEM	PROO DATA	SHOP DWGS	TEST RESULTS	CALCS	DEFERRED SUBMITTAL
STRUCTURAL STEEL	-	YES	-	-	-
CONCRETE MATERIALS	YES	-	YES	-	-
GROUT	YES	-	-	-	-
STEEL DECK	YES	YES	-	-	-
COLD FORMED STEEL	YES	YES	-	-	-
EPOXY AND EXP ANCHORS	YES	-	-	-	-
WELD FILLER MATERIAL	YES	-	YES	-	-
ANCHORAGE FOR MECH/ELEC EQUIPMENT	-	YES	-	-	-

- "PROO DATA" - SUBMIT ADEQUATE DOCUMENTATION THAT THE PRODUCT PROPOSED TO BE USED MEETS THE REQUIREMENTS ON THESE PLANS AND THE PROJECT SPECIFICATIONS.
- "SHOP DWGS" - SUBMIT COMPLETE SHOP DRAWINGS SUFFICIENT TO SHOW QUANTITIES AND KINDS OF MATERIALS, METHODS OF ASSEMBLY, AND ALL DATA REQUIRED FOR FABRICATION, ERECTION, AND INSTALLATION. THE PURPOSE OF THESE DRAWINGS IS TO DEMONSTRATE THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT DOCUMENTED HEREIN. SUBMITTALS CONSISTING OF DRAWINGS TAKEN DIRECTLY FROM THESE PLANS WILL NOT BE APPROVED.
- "TEST RESULTS" - SUBMIT RESULTS FOR ANY TESTING REQUIRED BY BUILDING CODE OR THESE PLANS.
- "CALCS" - SUBMIT CALCULATIONS AND THE CORRESPONDING SHOP OR ERECTION DRAWINGS SIGNED AND SEALED BY A DESIGN PROFESSIONAL AUTHORIZED TO PERFORM WORK IN THE PROJECT JURISDICTION.
- "DEFERRED SUBMITTALS" - SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE PLAN CHECK AUTHORITY (DIVISION OF STATE ARCHITECTS) FOR REVIEW AND APPROVAL. FABRICATOR AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE PLAN CHECK AUTHORITY IS RECEIVED.

STRUCTURAL RENOVATION SCOPE

PROJECT STRUCTURAL SCOPE IS LIMITED TO THE FOLLOWING:
SECTION 05110 - ITEMIZE ELEMENTS WITHIN THE STRUCTURAL SCOPE HERE.

EXISTING CONDITIONS

- CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING ALL WORK AND MATERIALS NECESSARY TO INSTALL NEW WORK IN EXISTING BUILDING(S) SHALL BE INCLUDED.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND SHALL CONTACT THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BEFORE PROCEEDING. NOTIFY ENGINEER IMMEDIATELY IF EXISTING CONDITIONS DO NOT MATCH, OR SEEM IN CONFLICT WITH, INFORMATION SHOWN ON DRAWINGS.
- DIMENSIONS INDICATED ON PLAN AS FIELD VERIFY OR "FV" ARE DIMENSIONS THAT MAY BE REQUIRED FOR FABRICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF DIMENSIONS IN THE FIELD NECESSARY FOR FABRICATION OF MEMBERS AND PRIOR TO SUBMISSION OF SHOP DRAWINGS.
- CONTRACTOR TO PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT TO REMAIN FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION OPERATIONS PERFORMED UNDER THIS CONTRACT.
- THE SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY GUYS, BRACING, AND OTHER SUPPORTS AS NEEDED TO SAFELY RESIST ALL GRAVITY AND LATERAL LOADS TO WHICH THE EXISTING OR PROPOSED STRUCTURE MAY BE SUBJECTED, INCLUDING LOADS FROM ERECTION AND ERECTION OPERATIONS, AND WIND OR SEISMIC FORCES COMPARABLE IN INTENSITY FOR WHICH THE STRUCTURE IS DESIGNED. LOAD VERIFICATION OF EXISTING MEMBERS TO RECEIVE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER.
- ALL ERECTION AND CONSTRUCTION PROCEDURES SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND ORDINANCES.
- ALL FRAMING CONNECTIONS TO EXISTING STRUCTURE SHALL BE FIELD VERIFIED PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION. FIELD VERIFIED DIMENSIONS SHALL BE INCLUDED ON FIRST SHOP DRAWING SUBMITTAL AND NOTED AS SUCH.
- EXISTING UTILITY LINES SHALL BE PROBED PRIOR TO CONSTRUCTION OF FOUNDATIONS. NOTIFY ENGINEER IF THE TOP OF ANY UTILITY PIPE COMES WITHIN 3'-0" OF THE BOTTOM OF ANY FOUNDATION. DETERMINE THE LOCATION OF ALL NEW AND EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM FAILURE TO EXACTLY LOCATE, PROTECT, AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
- EXCAVATION UNDER OR NEAR IN-PLACE FOOTINGS WHICH DISTURBS THE COMPACTED SOIL BENEATH THE FOOTINGS IS NOT PERMITTED.
- CONTRACTOR SHALL LOCATE REBAR IN EXIST. CONSTRUCTION PRIOR TO DRILLING OF HOLES AND SHALL TAKE CARE NOT TO DAMAGE EXIST. BARS, IF DAMAGE TO EXIST. REBAR OCCURS DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE. REPAIR PROCEDURES NOT DETAILED IN THE CONTRACT DOCUMENTS WILL REQUIRE PREPARATION BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND MUST BE APPROVED BY THE ENGINEER.

EXISTING DOCUMENTATION

- THE FOLLOWING DOCUMENTS WERE USED TO REPRESENT EXISTING STRUCTURE IN THE CONSTRUCTION DOCUMENTS. NOT ALL ELEMENTS AND INFORMATION HAS BEEN PROVIDED. COPIES OF THE EXISTING DRAWINGS MAY BE AVAILABLE AT THE CONTRACTOR'S REQUEST.
 - ARCHITECTURAL DRAWINGS DATED FEBRUARY 11, 1959 BY D. STEWART KERR ARCHITECTS, INC.
 - STRUCTURAL DRAWINGS DATED FEBRUARY 11, 1959 BY EUGENE D. BIRNBAUM AND ASSOCIATES STRUCTURAL ENGINEERS.

DEMOLITION

- DEMOLITION OF EXISTING STRUCTURE TO BE REMOVED SHALL BE PERFORMED BY THE CONTRACTOR USING MEANS NECESSARY TO PREVENT DAMAGE TO THE EXISTING STRUCTURE TO REMAIN. DAMAGE TO THE EXISTING STRUCTURE TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE USING METHODS REVIEWED BY THE STRUCTURAL ENGINEER. IF EXISTING CONDITIONS DIFFER FROM THOSE SHOWN IN THE CONTRACT DOCUMENTS CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- SHORING OF THE EXISTING STRUCTURE SHALL BE PROVIDED BY THE CONTRACTOR AND DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

ABBREVIATIONS

ABBREVIATIONS ARE AS SHOWN IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING EXCEPTIONS:

#	REINFORCING BAR SIZE	LB(S)	POUND(S)
#	SHEET METAL SCREW SIZE AT (SPACING)	Ld	REINFORCING BAR DEVELOPMENT LENGTH
@	DIAMETER	Ldh	HOOKEED REINFORCING BAR DEVELOPMENT LENGTH
AB	ANCHOR BOLT	LF	LATERAL FORCE RESISTING SYSTEM
ABC	AGGREGATE BASE COURSE	LFRS	LINEAR
ADDL	ADDITIONAL ABOVE FINISHED FLOOR	LN	LINEAR LOAD
AFF	AUTHORITY HAVING JURISDICTION	LLB	LONG LEG BACK TO BACK
AHJ	ALTERNATE	LLH	LONG LEG HORIZONTAL
AL	ANCHOR	LHV	LONG LEG VERTICAL
ANCH	ANCHOR	LONG	LONGITUDINAL
APPROX	APPROXIMATE	LSH	LONG SHOT HOLE
AR	ARCHITECTURAL	LVL	LAMINATED VENEER LUMBER
B	BOTTOM OF ANCHOR ROD	LW	LONG WAY
BDD	BOTTOM OF DECK	LWC	LIGHT WEIGHT CONCRETE
BLDG	BUILDING	MAX	MAXIMUM
BKFS	BLOCKING BEAMS)	MECH	MECHANICAL
BWS)	BOTTOM OF FOOTING	MEP	MECHANICAL, ELECTRICAL & PLUMBING
BOF	BOTTOM OF LUNTEL	MF	MOMENT FRAME
BOF	BOTTOM OF FOOTING	MFR	MOMENT FRAME REINFORCED
BOJ	BOTTOM JOINT	MIN	MINIMUM
BRF	BUCKLING RESTRAINED BRACED FRAME	MISL	MISCELLANEOUS
BRG	BEARING	MWFRS	MAIN WIND FORCE RESISTING SYSTEM
BTWN	BETWEEN	(N)	NEW
C	CHANNEL	NIC	NOT APPLICABLE
CANT	CANTILEVER	NT	NOT IN CONTRACT
CFM	COLD-FORMED METAL FRAMING	NR	NEAR SIDE
CP	CAST-IN-PLACE	NTS	NOT TO SCALE
CJ	CONTROL JOINT	NWC	NORMAL WEIGHT CONCRETE
CLP	COMPLETE JOINT PENETRATION	OC	ON CENTER
CL	CENTRLINE	OCBF	ORDINARY CONCENTRICALLY BRACED FRAME
CL	CLEAR	OCSS	ORDINARY CANTILEVER COLUMN SYSTEM
CMU	CONCRETE MASONRY UNIT	OD	OUTSIDE DIAMETER
COL	COLUMN	OF	OUTSIDE FACE
COMP	COMPOSITE	OH	OPPOSITE HAND
CONG	CONCRETE	OR	ORDINARY CONSTRUCTION OPENINGS)
CONN(S)	CONNECTION(S)	OPP	OPPOSITE
CONST	CONSTRUCTION	OWJ	OPEN WEB JOIST
CONTR	CONTRACTOR	PAF	POWER ACTUATED FASTENER
CONTR	CONSTRUCTION JOINT CENTER	PCBE	PRECAST CONCRETE BEARING ELEVATION
CR	DEMOLISH	PCF	POUNDS PER CUBIC FOOT
DCB	DEFORMED BAR ANCHOR	PERP	PERPENDICULAR
DCA	DEMAND CRITICAL WELD	P/P	PARTIAL JOINT PENETRATION
DEG	DEGREE	PL	PLATE
DI	DIAMETER	PLF	POUNDS PER LINEAL FOOT
DIAG	DIAGONAL	PLWD	PLYWOOD
DM	DIMENSION	PREFAB	PREFABRICATED
DL	DEAD LOAD	PRJ	PROJECTION
DO	DITTO	PSF	POUNDS PER SQUARE FOOT
DOW	DOWEL	PSI	POUNDS PER SQUARE INCH
DWL(S)	DOWEL(S)	PTW	PRESERVATIVE TREATED WOOD
(E)	EXISTING	RAD	RADIUS
EBF	ECENTRICALLY BRACED FRAME	REF	REINFORCED CONCRETE REFERENCE
EE	EACH END	REIN	REINFORCE, REINFORCED, REINFORCEMENT, REINFORCING
EFC	EACH FACE	REQ(D)	REQUIRED
EJ	EXPANSION JOINT	REVS	REVISION(S)
EL	ELEVATION	RTU	ROOFTOP UNIT
ELEC	ELECTRICAL	SCBF	SPECIAL CONCENTRICALLY BRACED FRAME
ELEV	ELEVATOR	SCCS	SPECIAL CANTILEVER COLUMN SYSTEM
EMBED	EMBEDMENT, EMBEDDED	SCHED	SCHEDULE
EN	ENGINEER	SE	SELF-DRILLING SCREWS
ENP	ENGINEERED WOOD PRODUCT	SFS	SELF-DRILLING SCREW
ENG	ENGINEER	SH	SHORT SLOTTED HOLE
EQ	EQUAL	SHD	SHORING
EOR	ENGINEER OF RECORD	SHS	SHORING
EOS	EDGE OF SLAB	SHR	SHORING
EQU	EQUAL	SHR	SHORING
EQUIP	EQUIPMENT	SHR	SHORING
EQV	EQUIVALENT	SHT	SHEET
EW	EACH WAY	SHM	SMILAR
EXP	EXPANSION	SMT	SPECIAL MOMENT FRAME
EXT	EXTERIOR	SO	SPECIAL ON GRADE
f	FE	SP	SPACE SPACING
fc	SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE	SPC(S)	SPECIFICATION(S)
f _m	SPECIFIED COMPRESSIVE STRENGTH OF MASONRY	SST	STAINLESS STEEL
FD	FLOOR DRAIN	STAGD	STAGGERED
FDM	FOUNDATION	STD	STANDARD
FRT	FIRE RESISTANCE TREATED	STIFF	STIFFENER
FS	FAR SIDE	STL	STEEL
FT	FEET (FOOT)	STRUCT	STRUCTURE, STRUCTURAL
FTG	FOOTING	SYM	SYMMETRICAL
FV	FIELD VERIFY	T	THICKNESS
Fy	YIELD STRENGTH	T&B	TOP & BOTTOM
GA	GAGE, GAUGE	T&G	TONGUE & GROOVE
GALV	GALVANIZED	TC	TENSION CONTROL
GB	GRADE BEAM	TCW	TOP OF CONCRETE WALL
GC	GENERAL CONTRACTOR	THD	THREADED
GLB	GLUE LAMINATED BEAM	T/	TOP OF
G	GRADE	TOB	TOP OF BEAM
H	HEIGHT	TOC	TOP OF CONCRETE
HC	PRESTRESSED HOLLOW CORE	TOF	TOP OF FOOTING
HDR	HEADER	TOS	TOP OF STEEL
HORIZ	HORIZONTAL	TOW	TOP OF WALL
HS	HEADED STUD	TPE	TOP OF PIER ELEVATION
ID	INSIDE DIAMETER	TRANS	TRANSVERSE
IMF	INSIDE FACE	TSE	TOP OF SLAB ELEVATION
INF	INTERMEDIATE MOMENT FRAME	TWE	TOP OF WALL ELEVATION
IN	INCH	TY	TYPICAL
INC	INCLUDE(ING)	UNO	UNLESS NOTED OTHERWISE
INT	INTERIOR	VERT	VERTICAL
J	JOIST	VFY	VERIFY
JBE	JOIST BEARING ELEVATION	W	WITH
JST	JOIST	WO	WITHOUT
JT	JOINT	WOC	WOOD
K	KIP (1,000 LBS)	WFRS	WIND FORCE RESISTING SYSTEM
KSF	KIPS PER SQUARE FOOT	WGT	WEIGHT
		WP	WORK POINT
		WPS	WELDING PROCEDURE SPECIFICATION
		WT	STEEL TEE SECTION
		WRR	WELDED WIRE FABRIC/REINFORCEMENT
		X-STR	EXTRA STRONG
		XX-STR	DOUBLE EXTRA STRONG
		ZRC	ZINC RICH COATING

GENERAL SYMBOLS

DETAIL NUMBER
CROSS REFERENCE
SHEET NUMBER
SIMILAR OR TYPICAL REFERENCE

WALL SECTION

DETAIL REFERENCE

BUILDING SECTION

CASEWORK ELEVATION

KEYNOTE

ROOM NUMBER

ROOM NUMBER/NAME

DOOR NUMBER / INTERIOR WINDOW

EXTERIOR WINDOW NUMBER

WALL TYPE

REVISION NUMBER

[Symbol]	EARTH
[Symbol]	GRAVEL
[Symbol]	SAND
[Symbol]	CONCRETE
[Symbol]	PRECAST CONCRETE
[Symbol]	STEEL
[Symbol]	GYM FLOOR
[Symbol]	WOOD (CONTINUOUS BLOCKING)
[Symbol]	WOOD (NON-CONTINUOUS BLOCKING)
[Symbol]	WOOD (TRIM/FINISH)
[Symbol]	GLASS
[Symbol]	STONE
[Symbol]	SHINGLES
[Symbol]	CONCRETE MASONRY UNIT
[Symbol]	BRICK VENEER
[Symbol]	STEEL (LARGE SCALE)
[Symbol]	PLYWOOD (LARGE SCALE)
[Symbol]	GYPSUM WALL BOARD
[Symbol]	BATT INSULATION
[Symbol]	RIGID INSULATION
[Symbol]	SPRAY FOAM INSULATION
[Symbol]	FIRE SAFING INSULATION
[Symbol]	PROTECTION BOARD
[Symbol]	CARPET (LARGE SCALE)
[Symbol]	ACOUSTIC TILE (LARGE SCALE)
[Symbol]	TILE (LARGE SCALE)

STRUCTURAL SHEET LIST</

REQUIRED STRUCTURAL OBSERVATIONS

- IN ACCORDANCE WITH IBC, SECTION 1704.6, THE OWNER'S REPRESENTATIVE SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS AS LISTED IN THE BELOW STATEMENT OF REQUIRED STRUCTURAL OBSERVATIONS.
- STRUCTURAL OBSERVATION DOES NOT INCLUDE, OR WAIVE, THE RESPONSIBILITY FOR COMPLETING THE LISTED SPECIAL INSPECTIONS OR INSPECTIONS REQUIRED BY IBC SECTION 110.
- AT THE CONCLUSION OF THE WORK, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE AHJ A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER TO NOTIFY THE ENGINEER AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR OBSERVATION A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NAILING, REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR DESIGNATED STRUCTURAL OBSERVER AT THE TIME OF SITE VISIT.
- PRIOR TO THE FIRST STRUCTURAL OBSERVATION, THE OWNER'S REPRESENTATIVE SHALL COORDINATE A PRE-CONSTRUCTION MEETING BETWEEN THE OBSERVING ENGINEER, ARCHITECT, CONTRACTOR, SUBCONTRACTORS AND OTHER INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE STRUCTURAL ELEMENTS AND CONNECTIONS THAT ARE PART OF THE VERTICAL AND LATERAL LOAD RESISTING SYSTEMS AND REVIEW SCHEDULING OF SCHEDULED STRUCTURAL OBSERVATIONS.
- THE STRUCTURAL OBSERVER SHALL PERFORM OBSERVATIONS AT THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES:
 - CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED
 - AT SUBSTANTIAL COMPLETION OF THE PRIMARY STRUCTURE

STATEMENT OF SPECIAL INSPECTIONS

- IN ACCORDANCE WITH IBC, SECTION 1704, THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS AND/OR TESTING AGENCIES TO PERFORM STRUCTURAL TESTS AND SPECIAL INSPECTIONS ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS.
- THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE AHJ, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
- THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE OWNER'S REPRESENTATIVE, AHJ AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE AHJ.
- THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE AHJ AND SHALL NOT BE CONSIDERED TO RELIEVE THE OWNER OR AUTHORIZED AGENT FROM REQUESTING THE INSPECTIONS REQUIRED BY IBC SECTION 110.
- CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AHJ AND THE OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL INSPECTIONS PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.
- STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16. PROVIDE INSPECTION PER IBC SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.1.
- WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BASIS FOR WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.4-1 THROUGH TABLE N5.4-3.
- STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, HIGH STRENGTH BOLTING. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.6-1 THROUGH TABLE N5.6-3.
- SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.
- MASTIC AND INTUMESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15.
- EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.
- FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.
- SMOKE CONTROL: PER SECTION 1705.18.
- EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.
- HEADED CONCRETE SHEAR CONNECTORS: INSPECTED AND TESTED PER AMERICAN WELDING SOCIETY CODE AWS D1.1.

TMS 402 / 602 — TABLE 3

MINIMUM VERIFICATION	REQUIRED FOR QUALITY ASSURANCE (a)			REFERENCE FOR CRITERIA
	LEVEL 1	LEVEL 2	LEVEL 3	
	TMS 602			
Prior to construction, verification of compliance of submittals.	R	R	R	Art. 1.5
Prior to construction, verification of fit and FAAC, except where specifically exempted by the Code.	NR	R	R	Art. 1.4B
During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to the project site.	NR	R	R	Art. 1.5 & 1.6.3
During construction, verification of fit and FAAC for every 5,000 square feet (465 square meters).	NR	NR	R	Art. 1.4B
During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout.	NR	NR	R	Art. 1.4B

a. R = Required, NR = Not Required

AISC 360 — TABLE N5.5-1

INSPECTION TASKS PRIOR TO BOLTING			
INSPECTION TASKS PRIOR TO BOLTING	QC	QA	
Manufacturer's certifications available for fastener materials	O	P	
Fasteners marked in accordance with ASTM requirements	O	O	
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O	
Proper bolting procedure selected for joint detail	O	O	
Connecting elements, including the appropriate laying surface condition and hole preparation, if specified, meet applicable requirements	O	O	
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	O	
Proper storage provided for bolts, nuts, washers, and other fastener components	O	O	
O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each bolted connection.			

AISC 360 — TABLE N5.6-2

INSPECTION TASKS DURING BOLTING			
INSPECTION TASKS DURING BOLTING	QC	QA	
Fastener assemblies placed in all holes and washers and nuts are positioned as required	O	O	
Joint brought to the snug-tight condition prior to the pretensioning operation	O	O	
Fastener component not turned by the wrench prevented from rotating	O	O	
Fasteners are pretensioned in accordance with the RSC Specification, progressing systematically from the most rigid point toward the free edges	O	O	
O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each bolted connection.			

AISC 360 — TABLE N5.6-3

INSPECTION TASKS AFTER BOLTING			
INSPECTION TASKS AFTER BOLTING	QC	QA	
Document acceptance or rejection of bolted connections	P	P	
O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each bolted connection.			

AISC 360 — TABLE N5.4-1

INSPECTION TASKS PRIOR TO WELDING			
INSPECTION TASKS PRIOR TO WELDING	QC	QA	
Welder qualification records and continuity records	P	O	
Welding procedure specifications (WPS) available	P	P	
Manufacturer certifications for welding consumables available	P	P	
Material identification (type / grade)	O	O	
Welder identification system [a]	O	O	
Fit-up of groove welds (including joint geometry) joint preparations			
• Dimensions (alignment, root opening, root face, bevel)	O	O	
• Cleanliness (condition of steel surfaces)			
• Tacking (lack weld quality and location)			
• Backing type and fit (if applicable)			
Fit-up of CJP groove welds of HSS T-, Y- and K-joints without backing (including joint geometry)			
• Joint preparations	P	O	
• Dimensions (alignment, root opening, root face, bevel)			
• Cleanliness (condition of steel surfaces)			
• Tacking (lack weld quality and location)			
Configuration and finish of access holes	O	O	
Fit-up of fillet welds			
• Dimensions (alignment, gaps at root)	O	O	
• Cleanliness (condition of steel surfaces)			
• Tacking (lack weld quality and location)			
Check welding equipment	O	—	
[a] The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type. O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member.			

AISC 360 — TABLE N5.4-2

INSPECTION TASKS DURING WELDING			
INSPECTION TASKS DURING WELDING	QC	QA	
Control and handling of welding consumables			
• Packaging	O	O	
• Exposure Control			
No welding over cracked lack welds	O	O	
Environmental conditions	O	O	
• Wind speed within limits			
• Precipitation and temperature			
WPS Followed			
• Settings on welding equipment			
• Travel Speed			
• Selected welding materials	O	O	
• Shielding gas type / flow rate			
• Preheat applied			
• Interpass temperature maintained (min. / max.)			
• Proper position (F, V, H, Ch)			
Welding techniques			
• Interpass and final cleaning	O	O	
• Each pass within profile limitations			
• Each pass meets quality requirements			
Placement and installation of steel headed stud anchors	P	P	
O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member.			

AISC 360 — TABLE N5.4-3

INSPECTION TASKS AFTER WELDING			
INSPECTION TASKS AFTER WELDING	QC	QA	
Welds cleaned	O	O	
Size, length and location of welds	P	P	
Welds meet visual acceptance criteria			
• Crack prohibition			
• Weld / base-metal fusion	P	P	
• Crater crack section			
• Weld profiles			
• Weld size			
• Undercut			
• Porosity			
Arc strikes	P	P	
k-area [a]	P	P	
Weld access holes in rolled heavy shapes and built-up heavy shapes [b]	P	P	
Backing removed and weld tabs removed (if required)	P	P	
Repair activities	P	P	
Document acceptance or rejection of welded joint or member	P	P	
No prohibited welds have been added without the approval of the EOR	O	O	
[a] When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 inches (75 mm) of the weld. [b] After rolled heavy shapes (see Section A3.1c) and built-up heavy shapes (see Section A3.1d) are welded, visually inspect the weld access hole for cracks. O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member.			

ANSI / SDI QA/QC — TABLE 1.3

INSPECTION OR EXECUTION TASKS PRIOR TO WELDING			
TASK	QC	QA	
A. Welding procedure specifications (WPS) available	O	O	
B. Manufacturer certifications for welding consumables available	O	O	
C. Material identification (type / grade)	O	O	
D. Check welding equipment	O	O	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			

ANSI / SDI QA/QC — TABLE 1.4

INSPECTION OR EXECUTION TASKS DURING WELDING			
TASK	QC	QA	
A. Use of qualified welders.	O	O	
B. Control and handling of welding consumables	O	O	
C. Environmental conditions (wind speed, moisture, temperature)	O	O	
D. WPS followed	O	O	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			

ANSI / SDI QA/QC — TABLE 1.5

INSPECTION OR EXECUTION TASKS AFTER WELDING			
TASK	QC	QA	
A. Verify size and location of welds, including support, sidelap, and perimeter welds	P	P	
B. Welds meet visual acceptance criteria	P	P	
C. Verify repair activities	P	P	
D. Document acceptance or rejection of welds	P	P	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			

ANSI / SDI QA/QC — TABLE 1.6

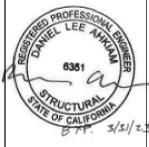
INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING			
TASK	QC	QA	
A. Manufacturer installation instructions available for mechanical fasteners	O	O	
B. Proper tools available for fastener installation	O	O	
C. Proper storage for mechanical fasteners	O	O	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			

ANSI / SDI QA/QC — TABLE 1.7

INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING			
TASK	QC	QA	
A. Fasteners are positioned as required	O	O	
B. Fasteners are installed in accordance with manufacturer's instructions	O	O	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			

ANSI / SDI QA/QC — TABLE 1.8

INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING			
TASK	QC	QA	
A. Check spacing, type, and installation of support fasteners	P	P	
B. Check spacing, type, and installation of sidelap fasteners	P	P	
C. Check spacing, type, and installation of perimeter fasteners	P	P	
D. Verify repair activities	P	P	
E. Document acceptance or rejection on mechanical fasteners	P	P	
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections. P - Perform these tasks prior to final acceptance for each item or element.			



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 GENERAL STRUCTURAL NOTES & SPECIAL INSPECTIONS

S0.2

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UNIT C

UNIT D

UNIT B

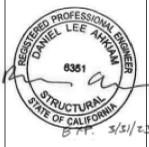
UNIT E

UNIT A

UNIT F

NOTES:

- 1. 3D VIEW SHOWN (INCLUDING, BUT NOT LIMITED TO ISOMETRICS, PERSPECTIVES, ETC.) ARE PROVIDED FOR REFERENCE PURPOSES ONLY.
- 2. IN THE EVENT OF ANY DISCREPANCY BETWEEN INFORMATION REPRESENTED BY BOTH A 3D VIEW AND BY A NON-3D VIEW WITHIN THE CONSTRUCTION DOCUMENTS, THE NON-3D VIEW SHALL GOVERN IN ALL CASES.



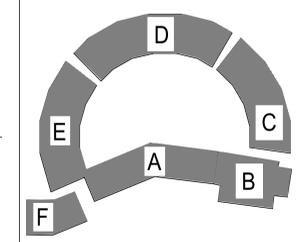
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ISOMETRIC VIEW
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KEY PLAN

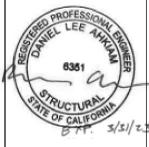


ISOMETRIC VIEW
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- ROOF FRAMING PLAN NOTES:**
- ELEVATIONS ARE BASED ON A FLOOR DATUM OF 0'-0" UNO.
 - RTU SIZES AND LOCATIONS SHOWN ON PLAN ARE ONLY SCHEMATIC. CONTRACTOR SHALL VERIFY AND COORDINATE FINAL LOCATIONS/PLAN DIMENSIONS, WEIGHTS AND ROOF OPENING SIZES/LOCATIONS FOR ALL MECHANICAL UNITS/EQUIPMENT.
 - FOR ELEVATIONS, WALL SECTIONS AND DIMENSIONS NOT SHOWN SEE ARCHITECTURAL DRAWINGS.
 - (E) STEEL FRAMING LOCATION, SIZES AND ELEVATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL (E) BEAMS TO SUPPORTING NEW POST ABOVE.
 - ALL (N) STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED PER GENERAL NOTES.



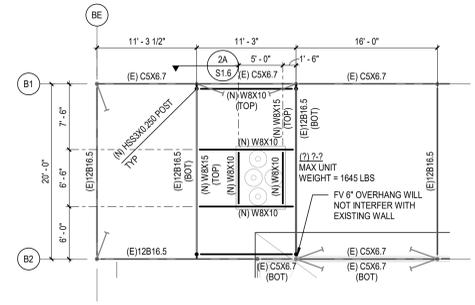
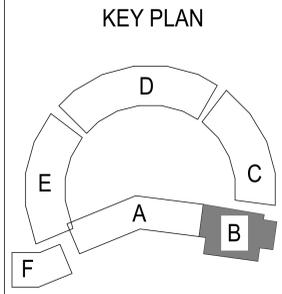
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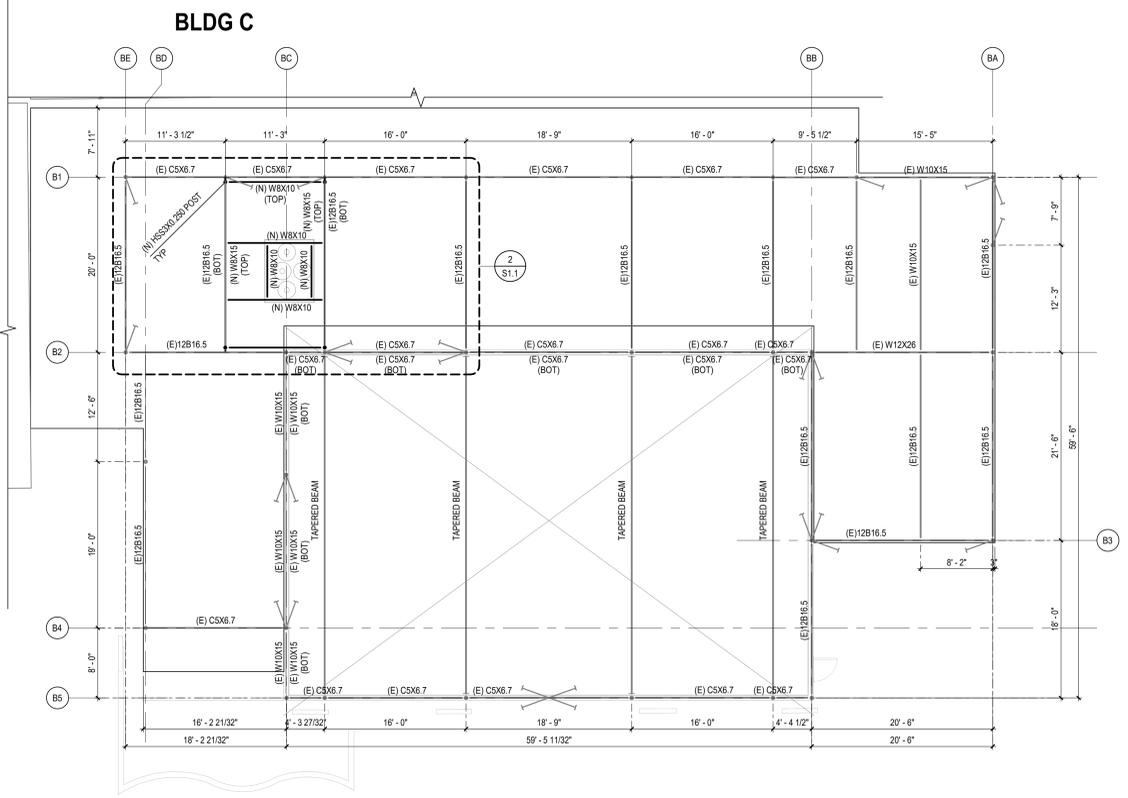
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ROOF FRAMING
 PLAN - UNIT B

S1.1



ROOF FRAMING PLAN - UNIT B
 SCALE: 1/8" = 1'-0"

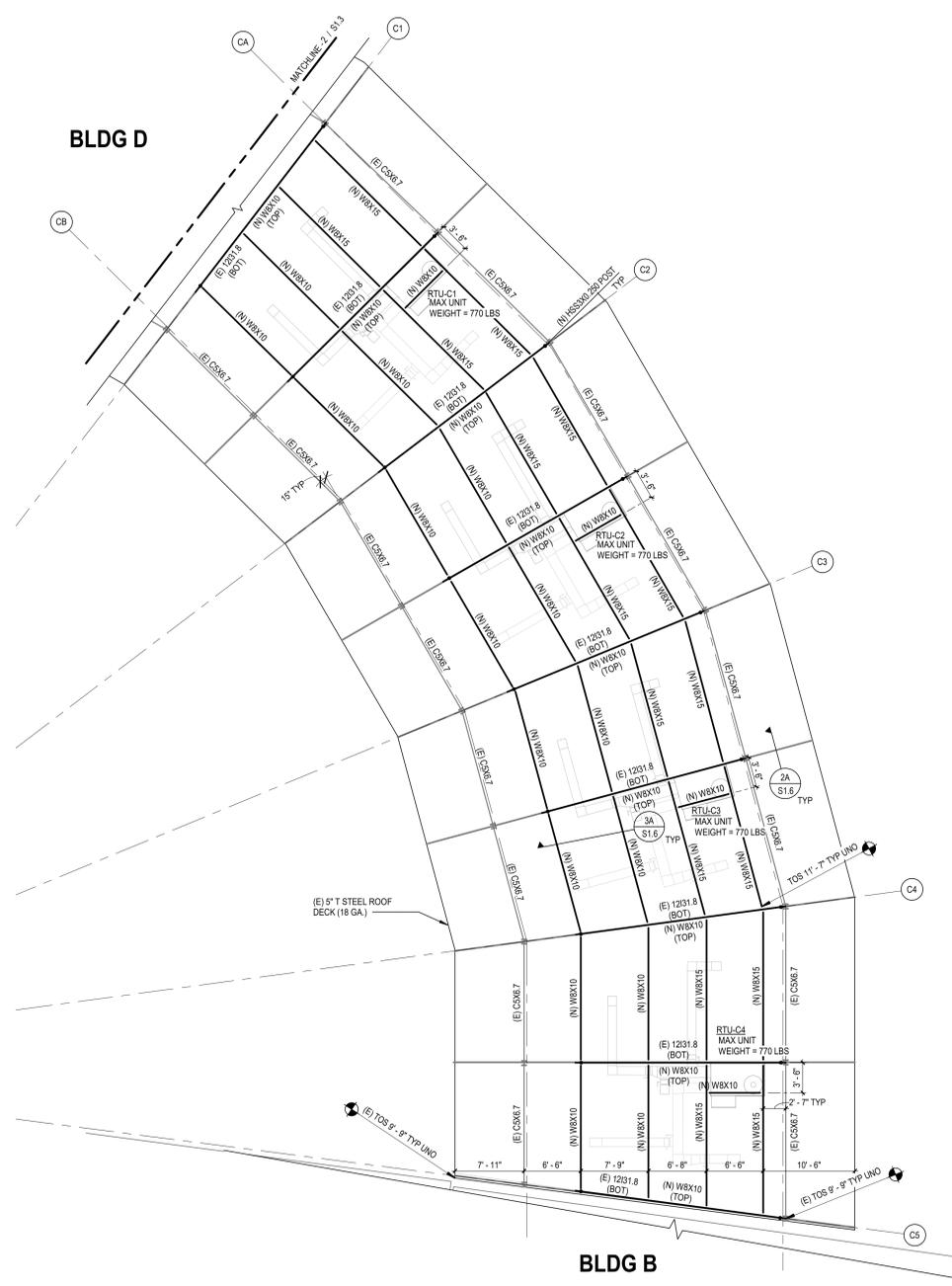


ROOF FRAMING PLAN - UNIT B
 SCALE: 1/8" = 1'-0"

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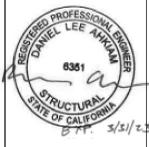
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ROOF FRAMING PLAN - UNIT C
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. ELEVATIONS ARE BASED ON A FLOOR DATUM OF 0'-0" UNO.
2. RTU SIZES AND LOCATIONS SHOWN ON PLAN ARE ONLY SCHEMATIC. CONTRACTOR SHALL VERIFY AND COORDINATE FINAL LOCATIONS/PLAN DIMENSIONS, WEIGHTS AND ROOF OPENING SIZES/LOCATIONS FOR ALL MECHANICAL UNITS/EQUIPMENT.
3. FOR ELEVATIONS, WALL SECTIONS AND DIMENSIONS NOT SHOWN SEE ARCHITECTURAL DRAWINGS.
4. (E) STEEL FRAMING LOCATION, SIZES AND ELEVATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL (E) BEAMS TO SUPPORTING NEW POST ABOVE.
5. ALL (N) STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED PER GENERAL NOTES.

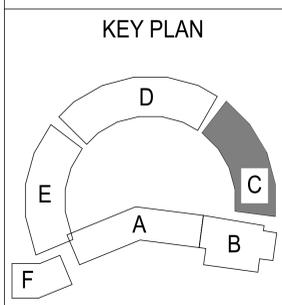


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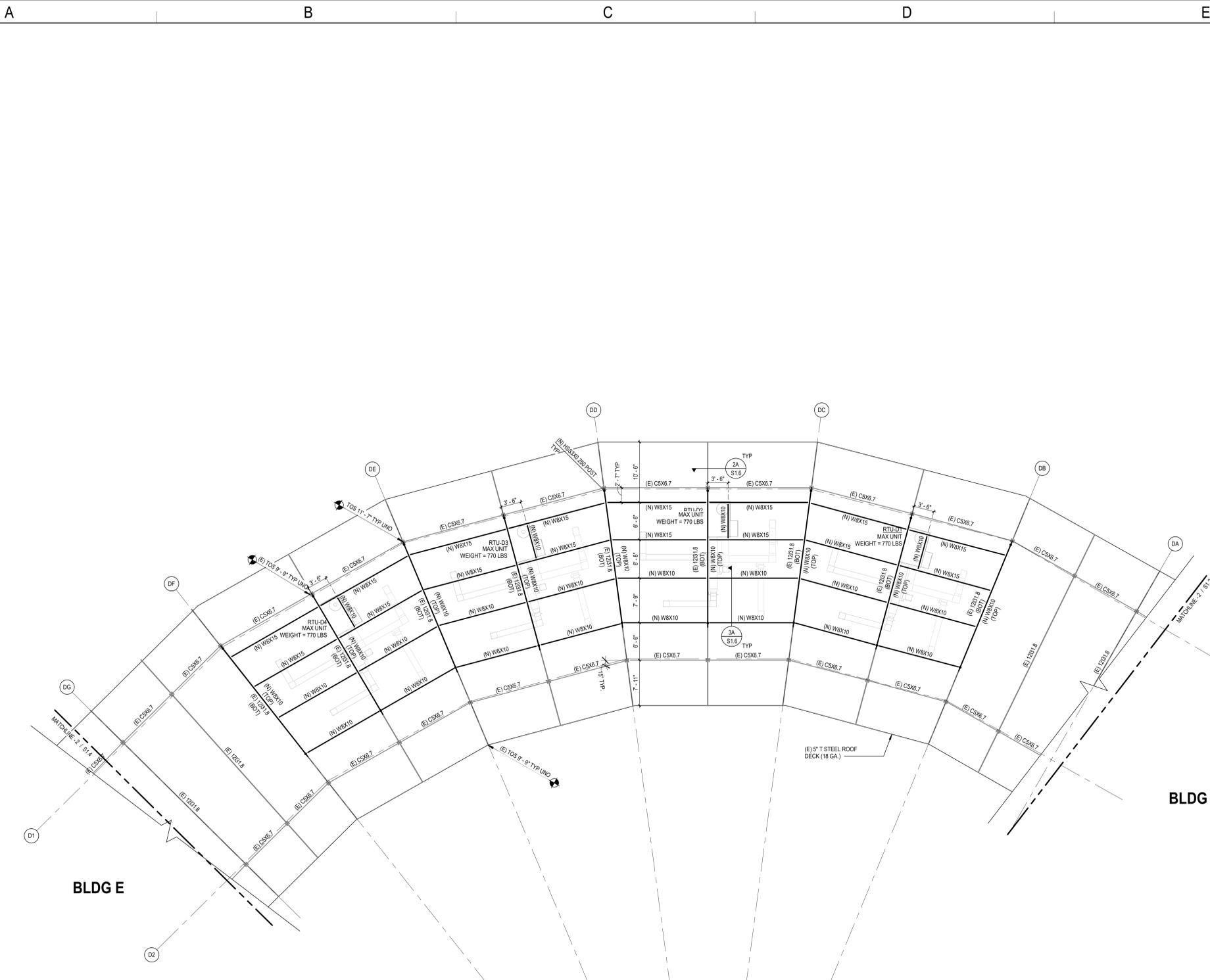
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ROOF FRAMING PLAN - UNIT C

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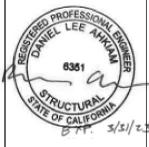
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ROOF FRAMING PLAN - UNIT D
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES:

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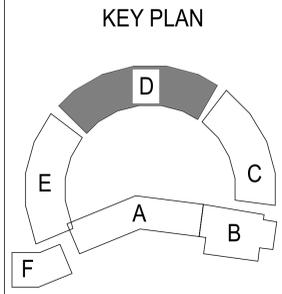


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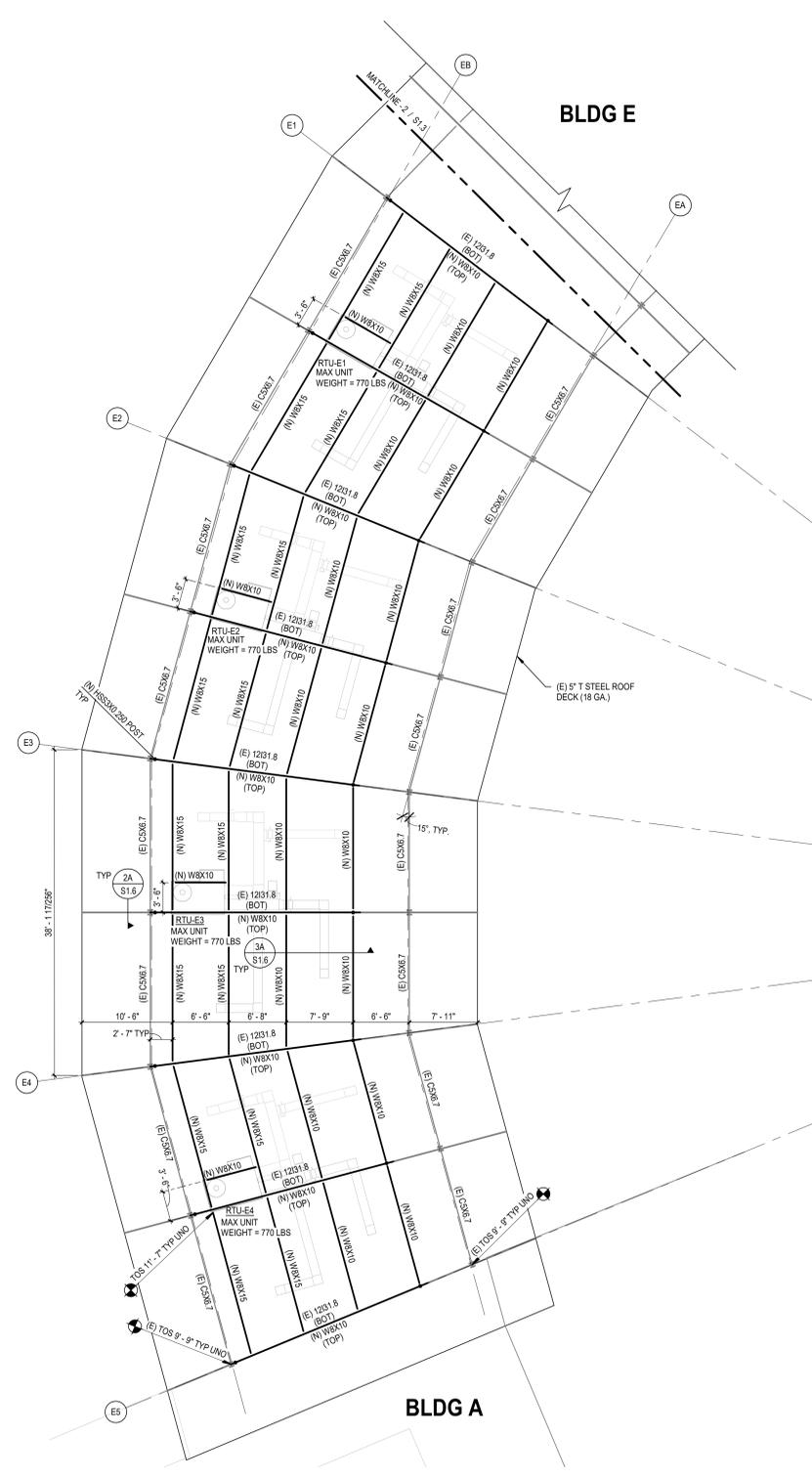
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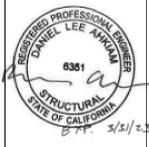
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 **ROOF FRAMING PLAN - UNIT E**
SCALE: 1/8" = 1'-0"

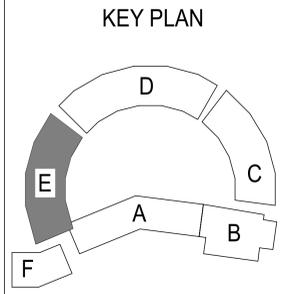
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4. (E) STEEL FRAMING LOCATION, SIZES AND ELEVATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL (E) BEAMS TO SUPPORTING NEW POST ABOVE.
5. ALL (N) STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED PER GENERAL NOTES.



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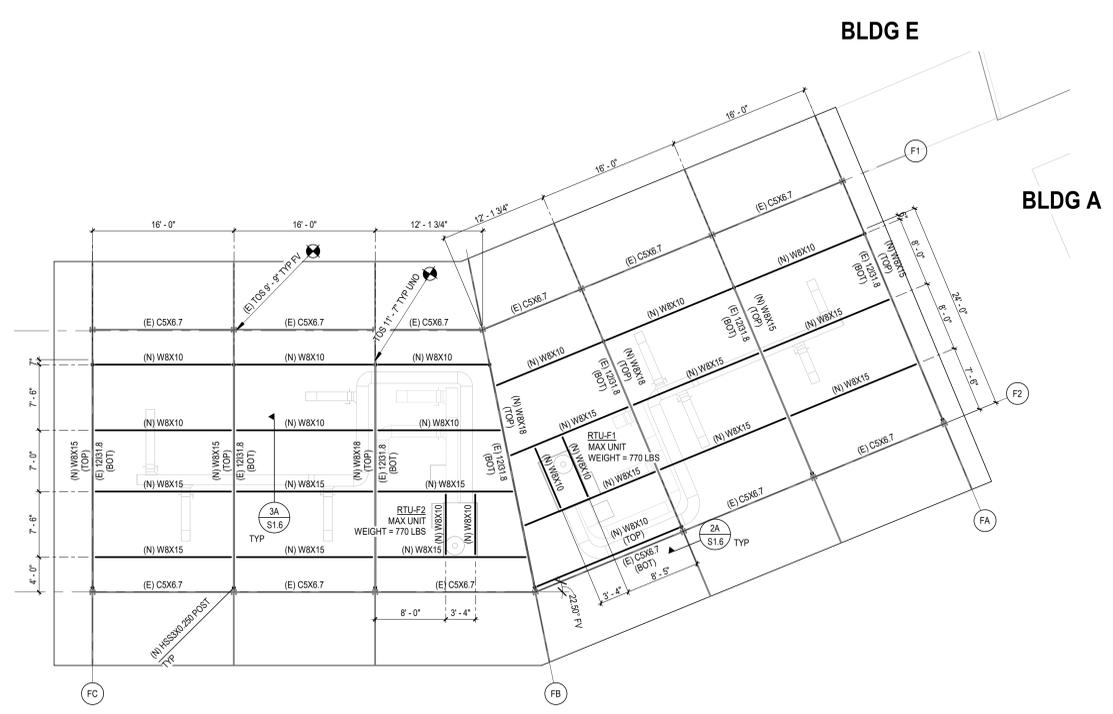
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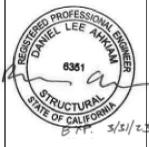
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ROOF FRAMING PLAN - UNIT F
SCALE: 1/8" = 1'-0"

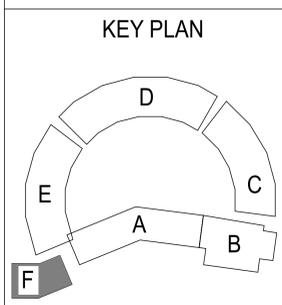
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- FOR ELEVATIONS, WALL SECTIONS AND DIMENSIONS NOT SHOWN SEE ARCHITECTURAL DRAWINGS.
- (E) STEEL FRAMING LOCATION, SIZES AND ELEVATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL (E) BEAMS TO SUPPORTING NEW POST ABOVE.
- ALL (N) STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED PER GENERAL NOTES.



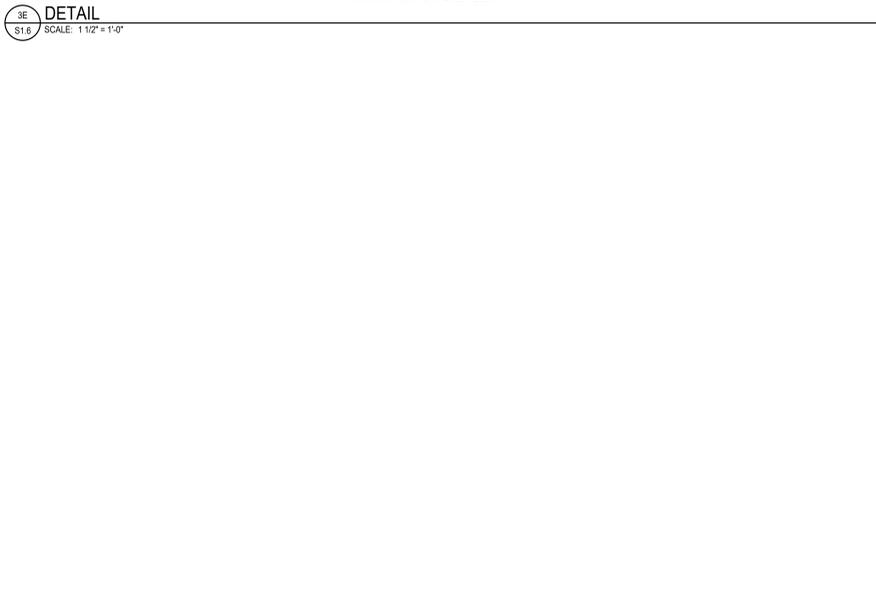
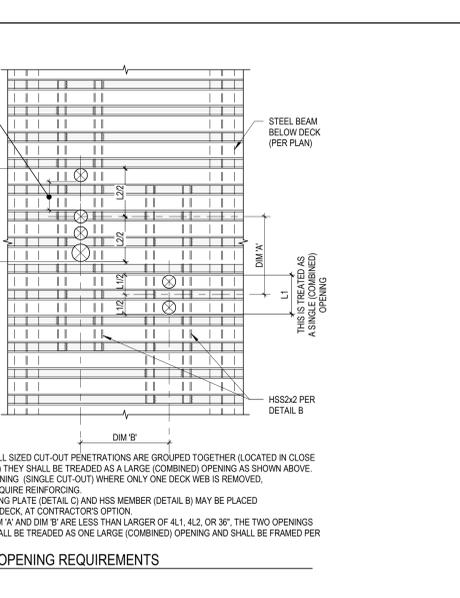
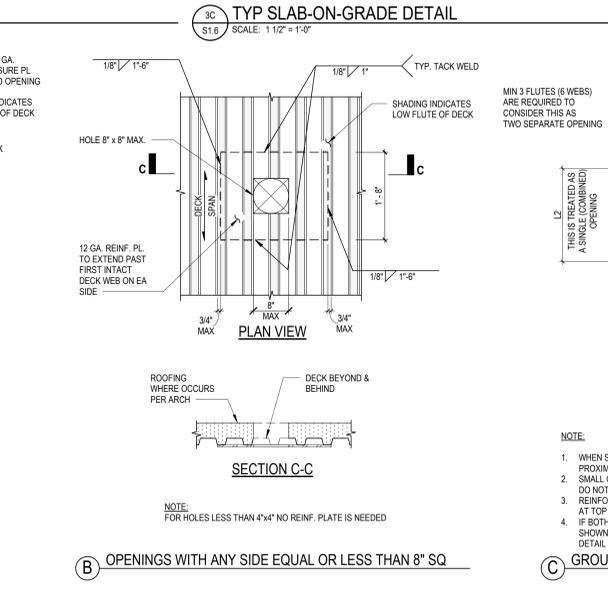
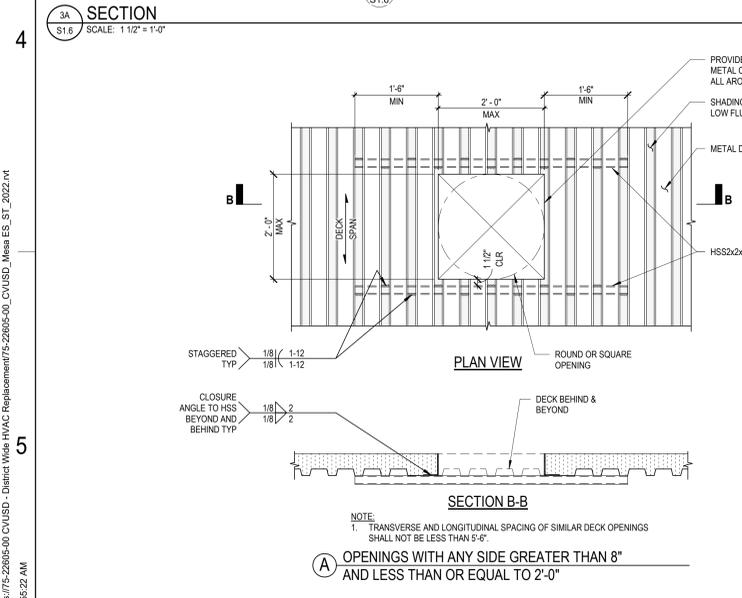
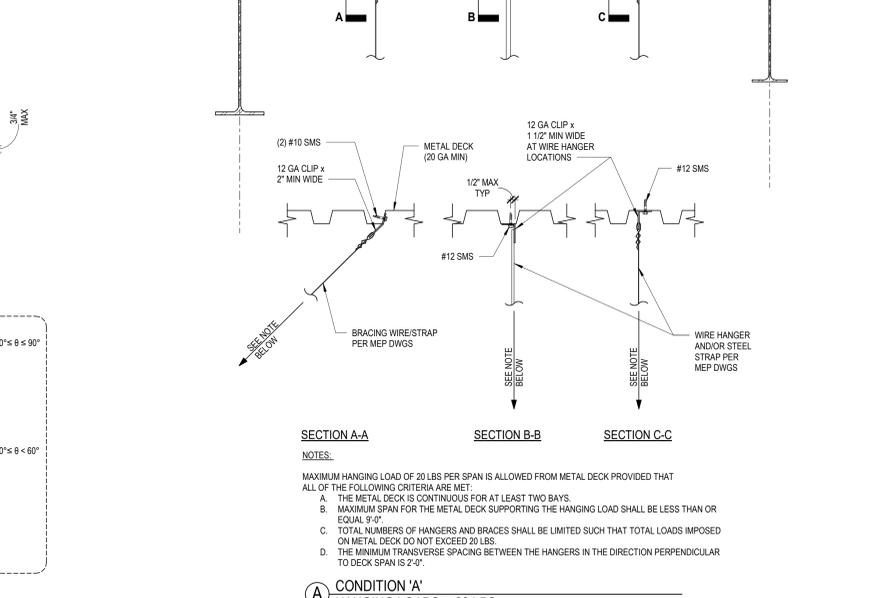
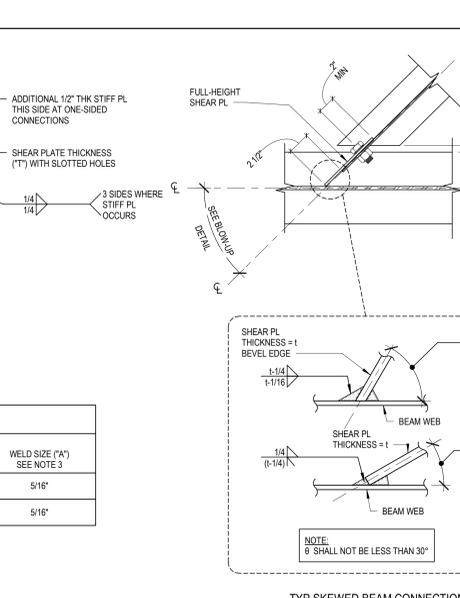
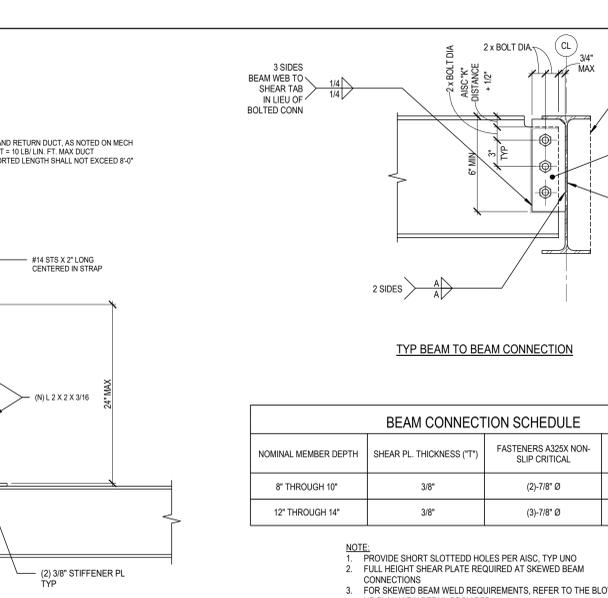
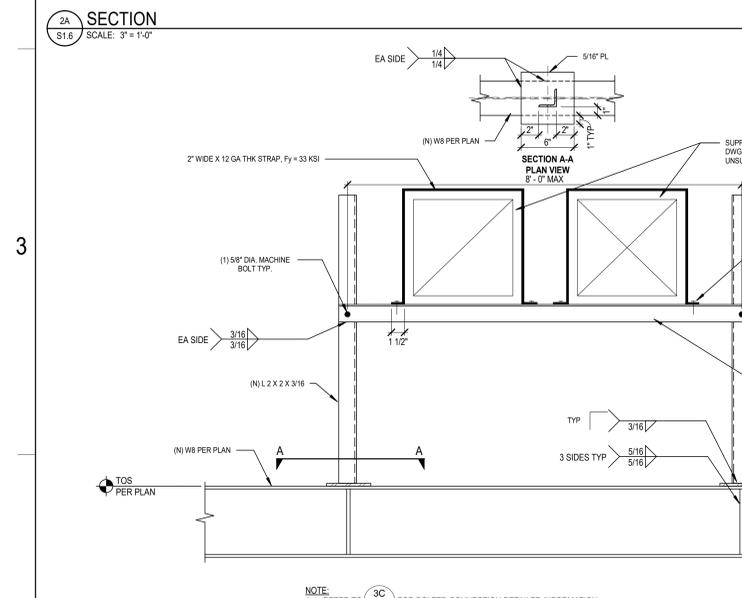
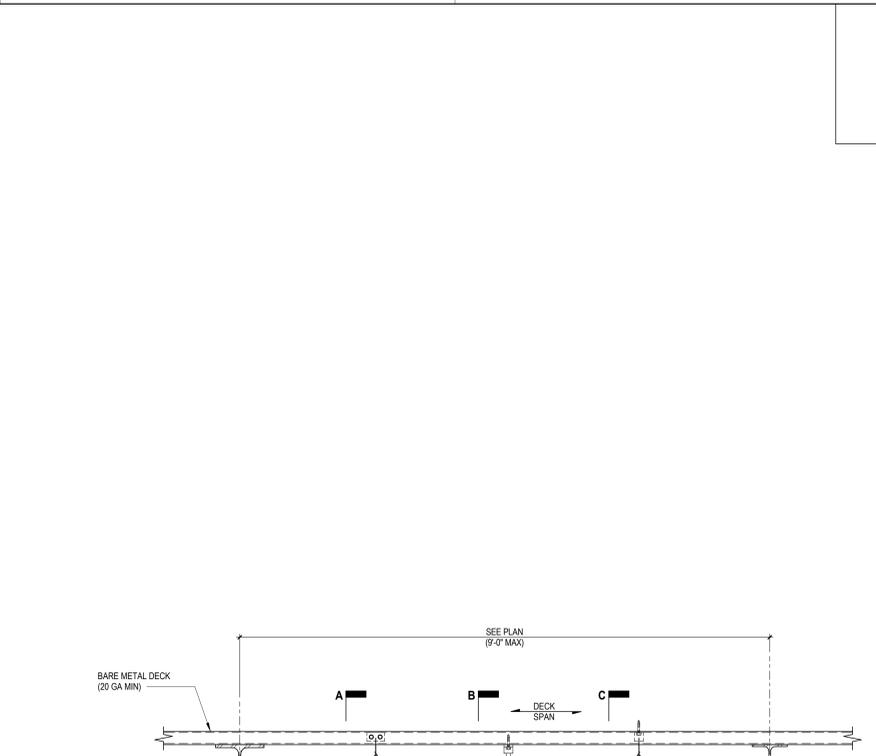
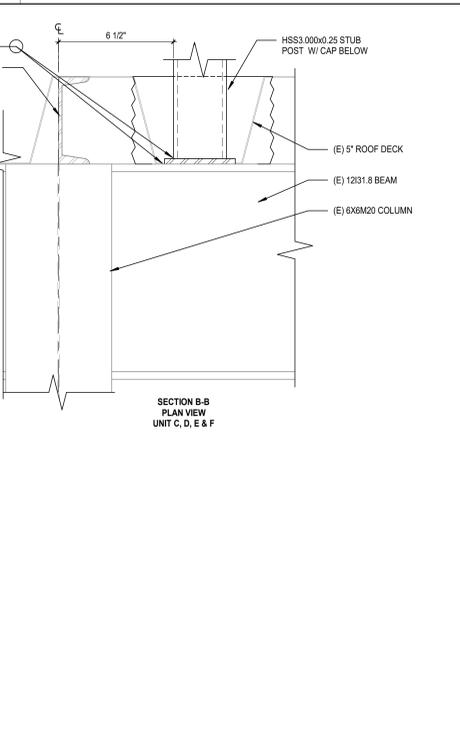
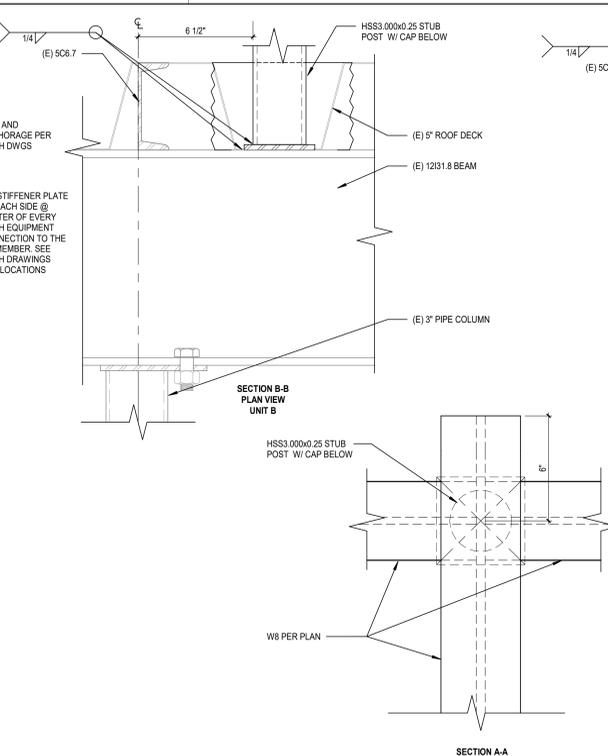
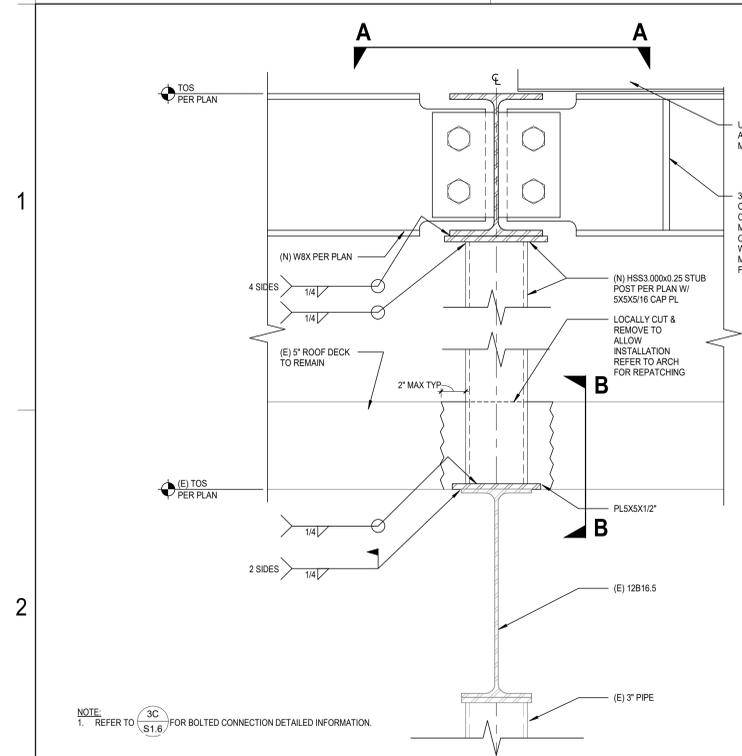
MESA ELEMENTARY SCHOOL
COVID 19 - COVINA VALLEY DISTRICT HVAC REPLACEMENT
409 S. BARRANCA ST. WEST COVINA, CA 91791

100%
CONSTRUCTION
DOCUMENTS
11/04/2022
REVISIONS



75-22605-00
DSA A#03-122232
DSA FILE #: 19-25
**ROOF FRAMING
PLAN - UNIT F**

S1.5



3A SECTION SCALE: 1 1/2" = 1'-0"

3C TYP SLAB-ON-GRADE DETAIL SCALE: 1 1/2" = 1'-0"

3E DETAIL SCALE: 1 1/2" = 1'-0"

SECTION A-A, B-B, C-C HANGING LOADS ≤ 20 LBS

3A TYPICAL METAL DECK REINF AT (N) OPENINGS SCALE: 3/4" = 1'-0"

3C OPENINGS WITH ANY SIDE EQUAL OR LESS THAN 8" Q

3E GROUP OPENING REQUIREMENTS

SECTION A-A, B-B, C-C HANGING LOADS ≤ 20 LBS

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ABBREVIATIONS

ABBREVIATIONS

SHEET INDEX

Table of abbreviations for mechanical, electrical, and plumbing symbols, organized in three columns.

Table of sheet index numbers and titles, such as M0.1 MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES.

Table of sheet index numbers and titles, such as M5.1 CONTROLS DIAGRAMS, M7.1 MECHANICAL DETAILS.

Table of sheet index numbers and titles, such as M8.1 MECHANICAL SCHEDULES, MP1.1 MECHANICAL PLUMBING SITE PLAN.

Table of sheet index numbers and titles, such as M9.1 MECHANICAL SCHEDULES, MP1.1 MECHANICAL PLUMBING SITE PLAN.

Table of sheet index numbers and titles, such as M9.1 MECHANICAL SCHEDULES, MP1.1 MECHANICAL PLUMBING SITE PLAN.

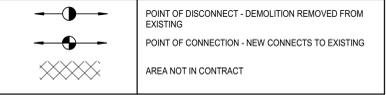
Table of sheet index numbers and titles, such as M9.1 MECHANICAL SCHEDULES, MP1.1 MECHANICAL PLUMBING SITE PLAN.

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Table of sheet index numbers and titles, such as M9.1 MECHANICAL SCHEDULES, MP1.1 MECHANICAL PLUMBING SITE PLAN.

GENERAL SYMBOLS



GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID... 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION...

GENERAL HVAC NOTES

- 1 CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT... 2 ALL SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.

HVAC SYMBOLS

Table of HVAC symbols including schematic, 3D, and description for various components like diffusers, registers, and dampers.

PIPING VALVES AND FITTINGS

Table of piping valves and fittings symbols including schematic, 3D, and description for various types of valves and fittings.

EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS...

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 8 SHALL BE AS FOLLOWS:
AN AABC AGENCY SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2019 NONRESIDENTIAL COMPLIANCE MANUAL...

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY
ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD.
PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TEMPERATURE BETWEEN 60°F AND 105°F...



Mesa Elementary School
COVINA VALLEY USD
400 S BARBARCA AVE, WEST COVINA, CA 91791

100% CONSTRUCTION DOCUMENTS
11/04/2022
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MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES

M0.1

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NOTE
ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 1 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

A. GENERAL INFORMATION

01 Project Location (City)	West Covina	04 Total Conditioned Floor Area	17040
02 Climate Zone	10	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
<input type="checkbox"/> Office (B)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (I)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input type="checkbox"/> Other (write in)	See Table J

B. PROJECT SCOPE
 This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> System Piping	<input type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number: Registration Date/Time: Registration Provider: Energysoft
 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-08-11 14:41:53
 Schema Version: rev 20200601

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 4 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
RTU-E1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	24.15	23.5	31.67	28
RTU-E2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-E3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-E4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.67	23	31.67	27.56
RTU-F1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	14.47	24.5	0	27.82	27.5	34.46	33.21
RTU-F2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	14.47	24.5	0	28.3	28	34.7	33.65

¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are exempted.
² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
FCU/CU-B1	>=135,000 and <240,000		COP	3.2	3.5	EER	10.6	12
RTU-C1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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 Schema Version: rev 20200601

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 7 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-C3	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

System Name:	RTU-C4	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 2 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

C. COMPLIANCE RESULTS
 Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09							
System Summary §110.2, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(i)	AND	Cooling Towers §110.2(e)2	Compliance Results
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	(See Table N)	(See Table O)	(See Table P)	(See Table Q)	(See Table R)	(See Table S)	(See Table T)	COMPLIES
Mandatory Measures Compliance (See Table Q for Details)															

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

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

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 5 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
RTU-C2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-C3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-C4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-F1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-F2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3

G. PUMPS
 This section does not apply to this project.

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 8 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-D2	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

System Name:	RTU-D3	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 3 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(i) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 / Title 20	Smallest Size Available ¹ §140.4(a)	Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4(a)(8)		Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4(a)(8)		Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4(a)(8)		Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4(a)(8)	
				Heating Output ^{2,3}		Cooling Output ^{2,3}		Load Calculations ^{3,4}			
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)	
FCU/CU-B1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	94.83	160.35	0	140.04	118.37	177.66	149.2	
RTU-C1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	24.15	23.5	31.67	28	
RTU-C2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7	
RTU-C3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7	
RTU-C4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.67	23	31.67	27.56	
RTU-D1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.57	23	29.7	28.12	
RTU-D2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12	
RTU-D3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12	
RTU-D4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12	

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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 Schema Version: rev 20200601

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 6 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

H. FAN SYSTEMS & AIR ECONOMIZERS
 This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name:	FCU/CU-B1	Economizer:	NA: Special OA Filtration	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	4472	BHP	0.91		
Total System Design Supply Airflow (CFM):			4472	Total System Design (BHP):		Maximum System Fan Power (BHP):	

System Name:	RTU-C1	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

Registration Number: Registration Date/Time: Registration Provider: Energysoft
 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-08-11 14:41:53
 Schema Version: rev 20200601

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-4
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

Project Name: CVUSD Mesa Report Page: (Page 9 of 36)
 Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-E1	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1600	BHP	0.91		
Total System Design Supply Airflow (CFM):			1600	Total System Design (BHP):		Maximum System Fan Power (BHP):	

System Name:	RTU-E2	Economizer:	NA: <=54 kBtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume

1

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 28 of 36)
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L. DISTRIBUTION (DUCTWORK and PIPING)
In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)(18) or if the roof has fixed vents or openings to the outside/unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces

15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16		The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17	Yes	Duct system shall be sealed in accordance with the California Mechanical Code		

M. COOLING TOWERS
This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Field Inspector	
	Pass	Fail
NRCA-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

2

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

3

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 31 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-05-A - Air Economizer Controls	RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

4

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 34 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-16-A Supply Air Temperature Reset Controls	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

5

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 29 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 32 of 36)
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O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.16(3)) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 35 of 36)
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O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-18-A Energy Management Control Systems	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	M-Sheets

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 30 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 33 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-11-A Automatic Demand Shed Controls	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1 CARRIER 4-TON; RTU-F2 CARRIER 4-TON;	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: CVUSD Mesa Report Page: (Page 36 of 36)
Project Address: 409 S Barranca Ave Date Prepared: 8/11/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.
Documentation Author Name: Abhijit Rege
Signature Date: 2022-08-11
Company: DLR Group
Address: 9730 SAKIN ECK 4 7553 2772 ADOE 971 AZD4-7420-7AD7-DA3E-A598-8F3B-18A3-888E-17FE
City/State/Zip: (949)-701-8533

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: TONG FANG ZHAO
Signature Date: 2022-08-11
Company: DLR GROUP
Address: 700 FLOWER STREET
City/State/Zip: LOS ANGELES CA 90017

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energysoft
Report Generated: 2022-08-11 14:41:53

Audodesk Docs/75-22605-00_CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Mesa_ES_MEP_2022.rvt
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100% CONSTRUCTION DOCUMENTS
11/04/2022 REVISIONS
Mesa Elementary School
COVINA VALLEY USD
409 S BARRANCA AVE, WEST COVINA, CA 91791

75-22605-00
TITLE 24 COMPLIANCE

M0.5

A

B

C

D

E

F

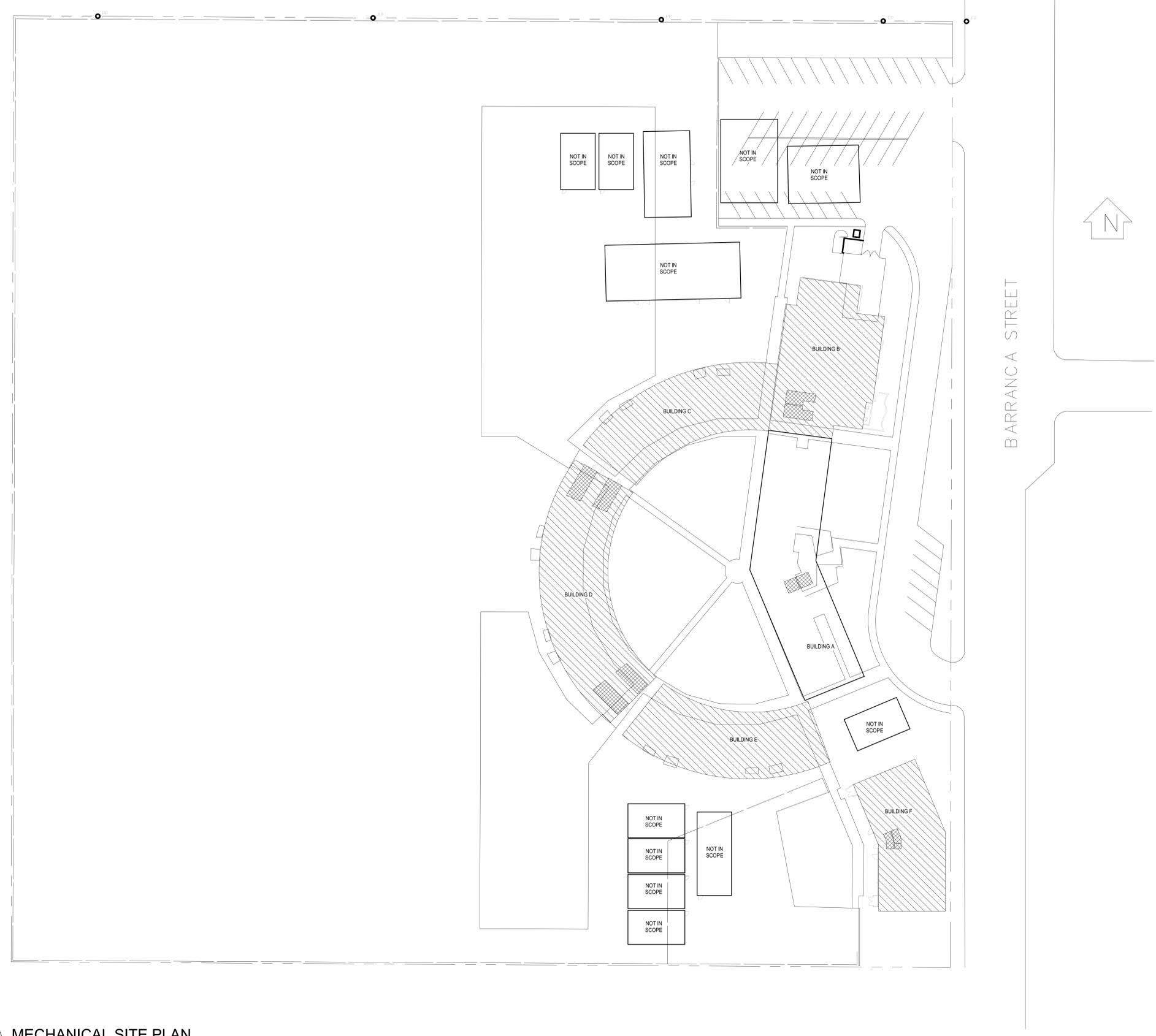
1

2

3

4

5



GENERAL NOTES

- 1 MPR SCOPE IS LIMITED TO MPR AND THE RELATED ROOMS SERVED BY UNITS IN THE EXISTING MECHANICAL ROOM. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- 2 MPR - FOR DIFFUSERS/GRILLES LOCATION, CONTRACTOR TO VERIFY ON SITE. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.
- 3 MPR - PROVIDE PRE-READ TAB PRIOR TO CONSTRUCTION. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.
- 4

SITE LEGEND

-  EXISTING BUILDING NOT IN SCOPE
-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



Mesa Elementary School
COVINA VALLEY USD
408 S BARRANCA AVE, WEST COVINA, CA 91791

100%
CONSTRUCTION
DOCUMENTS
11/04/2022
REVISIONS

75-22605-00

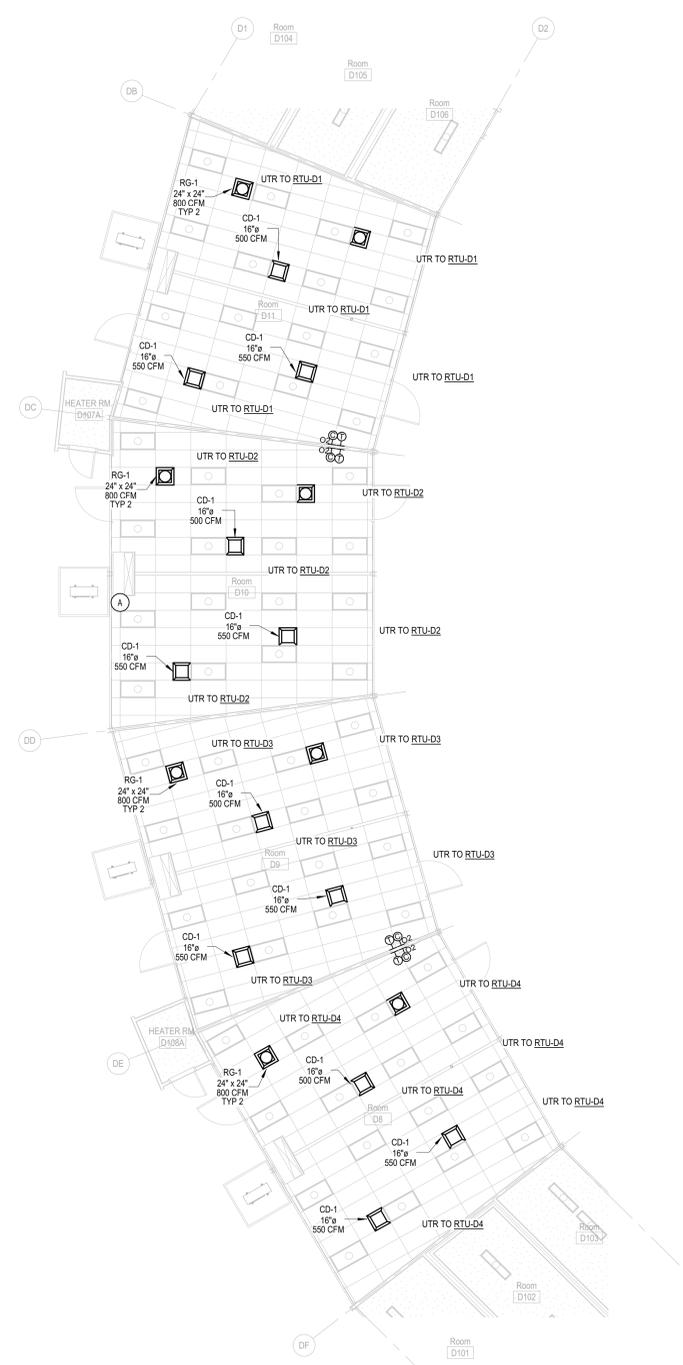
MECHANICAL
SITE PLAN

M1.1

 **MECHANICAL SITE PLAN**
SCALE: 1" = 30'-0"

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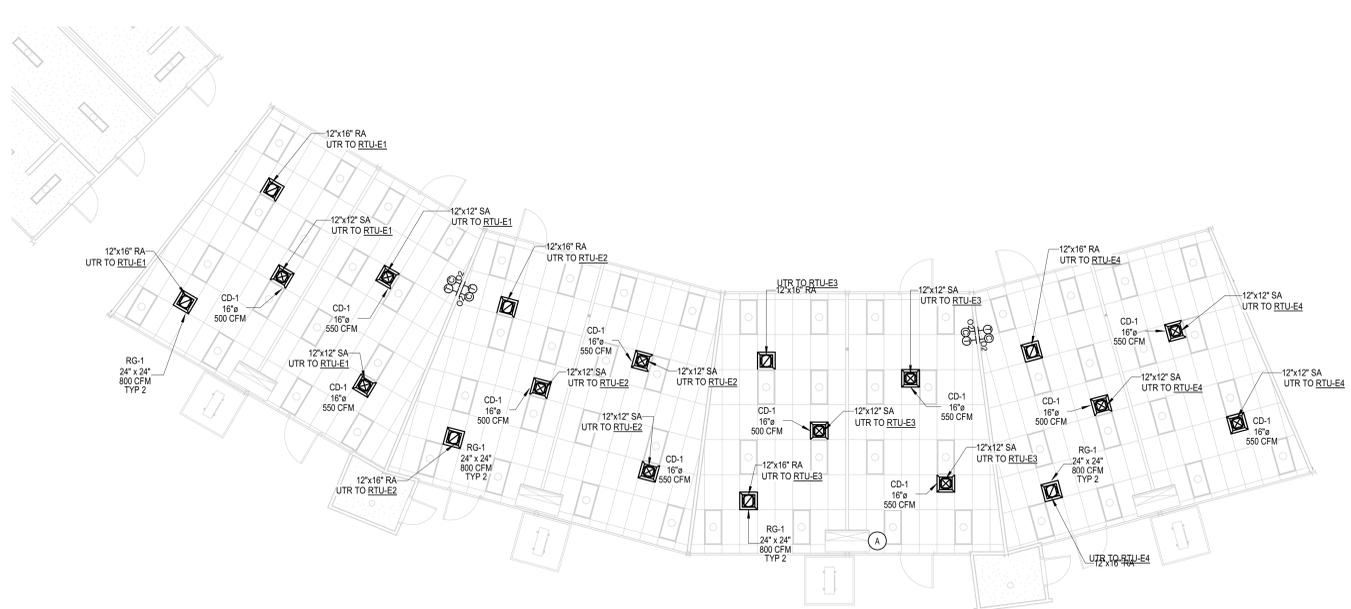
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BUILDING D MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING C MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING E MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

DEMO NOTES

A. DEMOLISH EXISTING OUTDOOR CONDENSING UNIT ON ROOF AND INDOOR FANCOIL UNITS, ALONG WITH RELATED CONCRETE PASS, PIPING, CONDUIT, FENCE, SUPPORTS AND OTHER APPURTENANCES. REFER TO ARCH PLANS OR SPECS FOR FILLING HOLES AND MATCHING WALL. CONTRACTOR TO VERIFY LOCATIONS ON SITE. TYP.

GENERAL NOTES

A. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
B. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES REFER TO RCP.

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COVINA VALLEY USD
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75-22605-00
BUILDINGS C, D AND E MECHANICAL FLOOR PLANS

M1.1C

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A

B

C

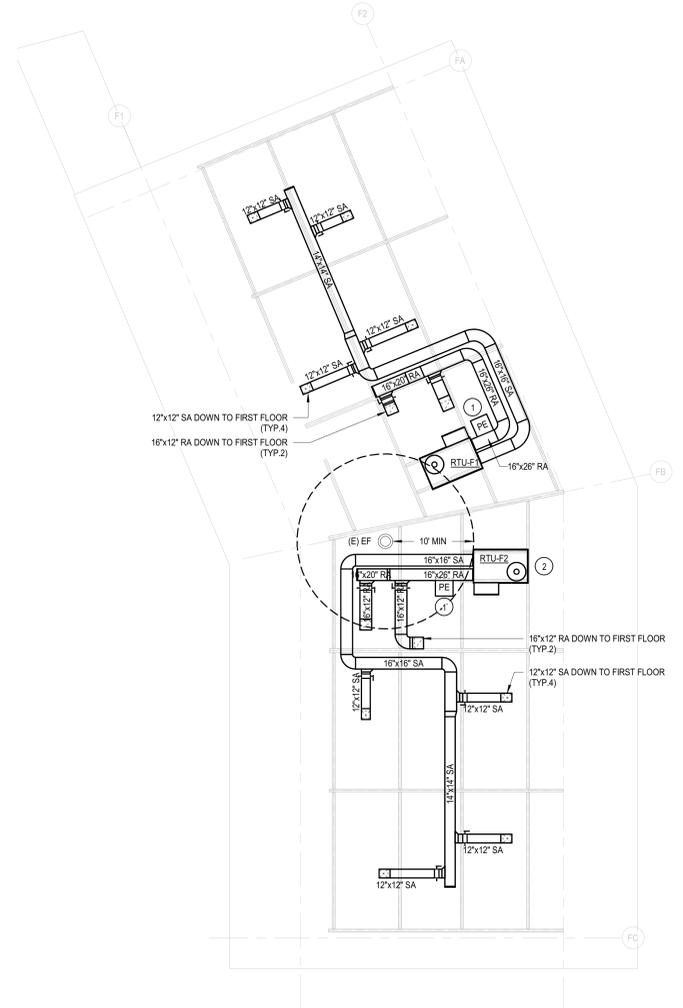
D

E

F



BUILDING B MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"



BUILDING F MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

- SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- PROVIDE LINER TO DUCTWORK FOR 10 FEET FROM RTU.
- NEW OPENINGS FOR SUPPLY AND RETURN DUCTS SHOULD BE MADE BETWEEN THE ROOF JOISTS. DO NOT CUT THE JOISTS.

KEY NOTES

- PROVIDE POWER EXHAUST ON RETURN DUCT WITH LEG LENGTH TO FIT THE ROOF SLOPE. CONTRACTOR TO VERIFY ON SITE. TYP.
- RTU TO BE 10'-0" MIN. FROM ROOF EDGE. CONTRACTOR TO VERIFY ON SITE. TYP.



Mesa Elementary School
COVINA VALLEY USD
408 S BARBARCA AVE, WEST COVINA, CA 91791

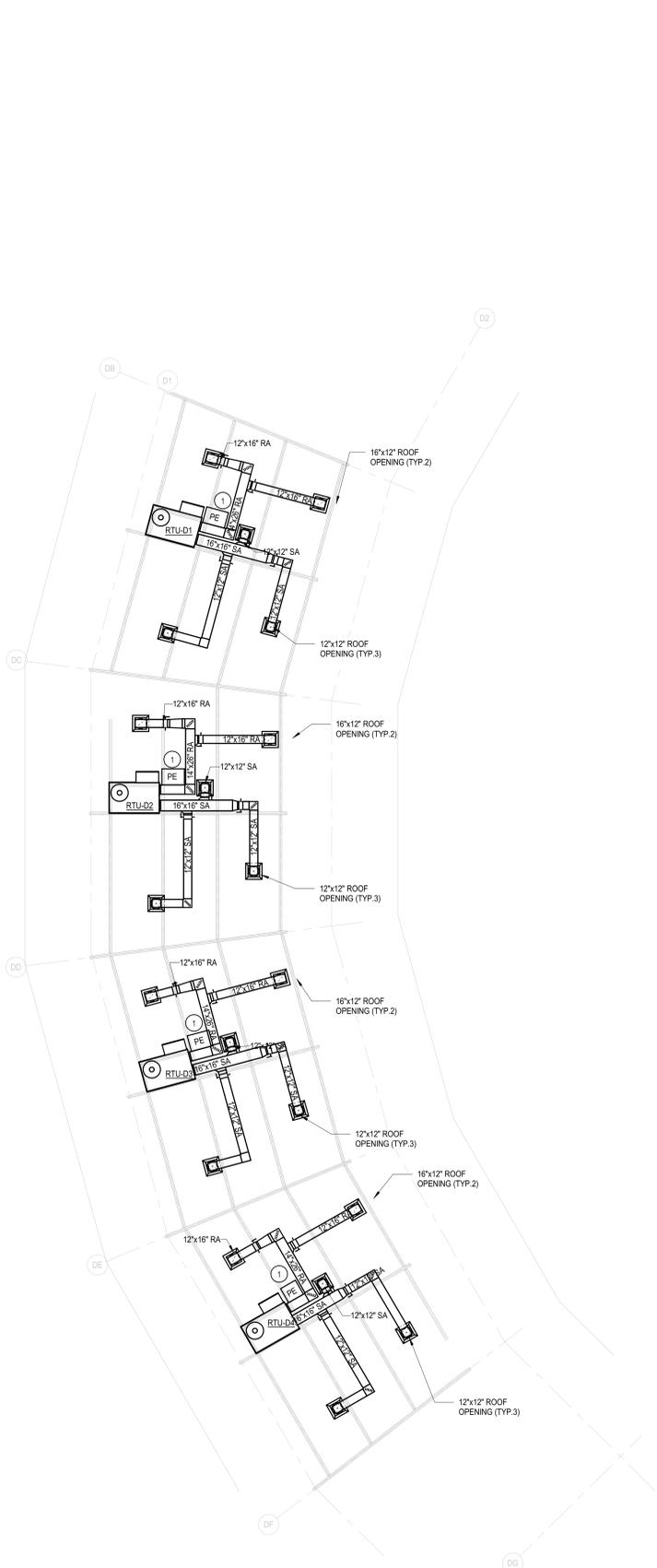
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CONSTRUCTION
DOCUMENTS
11/04/2022
REVISIONS

75-22605-00

BUILDINGS B AND
F MECHANICAL
ROOF PLANS

M3.1B

1
2
3
4
5



BUILDING D MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"



BUILDING E MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

- GENERAL HVAC NOTES**
1. INSTALL NEW RTU ON PRE-FAB CURB.
 2. NEW OPENINGS FOR SUPPLY AND RETURN DUCTS SHOULD BE MADE BETWEEN THE ROOF JOISTS. DO NOT CUT THE JOISTS.
 3. PROVIDE FLEXIBLE DUCT AT UNIT CONNECTION FOR SA & RA DUCT.
- KEY NOTES**
1. PROVIDE POWER EXHAUST ON RETURN DUCT WITH LEG LENGTH TO FIT THE ROOF SLOPE. CONTRACTOR TO VERIFY ON SITE. TYP.

DLR Group
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REGISTERED PROFESSIONAL MECHANICAL ENGINEER
No. M32891
12/21/22
STATE OF CALIFORNIA

USG

Mesa Elementary School
COVINA VALLEY USD
408 S BARBARCA AVE, WEST COVINA, CA 91791

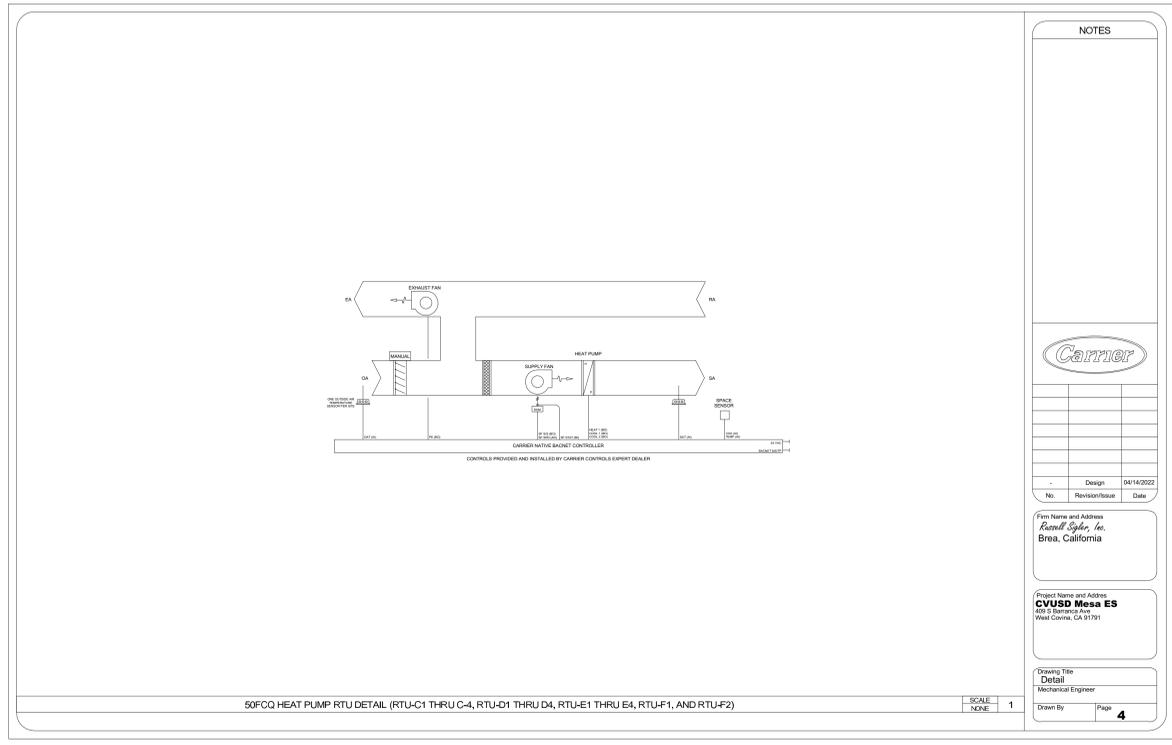
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CONSTRUCTION
DOCUMENTS
11/04/2022
REVISIONS

75-22605-00

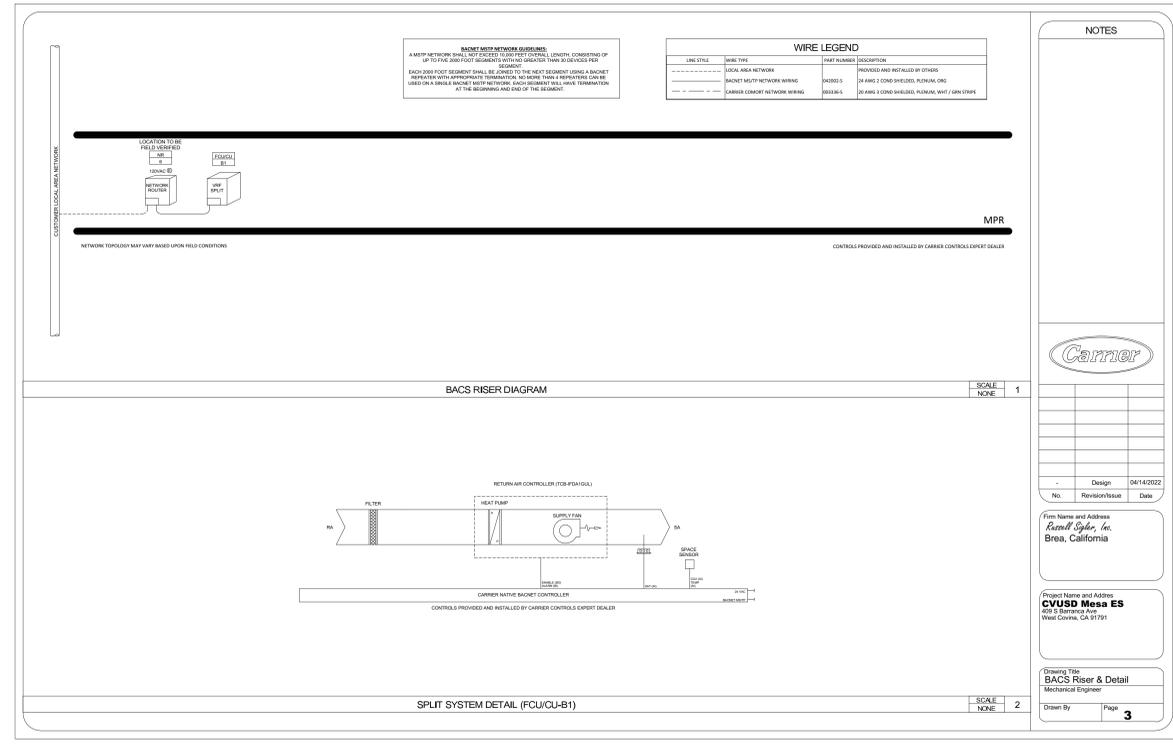
BUILDINGS C, D
AND E
MECHANICAL
ROOF PLAN

M3.1C

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3 RTU DIAGRAM
MS.1 NO SCALE



1 BACS RISER AND DETAIL
MS.1 NO SCALE

SEQUENCES OF OPERATION

HEAT PUMP RTU CONTROLLER (RTU-C1 THRU C-4, RTU-D1 THRU D-4, RTU-E1 THRU E-4, RTU-F1, AND RTU-F2)

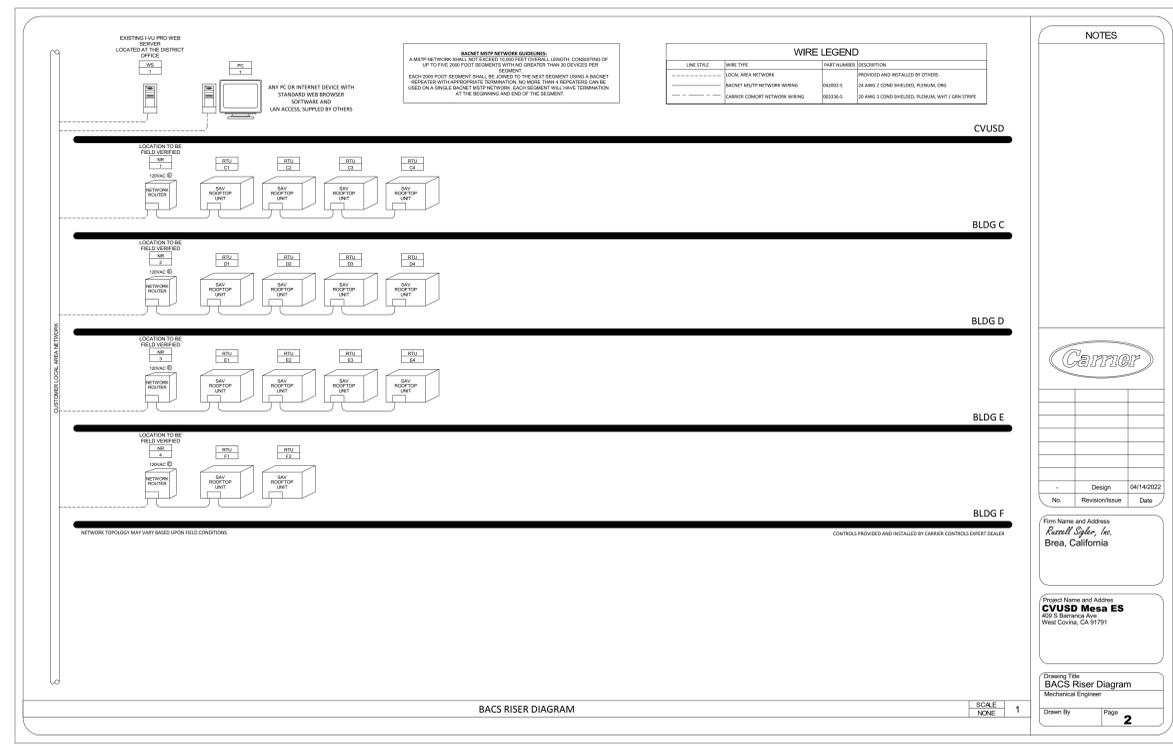
INDOOR FAN
THE FAN OPERATES AT A VARIABLE SPEED TO MEET THE LOAD CONDITIONS AND SAT SAFETY REQUIREMENTS TO PROVIDE MAXIMUM ENERGY SAVINGS BY MINIMIZING FAN HORSEPOWER CONSUMPTION. FAN SPEED IS NOT CONTROLLED BY STATIC PRESSURE.

HEATING MODE
WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL ENABLE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

COOLING MODE
WHEN SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

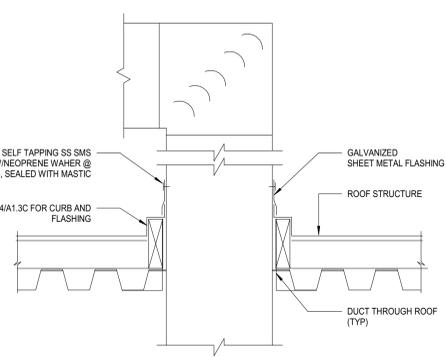
CO2 CONTROL
UNIT SHALL MONITOR SPACE CO2 WHEN THE SUPPLY FAN IS ENERGIZED. WHEN CO2 IS ABOVE SETPOINT OF 1000 PPM, AN ALARM SHALL BE ENABLED THROUGH THE EMS.

POWER EXHAUST
THE EXHAUST FAN SHALL RUN WHEN THE UNIT IS OCCUPIED.

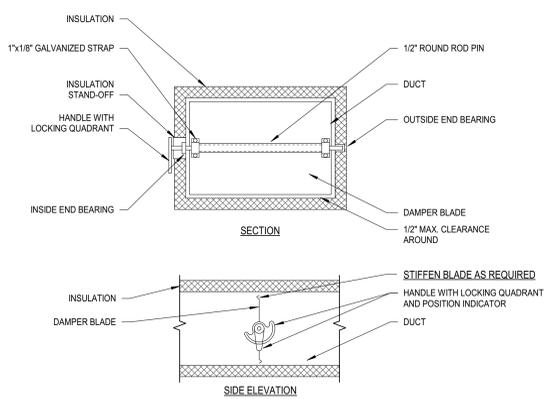


2 BACS RISER DIAGRAM
MS.1 NO SCALE

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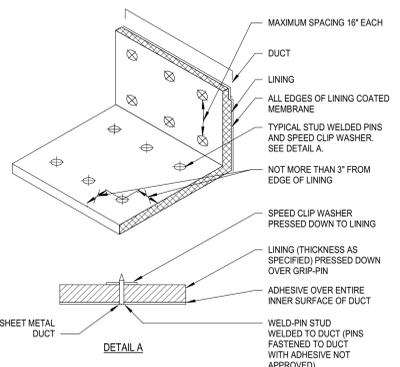


1 DUCT THRU ROOF PENETRATION
M7.1 NO SCALE

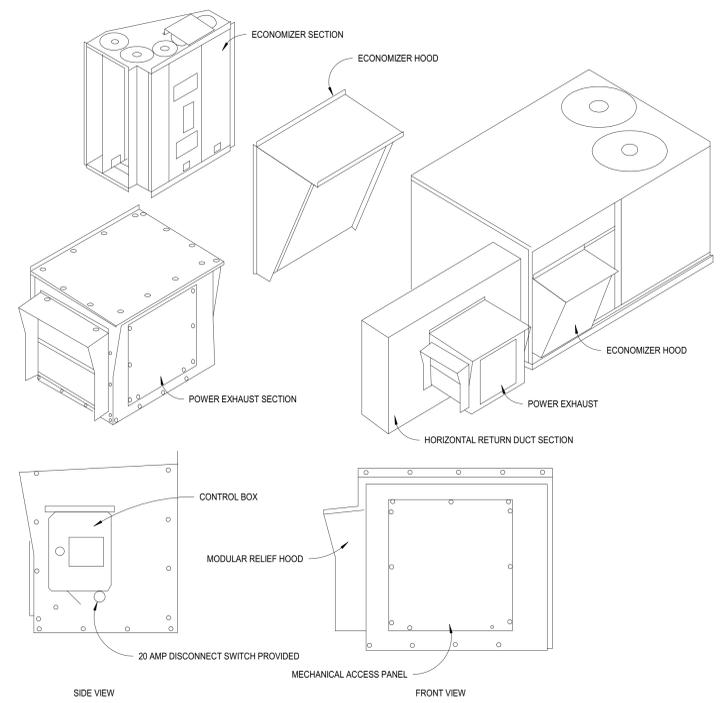


- DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
- DETAIL SHOWS SINGLE BLADE DAMPER. MULTI-BLADE DAMPERS INSTALLATIONS SHALL BE SIMILAR.
- LOCK DAMPER DURING AIR BALANCE AND MARK QUADRANT TO RECORD AIR BALANCED DAMPER POSITION.
- PROVIDE "HAT" SECTION AT QUADRANT FOR ALL EXTERNALLY INSULATED DUCTWORK.
- PROVIDE FLUORESCENT COLORED MARKERS ON CEILING AT ALL VOLUME DAMPER LOCATIONS.

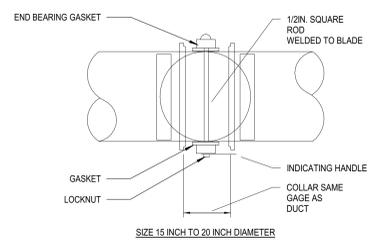
2 RECTANGULAR VOLUME DAMPER DETAIL
M7.1 NO SCALE



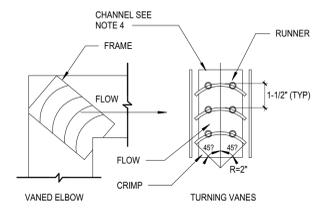
3 ACOUSTICAL DUCT LINING INSTALLATION DETAIL
M7.1 NO SCALE



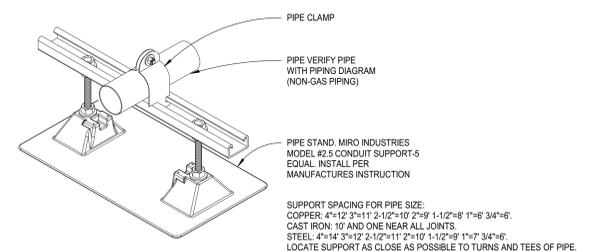
4 ECONOMIZER AND POWER EXHAUST DETAIL - HORIZONTAL DISCHARGE RTU (LESS THAN 15 TONS)
M7.1 NO SCALE



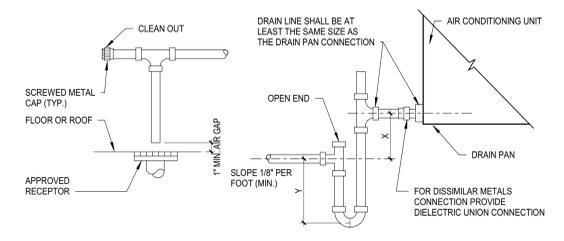
5 ROUND VOLUME DAMPER (LARGER THAN 14\"/>



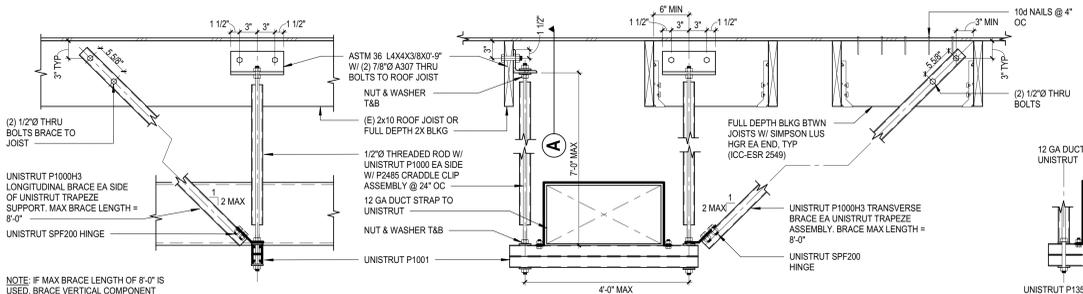
6 RECTANGULAR ELBOW W/ TURNING VANES DETAIL
M7.1 NO SCALE



7 PIPE SUPPORT ON ROOF DETAIL
M7.1 NO SCALE



8 CONDENSATE DRAIN CONNECTION DETAIL
M7.1 NO SCALE



9 DUCT SUPPORTS
M7.1 NO SCALE

6.1 TRANSVERSE DIRECTION - WOOD ROOF

6.2 TRANSVERSE DIRECTION - WOOD WALL TIEBACK

Autodesk Docs/75-22605-00_CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Mesa ES_MEP_2022.rvt 10/21/2022 4:51:30 PM

MARK	MAKE	MODEL	STEEL FRAME						
CU-B1	TOSHIBA	MNY-AP240	ASTM A36, L 4 X 3 X 1/4						

DETAIL-1

NOTES:

- APPROX. STEEL WEIGHT INCLUDING ISOLATORS: 450 LBS.
- FOR ISOLATORS. SEE DETAIL 3.
- M.W. SAUSSE & CO. INC. IS NOT RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE EQUIPMENT WHEN ANCHORED AS SHOWN.
- NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

DETAIL-3

ATTACHMENT OF SPRING ISOLATORS TO ROOF STRUCTURE

WELD ISO PLATE TO WF CENTERED @ EA MTC HOLE

CS X 6.7 X 4-1/2 LG

L 4 X 3 X 1/4

NEOPRENE GROMMET

1/2" DIA. LEVELING BOLT

1/2" DIA. TAP

5/8" EARTHQUAKE STABILIZER BOLT

1/4" PLATE

1/4" RIBBED NEOPRENE PAD

APPROX. OPER. HT. 5-1/2

STEEL BEAM BY SEOR

MAX. ALLOW. LOADS: HORIZ: 2200 LBS VERT. (UP): 2820 LBS

DETAIL-2

VIEW B-B

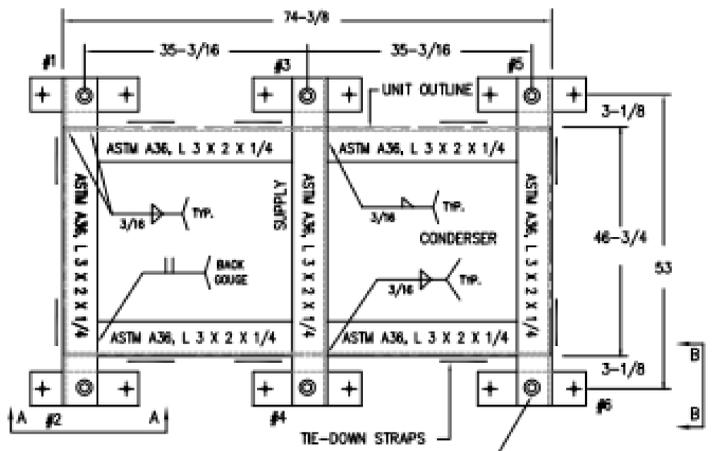
VIEW A-A

M. W. SAUSSE & CO., INC. 28744 Whitherspoon Pkwy, Valencia, CA 91355 Phone: (661) 257-3311 Fax: (661) 257-7673 	JOB NAME: COVINA USD - MESA ES CUST.: CUST. P.O.: MECH. ENGR.: DLR MARK: CU-B1	REVISIONS: A: CALL OUT ALL ATTACHMENT (9-2-22) B: CHANGED UNIT (9-6-22) C: WOOD TO STEEL (9-9-22) D: SPECS ANGLE (9-20-22)	DRN: TDT DATE: 9-7-22 DRAWING NO.: <div style="border: 1px solid black; padding: 2px; text-align: center;">-1D</div>
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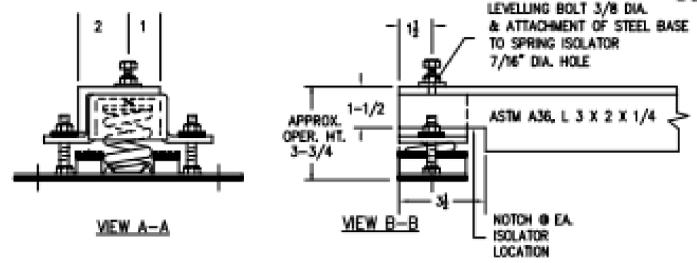
MARK	MAKE	TYPE	STEEL SIZE
RTU C1 to C8	CARRIER	50FCQAD5	
RTU D1 to D8	CARRIER	50FCQAD5	ASTM A36, L 3 X 2 X 1/4
RTU F1,F2	CARRIER	50FCQAD5	

DETAIL-1



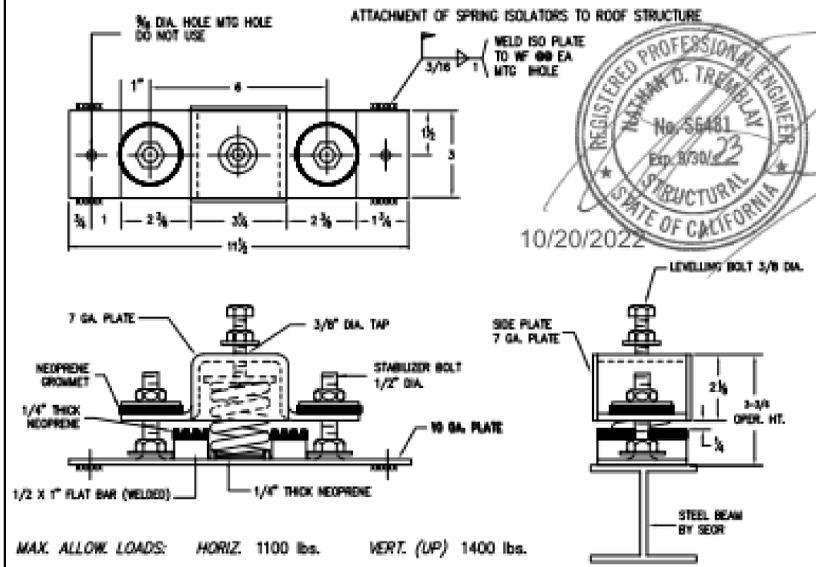
- NOTES:
1. APPROX. STEEL WEIGHT INCLUDING ISOLATORS: 200 LBS.
 2. ISOLATORS, SEE DETAIL 3.
 3. — INDICATES TIE-DOWN STRAP. SEE DETAIL 3.
 4. M.W. SAUSSE & CO. INC. IS NOT RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE EQUIPMENT WHEN ANCHORED AS SHOWN.
 5. ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

DETAIL-2



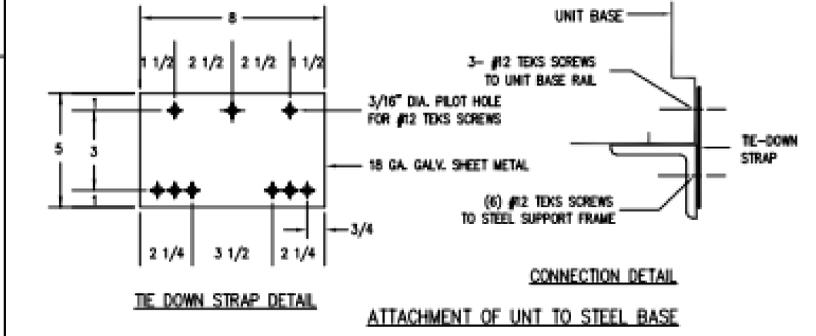
DETAIL-3

MTS	SPRING O.D.	DEFL.
1-6	2"	1"



MAX. ALLOW. LOADS: HORIZ. 1100 lbs. VERT. (UP) 1400 lbs.

RMU-RO-SB-1



M. W. SAUSSE & CO., INC.
28774 Whitherspoon Pkwy. Valencia, CA 91355
Phone: (881) 257-3311 Fax: (861) 257-7673

Vibrex **RMUAB**

JOB NAME:	COVINA USD - MESA ES	REVISIONS:	DRN: TDT
CUST.:		A: ROOF CURB TO RMUAB (8-17-22)	DATE: 08-17-22
CUST. P.O.:		B: CALL OUT ALL ATTACHMENTS (9-2-22)	DRAWING NO.:
MECH. ENGR.:	DLR	C: SPECS ANGLE (9-20-22)	-3C
MARK:	RTU-C1-C8,D1-D8,F1,F2 (RTU 4 TON)	D:	

1 ROOF TOP UNIT
MTS NO SCALE



A

B

C

D

E

F

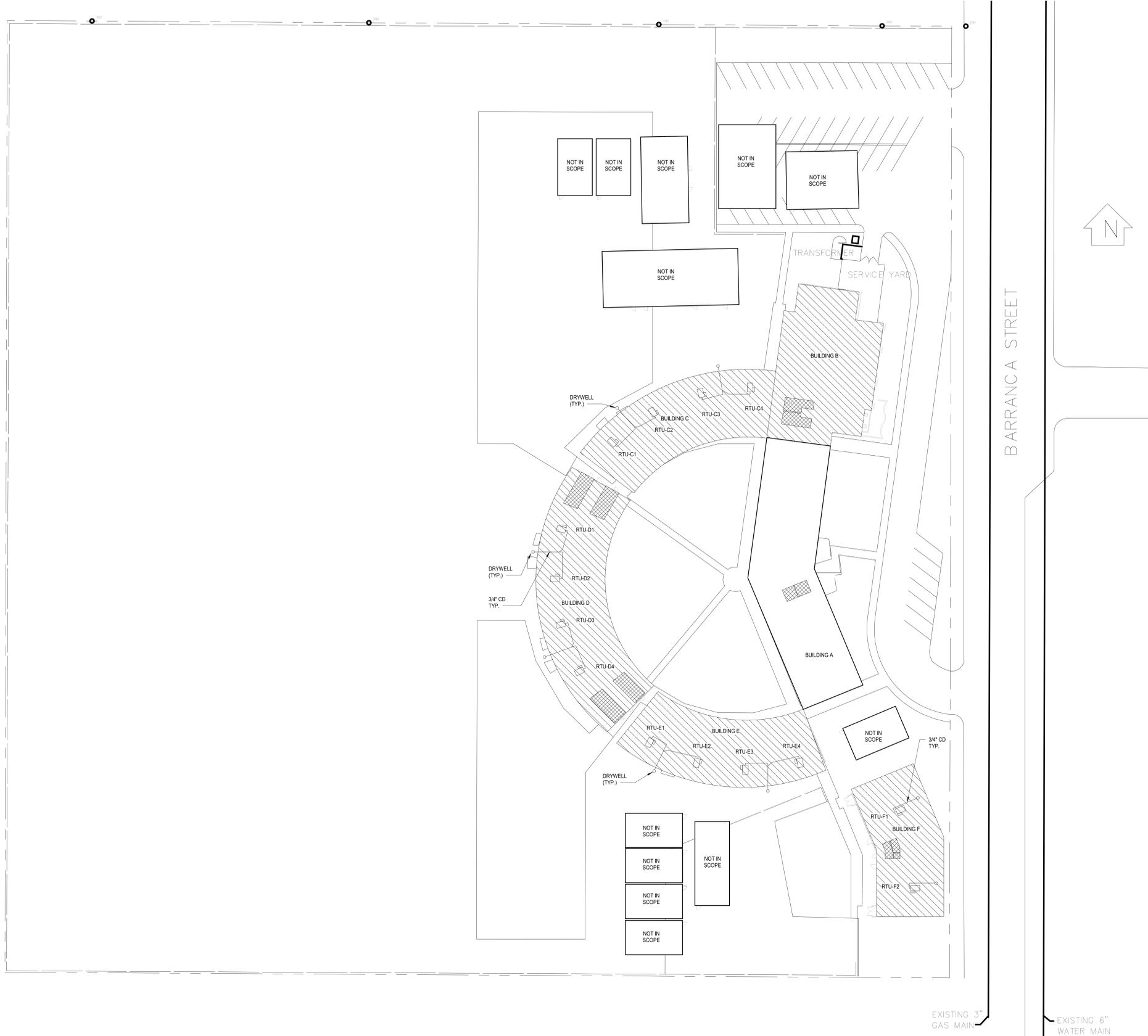
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SITE LEGEND

	EXISTING BUILDING NOT IN SCOPE
	EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
	(E) RESTROOMS - NOT IN SCOPE



MECHANICAL PLUMBING SITE PLAN

SCALE: 1" = 30'-0"

EXISTING 3" GAS MAIN
EXISTING 6" WATER MAIN



Mesa Elementary School
COVINA VALLEY USD
408 S BARRANCA AVE, WEST COVINA, CA 91791

100% CONSTRUCTION DOCUMENTS
11/04/2022 REVISIONS

75-22605-00

MECHANICAL PLUMBING SITE PLAN

MP1.1

A:\desk Docs\75-22605-00_CVUSD - District Wide HVAC Replacement\75-22605-00_CVUSD_Mesa ES MEP_2022.rvt 10/21/2022 4:51:13 PM

MEP COMPONENT ANCHORAGE NOTE

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

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

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

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING 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.

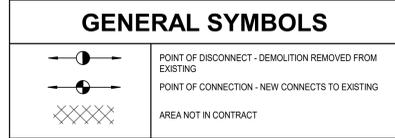
PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

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

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

MP	MD	PP	E	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
MP	MD	PP	E	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM) # 00043-13

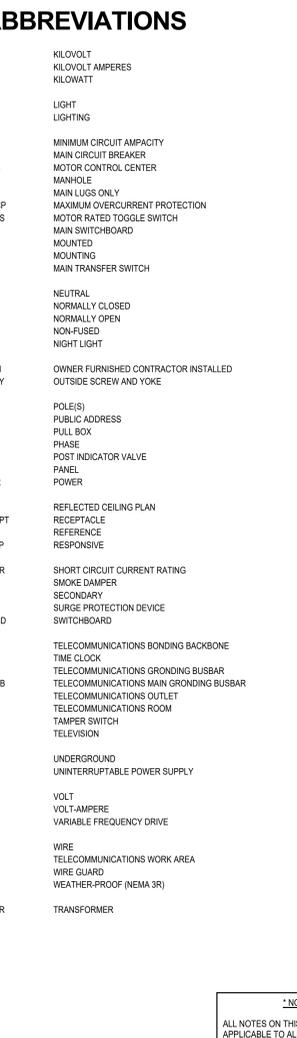
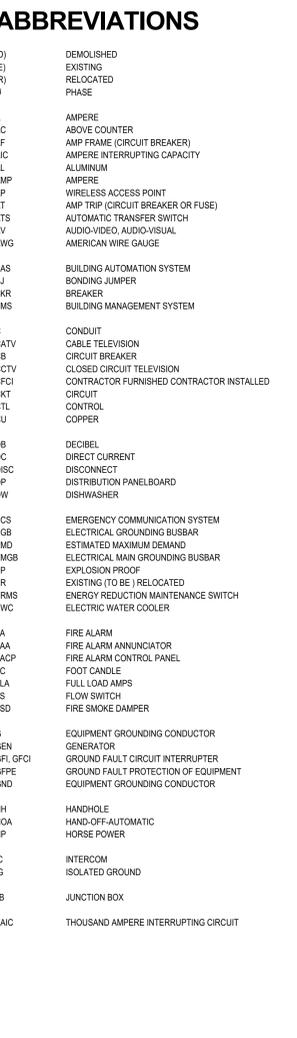
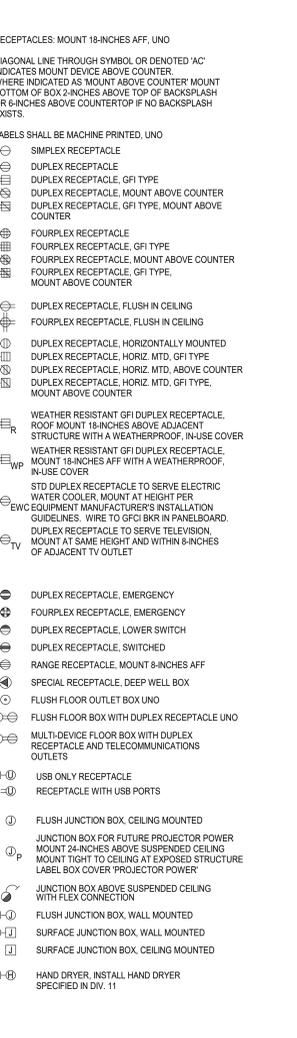
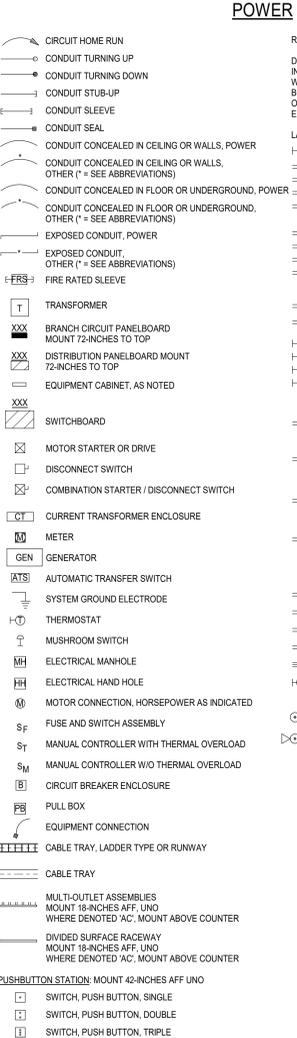


GENERAL NOTES

1. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIREFSTOPPED WITH AN APPROVED MATERIAL.
2. UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD AND DSA.

SHEET INDEX

E0.1	ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES
E2.1	ROOF ELECTRICAL PLAN
E6.1	ELECTRICAL DETAILS



NOTE
ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

MESA E.S. AC UNIT REPLACEMENT																							
EXISTING UNIT								NEW UNIT															NOTES
TAGS	VIPH	MCA	FLA	MOC	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	TAGS	DIRECT REPLACEMENT? Y/N	CFM	V-PH	MCA	MOC	FEEDER SIZE	DISCONNECT	REQUIRED?	Model#	MCA	MOC	FEEDER SIZE	DISCONNECT		
CU-B1 (BLDG. B)	208/3	93.4	67.9	100	HBM-19,21,23	3#2/0 1#4GND-2" C	150	CU-B1A (BLDG. B)	N		208/3	45.4	50	3#6, 1#10GND-1" C	60A (50A FUSE)	NO	NA	NO	NA			NA	NA
CU-B1B (BLDG. B)	208/3	20.875	16.7	30	HBM-20,22,24	3#1/0 1#10GND-0.75" C	30	CU-B1B (BLDG. B)	N		208/3	45.4	50	3#6, 1#10GND-1" C	60A (50A FUSE)	NO	NA	NO	NA			NA	NA
FCU-1 (BLDG. B)	208/3	20.875	16.7	30	HBM-20,22,24	3#1/0 1#10GND-0.75" C	30	FCU-1 (BLDG. B)	Y	6,430	208/3	30	50	3#6, 1#10GND-1" C	60A (50A FUSE)	NO	NA	NO	NA			NA	NA
CUFCU-C1 (BLDG. C)	208/1	21.875	17.5	30	HDB-1,3	4#8, 1#8GND-1" C	30	RTU-C1 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-C2 (BLDG. C)	208/1	21.875	17.5	30	HDB-5,7	4#8, 1#8GND-1" C	30	RTU-C2 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-C3 (BLDG. C)	208/1	21.875	17.5	30	HDB-2,4	4#8, 1#8GND-1" C	30	RTU-C3 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-C4 (BLDG. C)	208/1	21.875	17.5	30	HDB-6,8	4#8, 1#8GND-1" C	30	RTU-C4 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-D1 (BLDG. D)	208/1	21.875	17.5	30	HDB-9,11	4#8, 1#8GND-1" C	30	RTU-D1 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-D2 (BLDG. D)	208/1	21.875	17.5	30	HDB-10,12	4#8, 1#8GND-1" C	30	RTU-D2 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-D3 (BLDG. D)	208/1	21.875	17.5	30	HDC-9,11	4#8, 1#8GND-1" C	30	RTU-D3 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-D4 (BLDG. D)	208/1	21.875	17.5	30	HDC-10,12	4#8, 1#8GND-1" C	30	RTU-D4 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-E1 (BLDG. E)	208/1	21.875	17.5	30	HDC-2,4	4#8, 1#8GND-1" C	30	RTU-E1 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-E2 (BLDG. E)	208/1	21.875	17.5	30	HDC-6,8	4#8, 1#8GND-1" C	30	RTU-E2 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-E3 (BLDG. E)	208/1	21.875	17.5	30	HDC-1,3	4#8, 1#8GND-1" C	30	RTU-E3 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-E4 (BLDG. E)	208/1	21.875	17.5	30	HDC-5,7	4#8, 1#8GND-1" C	30	RTU-E4 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-F1 (BLDG. F)	208/1	21.875	17.5	30	HF-1,3	4#6, 1#6GND-1" C	30	RTU-F1 (BLDG. F)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		
CUFCU-F2 (BLDG. F)	208/1	21.875	17.5	30	HF-5,7	4#6, 1#6GND-1" C	30	RTU-F2 (BLDG. F)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1" C	30A (20A FUSE)		

- GENERAL NOTES:
1. CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED.
 2. PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE. FEED FROM SPARE 20A/1P BREAKER IN NEAREST PANEL. ROUTE 2#12-1#12GND IN 1/2" EMT CONDUIT FROM PANEL TO RECEPTACLE.
 3. POWER NO MORE THAN 10 RECEPTACLES ON ONE CIRCUIT. FIELD VERIFY EXACT LOCATION OF NEAREST PANEL AND ROUTE OF NEW CIRCUIT FROM PANEL TO UNIT RECEPTACLE.
 4. CONTRACTOR TO DEMOLISH POWER CONNECTION FROM ALL ROOF TOP UNITS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK...
 5. FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES

Mesa Elementary School
COVINA VALLEY USD
408 S BARBARCA AVE, WEST COVINA, CA 91791

100% CONSTRUCTION DOCUMENTS
11/04/2022 REVISIONS

75-22605-00

ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES

E0.1



GENERAL NOTES

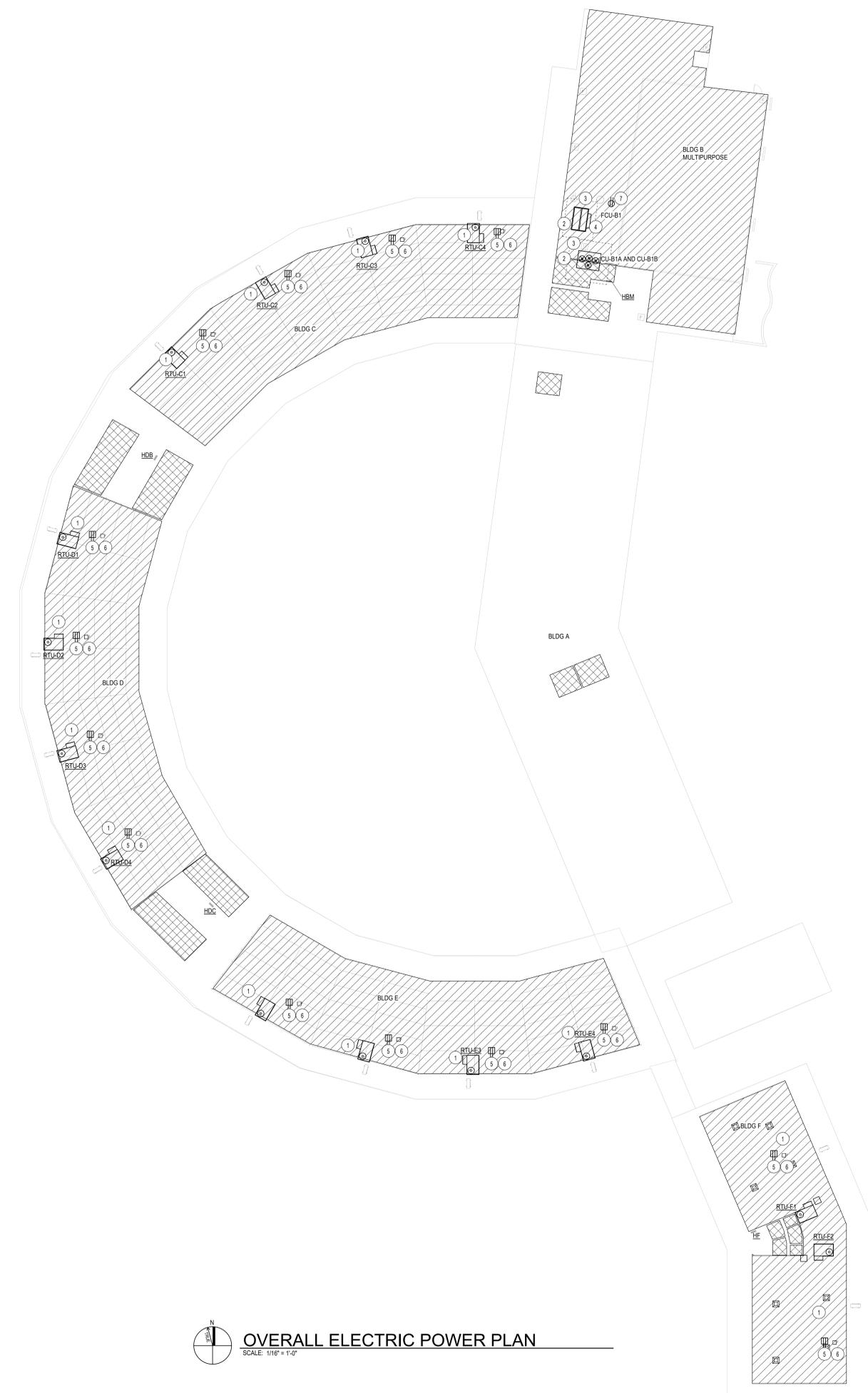
- A WORK TO INCLUDE REMOVAL OF EXISTING FEEDER TO EXISTING HVAC EQUIPMENT THAT ARE TO BE REMOVED AND REPLACED. FEEDER TO EXISTING INDOOR FAN COIL UNIT TO BE REMOVED IN ITS ENTIRETY.
- B DISCONNECTING MEANS TO BE NEMA 3R RATED, FURNISHED AND INSTALLED BY DIVISION 28.
- C CARBON MONOXIDE DETECTION SYSTEM NOT REQUIRED. ELECTRIC HEATING IS BEING PROVIDED.
- D SEE SCHEDULE ON SHEET E0.1 FOR ADDITIONAL INFORMATION.
- E FUSES SHALL BE PROVIDED PER EQUIPMENT NAMEPLATE RATING.
- F ELECTRICAL PANELS LOCATED AT GRADE LEVEL DIRECTLY BELOW WHERE SHOWN.
- G ENERGY MANAGEMENT SYSTEM (EMS) / BUILDING AUTOMATION SYSTEM (BAS) IS A DELEGATED DESIGN SCOPE BY CONTRACTOR. CONTRACTOR TO FIELD COORDINATE WITH SCHOOL DISTRICT FOR LOCATIONS OF EMS ROUTER AND EMS PANEL AS WELL AS CONDUIT ROUTING.
- H CARBON MONOXIDE DETECTION SYSTEM WILL NOT BE PROVIDED AT THIS TIME UNDER CEBC 503 15.1.
EXCEPTION 2: THE GROUP BUILDING WAS CONSTRUCTED BEFORE THE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE.
- I EXISTING HVAC UNITS ARE BEING REPLACED IN KIND THROUGHOUT.
- J CONTRACTOR TO PROVIDE CONNECTION FROM LOAD SIDE OF HVAC EQUIPMENT DISCONNECT SWITCH TO FEED POWER EXHAUST DISCONNECT SWITCH. PROVIDE SAME SIZE FEEDER. PROVIDE FUSES PER EQUIPMENT NAMEPLATE RATING.

KEYNOTES

No.	DESCRIPTION
1	EXISTING HVAC EQUIPMENT ON THE ROOF TO BE DISCONNECTED AND REPLACED AS PART OF THIS SCOPE OF WORK. EXISTING FEEDER TO BE EXTENDED AS REQUIRED. PROVIDE ALL REQUIRED CONNECTION. FUSED DISCONNECT FOR POWER EXHAUST FAN SHALL BE PROVIDED #8 CONDUCTOR AND #10 GND CONDUCTOR TO LOAD SIDE OF MAIN DISCONNECT FOR RTU.
2	HVAC EQUIPMENT ON GRADE TO BE DISCONNECTED AND REPLACED WITH NEW. CONTRACTOR TO RE-USE EXISTING CIRCUITING. EXTEND EXISTING FEEDERS AS REQUIRED.
3	PROVIDE 120 VOLT CIRCUIT FROM NEAREST EXISTING PANEL.
4	DUCT SMOKE DETECTOR FOR COMPLIANCE TO CALIFORNIA MECHANICAL CODE SECTION 608 IS NOT REQUIRED PER CODE EXCEPTION NO.2. ROOM HAVE DIRECT EXIT TO EXTERIOR AND TRAVEL DISTANCE DOES NOT EXCEED 100 FEET.
5	GFCI TYPE RECEPTACLE PROVIDED BY HVAC EQUIPMENT MANUFACTURER PER GENERAL NOTE NUMBER 2 ON SHEET E0.1. PROVIDE WEATHERPROOF COVER.
6	FUSED DISCONNECT SIZE PER TABLE SHOWN ON E0.1
7	PROVIDE 120V CIRCUIT FOR EMS ROUTER AND EMS PANEL. FIELD VERIFY EXACT LOCATION OF EMS ROUTER AND PANEL.

SITE LEGEND

-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



OVERALL ELECTRIC POWER PLAN
SCALE: 1/16" = 1'-0"



Mesa Elementary School
COVINA VALLEY USD
408 S BARBARCA AVE, WEST COVINA, CA 91791

100%
CONSTRUCTION
DOCUMENTS
11/04/2022
REVISIONS

75-22605-00

ROOF
ELECTRICAL
PLAN

E2.1

ALTERNATE ARRANGEMENT OF SEISMIC BRACES FOR CONDUITS ON TRAPEZE

NOTES:
1) REFER TO APPROPRIATE DETAIL F PAGES FOR DIMENSIONS AND NOTATIONS NOT SHOWN.

MASON WEST, INC.
1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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SEISMIC BRACKET ATTACHMENT TO STRUCTURAL TIMBER WITH (1) THRU BOLT OR THREADED ROD

SEISMIC BRACE BRACKET PERPENDICULAR TO JOIST

SEISMIC BRACE BRACKET PARALLEL TO JOIST

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE INCH	MIN. EDGE DIA INCH	Cmin1 INCH	Cmin2 INCH
38A TO 38D	250	30"-45"	1/2	1 1/2	1 1/2
38A TO 38B	150	48"-60"	1/2	1 1/2	1 1/2
50A TO 50D	300	30"-45"	1/2	1 1/2	2
50A TO 50B	170	48"-60"	1/2	1 1/2	2
63A TO 63D	340	30"-45"	1/2	1 1/2	2 1/2
63A TO 63C	200	48"-60"	1/2	1 1/2	2 1/2

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1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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SEISMIC BRACKET ATTACHMENT TO WOOD I-JOISTS WITH (1) THRU BOLT OR THREADED ROD

PERPENDICULAR TO JOIST

PARALLEL TO JOIST

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE INCH	MIN. EDGE DIA INCH
38A TO 38B	150	30"-45"	1/2
38A TO 38A	80	48"-60"	1/2
50A TO 50C	150	30"-45"	1/2
50A TO 50A	100	48"-60"	1/2
63A TO 63C	210	30"-45"	1/2
63A TO 63A	120	48"-60"	1/2

MASON WEST, INC.
1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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SEISMIC BRACKET ATTACHMENT TO WOOD JOIST

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE INCH	MIN. EDGE DIA INCH
38A TO 38E	420	30"-45"	1/2
38A TO 38D	300	48"-60"	1/2
50A TO 50E	420	30"-45"	1/2
50A TO 50D	300	48"-60"	1/2
63A TO 63E	420	30"-45"	1/2
63A TO 63D	300	48"-60"	1/2

MASON WEST, INC.
1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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CONDUIT ELECTRICAL METALLIC TUBING (EMT) MAXIMUM SEISMIC BRACE SPACINGS VERTICAL FORCE Fpv = 0.375g (ASD)

TRADE SIZE	MAX WEIGHT PER FOOT (LBS/FT)	MAX GRAVITY SUPPORT SPACING (FT)	MAX TRANSVERSE BRACE SPACING BASED ON TRADE SIZE AND g FORCE (FT)	g FORCE
3	8.26	10	45	0.25
3.5	10.98	10	41	0.375
4	13.64	10	38	0.5
			36	0.625
			33	0.75
			31	0.875
			30	1

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1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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ELECTRICAL CONDUIT WEIGHT TABLES

CONDUIT DIAMETER (IN)	CONDUIT WEIGHTS		
	PIPE WEIGHT PER FOOT (LBS)	CONDUCTORS	TOTAL
1/2	0.29	0.22	0.51
3/4	0.44	0.40	0.84
1	0.64	0.66	1.30
1 1/4	0.95	1.17	2.12
1 1/2	1.10	1.80	2.70
2	1.40	2.62	4.02
2 1/2	2.05	3.74	5.79
3	2.50	5.76	8.26
3 1/2	3.25	7.73	10.98
4	3.70	9.94	13.64
5	---	---	---
6	---	---	---
1/2	0.60	0.22	0.82
3/4	0.82	0.41	1.23
1	1.16	0.66	1.82
1 1/4	1.50	1.17	2.67
1 1/2	1.82	1.60	3.42
2	2.42	2.62	5.04
2 1/2	4.28	3.47	7.75
3	5.26	5.43	10.69
3 1/2	6.12	7.34	13.46
4	6.82	9.90	16.32
5	---	---	---
6	---	---	---
1/2	0.79	0.22	1.01
3/4	1.05	0.41	1.46
1	1.53	0.66	2.19
1 1/4	2.01	1.17	3.18
1 1/2	2.48	1.61	4.09
2	3.32	2.62	5.94
2 1/2	5.27	3.74	9.01
3	6.82	5.77	12.59
3 1/2	8.31	7.73	16.04
4	9.72	9.95	19.67
5	13.14	15.82	28.76
6	17.45	22.98	40.93

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1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jiefu "Jeff" Zhang, SE
California SE No. 55270

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ROOF PENETRATION DETAIL

TYP WALL EQUIPMENT BACKING

NON-STRUCTURAL EQUIPMENT WEIGHT	
WEIGHT < 250 LBS	SINGLE 2x STUD
250 LBS < WEIGHT < 500 LBS	DOUBLE 2x STUD

NOTES:
1. MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 500 LBS.
2. COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.

2 ROOF PENETRATION DETAIL E6.1 NO SCALE

1 TYP WALL EQUIPMENT BACKING E6.1 NO SCALE