PBK

WESTMINSTER SCHOOL DISTRICT

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

SCHMITT E.S. HVAC
UPGRADE &
MODERNIZATION
7200 Trask Ave
Westminster, CA 92683
DSA SUBMITTAL

DSA SUBMITTAL

12-29-2022

OWNER

WESTMINSTER SCHOOL DISTRICT
CONTACT: Brian Johnson
14121 Cedarwood Avenue
Westminster, CA 92683
714-894-7311 P Ext. 1121
bkjohnson@wsdk8.us

ARCHITECT

PBK Architects
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2400 E. Katella Ave.
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MEP ENGINEER

LEAF Engineers
CONTACT: Ronald De La Cruz
8163 Rochester Ave. #100
Rancho Cucamonga, CA 91730
909-390-3111 P
ronald.delacruz@leafengineers.com

STRUCTURAL

NIC STRUCTURAL
ENGINEERING CONSULTANTS
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23 Corporate Plaza Dr., Suite 150
Newport Beach, CA 92660
949-629-2529 P
teimani@nic-eng.com

G1 - SHEET INDEX, DRAWING CONVENTIONS, AND LOCATION MAP

0" 1"

ABBREVIATIONS

A	A.D.	AREA DRAIN	M	MEP	MECHANICAL, ELECTRICAL, PLUMBING
A	A.D.A.	AMERICANS WITH DISABILITIES ACT	M	MEPT	MECHANICAL, ELECTRICAL, PLUMBING, TECHNOLOGY
A	A.D.A.	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN	M	MEZZ.	MEZZANINE
A	A.D.A.A.G.	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	M	MFR. / MANUF.	MANUFACTURE (R)
A	A.F.F.	ABOVE FINISH FLOOR	M	MH.	MANHOLE
A	A.F.G.	ABOVE FINISH GRADE	M	MIN.	MINIMUM
A	A.H.J.	ATHORITY HAVING JURISDICTION	M	MISC.	MISCELLANEOUS
			M	MOD	MODULAR
A	A/C	AIR CONDITIONING	M	MTL	METAL
A	ACC.	ACCESSIBLE, ACCESSIBILITY	M	MTP.	METAL TOILET PARTITION
A	ACP.	ACOUSTICAL PANEL	N	N.D.	NAPKIN DISPOSAL
A	ACT.	ACOUSTICAL TILE	N	N.I.C.	NOT IN CONTRACT
A	ADJ.	ABADJUSTABLE	N	N.T.S.	NOT TO SCALE
A	ALT.	ALTERNATE	N	N.V.	NAPKIN VENDOR
A	ALUM.	ALUMINUM	N	NO.	NUMBER
A	ASPH.	ASPHALT	N	NOM.	NOMINAL
A	∠.	ANGLE			
			O	O.C.	ON CENTER (S)
B	B.O.D.	BOTTOM OF DECK	O	O.C.E.W.	ON CENTER EACH WAY
B	B.U.R.	BUILT-UP ROOF	O	O.D.	OUTSIDE DIAMETER
B	BD.	BOARD	O	O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
B	BLDG.	BUILDING			
B	BLK.	BLOCK	O	O.H.	OPPOSITE HAND
B	BM.	BEAM	O	OPNG.	OPENING
			O	OPP.	OPPOSITE
C	C	CHANNEL			
C	C.J.	CONTROL JOINT	P	P, LAM. / PLAM	PLASTIC LAMINATE
C	C.M.U.	CONCRETE MASONRY UNIT			
C	C.W.	COLD WATER	P	P.C.	PRECAST
C	CAB, CABT	CABINET	P	P.H.	PAPER HOLDER
C	CFMF	COLD-FORMED METAL FRAMING	P	P.L.	PROPERTY LINE
			P	P.P.	POWER POLE
C	CFSF	COLD-FORMED STEEL FRAMING	P	P.W.B.	PREFINISHED WALL BOARD
C	CL.	CENTERLINE	P	PL.	PLATE
C	CLG.	CEILING	P	PLUMB.	PLUMBING
C	CLR	CLEAR	P	PLYWD.	PLYWOOD
C	COL.	COLUMN	P	POL.	POLISHED
C	COMP.	COMPRESSIBLE	P	PR	PAIR
C	CONC.	CONCRETE	P	PREFIN.	PRE-FINISHED
C	COND.	CONDITION	P	PT	PRESSURE-TREATED
C	CONT.	CONTINUOUS	P	PT.	POINT
C	CORR.	CORRIDOR	P	PTD.	PAINTED
C	CPT.	CARPET (ED)			
C	CT.	CERAMIC TILE	Q	Q.T.	QUARRY TILE
C	CTSK.	COUNTER SINK			
			R	R / RAD	RADIUS
D	D	DRYER	R	RCP	REFLECTED CEILING PLAN
D	D.F.	DRINKING FOUNTAIN	R	RD	ROOF DRAIN
D	D.P.	DAMPPROOFING	R	RE. , REF.	REFER TO / REFERENCE / SEE
D	D.S.	DOWN SPOUT	R	RECP.	RECEPTACLE
D	DIA.	DIAMETER	R	REINF.	REINFORCE (D), (ING)
D	DIM.	DIMENSION	R	REQD.	REQUIRED
D	DTL.	DETAIL	R	RES.	RESILIENT
D	DWG.	DRAWING	R	REV.	REVISION (S), REVISED
			R	RF	RECREATIONAL RESILIENT FLOORING
E	E.J.	EXPANSION JOINT			
E	E.Q.	EQUAL	R	RPG.	RELOCATABLE PAINTED GYPSUM BOARD
E	EA.	EACH			
E	EDF	ELECTRIC DRINKING FOUNTAIN	R	RSS.	ROD STOCK AND SEALANT
E	EL.	ELEVATION (HEIGHT)			
E	ELEC.	ELECTRICAL	S	S.C.	SEALED CONCRETE
E	ELECT.	ELECTRICAL	S	S.D.	SOAP DISPENSER
E	ELEV	ELEVATION (DRAWING)	S	S.N.D.	SANITARY NAPKIN DISPOSAL
E	EQUIP	EQUIPMENT	S	SCHED	SCHEDULE
E	EXIST	EXISTING	S	SCPL	SOLID CORE PLASTIC LAMINATE
E	EXP	EXPANSION			
E	EXT	EXTERIOR	S	SECT	SECTION
			S	SHT	SHEET
F	F.E.	FIRE EXTINGUISHER	S	SIM	SIMILAR
F	F.E.C.	FIRE EXTINGUISHER CABINET	S	SPC	SPECIAL COATING SYSTEM
F	F.H.C.	FIRE HOSE CABINET	S	SPEC	SPECIFICATION (S)
F	FB.	FACE BRICK	S	SQ.	SQUARE
F	FD.	FLOOR DRAIN	S	SS / SS. STL.	STAINLESS STEEL
F	FIN.	FINISH (ED)			
F	FIXT.	FIXTURE	S	STL.	STEEL
F	FLR.	FLOOR (ING)	S	STRUC / STRUCT	STRUCTURAL
F	FLSHG.	FLASHING	S	SUSP.	SUSPENDED
F	FLUOR	FLUORESCENT	S	SVDF	SHEET VINYL DANCE FLOORING
F	FRP	FIBER REINFORCED PLASTIC	S	SVF	SHEET VINYL FLOORING
G	G.B.	GRAB BAR	T	T.A.S.	TEXAS ACCESSIBILITY STANDARDS (2012)
G	G.I.	GALVANIZED IRON			
G	GA.	GAUGE	T	T.B.	TACK BOARD
G	GALV.	GALVANIZED	T	T.D.R.	TOWEL DISPENSER AND RECEPTACL
G	GCMU	GLAZED CONCRETE MASONRY UNIT	T	T.O.	TOP OF
G	GEN.	GENERAL	T	T.O.B.	TOP OF (WOOD) BLOCKING
G	GEN.	GENERAL	T	T.O.M.	TOP OF MASONRY
G	GL.	GLASS / GLAZING	T	T.O.P.	TOP OF PARAPET
G	GL.	GLASS	T	T.O.S.	TOP OF STEEL
G	GR.	GRADE	T	T.T.D.	TOILET TISSUE DISPENSER
G	GTP.	GLAZED TILE PAVER	T	TEL	TELEPHONE
G	GYP.	GYPSUM DRYWALL	T	TERR	TERRAZZO
			T	THK	THICK (NESS)
H	H.W.	HOT WATER	T	TYP	TYPICAL
H	HM	HOLLOW METAL FRAME			
H	HORIZ.	HORIZONTAL	U	U.N.O.	UNLESS NOTED OTHERWISE
H	HT.	HEIGHT	U	UR.	URINAL
I	I.D.	INSIDE DIAMETER	V	V	VENT
I	I.P.S.	IRON PIPE SIZE	V	V.C.T.	VINYL COMPOSITION TILE
I	INSUL	INSULATE (ED), (ION)	V	V.I.F.	VERIFY IN FIELD
I	INT.	INTERIOR	V	VENT.	VENTILATING, VENTILATED
			V	VER.	VERIFY
J	JT..	JOINT	V	VERT.	VERTICAL
			V	VGB	(PREFINISHED) VINYL CLAD GYPSUM BOARD
L	L.P.	LIGHT POLE			
L	LAM.	LAMINATE (D)	V	VWC	VINYL WALL COVERING
L	LAV.	LAVATORY			
L	LT.	LIGHT	W	W	WASHING MACHINE
L	LT. WT.	LIGHTWEIGHT	W	W.P.	WATER PROOFING
			W	W.S.	WEATHERSTRIP
M	M.O.	MASONRY OPENING	W	W.W.	WATER WELL
M	MAS.	MASONRY	W	W.W.F.	WELDED WIRE FABRIC
M	MATL.	MATERIAL (S)	W	W.W.M.	WOVEN WIRE MESH
M	MAX.	MAXIMUM	W	W/	WITH
M	MB.	MARKER BOARD	W	WC	WATER CLOSET
M	MECH.	MECHANICAL	W	WD	WOOD
M	MEM	MEMBRANE	W	WDW	WINDOW
M	MEM. WP.	MEMBRANE WATERPROOFING	W	WT	WEIGHT

STATEMENT OF GENERAL CONFORMANCE

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. O4-121817 File No. 30-43)

[X] The drawings or sheets listed on the cover or index sheet (see asterisk *)
[ ] This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. 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:
[X] The drawings or sheets listed on the cover or index sheet
[ ] This drawing or page

[X] is/are in general conformance with the project design intent, and
[X] has/have been coordinated with the project plans and specifications.

06/19/22
Signature **Date**

Architect or Engineer designated to be in general responsible charge

YONG YOO
Print Name

C-31162 **10/31/2023**
License Number **Expiration Date**

[ ] is/are in general conformance with the project design intent, and
[ ] have been coordinated with the project plans and specifications.

Signature **Date**

Architect or Engineer deligated responsibility for this portion of the work

Print Name

License Number **Expiration Date**

CODES & STANDARDS

PARTIAL LIST OF APPLICABLE CODES

2022 Building Standards Administrative Code ..... **(Part 1, Title 24, CCR)**
2019 California Building Code (CBC) ..... **(Part 2, Title 24, CCR)**
(2018 International Building Code with 2019 California Ammendments)
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 IAMPO Uniform Mechanical Code and 2019 California Amendments)
2019 California Plumbing Code (CPC) ..... **(Part 5, Title 24, CCR)**
(2018 IAMPO 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 ..... **(Part 11, Title 24, CCR)**
2019 California Referenced Standards Code ..... **(Part 12, Title 24, CCR)**
Regulations of the State Fire Marshall ..... **(Title 19, CCR)**
2016 ASME A17.1/CSA B44-16 Safety Code for Elevators and Escalators ..... **(per 2019 CBC Part 2 Ch 35)**

PARTIAL LIST OF FIRE LIFE SAFETY APPLICABLE STANDARDS

NFPA 13 Automatic Fire Sprinkler Systems ..... **(2016 Edition, CA Amended)**
NFPA 14 Standpipe and Hose Systems ..... **(2016 Edition, CA Amended)**
NFPA 17 Dry Chemical Extinguishing Systems ..... **(2017 Edition)**
NFPA 17A Wet Chemical Extinguishing Systems ..... **(2017 Edition)**
NFPA 20 Stationary Pumps for Fire Protection ..... **(2016 Edition)**
NFPA 22 Standard for the Installation of Private Fire Service Mains and Their Appurtenances ..... **(2013 Edition)**
NFPA 24 Private Fire Mains & their Appurtenances ..... **(2016 Edition, CA Amended)**
NFPA 72 National Fire Alarm & Signaling Code ..... **(2016 Edition, CA Amended)**
NFPA 80 Fire Doors and Other Opening Protectives ..... **(2016 Edition)**
NFPA 2001 Clean Agent Fire Extinguishing Systems ..... **(2015 Edition)**
UL 300 Standard Fire Extinguishing Systems For Protection of Commercial Cooking Equipment ..... **(2005, R2010)**
UL 464 Audible Signal Appliances ..... **(2018 Edition)**
UL 521 Standard for Heat Detectors for Fire Protective Signaling Systems ..... **(1999 Edition)**
UL 1971 Standard for Signaling Devices for the Hearing Impaired ..... **(2002, R2012)**
ICC 300 Standard for Bleachers, Folding and Telescopic Seating, and Grandstands ..... **(2017 Edition)**

For a complete list of all applicable NFPA standards refer to 2019 CBC (SFM) Chapter 35 and California Fire Code (CFC) Chapter 80.
See California Building Code, Chapter 35, for State of California ammendments to the NFPA Standards

GENERAL NOTES

1. CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT.
2. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.
3. PERFORMANCE BY THE CONSTRUCTION TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT.
4. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS.
5. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
7. ENACT ALL MEASURES TO PROTECT AND SAFEGUARD ALL EXISTING ELEMENTS TO REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION.
8. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.
9. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
10. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
11. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
12. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
13. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.
14. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE.
15. ALL SPACES WITH FLOOR DRAINS TO HAVE FINISHED FLOORS SLOPED TO DRAIN NOT TO EXCEED ONE IN FIFTY.
16. ALL FLOORS FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS UNLESS NOTED OTHERWISE. ALL FLOOR FINISH CHANGES SHALL HAVE THRESHOLDS OR REDUCER STRIPS.
17. COORDINATE HOUSEKEEPING PAD DIMENSIONS AND LOCATIONS WITH EQUIPMENT TO BE INSTALLED.
18. ALL DOORS IN INTERIOR GYP. BD STUD WALLS SHALL BE SET 4" OFF THE PERP. ADJ. WALL ON THE HINGE SIDE OF THE DOOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR.
19. ALUM. THRESHOLDS TO BE SET IN FULL BED OF SEALANT AT ALL EXT. DOORS.
20. UNLESS OTHERWISE NOTED, ALL ELECTRICAL AND MECHANICAL OPERABLE DEVICES SHALL BE MOUNTED WITH THE HIGHEST OPERABLE CONTROL AT MAX. OF 42" AFF.
21. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK, PER CAC, 2013, 4-317(c)

DRAWING INDEX

TOTAL SHEET: 73

DRAWING CONVENTIONS

PROPERTY LINE
AREA DRAIN
NORTH / TRUE NORTH — NORTH SYMBOL
COLUMN LINE
Name / Elevation — FLOOR LINE
MATCH LINE
1 / A101 — SECTION CALLOUT SYMBOL
A1.01 / 12 — EXTERIOR ELEVATION SYMBOL
2 / 3 / A1.01 / 1 / 4 — INTERIOR ELEVATION SYMBOL
101 — DOOR DESIGNATION
A / 1 — WINDOW DESIGNATION
1i — PARTITION TYPE
EXISTING PARTITION
NEW PARTITION
1 — REVISION NUMBER
1 / A-100 — DETAIL ENLARGED

1 / A-100 — PLAN OR DETAIL ENLARGED
1 / A101 — DETAIL SECTIONS AND VERTICAL SECTIONS
6'-0" 4'-0" 10'-0" — DIMENSIONS
NOTE: all dimensions to face of wall unless otherwise noted
SPOT ELEVATION
MATCH LINE / SEE XX/X-XXX — SHEET NUMBER ON WHICH CONTINUATION IS FOUND
FENCING (WITH POSTS)
BREAK LINE
12.34 — KEY NOTE
Room name / 101 / 150 SF — ROOM NAME AND NUMBER
FHC FHC — FIRE HOSE CABINET (RECESSED AND SURFACE MOUNTED)
FEC FEC — FIRE EXTINGUISHER CABINET (RECESSED AND SURFACE MOUNTED)
TA1 — TOILET ACCESSORY SYMBOL
F.D. — FLOOR DRAIN

DSA NOTES

1. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART I, TITLE 24, CCR
2. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR; CLASS 3
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
5. THE SCOPE OF WORK - CLEARLY INDICATE THE SCOPE OF WORK ON THE COVER SHEET OR GENERAL NOTE SHEET OF THE DRAWINGS.
6. 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 DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
7. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERNATION, 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).
8. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

DEFERRED APPROVAL ITEMS

NOTE:
NONE

SCOPE OF WORK

BUILDING IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO;

FIRE ALARM AND ROOFING UPGRADE ONLY
- EXISTING RELOCATABLE CLASSROOMS: 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 & 42
- EXISTING BOYS/GIRLS/STAFF TOILET
- EXISTING MULTI PURPOSE

ADMINISTRATION KINDERGARTEN BUILDING (EXISTING ADMINISTRATION / KINDERGARTEN)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- TOILET MODERNIZATION
- FIRE ALARM UPGRADE

BUILDING A, B (EXISTING CLASSROOMS)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- FIRE ALARM UPGRADE

BUILDING C (EXISTING LIBRARY)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- FIRE ALARM UPGRADE

EXISTING COVERED WALKWAYS
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE

EXISTING PARKING LOT 1
- (N) SLURRY COAT

NEW INTERIOR AND EXTERIOR PAINT IN ALL BUILDINGS AND STRUCTURES INCLUDING LUNCH SHELTER AND ALL RELOCATABLES.

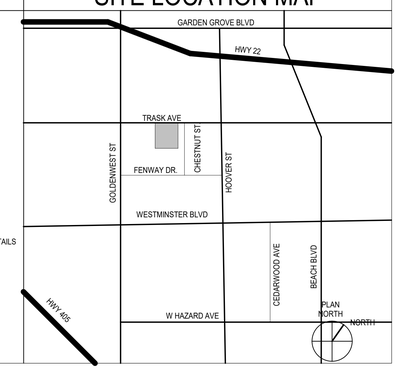
SHEET NUMBERING

A2.01A
- **SHEET NUMBER**
- **BUILDING AREA**
- **SEQUENCE (.01 - .99.....etc.)**
- **SHEET DISCIPLINE TYPE**

DISCIPLINE

G	GENERAL	0 - GENERAL
C	CIVIL	1 - FLOOR PLANS
L	LANDSCAPE	2 - REFLECTED CEILING PLANS & DETAILS
CA	SPORTS	3 - ROOF PLANS & DETAILS
S	STRUCTURAL	4 - BUILDING SECTIONS
D	DEMOLITION	5 - ADA & ENLARGED PLANS
A	ARCHITECTURAL	6 - ENLARGED PLAN DETAILS
M	MECHANICAL	7 - ENLARGED MILLWORK & DETAILS
E	ELECTRICAL	8 - PARTITION TYPES & WALL SECTIONS
P	PLUMBING	9 - WINDOWS, DOORS, FRAME ELEVATIONS & DETAILS
T	TECHNOLOGY	10 - FINISH SCHEDULES
FS	FOOD SERVICE	11 - ELEVATIONS (EXTERIOR & INTERIOR)
AV	ACOUSTICAL	12 - CASEWORK ELEVATIONS
TH	THEATRICAL	

SITE LOCATION MAP



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

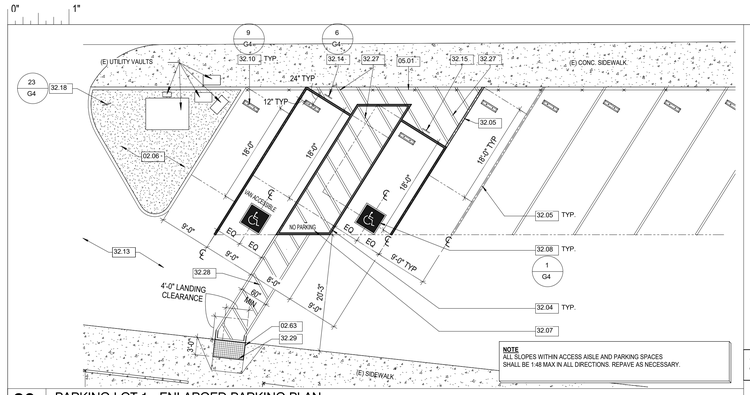
DSA SUBMITTAL

SHEET INDEX, DRAWING CONVENTIONS, AND LOCATION MAP

G1

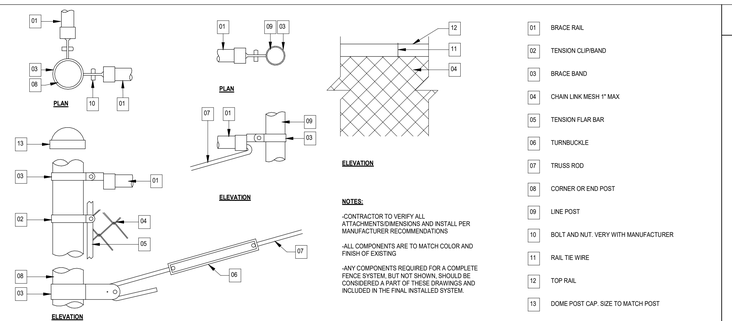
FILE PATH: Z:\Projects\...
6/19/2023 12:22:20 PM

G2 - ACCESSIBILITY SITE PLAN



30 PARKING LOT 1 - ENLARGED PARKING PLAN

3/32" = 1'-0"



28 CHAIN LINK CONNECTIONS

1 1/2" = 1'-0"

PARKING CALCULATION

(E) PARKING LOT 1 (A#107095):
- STANDARD STALLS 10
- STANDARD ACCESSIBLE STALLS 2
- VAN ACCESSIBLE STALLS 1

TOTAL P-LOT STALLS 13

(E) PARKING LOT 2 (A#04-114892):
- STANDARD STALLS 100
- STANDARD ACCESSIBLE STALLS 4
- VAN ACCESSIBLE STALLS 2

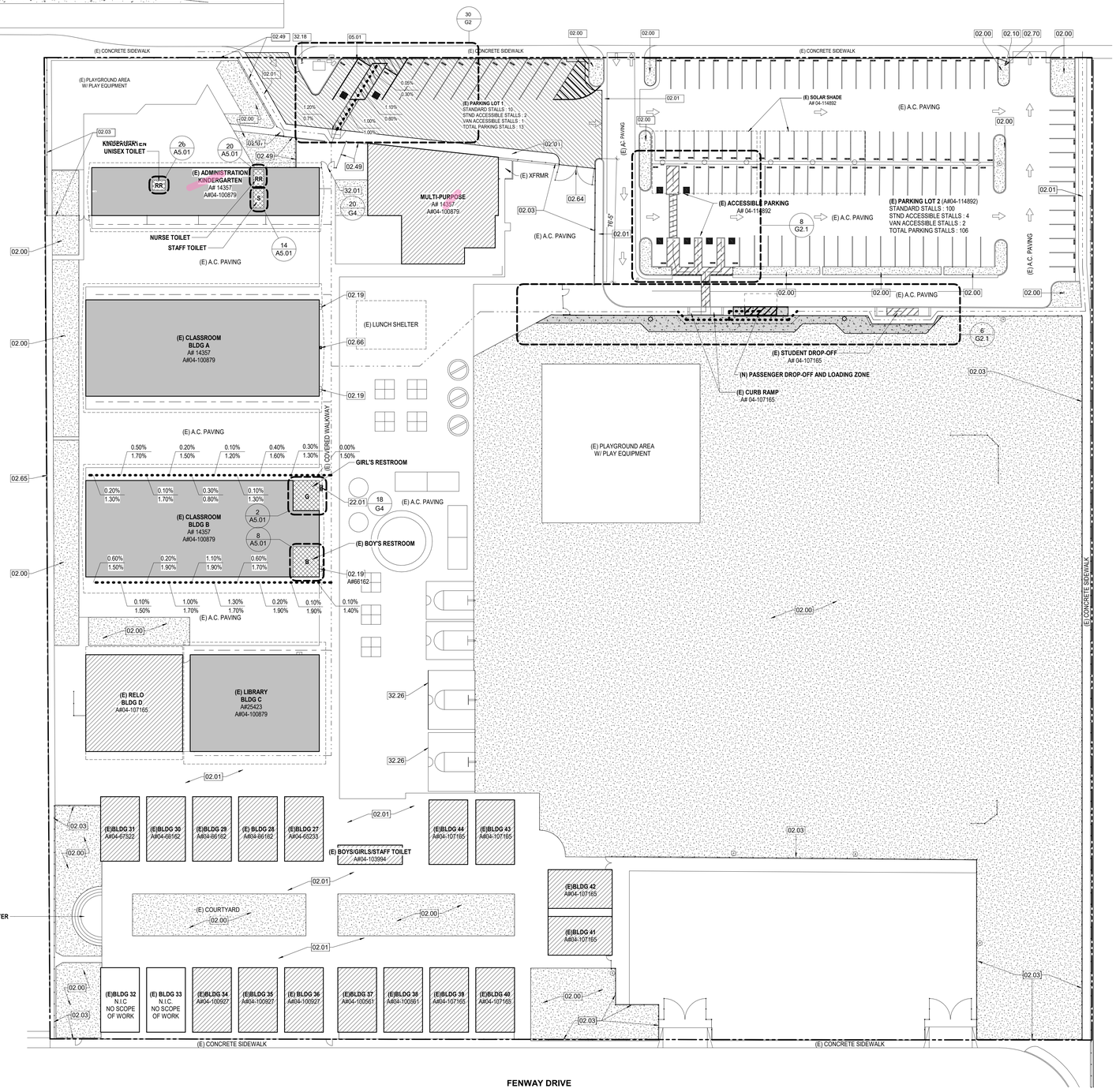
TOTAL P-LOT STALLS 106

TOTAL STALLS ON SITE 119

PATH OF TRAVEL

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE POT INDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRCUTURAL REPAIRS.** AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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



6 SITE PLAN

1" = 30'-0"

ACCESSIBILITY LEGEND

- (N) PATH OF TRAVEL
- (E) PATH OF TRAVEL PER #04-107165
- (E) PATH OF TRAVEL PER #04-110234
- (E) PATH OF TRAVEL PER #04-114892
- PROPERTY LINE
- (E) BUILDING TO BE MODERNIZED
- (E) BUILDING WITH ROOF & FIRE ALARM SCOPE ONLY
- (E) BUILDING N.I.C. - NO SCOPE OF WORK
- AREA OF (N) ASPHALT SLURRY COAT
- ACCESSIBLE RESTROOM TO BE PROVIDED AS PART OF THE CONTRACT
  - RR = GENDER NEUTRAL TOILET
  - B = BOYS
  - G = GIRLS
  - S = STAFF

0.0% SLOPE IN DIRECTION OF TRAVEL
0.0% (E) SLOPES PER SMART LEVEL, VERIFIED IN FIELD. NOTE: SLOPE MEASUREMENTS SPACED 10'-0" O.C. MAX, TYP
CROSS SLOPE

ACCESSIBLITY KEYED NOTES

02.00 (E) TURF TO REMAIN
02.01 (E) CONCRETE TO REMAIN
02.03 (E) 6'-0"H GALV. STEEL CHAIN LINK FENCE TO REMAIN
02.06 (E) ASPHALT TO REMAIN, PROTECT IN PLACE
02.10 (E) TOW AWAY SIGN A# 04-107165
02.19 (E) DRINKING FOUNTAIN TO REMAIN
02.49 (E) METAL FENCE AND POSTS TO REMAIN. PROTECT IN PLACE.
02.63 (E) CURB RAMP TO REMAIN, SEE A#100879
02.64 (E) FIRE ACCESS GATE TO REMAIN, SEE A#14357
02.65 (E) CMU WALL TO REMAIN
02.66 (E) DRINKING FOUNTAIN W/ BOTTLE FILLER TO REMAIN. PROTECT IN PLACE.
02.67 (E) ORNAMENTAL METAL GATE TO REMAIN
02.70 (E) "DO NOT ENTER" SIGNAGE PER DETAIL 25/G2.1
05.01 (N) 3'-0" HEIGHT CHAIN LINK FENCE. REFER TO 28/G2, 22&21/G4
22.01 (N) ACCESSIBLE DRINKING FOUNTAIN W/ BOTTLE FILLER & FURRED WALL. SEE DETAIL 18/G4
32.01 6'-0" HIGH GALV. STEEL CHAIN LINK GATE W/ PANIC HARDWARE, PER DETAIL 20/G4
32.04 4" WIDE BLUE STRIPING
32.05 4" WIDE WHITE STRIPING
32.07 "NO PARKING" - 12" HIGH MIN. LETTERS, WHITE PAINT. NO DIAGONAL STRIPING THROUGH TEXT, TYP.
32.08 INTERNATIONAL SYMBOL OF ACCESSIBILITY PER DETAIL 1/G4
32.10 CONCRETE WHEELSTOP PER DETAIL 30/G4
32.13 (N) ASPHALT SLURRY COAT
32.14 (N) VAN ACCESSIBLE PARKING SIGN PER DETAIL 6/G4
32.15 (N) ACCESSIBLE PARKING SIGN PER DETAIL 6/G4
32.18 (N) TOW AWAY SIGNAGE PER DETAIL 23/G4
32.26 (N) 2" WIDE (MIN) WHITE PAINTED STRIPING
32.27 (N) 4" WIDE PAINTED WHITE HATCH LINES AT 36" OC
32.28 (N) 4" WIDE PAINTED WHITE BORDER & HATCH LINES AT 36" OC
32.29 (N) TRUNCATED DOMES SIMILAR TO DETAIL 21/G2.1. GRIND (E) CONCRETE FOR NEW FLUSH TRANSITION CONCRETE DOME MAT.

GENERAL NOTES

1. REFER TO CIVIL DRAWINGS FOR NEW PAVING AREAS AND DETAILS.

DSA CERTIFICATION LIST

1. THE FOLLOWING PROJECT... **A# 04-114892** CLOSED WITH DSA CERTIFICATION ON 2/24/2017
2. THE FOLLOWING PROJECT... **A# 04-110234** CLOSED WITH DSA CERTIFICATION ON 7/25/2011
3. THE FOLLOWING PROJECT... **A# 04-107165** CLOSED WITH DSA CERTIFICATION ON 7/17/2013
4. THE FOLLOWING PROJECT... **A# 04-103994** CLOSED WITH DSA CERTIFICATION ON 11/1/2006
5. THE FOLLOWING PROJECT... **A# 04-100879** CLOSED WITH DSA CERTIFICATION ON 12/17/2008
6. THE FOLLOWING PROJECT... **A# 04-100561** CLOSED WITH DSA CERTIFICATION ON 7/17/2013
7. THE FOLLOWING PROJECT...**A# 66162** CLOSED WITH DSA CERTIFICATION ON 6/16/2009
8. THE FOLLOWING PROJECT...**A# 65233** CLOSED WITH DSA CERTIFICATION ON 2/22/2010
9. THE FOLLOWING PROJECT... **A# 25423** CLOSED WITH DSA CERTIFICATION ON 1/22/1965
10. THE FOLLOWING PROJECT... **A# 14357** CLOSED WITH DSA CERTIFICATION ON 5/1/1956

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C
S
KEY PLAN
N
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

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ACCESSIBILITY SITE PLAN

G2

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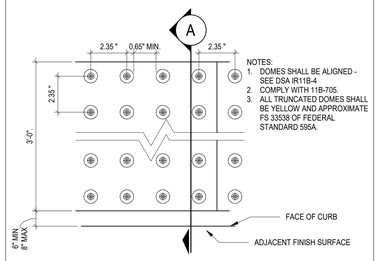
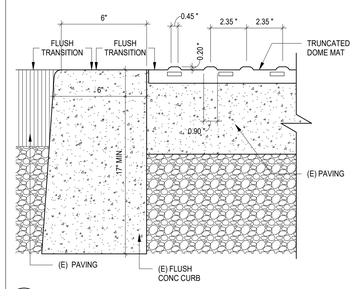
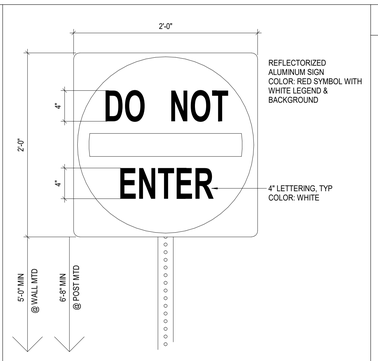
G2.1 - ENLARGED SITE PLAN

0" 1"





21 TRUNCATED DOMES
3" = 1'-0"



26 (E) DO NOT ENTER
1 1/2" = 1'-0"

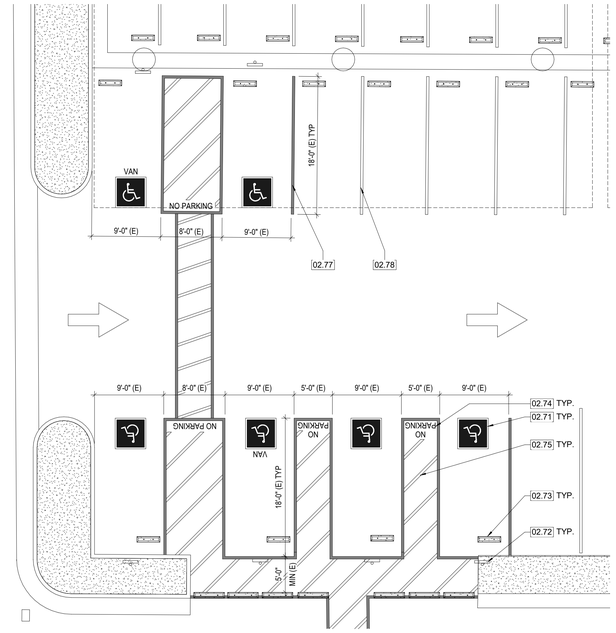
ACCESSIBLITY KEYED NOTES

02.01 (E) CONCRETE TO REMAIN
02.03 (E) 6'-0"H GALV. STEEL CHAIN LINK FENCE TO REMAIN
02.05 (E) CONCRETE RAMP TO REMAIN
02.17 (E) TRUNCATED DOMES TO REMAIN
02.71 (E) INTERNATIONAL SYMBOL OF ACCESSIBILITY TO REMAIN
02.72 (E) ACCESSIBLE PARKING SIGN TO REMAIN
02.73 (E) CONCRETE WHEELSTOP TO REMAIN
02.74 (E) "NO PARKING" PAINTED LETTERING TO REMAIN - 12" HIGH MIN, WHITE PAINT. NO DIAGONAL STRIPING THROUGH 'TEXT'
02.75 (E) 4" WIDE PAINTED ACCESS AISLE STRIPING TO REMAIN - BLUE BORDER W/ WHITE HATCH LINES @ 36"OC
02.77 (E) 4" WIDE BLUE PAINTED ACCESSIBLE PARKING STRIPING TO REMAIN
02.78 (E) 4" WIDE WHITE PAINTED STANDARD PARKING STRIPING TO REMAIN
02.80 (E) CHAINLINK GATE TO REMAIN
02.81 (E) 4" WIDE PAINTED ACCESS AISLE STRIPING TO REMAIN - PAINTED BLUE BORDER W/ BLUE HATCH LINES @ 36"OC
02.82 (E) LIGHT POLE W/ CONCRETE BASE TO REMAIN
02.83 (E) CURB TO REMAIN
32.01 6'-0" HIGH GALV. STEEL CHAIN LINK GATE W/ PANIC HARDWARE, PER DETAIL 20/G4
32.02 6'-0" HIGH GALV. STEEL CHAIN LINK FENCE, PER DETAIL 22/G4
32.16 (N) TRUNCATED DOMES. PER DETAIL 21/G2.1
32.19 (N) 4" WIDE PAINTED ACCESS AISLE STRIPING - BLUE BORDER W/ BLUE HATCH LINES @ 36"OC
32.20 (N) CONCRETE WALKWAY PER CIVIL DWGS
32.21 (N) CONCRETE RAMP PER CIVIL DWGS
32.22 (N) CONCRETE ACCESS AISLE PER CIVIL DWGS
32.23 (N) 6" CONCRETE CURB PER CIVIL DWGS
32.24 (N) 36"H METAL RAIL
32.25 (N) 6'-0" HIGH GALV. STEEL CHAIN LINK SERVICE GATE, PER DETAIL 27/G4

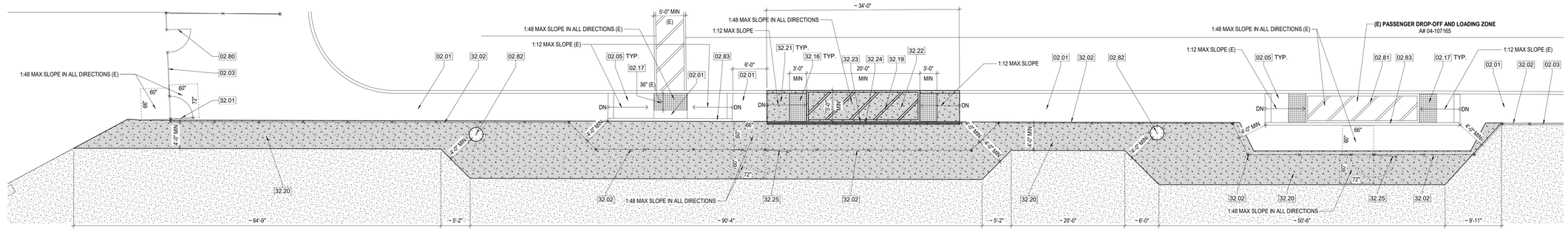
ACCESSIBILITY LEGEND

PROPERTY LINE

AREA OF (N) CONCRETE WALKWAY. SEE DETAIL CIVIL PLAN DETAIL 1 / C3.00



8 ENLARGED ACCESSIBLE PARKING PLAN - LOT 2 (FOR REFERENCE ONLY) A#04-114892
1/8" = 1'-0"



6 ENLARGED SITE PLAN - PASSENGER DROP-OFF & LOADING ZONES
1/8" = 1'-0"

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6/19/2023 1:22:25 PM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

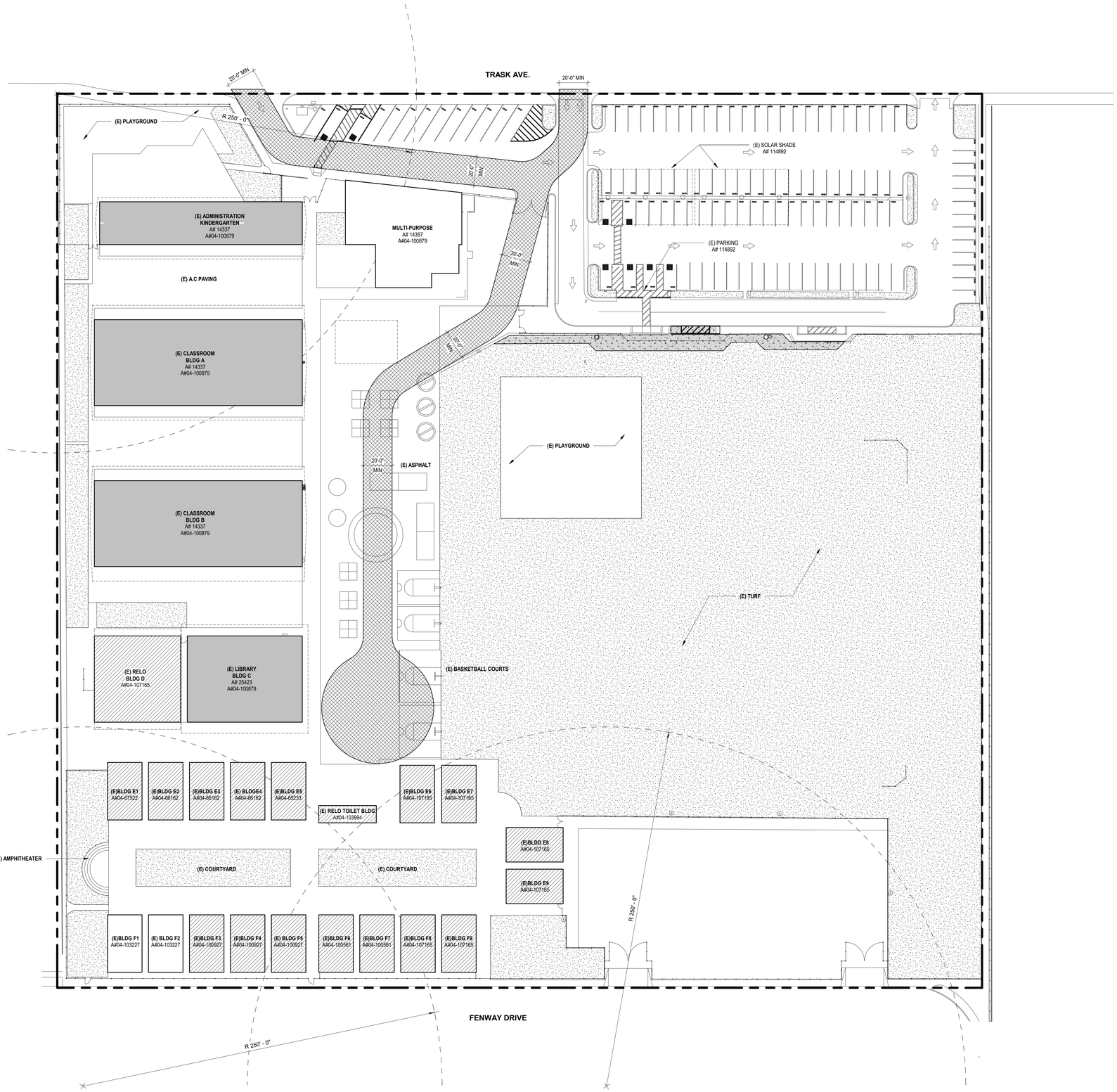
No.	Description	Date

DSA SUBMITTAL

ENLARGED SITE PLAN

G2.1

0" 1"



NORTH

1 Fire Access Site Plan
1" = 30'-0"

FIRE ACCESS LEGEND / CODE INFORMATION

- PROPERTY LINE
- (E) BUILDING TO BE MODERNIZED
- (E) BUILDING WITH ROOF & FIRE ALARM SCOPE ONLY
- (E) BUILDING N.I.C., NO SCOPE OF WORK
- (E) FIRE ACCESS LANE (A# 04-107165)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C
1
2
KEY PLAN
N
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

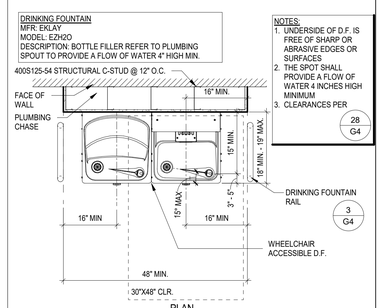
REVISIONS

No.	Description	Date

DSA SUBMITTAL

FIRE ACCESS SITE PLAN

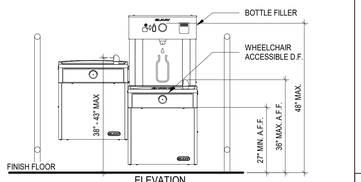
G3



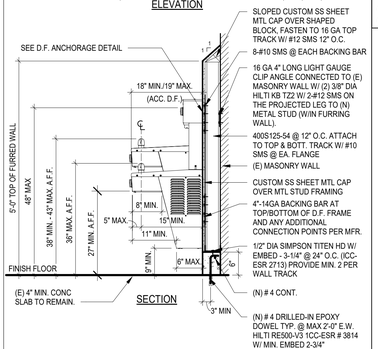
PLAN

NOTES:

**11B-602.6 WATER FLOW
THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES AND 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.



ELEVATION



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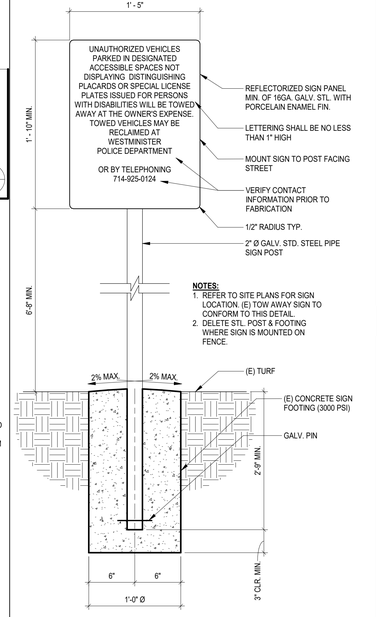
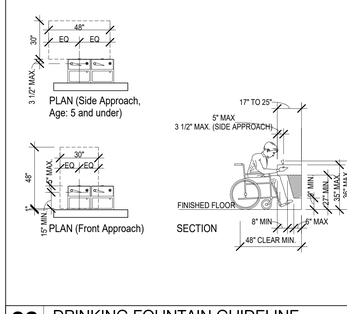


23 TOW AWAY SIGN
1 1/2" = 1'-0"



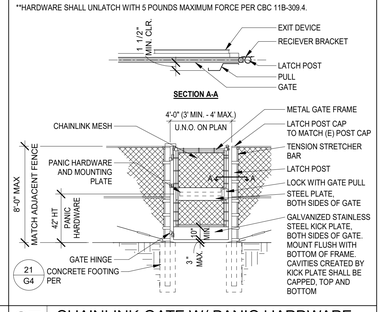
28 DRINKING FOUNTAIN GUIDELINE
1/4" = 1'-0"

Item	Height	Nominal Pipe Size (inches)	Outside Diameter (Inches)	Weight (pounds per foot)	Conc.Footings f'c=3000 psi min.	
					Diameter (inches)	Depth (inches)
Top Rail, Brace Rails and Transom Rails	Up to 10'-0"	1-1/4	1.660	2.27	N/A	N/A
	10'-1" to 16'-0"	1-1/2	1.900	2.72	N/A	N/A
Line Posts	Up to 6'-0"	2	2.375	2.65	12	30
	6'-1" to 8'-0"	2	2.375	2.65	12	36
	8'-1" to 10'-0"	2-1/2	2.875	5.79	12	42
	10'-1" to 16'-0"	3	3.500	7.58	14	60
Terminal, Corner, Angle & Pull Posts	Up to 8'-0"	2-1/2	2.875	5.79	12	36
	8'-1" to 10'-0"	2-1/2	2.875	5.79	14	42
	10'-1" to 16'-0"	3	3.500	7.58	14	60
Pedestrian Gate Posts	Up to 8'-0"	2-1/2	2.875	5.79	14	36
Gate Frames	Up to 8'-0"	1-1/2	1.900	2.72	N/A	N/A
Driveway Double-Leaf Swing Gate Posts: Opening						
Up to 17' - 3-1/2"	Up to 8'-0"	3-1/2	4.000	9.11	16	42
17'-4" to 20'- 3 1/2"	Up to 8'-0"	3-1/2	4.000	9.11	16	42

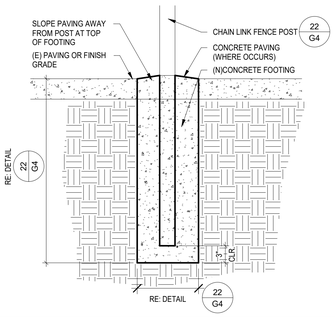
22 CHAINLINK FENCE & GATE SCHEDULE
3" = 1'-0"

**GATE SHALL HAVE AN OPENING FORCE OF 5 POUNDS MAXIMUM PER CBC 11B-404.2.9.

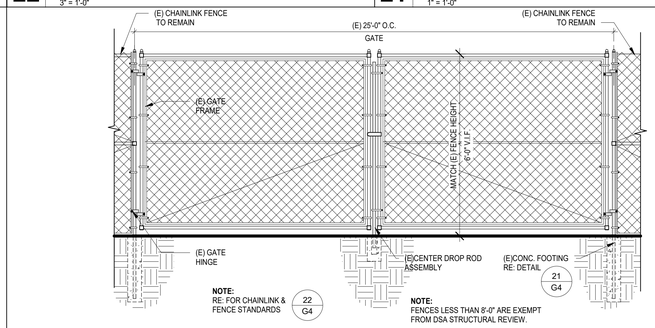
**HARDWARE SHALL UNLATCH WITH 5 POUNDS MAXIMUM FORCE PER CBC 11B-309.4.



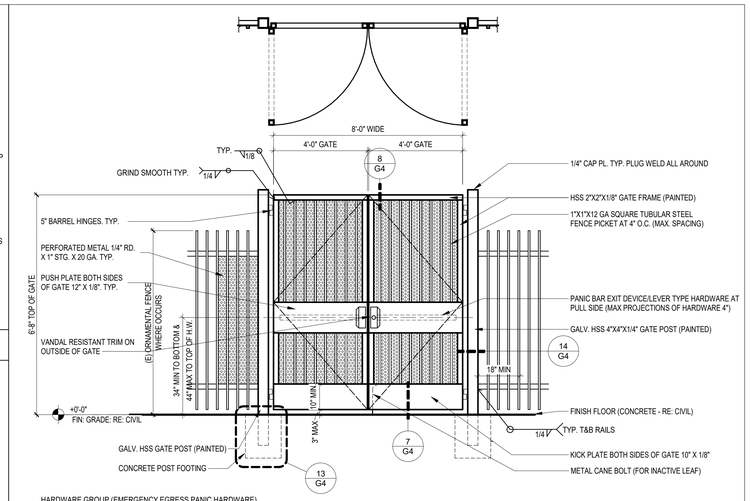
27 CHAINLINK GATE W/ PANIC HARDWARE
1/4" = 1'-0"



21 CHAIN LINK FENCE POST FOOTING
1" = 1'-0"



16 CHAINLINK VEHICLE ACCESS GATE
3/8" = 1'-0"

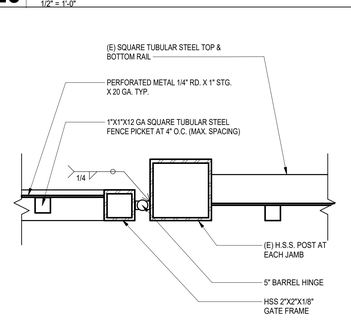


HARDWARE GROUP (EMERGENCY EGRESS PANIC HARDWARE)
- 3 HINGE (HEAVY WEIGHT): T4A3386 4-1/2" X 4-1/2" NRP
- EXIT HARDWARE: VON DUPRIN AX PA-98EO-US26D - 3 OR 4 FT LENGTH DEPENDING ON GATE SIZE (PUSH BAR EXIT DEVICE) VON DUPRIN 996L-NL-R/V-US26D (OUTSIDE TRIM FOR PUSH BAR NIGHT LATCH FUNCTION)
- EXIT PULL DEVICE: VON DUPRIN 996L-DT
- FORMAT IC CORE (KEYED PER DISTRICT REQUIREMENT)
- CLOSURE: LOCINOX PART # MAMMOTH 180-ZILV (HYDRAULIC GATE CLOSER)
- KICK PLATE: 10 GA. GALV.
- HARDWARE BACKING-PLATE: 24" TALL X WIDTH OF GATE 16 GA GALV.
- CLOSURE BACKING PLATE: SIZED FIT ITEM C. CLOSURE.
- FLAT MOUNTED GORILLA WELD ON HINGES.

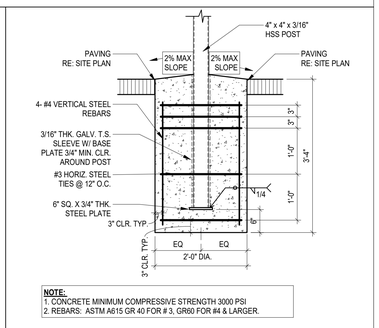
***DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM
*** GATES SHALL HAVE AN OPENING FORCE OF 5 POUNDS MAXIMUM PER CBC 11B-404.2.9.
*** HARDWARE SHALL UNLATCH WITH 5 POUNDS MAXIMUM FORCE PER CBC 11B-309.4.

PROVIDE NEW SECURITY GATES WITH POWDER COATED PAINTS.

20 ORNAMENTAL FENCE - DOUBLE GATE CUSTOM
1/2" = 1'-0"



14 HM GATE JAMB DETAIL
3" = 1'-0"



NOTE:
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 3000 PSI
2. REBARS: ASTM A615 GR 40 FOR # 3, GR60 FOR #4 & LARGER.

13 STEEL COLUMN AT METAL GATES
3/4" = 1'-0"

8 HM GATE HEAD DETAIL
3" = 1'-0"

9 CONCRETE WHEEL STOP
1" = 1'-0"

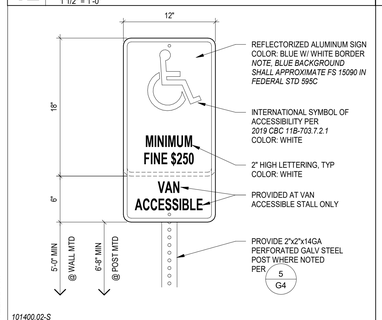
033053.01-S Rev 10/17

10 CONC CONTROL JOINT - TYP.
3" = 1'-0"

3 DRINKING FOUNTAIN RAILS
3/4" = 1'-0"

2 ACCESSIBLE PEDESTRIAN PATH
1/2" = 1'-0"

1 ACCESSIBLE PARKING SYMBOL
3/4" = 1'-0"

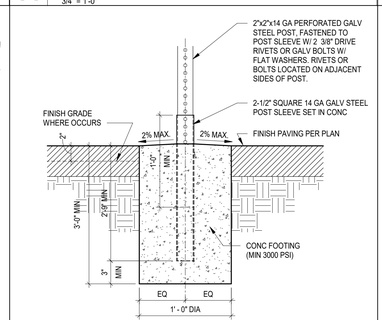


101400.03-S CBC 2016 - Rev 09/16

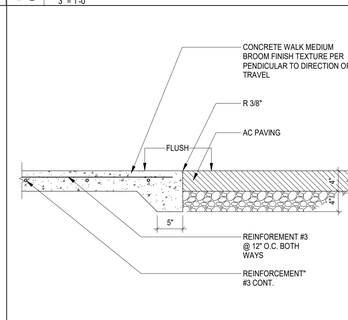
12 PASSENGER LOADING ZONE SIGN
1 1/2" = 1'-0"

101400.02-S

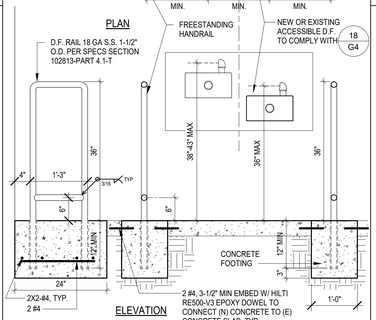
6 ACCESSIBLE PARKING SIGN
1 1/2" = 1'-0"



5 SIGN POST DETAIL
1 1/2" = 1'-0"



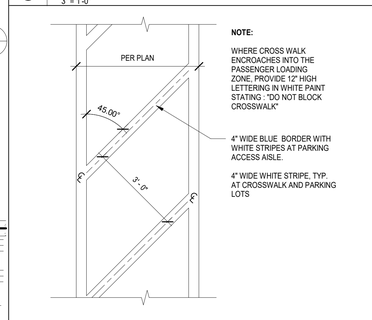
4 (E) CONC. SIDEWALK @ AC PAVING
1" = 1'-0"



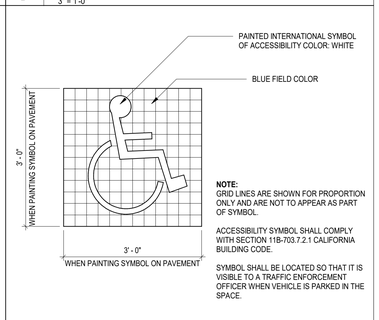
18 ACCESSIBLE DRINKING FOUNTAIN
3/4" = 1'-0"

17 GUARD POST/ BOLLARD
1/2" = 1'-0"

16 CHAINLINK VEHICLE ACCESS GATE
3/8" = 1'-0"

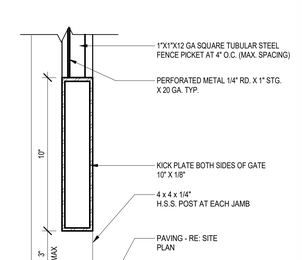


14 HM GATE JAMB DETAIL
3" = 1'-0"



NOTE:
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 3000 PSI
2. REBARS: ASTM A615 GR 40 FOR # 3, GR60 FOR #4 & LARGER.

13 STEEL COLUMN AT METAL GATES
3/4" = 1'-0"



8 HM GATE HEAD DETAIL
3" = 1'-0"

9 CONCRETE WHEEL STOP
1" = 1'-0"

033053.01-S Rev 10/17

10 CONC CONTROL JOINT - TYP.
3" = 1'-0"

3 DRINKING FOUNTAIN RAILS
3/4" = 1'-0"

2 ACCESSIBLE PEDESTRIAN PATH
1/2" = 1'-0"

1 ACCESSIBLE PARKING SYMBOL
3/4" = 1'-0"

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

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A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Tong Tou
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

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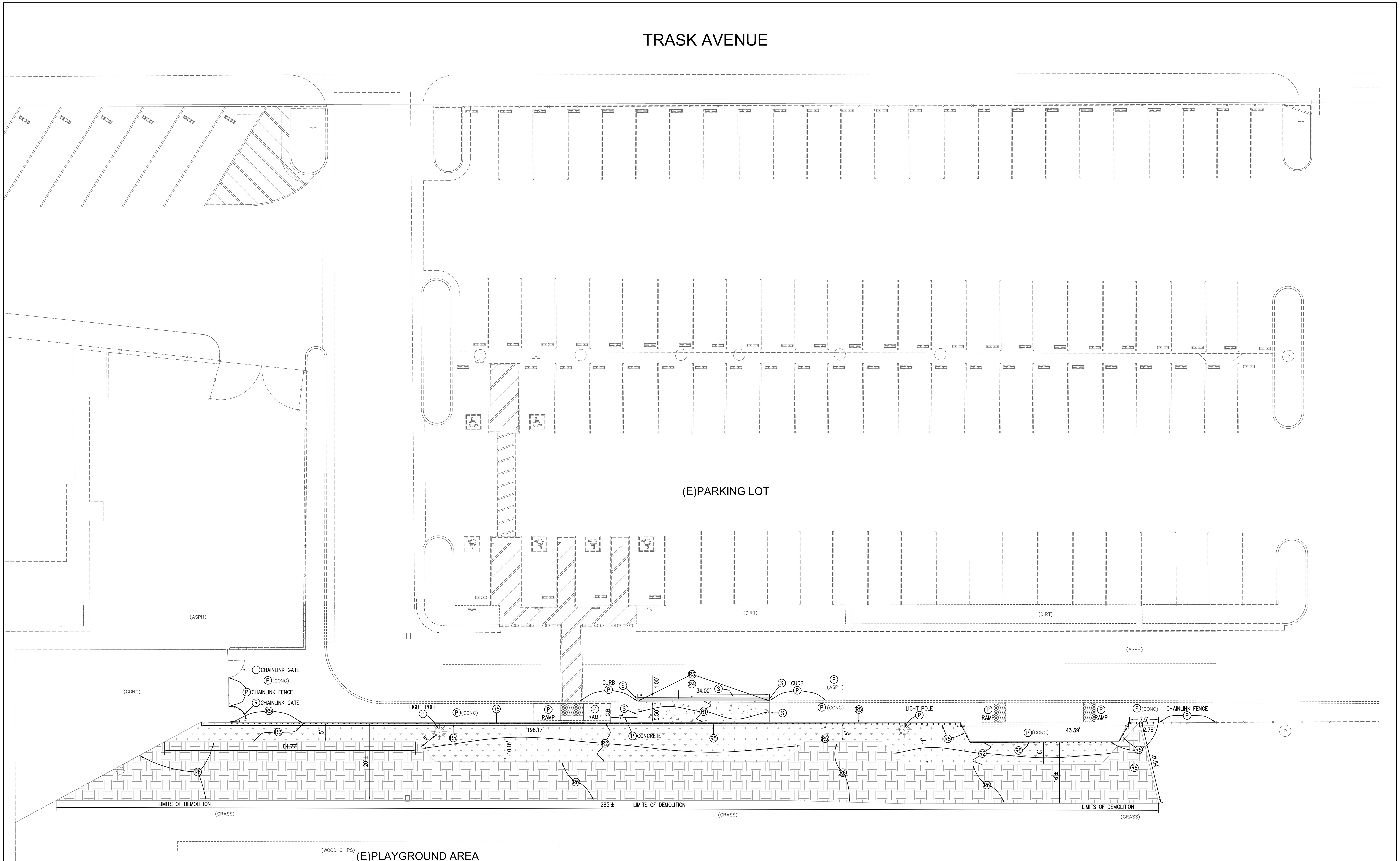
SITE DETAILS

G4



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

EARTHWORK NOTICE TO CONTRACTOR: NO EARTHWORK ANALYSIS HAS BEEN COMPLETED WITH RESPECT TO VOLUMES OF SOILS TO BE EXCAVATED, PLACED, OR IMPORTED IN ORDER TO PROVIDE THE FINISHED GRADES SHOWN ON THE PLANS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE EARTHWORK QUANTITIES NECESSARY TO COMPLETE THE PROJECT.

CONSTRUCTION STORM WATER NOTE:
GRADING WORK ASSOCIATED WITH THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF SOIL AND THUS SHALL NOT BE SUBJECT TO COMPLY WITH THE NPDES STORMWATER CONSTRUCTION GENERAL PERMIT 2009-0009-DWQ.

DEMOLITION NOTES:

- (P) PROTECT EXISTING IMPROVEMENT IN PLACE.
- (S) SAWCUT EXISTING PAVEMENT WITH CLEAN EDGE.
- (R) REMOVE & DISPOSE OF EXISTING IMPROVEMENT.
- (R1) REMOVE & DISPOSE OF EXISTING 4" THICK CONCRETE PAVEMENT & BASE MATERIAL.
- (R2) CLEAR AND GRUB EXISTING TURF AND REMOVE IRRIGATION HEADS / PIPES. PREP EXISTING SUBGRADE FOR NEW CONCRETE PER CONCRETE PAVEMENT DETAIL 1 ON C3.00.
- (R3) REMOVE & DISPOSE OF EXISTING CONCRETE CURB.
- (R4) SAWCUT ASPHALT PAVEMENT 12" OUTSIDE OF EXISTING CURB WITH CLEAN EDGE. REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT & BASE MATERIAL.
- (R5) REMOVE & DISPOSE OF EXISTING CHAIN LINK FENCE, POSTS AND FOOTINGS.
- (R6) CLEAR AND GRUB EXISTING TURF. ADJUST EXISTING IRRIGATION HEADS TO NEW CONTOURS SHOWN ON GRADING PLAN.

HATCH LEGEND:

- = EXISTING ASPHALT PAVEMENT TO BE REMOVED
- = EXISTING CONCRETE PAVEMENT TO BE REMOVED
- = CLEAR AND GRUB TURF / PREP SUBGRADE FOR NEW CONCRETE (R2)
- = CLEAR AND GRUB TURF (R6)

10 5 0 10 20 30
SCALE: 1" = 10'

PLANS PREPARED BY:
FPL and Associates, Inc.
Traffic • Transportation • Civil
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1688

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KEY PLAN
NORTH: PLAN

Consultant

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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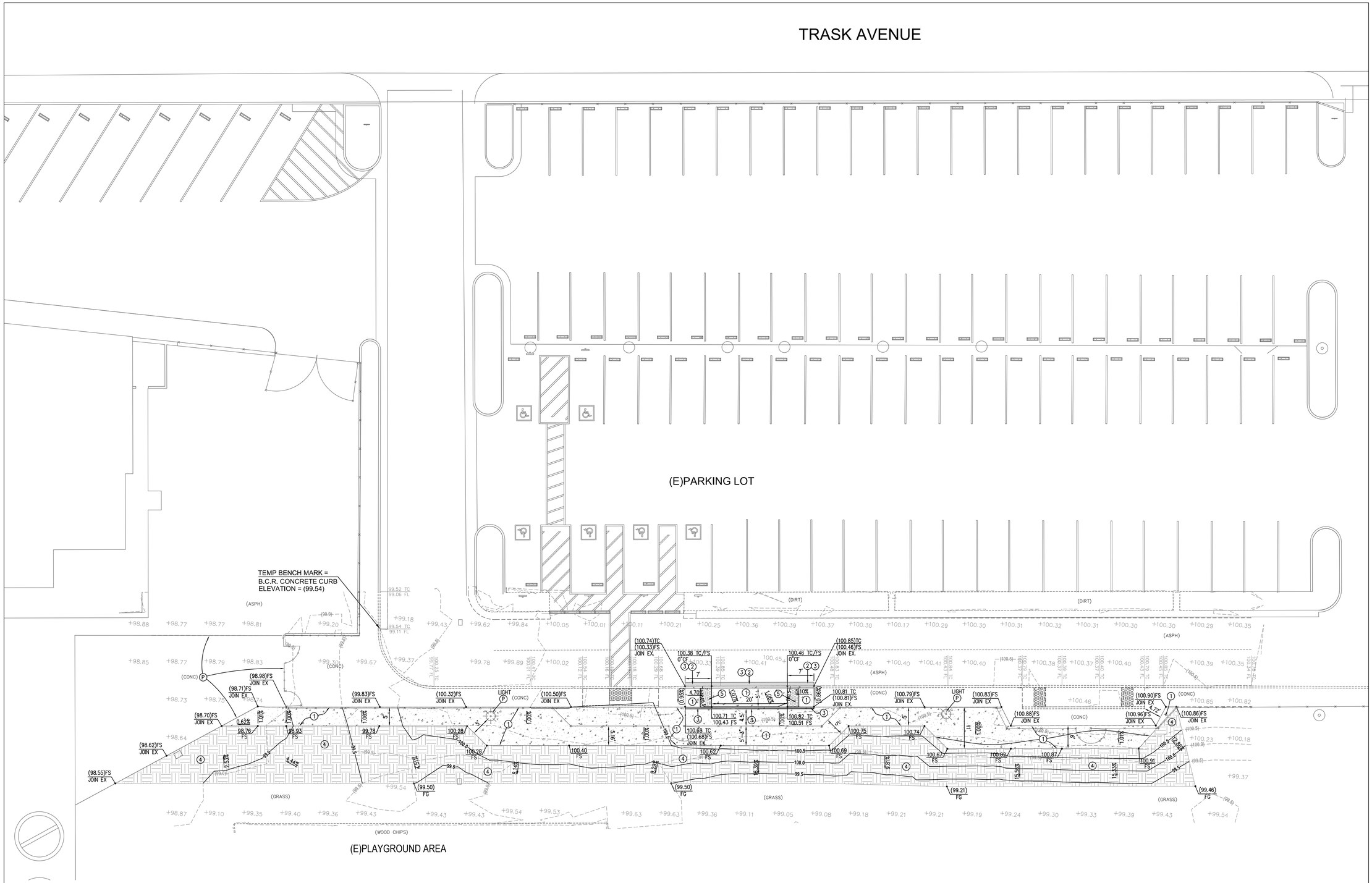
DEMOLITION PLAN

C1.00



HORIZONTAL CONTROL

AN AUTOCAD GEOMETRIC ELECTRONIC FILE SHALL BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST FOR THE CONTRACTOR'S SURVEYOR TO LAYOUT THE CONSTRUCTION STAKING OF THE PROJECT. THE SURVEYOR OR CONTRACTOR WILL NEED TO SIGN A WAIVER FORM BEFORE RELEASE OF ANY CAD ELECTRONIC DRAWINGS.

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

EARTHWORK NOTICE TO CONTRACTOR: NO EARTHWORK ANALYSIS HAS BEEN COMPLETED WITH RESPECT TO VOLUMES OF SOILS TO BE EXCAVATED, PLACED, OR IMPORTED IN ORDER TO PROVIDE THE FINISHED GRADES SHOWN ON THE PLANS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE EARTHWORK QUANTITIES NECESSARY TO COMPLETE THE PROJECT.

CONSTRUCTION STORM WATER NOTE:
GRADING WORK ASSOCIATED WITH THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF SOIL AND THUS SHALL NOT BE SUBJECT TO COMPLY WITH THE NPDES STORMWATER CONSTRUCTION GENERAL PERMIT 2009-0009-DWQ.

HATCH LEGEND:

= NEW CONCRETE PAVEMENT (1)

= NEW ASPHALT PAVEMENT (2)

= CLEAR AND GRUB TURF (4)

CONSTRUCTION NOTES:

(P) PROTECT EXISTING IMPROVEMENT IN PLACE.

(R) REMOVE EXISTING IMPROVEMENT.

(1) CONSTRUCT CONCRETE PAVEMENT PER DETAIL 1/C3.00.

(2) CONSTRUCT 12" WIDE BY 3.0" THICK NEW ASPHALT PAVEMENT, CLASS AND GRADE SHALL BE TYPE III, C3, PG-64-10, PER S.S.P.W.C. SECTION 203-6.4.3. CONSTRUCT 3.0" OF CRUSHED AGGREGATE BASE UNDER ASPHALT, COMPACTED TO MINIMUM 95% RELATIVE DENSITY. NEW ASPHALT SHALL BE FLUSH WITH EXISTING ASPHALT. THE EXPOSED BOTTOM SOILS SHOULD THEN BE RIPPED AND SCARIFIED, AND MOISTURE CONDITIONED TO SEVERAL POINTS ABOVE OPTIMUM MOISTURE BEFORE BEING RECOMPACTED IN PLACE TO A COMPACTION OF 90 PERCENT OR GREATER OF THE LABORATORY MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D 1557.

(3) CONSTRUCT CONCRETE CURB PER DETAIL 3/C3.00 AND GRADES HEREON.

(4) REGRADE EXISTING GROUND AND INSTALL NEW SOD, TO MATCH EXISTING TURF, ADJUST IRRIGATION HEADS AND PIPING AS NECESSARY.

(5) CONSTRUCT TRUNCATED DOMES PER DETAIL 21/G2.1.

10 5 0 10 20 30

SCALE: 1" = 10'

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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

KEY PLAN

Consultant

Architect

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WESTMINSTER SCHOOL DISTRICT

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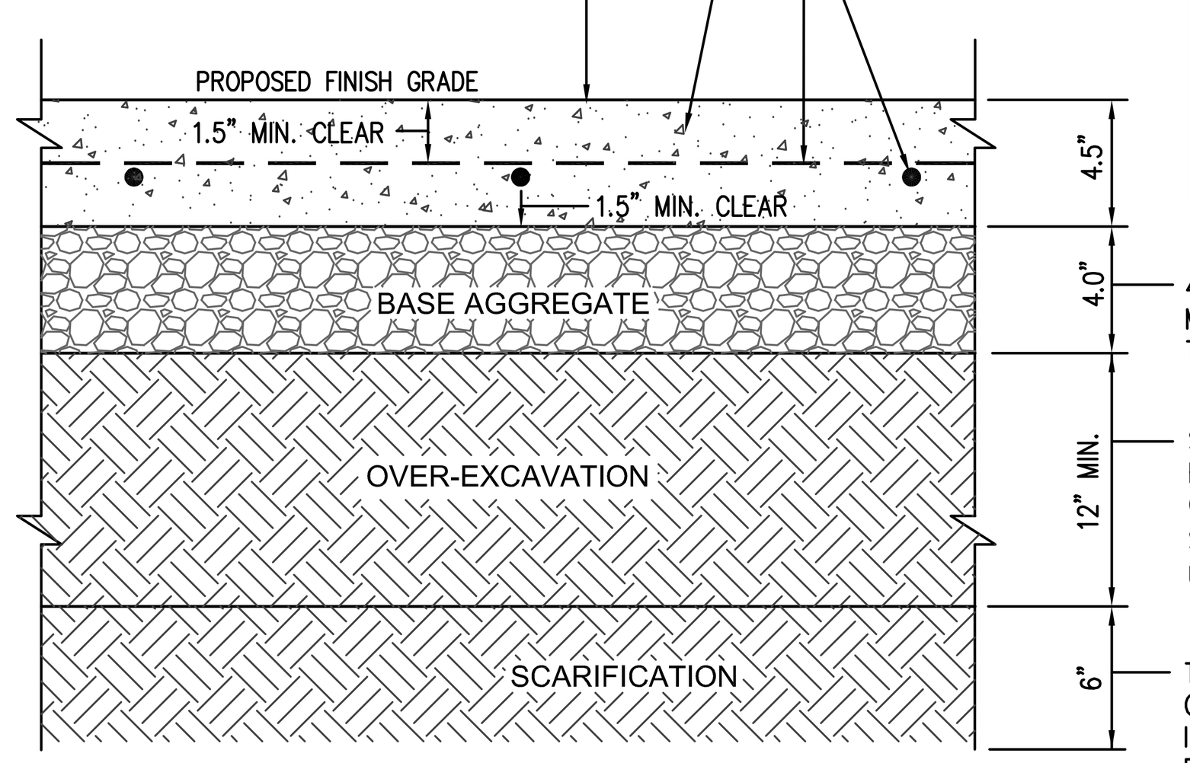
GRADING PLAN

C2.00



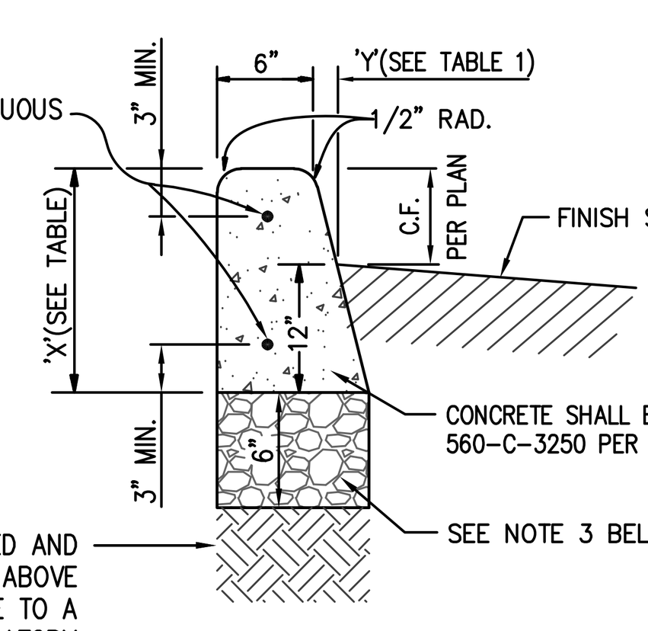
NOTE TO CONTRACTOR:
A. THE CONTRACTOR SHALL INSTALL EXPANSION AND CONTROL JOINTS IN CONCRETE FLATWORK FOLLOWING DETAILS 'AA' THRU 'CC' HEREON.
B. CONTRACTOR SHALL FOLLOW DETAILS 'DD' THRU 'EE' HEREON WHEN CONSTRUCTING CONCRETE FLATWORK EDGE TREATMENTS.

(1) CONCRETE PAVEMENT DETAIL
NOT TO SCALE

FLOOD TEST NOTE:

BEFORE ACCEPTANCE, ALL NEW CONCRETE PAVEMENT SHALL BE WATER TESTED TO ENSURE PROPER DRAINAGE AS DIRECTED BY THE INSPECTOR. THE CONTRACTOR SHALL PROVIDE WATER FOR THIS PURPOSE. THE FLOODING SHALL BE DONE BY WATER TANK TRUCK. DEPRESSIONS WHERE THE WATER PONDS TO A DEPTH OF MORE THAN 0.01 FOOT SHALL BE FILLED WITH TYPE E ASPHALT MIX OR THE SLOPE CORRECTED TO PROVIDE PROPER DRAINAGE. THE EDGES OF THE FILL SHALL BE FEATHERED AND SMOOTHED SO THAT THE JOINT BETWEEN THE FILL AND THE ORIGINAL SURFACE IS INVISIBLE. PRACTICAL FIELD MEASUREMENT: 0.01 FOOT = TWO QUARTERS STACKED. NO STANDING WATER SHALL REMAIN AFTER 60 MINUTES ON A 70 DEGREE F (OR WARMER) DAY.

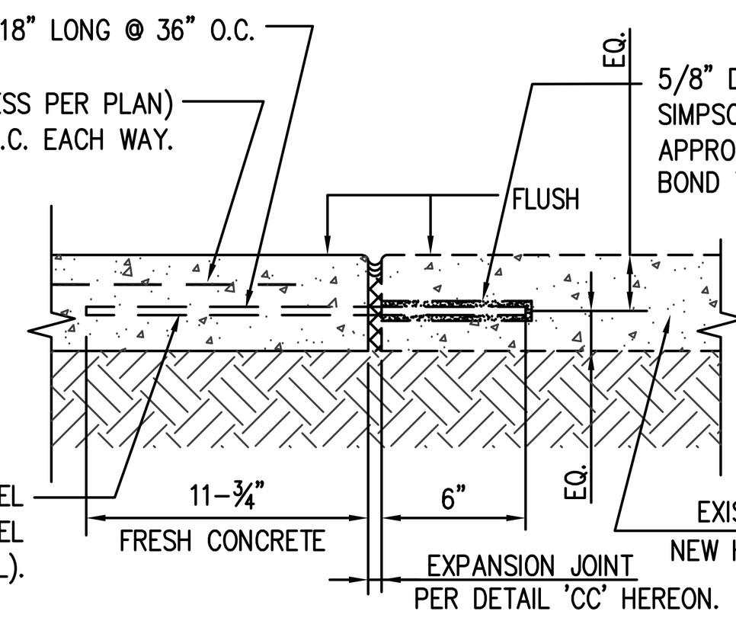
CURB FACE	0"	2"	4"	5"	6"	8"
'X'	12"	14"	16"	17"	18"	20"
'Y'	0"	0.5"	1"	1.25"	1.5"	2"



(3) CONCRETE CURB DETAIL
NOT TO SCALE

CURB GENERAL NOTES:

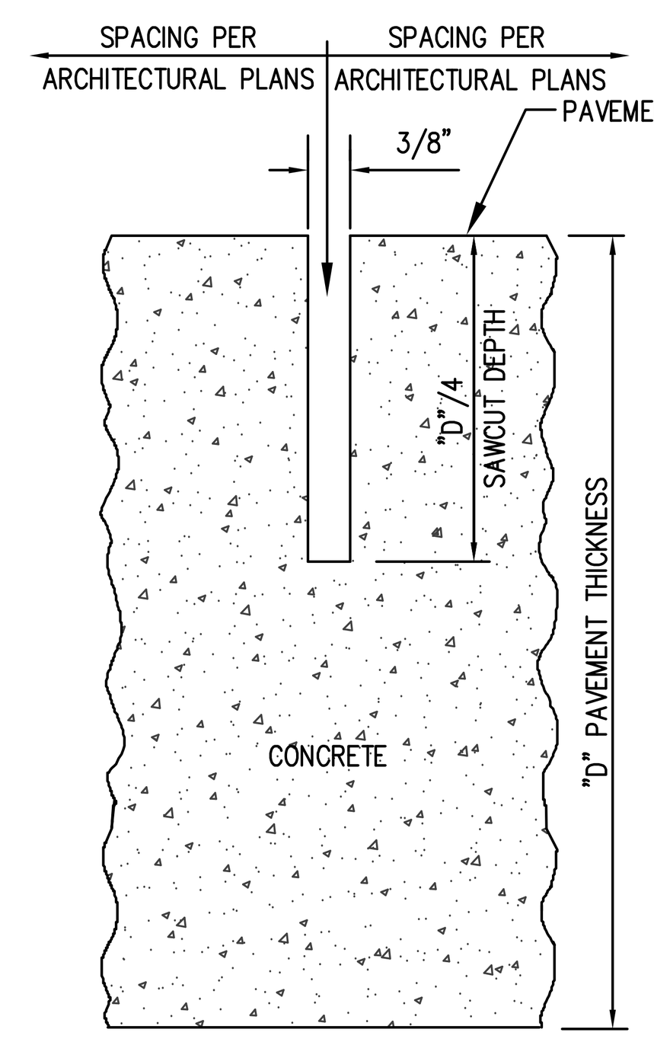
1. ALL EXPOSED EDGES SHALL HAVE A 1/2" RADIUS.
2. CONTROL JOINTS SHALL BE PLACED IN CURBING AT REGULAR INTERVALS OF 10'. EXPANSION JOINTS AT 30' INTERVALS, AND AT DRIVE APPROACHES, B.C.'S, E.C.'S, CROSS GUTTERS AND CATCH BASIN TRANSITIONS PER JOINT DETAILS HEREON.
3. A 6" THICK LAYER OF CRUSHED AGGREGATE BASE SHALL BE PLACED UNDER ALL CURB. MINIMUM COMPACTION OF 95% RELATIVE DENSITY UNLESS WAIVED BY CIVIL ENGINEER.
4. CONCRETE CURB SHALL BE MINIMUM CLASS 560-C-3250 PER S.S.P.W.C. SECTION 201-1.
5. PLACE NO. 4 REBARS 3" MINIMUM FROM TOP AND BOTTOM OF CURB.



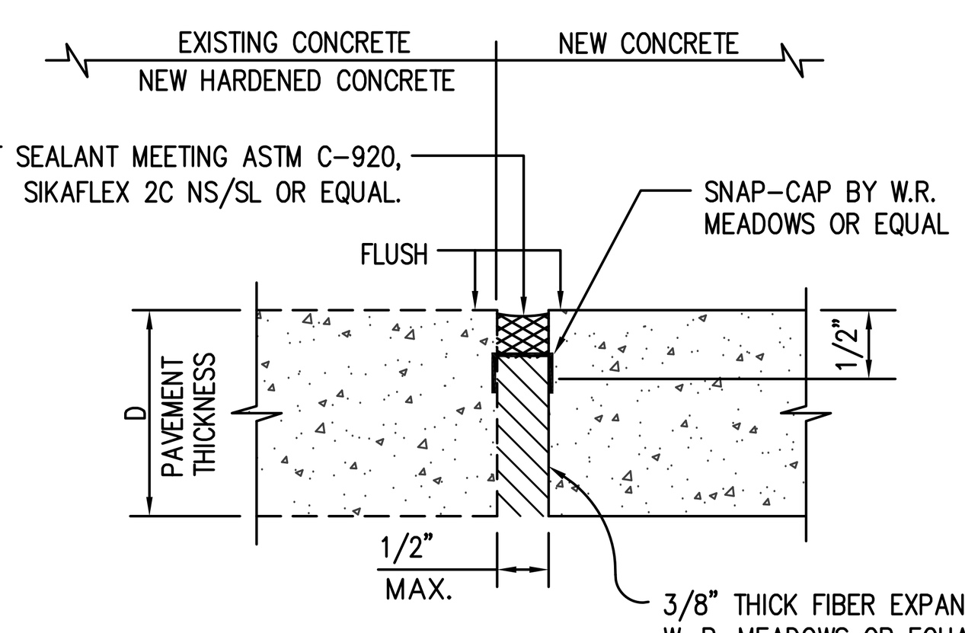
NOTE: 1. VERTICAL CHANGE IN ELEVATION ALONG ACCESSIBLE PATH OF TRAVEL CANNOT EXCEED 1/4" PER CBC 11B-303.2

2. LEVEL CHANGE BETWEEN 1/4"-1/2" MUST BE BEVELED AT 1:2 MAX PER CBC 11B-303.3

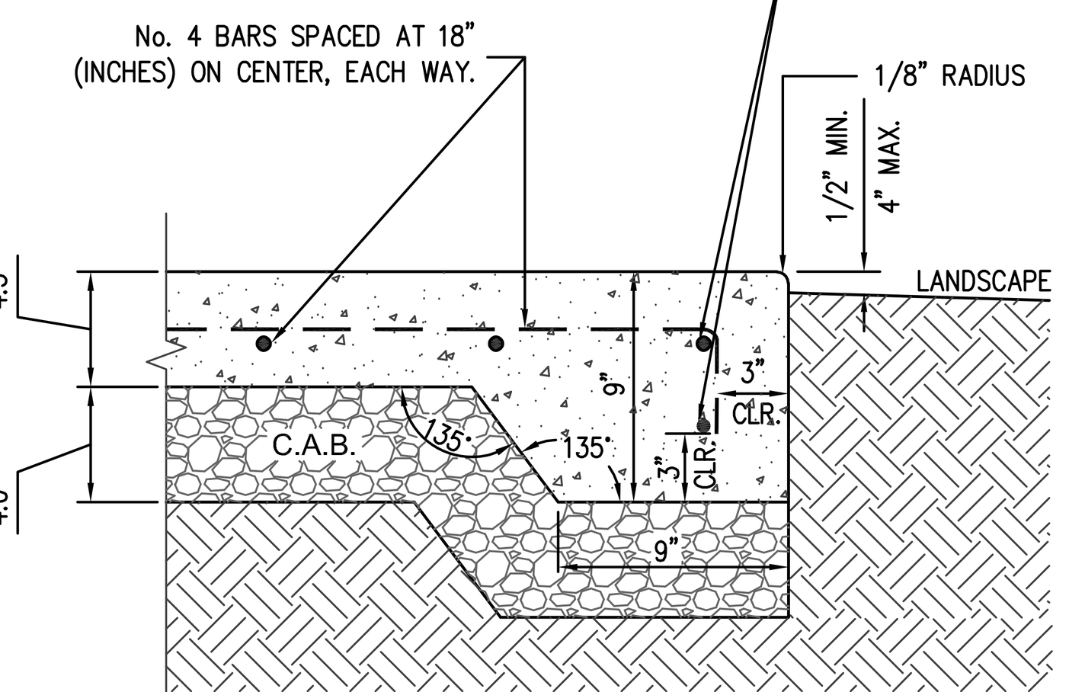
(AA) EXPANSION JOINT (E.J.) WITH REBAR
NOT TO SCALE



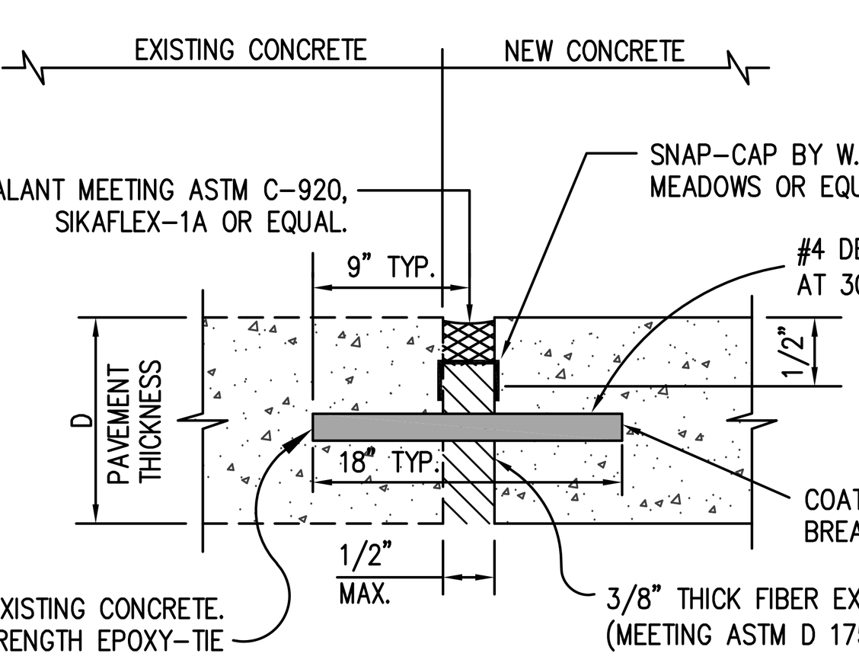
(BB) CONTROL JOINT (C.J.)
NOT TO SCALE



(CC) EXPANSION JOINT (E.J.)
NOT TO SCALE



(DD) EDGE OF CONCRETE SLAB DETAIL
WHERE CONCRETE MEETS SOFTSCAPE
NOT TO SCALE



(EE) DOWELED JOINT (D.J.)
NOT TO SCALE

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

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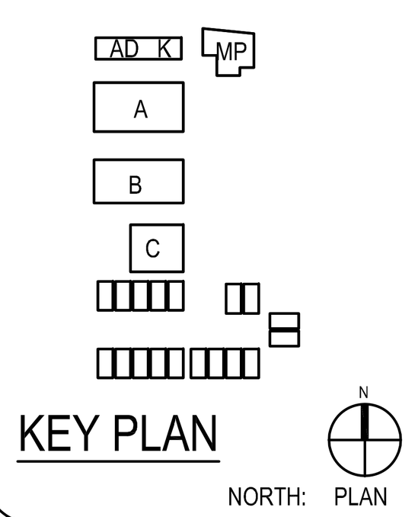

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DATE	PROJECT NUMBER
05-11-2023	220308

REVISIONS

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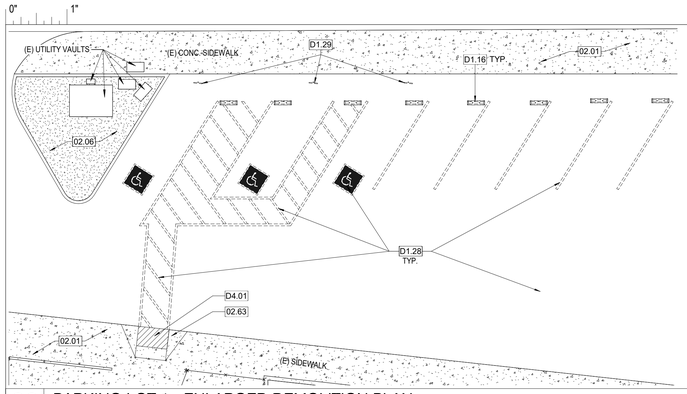
DETAIL SHEET

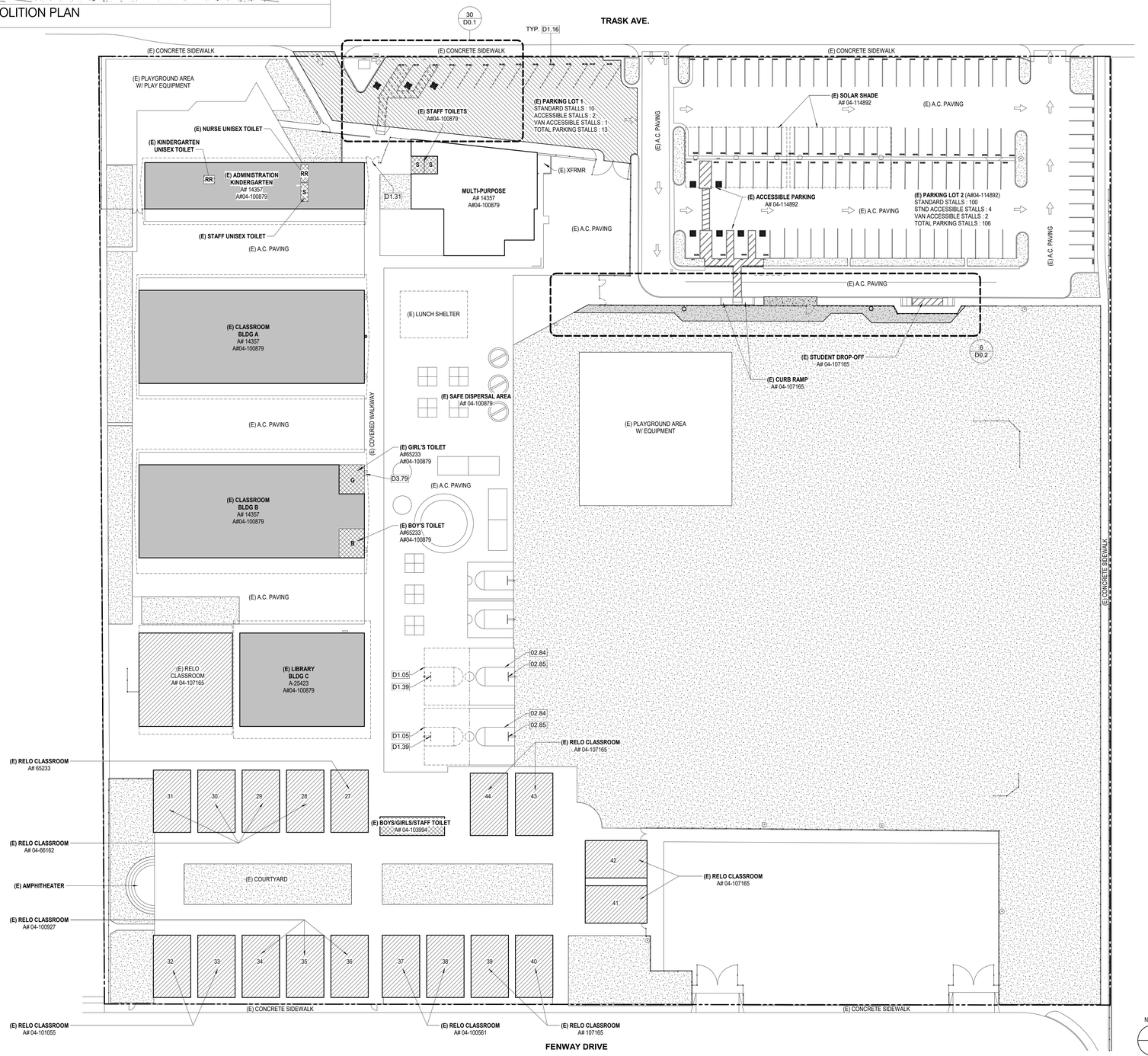
C3.00

Plot Date: 5/15/2023 12:13:14 PM Last Save By: ron.canedy Login: Ron Canedy S:\Jobs\2777 - PBK\2777bbb - Schmitt Elementary School\Civil\Schmitt ES C3.00 - Detail Sheet.dwg

D0.1 - SITE DEMOLITION PLAN



30 PARKING LOT 1 - ENLARGED DEMOLITION PLAN
3/32" = 1'-0"



6 SITE DEMOLITION PLAN
1" = 30'-0"

SITE DEMOLITION KEYED NOTES

#	DESCRIPTION
02.01	(E) CONCRETE TO REMAIN
02.06	(E) ASPHALT TO REMAIN, PROTECT IN PLACE
02.63	(E) CURB RAMP TO REMAIN, SEE A#100879
02.84	(E) PAINTED STRIPING TO REMAIN
02.85	(E) BACKBOARD AND SUPPORT POSTS TO REMAIN
D1.05	REMOVE (E) PAINTED STRIPING AS INDICATED
D1.16	REMOVE (E) CONCRETE WHEEL STOP
D1.28	(E) ASPHALT AND PARKING STRIPING TO BE PREPARED FOR (N) ASPHALT SLURRY COAT
D1.29	(E) ACCESSIBLE PARKING SIGN TO BE REMOVED
D1.31	REMOVE (E) DOUBLE-LEAF ORNAMENTAL METAL GATES & PREPARE FOR (N) DOUBLE-LEAF ORNAMENTAL METAL GATES W/ PANIC HARDWARE PER ACCESSIBILITY SITE PLAN
D1.39	REMOVE (E) BACKBOARD AND SUPPORT POSTS, DISPOSE
D3.79	REMOVE (E) DRINKING FOUNTAINS, PREPARE FOR NEW DRINKING FOUNTAIN
D4.01	GRIND (E) CONCRETE FOR NEW FLUSH TRANSITION CONCRETE DOME MAT.

SITE DEMOLITION LEGEND

- (E) PATH OF TRAVEL PER A# 53919, 65233, 04-100879, 04-102560, 04-107165, 04-110234, 04-114892
- PROPERTY LINE
- (E) BUILDING FIRE ALARM SCOPE ONLY
- BUILDING TO BE REMODELED
- AREAS OF MODIFICATION
- AREA OF (E) ASPHALT TO BE PREPARED FOR (N) SLURRY COAT
- ACCESSIBLE RESTROOM TO BE PROVIDED AS PART OF THE CONTRACT
  RR = GENDER NEUTRAL TOILET
  B = BOYS
  G = GIRLS
  S = STAFF

NOTES: For a complete list of all applicable NFPA standards refer to 2019 CBC (SFM) Chapter 35 and California Fire Code (CFC) Chapter 80. See California Building Code, Chapter 35, for State of California ammendments to the NFPA Standards.

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WESTMINSTER SCHOOL DISTRICT

AD K MP A B C

KEY PLAN
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Tong Yao
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
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SITE DEMOLITION PLAN

D0.1

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0" 1"

SITE DEMOLITION KEYED NOTES

#	DESCRIPTION
02.03	(E) 6'-0"H GALV. STEEL CHAIN LINK FENCE TO REMAIN
02.80	(E) CHAINLINK GATE TO REMAIN
D1.02	REMOVE (E) 6'-0"H GALV. STEEL CHAIN LINK GATE AND REPLACE WITH (N) CHAINLINK GATE W/ PANIC HARDWARE PER ENLARGED SITE PLAN 18/G2.1
D1.33	REMOVE (E) CONCRETE PAVING AS INDICATED
D1.36	REMOVE PORTION OF (E) CHAINLINK FENCE AS INDICATED
D1.37	REMOVE PORTION OF (E) TURF AS INDICATED, PREPARE FOR NEW CONCRETE PAVING PER CIVIL
D1.38	REMOVE (E) CHAINLINK GATE AND DISPOSE

SITE DEMOLITION LEGEND

- PROPERTY LINE
- AREA OF (E) TURF TO BE PREPARED FOR (N) CONCRETE PER CIVIL
- AREA OF (E) CONCRETE TO BE REMOVED, PREPARE FOR (N) CONCRETE PER CIVIL

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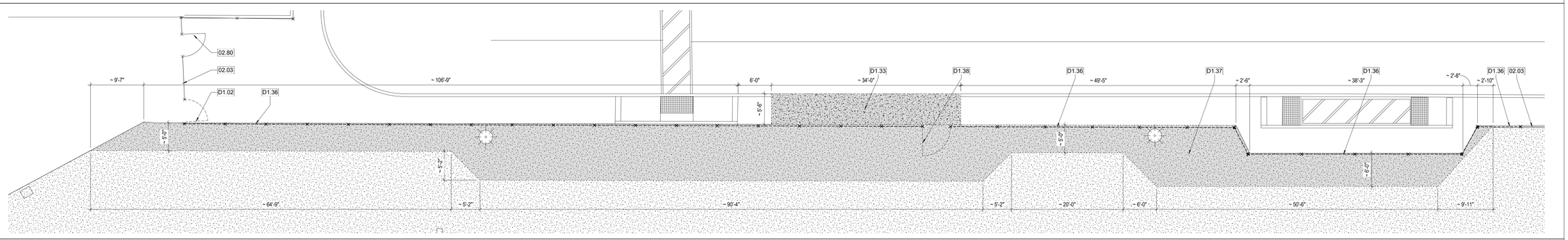

6 DROP-OFF ZONES - ENLARGED DEMOLITION PLAN
1/8" = 1'-0"

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KEY PLAN
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

SITE DEMOLITION PLANS

D0.2

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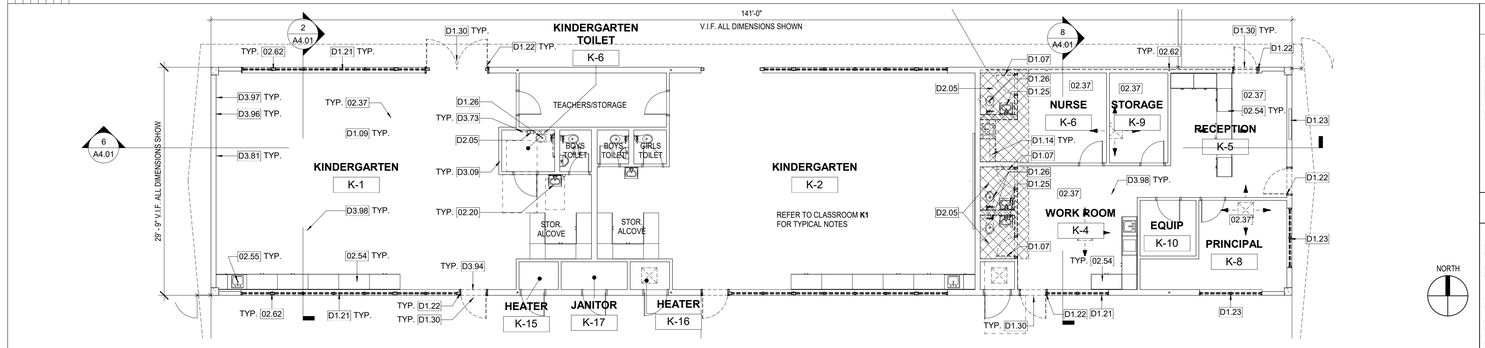
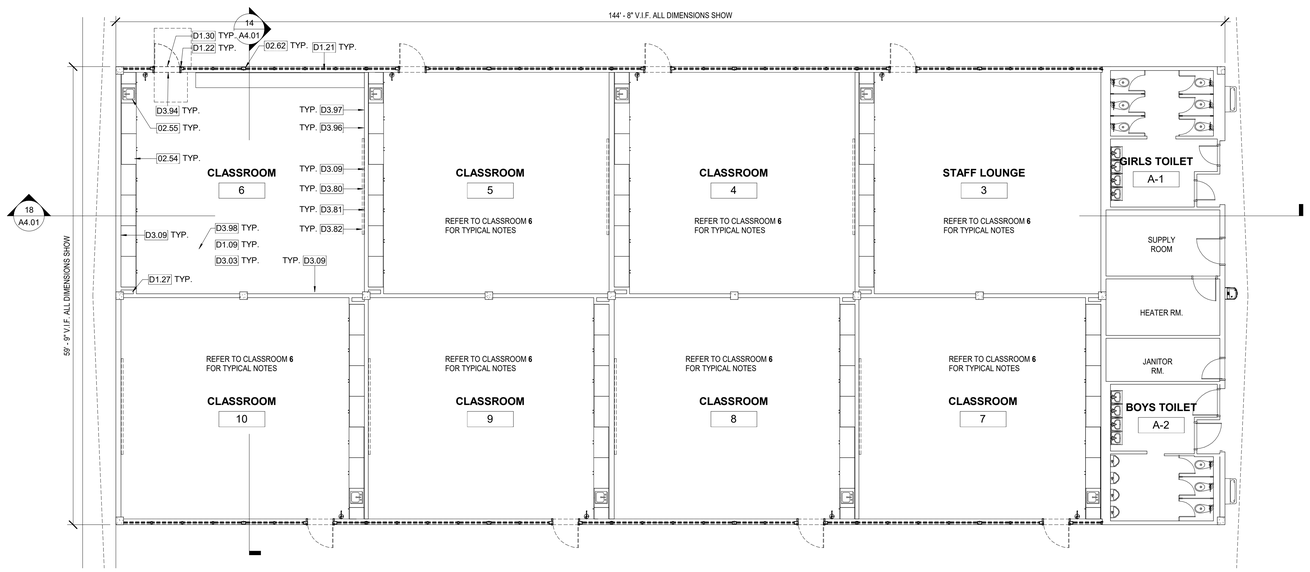
D1.1 - DEMO FLOOR PLANS ADMIN/KINDER, BLDG A,B&C



30 DEMO FLOOR PLAN - ADMIN / KINDERGARTEN
1/8" = 1'-0"



18 DEMO FLOOR PLAN BUILDING A - CLASSROOM
1/8" = 1'-0"

KEYNOTE LEGEND

#	DESCRIPTION
02.20	(E) LAVATORY TO REMAIN
02.37	(E) FLOOR FINISH TO REMAIN AND PROTECT IN PLACE.
02.54	(E) CASEWORK TO REMAIN, RE-PAINT & PROTECT IN PLACE. TO RE-PAINT (EXCEPT PLAM/STONE COUNTERTOPS)
02.55	(E) ACCESSIBLE SINK TO REMAIN. PROTECT IN PLACE
02.57	(E) DOOR FRAME & PANEL TO REMAIN. PROTECT IN PLACE.
02.62	(E) WINDOW MULLION/COLUMN TUBE STEEL TO REMAIN, PROTECT IN PLACE, WHERE OCCURS

DEMOLITION KEYNOTES

#	DESCRIPTION
D1.07	(E) DOOR AND FRAME TO BE REMOVED AND DISPOSED
D1.09	(E) MARKER / TACK BOARD TO BE REMOVED AND DISPOSED. WHERE OCCURS
D1.14	(E) CASEWORK TO BE REMOVED AND DISPOSED.
D1.20	(E) CONDUIT COLUMN AND WIRING TO BE REMOVED AND DISPOSED. PATCH AND REPAIR AS REQUIRED
D1.21	(E) ALUMINUM FRAME & GLAZING STOREFRONT SYSTEM TO BE REMOVED AND DISPOSED
D1.22	(E) HM DOOR FRAME & (E) DOOR PANEL TO BE REMOVED AND DISPOSED.
D1.23	(E) ALUMINUM FRAME & GLAZING WINDOW SYSTEM TO BE REMOVED AND DISPOSED
D1.25	(E) LAVATORY TO BE REMOVED AND DISPOSED, PATCH AND REPAIR AS REQUIRED
D1.26	(E) WATERCLOSET TO BE REMOVED AND DISPOSED, PATCH AND REPAIR AS REQUIRED
D1.27	(E) VERTICAL DUCT CHASE, (E) LOUVERED VENT TO BE REMOVED, DISPOSED & COVERED WITH SIMILAR FRAMING & DRYWALL MATERIAL. (E) MECH DUCT TO BE CAPPED & SEALED
D1.30	(E) TRANSOM WINDOWS TO BE REMOVED AND DISPOSED
D1.32	(E) URINAL TO BE REMOVED AND DISPOSED, PATCH AND REPAIR AS REQUIRED
D2.05	REMOVE (E) RESTROOM ACCESSORIES, PATCH AND REPLACE FINISH MATERIALS TO MATCH EXISTING
D3.03	(E) FLOOR FINISH TO BE REMOVED, DISPOSED AND REPLACED, SEE FINISH SCHEDULE SPECS
D3.09	(E) GLUE-ON/STAPLED ACOUSTIC TILE TO BE DEMOLISHED AND DISPOSED, INCLUDING SUBSTRATES AND (E) 2"X3" WOOD STRIPPING. WHERE OCCURS
D3.73	REMOVE (E) GRAB BAR AND RELOCATE PER ELEVATION, PATCH AND REPAIR AS REQUIRED
D3.79	REMOVE (E) DRINKING FOUNTAINS, PREPARE FOR NEW DRINKING FOUNTAIN
D3.80	(E) TELEVISION, PROJECTOR & BRACKET TO BE REMOVED. WHERE OCCURS.
D3.81	(E) ANALOG WALL CLOCK TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D3.82	(E) AUDIO SPEAKER TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D3.89	REMOVE (E) SOLID PLASTIC TOILET PARTITION, PREPARE FOR NEW TOILET PARTITION
D3.94	(E) EXIT SIGNAGE TO BE REMOVED, DISPOSED AND REPLACE
D3.96	(E) ELECTRICAL OUTLETS , WIREMOLDS & RACEWAYS TO BE REMOVED, PER ELECTRICAL PLANS, WHERE OCCURS.
D3.97	REMOVE (E) WALL PANELS AND REPLACE WITH NEW PER SPECS SECTION 10 11 00, WHERE OCCURS
D3.98	REMOVE & DISPOSE OF EXISTING ABOVE CEILING ROOF INSULATION WHERE OCCURS
D4.00	PORTION OF (E) NON-BEARING STUD WALL & FINISHES TO BE REMOVED & DISPOSED

BUILDING MPE NOTES

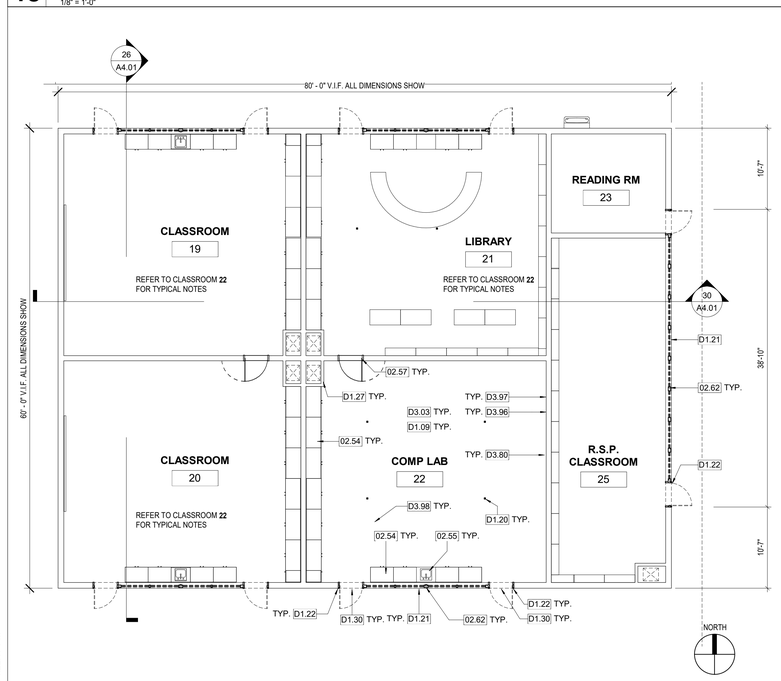
1. EXISTING GAS AND WATER PIPES: REMOVE AND REPLACE ANY RUSTED OR DETERIORATED PIPES, VALVES AND YARD BOXES TO REMAIN.
2. RELOCATE / RE-ROUTE ANY ELECTRICAL CONDUITS AND LOW VOLTAGE RACEWAYS AND WIRING ABOVE & BELOW CEILING TO ACCOMMODATE NEW WORK.
3. RELOCATE / RE-ROUTE ANY VENT PIPES INTERFERING WITH NEW WORK.
4. REMOVE AND DISPOSE OLD CLOCK AND SPEAKERS NO LONGER IN USE.
5. REMOVE AND DISPOSE ELECTRICAL CABLING AND DEVICES NOT IN USE.
6. REMOVE AND DISPOSE FAU HEATING UNITS IN EACH ROOM AND ALL ASSOCIATED DUCTWORK, REGISTERS, CONDUITS AND WIRING.
7. REMOVE PROJECTORS IN WORKROOM AND LIBRARY ROOMS RETURN TO DISTRICT

DEMOLITION LEGEND

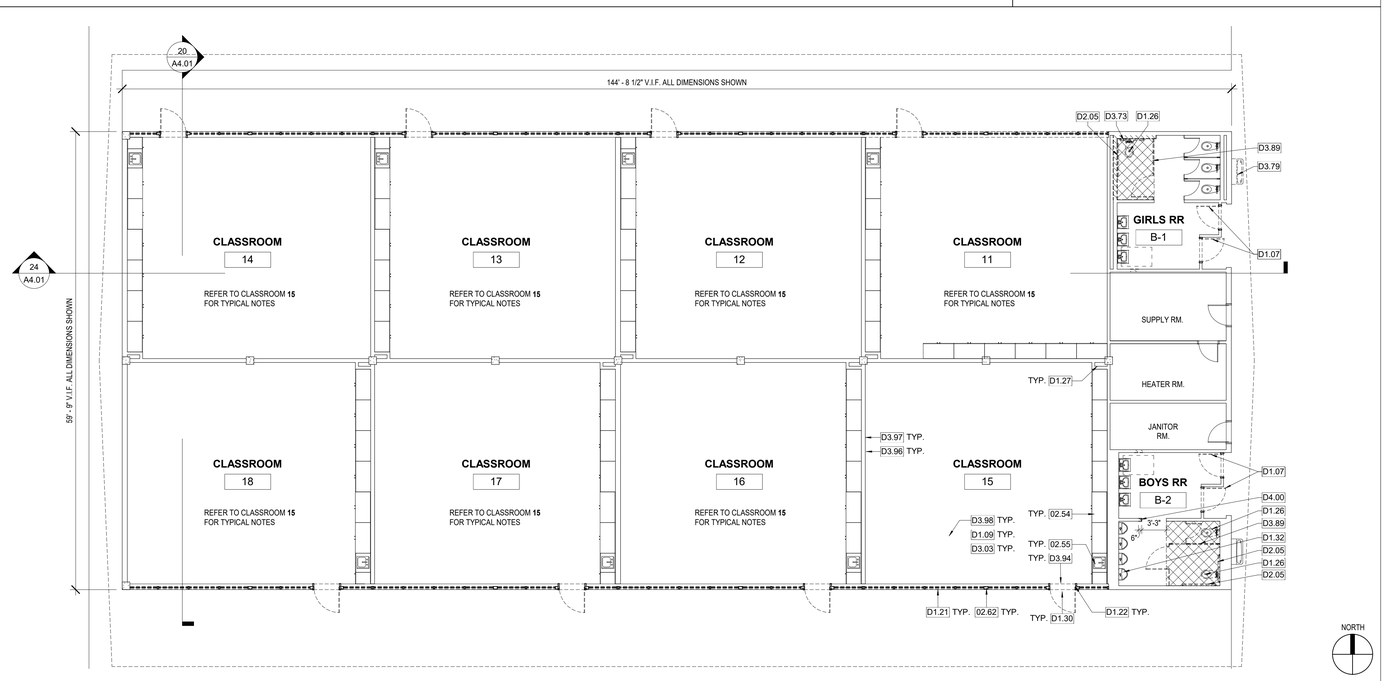
- EXISTING NON-BEARING WALL TO BE REMOVED
- DOOR TO BE REMOVED
- WINDOW TO BE REMOVED (SEE SCHEDULE)
- DEMO ALL (E) WALL FINISH, FLOOR SLAB, DUCTS, PIPES, CONDUITS & FIXTURES, U.N.O.
- (E) DUCT OPENINGS IN SLAB TO BE REMOVED AND IN-FILLED WITH CONCRETE WHERE OCCURS. PER DETAIL 4/SD1

GENERAL DEMOLITION NOTES

1. DEMOLITION PLANS INDICATE SOME OF THE SCOPE-OF-WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL REVIEW ALL SHEETS FOR ADDITIONAL DEMOLITION SCOPE.
2. CONTRACTOR SHALL VERIFY EXISTING SITE AND BUILDING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO DEMOLITION ACTIVITIES AND WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES IN WRITING. PRIOR TO COMMENCING WITH WORK.
4. CONTRACTOR SHALL NOTIFY ARCHITECT AND OWNER OF ANY POSSIBLE ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK, PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
5. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS BEFORE COMMENCING WORK.
6. AFTER AWARD OF THE CONTRACT, CHANGE ORDER REQUESTS FOR ADDITIONAL MONEY WILL NOT BE APPROVED IF THE WORK COULD HAVE BEEN ANTICIPATED DURING A SITE VISIT BY THE CONTRACTOR.
7. CONTRACTOR SHALL NOT SCALE DRAWINGS.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SHORING, TEMPORARY BRACING, AND OR TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY OF EXISTING STRUCTURE TO REMAIN AND OR EXISTING BUILDING ELEMENTS TO REMAIN.
9. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES AND WORK.
10. CONTRACTOR SHALL REMOVE TRASH AND DEBRIS REGULARLY AS NECESSARY TO ELIMINATE INTERFERENCE WITH ROADS, STREET, WALKS, AND ALL OTHER ADJACENT FACILITIES.
11. CONTRACTOR SHALL REMOVE TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
12. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND OR SOUND PARTITION BETWEEN CONSTRUCTION AREA AND AREAS NOT IN SCOPE AS NECESSARY. DEMOLITION ACTIVITIES SHALL BE PERFORMED SO AS TO PRODUCE MINIMAL DISTURBANCE TO EXISTING FACILITY AND OCCUPANTS (I.E. MINIMIZE EXCESSIVE AND PROLONGED NOISE LEVELS AND DUST).
13. CONTRACTOR SHALL REPAIR, REPLACE, OR PATCH EXISTING BUILDINGS, DRIVEWAYS, SIDEWALKS, CANOPIES, AND OR PARKING AREAS DAMAGED, MODIFIED, AND OR DISTURBED BY DEMOLITION WORK AT NO COST TO THE OWNER.
14. ALL EXISTING EQUIPMENT THAT REMAINS SHALL BE PROTECTED DURING DEMOLITION AND OR CONSTRUCTION TO PREVENT DAMAGE. ANY DAMAGE TO REMAINING EXISTING EQUIPMENT SUSTAINED DURING DEMOLITION AND OR CONSTRUCITON SHALL BE EQUIVALENTLY REPLACED OR EQUIVALENTLY REPAIRED AT NO COST TO THE OWNER.
15. CONTRACTOR SHALL PROVIDE TRAFFIC HANDLING MEASURES TO PROTECT THE GENERAL PUBLIC AT ALL TIMES, AS NECESSARY AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
16. DO NOT INTERRUPT EXISTING UTILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
17. WHEN UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE BEFORE PROCEEDING WITH DEMOLITION.
18. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC, GAS, WATER, TELEPHONE, STORM SEWER, AND SANITARY SEWER FOR FIELD LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITY LINES. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, CONTRACTOR SHALL IDENTIFY ALL ELECTRICAL CIRCUITS SERVICING THE AREA INVOLVED WITH THIS DEMOLITION. THOSE CIRCUITS SHALL THEN BE LOCKED OUT AND TAGGED OUT IF THEY DO NOT SERVICE ANY OF THE REMAINING BUILDING. THOSE CIRCUITS WHICH ARE IDENTIFIED TO SERVICE BOTH THE AREA TO BE DEMOLISHED AND THE REMAINING BUILDING SHALL BE SPLIT SO AS TO KILL ALL ELECTRICAL POWER TO THE AREA TO BE DEMOLISHED WHILE MAINTAINING POWER TO THE REMAINDER OF THE BUILDING.
19. CONTRACTOR SHALL RELOCATE UTILITIES AND EQUIPMENT AS REQUIRED TO ACCOMMODATE NEW HVAC, ELECTRICAL, PLUMBING, AND TECHNOLOGY REQUIREMENTS FOR NEW WORK.
20. PROTECT EXISTING SITE ELEMENTS AND EXISTING LANDSCAPING TO REMAIN. PROTECTION SHALL INCLUDE BUT NOT BE LIMITED TO EXISTING TREES AND OTHER EXISTING VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
21. CONTRACTOR SHALL REGRADE AND HYDROMULCH AREAS AFFECTED BY DEMOLITION.
22. OWNER HAS RIGHT OF FIRST REFUSAL OF ALL ITEMS REMOVED AS PART OF THE SCOPE OF WORK, WHETHER IDENTIFIED AS SALVAGE OR NOT.
23. NOTIFY THE BUILDING OWNER OF ANY MATERIALS, FIXTURES, ETC. TO BE REMOVED THAT ARE DEEMED SALVAGEABLE. TURN OVER ANY REQUESTED ITEMS TO THE BUILDING OWNER IN GOOD AND CLEAN CONDITION.
24. ALL FURNITURE WILL BE REMOVED OR RELOCATED BY THE OWNER AS NECESSARY PRIOR TO THE DEMOLITION WORK OF THIS PROJECT. CONTRACTOR SHALL COORDINATE WITH OWNER AS REQUIRED.
25. REMOVE EXISTING CONSTRUCTION TO THE EXTENT INDICATED ON THE DRAWINGS. SHOULD ANY DAMAGE OCCUR TO ANY EXISTING CONSTRUCTION TO REMAIN, THE CONTRACTOR SHALL REPAIR THE DAMAGE TO MATCH EXISTING AND OR ADJACENT CONSTRUCTION AT NO COST TO THE OWNER.
26. MAINTAIN ANY AND ALL EXISTING FIRE-RATED ASSEMBLIES THAT ARE TO REMAIN, AND THEIR ASSOCIATED FIRE-RATINGS, INCLUDING BUT NOT LIMITED TO ALL ASSOCIATED EXISTING FIRE-RATED OPENINGS, ALL ASSOCIATED EXISTING FIRE-RATED PENETRATIONS, AND ALL ASSOCIATED EXISTING FIRE-RATED FIRESTOPPING CONDITIONS.
27. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE ARCHITECT IMMEDIATELY FOR RESOLUTION.
28. REMOVE, PATCH, AND REPAIR ALL ABANDONED ROOF PENETRATIONS RESULTING FROM WORK.
29. SAW-CUT AND REMOVE EXISTING FLOOR FINISHES AND FLOOR SLAB AS REQUIRED TO INSTALL NEW FIXTURES, ITEMS, AND OR DEVISES FOR ALL SCOPE-OF-WORK PERTAINING TO NEW MECHANICAL WORK, NEW PLUMBING UTILITIES, NEW PLUMBING WORK, NEW ELECTRICAL WORK, AND NEW TECHNOLOGY WORK. SPLICE NEW REINFORCING BARS DOWELLED INTO EXISTING CONCRETE AND PROVIDE NEW VAPOR RETARDER AND NEW CONTINUOUS WATERSTOPS AT JOINT BETWEEN NEW CONCRETE FLOOR SLAB AND EXISTING CONCRETE FLOOR SLAB. PATCH WITH NEW 3,500 PSI MINIMUM CONCRETE AND PREPARE FLOOR, INCLUDING NEW CONCRETE, TO RECEIVE NEW FLOOR FINISHES. COORDINATE WITH STRUCTURAL.
30. EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
31. ~~NEW OPENING~~ TO BE CUT IN EXISTING WALLS SHALL BE SAW-CUT AT LOCATIONS ~~INDICATED TO THE~~ HEIGHT AND WIDTH ~~INDICATED~~. NEW LINTELS SHALL BE ~~INSTALLED TO SUPPORT~~ EXISTING WALL CONSTRUCTION ABOVE AS INDICATED~~NOT USED~~. ~~DETAILS~~ OR IF NOT INDICATED, AS REQUIRED FOR NEW WALL CONSTRUCTION PER STRUCTURAL DRAWINGS. COORDINATE LOCATIONS OF ALL NEW OPENINGS IN EXISTING WALLS AND PARTITIONS WITH ARCHITECTURAL PLANS.
32. WHERE EXISTING WALL OPENINGS ARE TO BE NEWLY CLOSED-OFF, REMOVE ANY EXISTING OPENING FRAME AND PATCH AND REPAIR EXISTING WALL TO MATCH EXISTING ADJACENT MATERIALS AND FINISHES, UNLESS NOTED OTHERWISE.
33. WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEPT SYSTEMS BACK TO PANEL, OR MECHANICAL ROOM, OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION. REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEPT DRAWINGS
34. REFER TO MEPT DRAWINGS FOR DEMOLITION OF MEPT SYSTEMS. IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND OR REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUBCONTRACTORS THE EXTENT OF ALL DEMOLITION WORK.
35. PATCH FLOORS, WALLS CEILINGS WHICH REMAIN AT LOCATIONS WHERE PIPES, CONDUITS, ETC. ARE REMOVED AS REQUIRED TO MATCH EXISTING CONDITIONS OR TO RECEIVE NEW FINISHES.
36. WHERE EXISTING FINISH FLOOR IS REMOVED, PREPARE FLOOR SURFACE TO RECEIVE NEW FLOORING.
37. ALL DASHED LINES ARE DEMOLITION LINES U.N.O.



06 DEMO FLOOR PLAN - BUILDING C - LIBRARY / CLASSROOM
1/8" = 1'-0"



04 DEMO FLOOR PLAN - BUILDING B - CLASSROOM
1/8" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD X MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

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DEMO FLOOR PLANS ADMIN/KINDER, BLDG A,B&C

D1.1

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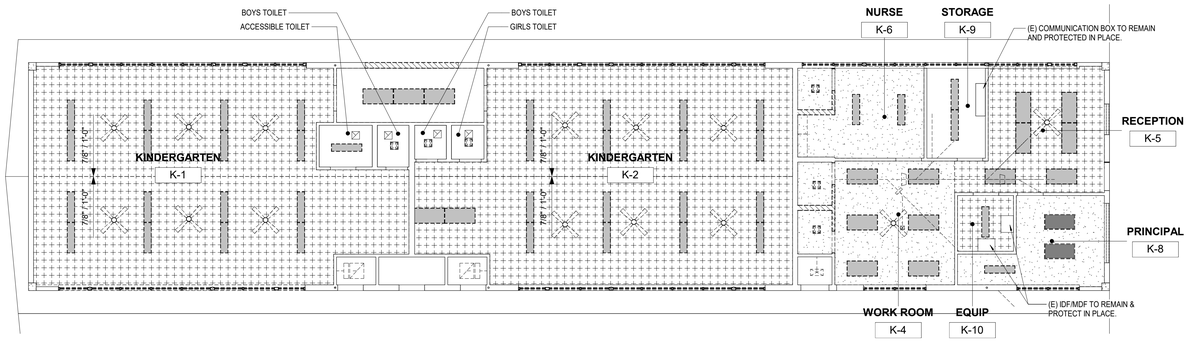
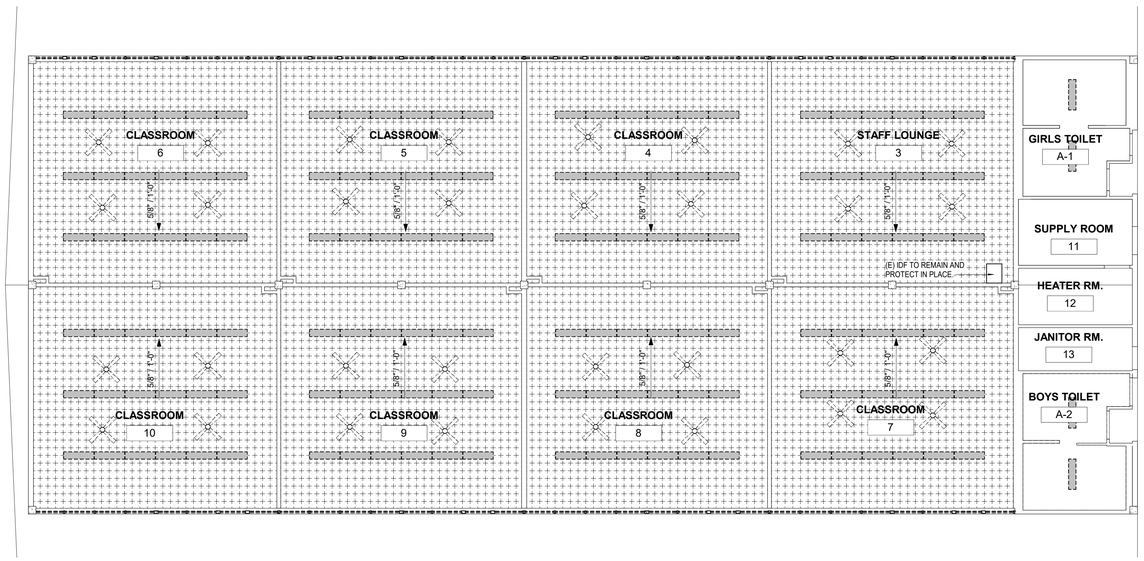
D2.1 - DEMO REFLECTED CEILING PLAN ADMIN/KINDER, BLDG A,B&C

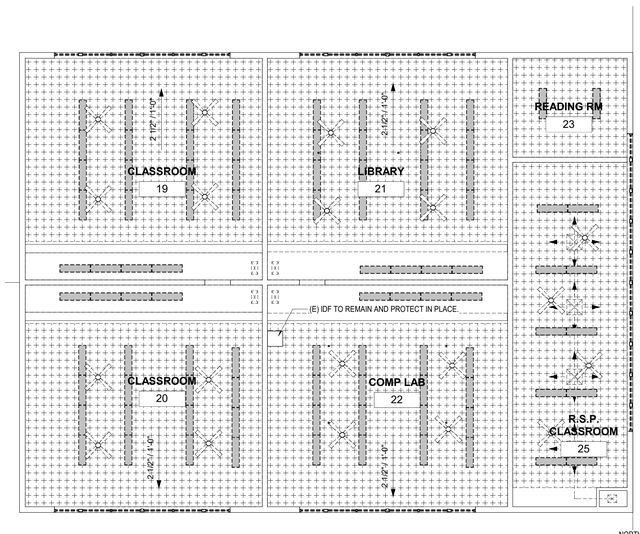
0" 1"



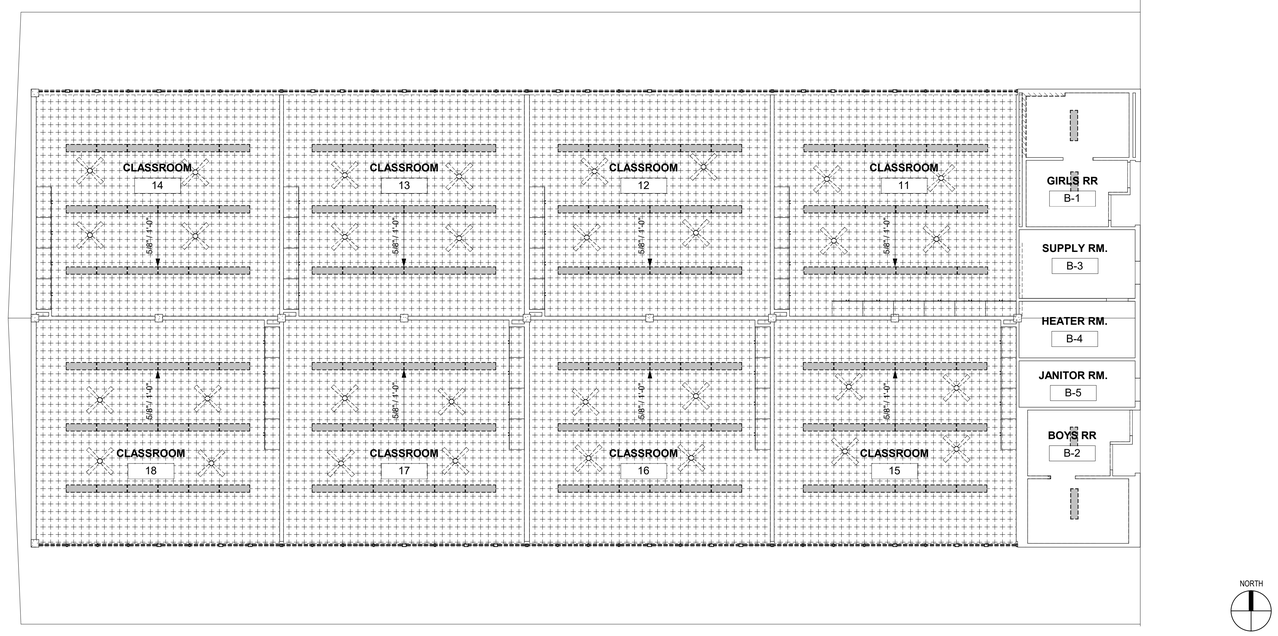
30 DEMO RCP - ADMIN KINDERGARTEN
1/8" = 1'-0"



18 DEMO RCP-BLDG A
1/8" = 1'-0"



6 DEMO RCP - BLDG C
1/8" = 1'-0"



4 DEMO RCP - BLDG B
1/8" = 1'-0"

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20. PROTECT EXISTING SITE ELEMENTS AND EXISTING LANDSCAPING TO REMAIN. PROTECTION SHALL INCLUDE BUT NOT BE LIMITED TO EXISTING TREES AND OTHER EXISTING VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
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28. REMOVE, PATCH, AND REPAIR ALL ABANDONED ROOF PENETRATIONS RESULTING FROM WORK.
29. SAW-CUT AND REMOVE EXISTING FLOOR FINISHES AND FLOOR SLAB AS REQUIRED TO INSTALL NEW FIXTURES, ITEMS, AND OR DEVISES FOR ALL SCOPE-OF-WORK PERTAINING TO NEW MECHANICAL WORK, NEW PLUMBING UTILITIES, NEW PLUMBING WORK, NEW ELECTRICAL WORK, AND NEW TECHNOLOGY WORK. SPLICE NEW REINFORCING BARS DOWELLED INTO EXISTING CONCRETE AND PROVIDE NEW VAPOR RETARDER AND NEW CONTINUOUS WATERSTOPS AT JOINT BETWEEN NEW CONCRETE FLOOR SLAB AND EXISTING CONCRETE FLOOR SLAB. PATCH WITH NEW 3,500 PSI MINIMUM CONCRETE AND PREPARE FLOOR, INCLUDING NEW CONCRETE, TO RECEIVE NEW FLOOR FINISHES. COORDINATE WITH STRUCTURAL.
30. EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
31. NEW OPENING TO BE CUT IN EXISTING WALLS SHALL BE SAW-CUT AT LOCATIONS INDICATED TO THE HEIGHT AND WIDTH INDICATED. NEW LINTELS SHALL BE INSTALLED TO SUPPORT EXISTING WALL CONSTRUCTION ABOVE AS INDICATED. NOT USED ~~WHERE~~ OR IF NOT INDICATED, AS REQUIRED FOR NEW WALL CONSTRUCTION PER STRUCTURAL DRAWINGS. COORDINATE LOCATIONS OF ALL NEW OPENINGS IN EXISTING WALLS AND PARTITIONS WITH ARCHITECTURAL PLANS.
32. WHERE EXISTING WALL OPENINGS ARE TO BE NEWLY CLOSED-OFF, REMOVE ANY EXISTING OPENING FRAME AND PATCH AND REPAIR EXISTING WALL TO MATCH EXISTING ADJACENT MATERIALS AND FINISHES, UNLESS NOTED OTHERWISE.
33. WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEPT SYSTEMS BACK TO PANEL, OR MECHANICAL ROOM, OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION. REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEPT DRAWINGS
34. REFER TO MEPT DRAWINGS FOR DEMOLITION OF MEPT SYSTEMS. IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND OR REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUBCONTRACTORS THE EXTENT OF ALL DEMOLITION WORK.
35. PATCH FLOORS, WALLS CEILINGS WHICH REMAIN AT LOCATIONS WHERE PIPES, CONDUITS, ETC. ARE REMOVED AS REQUIRED TO MATCH EXISTING CONDITIONS OR TO RECEIVE NEW FINISHES.
36. WHERE EXISTING FINISH FLOOR IS REMOVED, PREPARE FLOOR SURFACE TO RECEIVE NEW FLOORING.
37. ALL DASHED LINES ARE DEMOLITION LINES U.N.O.

BUILDING MPE NOTES

1. EXISTING GAS AND WATER PIPES: REMOVE AND REPLACE ANY RUSTED OR DETERIORATED PIPES, VALVES AND YARD BOXES TO REMAIN.
2. RELOCATE / RE-ROUTE ANY ELECTRICAL CONDUITS AND LOW VOLTAGE RACEWAYS AND WIRING ABOVE & BELOW CEILING TO ACCOMMODATE NEW WORK.
3. RELOCATE / RE-ROUTE ANY VENT PIPES INTERFERING WITH NEW WORK.
4. REMOVE AND DISPOSE OLD CLOCK AND SPEAKERS NO LONGER IN USE.
5. REMOVE AND DISPOSE ELECTRICAL CABLING AND DEVICES NOT IN USE.
6. REMOVE AND DISPOSE FAU HEATING UNITS IN EACH ROOM AND ALL ASSOCIATED DUCTWORK, REGISTERS, CONDUITS AND WIRING.
7. REMOVE PROJECTORS IN WORKROOM AND LIBRARY ROOMS RETURN TO DISTRICT

DEMOLITION RCP LEGEND

- EXISTING CEILING TO REMAIN
- EXISTING PLASTER /GYP.BD. CEILING & SUBSTRATE TO BE REMOVED AND DISPOSED.
- EXISTING NON-BEARING WALL TO BE REMOVED
- EXISTING 12"x12" GLUE UP / STAPLED ACOUSTIC TILE AND (E) SUBSTRATES TO BE REMOVED AND DISPOSED.
- REMOVE AND DISPOSE (E) LIGHT FIXTURES AND WIRING. SEE ELECTRICAL DWGS.
- MECHANICAL GRILLES, REFER TO MECHANICAL DRAWINGS (REMOVE WHEN SHOWN DASHED)
- (E) CEILING FAN AND ACCESSORIES TO BE REMOVED BY G.C. AND RETURNED TO THE DISTRICT.
- (E) ACCESS PANEL TO BE REMOVED & DISPOSED, WHERE OCCURS.

NOTE:
1. REMOVE & DISPOSE OF EXISTING ABOVE CEILING ROOF INSULATION. WHERE OCCURS.

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

AD X MP
A
B
C

KEY PLAN N
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

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DEMO REFLECTED CEILING PLAN ADMIN/KINDER, BLDG A,B&C

D2.1

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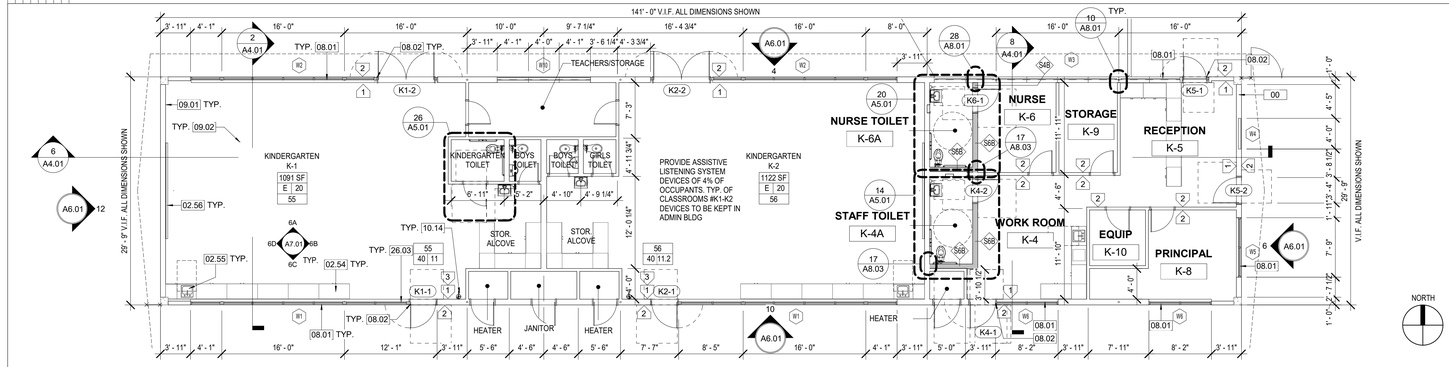
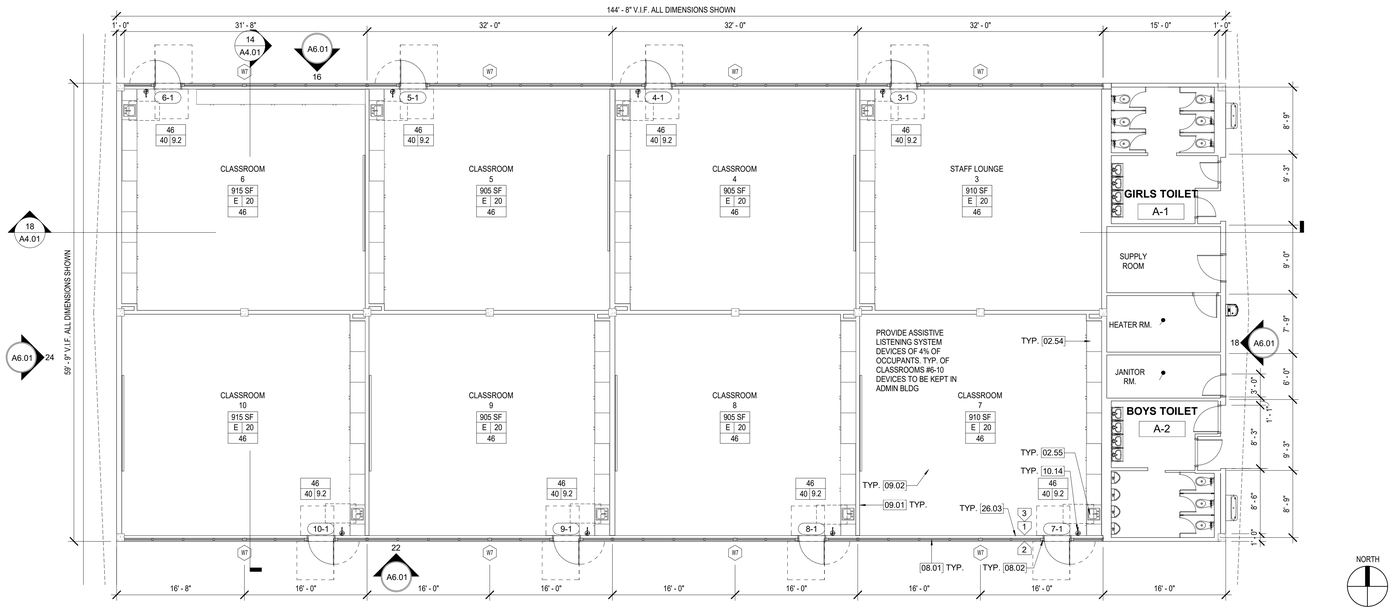
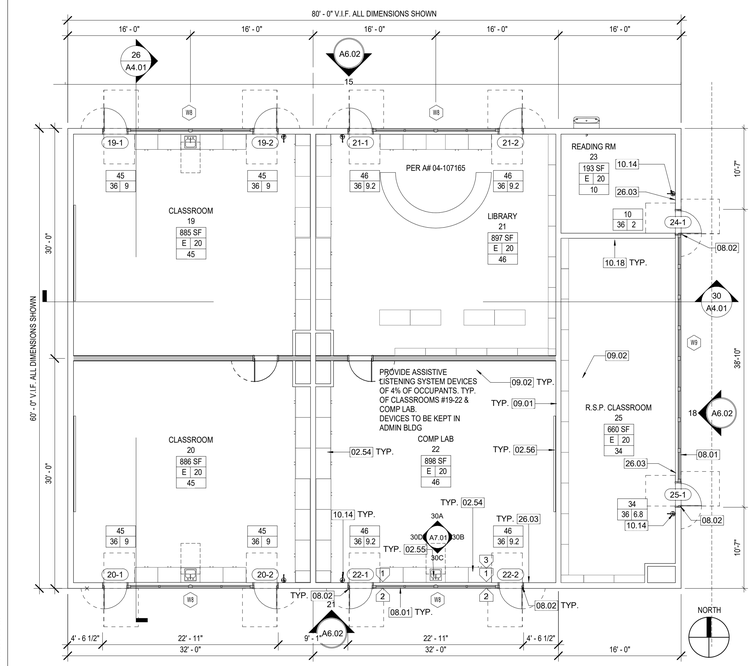
A1.01 - FLOOR PLANS ADMIN/KINDER, BLDG A,B&C



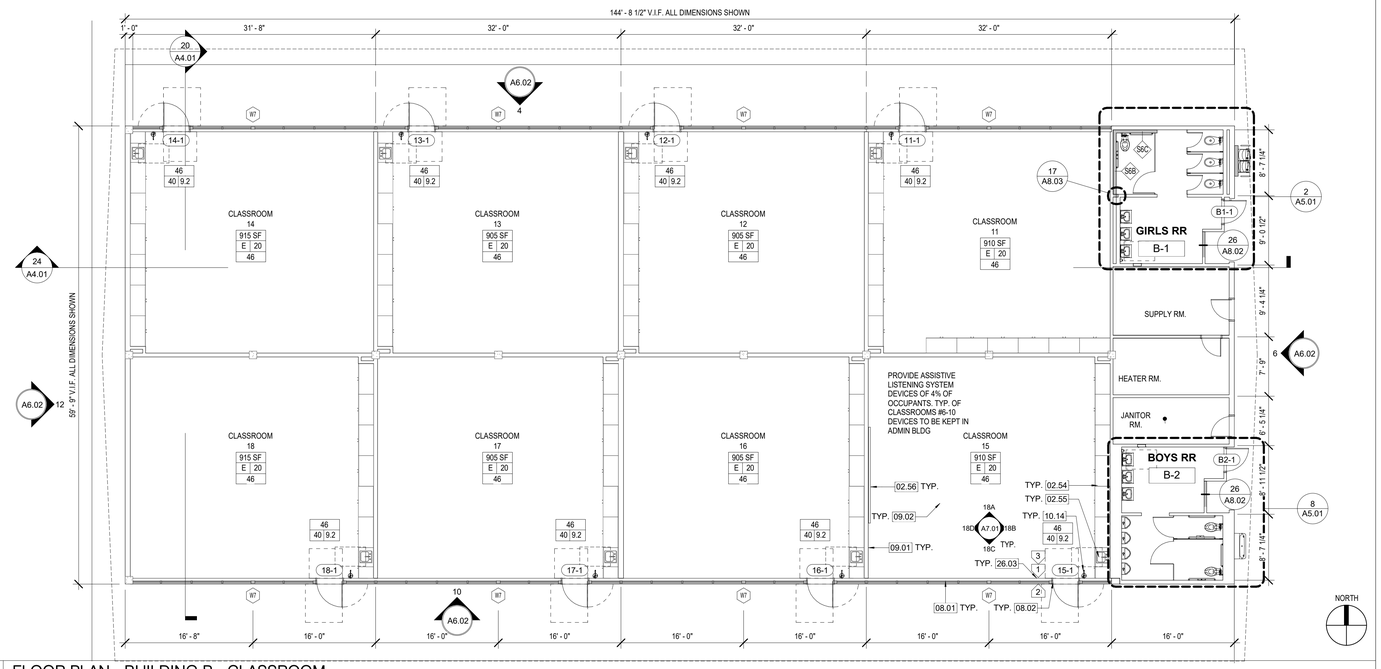
29 FLOOR PLAN - ADMIN / KINDERGARTEN
1/8" = 1'-0"



17 FLOOR PLAN BUILDING A - CLASSROOM
1/8" = 1'-0"



05 FLOOR PLAN - BUILDING C - LIBRARY / CLASSROOM
1/8" = 1'-0"



04 FLOOR PLAN - BUILDING B - CLASSROOM
1/8" = 1'-0"

CONSTRUCTION KEYED NOTES

00	
02.54	(E) CASEWORK TO REMAIN, RE-PAINT & PROTECT IN PLACE. TO RE-PAINT (EXCEPT PLAMSTONE COUNTERTOPS)
02.55	(E) ACCESSIBLE SINK TO REMAIN. PROTECT IN PLACE
02.56	(E) MARKER/TACKBOARD TO BE REMOVED & REPLACED WITH NEW PER DETAIL 5&6/A8.02
08.01	(N) ALUMINUM FRAME & GLAZING WINDOW SYSTEM.SEE WINDOWS FRAMING ELEVATION A9.01. PER ALUMINUM-FRAMED STOREFRONT & ALUMINUM WINDOWS & GLAZING SPEC SECTION 084113, ALUMINUM WINDOW SPECS SECTION 085100 & GLAZING SPEC SECTION 088000
08.02	(N) INTEGRAL ALUMINUM FRAME DOOR SYSTEM.SEE FRAMING ELEVATION A9.01 & DOOR SCHEDULE. PER ALUMINUM-FRAMED STOREFRONT SPEC SECTION 084113, & DOOR SPEC SECTION IN DIV 8
09.01	(N) INTERIOR PAINT FINISH. SEE FINISH SCHEDULE
09.02	(N) FLOOR FINISH AND BASEBOARD. SEE FINISH SCHEDULE
10.14	(N) FIRE EXTINGUISHER, SURFACE MOUNTED TO (E) WALL. SEE DETAIL 18/A8.02
10.18	(N) TACKABLE SURFACE PER DETAIL 6/A8.02
26.03	NEW EXIT SIGN, PER ELEC DWGS. SEE DETAIL 16/A8.02

EXTERIOR & INTERIOR PAINT SCOPE OF WORK

1. CONTRACTOR SHALL PAINT ALL EXTERIOR AND INTERIOR SURFACES OF ALL BUILDINGS INCLUDING PORTABLES PER SPECIFICATION, THIS WORK INCLUDES ALL FLASHING, FASCIA, PLASTER, LOUVER, DRYWALL, DOORS AND FRAMES WITH THE EXCEPTION OF BRICK SURFACES. MINIMUM OF 4 COLORS TO BE SELECTED BY THE ARCHITECTS.
2. CONTRACTOR SHALL PAINT ALL COLUMN AND BEAMS OF SOLAR SHADE STRUCTURE PER SPECIFICATION, EXCEPT GALVANIZED AND SOLAR PANEL SURFACES, MINIMUM OF 2 COLORS TO BE SELECTED BY ARCHITECT.
3. GENERAL CONTRACTOR TO NOTIFY AND DOCUMENT ANY AREAS WITH DRYROT AND / OR TERMITE DAMAGE IN WRITTEN FORMAT PRIOR TO BID.

SIGNAGE LEGEND

ALL SIGNAGE IS (E) TO REMAIN. WHERE (E) SIGNAGE IS MISSING OR DAMAGED PROVIDE NEW SIGNAGE TO MATCH EXISTING PER DETAIL REFERENCES BELOW...

SIGNAGE TAG (#)

1. TACTILE EXIT SIGNAGE, SEE DETAIL 16 / A8.02 AND/OR SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
2. ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 19 / A8.02 (VERIFY ROOM NAME & NUMBER w/ OWNER). WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL, TYP. ALL ROOMS
3. ASSISTIVE LISTENING SIGNAGE, SEE DETAIL 23 / A8.02

REMODEL PLAN LEGEND

NOTE: 1. ALL EXTERIOR CLASSROOM/ADMIN WINDOW FRAMES AND GLAZING TO BE REPLACED. PATCH AND REPAIR WALLS, AS NEEDED, FOLLOWING WINDOW INSTALLATION.

2. FIELD VERIFY ALL DIMENSIONS.

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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

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KEY PLAN
NORTH: PLAN

Consultant

Architect

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Yong Tao
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FLOOR PLANS ADMIN/KINDER, BLDG A,B&C

A1.01

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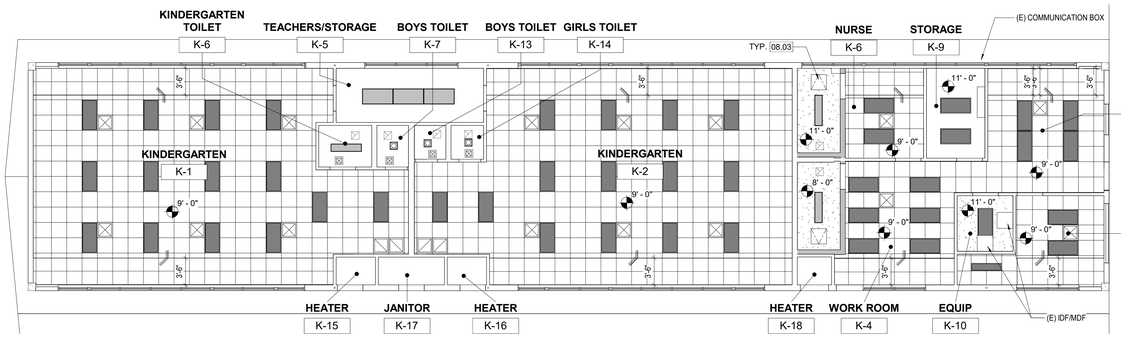
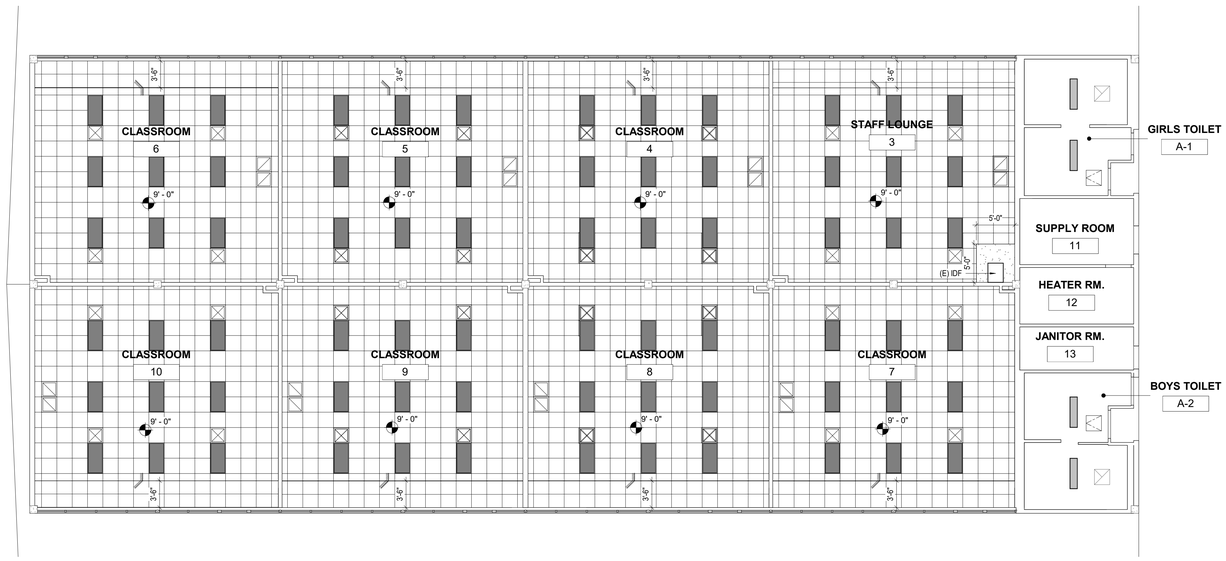
A2.01 - REFLECTED CEILING PLANS ADMIN/KINDER, BLDG A,B&C

0" 1"



29 RCP - ADMIN KINDERGARTEN
1/8" = 1'-0"



17 RCP-BLDG A
1/8" = 1'-0"

-CONSTRUCTION KEYED NOTES

#	Description
08.03	(N) CEILING ACCESS PANEL, MIN. 22"X30" ROUGH FRAME OPENING, AS REQUIRED PER CODE. TO ACCESS HEAT DETECTOR AND RELATED MECH/ELEC SYSTEMS. MATCH CEILING FINISH

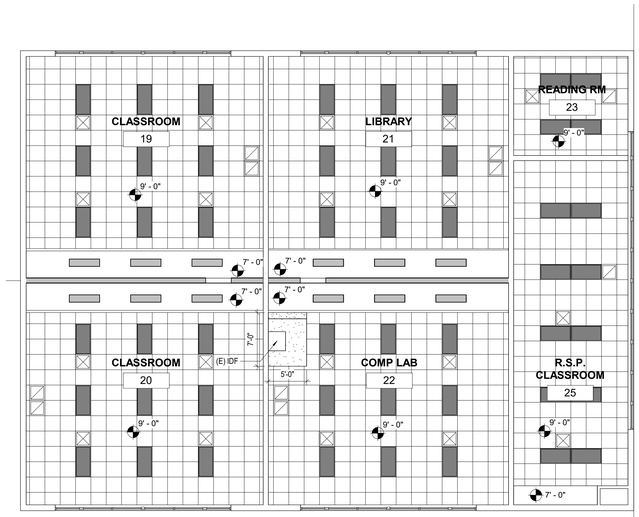
REFLECTED CEILING PLAN LEGEND

- EXISTING PLASTER / GYP. BD. CEILING TO REMAIN. RE-PAINT TO MATCH EXISTING.
- NEW GYPSUM BOARD CEILING ATTACHED TO (E) CEILING JOIST. SEE DETAIL 5 / A8.03
- NEW 24" x 24" SUSPENDED ACOUSTIC CEILING TILE. SEE DETAIL 7 / A8.03
- NEW LIGHT FIXTURE(S). SEE ELECTRICAL DRAWINGS.
- MECHANICAL GRILLES. REFER TO MECHANICAL DRAWINGS AND STRUCTURAL DETAIL FOR HUNG UNITS. 10/M6.01, 11/M6.01, 19/M6.01, 4/SD3
- ACCESS PANEL. SEE DETAIL 4 / A8.03
- CEILING SLOPE TRANSITION.
- #F CEILING HEIGHT

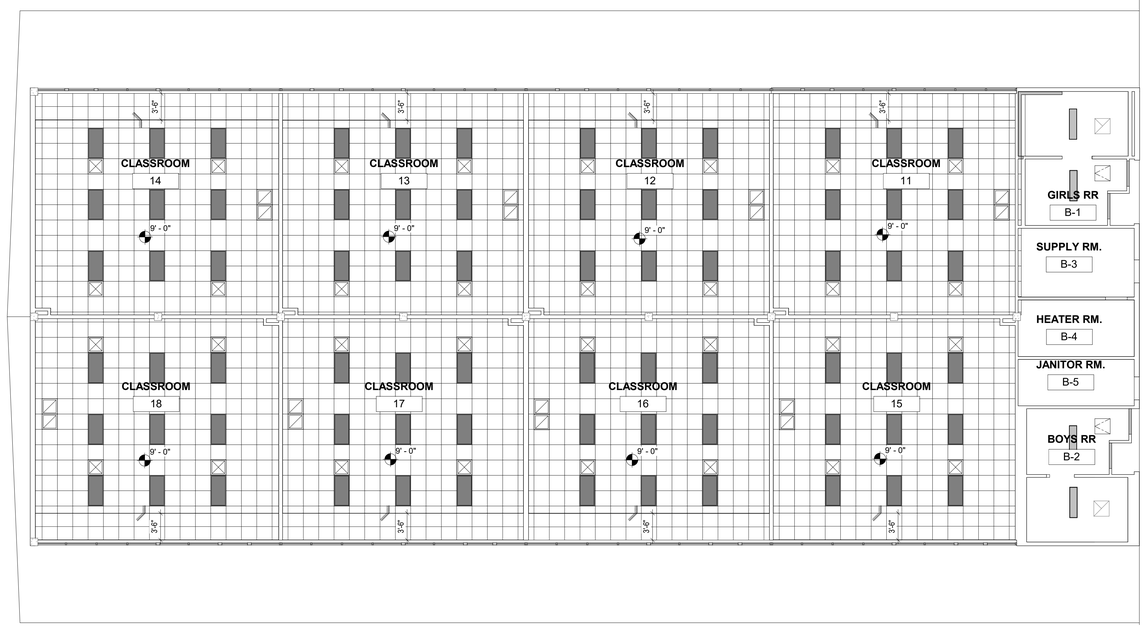
NOTE:
ALL (E) BLDGS ARE NON-SPRINKLERED

GENERAL CEILING PLAN NOTES

1. REFER TO AND COORD. WITH ROOM FINISH SCHEDULES FOR SPECIFIC CEILING TYPES.
2. ALL SCHEDULED CEILING HEIGHTS ARE FROM THE MAIN FLOOR LEVEL WITHIN THE ROOM AND OR SPACE, AND ARE NOT FROM AN ELEVATED FLOOR LEVEL, AND ARE NOT FROM A RECESSED FLOOR LEVEL.
3. NO FIRE SPRINKLER HEADS ARE SHOWN ON ARCH. CEILING PLANS. ALL SPRINKLER HEADS SHALL BE CENTERED WITHIN CEILING TILES U.N.O.
4. ONLY CEILING MOUNTED FIXTURES AND EQUIP. IS SHOWN ON ARCH. CEILING PLANS. REFER TO INTERIOR ELEVATIONS FOR WALL MOUNTED FIXTURES. REFER TO MEPT DOCUMENTS FOR ADDITIONAL INFORMATION CONCERNING CEILING MOUNTED FIXTURES AND OR WALL MOUNTED FIXTURES.
5. CEILING MOUNTED LIGHT FIXTURES ARE SHOWN FOR LOCATION PURPOSES ONLY. COORD. WITH ELEC. DOCUMENTS FOR LIGHT FIXTURE DESIGNATIONS.
6. CEILING MOUNTED LIGHT FIXTURES WITHIN FIRE RATED CEILING ASSEMBLIES SHALL HAVE LIGHT FIXTURE PROTECTION AND BE TENTED OR OTHERWISE FIRE RATED TO MATCH CEILING ASSEMBLY FIRE RATING.
7. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEPT DOCUMENTS. COORD. LOCATIONS OF CEILING ACCESS PANELS WITH ARCH. PRIOR TO INSTALLATION. CEILING ACCESS PANEL FIRE RATINGS SHALL MATCH CEILING ASSEMBLY FIRE RATINGS.
8. REFER TO WALL SECTIONS FOR WALL-CEILING INTERFACE
9. EXISTING CEILING ACCESS PANEL TO REMAIN.
10. PROVIDE NEW CEILING ACCESS PANEL WHERE REQUIRED PER CODE.



06 RCP - BLDG C
1/8" = 1'-0"



4 RCP - BLDG B
1/8" = 1'-0"

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KEY PLAN
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Consultant

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REFLECTED CEILING PLANS ADMIN/KINDER, BLDG A,B&C

A2.01

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A3.01 - OVERALL ROOF PLAN AND DETAIL

0" 1"

PARTIAL LIST OF APPLICABLE CODES

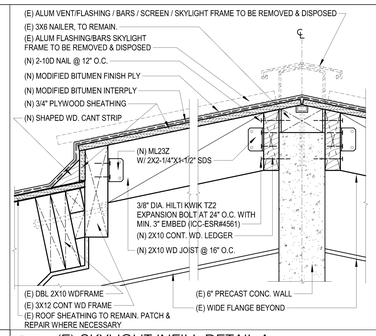
2022 California Administrative Code (CAC)	(Part 1, Title 24, CCR)
2019 California Building Code (CBC) (2015 International Building Code Volumes 1-2 and 2019 California Amendments)	(Part 2, Title 24, CCR)
2019 California Electrical Code (CEC) (2014 National Electrical Code and 2019 California Amendments)	(Part 3, Title 24, CCR)
2019 California Mechanical Code (CMC) (2015 Uniform Mechanical Code and 2019 California Amendments)	(Part 4, Title 24, CCR)
2019 California Plumbing Code (CPC) (2015 Uniform Plumbing Code and 2019 California Amendments)	(Part 5, Title 24, CCR)
2019 California Energy Code (CEC)	(Part 6, Title 24, CCR)
2019 California Fire Code (CFC) (2015 International Fire Code and 2019 California Amendments)	(Part 9, Title 24, CCR)
2019 California Green Building Standards Code (CAL Green)	(Part 11, Title 24, CCR)
2019 California Referenced Standards Code	(Part 12, Title 24, CCR)

Title 19 CCR, Public Safety, State Fire Marshall Regulations
2016 ASME A17.1/CSA B44-13 Safety Code For Elevators and Escalators (per 2019 CBC Part2, Ch 35)
Note: Cal/OSHA Elevator Unit enforces CCR Title 8 and uses the 2004 ASME A17.1 by adoption

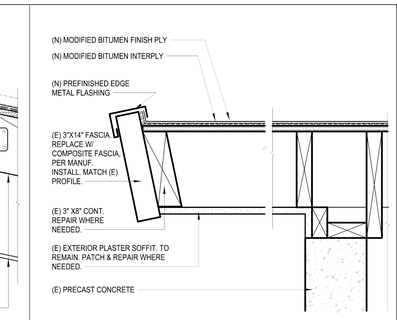
PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13 Automatic Fire Sprinkler Systems	(2016 Edition)
NFPA 14 Standpipe and Hose Systems	(2016 Edition)
NFPA 17 Dry Chemical Extinguishing Systems	(2017 Edition)
NFPA 17a Wet Chemical Extinguishing Systems	(2017 Edition)
NFPA 20 Stationary Pumps for Fire Protection	(2016 Edition)
NFPA 22 Water Tanks for Private Fire Protection	(2013 Edition)
NFPA 24 Standard for the Installation of Private Fire Service Mains & their Appurtenances (CA amended)	(2016 Edition)
NFPA 25 *Standard for Inspection, Testing and Maintenance of Water-Based Fire Protection Systems (CA amended)*	*(2013 Edition)*
NFPA 72 National Fire Alarm & Signaling Code (CA amended)	(2016 Edition)
NFPA 80 Fire Doors and Other Opening Protectives	(2016 Edition)
NFPA 92 Standard for Smoke Control Systems	(2015 Edition)
NFPA 253 Critical Radiant Flux of Floor Covering Systems	(2015 Edition)
NFPA 2001 Clean Agent Fire Extinguishing Systems (CA amended)	(2015 Edition)
ICC 300 ICC Stds on Bleachers, Folding and Telescoping Seating and Grand stands	(2017 Edition)
UL 300 Fire Testing of Fire Extinguishing Sys for Protection of Restaurant Cooking Areas	2005 (R2010)
UL 464 Audible Signal Appliances	(2003 Edition)
UL 521 Heat Detectors for Fire Protective Signaling Systems	(1999 Edition)

27 CODES & STANDARDS



27 (E) SKYLIGHT INFILL DETAIL A
NTS



26 TYP. GABLE END DETAIL
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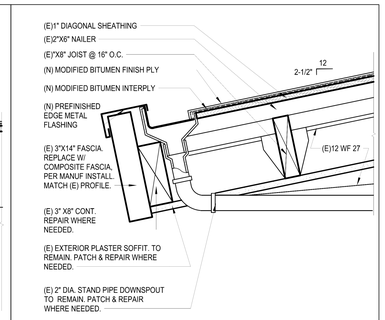

25 TYP. EAVE DETAIL
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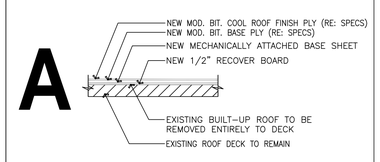
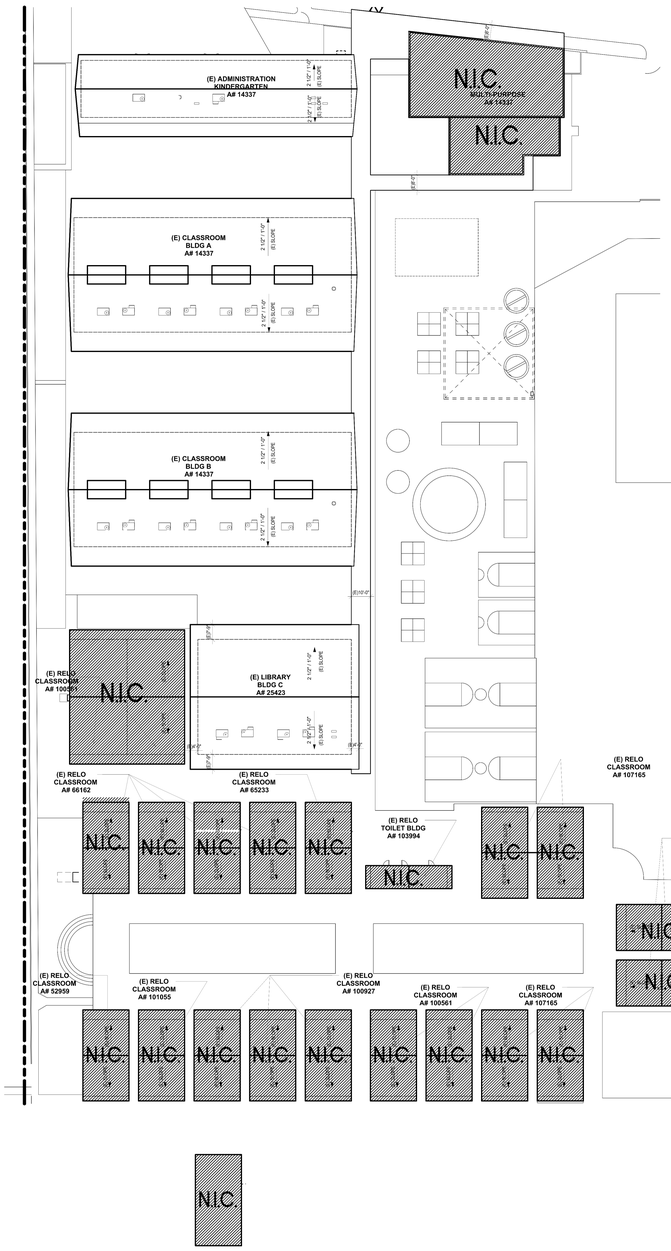
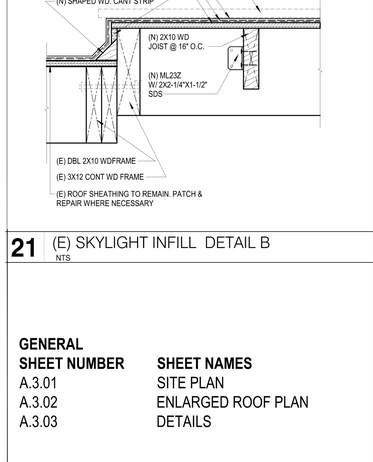
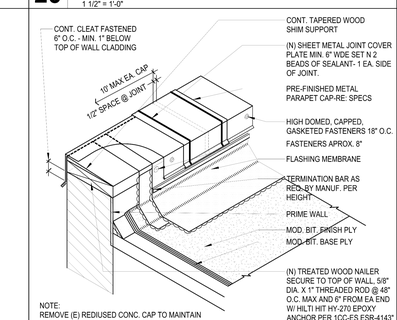




6 SITE PLAN
1/32" = 1'-0"



21 (E) SKYLIGHT INFILL DETAIL B
NTS



20 TYP. COVERED WALKWAY DETAIL
1 1/2" = 1'-0"

19 NEW NOMENCLATURE
NTS

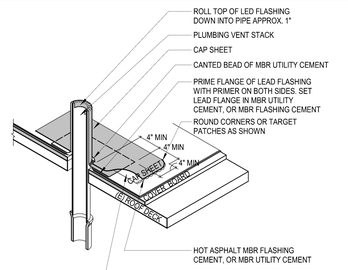
ROOF AREA	APPROX. SQ.FT.	EXISTING ROOF	NEW ROOF PER 19/A3.01	REMARKS
#1 RELO CR A#52959	1140 SF	WD/SS/BUR-A	N/A	
#1 RELO CR A#66162	1140 SF	WD/SS/BUR-A	N/A	
#1 RELO CR A#100561	1140 SF	WD/SS/BUR-A	N/A	
#1 RELO CR A#100927	1140 SF	WD/SS/BUR-A	N/A	
#1 RELO CR A#101055	1140 SF	WD/SS/BUR-A	N/A	
#1 RELO CR A#107165	1140 SF	WD/SS/BUR-A	N/A	
#2 RELO CR A#66162	1140 SF	WD/SS/BUR-A	N/A	
#2 RELO CR A#100561	1140 SF	WD/SS/BUR-A	N/A	
#2 RELO CR A#100927	1140 SF	WD/SS/BUR-A	N/A	
#2 RELO CR A#107165	1140 SF	WD/SS/BUR-A	N/A	
#3 RELO CR A#66162	1140 SF	WD/SS/BUR-A	N/A	
#3 RELO CR A#100927	1140 SF	WD/SS/BUR-A	N/A	
#3 RELO CR A#107165	1132 SF	WD/SS/BUR-A	N/A	
#4 RELO CR A#107165	1132 SF	WD/SS/BUR-A	N/A	
#4 RELO CR A# 66162	1140 SF	WD/SS/BUR-A	N/A	
#5 RELO CR A#107165	1164 SF	WD/SS/BUR-A	N/A	
#6 RELO CR A#107165	1140 SF	WD/SS/BUR-A	N/A	
(E) RELO TOILET	540 SF	WD/SS/BUR-A	N/A	
ADMIN / KINDERGARTEN	5307 SF	WD/SS/BUR-A	A	
ADMIN.KINDER OVERHANG	1023 SF	WD/SS/BUR-A	A	
BLDG A CLASSROOMS	12151 SF	WD/SS/BUR-A	A	
BLDG B CLASSROOMS	12151 SF	WD/SS/BUR-A	A	
BLDG C CLASSROOMS LIBRARY	6787 SF	WD/SS/BUR-A	A	
COVERED WALKWAY	5833 SF	WD/SS/BUR-A	A	
MPR	4830 SF	WD/SS/BUR-A	N/A	
RELO CR A#65233	1140 SF	WD/SS/BUR-A	N/A	
RELO CR A#100561	4200 SF	WD/SS/BUR-A	N/A	

15 SHEET INDEX

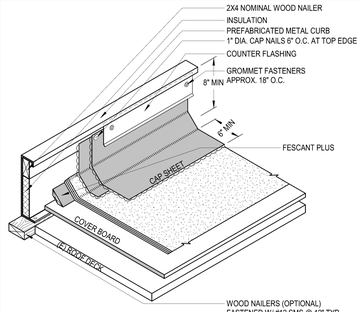
GENERAL

SHEET NUMBER	SHEET NAMES
A.3.01	SITE PLAN
A.3.02	ENLARGED ROOF PLAN
A.3.03	DETAILS

14 (N) PARAPET BASE & CAP
NTS



8 (N) PLUMBING VENT THRU ROOF
NTS



2 (N) PREFABRICATED CURB
NTS

A. CONTRACTOR SHALL VISIT SITE TO ASCERTAIN EXACT EXISTING CONDITIONS AND COMPONENTS RELATED TO THE WORK DESCRIBED BY THESE DOCUMENTS. AFTER AWARD OF THE CONTRACT, CHANGE ORDER REQUEST FOR ADDITIONAL MONEY SHALL NOT BE APPROVED IF THE WORK COULD HAVE BEEN ANTICIPATED DURING THE SITE VISIT BY THE CONTRACTOR, ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ACCEPTED MANUFACTURER'S PRINTED INSTRUCTIONS & WARRANTY REQUIREMENTS.

B. DIMENSIONS,DETAILS, EQUIPMENT SIZE AND LOCATION SHOWN IN THESE DOCUMENTS ARE FOR INFORMATION AND REFERENCE ONLY. EXACT SIZE, LOCATION, TYPE OF MATERIAL AND TYPE OF CONSTRUCTION OF EXISTING CONDITIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN & CONFIRM.

C. ALL NEW CRICKETS AND TAPERED INSULATION SHALL BE INSTALLED WITH A FINISHED 1/4" PER FOOT MIN. SLOPE. CRICKET THE UP SLOPE SIDE OF ALL SQUARE CURBS AND PROJECTIONS.

D. REMOVE ALL ABANDONED EQUIP. IDENTIFIED ON ROOF TOP AND AS SHOWN ON DRAWINGS –(PATCH DECK) HOLES LESS THAN 10" WIDE– SCREW 22 GA. STAINLESS STEEL SHEET METAL TO EXISTING DECK HOLES GREATER THAN 10" WIDE– SCREW NEW METAL DECK (MATCH EXISTING) SPAN FROM JOIST TO JOIST.

E. ALL HVAC AND/OR DX UNITS, ELECTRICAL TRANSFORMERS, ROOF TOP EQUIPMENT, ETC. THAT ARE ON SLEEPERS SHALL BE DISCONNECTED/REMOVED, RAISED, & PLACED ON NEW CURBED PLATFORMS (RE: DETAIL), AND RECONNECTED/RE–INSTALLED. VERIFY ALL EXISTING CURB MOUNTED UNITS, EQUIPMENT, ETC. HAVE A MINIMUM 10" CURB HEIGHT (RAISED AS REQUIRED) – ALL DISCONNECTS AND RECONNECTS SHALL BE PERFORMED BY A LICENSED ELECTRICIAN.

F. IF EXISTING ELECTRICAL/GAS/WATER/ETC. LINES ARE MODIFIED– ONLY LICENSED SUBCONTRACTORS SPECIALIZING IN HVAC, PLUMBING AND ELECTRICAL SHALL PERFORM THAT TYPE OF WORK. PERMITS AND INSPECTIONS REQUIRED– PROVIDE "MERCURY" GAS LINE TEST (COORDINATE OWNER/ARCHITECT WITNESS OF TEST), REPAIR ALL LEAKS AND RE–TEST

G. REPLACE AND RAISE (AS REQUIRED) ALL EXISTING EXPANSION JOINTS/AREA DIVIDERS/ CURB MOUNTED EQUIPMENT/ SKYLIGHTS A MIN. 10" ABOVE ROOF DECK. (UNLESS INDICATED OTHER WISE ON DRAWING.)

H. ENSURE ALL SOIL STACK FLASHING IS MIN. 10" ABOVE ROOF. COUPLE PVC PIPE ABOVE DECK, COUPLE CAST IRON PIPE UNDER DECK.

I. PROVIDE SHEET METAL HOODED (w/METAL FACE CLOSURE), WOOD CURB, BOX COVER AT ALL GAS LINE AND WATER LINE ROOF PENETRATIONS (RE: DETAILS). ENSURE LINES SLOPE AWAY FROM FACE COVER.

J. PROVIDE WALKWAY PROTECTION PADS (AS ACCEPTABLE TO MANUFACTURER–RE: SPECS.) AROUND ALL ROOF HATCHES, A/C UNITS, DOORS THAT OPEN ONTO ROOF, AND AT ALL ROOF TOP ACCESS LADDERS (TOP & BOTTOM)

K. ISOLATE ALL HEAT PIPES/FLUES AS RECOMMENDED & OUTLINED IN THE NRCA MANUAL FOR ISOLATED STACK FLASHING– (RE:DETAILS)

L. ALL OUTSIDE AIR INTAKES SHALL BE COVERED TO ELIMINATE ODORS AND FUMES FROM ENTERING INTO THE BUILDING DURING WORK.

M. EXAMINE AND CLEAN EXISTING DRAIN LINES OF DEBRIS AND BLOCKAGE, FLUSH WITH WATER TO ENSURE THAT DRAINS FLOW FREELY.

N. OWNER WILL VERIFY CORRECT OPERATION OF ALL ROOF TOP EQUIPMENT BEFORE AND AFTER PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ALL INOPERABLE EQUIPMENT PRIOR TO RELEASE OF RETAINAGE.

O. REPLACE ALL RUSTED/DETERIORATED EXISTING METAL VENT FLASHING AND FLUES.

P. COORDINATE WALK OF ENTIRE ROOF (PRIOR TO STARTING) WITH ROOFING MANUFACTURER'S TECHNICAL REP. TO IDENTIFY AND LOCATE ALL AREAS OF HIGH SLOPE WHICH MIGHT REQUIRE SPECIAL PROCEDURES FOR SYSTEM ATTACHMENT.

Q. PROVIDE ONE–WAY MOISTURE VENTS 1 PER 900 SF AT ALL LT. WT. OVER POUR AREAS

3 GENERAL NOTES

1.REMOVE AND PROPERLY DISPOSE OF EXISTING ROOFING (WEIGHING APPROXIMATELY 8 LBS/SF) / INSULATION (RE: 3/A4.11) DOWN TO EXISTING ROOF DECK AT ROOF AREAS ADMIN, KINDERGARTEN, BLDG A,B,C, MPR & ALL RELOCATABLES. PREPARE / REPAIR EXISTING VERTICAL FASCIA NAILER (INCLUDE 100 IN FT OF REPLACEMENT) FOR INSTALLATION OF NEW CLASS "A" ROOF SYSTEM. PREPARE / REPAIR EXISTING ROOF DECK WITH LIKE KIND MATERIAL AND ATTACHMENT. MECHANICALLY ATTACH NEW BASE SHEET, HEAT WELD MODIFIED BITUMEN BASE PLY ROOF MEMBRANE, ENSURE IS WATER TIGHT PRIOR TO

ASSOCIATED ROOF RELATED SHEET METAL, GUTTERS, DOWNSPOUTS, EDGE METALS AND TRIM. THE TOTAL WEIGHT OF THE NEW COMPLETED ROOF IS NOT TO EXCEED 5 LBS/SF.

2. PROVIDE R-30 BATT INSULATION UNDER ROOF DECK PER SPEC SECTION 07 21 00.

3. REPLACE OR REPAIR ALL EXISTING ROOF DAMAGE.

4. REPLACE EXISTING ROOF FASCIA WITH "TREX" COMPOSITE FASCIA, MATCH EXISTING FACIA PROFILE.

5. ROOFING TO BE CLASS A ASSEMBLY.

7 SCOPE OF WORK

EXISTING AREAS TO REMAIN – NIC

NOTE:
SQUARE FOOTAGES SHOWN ARE FOR REFERENCE ONLY - (FIELD VERIFY) CONSTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND FOR ENSURING NEW CONDITIONS ADHERE TO ALL LOCAL AND FEDERAL CODES ALONG WITH INDUSTRY STANDARD GUIDELINES AND REMAIN IN A WATERTIGHT CONDITION.

SEE SPECIFICATION DIVISION 7 FOR OTHER ROOF RELATED COMPONENTS.

ABBREVIATIONS:

WD: WOOD ROOF DECK
SS: SLIP SHEET

1 GENERAL LEGEND
NTS

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DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

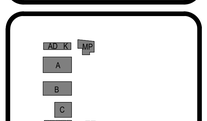
SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT



Consultant

BEAM PROFESSIONALS

Architect

LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

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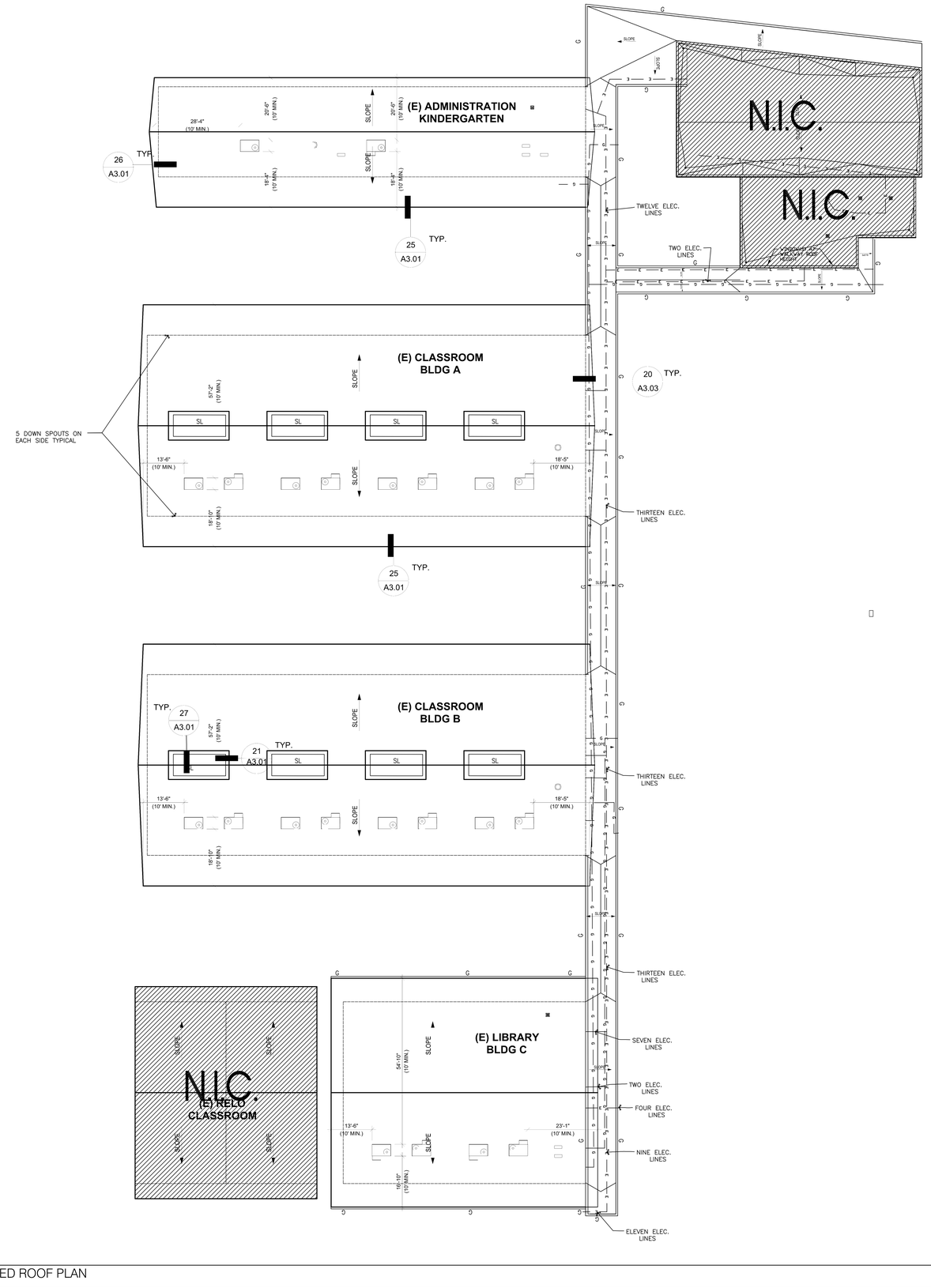
OVERALL ROOF PLAN AND DETAIL

A3.01

0" 1"



NORTH

6 ENLARGED ROOF PLAN
1/16" = 1'-0"

19 EXISTING NOMENCLATURE

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7 GENERAL NOTES
3" = 1'-0"

1 GENERAL LEGEND
NTS

PLUMBING VENT		GOOSE NECK VENT	PB	PIPE BOX	
FLANGE VENT		CURB MOUNTED A/C			RIDGE LINE
PITCH PAN		SPLASH BLOCK			
NEW ROOF DRAIN		SPLASH PAN			EXISTING AREAS TO REMAIN – NIC
EXIST. ROOF DRAIN		A/C ON POSTS			
OF OVERFLOW DRAIN		ROOF HATCH			NEW TAPERED INSULATION / CRICKET
WALL DRAIN	SL	SKYLIGHT			
CURB MOUNTED VENT		ANTENNA	A1	ROOF AREA DESIGNATION	
		SATELLITE DISH			TAPERED LIGHTWEIGHT CONCRETE
ABANDONED CURB TO BE REMOVED/PATCHED	SC	SCUPPER			SCREEN WALL
GUY WIRE	G	GUTTER			
POWER VENT	DS	DOWNSPOUT			DESIGNATES EXTENTS OF WORK IDENTIFIED BY KEYED NOTES
HEATER VENT		WALL LADDER			
BOILER VENT		SWING LADDER			EXPANSION JOINT
TURBINE VENT	G	GAS LINE	C	CONDINSATE LINE	
A ABANDON EQUIP.	E	ELEC. LINE	W	WATER LINE	

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PBK

ARCHITECT PBK Architects, Inc.
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P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant
BEAM PROFESSIONALS

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ROOF PLAN

A3.02

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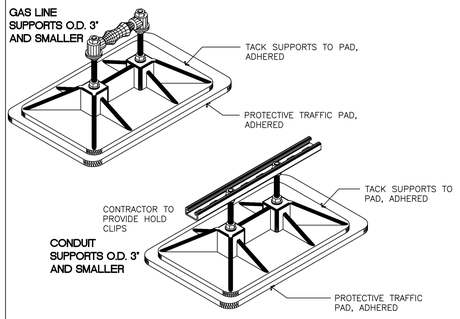
A3.03 - ROOF DETAILS - MOD. BIT.

0" 1"



18 PIPE SUPPORT

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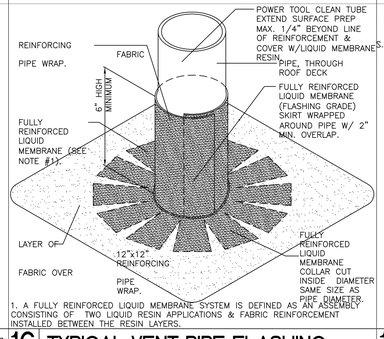

1. A FULLY REINFORCED LIQUID MEMBRANE SYSTEM IS DEFINED AS AN ASSEMBLY CONSISTING OF TWO LIQUID RESIN APPLICATIONS & FABRIC REINFORCEMENT INSTALLED BETWEEN THE RESIN LAYERS.

16 TYPICAL VENT PIPE FLASHING

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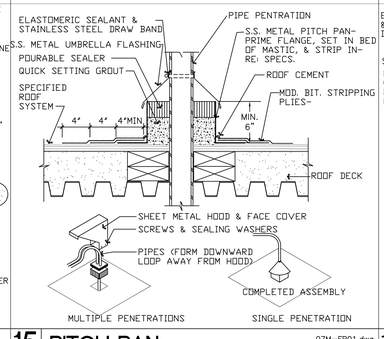

15 PITCH PAN

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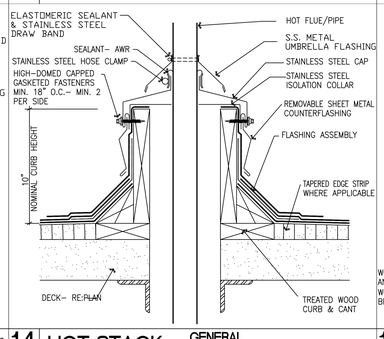

14 HOT STACK - GENERAL INFORMATION

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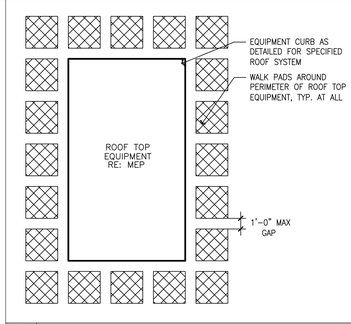
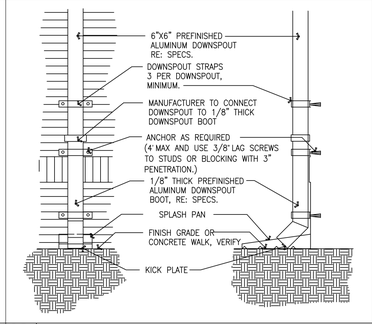


20 WALK PADS AT RTU

NTS



19 DOWN SPOUT

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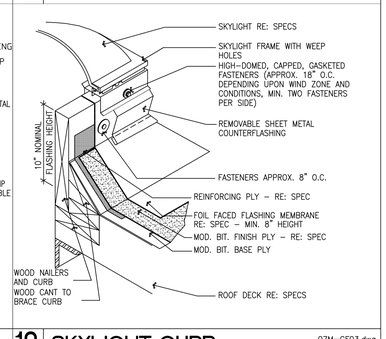

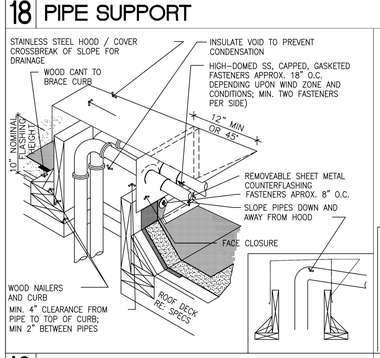

12 HOODED CURB

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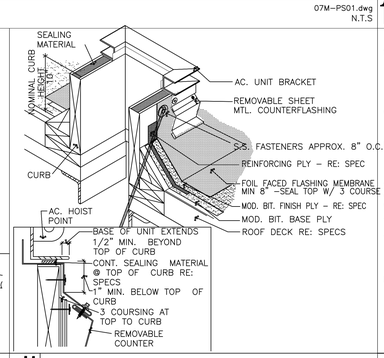

11 AC CURB

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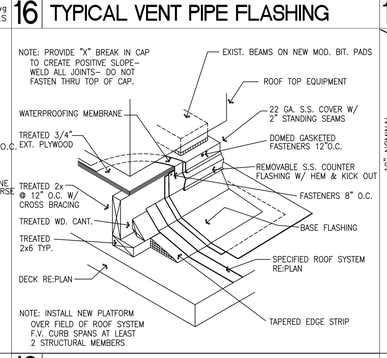

10 CURBED PLATFORM -

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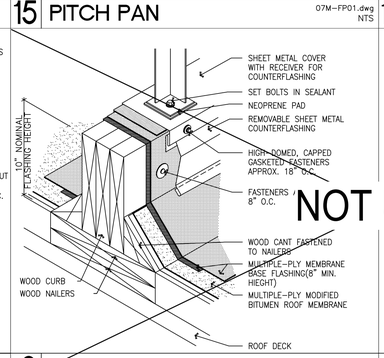

NOT USED

9 EQUIP. SUPPORT CURB

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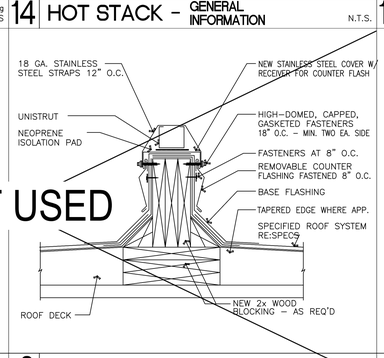

8 EQUIPMENT SUPPORT CURB

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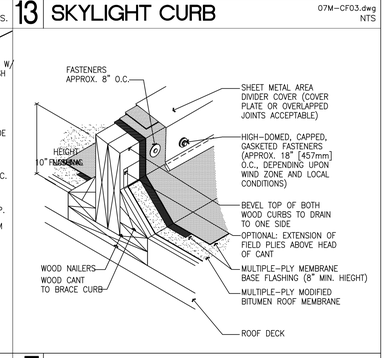

7 AREA DIVIDER

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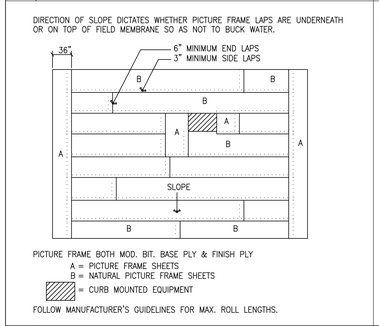
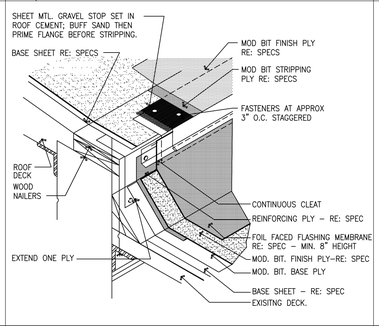
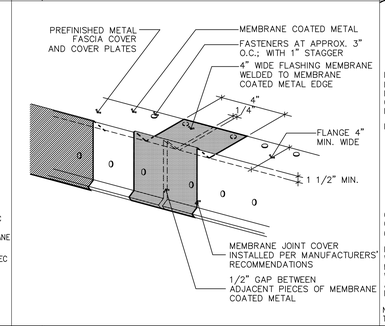


6 PICTURE FRAME DETAIL



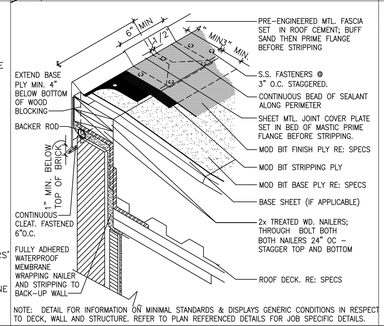
5 ROOF HIGH/LOW

NTS



4 COVER PLATE

NTS



NOTE: DETAIL FOR INFORMATION ON MINIMAL STANDARDS & DISPLAYS GENERIC CONDITIONS IN RESPECT TO DECK, WALL AND STRUCTURE. REFER TO PLAN REFERENCED DETAILS FOR JOB SPECIFIC DETAILS.

3 ROOF EDGE

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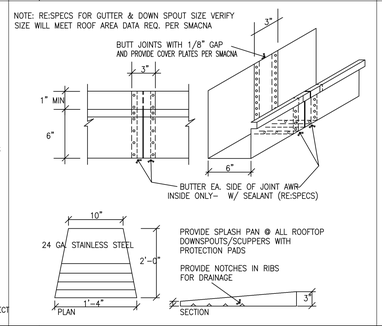

2 GUTTER JOINT

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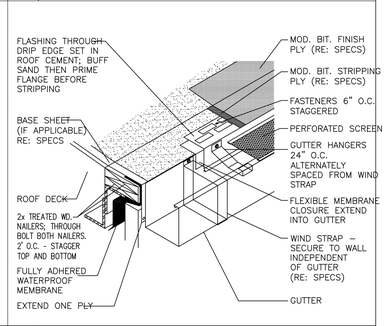

1 ROOF EDGE

07M-PE01.dwg
NTS

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APP: 04-121817 INC:
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PBK

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WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant
BEAM PROFESSIONALS

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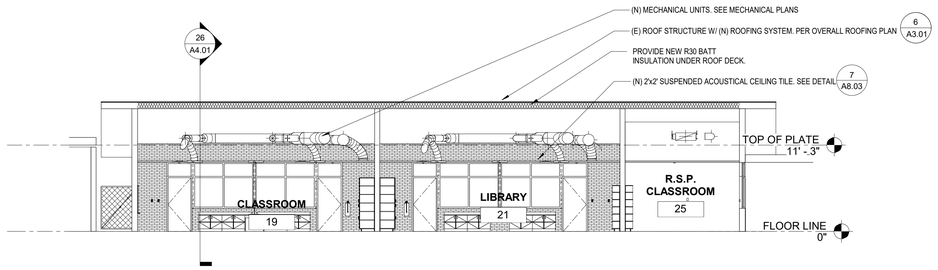
ROOF DETAILS - MOD. BIT.

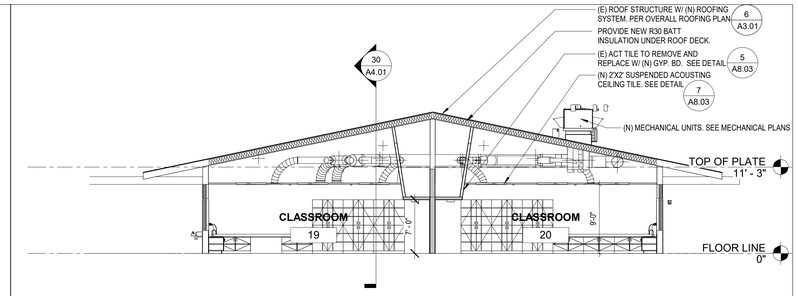
A3.03

A4.01 - BUILDING SECTIONS

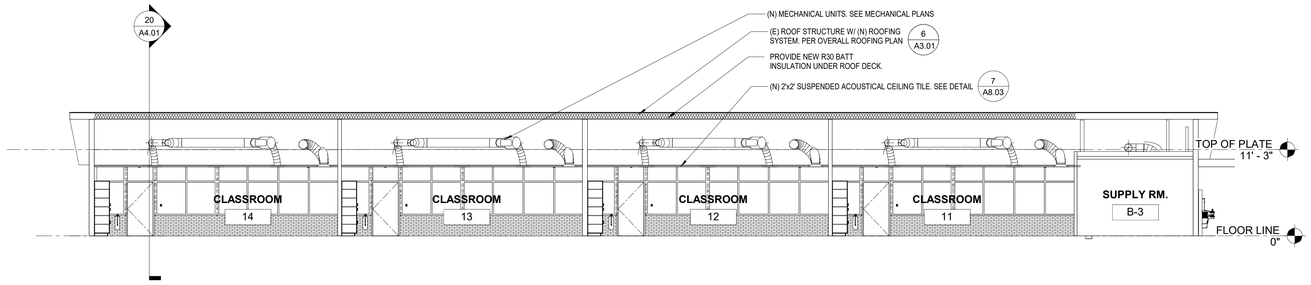
0" 1"



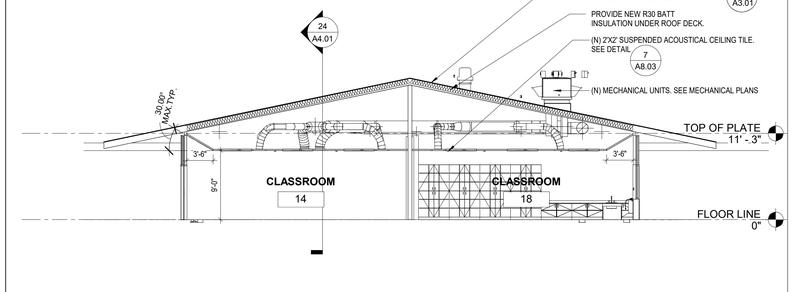
30 BLDG C - SECTION B
1/8" = 1'-0"



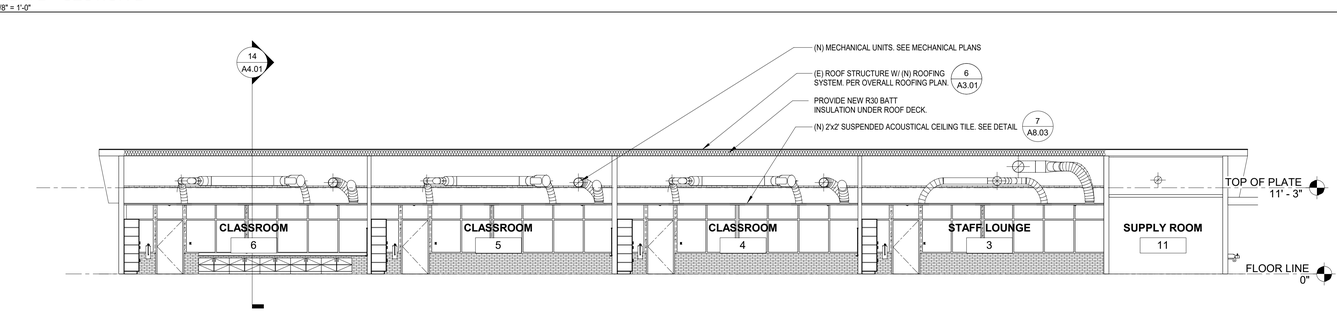
26 BLDG C - SECTION A
1/8" = 1'-0"



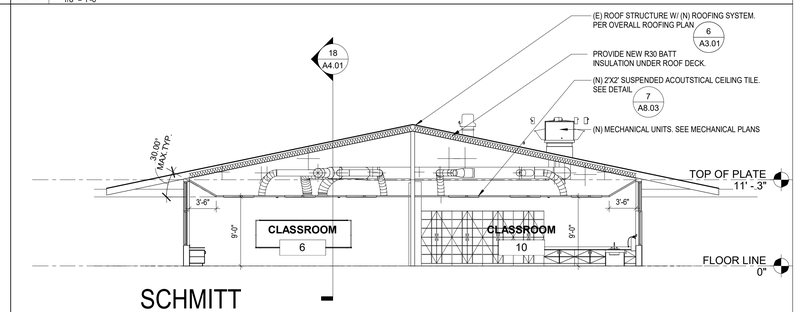
24 BLDG B - SECTION B
1/8" = 1'-0"



20 BLDG B - SECTON A
1/8" = 1'-0"



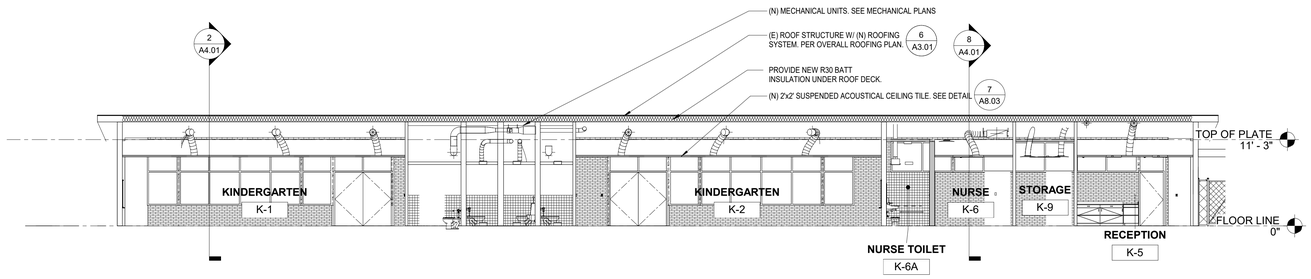
18 BLDG A - SECTION B
1/8" = 1'-0"



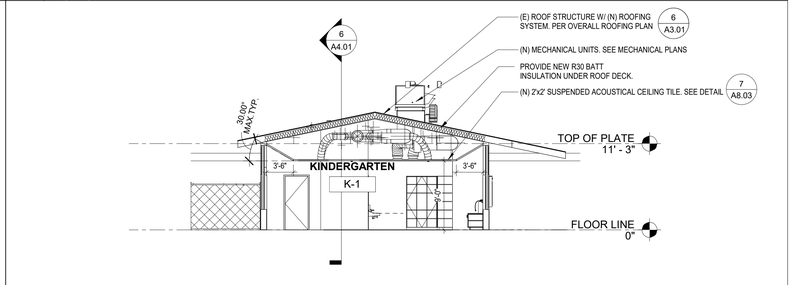
SCHMITT

14 BLDG A - SECTION A
1/8" = 1'-0"

8 BLDG ADMIN - SECTION A
1/8" = 1'-0"



6 BLDG ADMIN / KINDER - SECTION B
1/8" = 1'-0"



2 BLDG KINDER - SECTION A
1/8" = 1'-0"

FILE PATH: Z:\Projects\...
6/19/2023 12:12:26 PM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Tong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

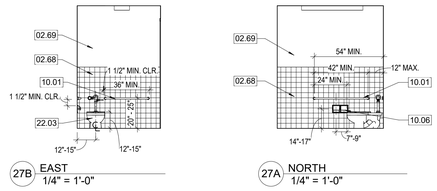
No.	Description	Date

DSA SUBMITTAL

BUILDING SECTIONS

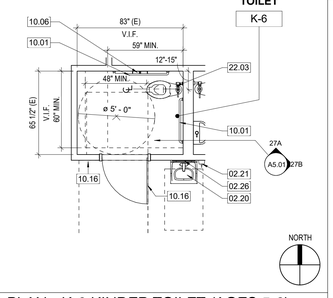
A4.01

0" 1"

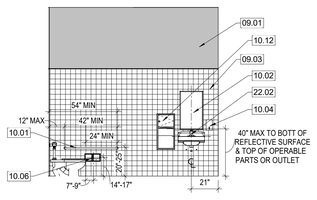


27B EAST
1/4" = 1'-0"

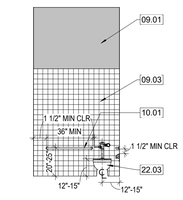
27A NORTH
1/4" = 1'-0"



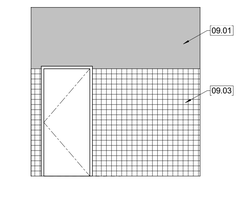
30 ELEVATIONS - K-6 KINDERGARTEN TOILET (AGES 5-8)
1/4" = 1' - 0"



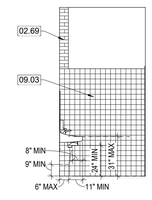
21D WEST
1/4" = 1'-0"



21C SOUTH
1/4" = 1'-0"

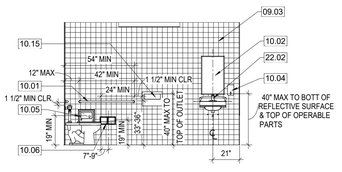


21B EAST
1/4" = 1'-0"

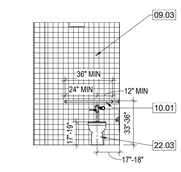


21A NORTH
1/4" = 1'-0"

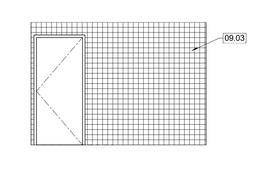
24 ELEVATIONS - K-6A NURSE TOILET (AGES 5-8)
1/4" = 1' - 0"



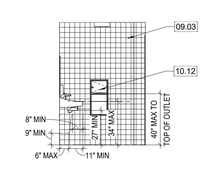
15D WEST
1/4" = 1'-0"



15C SOUTH
1/4" = 1'-0"

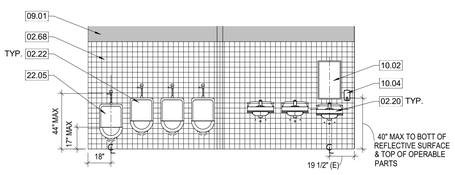


15B EAST
1/4" = 1'-0"

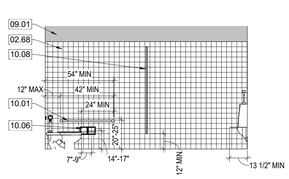


15A NORTH
1/4" = 1'-0"

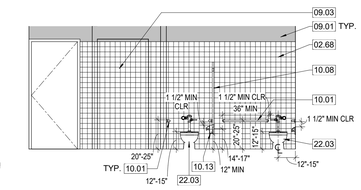
18 ELEVATIONS - K-4A STAFF TOILET (ADULT)
1/4" = 1' - 0"



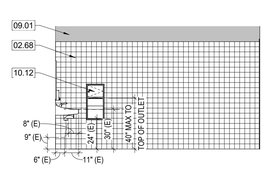
8D WEST
1/4" = 1'-0"



8C SOUTH
1/4" = 1'-0"

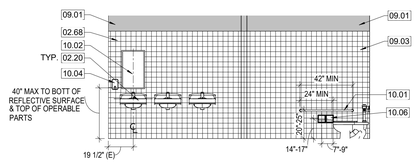


8B EAST
1/4" = 1'-0"

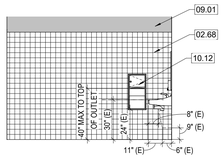


8A NORTH
1/4" = 1'-0"

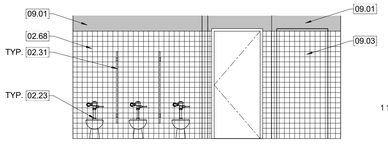
12 ELEVATIONS - B-2 BOYS RR (AGES 5-8)
1/4" = 1' - 0"



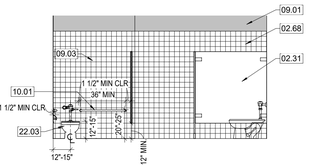
2D WEST
1/4" = 1'-0"



2C SOUTH
1/4" = 1'-0"



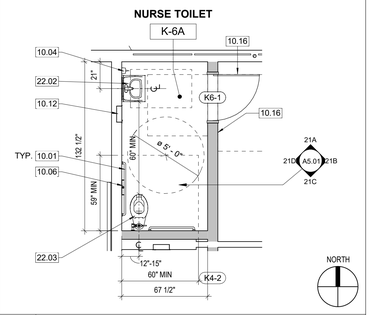
2B EAST
1/4" = 1'-0"



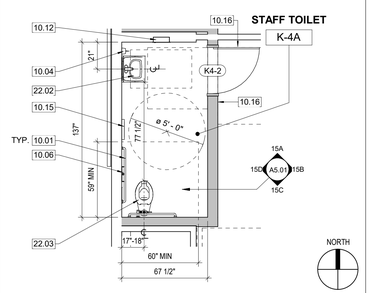
2A NORTH
1/4" = 1'-0"

6 ELEVATIONS - B-1 GIRLS RR (AGES 5-8)
1/4" = 1' - 0"

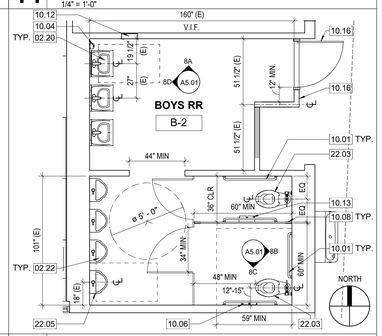
26 PLAN - K-6 KINDER TOILET (AGES 5-8)
1/4" = 1'-0"



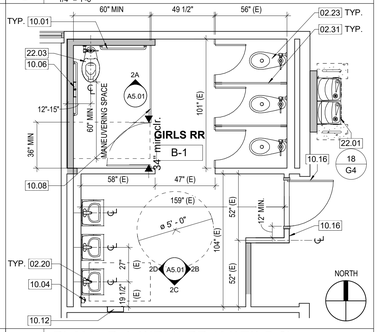
20 PLAN - K-6A NURSE TOILET (AGES 5-8)
1/4" = 1'-0"



14 PLAN - K-4A STAFF TOILET (ADULT)
1/4" = 1'-0"



8 PLAN - B-2 BOYS RR (AGES 5-8)
1/4" = 1'-0"



2 PLAN - B-1 GIRLS RR (AGES 5-8)
1/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong You
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS

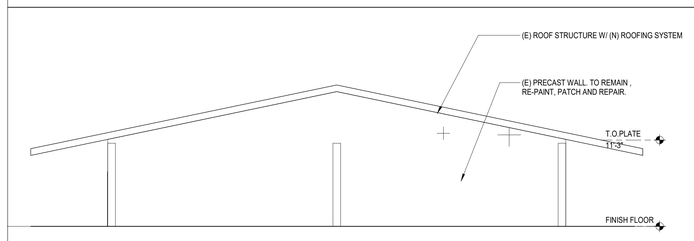
A5.01

CONSTRUCTION KEYED NOTES

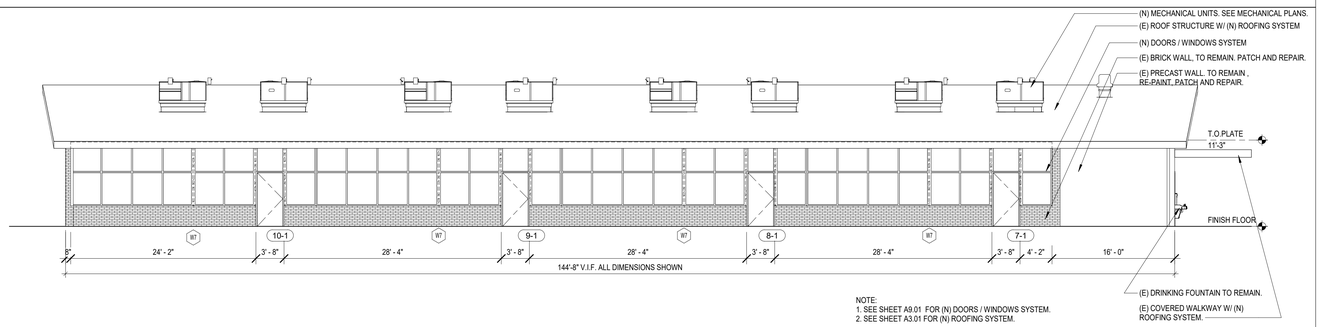
02.20	(E) LAVATORY TO REMAIN
02.21	(E) SOAP DISPENSER TO REMAIN
02.22	(E) URINAL TO REMAIN
02.23	(E) TOILET FIXTURE TO REMAIN
02.26	(E) MIRROR TO REMAIN
02.31	(E) FLOOR MOUNTED OVERHEAD BRACED SOLID PLASTIC TOILET PARTITION TO REMAIN
02.68	(E) CERAMIC TILE TO REMAIN, PROTECT IN PLACE
02.69	(E) WALL FINISH TO REMAIN, PROTECT IN PLACE
09.01	(N) INTERIOR PAINT FINISH, SEE FINISH SCHEDULE
09.03	(N) 4X4 CERAMIC TILE. PROVIDE GREENBOARD SUBSTRATE AT (E) BRICK SURFACES.
10.01	(N) WALL MOUNTED GRAB BAR, MOUNT PER DETAIL 27/A8.02
10.02	(N) WALL MOUNTED MIRROR
10.04	(N) WALL MOUNTED HAND SOAP DISPENSER
10.05	(N) RECESSED SANITARY NAPKIN DISPOSAL
10.06	(N) SEMI-RECESSED TOILET PAPER DISPENSER, 4" MAX PROTRUSION
10.08	(N) SOLID PLASTIC TOILET PARTITION, FOR MOUNTING SEE DETL 12/A8.03
10.12	(N) COMBO PAPER TOWEL DISPENSER & WASTE RECEPTACLE, 4" MAX PROTRUSION
10.13	(N) SURFACE MOUNT TOILET PAPER DISPENSER, 4" MAX PROTRUSION
10.15	(N) TOILET SEAT COVER DISPENSER, 4" MAX PROTRUSION
10.16	TACTILE RESTROOM DOOR & WALL SIGN, REF DETAIL 24/A8.02
22.01	(N) ACCESSIBLE DRINKING FOUNTAIN W/ BOTTLE FILLER & FURRED WALL. SEE DETAIL 18/G4
22.02	(N) WALL MOUNTED LAVATORY, BACKING SUPPORT PER DETL 6/A8.03
22.03	(N) ACCESSIBLE FLOOR MOUNTED WATER CLOSET
22.05	(N) WALL MOUNTED URINAL, BACKING SUPPORT PER DETL 6/A8.03

A6.01 - EXTERIOR ELEVATIONS

0" 1"

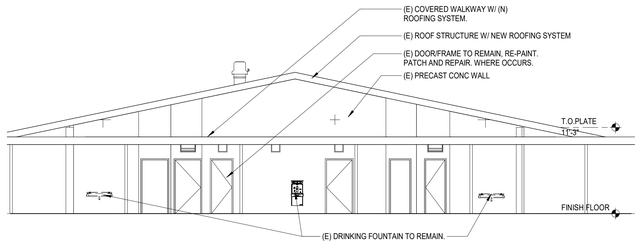


NOTE:
1. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.



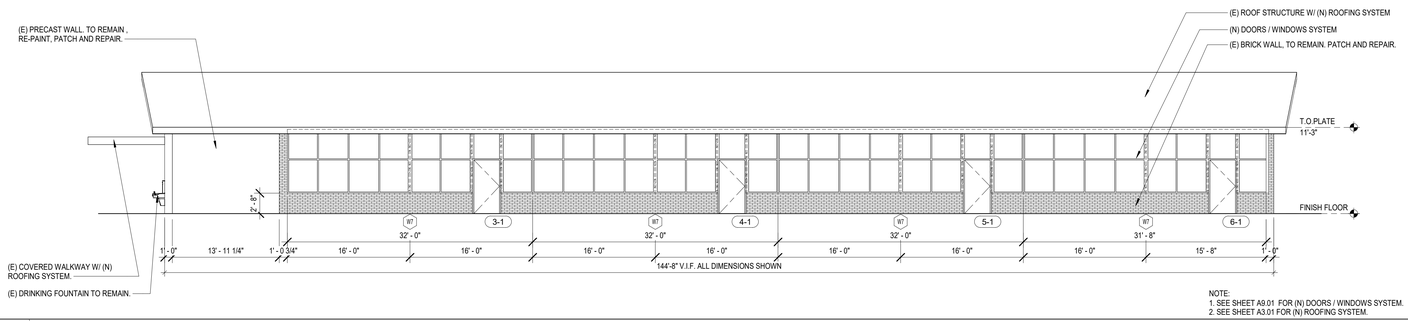
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

24 BLDG A WEST ELEVATION
1/8" = 1'-0"



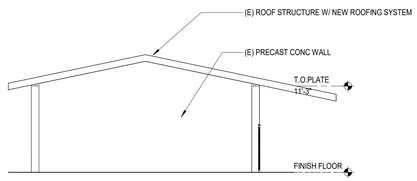
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

22 BLDG A SOUTH ELEVATION
1/8" = 1'-0"



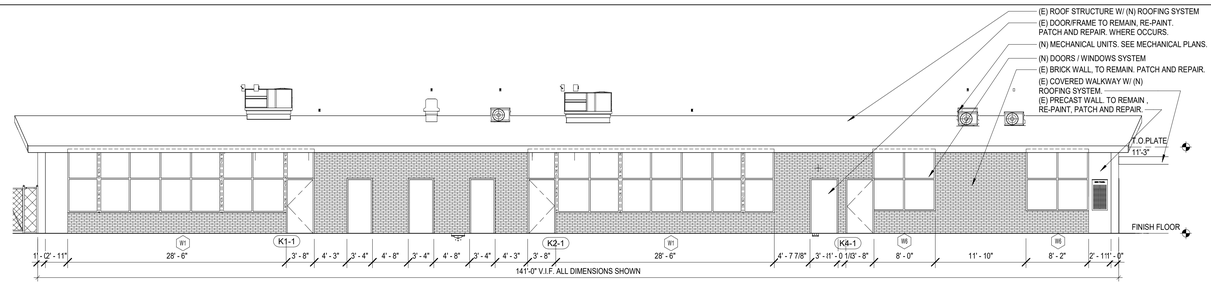
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

18 BLDG A EAST ELEVATION
1/8" = 1'-0"



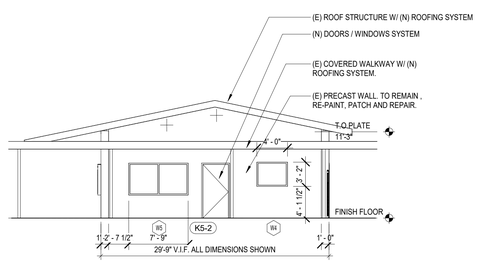
NOTE:
1. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

16 BLDG A NORTH ELEVATION
1/8" = 1'-0"



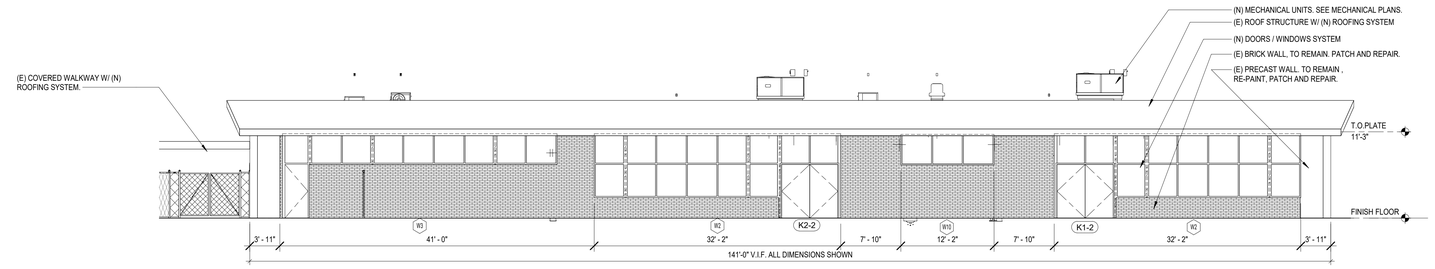
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

12 BLDG ADMIN WEST ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

10 BLDG ADMIN/KINDERGARTEN SOUTH ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

6 BLDG ADMIN EAST ELEVATION
1/8" = 1'-0"

4 BLDG ADMIN/KINDERGARTEN NORTH ELEVATION
1/8" = 1'-0"

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PBK

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WESTMINSTER SCHOOL DISTRICT

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KEY PLAN
NORTH: PLAN

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Architect

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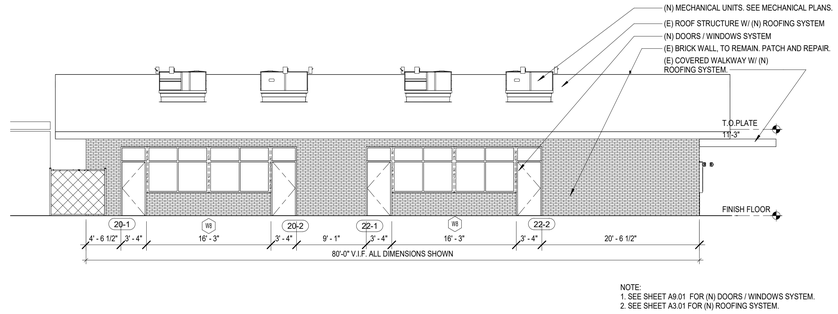
EXTERIOR ELEVATIONS

A6.01

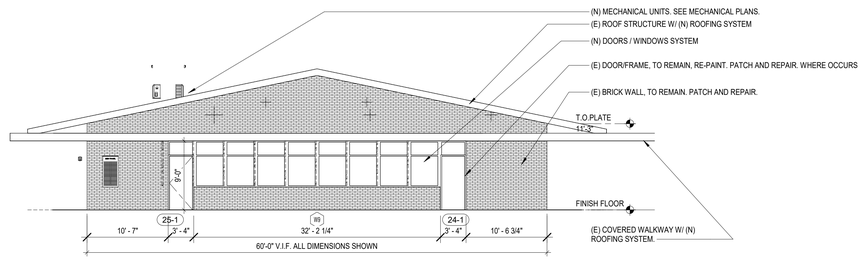
A6.02 - EXTERIOR ELEVATIONS

0" 1"



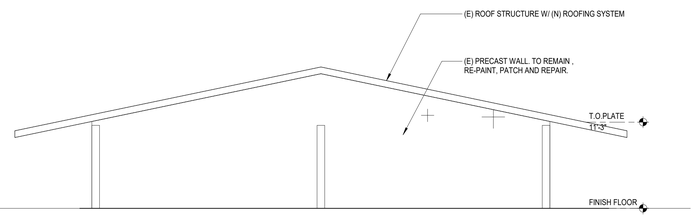
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

21 BLDG C SOUTH ELEVATION
1/8" = 1'-0"



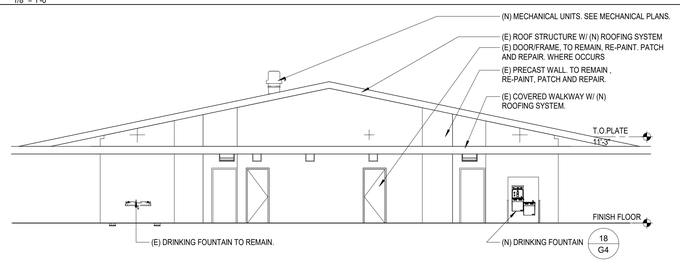
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

18 BLDG C EAST ELEVATION
1/8" = 1'-0"



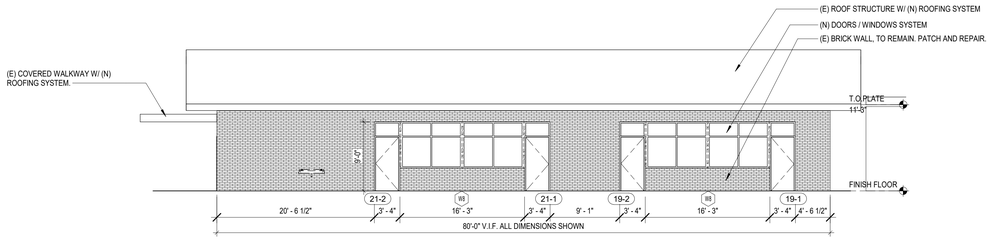
NOTE:
1. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

12 BLDG B WEST ELEVATION
1/8" = 1'-0"



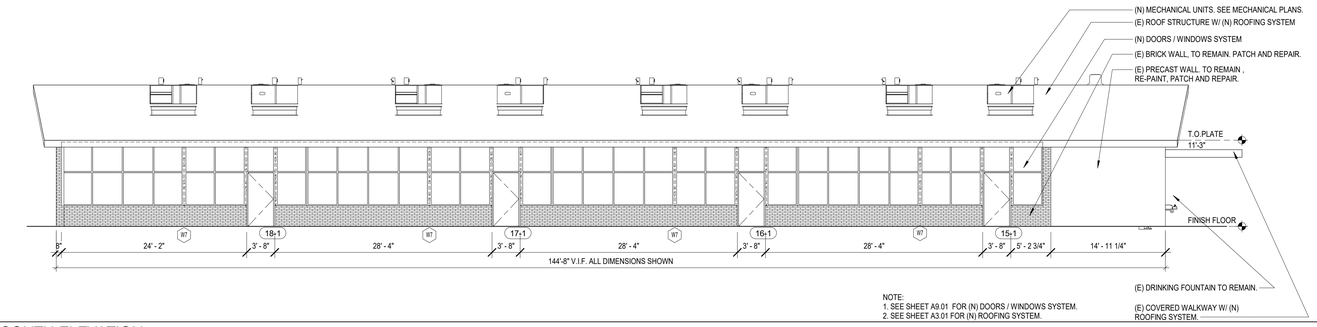
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

6 BLDG B EAST ELEVATION
1/8" = 1'-0"



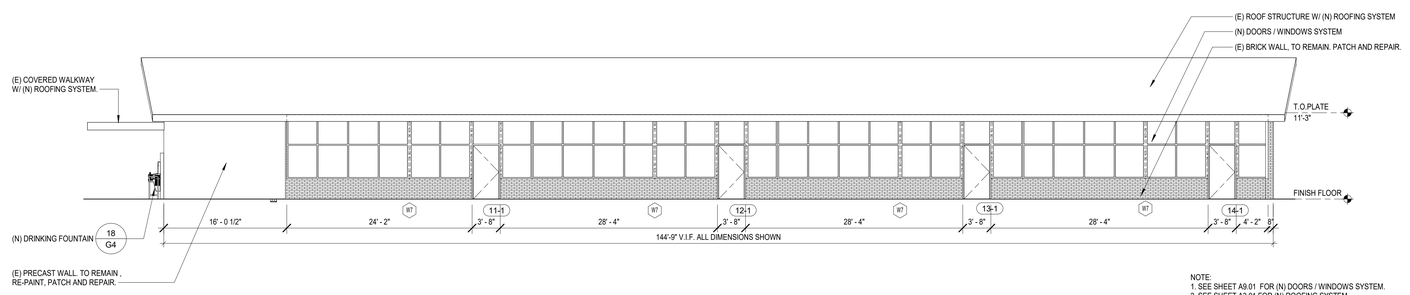
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

15 BLDG C NORTH ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

10 BLDG B SOUTH ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

4 BLDG B NORTH ELEVATION
1/8" = 1'-0"

FILE PATH: Z:\Projects\...
6/19/2023 1:21:46 PM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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2400 E. Katella Ave., Suite 950
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P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Tong You
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220308

REVISIONS

No.	Description	Date

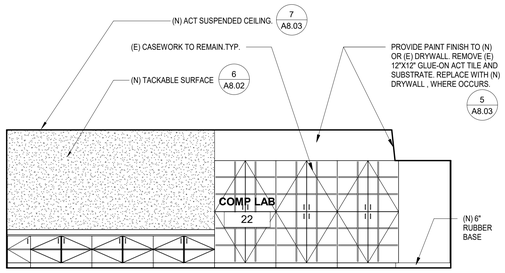
DSA SUBMITTAL

EXTERIOR ELEVATIONS

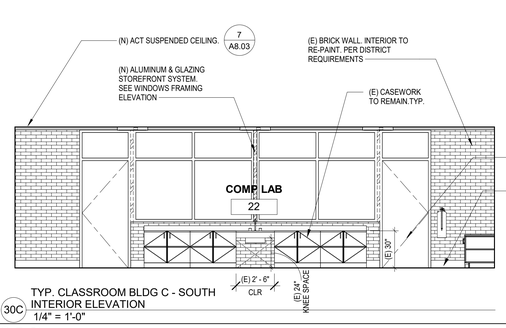
A6.02

A7.01 - INTERIOR ELEVATIONS

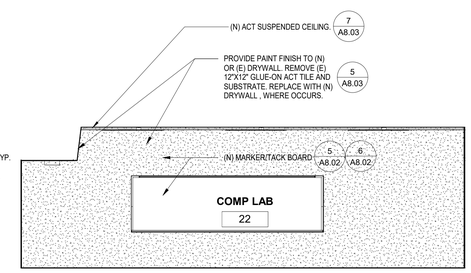
0" 1"



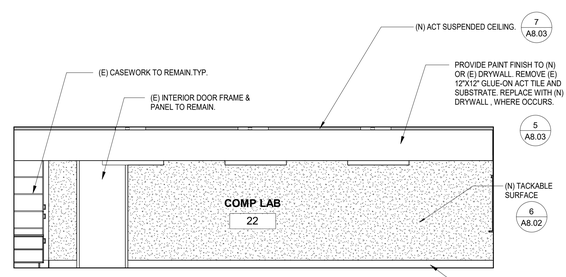
30D TYP. CLASSROOM BLDG C - WEST INTERIOR ELEVATION
1/4" = 1'-0"



30C TYP. CLASSROOM BLDG C - SOUTH INTERIOR ELEVATION
1/4" = 1'-0"

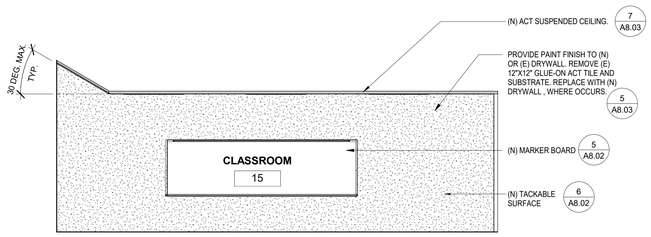


30B TYP. CLASSROOM BLDG C - EAST INTERIOR ELEVATION
1/4" = 1'-0"

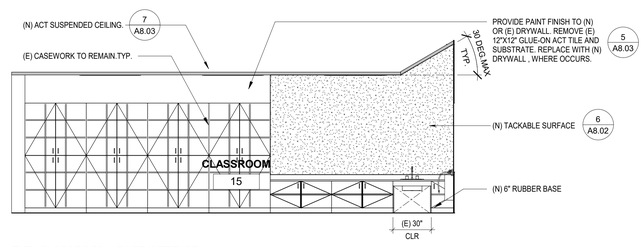


30A TYP. CLASSROOM BLDG C - NORTH INTERIOR ELEVATION
1/4" = 1'-0"

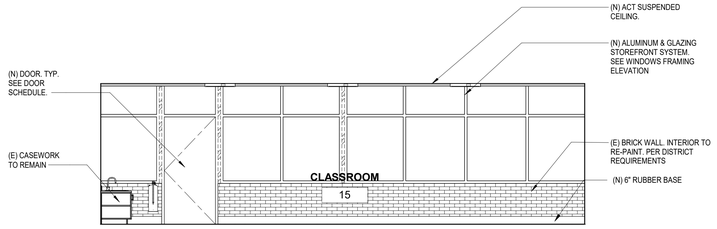
30 TYPICAL CLASSROOM AT BUILDING C - INTERIOR ELEVATIONS (AGES 5-8)
1/4" = 1'-0"



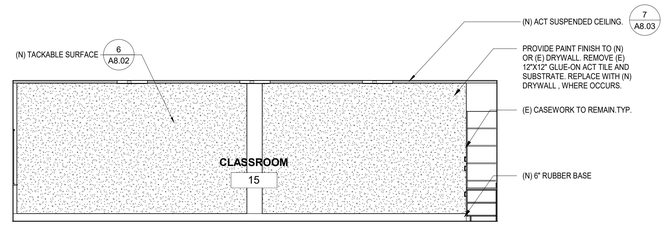
18D TYP. CLASSROOM - WEST INTERIOR ELEVATION
1/4" = 1'-0"



18B TYP. CLASSROOM - EAST INTERIOR ELEVATION
1/4" = 1'-0"

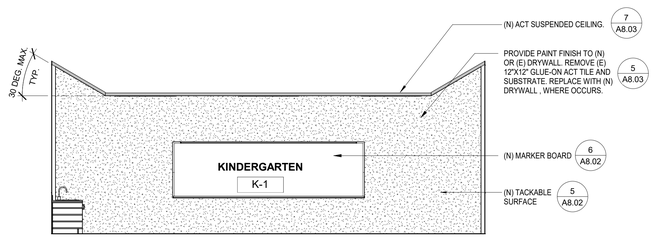


18C TYP. CLASSROOM - SOUTH INTERIOR ELEVATION
1/4" = 1'-0"

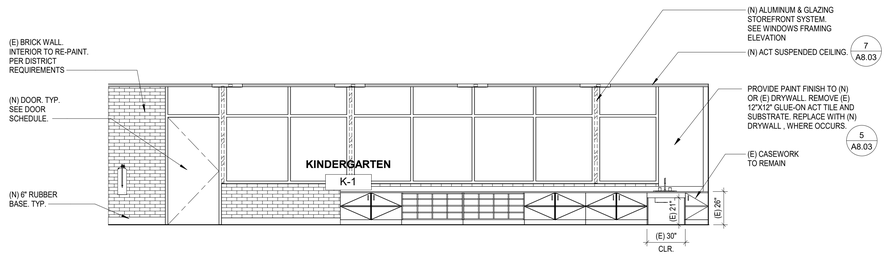


18A TYP. CLASSROOM - NORTH INTERIOR ELEVATION
1/4" = 1'-0"

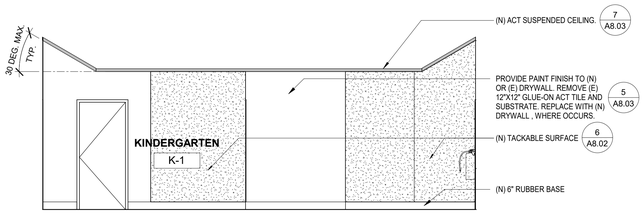
18 TYPICAL CLASSROOM AT BLDG A & B - INTERIOR ELEVATIONS (AGES 5-8)
1/4" = 1'-0"



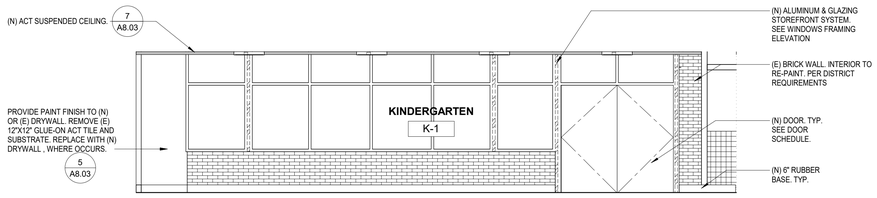
6D K1- WEST INTERIOR ELEVATION
1/4" = 1'-0"



6C K1 - SOUTH INTERIOR ELEVATION
1/4" = 1'-0"



6B K1 - EAST INTERIOR ELEVATION
1/4" = 1'-0"



6A K1 - NORTH INTERIOR ELEVATION
1/4" = 1'-0"

6 KINDERGARTEN K1&K2 - TYP. INTERIOR ELEVATIONS
1/4" = 1'-0"

FILE PATH: Z:\Projects\...
6/19/2023 1:21:50 PM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

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7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

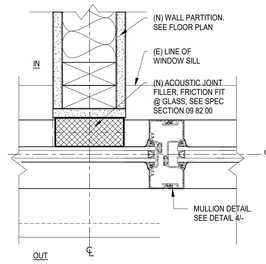
DSA SUBMITTAL

INTERIOR ELEVATIONS

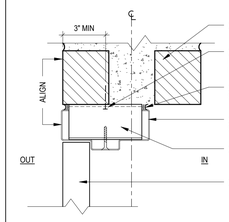
A7.01

0" 1"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..

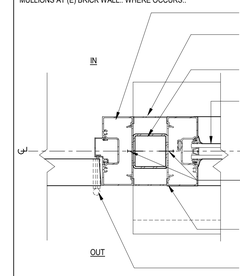


28 GLAZING @ WALL INTERSECTION
3" = 1'-0"



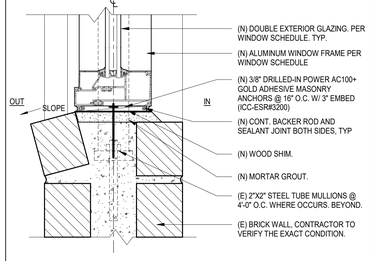
27 HM DOOR JAMB/HEAD @ BRICK
3" = 1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



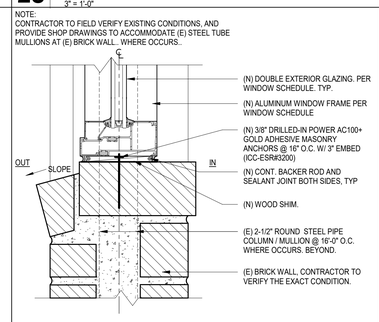
26 WINDOW/DOOR (E) MULLION ATTACHMENT
3" = 1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



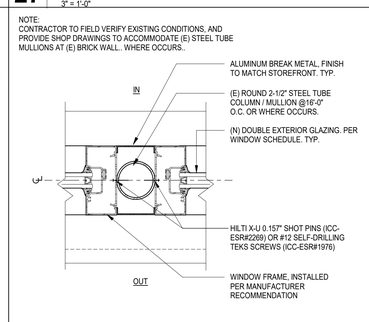
25 WINDOW SILL @ BRICK WALL
3" = 1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



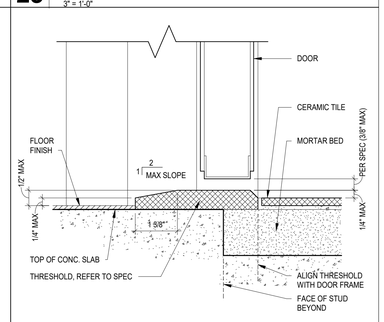
22 WIN SILL @ BRICK WALL W/ ROUND COL
3" = 1'-0"

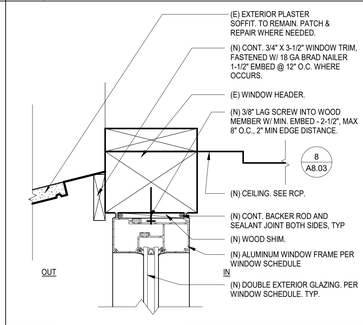
NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



21 WIN. MULLION ATTACH TO ROUND COL.
3" = 1'-0"

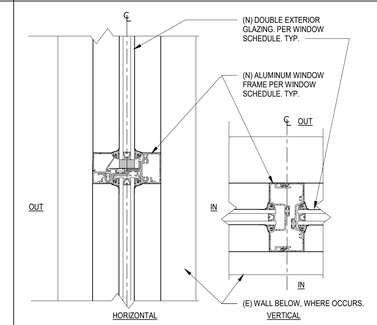
19 INT SILL AT CERAMIC TILE
6" = 1'-0"





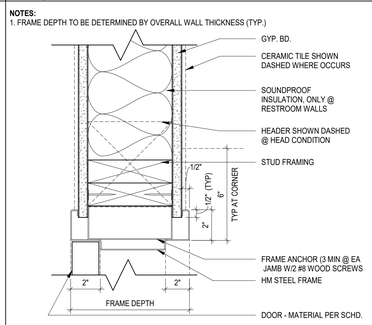
16 WINDOW/DOOR (E) ROUND COL ATTACH
3" = 1'-0"

15 WINDOW HEADER
3" = 1'-0"



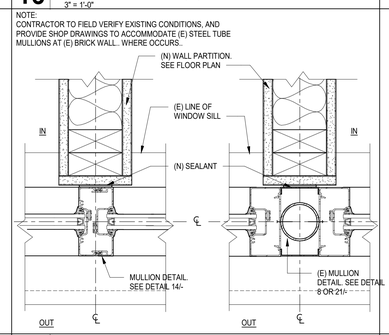
14 WINDOW MULLION VERT/HORIZ
3" = 1'-0"

NOTES:
1. FRAME DEPTH TO BE DETERMINED BY OVERALL WALL THICKNESS (TYP.)

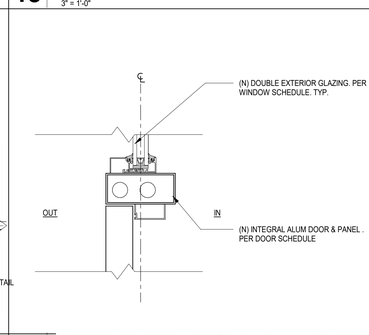


13 HM FRAME INT JAMB
3" = 1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..

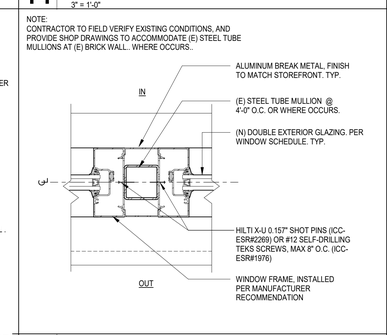


10 WINDOW JAMB /WALL INTERSECTION
3" = 1'-0"

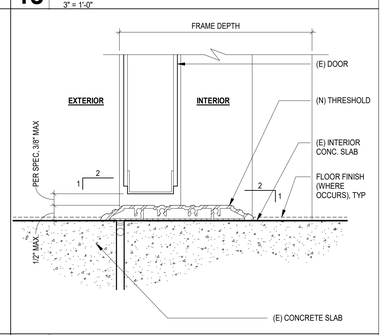


9 WINDOW/DOOR INTEGRAL ALUM HEADER
3" = 1'-0"

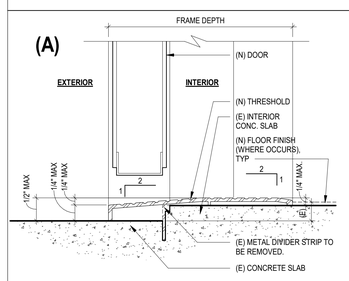
NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



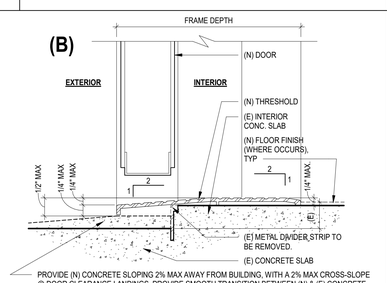
8 WINDOW MULLION ATTACHMENT
3" = 1'-0"



7 EXT SILL @ (E) DOOR
6" = 1'-0"

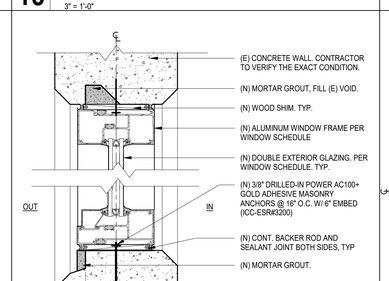


NOTE:
WHERE INTERIOR FLOOR FINISH IS LESS THAN OR EQUAL TO 1/2" MAX ABOVE EXTERIOR FLOOR FINISH @ EXTERIOR DOOR LANDINGS, USE DETAIL **(A)** ABOVE, TYP.

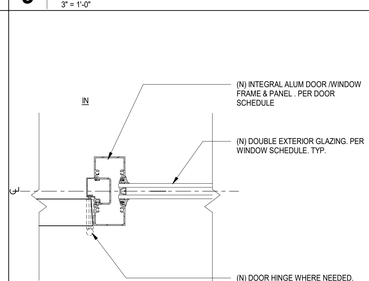


NOTE:
WHERE INTERIOR FLOOR FINISH IS HIGHER THAN 1/2" MAX ABOVE EXTERIOR FLOOR FINISH @ EXTERIOR DOOR LANDINGS, USE DETAIL **(B)** ABOVE, TYP.

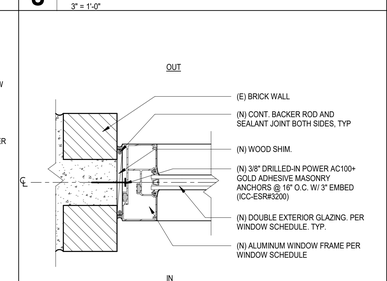
6 EXT DOOR SILL THRESHOLD RAMP
6" = 1'-0"



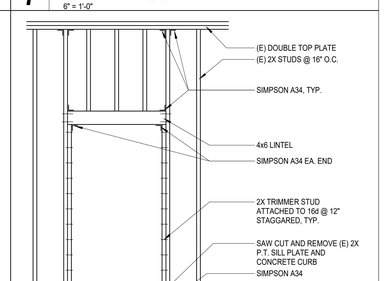
4 WINDOW FRAME @ (E) CONC WALL
3" = 1'-0"



3 WINDOW/DOOR MULLION ATTACHMENT
3" = 1'-0"



2 WINDOW JAMB @ BRICK WALL
3" = 1'-0"



1 (N) DOOR OPENING
1/2" = 1'-0"

IDENTIFICATION STAMP
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APP: 04-121817 INC:
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ANAHEIM
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P 949-548-5000

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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

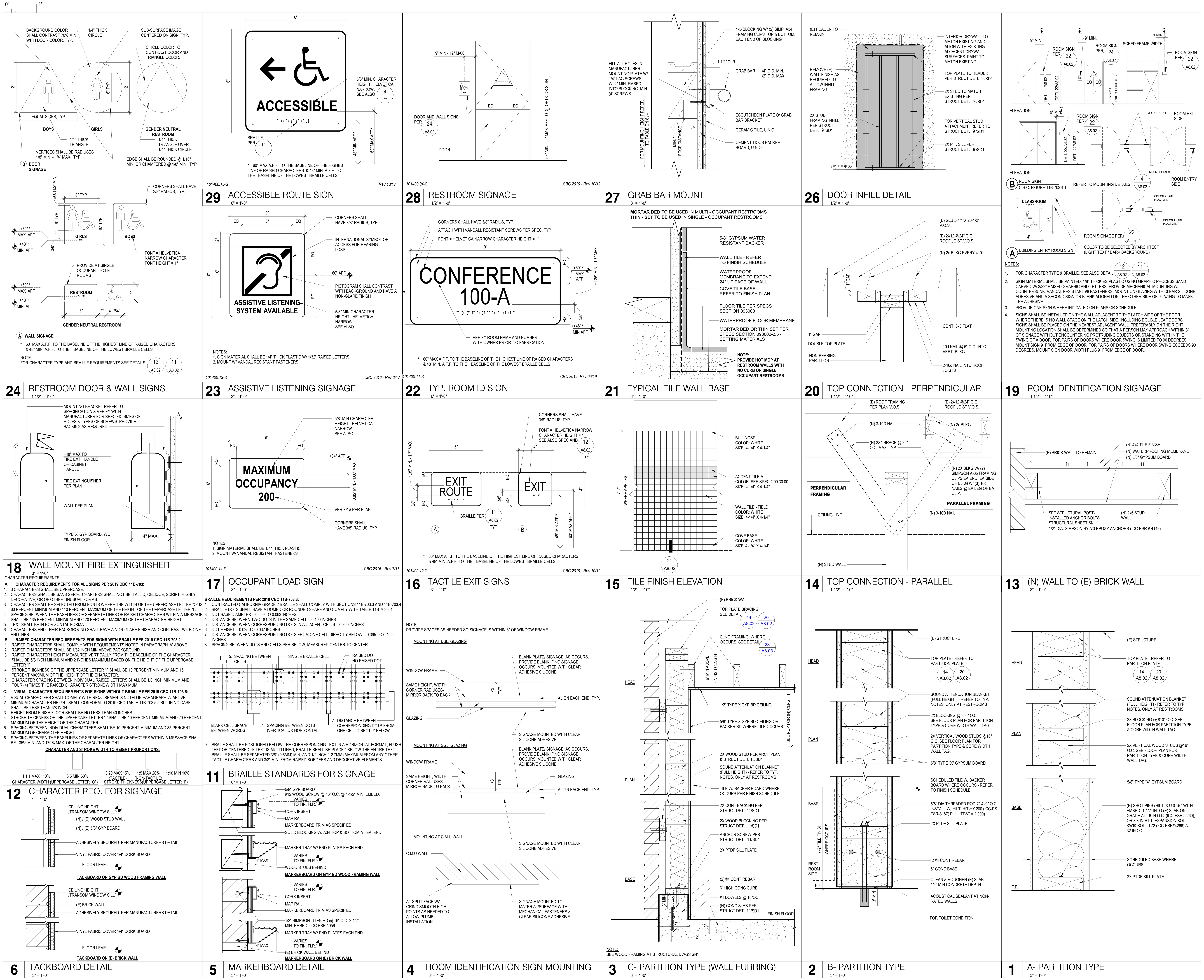
REVISIONS

No.	Description	Date

DSA SUBMITTAL

DOORS, WINDOW FRAME DETAILS

A8.01



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT: PBK Architects, Inc.
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL
DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

KEY PLAN

Consultant

Architect
LICENSED ARCHITECT
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

PARTITION TYPES AND MISC. DETAILS

A8.02

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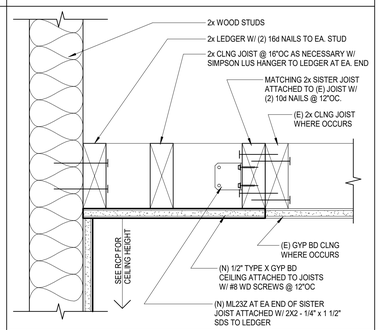
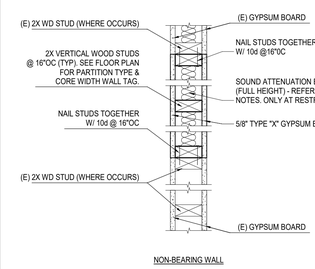
0" 1"



23 (N) HARD LID CLNG FRAMING
3" = 1'-0"

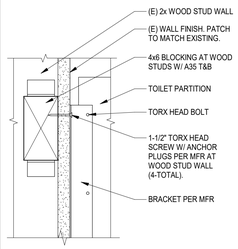


NON-BEARING WALL

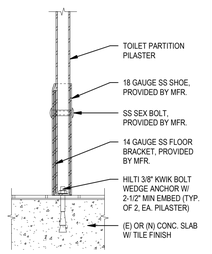
18 (E) WALL TO (N) WALL CONNECTION
1 1/2" = 1'-0"

NON-BEARING WALL

17 (E) WALL TO (N) WALL "T" CONNECTION
1 1/2" = 1'-0"

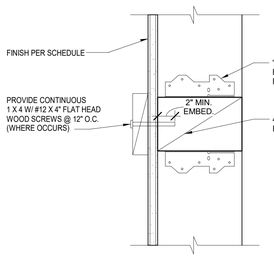


Ⓐ **WOOD STUD WALL**

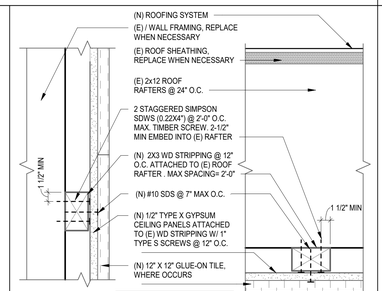


Ⓒ **CONCRETE FLOOR W/ TILE FINISH**

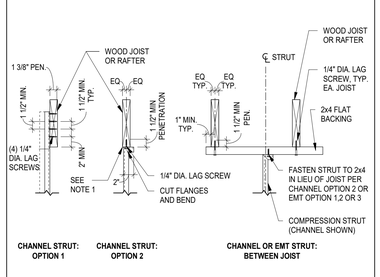
12 PARTITION MOUNTING DETAILS
3" = 1'-0"



6 TYPICAL BACKING SUPPORT DETAIL
3" = 1'-0"



5 GYP. BD. WALL / CEILING
3" = 1'-0"

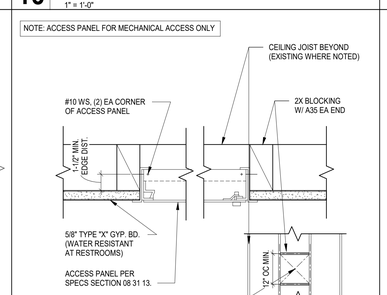


NOTES:

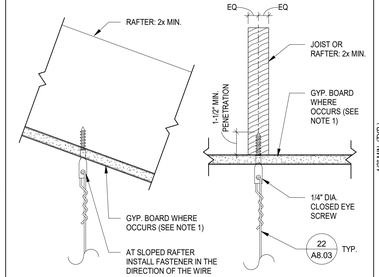
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. PEN. = MINIMUM PENETRATION OF LAG SCREW THREADS INTO THE WOOD MEMBER.
4. NO. 14 WOOD SCREW MAY BE USED IN LIEU OF 1/4" LAG SCREW.

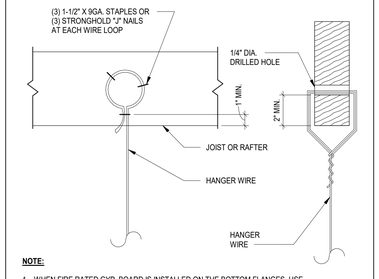
095100.5.60-S — DSA IR 25-2 #5.51 - Rev 03/18/22

10 STRUT TO WOOD FRAMING
1" = 1'-0"



4 ACCESS PANEL
3" = 1'-0"



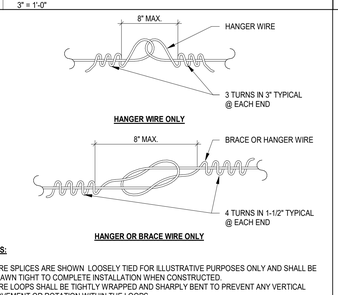


NOTE:

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

095100.4.25-S — DSA IR 25-2 #4.25 - Rev 03/18/22

9 HANGER WIRE TO WOOD
3" = 1'-0"

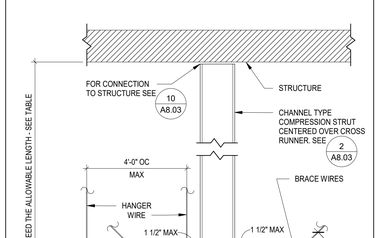


NOTES:

1. WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.
2. WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION WITHIN THE LOOPS.
3. EACH HANGER AND BRACE WIRE SHALL BE SPLICED NO MORE THAN ONCE ALONG ITS LENGTH

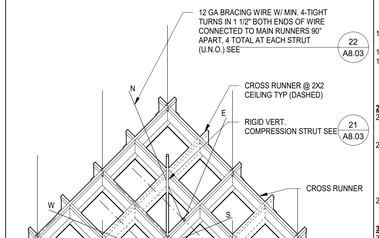
095100.6.10-S — DSA IR 25-2 #6.10 - Rev 03/18/22

3 CEILING WIRE SPLICES
6" = 1'-0"



095100.3.10-S — DSA IR 25-2 #3.10 - Rev 03/18/22

21 COMPRESSION STRUT - CHANNEL
1 1/2" = 1'-0"



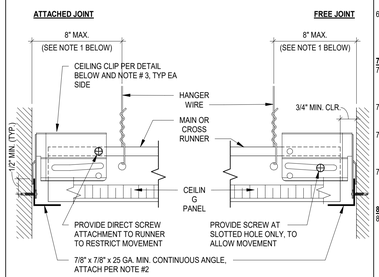
NOTES:

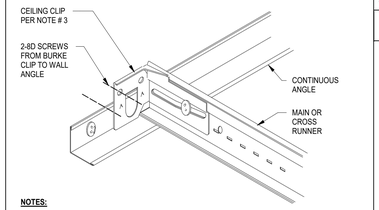
1. SUSPENDED CEILING SHALL COMPLY WITH DSA IR 25-2.13
2. STRUTS SHALL NOT REPLACE HANGER WIRES
3. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.
4. FOR TYPICAL SUSPENDED CEILING NOTES, SEE
5. FOR TYPICAL CEILING PLAN & COMPRESSION STRUT LAYOUT, SEE
6. FOR HANGER AND/OR BRACING WIRE SPLICING, SEE

13 A8.03 · 7 A8.03 · 3 A8.03

095100.2.35-S — DSA IR 25-2 #2.35 - Rev 03/18/22

20 SUSPENDED CEILING SYSTEM
3/8" = 1'-0"





NOTES:

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OF WITHIN ONE-FORTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. AT METAL STUD FRAMING: (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 24" O.C. AT WOOD STUD FRAMING: (1) #10 WOOD SCREW TO 2X MIN. WALL STUD @ 24" O.C.
3. CEILING CLIP: ARMSTRONG BERC2 CLIP, OR EQUAL
4. SLOPED CEILING: USE ACCEPTABLE SUSPENSION SYSTEM & ACCESSORIES. WALL ANGLE ARE PAINTED AND WALL SHIMMED TO ACHIEVE THE CORRECT ANGLE. 7/8" WALL ANGLE ITEM 7800 SHOULD BE USED. PER MANUFACTURERS RECOMMENDATION.

095100.2.60-S — DSA IR 25-2 #2.60 - Rev 03/18/22

8 SUSPENDED CEILING PERIMETER JOINTS
6" = 1'-0"

COMPRESSION STRUT EMT SECTION	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3'-11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6'-4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"

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

095100.3.21-S — DSA IR 25-2 #3.21 - Rev 03/18/22

2 COMPRESSION STRUT TABLE
1/2" = 1'-0"

1. CEILING SYSTEM GENERAL NOTES: PER IR 25-2 REV 3/18/22

1.01 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 AND SECTION 5.1 OF ASTM E580-10a.
1.02 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08.
1.03 CEILING SYSTEMS. THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:
MANUFACTURER'S NAME ARMSTRONG WORLD INDUSTRIES, INC.
PRODUCT EVALUATION REPORT TYPE AND NUMBER ICC ESR-1308
MANUFACTURER'S MODEL NUMBER - MAIN RUNNER ARMSTRONG HEAVY DUTY PRELUDE XL 7301
MANUFACTURER'S CATALOG NUMBER - CROSS RUNNER ARMSTRONG XL7328
1.04 SEISMIC WALL CLIP:
MANUFACTURER'S MODEL BERC2
1.05 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
1.06 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE 3/4" CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE 3/4" CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE TO SLIP.

2. MATERIALS:

2.01 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVINIZED) CARBON STEEL CONFORMING TO ASTM A641-09a. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.
2.02 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A6453-11, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/S2-10). MATERIAL 43 MIL (18 GAGE) AND LIGHTER SHALL HAVE A MINIMUM YIELD STRENGTH OF 32 KSI. MATERIAL 54 MIL (16 GAGE) AND HEAVIER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.
2.03 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH (Fy) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (Fu) OF 48 KSI

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
3.02 HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, DUCTWORK, CONDUIT AND EQUIPMENT.
3.03 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.
3.04 SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.
3.05 HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.)

4. FASTENERS AND WELDING:

4.01 SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513-10, ASME B18.6.4-89 (R2005). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
4.02 EXPANSION ANCHORS SHALL BE: NA
4.03 POWER-ACTUATED FASTENERS SHALL BE: NA
4.04 IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER.
4.05 POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.
4.06 CONCRETE REINFORCEMENT AND PRESTRESSING TENDONS SHALL BE LOCATED BY NON DESTRUCTIVE MEANS PRIOR TO INSTALLING POST - INSTALLED ANCHOR.

5. TESTING: ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.

5.01 POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER ACTUATED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 LBS. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1913A.7
5.02 POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1913A.7.

6. LIGHT FIXTURES:

6.01 ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURES, PER ASTM E580, SECTION 5.3.1.
6.02 SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.
6.03 LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
6.04 LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE.
EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER
6.05 ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.

7. SERVICES WITHIN THE CEILING:

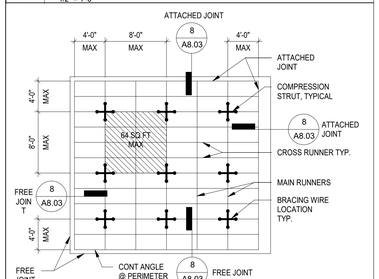
7.01 ALL FLEXIBLE SPRINKLER HOSE FIRRING MOUNTING BRACKETS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.
7.02 CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.03 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.04 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS.

8. OTHER DEVICES WITHIN THE CEILING:

8.01 ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE. DEVICES WEIGHING MORE THAN 20 LB. SHALL BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE ABOVE.

095100.1.00-S — DSA IR 25-2 #1.00 - Rev 03/18/22

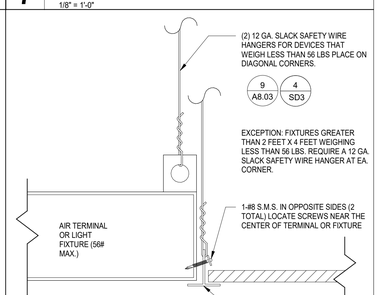
13 SUSPENDED CEILING NOTES
1/2" = 1'-0"



NOTE: BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 64 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

095100.2.10-S — DSA IR 25-2 #2.10 - Rev 03/18/22

7 TYP CEILING PLAN
1/8" = 1'-0"



095100.2.80-S — DSA IR 25-2 #2.80 - Rev 03/18/22

1 SUSPENDED LIGHT FIXT./AIR TERMINALS
3" = 1'-0"

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C
KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Tong You No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

CEILING & MISC DETAILS

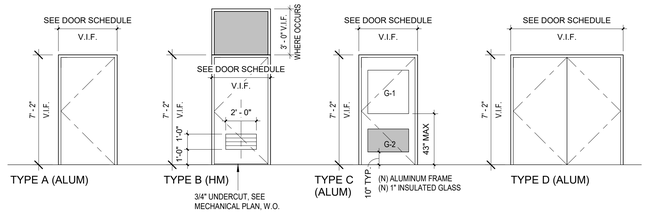
A8.03

A9.01 - DOORS SCHEDULE & WINDOWS FRAMING ELEVATION

0" 1"

DOOR SCHEDULE

MARK	ROOM NAME	Plan Area	DOOR Pair/Single	DOOR SIZE W x H WIDTH	DOOR SIZE W x H HEIGHT	DOOR MATL.	DOOR FINISH	FRAME TYPE	FRAME MATL.	FRAME FINISH	DETAILS SILL	DETAILS JAMB	DETAILS HEAD	HARDWARE	FIRE RATING	PANIC HARDWARE	Security Hardware	REMARKS
3-1	STAFF LOUNGE	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
4-1	CLASSROOM 4	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
5-1	CLASSROOM 5	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
6-1	CLASSROOM 6	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
7-1	CLASSROOM 7	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
8-1	CLASSROOM 8	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
9-1	CLASSROOM 9	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
10-1	CLASSROOM 10	BLDG A	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
11-1	CLASSROOM 11	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
12-1	CLASSROOM 12	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
13-1	CLASSROOM 13	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
14-1	CLASSROOM 14	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
15-1	CLASSROOM 15	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
16-1	CLASSROOM 16	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
17-1	CLASSROOM 17	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
18-1	CLASSROOM 18	BLDG B	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
19-1	CLASSROOM 19	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
19-2	CLASSROOM 19	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
20-1	CLASSROOM 20	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
20-2	CLASSROOM 20	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
21-1	LIBRARY	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
21-2	LIBRARY	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
22-1	COMP LAB	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
22-2	COMP LAB	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
24-1	READING	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	3		No	Yes	
25-1	R.S.P. CLASSROOM	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
B1-1	GIRLS RESTROOM	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	B	HM	PTD	20/A8.01	27/A8.01	27/A8.01	3		No	No	NO CLOSER
B2-1	BOYS RESTROOM	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	B	HM	PTD	20/A8.01	27/A8.01	27/A8.01	3		No	No	NO CLOSER
K1-1	KINDERGARTEN K-1	ADMIN / KINDERGARTEN	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
K1-2	KINDERGARTEN K-1	ADMIN / KINDERGARTEN	PAIR	7' - 4"	7' - 0"	WOOD	PTD	D	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	4		No	Yes	
K2-1	KINDERGARTEN K-2	ADMIN / KINDERGARTEN	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
K2-2	KINDERGARTEN K-2	ADMIN / KINDERGARTEN	PAIR	7' - 4"	7' - 0"	WOOD	PTD	D	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	4		No	Yes	
K4-1	WORKROOM K-4	ADMIN / KINDERGARTEN	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
K4-2	UNISEX RR 1	ADMIN / KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	HM	PTD	19/A8.01	13/A8.01	13/A8.01	2		No	No	
K5-1	RECEPTION K-5	ADMIN / KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	1		Yes	Yes	
K5-2	RECEPTION K-5	ADMIN / KINDERGARTEN	SINGLE	3' - 4"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	16&20/A8.01	9/A8.01	3		No	Yes	
K6-1	UNISEX RR 2	ADMIN / KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	HM	PTD	19/A8.01	13/A8.01	13/A8.01	2		No	No	



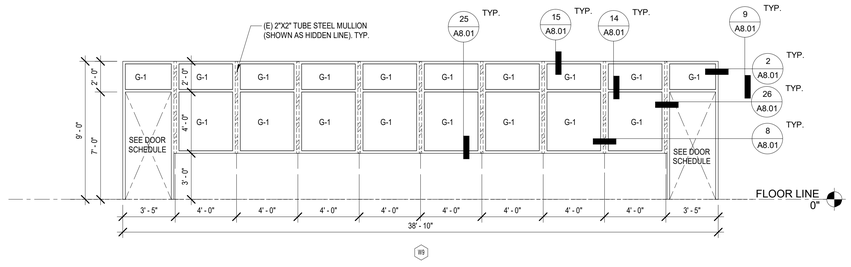
NOTE:

G-1 = TG (TEMPERED GLASS)
G-2 = TG/TINT (TEMPERED GLASS/TINTED GLASS
REFERENCE SCHEDULE ABBREVIATIONS

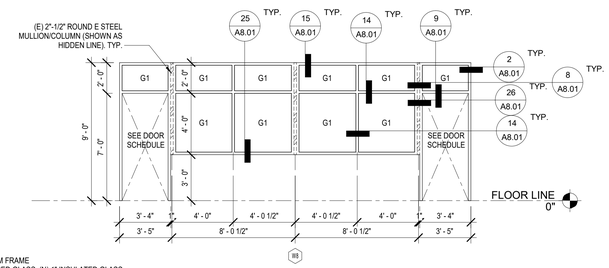
GLASS COLOR TO BE VERIFIED BY THE DISTRICT

DOOR & WINDOW SCHEDULE ABBREVIATIONS

ALUM	ALUMINUM
FF	FACTORY FINISH
HM	HOLLOW METAL
N/A	NOT APPLICABLE
PTD	PAINT
ST	STAIN
WD	WOOD

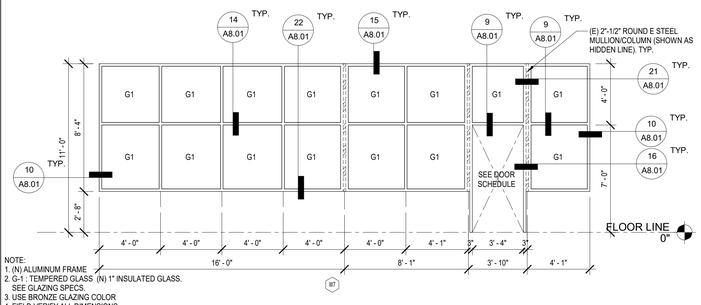


17 WINDOW FRAMING ELEVATION - W9
1/4" = 1'-0"



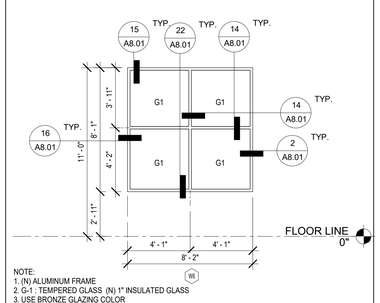
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

14 WINDOW FRAMING ELEVATION - W8
1/4" = 1'-0"



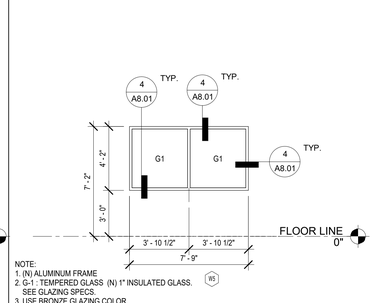
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

11 WINDOW FRAMING ELEVATION - W7
1/4" = 1'-0"



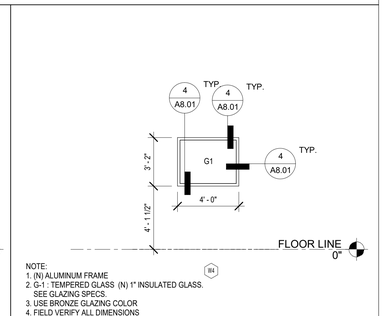
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

9 WINDOW FRAMING ELEVATION - W6
1/4" = 1'-0"



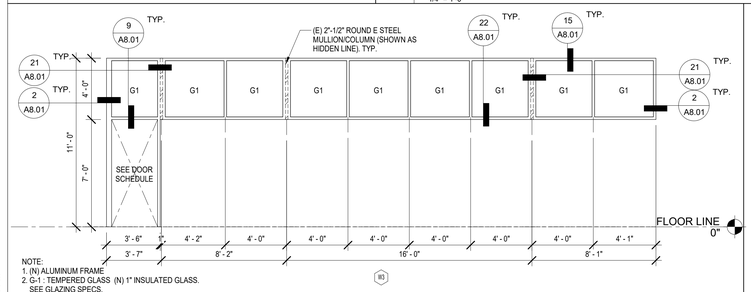
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

8 WINDOW FRAMING ELEVATION - W5
1/4" = 1'-0"



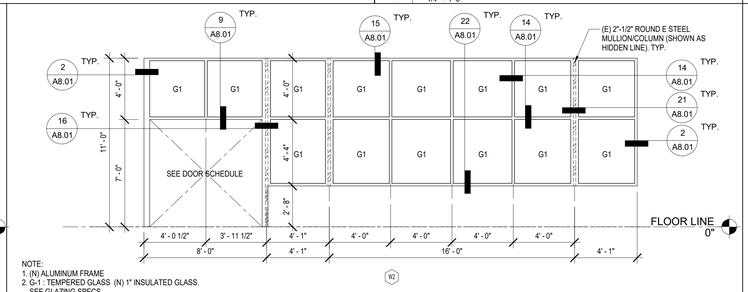
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

7 WINDOW FRAMING ELEVATION - W4
1/4" = 1'-0"



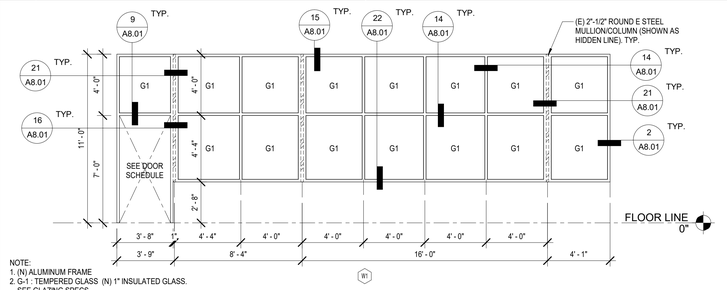
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

6 WINDOW FRAMING ELEVATION -W3
1/4" = 1'-0"



NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

4 WINDOW FRAMING ELEVATION -W2
1/4" = 1'-0"



NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

2 WINDOW FRAMING ELEVATION - W1
1/4" = 1'-0"

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave., Suite 950
Anaheim, CA 92806
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
7200 Trask Ave
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

DOORS SCHEDULE & WINDOWS FRAMING ELEVATION

A9.01

A10.01 - FINISH PLANS & SCHEDULE

0" 1"

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	(E) FLOOR MATERIAL	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING	
			MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH
3	STAFF LOUNGE	VCT	VCT	VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
4	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
5	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
6	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
7	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
8	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
9	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
10	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) CONC	TS1	ACP	ACP1
11	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
12	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
13	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 & TS1	ACP	ACP1
14	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) GYP	TS1	(E) CONC	P1 & TS1	ACP	ACP1
15	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
16	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
17	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) GYP	TS1	ACP	ACP1
18	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) CONC	TS1	ACP	ACP1
19	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1 & TS1	(E) GYP	TS1	(E) CONC	TS1	ACP	ACP1
20	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) CONC	TS1	ACP	ACP1
21	LIBRARY	CPT	CPT	CPT2	RB	RB1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
22	COMP LAB	CPT	CPT	CPT2	RB	RB1	(E) GYP	TS1	(E) GYP	TS1	(E) BRICK	P1	(E) GYP	P1 & TS1	ACP	ACP1
23	READING RM	CPT	CPT	CPT2	RB	RB1	(E) BRICK	P1	(E) BRICK	P1	(E) BRICK	P1	(E) GYP	P1	ACP	ACP1
24	READING	CPT	CPT	CPT2	RB	RB1	(E) GYP	P1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
25	R.S.P. CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) BRICK	P1	(E) GYP	P1	ACP	ACP1
26	READING	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1	(E) BRICK	P1	(E) BRICK	P1	(E) GYP	P1	ACP	ACP1
A-1	GIRLS TOILET	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
A-2	BOYS TOILET	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
B-1	GIRLS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
B-2	BOYS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
K-1	KINDERGARTEN	CPT/VCT	CPT/VCT	CPT1/VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1 & TS1	(E) BRICK	P1	(E) CONC	TS1	ACP	ACP1
K-1A	KG TOILET 1	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K-1B	KG TOILET 2	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K-2	KINDERGARTEN	CPT/VCT	CPT/VCT	CPT1/VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	TS1	(E) BRICK	P1	(E) GYP	P1 & TS1	ACP	ACP1
K-2A	KG TOILET 3	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K-2B	KG TOILET 4	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K-3	KG TOILET 2	VCT	VCT	VCT1	RB	RB1	(E) GYP	P1	(E) GYP	P1	(E) GYP	P1	-	-	ACP	ACP1
K-4	KG TOILET 3	VCT	VCT	VCT1	RB	RB1	(E) GYP	P1	-	-	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
K-4	WORK ROOM	VCT	VCT	VCT1	RB	RB1	(E) GYP	P1	(E) GYP	P1	(E) BRICK	P1	(N) GYP	P1	ACP	ACP1
K-4A	STAFF TOILET	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K-5	RECEPTION	VCT	VCT	VCT1	RB	RB1	(E) BRICK	P1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
K-6	NURSE	VCT	VCT	VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	(N) GYP	P1	ACP	ACP1
K-6A	NURSE TOILET	CT	CT	CT1	CT	CT1	(E) BRICK / GYP / CT	(E) BRICK / P1 / CT1	(N) GYP / CT	P1 / CT1	(N) GYP / CT	P1 / CT1	(N) GYP / CT	P1 / CT1	GYP	P1
K-8	PRINCIPAL	VCT	VCT	VCT1	RB	RB1	(E) GYP	P1	(E) GYP	P1	(E) BRICK	P1	(E) GYP	P1	ACP	ACP1
K-9	STORAGE	VCT	VCT	VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1	(E) GYP	P1	(E) GYP	P1	ACP	ACP1
K-10	EQUIP	VCT	VCT	VCT1	RB	RB1	(E) GYP	P1	(E) GYP	P1	(E) GYP	P1	(N) GYP	P1	ACP	ACP1

GENERAL FINISH LEGEND NOTES

1. ALL FINISH MATERIALS SHALL MEET THE FLAME SPREAD RATINGS PER THE BUILDING CODE.
2. REFER TO INTERIOR ELEVATIONS FOR SPECIFIC MATERIAL LOCATIONS.
3. PAINT ALL EXPOSED STRUCT. MEMBERS, STRUCT. DECK, DUCTWORK, DIFFUSERS, PIPING, CONDUIT, EQUIP. HOUSINGS, LIGHT FIXTURE HOUSINGS, CABLE SUPPORTS, CABLE TRAYS, EQUIP. SUPPORTS, HANGERS, ETC. TO MATCH ADJACENT SURFACES.
4. PAINT ALL NON-FACTORY FINISHED EXPOSED METAL.
5. REFER TO TYPICAL FLOORING TRANSITION DETAILS FOR FLOORING MATERIAL TRANSITIONS.
6. ALL FLOORING TRANSITIONS AT DOORS SHALL BE LOCATED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
7. PROTECT ALL FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES.
8. PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIAL U.N.O.
9. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
10. ALL ELECTRICAL DEVICE COVERS ARE TO BE WHITE U.N.O.
11. ALL CARPET PATTERNS TO RUN PARALLEL TO CORRIDOR, U.N.O.
12. PAINT ALL HOLLOW METAL DOOR FRAMES TO MATCH ADJACENT WALL COLOR U.N.O.
13. REMOVE EXISTING PAINT AT EXISTING BRICK WALL, PREPARE BRICK WALL SMOOTH TO RECEIVE NEW PAINT FINISH WHERE OCCURS.
14. RE-PAINT ALL EXISTING CASEWORK (EXCLUDE PLAM/STONE COUNTERTOPS).
15. PROVIDE APPROPRIATE PREPARATION, CLEANING AND BASE MATERIAL TO EXISTING INTERIOR SURFACES TO RECEIVE NEW FINISHES PER FINISH SPECS.
16. PROVIDE APPROPRIATE PREPARATION, CLEANING AND BASE MATERIALTO EXISTING BRICK WALL BEFORE RECEIVING NEW FINISH MATERIAL, PER FINISH SPECIFICATION.
17. PROVIDE CONSISTENT FLAT SURFACE USING CEMENT FLOAT AND APPROPRIATE BASE MATERIAL AT EXISTING BRICK WALL TO RECEIVE NEW TILE FINISH, PER FINISH SPECIFICATIONS.

FINISH FLOOR MATERIALS LEGEND

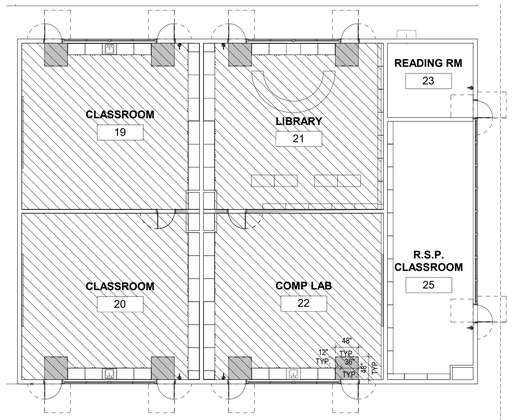
- (E) FLOOR FINISHES TO REMAIN
- CPT-1, CARPET FLOORING TYPE 1 *RE: FINISH SCHEDULE*
- VCT-1, VINYL COMPOSITION TILE *RE: FINISH SCHEDULE*
- CT-1 CERAMIC TILE FLOORING *RE: FINISH SCHEDULE*
- WALK-OFF MAT, RE: FLOOR FINISH PLAN & DETL 15/AX4.1 48" DEPTH, 12" EXTEND ON PUSH SIDE, UNLESS SHOWN AS FLUSH TO DOOR WIDTH OR EDGE OF WALL

MATERIAL FINISH ABBREVIATIONS

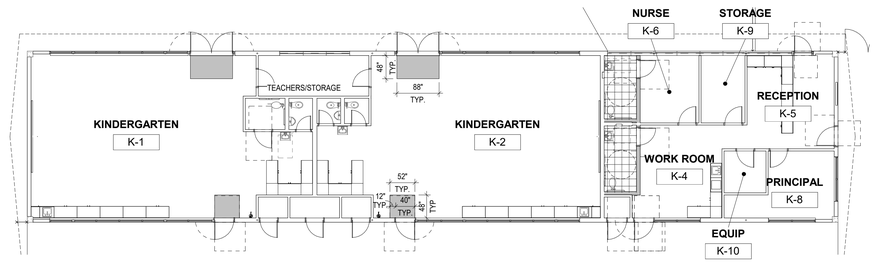
ACP1	2'X2' ACOUSTICAL CEILING PANEL , SEE SPECIFICATIONS
CPT1	CARPET TYPE 1 , SEE SPECIFICATIONS
CT1	CERAMIC TILE 1, SEE SPECIFICATIONS
CTB1	CERAMIC TILE BASE 1, SEE SPECIFICATIONS
VCT1	VINYL COMPOSITE TILE 1, SEE SPECIFICATIONS
P1	PAINT TO BE SELECTED BY OWNER, SEE SPECIFICATIONS
RB1	RUBBER BASE , SEE SPECIFICATIONS
(E)	(E) FINISH TO REMAIN
MF	MANUFACTURERS FINISH, SEE SPECIFICATIONS
TS1	TACKABLE SURFACE, SEE SPECIFICATIONS

MATERIAL ABBREVIATIONS

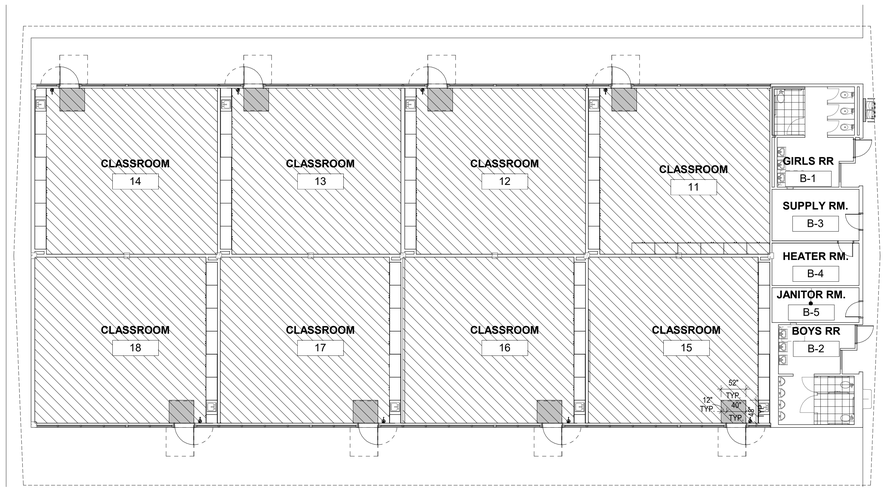
ACP	ACOUSTIC CEILING PANEL
CONC	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
GUT	GLUE UP TILE
GYP	GYPSUM BOARD
P	PAINT
RB	RUBBER BASE
VCT	VINYL COMPOSITE TILE
(E)	(E) FINISH TO REMAIN



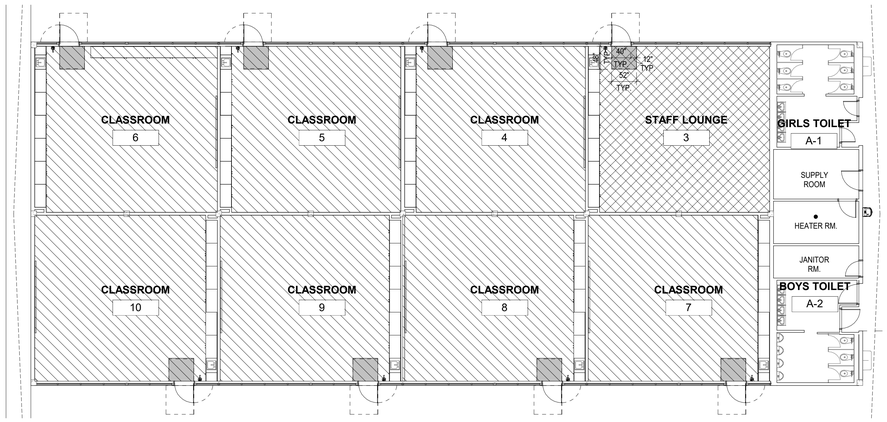
18 FINISH FLOOR PLAN - BUILDING C - LIBRARY / CLASSROOM
3/32" = 1'-0"



16 FINISH FLOOR PLAN - ADMIN / KINDERGARTEN
3/32" = 1'-0"



6 FINISH FLOOR PLAN - BUILDING B - CLASSROOM
3/32" = 1'-0"



3 FINISH FLOOR PLAN BUILDING A - CLASSROOM
3/32" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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PROJECT ADDRESS:
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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD X MP
A
B
C
KEY PLAN
N
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Vishal Tolia
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

FINISH PLANS & SCHEDULE

A10.01

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GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH TITLE 24 CALIFORNIA BUILDING CODE, 2019 EDITION.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE EOR, THE ARCHITECT AND THE OWNER REPRESENTATIVE. PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE EOR AND THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
4. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE OWNER SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
7. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK & PER TYP DETAILS.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THESE DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE CITY OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.
9. FOR TRENCHES OR EXCAVATIONS (5) FIVE FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, THE CONTRACTOR IS TO OBTAIN THE NECESSARY PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
10. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER AND OWNER.
11. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE UNIVERSITY REPRESENTATIVE OR ENGINEER SO THAT PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF STRUCTURAL ENGINEER AND OWNER.
12. IN CASE OF DISCREPANCIES BETWEEN NOTES ON THIS SHEET & PROJECT SPECIFICATIONS, THE PROVIDED NOTES SHALL TAKE PRECEDENCE OVER SPECS.
13. CUTTING, BORING, SAW CUTTING OR DRILLING INTO (E) OR (NEW) STRUCTURAL ELEMENTS SHALL BE SPECIFICALLY DETAILED OR OTHERWISE APPROVED BY STRUCTURAL EOR.

QUALITY ASSURANCE PROGRAM

A) STRUCTURAL TESTS AND SPECIAL INSPECTION PROGRAM.

PER SECTION 4-335 OF CALIFORNIA ADMINISTRATION CODE, THE ARCHITECT OR REGISTERED ENGINEER IN GENERAL RESPONSIBLE CHARGE OF THE PROJECT, OR WITHIN THEIR DELEGATED PORTION OF THE WORK, SHALL ESTABLISH THE EXTENT OF THE STRUCTURAL TESTS AND SPECIAL INSPECTION PROGRAM CONSISTENT WITH THE NEEDS OF THE PROJECT, AND SIGN DSA-103.

THE ARCHITECT OR REGISTERED ENGINEER SHALL RECEIVE VERIFIED REPORTS FROM THE PROJECT INSPECTOR, SPECIAL INSPECTORS, TESTING FACILITY, THE GEOTECHNICAL ENGINEER, CONTRACTORS AND THE OTHER ARCHITECTS AND ENGINEERS ARE SUBMITTED AS REQUIRED. THE RESPONSIBLE PARTY SHALL NOTIFY DSA AS TO THE DISPOSITION OF MATERIALS NOTED ON LABORATORY TESTING, AND/ OR SPECIAL INSPECTION, REPORTS AS NOT CONFORMING TO THE DSA APPROVED DOCUMENTS.

B) STRUCTURAL OBSERVATION

PERIODIC STRUCTURAL OBSERVATION SHALL BE CONDUCTED, PER SECTION 1710 OF THE CALIFORNIA BUILDING CODE AND SECTION 4-341(F) OF THE CALIFORNIA ADMINISTRATION CODE, TO ASSURE CONFORMANCE WITH THE DESIGN INTENT AND THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE REQUIREMENT ANS/OR RESPONSIBILITY FOR THE INSPECTION BY IOR.

A REGISTERED PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OF THE PROJECT, INCLUDING LICENSED ARCHITECT OR STRUCTURAL ENGINEER, SHALL OBSERVE HIS/HER PORTION OF WORK DURING THE CONSTRUCTION OF THE PROJECT.

OBSERVATION SHOULD INCLUDE VISITS TO THE PROJECT SITE BY THE ARCHITECT AND/OR ENGINEER OR THEIR QUALIFIED REPRESENTATIVES IN COORDINATION WITH THE DISTRICT AND DSA. PRIOR NOTIFICATION SHALL BE MADE TO REQUEST THE REQUIRED OBSERVATIONS. ELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERING MATERIAL TO FACILITATE OBSERVATION.

STRUCTURAL OBSERVATIONS MAY CONSIST OF VISUAL OBSERVATION OF MAJOR STRUCTURAL MEMBERS, AND THEIR IMMEDIATE CONNECTIONS, AT SIGNIFICANT CONSTRUCTION STAGES. THE FREQUENCY OF SUCH OBSERVATION SHALL BE COORDINATED WITH THE DISTRICT ENGINEER OR ASSIGNED IOR PER SECTION 4-336.

AT THE COMPLETION OF THE PROJECT, A FINAL VERIFIED REPORT (DSA-6) MUST BE SUBMITTED WHICH SHOWS THAT THE STRUCTURAL SYSTEM IS COMPLETE AND GENERALLY CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.

DEMOLITION

1. REFER TO MECH. SHEETS FOR DEMOLITION NOTES. SEE DEMOLITION PLANS ON SHEET MD2 SERIES
2. ALL (E) UTILITIES, DUCTS, CONDUITS, PIPES, SIGNS, JOINTS, ELEC PANELS & BOXES, DOOR, WINDOW, CHAIN FRAME CEILINGS & OTHER ARCH'L TREATMENTS SHALL BE REMOVED TEMPORARILY AS NEEDED & REINSTALLED TO IT'S ORIGINAL CONDITION & IN AGREEMENT WITH CODE STANDARDS. SUPPORTS & BRACES FOR DUCT WORK SHALL BE IN ACCORDANCE WITH SMACNA GUIDELINES.
3. DEMOLITION WORK SHALL BE FULLY COORDINATED WITH THE DISTRICT & DSA 'S REPRESENTATIVES FOR SEQUENCE AND TIME FRAME.
4. CONTRACTOR TO PROVIDE TEMP. SHORING, AS REQUIRED.
5. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

CONCRETE AND REINFORCEMENT

1. ALL CEMENT SHALL CONFORM AT ASTM C-150, TYPE II OR V
2. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C-33.
3. AGGREGATE GRADATION FOR CONCRETE SHALL CONFORM TO ASTM C-33 AND CBC 2019. AGGREGATE FOR ELEMENT WITH 4 HOURS RATING SHALL BE SILICEOUS.
4. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTH:
   - ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
   - CAST IN DRILLED-HOLE PILES - 4000 PSI.
   - CONCRETE SLAB ON GRADE/HOUSEKEEPING PAD - 3000 PSI.
   - EXTERIOR CONCRETE WALKS, CURBS, ETC. AND MISC. CONCRETE - 2500 PSI STONE.
5. LIGHTWEIGHT CONCRETE . (NOT APPLICABLE)
6. CONCRETE DESIGN MIXES SHALL CONFORM TO THE STANDARD SPECIFICATIONS. MIX DESIGNS SHALL BE SIGNED BY A CALIFORNIA LICENSED ENGINEER & SUBMITTED FOR REVIEW & APPROVAL. SUPPORTING DATA SHALL BE PROVIDED PER CBC 1903A. THE TEST DATA SHALL BE REPORTED BY AN INDEPENDENT TESTING AGENCY.
7. PLACING OF ALL CONCRETE SHALL BE INSPECTED BY THE JOB INSPECTOR TO VERIFY THAT REINFORCING STEEL IS SECURELY SUPPORTED IN PLACE DURING THE POUR. CONTRACTOR TO PROVIDE NECESSARY MEASURE TO PROTECT REINFORCING AND TENDONS DURING PLACEMENT USING TIES AND SUPPORTS. USE TREMY FOR PLACEMENT OF CONCRETE FOR POURS DEEPER THAN 6'-0". USE OF BUCKET OR DROPPING IS NOT ALLOWED TO AVOID SEGREGATION.
8. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS SHOWN ON PLANS OR AS APPROVED BY THE ENGINEER OR THE ARCHITECT PRIOR TO POURING CONCRETE. SEE NOTE 19 BELOW.
9. ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC., SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. CONCRETE BLOCKS ONLY SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
10. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR THEY MAY BE STRIPPED AFTER 3 DAYS AND THEN COVERED WITH BURLAP WHICH SHALL BE KEPT WET FOR AN ADDITIONAL 7 DAYS. IN LIEU OF BURLAP, CURING COMPOUNDS MAY BE USED IF APPROVED BY THE STRUCTURAL ENGINEER. FORMS FOR CONCRETE COLUMNS SHALL BE LEFT IN PLACE FOR 3 DAYS. IF STRIPPED EARLY, THEN SHALL BE COVERED FOR ANOTHER 3 DAYS. OR BE PROTECTED BY CURRING COMPONDS CONTRACTOR SELECTS TO DEVIATE FROM THESE INSTRUCTIONS, ALL CRACKS AND OTHER DEFECTS SHALL BE REPAIRED PER EOR RECOMMENDATIONS AT CONTRACTORS EXPENSE.
11. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
13. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL COMPLY WITH CBC SECTION TABLE 1808A.8.2
14. ALL CONCRETE SHALL BE VIBRATED IN PLACE DURING PLACING OF CONCRETE.
15. THE STRUCTURAL STEEL AND STEEL FORM WILL DEFLECT WHILE CONCRETE IS BEING PLACED ON IT. THIS WILL RESULT IN THE NEED TO ADJUST THE SCREEDS AFTER THE CONCRETE HAS BEEN PLACED TO PRODUCE A LEVEL CONCRETE SURFACE. ALSO, THERE WILL BE ADDITIONAL CONCRETE REQUIRED, WHICH IS TO BE ANTICIPATED, AND NO REQUEST FOR EXTRA COST WILL BE CONSIDERED.
16. NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
17. DRYPACK SHALL BE 1:3-1/2 PORTLAND CEMENT TO SAND WITH A MINIMUM 28 DAY STRENGTH OF 4500 PSI. OR SET GROUT BY AN APPROVED EOR.
18. NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 7000 PSI.
19. CONSTRUCTION JOINTS: CONSTRUCTION JOINTS SHALL HAVE ENTIRE SURFACE REMOVED TO MIN ~4" TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE. PER TYP. DETAILS PROVIDED IN THIS SET, CONSTRUCTION JOINTS SHALL BE PROVIDED TO LIMIT SHRINKAGE CRACKS. A MAX DISTANCE OF 50 FEET SHALL BE CONSIDERED IF NO CONSTRUCTION JOINTS IS CALLED ON PLANS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF CONSTRUCTION & CONTROL JOINT LOCATION IN SLABS, WALLS AND BEAMS.
20. TEMPERATURE AND SHRINKAGE REINFORCEMENT: SHALL HAVE A LAP OF THIRTY (30) BAR DIAMETERS, BUT NOT LESS THAN 18 IN. AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN FIVE (5) FEET APART.
21. REBAR GRADES: **ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:**
   - ALL SIZES NOT SUBJECT TO WELDING.......................................GRADE 60.

   ALL REINFORCING BARS TO BE WELDED SHOULD CONFORM TO ASTM A706.
22. TYP. REBAR COVER: MINIMUM REBAR COVER FOR REINFORCED CONCRETE SHALL BE AS SHOWN IN THIS TABLE:
23. MAX W/C RATIO = 0.45

EXPOSURE CONDITION	COVER	TOLERANCE (-)
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"	3/8 INCH
EXPOSED TO EARTH OR WEATHER:		
NO. 5 AND SMALLER BARS	1-1/2"	1/4 INCH
NO. 6 AND LARGER BARS	2"	1/4 INCH
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:		
ROOF SLAB	1"	1/8 INCH
STRUCTURAL SLABS & WALLS	1"	1/8 INCH
BEAMS AND COLUMNS (PRIMARY REINFORCEMENT, TIES, STIRRUPS & SPIRALS)	1-1/2"	1/4 INCH
SLABS ON GRADE	1-1/2"	1/4 INCH

NON-SHRINK GROUT

“NON-SHRINK GROUT” SHALL BE DEFINED AS A HIGH-STRENGTH MORTAR OR GROUT WHICH DOES NOT SHRINK IN THE PLASTIC STATE, IS DIMENSIONALLY STABLE IN THE HARDENED STATE, AND BONDS PERMANENTLY TO CLEAN METAL SURFACES AND CONCRETE SUBSTRATE.

DRY PACK OR NON-SHRINK GROUT SHALL CONFORM TO THE ASTM C1107, SPECIFICATION FOR PACKAGED DRY, HYDRAULIC-CEMENT GROUT (NON-SHRINKABLE). NO SHRINKAGE BEFORE HARDENING (0.00 SHRINKAGE WHEN TESTED IN ACCORDANCE WITH ASTM C827), IS ALLOWED

COMPRESSIVE STRENGTH, SHALL REACH THE FOLLOWING COMPRESSIVE STRENGTH

a. AT ONE DAY: 1000 PSI
b. AT THREE DAYS: 2500 PSI
c. AT SEVEN DAYS: 4000 PSI
d. AT 28 DAYS: 7000 PSI

A MANUFACTURER'S PRODUCT DATA SHALL BE SUBMITTED PRIOR TO THE INSTALLATION, SHOWING THE MATERIAL MEET SPECIFIED SHRINKAGE AND COMPRESSIVE STRENGTH REQUIREMENTS, ABOVE.

SHOP DRAWINGS:

1. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
2. SHOP DRAWINGS SHALL BE SUBMITTED BY CONTRACTOR TO ENGINEER OF RECORD (EOR) FOR REVIEW AND APPROVAL, AND IF REUIRED TO THE BUILDING OFFICIALS FOR THEIR REVIEW AND APPROVAL, ALSO SEE SUBMITTALS AND DEFERRED APPROVAL.
3. A SET OF APPROVED SHOP DRAWINGS SHALL BE MAINTAINED @ THE JOB SITE & PRESENTED TO THE INSPECTOR PRIOR TO PLACEMENT OF THE REINFORCEMENT.

STRUCTURAL STEEL AND MISC. IRON

1. WELDING SHALL BE DONE IN CONFORMANCE WITH AWS-D1.1 & OTHER APPLICABLE CODES & STANDARDS USE ELECTRIC SHIELDED ARC PROCESS USING E-70XX ELECTRODES. ALL WELDS SHALL BE UNIFORM IN SIZE AND APPEARANCE, AND FREE OF PINHOLES, POROSITY, UNDERCUTTING, OR OTHER DEFECTS. ALL BUTT WELDS SHALL BE FULL PENETRATION.
2. WELDS SHALL BE DONE IN THE SHOP OF AN ICC OR ASCE APPROVED FABRICATOR UNLESS OTHERWISE NOTED ON PLANS. ALL FIELD WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS APPROVED BY THE BUILDING OFFICIAL.
3. CONTINUOUS INSPECTION BY AN APPROVED DEPUTY INSPECTOR IS REQUIRED FOR ALL ON SITE WELDING, U.N.O.
4. STRUCTURAL STEEL NOT ENCASED IN CONCRETE OR MASONRY SHALL BE SHOP PAINTED AS SPECIFIED. ANY ABRASIONS SHALL BE TOUCHED UP AFTER ERECTION.
5. FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO START OF FABRICATION. FABRICATION SHALL CONFORM TO A.I.S.C. SPECIFICATION.
6. ALL FULL PENETRATION WELDS IN FIELD AND SHOP SHALL BE ULTRASONICALLY TESTED AND APPROVED.
7. CONTINUOUS INSPECTION IS REQUIRED FOR ALL HIGH STRENGTH BOLTING CONNECTIONS.
8. SPLICE MEMBERS ONLY WHERE INDICATED.
9. BOLT HOLES IN STEEL SHALL BE STANDARD HOLES, 1/16 INCH LARGER IN DIAMETER THAN NORMAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE. BOLT HOLES IN BASE PLATES MAY BE OVERSIZED PER AISC TABLE 14-2 IF WASHERS ARE PROVIDED IN ACCORDANCE WITH THIS TABLE.
10. STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION AS INDICATED BELOW UNLESS NOTED OTHERWISE:
    - ALL WIDE FLANGE AND WT SHAPES — A992, GRADE 50
    - STEEL ANGLES AND CHANNELS — A36 U.N.O.
    - BEAM SHEAR PLATES, STIFFENER PLATES, ALL OTHER PLATES — A572, GRADE 50 U.N.O.
    - MACHINE BOLTS USE ONLY WHERE INDICATED) — A307
    - THREADED AND SMOOTH ROD — F1554, GR50
    - NUTS FOR BOLTS AND MACHINE BOLTS — A563
    - HARDENED WASHERS — F436
    - UNHARDENED WASHERS — F844
    - PLAIN WASHERS — ANSI B18.22.1
    - STRUCTURAL TUBES — A-500, GRADE C
    - STRUCTURAL PIPES — A-53, TYPE E OR S, GRADE B
12. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIP ZINC GALVANIZED

WOOD FRAMING

1. ALL SAWN LUMBER SHALL BE DOUGLAS FIR OR WESTERN LARCH, U.N.O.
2. GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WWPA OR WCLIB). WOOD GRADES ARE TO BE AS FOLLOWS U.N.O.:
   - BEAMS________________LSL OR PRL OR GLB UNO
   - HEADERS________________SEE SCHEDULE (4/SD5.2)
   - POSTS AND TIMBERS________________NO.1
   - PLATES________________NO.2
   - STUDS @ NON-BEARING WALLS________________NO.2
   - STUDS @ BEARING/SHEAR WALLS NO.2 U.N.O.___SEE SCHEDULE (8/SD5.2)
   - RAFTERS AND ROOF JOISTS________________NO.2
   - FLOOR JOIST________________NO.1
   - SILL PLATES PRESSURE TREATED FOR MOISTURE RESISTANCE (SEE NOTE #23.)____NO.1
   - TJI________________PER PLAN OR EQ.
   - OPEN WEB TRUSSES________________PER PLAN & APPROVED MANUF.
   - ROOF TRUSSES________________PER PLAN & APPROVED MANUF.
3. WHERE WOOD IS IN CONTACT WITH CONCRETE OR MASONRY USE FOUNDATION REDWOOD OR DOUGLAS FIR PRESSURE TREATED FOR MOISTURE RESISTANCE. CORROSION RESISTANCE BOLTS ARE REQUIRED FOR "CHEMICALLY THREATED SILLS".
4. PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO U.S. PRODUCT STANDARDS PS 1-83, WITH EXTERIOR GLUE AND SHALL BE GRADE MARKED BY APA. PLYWOOD AT EXPOSED EAVES SHALL BE EXPOSURE I GRADE PLYWOOD. PLYWOOD SHALL BE STRUCTURAL- I FOR FLOOR DIAPHRAGMS & SHEAR WALLS. OSB PANELS MAY BE USED IF HAVE EQUIVALENT PROPERTIES.
5. U.N.O. ALL DAMAGED OR DETERIORATED LUMBER SHALL BE REPLACED WITH EQUAL SECTION AND EQUAL OR BETTER GRADE AS SPECIFIED ON THESE DRAWINGS.
6. ALL BOLTS FOR WOOD CONNECTIONS SHALL BE A307, GRADE A. WHERE WOOD IS BOLTED TO STEEL, USE A LOCK WASHER UNDER THE NUT ON THE STEEL SIDE.
7. ALL BOLT HEADS AND NUTS THAT BEAR AGAINST THE FACE OF WOOD MEMBERS SHALL BE PROVIDED WITH METAL SQUARE WASHERS AS INDICATED ON PLANS.
8. ALL STUD WALLS SHALL HAVE FIRE BLOCKING AT 5'-0" O.C. MAXIMUM, VERTICAL UNLESS ALLOWED BY CODE.
9. BLOCKING SHALL BE INSTALLED AT THE TOP OF ALL BEARING AND SHEAR WALLS.
10. PROVIDE DOUBLE FLOOR JOISTS UNDER PARALLEL PARTITIONS.
11. PROVIDE 2X3 CROSS-BRIDGING OR 2X SOLID BLOCKING AT A MINIMUM OF 8'-0" O.C. FOR FLOOR JOISTS (CONTACT METAL BRIDGING OR EQUAL MAY BE USED).
12. HOLES AND NOTCHES IN STRUCTURAL MEMBERS FOR PIPES AND CONDUIT SHALL COMPLY WITH THE BUILDING CODE & PROVIDED TYP. DETAILS.
13. ALL BOLT HOLES SHALL BE DRILLED A MIN. OF 1/32" TO A MAX. OF 1/16" LARGER IN DIAMETER THAN THE NOMINAL SIZE OF BOLT USED.
14. EACH SHEET OF PLYWOOD SHALL HAVE 2' MIN. SHEET DIMENSION UNLESS ALL EDGES OF THE UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR BLOCKING.
15. THREADED PORTION OF LAG SCREWS SHALL BE TURNED NOT DRIVEN INTO THE PRE-DRILLED HOLE.
16. ALL NAILS SHALL BE COMMON WIRE NAILS U.N.O.
17. IF GUN NAILING IS USED, REDUCE THE SPECIFIED NAIL SPACING BY 20% UNLESS THE HEADS DO NOT PENETRATE INTO THE SHT'G..
18. ALL NAILS SHALL BE GALVANIZED WHERE EXPOSED TO WEATHER.
19. EXCEPT WHERE TOE NAIL IS REQUIRED, NAILS SHALL BE DRIVEN PERPENDICULAR. PRE-DRILL FOR ALL NAILS 20d OR LARGER.
20. TJI, PARALLAM, AND TIMBER STRANDS SHALL BE ICC APPROVED PER SPECIFICATIONS. ALSO SEE SPECIAL INSPECTION & SHOP DRAWING NOTES ON THIS SHEET.
21. USE SIMPSON OR OTHER EQUIVALENT ICC APPROVED HARDWARE FOR ALL CONNECTION PER PLAN NOTES AND SPECIFICATIONS.
22. ROOF TRUSSES SHALL BE DESIGNED & STAMPED BY MANUFACTURE'S ENGINEER. SHOP DRAWING SHALL BE PREPARED PER NOTES ON THIS SHEET.
23. FASTENERS AND ANCHOR BOLTS INSTALLED IN CHEMICALLY OR PRESSURE TREATED LUMBERS SHALL BE CORROSION RESISTANT USING HOT-DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL PER CBC SECTION 2304A.3
24. EDGE OF SHEATHING PLYWOOD PANELS SHALL BE BLOCKED OR T&G AS SPECIFIED ON PLANS.
25. PARTICLE PANELS (OSB) MAY BE USED IN LIEU OF PLYWOOD, IF IT IS PROVED TO BE EQUIVALENT TO CDX-STRUCT-I, AND MEETS UL-FIRE-RATED ASSEMBLY FOR THE FLOOR SYSTEM, AS SPECIFIED ON THE PROJECT REQUIREMENTS. PLYWOOD SHEATHING PANELS SHALL HAVE TONGUE & GROOVE EDGES FOR INTERLOCKING OR BE SUPPORTED BY 3X BLOCKING ALONG THE PANEL WITH SQUARE EDGES. PLACING DECK CLIPS FOR SUPPORT OF PANELS IS NOT ACCEPTABLE AS ALTERNATIVE SUPPORT METHODS ALONG FREE EDGES.

POST-INSTALLED ANCHOR BOLTS

ANCHOR BOLTS SHALL BE ONE OF THE FOLLOWING ACCEPTABLE PRODUCTS, OR AN EQUIVALENT. NO DRILLED-IN ANCHOR IS ALLOWED IN POST TENSIONED SLABS TO AVOID DAMAGING/CUTTING TENDONS & REINFORCEMENT, UNLESS THE LOCATION IS CLEARED BY NONDESTRUCTIVE TESTING OF UNDERGROUND PENETRATING RADAROR X-RAY. (PACHOMETER READING IS NOT ACCEPTABLE)

- EXPANSION-TYPE ANCHORS
  HILTI -TZ2 (ESR#4266) (FOR CONCRETE)
  HILTI -TZ2 (ESR#4561) (FOR MASONRY)
  (FOR INSTALLATION SEE TABLE A)
- EPOXY/ADHESIVE ANCHORS
  HILTI RESD500-V3 ADHESIVE SYSTEM, ESR#3814
  (FOR TEST FREQUENCY SEE NOTES BELOW AND FOR TESTING LOADS SEE TABLE B)
- SIMPSON HY270 EPOXY ANCHORS (ICC-ESR # 4143) FOR USE IN BRICK
- SCREW TYPE ANCHORS
  SIMPSON TITEN HD (ESR#1056) (FOR MASONRY)

1. EQUIVALENT PRODUCTS, WITH VALID & CURRENT ICC REPORTS WHICH ALLOW APPLICATION FOR SEISMIC LOADING, ARE ACCEPTABLE.
2. FOR MIN. EMBEDMENT AND OTHER INFO., REFER TO DETAILS.
3. FOR REPRESSION AND INSTALLATION, REFER TO MANUFACTURES' RECOMMENDATIONS & NOTE/TABLES BELOW

POST-INSTALLED EXPANSIVE ANCHOR BOLTS

TABLE A

SETTING INFORMATION	SYM.	UNITS	NOMINAL ANCHOR DIAMETER (IN.)													
			1/4	3/8			1/2				5/8			3/4		
NOMINAL BIT DIAMETER	d_0	IN	1/4	3/8			1/2				5/8			3/4		
EFFECTIVE MIN. EMBEDMENT	h_{ef}	IN	$1\frac{1}{2}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{1}{4}$	4	$3\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{3}{4}$
NOMINAL EMBEDMENT	h_{nom}	IN	$1\frac{3}{4}$	$1\frac{7}{8}$	$2\frac{1}{2}$	3	2	$2\frac{1}{2}$	3	$3\frac{3}{4}$	$3\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{1}{2}$	4	$4\frac{1}{2}$	$5\frac{1}{2}$
MIN. HOLE DEPTH	h_o	IN	2	2	$2\frac{3}{4}$	$3\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{1}{4}$	$4\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$	$5\frac{3}{4}$
INSTALLATION TORQUE C.S.	T_{inst}	FT-LB	4	30			50				40			110		
INSTALLATION TORQUE S.S.	T_{inst}	FT-LB	6	30			40				60			125		
FIXTURE HOLE DIAMTER	d_h	IN	5/16	7/16			9/16				11/16			13/16		

ADHESIVE ANCHOR BOLTS AND DOWELS:

1. MANUFACTURER'S FIELD REPRESENTATIVE SHALL PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED PRIOR TO COMMENCEMENT OF WORK; INSTALLATION.
2. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICAL ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH THE CURRENT EDITION OF ACI 318.
3. EMBEDMENT DEPTH FOR ANCHORS AND DOWELS IS AS FOLLOWS, UNLESS OTHERWISE NOTED THE TESTING LABORATORY WILL PERFORM TENSION TESTS ON 25% OF ANCHORS AND DOWELS TO THE SPECIFIED TEST LOADS:

TABLE B

ROD DIA. OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL
3/8"	4"	3,000#	CONCRETE
1/2"	5"	4,500#	CONCRETE
5/8"	6"	6,500#	CONCRETE
3/4"	7"	9,000#	CONCRETE
7/8"	9"	11,000#	CONCRETE
1"	11"	15,000#	CONCRETE
1-1/4"	14"	20,000#	CONCRETE
#3	5"	3,500#	CONCRETE
#4	6-1/2"	5,500#	CONCRETE
#5	8"	8,500#	CONCRETE
#6	10"	12,000#	CONCRETE
#7	12"	16,500#	CONCRETE
#8	14"	12,500#	CONCRETE
#9	16"	23,000#	CONCRETE
#10	19"	26,000#	CONCRETE

4. ANCHORS SHALL CONFIRM WITH ASTM A193 GRADE B7 THREADED RODS USING ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS U.N.O..
5. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED IN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
6. CENTER BAR IN THE HOLE AND WEDGE TIGHT WITH WOODEN WEDGES TO HOLD IT IN PLACE UNTIL THE ADHESIVE SETS.
7. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE. THE ENGINEER WILL DETERMINE A NEW LOCATION.
8. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLES ATTACHED WITH ADHESIVE ANCHORS.
9. BOLTS SET IN EXPOSED SURFACE SHALL BE STAINLESS STEEL OR CORROSION RESISTANT
10. **TEST REQUIRMENT:**
    - **A. FREQUENCY** 50% OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.
    - **B. TEST LOADS:** TEST LOADS SHALL BE TWICE THE MAXIMUM ALLOWABLE TENSION LOAD OR ONE AND A QUARTER ($1\frac{1}{4}$) TIMES THE MAXIMUM DESIGN STRENGTH OF ANCHORS AS PROVIDED IN THE APPROVED ICC REPORT TENSION TEST LOAD NEED NOT EXCEED 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT.
11. TEST LOADS FOR EPOXY ANCHOR IN BRICK USE SIMPSON HY 270 UP TO 1/2" DIA. USE 450 LBS. FOR TESTING LOAD. TEST 1 OUT OF 5. IN CASE OF FAILURE TEST ANOTHER 20% , 2 OUT OF 5.

STRUCTURAL INDEX OF DRAWINGS

DESIGN LOADS:

LATITUDE: 33.765906° N
LONGITUDE: -118.003995° W

S_S = 1.413 Fa=1.2 S_{DS}= 1.13
S_1= 0.503 Fv=N/A S_{D1} = N/A

SITE CLASS "DEFAULT"
SEISMIC DESIGN CATEGORY "D"
I_e =1.25 RISK CATEGORY: III

WIND CRITERIA:
BASIC WIND SPEED 101 MPH
EXPOSURE "C"
I_W = 1.00

STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS
CL	CENTER LINE
BM.	BEAM
BEAM	BEAM
DET.	DETAIL
CLR.	CLEAR
CONT.	CONTINUOUS
CONC.	CONCRETE
COL.	COLUMN
BTWN.	BETWEEN
BOTT.	BOTTOM
B.O.F.	BOTTOM OF FOOTING
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
DWG.	DRAWING
DIM.	DIMENSION
-3"	SLAB DEPRESSION
EA.	EACH
FIN.	FINISH
EXP.	EXPANSION
EXIST.	EXISTING
ELECTL.	ELECTRICAL
EL	ELEVATION
E.W.	EACH WAY
E.F.	EACH FACE
EXTR.	EXTERIOR
F.O.W.	FACE OF WALL
F.O.S.	FACE OF STUD
F.O.C.	FACE OF CONCRETE
FDN.	FOUNDATION
ELEV.	ELEVATOR OR ELEVATION
GA.	GAUGE
JT.	JOINT
INTR.	INTERIOR
MFR.	MANUFACTURER
MECHL.	MECHANICAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
LT.	WT. LIGHTWEIGHT
HORIZ.	HORIZONTAL
H.S.B.	HIGH STRENGTH BOLT
GR. BM.	GRADE BEAM
FRT.	FIRE RETARDANT
FRMG.	FRAMING
FLR.	FLOOR
MTL.	METAL
PL.	PLATE
REINF.	REINFORCING
PLCS.	PLACES
P.H.	PENTHOUSE
O.C.	ON CENTER
NO.	NUMBER
PSF	POUNDS PGR SQ.FT.
N.T.S.	NOT TO SCALE
N.I.C.	NOT IN CONTRACT
SIM.	SIMILAR
SIMP.	SIMPSON
SEPN.	SEPARATION
SECT.	SECTION
S.W.S.	SHEAR WALL
SCHL.	SCHEDULE
S.	FOOTING STEP
MIN.	MINIMUM
STL.	STEEL
THK.	THICK
STIFF.	STIFFENER
T.O.W.	TOP OF WALL
T.O.S.	TOP OF STEEL
T.O.	TOP OF DRAWINGS
S.O.G.	SLAB ON GRADE
S.A.D.	SEE ARCHITECTURAL
SYM.	SYMMETRICAL
SUPPT.	SUPPORT
STD.	STANDARD
SQ.	SQUARE
V.O.S.	VERIFY ON SITE
V.O.J.	VERIFY ON JOB
TYP.	TYPICAL
SPEC.	SPECIFICATION
U.N.O.	UNLESS NOTED OTHERWISE
DWL.	DOWEL
W/	WITH
WT.	WEIGHT
WJ.	WALL JOINT
VERT.	VERTICAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

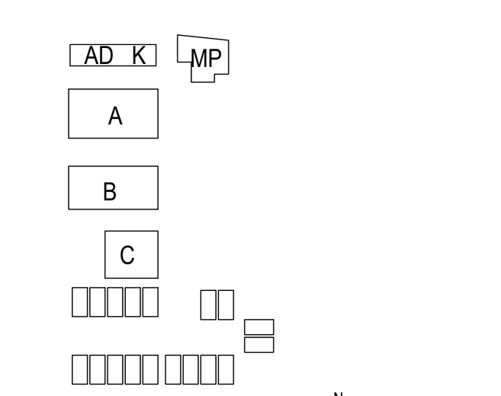
ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##-##### DSA FILE NO.: ##-##



KEY PLAN

NORTH: PLAN TRUE

Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2225.07

REGISTERED PROFESSIONAL ENGINEER
TOURAJ EIMANI
No. S4302
Exp. 09/30/23
STRUCTURAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
__-__-____	000000

REVISIONS

No.	Description	Date

DSA SUBMITTAL

GENERAL NOTES

SN1

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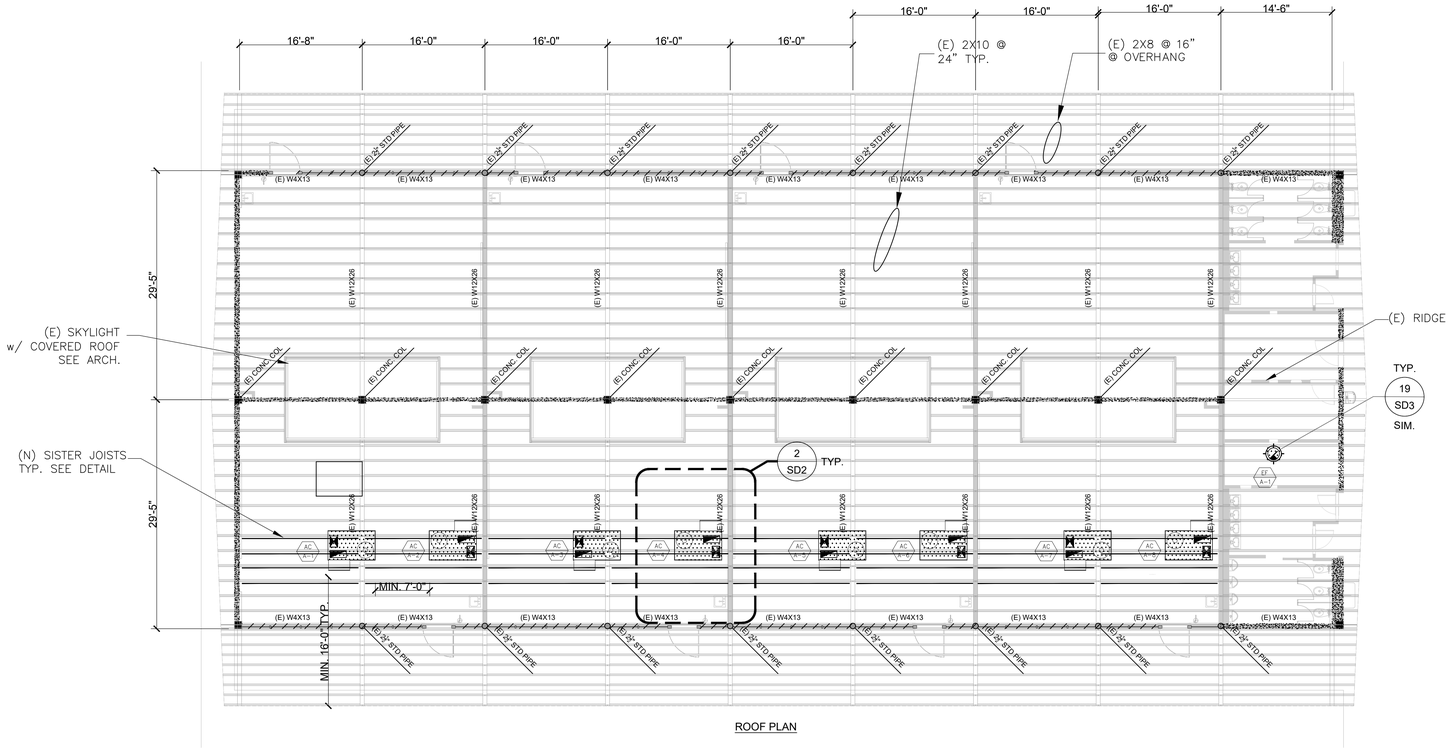
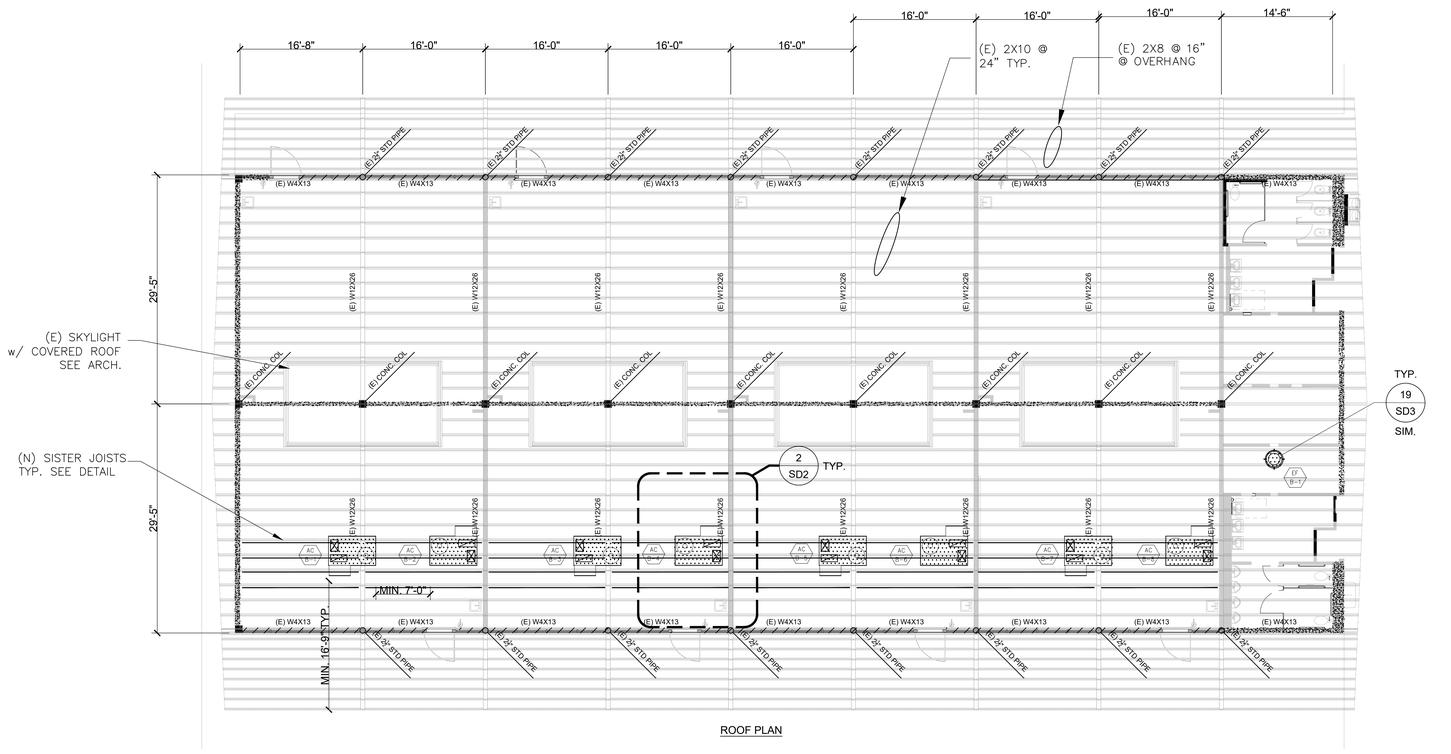


ROOF PLAN

FLOOR PLAN/ROOF PLAN - BLDG A
1/8" = 1'-0"

2



ROOF PLAN

FLOOR PLAN/ROOF PLAN - BLDG B
1/8" = 1'-0"

1

1. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 18/SD2. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
2. THE OPERATABLE WEIGHT OF UNITS SHALL BE LESS OR EQUAL TO THE VALUES SHOWN, CONTRACTOR SHALL NOTIFY SEoR ABOUT HEAVIER UNITS. (MORE THAN 5% OF LISTED VALUES)
3. UNIT DIMENSION SHOWN HERE REPRESENT THE BEST ESTIMATE BASED ON THE AVAILABLE DATA.
4. MINOR ADJUSTMENTS IN UNIT POSITION WITH RESPECT TO EXISTING ROOF FRAMING MAY BE NECESSARY TO MISS CONFLICT, ALIGN NEW BLOCKINGS TO MATCH THE EXACT UNIT LOCATION/DIMENSIONS.
5. FINAL CONFIGURATION OF EACH UNIT, WITH RESPECT TO THE EXISTING ROOF FRAMING, SHALL BE FIELD VERIFY TO AVOID CONFLICT.
6. THE EXACT LOCATION AND SIZE OF MECH. UNIT SHALL BE VERIFIED BY VENDOR/INSTALLER IN COORDINATION WITH THE LATEST MECH. DRAWING/ CUT SHEETS.

A. PRIOR TO DEMOLITION WORK, SEE GENERAL NOTES ON SN1. FOR EXACT EXTENT OF DEMOLITION WORK REFER TO THE ARCH. DWG'S.

B. ALL EXISTING FRAMING MEMBERS THAT ARE BEING CUT/NOTCHED/TRIMMED SHALL BE PROPERLY SECURED BY SHORING.

C. SIZES SPACING LOCATIONS OF ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED & ANY DISCREPANCIES BE REPORTED TO SEoR.

D. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO

LEGEND

	(E) W12X @ 16'-0" o.c., V.O.S., PER PLAN SEE NOTE A-D
	(E) HEADER, V.O.S., PER PLAN, SEE NOTES A-D
	(E) ROOF FRAMING, PER PLAN, SEE NOTES A-D
	(E) STL POST, V.O.S.
	(N) MATCHING SISTER JOIST, PER PLAN FOR EXACT LOCATION, SEE DETAIL 2/SD2
	(N) CONC. SLAB-ON-GRADE
EF A-1 / EF B-1	(N) ROOFTOP UNIT, PER PLAN, SEE 2/SD2 SEE NOTE 1-7
FC	(N) SUSPENDED UNIT, PER PLAN, SEE 4/SD3 SEE NOTE 1-7
	(N) HVAC UNIT, PER MECH. PLANS SEE NOTE 1-7
	DUCT THROUGH ROOF PENETRATION PER MECH.

EQUIPMENT SCHEDULE (*)

UNIT DESCRIPTION	(+)OVERALL WEIGHT(LBS)	DIMENSIONS	DETAIL REF.
		AC A-1, AC A-2, AC A-3, AC A-4, AC A-5, AC A-6, AC A-7, AC A-8, AC B-1, AC B-2, AC B-3, AC B-4, AC B-5, AC B-6, AC B-7, AC B-8	
AIR CONDITIONER (ON ROOF)	762	74"L x 44"W x 33"H	4/SD2
		EF A-1, EF B-1	
EXHAUST FAN	58		

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. SEE NOTES 1-7

(+) AC UNIT WEIGHT INCLUDES RTU SELF WEIGHT AND WEIGHT OF MECH. CURB

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DSA APPL NO.: ##/##### DSA FILE NO.: ##/##

AD K MP
A
B
C

KEY PLAN
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WESTMINSTER SCHOOL DISTRICT

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_-_-_	000000

REVISIONS

No.	Description	Date

DSA SUBMITTAL

FLOOR/ROOF PLANS - BLDG A & B

S1

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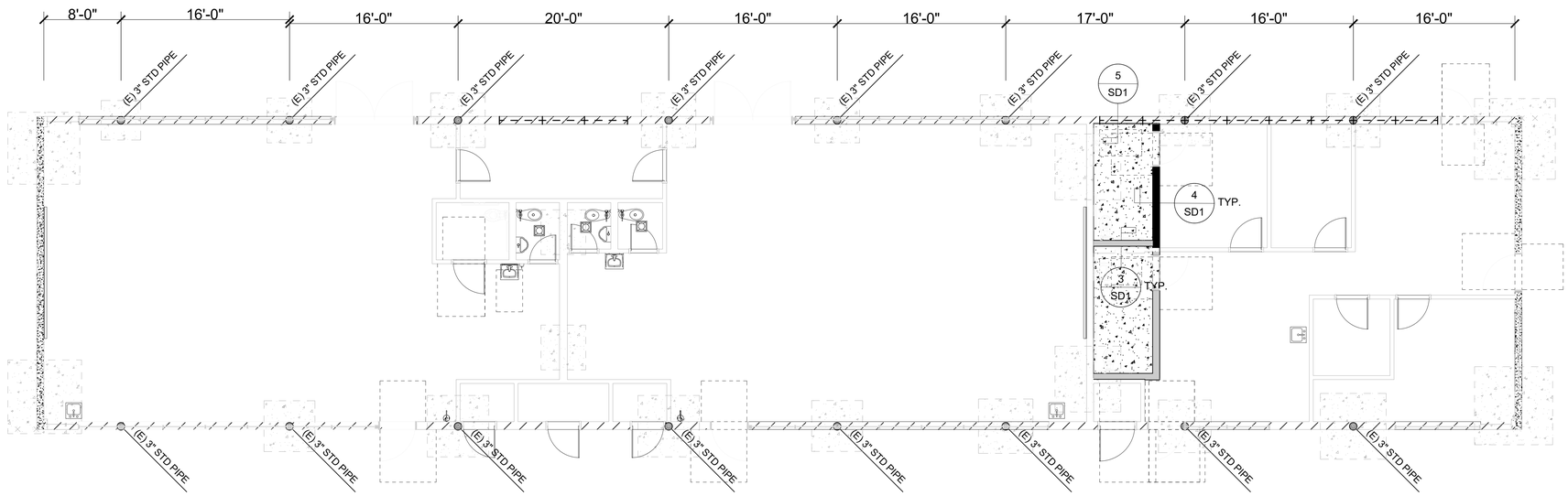
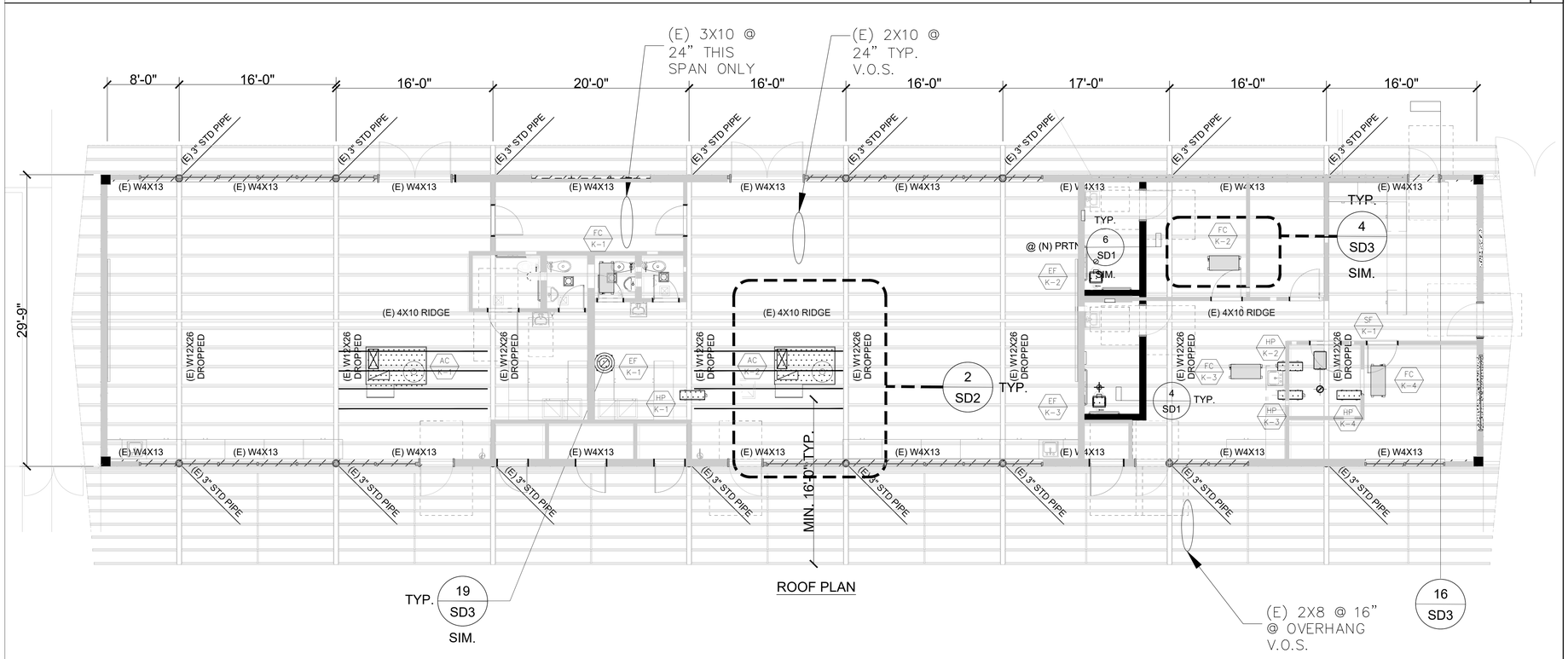


FLOOR PLAN

FLOOR PLAN - ADMIN. KINDERGARTEN 2
3/16" = 1'-0"



ROOF PLAN

ROOF PLAN - ADMIN. KINDERGARTEN 1
3/16" = 1'-0"

1. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 18/SD2. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
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4. MINOR ADJUSTMENTS IN UNIT POSITION WITH RESPECT TO EXISTING ROOF FRAMING MAY BE NECESSARY TO MISS CONFLICT, ALIGN NEW BLOCKINGS TO MATCH THE EXACT UNIT LOCATION/DIMENSIONS.
5. FINAL CONFIGURATION OF EACH UNIT, WITH RESPECT TO THE EXISTING ROOF FRAMING, SHALL BE FIELD VERIFY TO AVOID CONFLICT.
6. THE EXACT LOCATION AND SIZE OF MECH. UNIT SHALL BE VERIFIED BY VENDOR/INSTALLER IN COORDINATION WITH THE LATEST MECH. DRAWING/ CUT SHEETS.

A. PRIOR TO DEMOLITION WORK, SEE GENERAL NOTES ON SN1. FOR EXACT EXTENT OF DEMOLITION WORK REFER TO THE ARCH. DWG'S.

B. ALL EXISTING FRAMING MEMBERS THAT ARE BEING CUT/NOTCHED/TRIMMED SHALL BE PROPERLY SECURED BY SHORING.

C. SIZES SPACING LOCATIONS OF ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED & ANY DISCREPANCIES BE REPORTED TO SEoR.

D. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO

LEGEND

	(E) W12X @ 16'-0" o.c., V.O.S., PER PLAN SEE NOTE A-D
	(E) HEADER, V.O.S., PER PLAN, SEE NOTES A-D
	(E) ROOF FRAMING, PER PLAN, SEE NOTES A-D
	(E) STL POST, V.O.S.
	(N) MATCHING SISTER JOIST, PER PLAN FOR EXACT LOCATION, SEE DETAIL 2/SD2
	(N) CONC. SLAB-ON-GRADE
EF HP	(N) ROOFTOP UNIT, PER PLAN, SEE 2/SD2 SEE NOTE 1-7
FC	(N) SUSPENDED UNIT, PER PLAN, SEE 4/SD3 SEE NOTE 1-7
	(N) HVAC UNIT, PER MECH. PLANS SEE NOTE 1-7
	DUCT THROUGH ROOF PENETRATION PER MECH.

EQUIPMENT SCHEDULE (*)

UNIT DESCRIPTION	(+) OVERALL WEIGHT(LBS)	DIMENSIONS	DETAIL REF.
		AC K-1, AC K-2	
AIR CONDITIONER (ON ROOF)	930	74"L x 44"W x 33"H	4/SD2
		HP K-1, HP K-2, HP K-3, HP K-4	
HEAT PUMP (ON ROOF)	75...101		4/SD2 SIM.
		FC K-1, FC K-2, FC K-3, FC K-4	
FAN COIL (SUSPENDED)	40...54		4/SD3
		EF K-1, EF K-2, EF K-3	
EXHAUST FAN	15...74		

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. SEE NOTES 1-7

(+) AC UNIT WEIGHT INCLUDES RTU SELF WEIGHT AND WEIGHT OF MECH. CURB

IDENTIFICATION STAMP
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APP: 04-121817 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

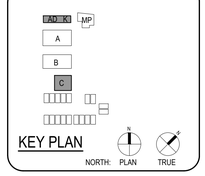
ARCHITECT PBK Architects, Inc.
PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##-###### DSA FILE NO.: ###



Consultant

STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR, SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2225.07

Architect

CLIENT
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DATE - - ____
PROJECT NUMBER 000000

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FLOOR/ROOF PLANS - BLDG ADMIN

S2

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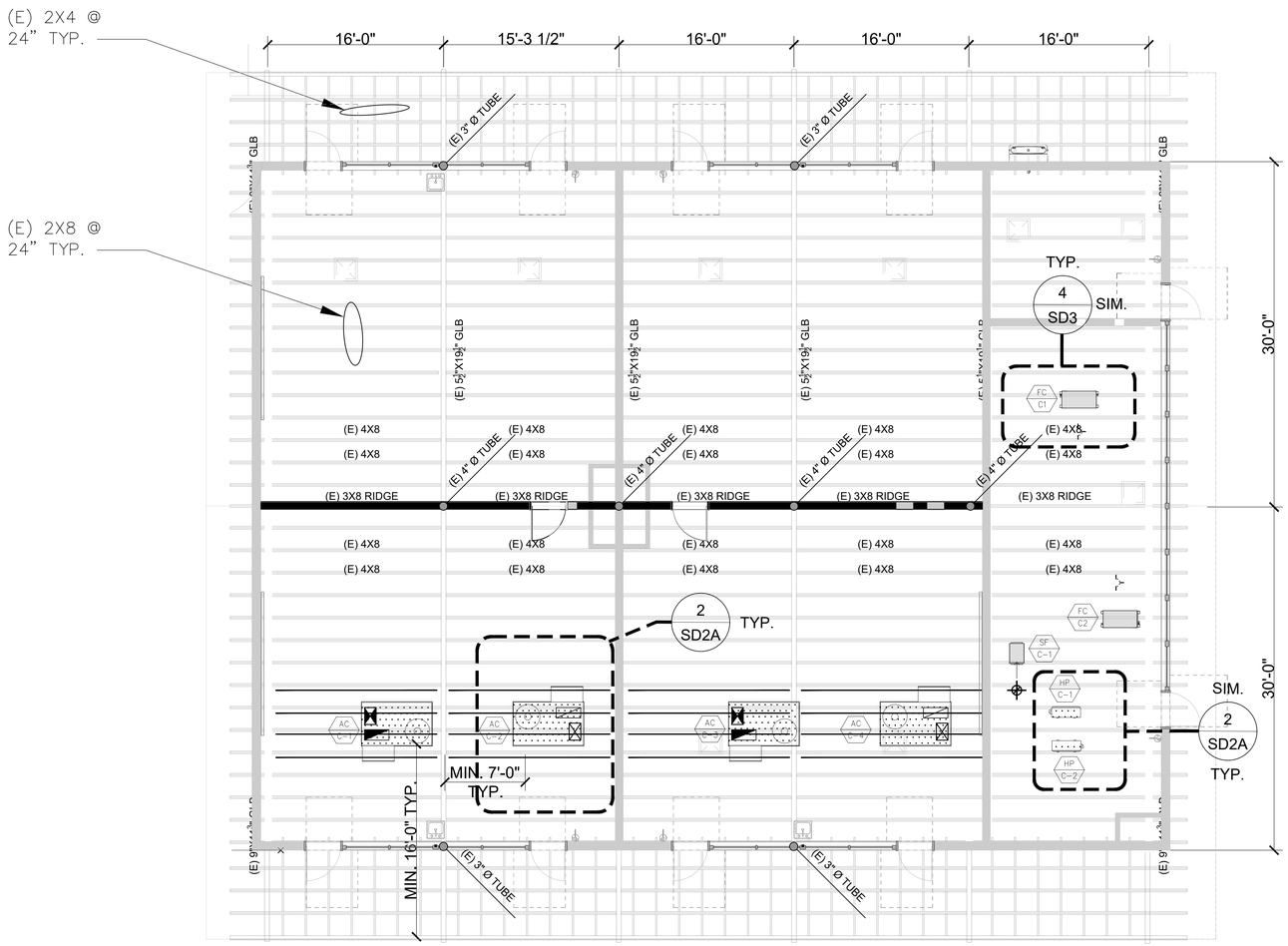

1. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 18/SD2A. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
2. THE OPERATABLE WEIGHT OF UNITS SHALL BE LESS OR EQUAL TO THE VALUES SHOWN, CONTRACTOR SHALL NOTIFY SEoR ABOUT HEAVIER UNITS. (MORE THAN 5% OF LISTED VALUES)
3. UNIT DIMENSION SHOWN HERE REPRESENT THE BEST ESTIMATE BASED ON THE AVAILABLE DATA.
4. MINOR ADJUSTMENTS IN UNIT POSITION WITH RESPECT TO EXISTING ROOF FRAMING MAY BE NECESSARY TO MISS CONFLICT, ALIGN NEW BLOCKINGS TO MATCH THE EXACT UNIT LOCATION/DIMENSIONS.
5. FINAL CONFIGURATION OF EACH UNIT, WITH RESPECT TO THE EXISTING ROOF FRAMING, SHALL BE FIELD VERIFY TO AVOID CONFLICT.
6. THE EXACT LOCATION AND SIZE OF MECH. UNIT SHALL BE VERIFIED BY VENDOR/INSTALLER IN COORDINATION WITH THE LATEST MECH. DRAWING/ CUT SHEETS.

A. PRIOR TO DEMOLITION WORK, SEE GENERAL NOTES ON SN1. FOR EXACT EXTENT OF DEMOLITION WORK REFER TO THE ARCH. DWG'S.
B. ALL EXISTING FRAMING MEMBERS THAT ARE BEING CUT/NOTCHED/TRIMMED SHALL BE PROPERLY SECURED BY SHORING.
C. SIZES SPACING LOCATIONS OF ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED & ANY DISCREPANCIES BE REPORTED TO SEoR.
D. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO

LEGEND

	(E) GLB @ 16'-0" o.c., V.O.S., PER PLAN SEE NOTE A-D
	(E) HEADER, V.O.S., PER PLAN, SEE NOTES A-D
	(E) ROOF FRAMING, PER PLAN, SEE NOTES A-D
	(E) STL POST, V.O.S.
	(N) MATCHING SISTER JOIST, PER PLAN FOR EXACT LOCATION, SEE DETAIL 2/SD2
	(N) CONC. SLAB-ON-GRADE
SF HP	(N) ROOFTOP UNIT, PER PLAN, SEE 2/SD2A SEE NOTE 1-7
FC	(N) SUSPENDED UNIT, PER PLAN, SEE 4/SD3 SEE NOTE 1-7
AC HP	(N) HVAC UNIT, PER MECH. PLANS SEE NOTE 1-7
	DUCT THROUGH ROOF PENETRATION PER MECH.

EQUIPMENT SCHEDULE (*)

UNIT DESCRIPTION	(+) OVERALL WEIGHT(LBS)	DIMENSIONS	DETAIL REF.
		AC C-1, AC C-2, AC C-3, AC C-4	
AIR CONDITIONER (ON ROOF)	762	74"L x 44"W x 33"H	4/SD2A
		HP C-1, HP C-2	
HEAT PUMP (ON ROOF)	75...135		4/SD2A SIM.
		FC B1, FC B2, SF S-1	
FAN COIL (SUSPENDED)	40...87		4/SD3

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. SEE NOTES 1-7

(+) AC UNIT WEIGHT INCLUDES RTU SELF WEIGHT AND WEIGHT OF MECH. CURB

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KEY PLAN
NORTH: PLAN TRUE

Consultant

STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR.
SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2225.07

REGISTERED PROFESSIONAL ENGINEER — TUNAJ EMAMI — No. S4302 Exp. 09/30/23 — STRUCTURAL — STATE OF CALIFORNIA

Architect

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ROOF PLAN - BLDG C

S3

ROOF PLAN - BLDG. C
3/16" = 1'-0"
1

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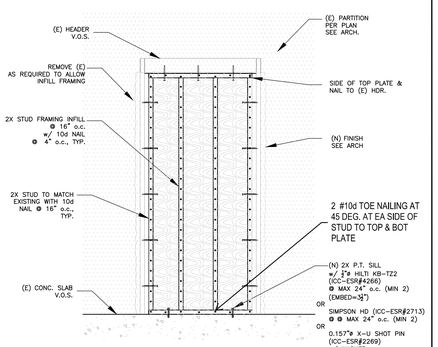
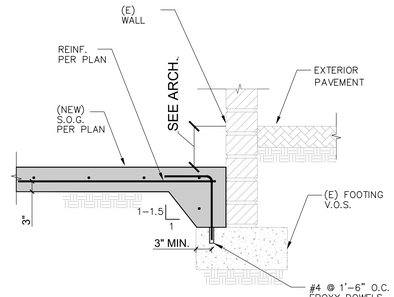
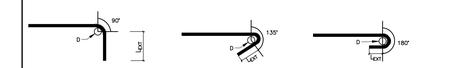
0" 1"



TYP. INFILL @ DOOR OPNG. | 9



NEW DEPRESSED SLAB @ EXT. WALL | 5

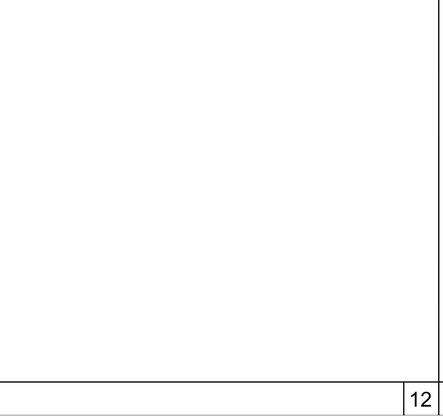


90 DEGREE HOOK **135 DEGREE HOOK** **180 DEGREE HOOK**

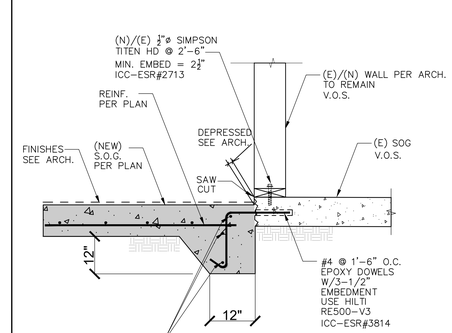
	TYPE OF HOOK	BAR SIZE	MIN D (IN)	L_{EXT} (IN)
STIRRUP	90-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $6d_b$ AND 3"
		#6-8	$6d_b$	$12d_b$
	135-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $6d_b$ AND 3"
		#6-8	$6d_b$	
	180-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $4d_b$ AND 2.5"
		#6-8	$6d_b$	
BENT BAR	90-DEGREE HOOK	#3-8	$6d_b$	$12d_b$
		#9-11	$8d_b$	
	180-DEGREE HOOK	#3-8	$6d_b$	GREATER OF $4d_b$ AND 2.5"
		#9-11	$8d_b$	

D = INSIDE BENT DIAMTER

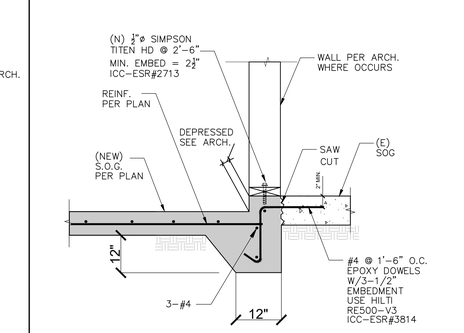
BAR BENDING & STIRRUPS | 1



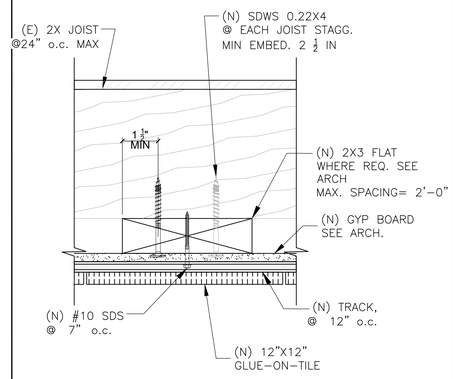
TYP. FURRING WALL SUPPORT | 11



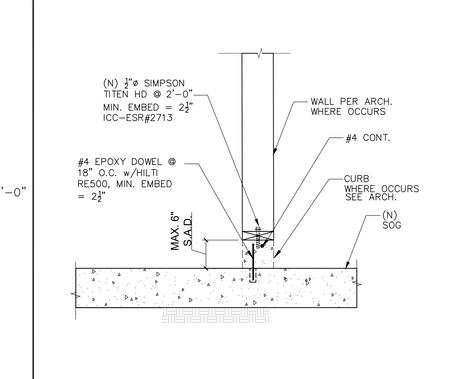
TYP. TOP CONN. @ (N) PARTN. | 6



TYPICAL REPAIR AT SLAB ON GRADE | 2



CEILING JOIST DETAIL | 7



TYP. BOT. CONN. @ NON-BEARING WALL | 3

NEW DEPRESSED SLAB @ INT. WALL | 8

NEW DEPRESSED SLAB @ INT. WALL | 4

	17	13	TYP. INFILL @ DOOR OPNG. 9
	18	14	NEW DEPRESSED SLAB @ EXT. WALL 5
	19	15	BAR BENDING & STIRRUPS 1
	20	16	TYP. TOP CONN. @ (N) PARTN. 6
		12	TYPICAL REPAIR AT SLAB ON GRADE 2
		11	CEILING JOIST DETAIL 7
		12	TYP. BOT. CONN. @ NON-BEARING WALL 3
		12	NEW DEPRESSED SLAB @ INT. WALL 8
		12	NEW DEPRESSED SLAB @ INT. WALL 4

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AD K MP
A
B
C

KEY PLAN
NORTH: PLAN TRUE

Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2225.07
REGISTERED PROFESSIONAL ENGINEER TONAJ EMAMI No. S4302 Exp. 09/30/23 STRUCTURAL STATE OF CALIFORNIA

Architect

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WESTMINSTER SCHOOL DISTRICT
DATE PROJECT NUMBER
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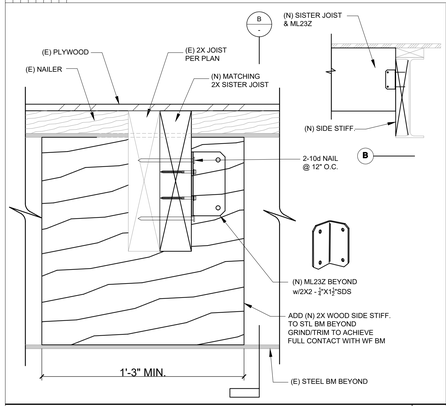
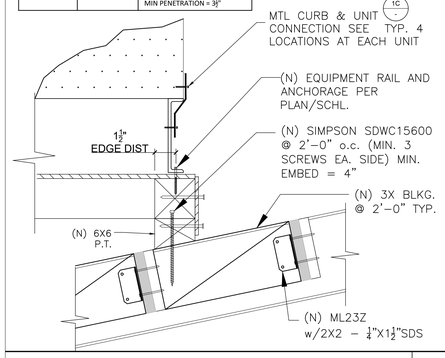
CONCRETE DETAILS

SD1

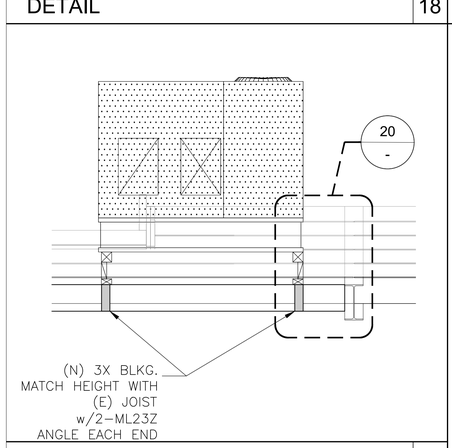


REINFORCED SUBPURLINE @ ROOF | 17

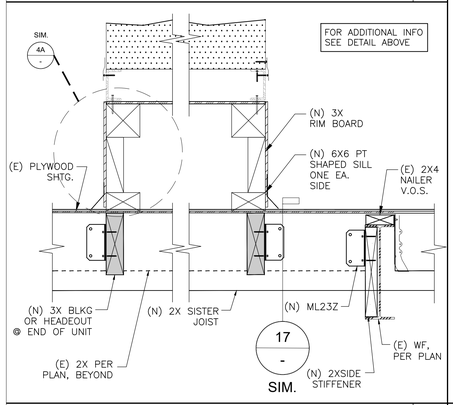
RTU ANCHORAGE SCHEDULE		
UNIT SYMBOL	MAX. WEIGHT	FASTENER
RTU RTU	930 LB	(3)-3/8Ø LAG SCREW LONG SIDE (2)-3/8Ø LAG SCREW SHORT SIDE MIN PENETRATION = 3½"



DETAIL | 18



ELEVATION VIEW | 19



DETAIL | 20

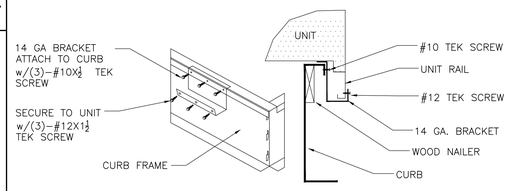
(N) 2X TO MATCH (E)

(N) 3X BLKG. TO MATCH (E)

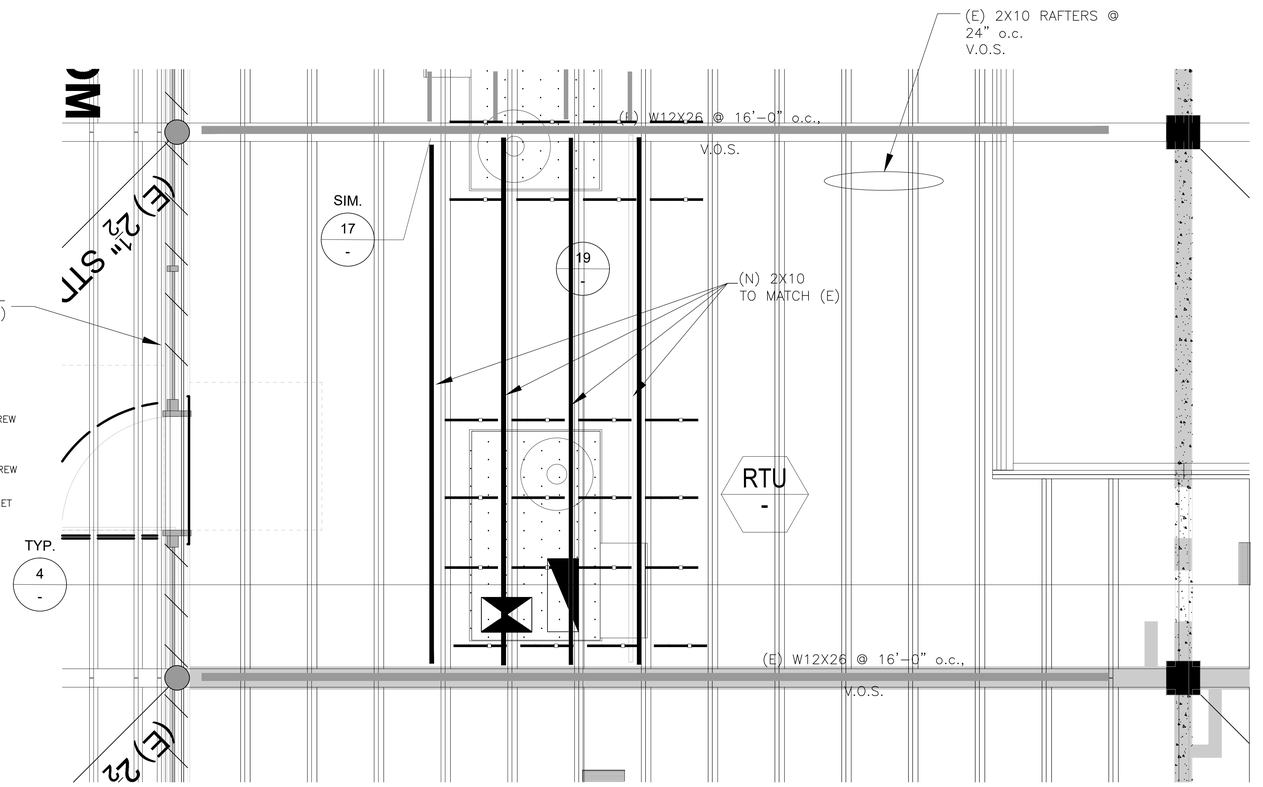
(E) WF STEEL BEAM, WHERE OCCURS, V.O.S.

(*)EXACT FRAMING CONFIGURATION AND SIZES MAY VARY ON DIFFERENT AREAS SEE CONFIG./OPTIONS BELOW

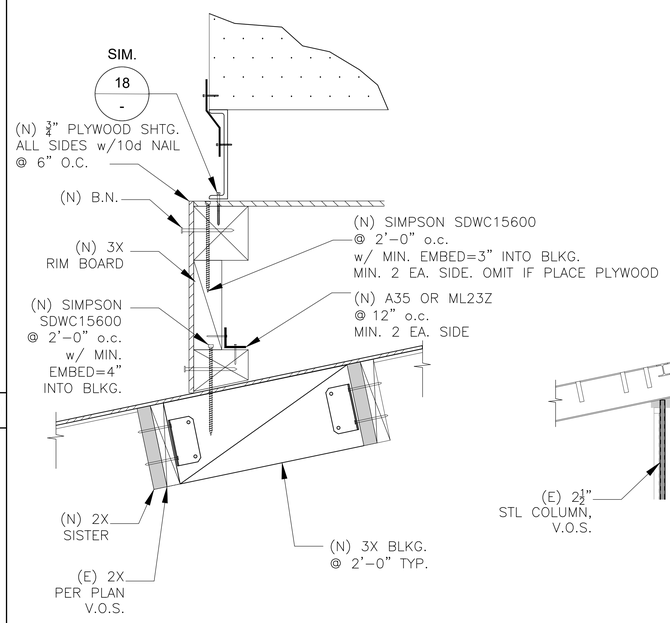
(**)FOR DIMENSION/LOCATION OF NEW UNITS, SEE NOTE 1-7 ON ROOF PLANS



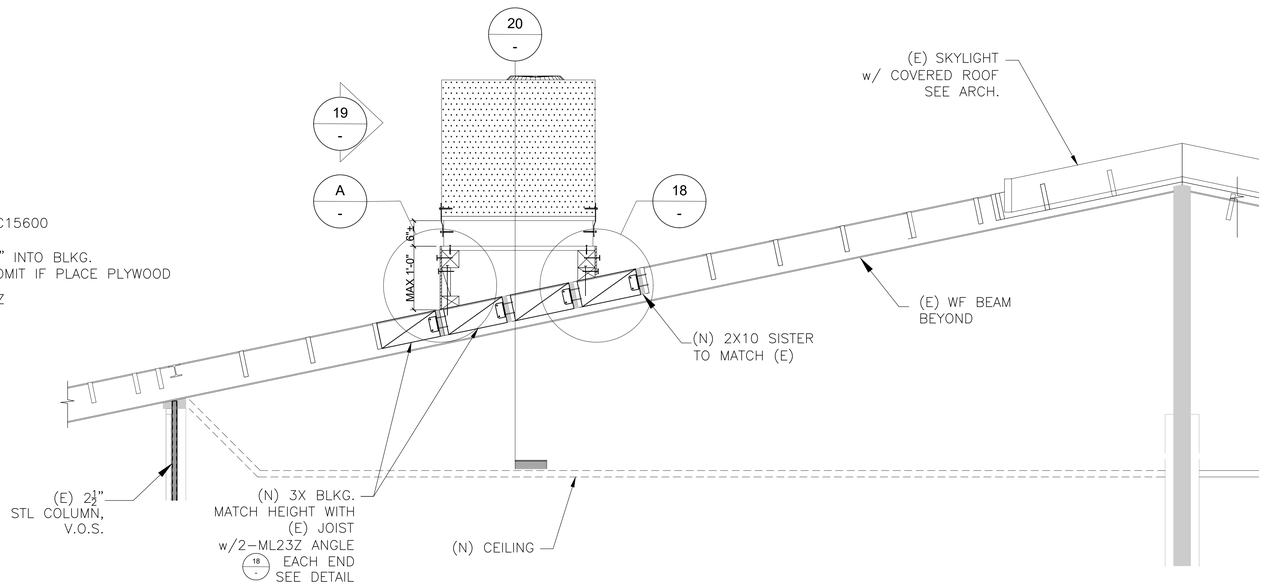
C RTU TO CURB CONN. (TYP. TWO ON EA. SIDE)



NEW MECH. UNIT @ CLASSROOM | 2



A CONN. DETAIL



NEW MECH. UNIT @ CLASSROOM | 4

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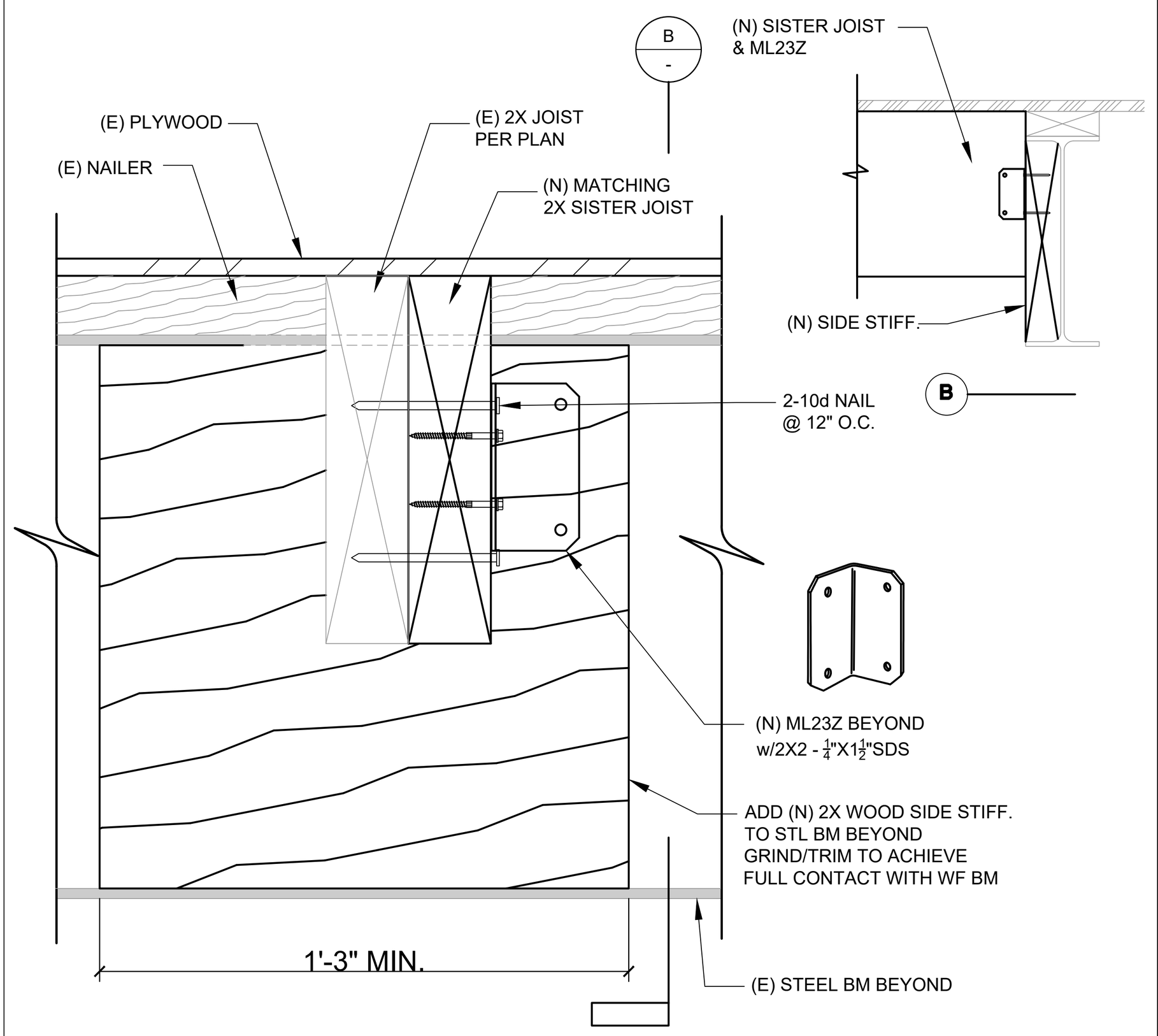
RTU DETAILS

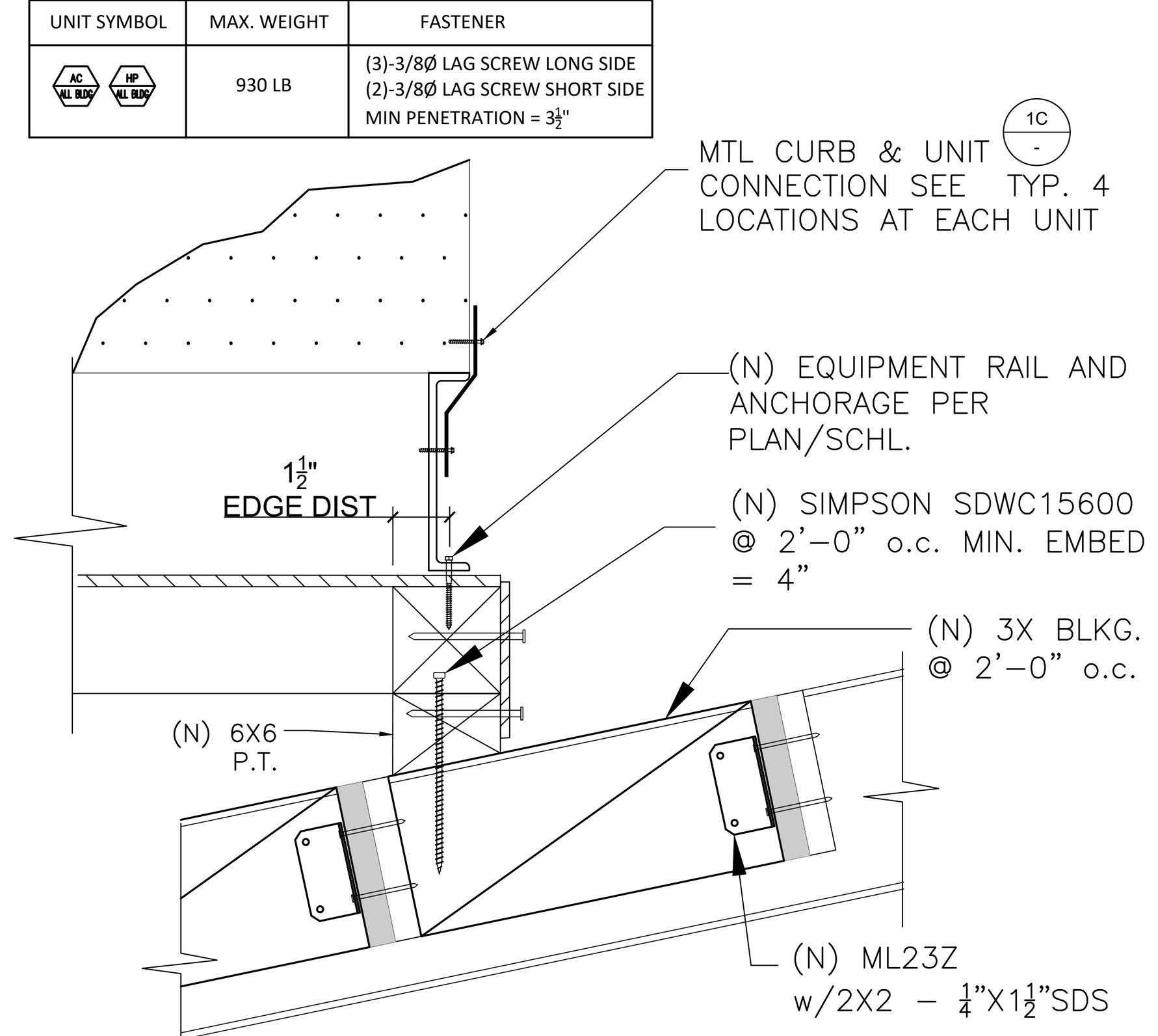
SD2



REINFORCED SUBPURLINE @ ROOF 17

RTU ANCHORAGE SCHEDULE

UNIT SYMBOL	MAX. WEIGHT	FASTENER
	930 LB	(3)-3/8Ø LAG SCREW LONG SIDE (2)-3/8Ø LAG SCREW SHORT SIDE MIN PENETRATION = 3"



DETAIL 18

(N) 2X8 SISTER JOISTS	
(N) 3X BLKG. TO MATCH (E)	
(E) GLB, WHERE OCCURS, V.O.S.	

(*)EXACT FRAMING CONFIGURATION AND SIZES MAY VARY ON DIFFERENT AREAS SEE CONFIG./OPTIONS BELOW

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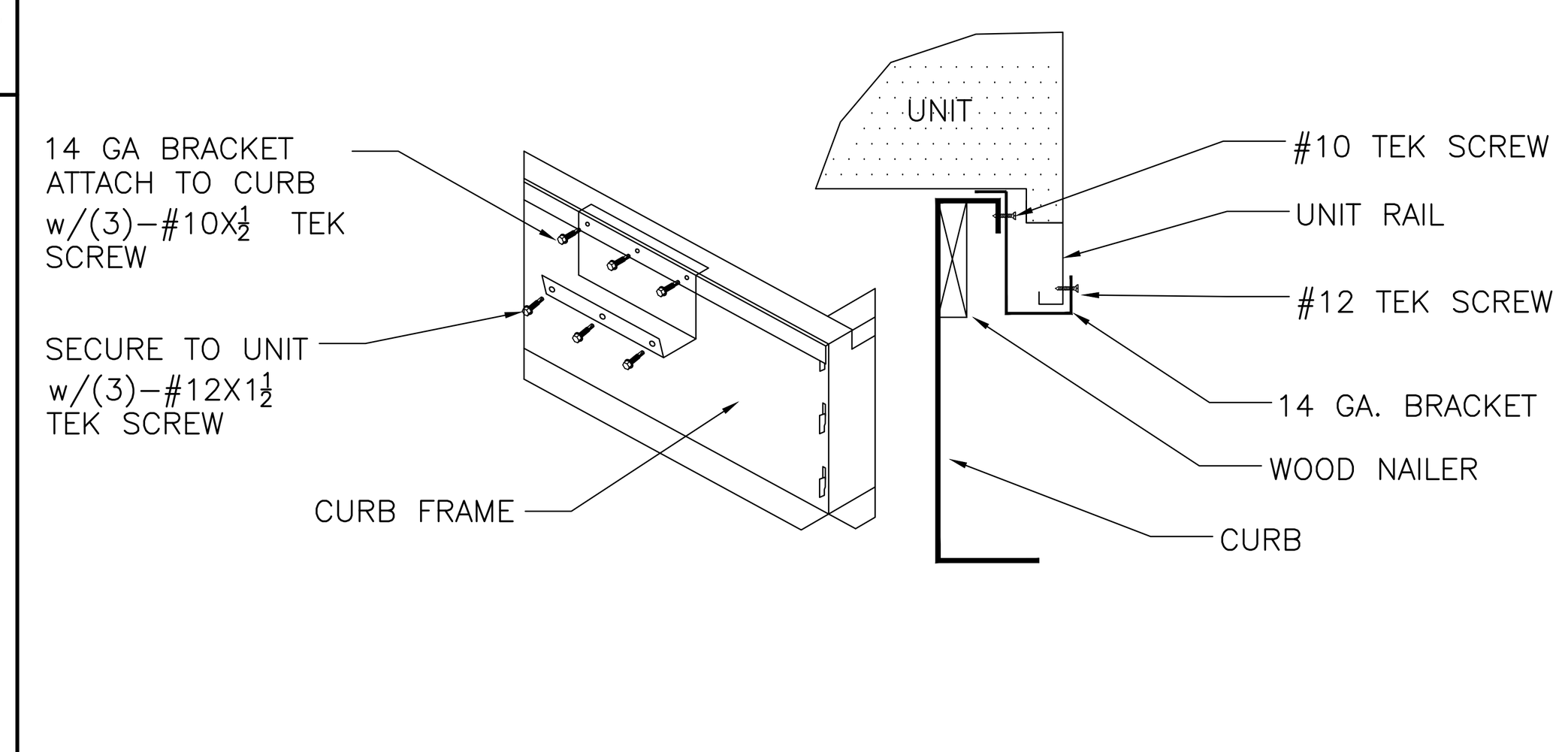
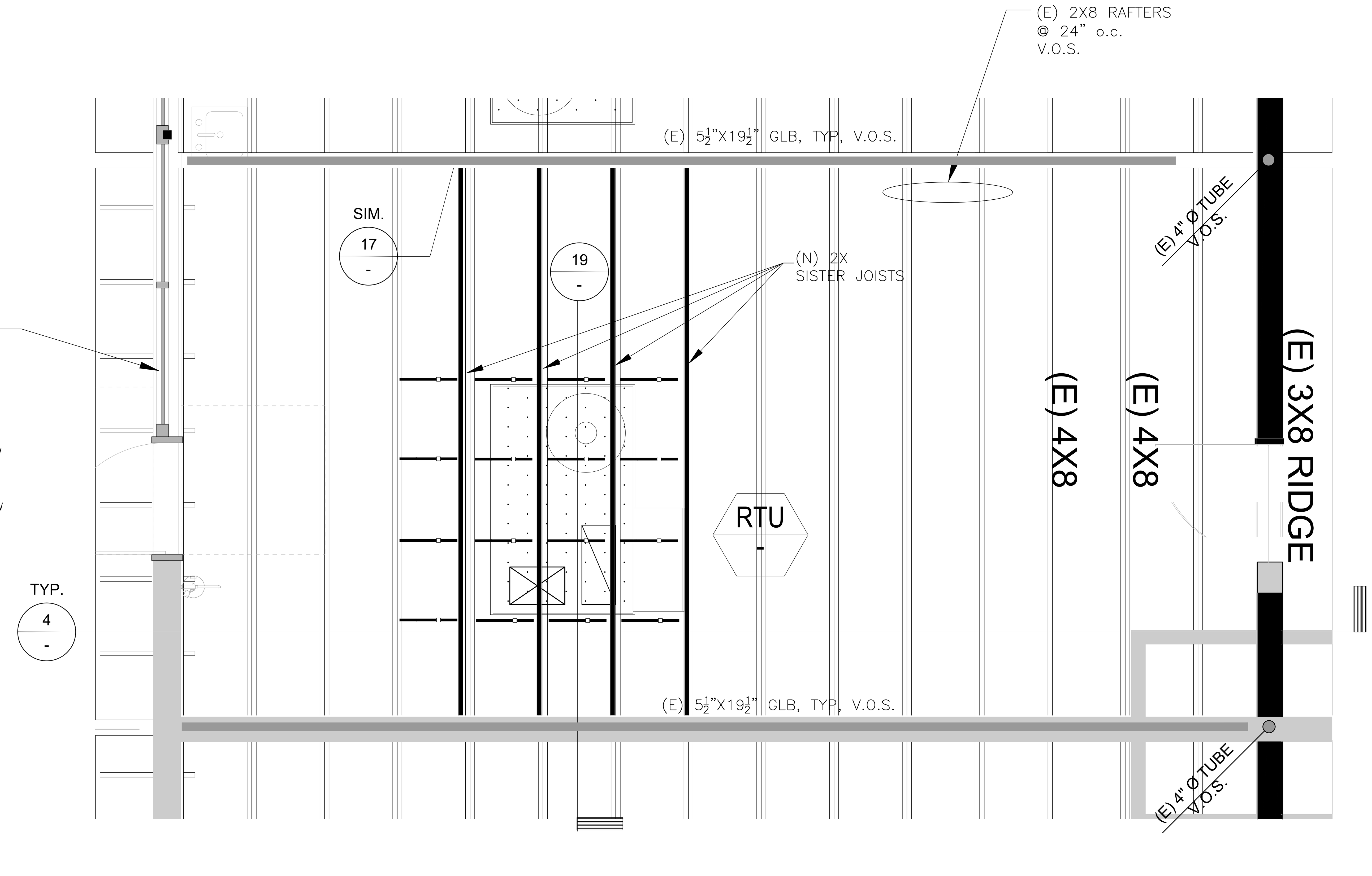
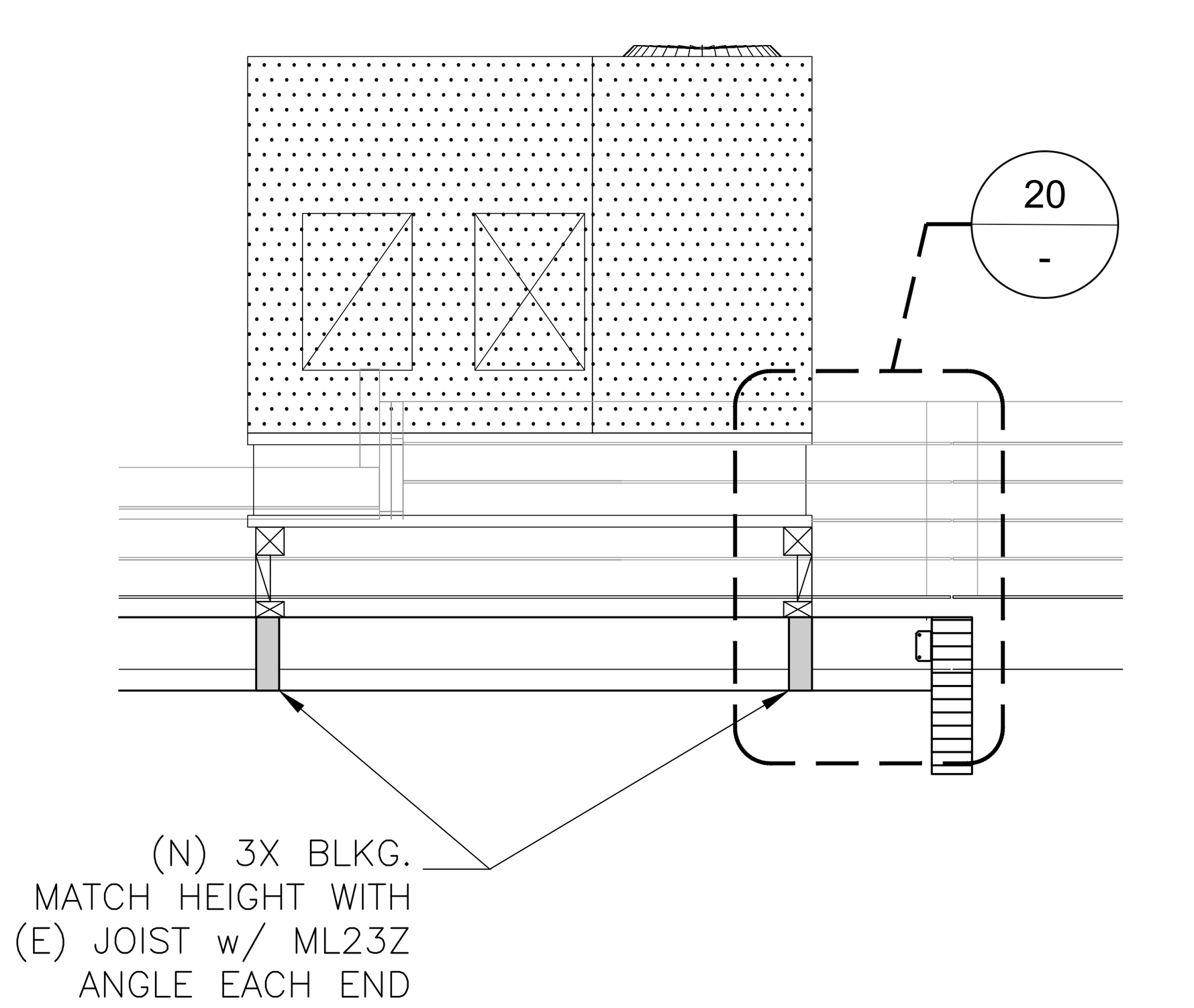


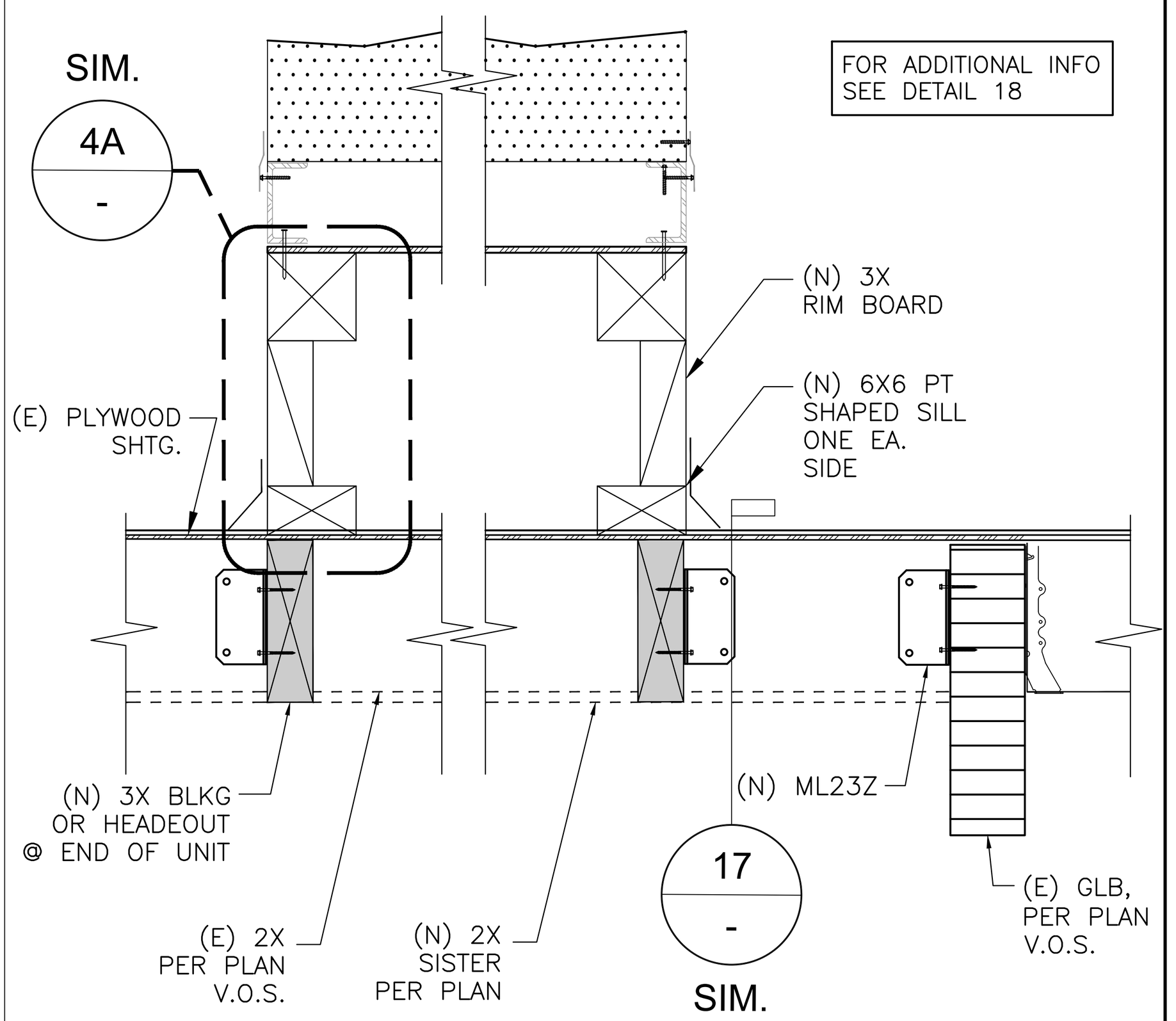
C RTU TO CURB CONN. (TYP. TWO ON EA. SIDE)



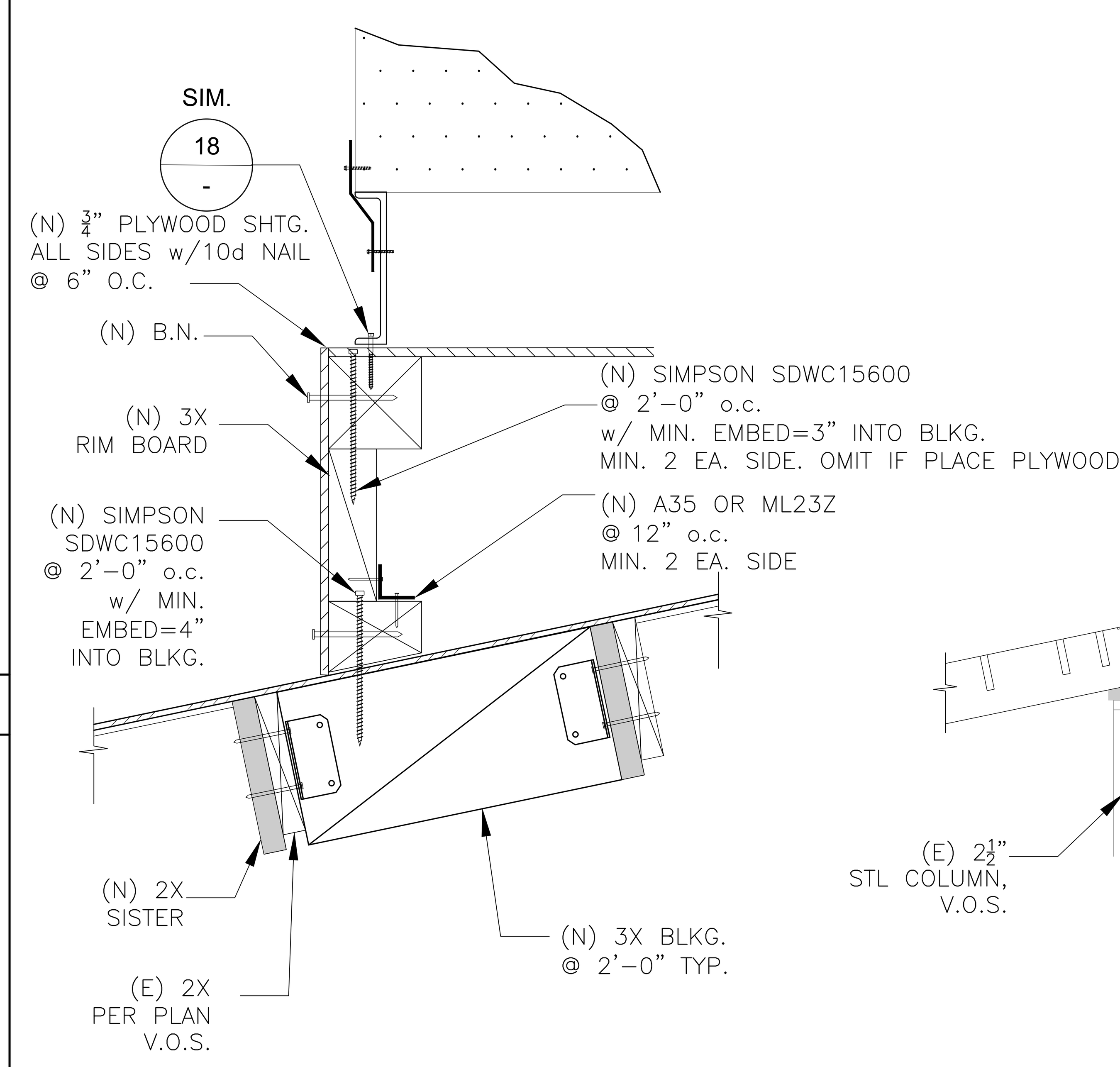
NEW MECH. UNIT @ BLDG C 2



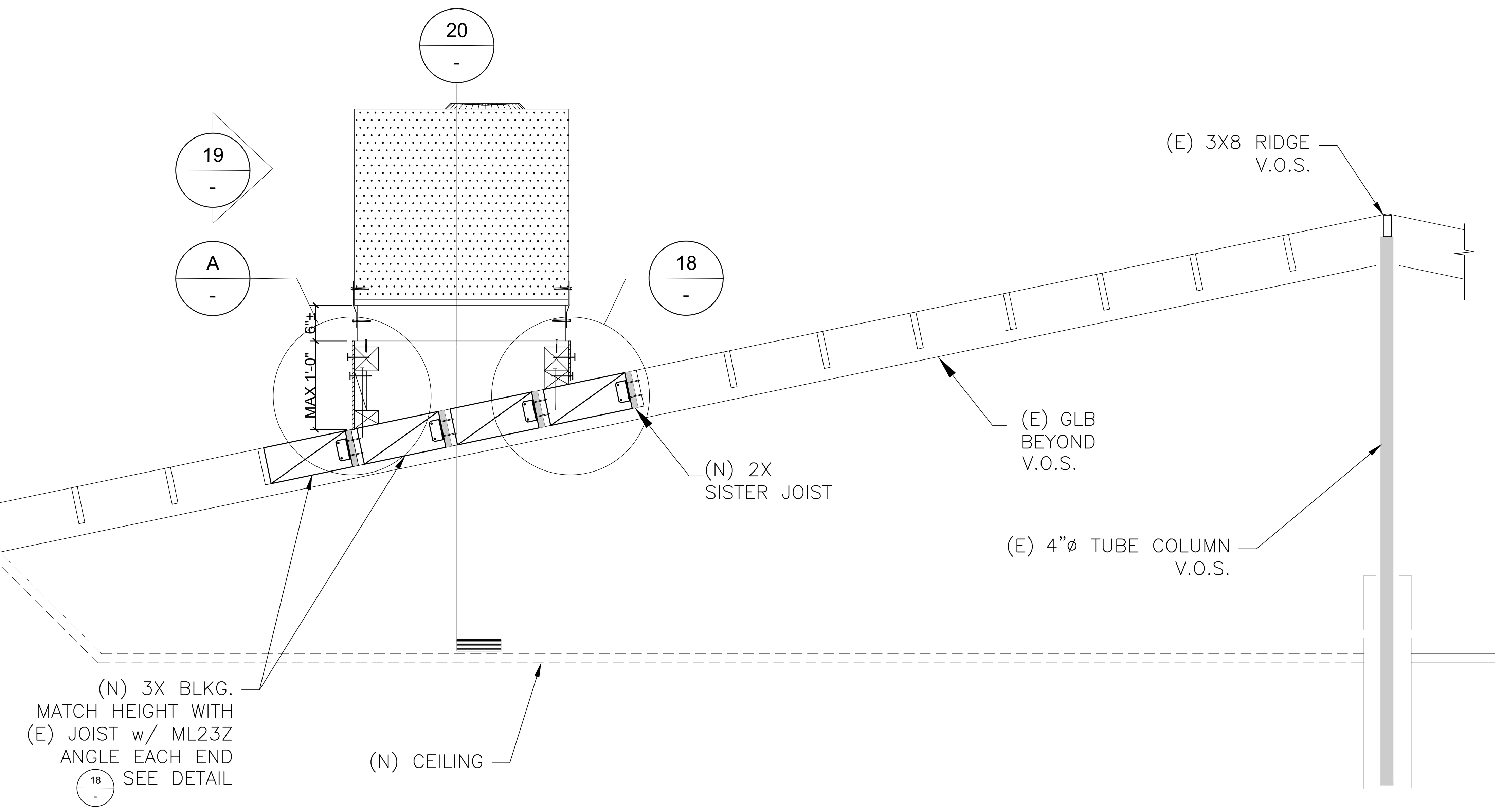
ELEVATION VIEW 19



DETAIL 20



A CONN. DETAIL



NEW MECH. UNIT @ BLDG C 4

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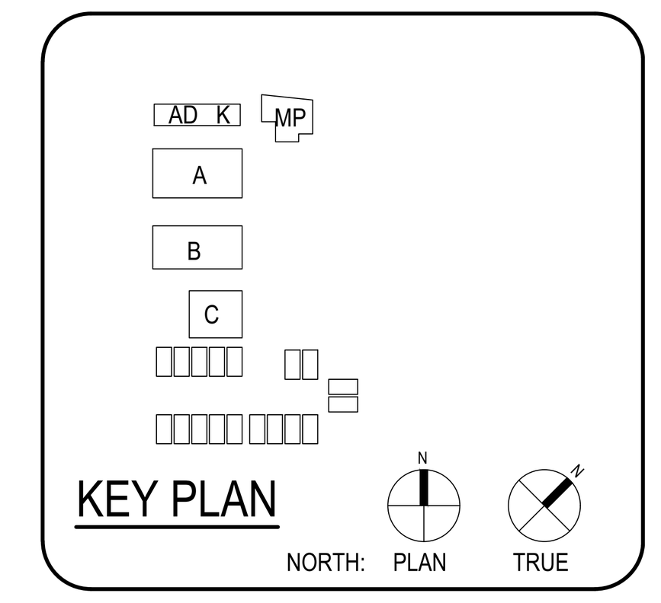

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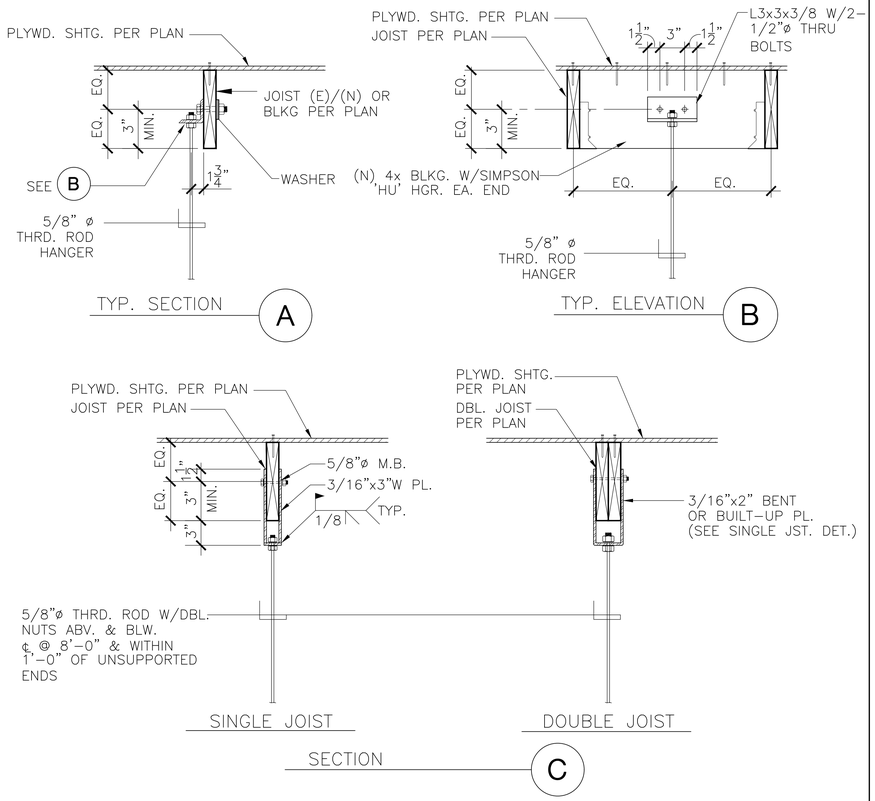
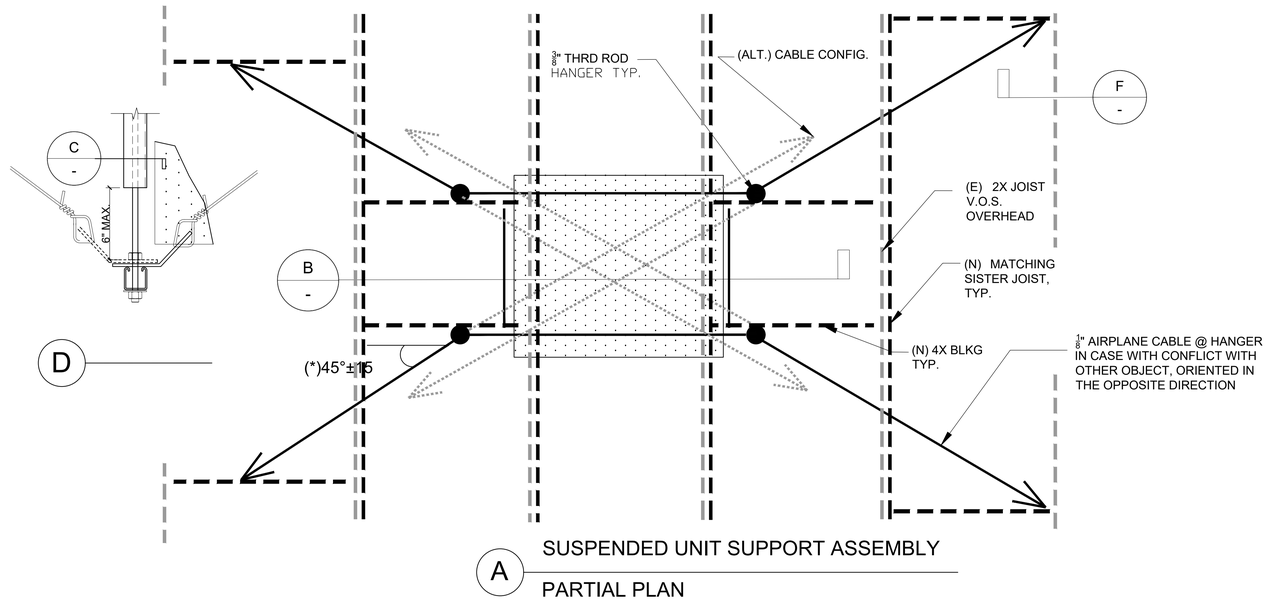
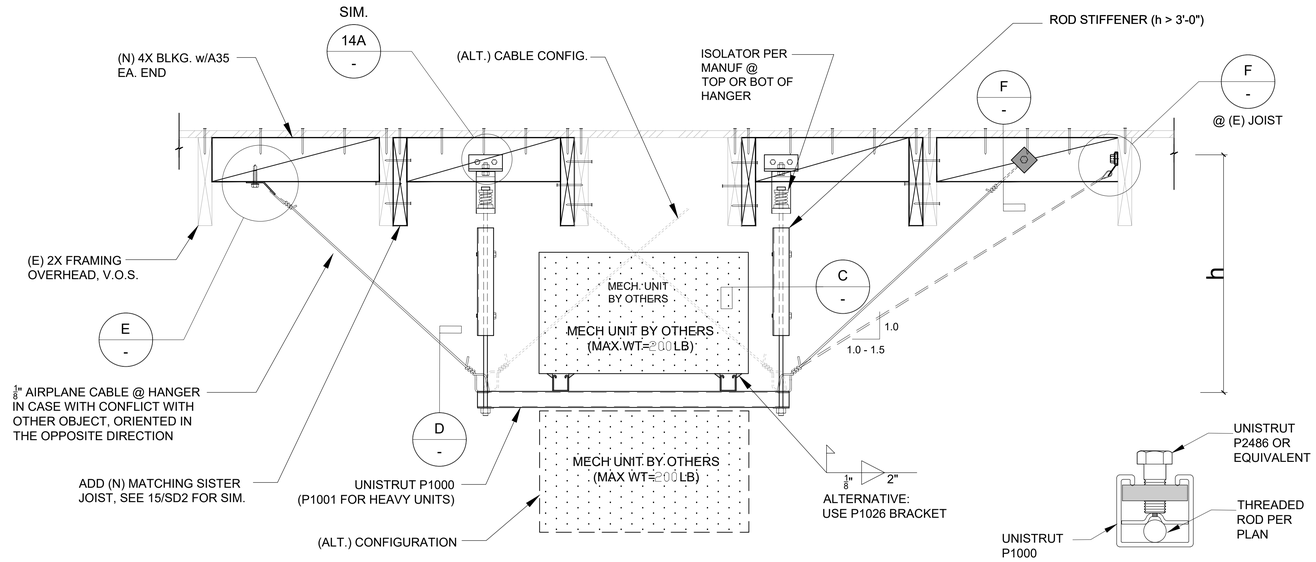


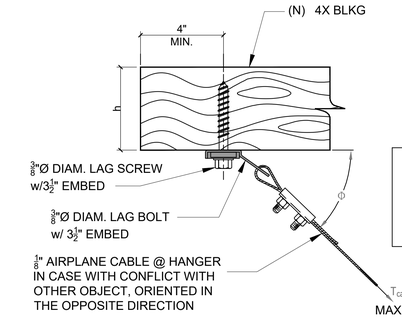


A SUSPENDED UNIT SUPPORT ASSEMBLY
PARTIAL PLAN



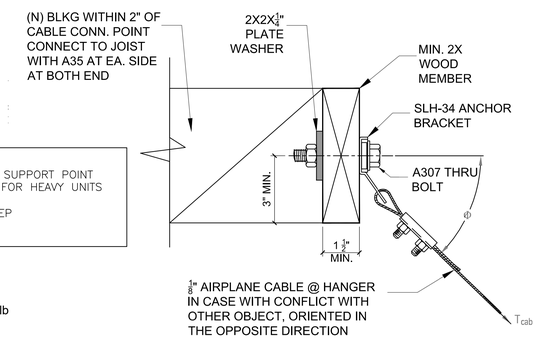
B SECTION

C ROD STIFFENER ("h">3'-0")



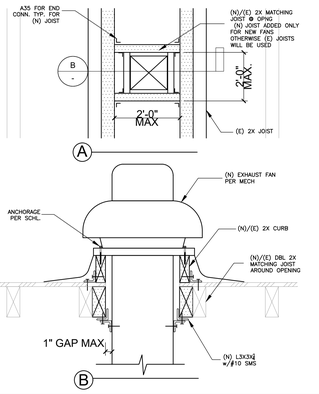
E LAG BOLT TO WOOD MEMBER

PROVIDE ADDITIONAL SUPPORT POINT & LATERAL BRACES FOR HEAVY UNITS (>500-LB) COORDINATE WITH MEP

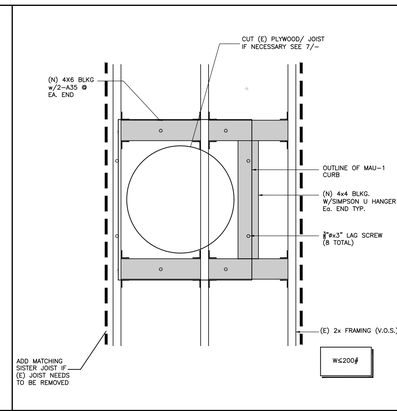


F THRU BOLT PERPENDICULAR TO WOOD MEMBER

HANGER FOR SAWN LUMBER 14



DETAIL 19



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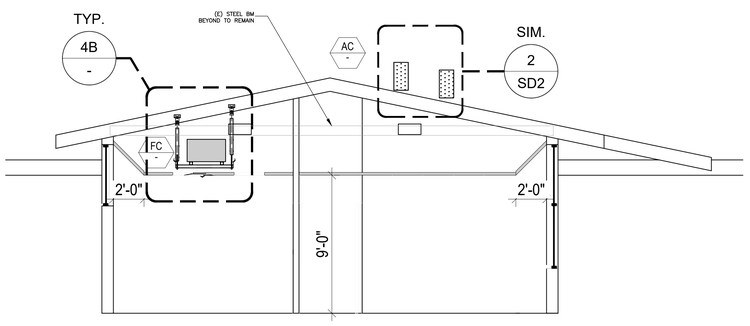

ADMIN BUILDING SECITON 16

HANGER SUPPORT/ SEISMIC BRACING @ HUNG UNITS (MAX 400-lbs) 4

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE - - PROJECT NUMBER 000000

REVISIONS

No.	Description	Date

DSA SUBMITTAL

HUNG UNITS DETAILS

SD3

FILE PATH: Z:\Projects\...

TITLE 24 NOTES

THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:

1. EQUIPMENT SHALL MEET EFFICIENTY REQUIREMENTS OF TABLES 110.2-A THROUGH 110.2-K.
2. ALL AIR-COOLED, UNITARY, DX UNITS (PACKAGED, SPLIT-SYSTEM, HEAT PUMPS AND VRF) WITH ECONOMIZERS SHALL BE EQUIPPED WITH FAULT DETECTION AND DIAGNOSTICS SYSTEMS.
3. PIPE INSULATION FOR SPACE CONDITIONING AND SERVICE WATER-HEATING WITH FLUID TEMPERATURES LISTED IN TABLE 120.3-A SHALL HAVE INSULATION LEVELS AS SPECIFIED IN SUBSECTION (A) AND (B).
4. MECHANICAL HEATING AND COOLING 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, AS CALCULATED ACCORDING TO THE REQUIREMENTS OF SECTION 140.4(B).
5. HVAC MOTORS FOR FANS THAT ARE LESS THAN 1 HP AND 1/12 HP OR GREATER SHALL BE ECM OR HAVE A MINIMUM MOTOR EFFICIENCY OF 70%. MOTORS SHALL ALSO HAVE MEANS TO ADJUST MOTOR SPEED FOR BALANCING OR REMOTE CONTROL.
6. ELECTRIC RESISTANCE HEATING SYSTEMS ARE NOT PROVIDED FOR SPACE HEATING.
7. IN DRIER CLIMATES AND WHEN LARGE OUTDOOR AIR FRACTIONS ARE REQUIRED, EVAPORATIVE PRE-COOLING PACKAGES WERE EVALUATED TO PRE-COOL OUTSIDE AIR AND COOL THE AIR FLOWING OVER THE DX CONDENSING UNIT.
8. ZONE EACH AIR HANDLER TO SERVE ONLY AREAS WITH COMMON LOADS TO ALLOW MORE AGGRESSIVE CONTROL STRATEGIES AND IMPROVE COMFORT. HAVE DIFFERENT AHU'S SERVING CORE VS. PERIMETER AREAS.
9. THE DESIGN ACCOMMODATES PARTIAL OCCUPANCY ENERGY SAVINGS WHEN THE OWNER'S REQUIREMENTS OR NARRATIVE DESCRIBE ANY POSSIBLITY OF PARTIAL OCCUPANCY, BY ZONING AIR HANDLERS BY FLOOR OR BY PART OF A FLOOR, OR BY INCORPORATING CONTROLLED FLOOR DAMPERS, OR VAV AIR TERMINALS GOING TOTALLY SHUT WHEN NOT OCCUPIED, ETC.
10. EACH ZONE IS CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL. CONTROLS SHALL BE CAPABLE OF SETTING TEMPERATURES TO 55 DEG F FOR HEATING AND 85 DEG F FOR COOLING AND PROVIDE A TEMPERATURE DEADBAND OF AT LEAST 5 DEG F IF CONTROLLING BOTH HEATING AND COOLING.
11. EACH SPACE CONDITIONING SYSTEM SHALL BE EQUIPPED WITH CONTROLS TO SHUT THE SYSTEM OFF DURING PERIODS OF NONUSE AND WILL TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN SETBACK AND SETUP TEMPERATURES WHILE KEEPING VENTILATION DAMPERS CLOSED.
12. SYSTEMS SERVING MULTIPURPOSE ROOMS LESS THAN 100 SF AND CLASSROOMS, CONFERENCE, AUDITORIUM OR MEETING CENTER ROOMS GREATER THAN 750 SF SHALL HAVE OCCUPANCY SENSORS THAT INTERFACE WITH HVAC CONTROLS TO AUTOMATICALLY SETUP THE COOLING SETPOINT BY 2F OR MORE AND AUTOMATICALLY RESET THE MINIMUM REQUIRED VENTILATION RATE. THESE OCCUPANT SENSOR VENTILATION CONTROL DEVICES MUST MEET THE REQUIREMENTS OF SECTION 120.1(C)5.
13. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON EF FAN SHUTDOWN.
14. HVAC SYSTEMS WITH DDC TO THE ZONE LEVEL SHALL BE PROGRAMMED TO ALLOW CENTRALIZED DEMAND SHED FOR NON-CRITICAL ZONES.
15. ZONE CONTROLS PREVENT REHEATING, RECOOLING AND SIMULTANEOUS PROVISIONS OF HEATING AND COOLING TO THE SAME ZONE.
16. EACH WALL MOUNTED THRMOSTAT SHALL BE LOCATED AWAY FROM POTENTIAL SOURCES THAT WOULD ADVERSELY AFFECT THE READING (CLOSE TO COPIERS, DIRECT SUNLIGHT, BELOW OR ABOVE A SUPPLY AIR DIFFUSER OR CONVECTOR, ETC.). ANY THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL BE INSTALLED IN SEALED AND INSULATED JUNCTION BOXES.
17. CORNER OFFICE SHALL ALWAYS HAVE THEIR OWN THERMOSTATS, AIR TERMINAL BOXES OR FIN-TUBE RADIATORS.
18. CONTROL SEQUENCES SHALL BE LISTED FOR EQUIPMENT OPERATED BY STAND-ALONE PACKAGED CONTROLS. UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
19. CONTROL SEQUENCES SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT LISTED IN THE EQUIPMENT SCHEDULE THAT IS MONITORED OR CONTROLLED BY THE BUILDING AUTOMATION SYSTEM (BAS). UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
20. OUTSIDE AIR TEMPERATURE SENSORS SHALL BE IN A COMMERCIALLY DESIGNED SOLAR SHIELD LOCATED ON A NORTH WALL OR SOME OTHER LOCATION OUT OF DIRECT SUNLIGHT AND AWAY FROM BUILDING EXHAUST OR HEAT REJECTION EQUIPMENT.
21. THE OUTDOOR AIR-VENTILATION RATE AND AIR-DISTRIBUTION ASSUMPTIONS MADE IN THE DESIGN OF THE VENTILATING SYSTEM ARE CLEARLY IDENTIFIED ON THE PLANS.
22. EACH SPACE IS DESIGNED TO HAVE NATURAL VENTILATION OR MECHANICAL VENTILATION THAT IS NO LESS THAN THE LARGER OF CONDITIONED FLOOR AREA TIMES THE REQUIREMENTS IN TABLE 120.1-A OR 15 CFM TIMES THE EXPECTED NUMBER OF OCCUPANTS.
23. THE MINIMUM AND MAXIMUM OUTDOOR AIR RATES FOR EACH AIR HANDLER ARE LISTED ON THE EQUIPMENT SCHEDULES.
24. THE OUTDOOR AIR-VENTILATION RATES ARE BASED ON PLANNED OWNER OCCUPANCY AS DEFINED IN OWNER'S DESIGN INTENT AND ARE NOT BASED ON MAXIMUM EGRESS OCCUPANCY RATES.
25. HVAC SYSTEMS THAT HAVE AN ECONOMIZER, SERVE A SPACE WITH A DESIGN OCCUPANT DENSITY GREATER THAN OR EQUAL TO 25 PEOPLE PER 1000 SF, AND ARE EITHER A SINGLE ZONE SYSTEM WITH ANY CONTROLS OR MULTIPLE ZONE SYSTEM WITH DDC CONTROLS TO THE ZONE LEVEL MUST HAVE DEMAND CONTROL VENTILATION CONTROLS. THE FOLLOWING MUST BE MET:
   - A. CO2 SENSORS INSTALLED IN EACH ROOM SERVED BY SYSTEMS WITH DCV CONTROLS.
   - B. CO2 SENSORS ARE LOCATED BETWEEN 3 FT AND 6 FT ABOVE THE FLOOR.
   - C. CO2 CONCENTRATIONS MAINTAINED AT LESS THAN OR EQUAL TO 600 PPM PLUS OUTDOOR PPM.
   - D. DURING HOURS OF EXPECTED OCCUPANCY, CONTROLS MAINTAIN THE SYSTEM VENTILATION RATE.
26. EACH COOLING FAN SYSTEM THAT HAS A DESIGN MECHANICAL COOLING CAPACITY OVER 54,000 BTU/H SHALL HAVE AN AIR ECONOMIZER OR A WATER ECONOMIZER. AIR ECONOMIZERS MUST COMPLY WITH THE HIGH LIMIT SHUTOFF CONTROLS SHOWN IN TABLE 140.4-B.
27. INTEGRATED ECONOMIZER CONTROLS SHALL BE SET UP SUCH THAT PARTIAL COOLING IS PROVIDED BY THE ECONOMIZER EVEN WHEN ADDITIONAL MECHANICAL COOLING ID REQUIRED.
28. ECONOMIZER DAMPERS SHALL BE DRIVEN BY DIRECT DRIVE ACTUATORS RATHER THAN ROD LINKAGES, WHICH CAN BE A MAJOR CAUSE OF ECONOMIZER MALFUNCTION.
29. BAROMETRIC RELIEF IS USED, IF POSSIBLE. IF NOT, RELIEF FANS (RATHER THAN RETURN FANS) SHALL BE USED IN MOST CASES.
30. OUTDOOR AND RETURN AIR SENSORS SHALL BE PROPERLY SELECTED, PROPERLY LOCATED TO PROVIDE ACCURATE AND REPEATABLE MEASUREMENTS FOR CONTROLLING ECONOMIZER OPERATION. AVERAGING SENSORS COVER THE ENTIRE DUCT OR COIL FACE AREAS.
31. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST BE INSTALLED, SEALED AND INSULATED AS REQUIRED BY 120.4(A).
32. DUCT SEALING LEAKAGE RATES SHALL BE NO MORE THAN 6% OF AIR FLOW FOR NEW DUCT SYSTEMS AND NO MORE THAN 15% OF AIR FLOW FOR ALTERED EXISTING DUCT SYSTEMS.
33. DUCT SHALL UTILIZE LOW STATIC PRESSURE DESIGN. IDENTIFY THE MOST RESTRICTIVE BRANCH FROM THE FAN TO THE LAST AIR TERMINAL UNIT. IDENTIFY POSSIBLE MEANS OF SIGNIFICANTLY REDUCING THE PRESSURE DROP. BRANCH DUCT SYSTEMS SHALL DESIGNED FOR EQUAL PRESSURE DROP, WHEN POSSIBLE.
34. DUCT BRANCHES WITH SIGNIFICANTLY DIFFERING STATIC PRESSURE REQUIREMENTS SHALL HAVE VOLUME CONTROL STRATEGICALLY PLACED TO AID IN TAB WORK.
35. FAN SHALL DISCHARGE INTO DUCT SECTIONS THAT REMAIN STRAIGHT FOR AS LONG AS POSSIBLE (IDEALLY 10 DUCT DIAMETERS) TO REDUCE FAN INEFFICIENCIES FROM SYSTEM EFFECTS.
36. DUCT VELOCITIES SHALL GENERALLY BE BELOW 2,000 FPM FOR DUCTS IN CEILING PLENUMS, 1500 FPM FOR EXPOSED DUCTS AND 3500 FPM IN MECHANICAL ROOMS AND NON-NOISE SENSITIVE SHAFTS AND DO NOT REDUCE ANY DUCT SIZES LISTED ON PLANS.
37. DUCT FRICTION RATES SHALL GENERALLY BE LESS THAN O.25" WC PER 100 LINEAL FEET NEARER THE FAN, 0.15 TO 0.20" IN THE MAIN DUCTS AND 0.08 TO 0.12" WC/100' NEARER THE END OF THE SYSTEM. DESIGNS OVER THESE RATES SHALL BE QUESTIONED. VERY ENERGY EFFICIENT DESIGN CAN LOWER THESE VALUES BY UP TO 40%.
38. CONTRACTOR SHOP DRAWINGS SHALL BE SUFFICIENTLY DETAILED TO ENSURE THAT DISTRIBUTION SYSTEM DESIGN INTENT IS ADEQUATELY CONVEYED TO MATCH PLANS. IF SUFFICIENT DETAIL IS NOT INCLUDED IN DRAWINGS, INSTALLATIONS MAY RESULT IN SIGNIFICANTLY HIGHER PRESSURE DROPS AND HENCE HIGHER ENERGY CONSUMPTION AND OTHER OPERATING ISSUES.
39. ACCEPTANCE REQUIREMENTS ARE CLEARLY IDENTIFIED IN CONSTRUCTION DOCUMENTS.
40. COMMISSIONING MEASURES OR REQUIREMENTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
41. REQUIREMENTS FOR FUNCTIONAL PERFORMANCE TESTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
42. COOLING SYSTEMS IDENTIFIED IN TABLE 140.4-D SHALL HAVE FAN CONTROLS TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD:
   - A. DX AND CHILLED WATER COOLING SYSTEMS THAT CONTROL CAPACITY BASED ON OCCUPIED SPACE TEMPERATURE SHALL HAVE A MINIMUM OF 2 STAGES OF CONTROL.
   - B. SYSTEMS THAT CONTROL SPACE TEMPERATURE BY MODULATING AIRFLOW TO THE SPACE SHALL HAVE PROPORTIONAL FAN CONTROL.
   - C. SYSTEMS WITH AIR SIDE ECONOMIZER SHALL HAVE A MINIMUM OF 2 SPEEDS OF FAN CONTROL DURING ECONOMIZER OPERATION.
43. FAN CABINET ENCLOSURE AND INTERNAL COMPONENTS SHALL BE ELECTED TO MINIMIZE PRESSURE DROP, E.G. FACE VELOCITY IS LESS THAN 500 FPM, LOW PRESSURE DROP COILS, FILTERS, ETC.
44. FAN WHEEL SHALL BE SELECTED FOR EFFICIENT OPERATION, E.G. LARGER DIAMETER ROTATING AT LOWER SPEED.
45. SYSTEMS THAT SERVE MULTIPLE ZONES SHALL HAVE CONTROLS THAT AUTOMATICALLY RESET SUPPLY AIR TEMPERATURE. ZONES WITH HIGH INTERNAL LOADS WITH NEAR CONSTANT AIRFLOW SHALL BE DESIGNED FOR THE ELEVATED RESET SUPPLY AIR TEMPERATURE. RESET CONTROLS SHALL BE IN RESPONSE TO BUILDING LOADS OR TO OUTDOOR AIT TEMPERATURE AND SHALL BE AT LEAST 25% OF THE DIFFERENCE BETWEEN SUPPLY AIR AND DESIGN ROOM AIR TEMPERATURE. CONTROL SEQUENCES ARE IDENTIFIED IN CONSTRUCTION DOCUMENTS.
46. SAT RESET SHALL BE ESTABLISHED WITH AN AGGRESSIVE RESET SCHEDULE OF 10F, E.G. 55F DURING WARM WEATHER AND 65F DURING COOL WEATHER.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH CURRENT CALIFORNIA CODE OF REGULATIONS TITLE 24, ALL OTHER APPLICABLE CODES AND REGULATIONS, SMACNA AND ASHRAE GUIDELINES, AND LOCAL CODES.
2. ALL HVAC EQUIPMENT SHALL BE COMPLIANT WITH EFFICIENCY STANDARDS PER TITLE-24, PART 6.
3. ALL FRESH AIR INTAKES SHALL BE AT LEAST 10 FEET IN A HORIZONTAL DIRECTION FROM ALL EXHAUST, FLUE, FUEL BURNING APPLIANCE AND PLUMBING VENT OUTLETS. FOR GAS/ELECTRIC AIR CONDITIONING UNITS WHERE THE CODE REQUIRED CLEARANCES ARE NOT MET, A FACTORY FLUE GAS DEFLECTOR AND EXTENSION SHALL BE USED TO MINIMIZE THESE CLEARANCES. CONTRACTOR SHALL DETERMINE LOCATIONS WHERE REQUIRED PRIOR TO BID. THIS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. AIR FILTERS SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE PER TITLE-24 PART 6 AND APPLICABLE ASHRAE REQUIREMENTS. FILTERS SHALL BE ACCESSIBLE
5. REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND FIRE PROTECTION.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AS THESE ARE PART OF THE CONTRACT DOCUMENTS. WHERE A CONFLICT OCCURS BETWEEN THIS SPECIFICATION AND OTHER SPECIFICATIONS ISSUED AS A PART OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SUPERCEDES.
7. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND NOT INTENDED TO INDICATE ALL REQUIRED OFFSETS, BENDS, ELBOWS, TRANSITIONS, FITTINGS AS REQUIRED TO CONFORM TO THE BUILDING STRUCTURE, CLEARANCE INSIDE CEILINGS, AVOIDANCE OF OBSTRUCTIONS, AND MAINTAINING HEAD CLEARANCE.
8. COORDINATE INSTALLATION WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF EQUIPMENT OR MATERIALS, INCLUDING BUT NOT LIMITED TO, STRUCTURAL, ARCHITECTURAL, ELECTRICAL, AND PLUMBING.
9. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTIVE CEILING PLANS, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ROOM ELEVATIONS. THE ARCHITECT AND ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS PRIOR TO FABRICATION AND INSTALLATION.
10. COORDINATE THE LOCATION OF ALL ROOF OPENINGS AND THE LOCATIONS OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL WEIGHTS FOR PLATFORM AND CURB SIZES, FOR ROOF AND WALL PENETRATION DETAILS AND REQUIREMENTS, SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS. REQUIRED PLATFORMS AND FLASHINGS FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS, UNLESS NOTED OTHERWISE.
11. HIRE A TEST AND BALANCE AGENCY TO PERFORM THE TESTING PROCEDURES, REQUIRED BY THE MECH-2A THROUGH MECH-11A CERTIFICATE OF ACCEPTANCE FORMS, AS APPLICABLE FOR ALL NEWLY INSTALLED HEATING AND COOLING SYSTEMS. THE CONTRACTOR AND TEST AND BALANCE AGENCY ARE RESPONSIBLE FOR OBTAINING THE CERTIFICATE OF ACCEPTANCE FORMS REQUIRED BY THE IOR. THE TEST AND BALANCE AGENCY SHALL BE WELL VERSED WITH ALL THE REQUIREMENTS OF THESE CERTIFICATE OF ACCEPTANCE FORMS, AND SHALL COORDINATE AND WORK WITH THE EQUIPMENT AND CONTROLS INSTALLERS TO COMPLY WITH THESE REQUIREMENTS IN A TIMELY MANNER WITHIN THE PROJECT SCHEDULE. THE AIR BALANCE CONTRACTOR SHALL BE A MEMBER OF AABC (ASSOCIATED AIR BALANCE COUNCIL).
12. PAINT ALL EXPOSED DUCTWORK, DUCT SUPPORTS, ACCESSORIES, REGISTERS, GRILLES, DIFFUSERS, AND APPURTENANCES, WHETHER OR NOT COLORS ARE DESIGNATED IN SCHEDULES, EXCEPT WHERE A SURFACE OR MATERIAL IS SPECIFICALLY INDICATED NOT TO BE PAINTED OR IS TO REMAIN NATURAL. WHERE AN ITEM OR SURFACE IS NOT SPECIFICALLY MENTIONED, PAINT THE SAME AS SIMILAR ADJACENT MATERIALS OR SURFACES. IF COLOR OR FINISH IS NOT DESIGNATED, THE ARCHITECT WILL SELECT FROM STANDARD COLORS OR FINISHES AVAILABLE. PAINTING INCLUDES FIELD PAINTING EXPOSED BARE AND COVERED PIPES AND DUCTS (INCLUDING COLOR CODING), HANGERS, EXPOSED STEEL AND IRON WORK, AND PRIMED METAL SURFACES OF MECHANICAL EQUIPMENT.
13. PROVIDE ALL LABOR, MATERIAL, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, AND OTHER WORK AS REQUIRED. FOR A COMPLETE AND PROPERLY OPERATING MECHANICAL SYSTEM.
14. ALL MATERIALS SHALL BE NEW AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. EQUIPMENT SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY THE LATEST EDITION OF CMC, CBC U.L., SMACNA AND ASHRAE GUIDELINES. INSTALL PER MANUFACTURERS' RECOMMENDATIONS, AND INSTALLATION INSTRUCTIONS.
15. OBTAIN AND PAY FOR ALL NECESSARY BUILDING PERMITS AND VARIANCES. COORDINATE TEMPORARY CONSTRUCTION REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION. INCLUDE ALL COSTS IN THE BID.
16. IF THE CONTRACTOR PROPOSES ALTERNATE EQUIPMENT OR MATERIAL, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL DSA APPROVALS, PAY ALL RELATED FEES AND OBTAIN APPROVAL FROM OWNER & ENGINEER OF RECORD. PROVIDE TITLE-24 COMPLIANCE CERTIFICATION AND ALL ASSOCIATED FEES REQUIRED. COORDINATE SUBMITTED EQUIPMENT WITH OTHER TRADES. INCLUDE IN THE SHOP DRAWINGS THE EQUIPMENT SUBMITTED FOR APPROVAL WITH A DIFFERENT PHYSICAL SIZE OR ARRANGEMENT FROM THAT SHOWN.
17. PROVIDE SHOP DRAWINGS PER PROJECT SCHEDULE, SEE 23 00 00 SPECIFICATIONS FOR REQUIREMENTS. IF SHOP DRAWINGS ARE NOT PROVIDED TO THE ENGINEER FOR REVIEW, AND ANY CONFLICTS OCCUR BETWEEN TRADES, DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO RESOLVE THE CONFLICT AND BEAR ALL COSTS INCURRED FOR ALL REVISIONS, AT NO ADDITIONAL COST TO THE DISTRICT. THE DISTRICT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY PRIOR TO FABRICATION AND INSTALLATION OF ALL WORK THAT CAUSES CONFLICTS BETWEEN TRADES.
18. PROVIDE ALL MANUFACTURER'S PRODUCT DATA CLEARLY INDICATING MODEL NUMBERS, CAPACITIES, CONSTRUCTION, ELECTRICAL INFORMATION, AND OPTIONAL ACCESSORIES, PER PROJECT SCHEDULE AND PRIOR TO THE START OF WORK. THESE SHALL BE REVIEWED BY THE MECHANICAL ENGINEER PRIOR TO PURCHASING.
19. SUBMIT TO THE OWNER ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, "AS-BUILTS", ETC. AT THE COMPLETION OF THE JOB. PROVIDE THE OWNER WITH COMPLETE MECHANICAL "AS-BUILTS" INDICATING FINAL EQUIPMENT LOCATIONS, DUCTWORK AND PIPE ROUTING, ETC.
20. OBTAIN APPROVAL FROM THE OWNER ON ALL ADDENDA AND CONSTRUCTION CHANGE DOCUMENT (CCD) PRIOR TO DOING THE WORK.
21. INSTALL ALL EQUIPMENT, ACCESSORIES, AND MATERIAL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
22. PROVIDE FIRESTOPPING FOR PIPE AND DUCT PENETRATIONS THROUGH RATED WALLS. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
23. ANY MATERIAL EXPOSED WITHIN A PLENUM OR DUCT MUST HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25, AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50, AND A MOLD/HUMIDITY RESISTANCE PER U.L. 181.
24. ALL EQUIPMENT, DUCTS, PIPING, AND OTHER DEVICES AND MATERIALS OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHERPROOFED.
25. LOCATE ALL EQUIPMENT SUCH THAT CODE REQUIRED ACCESS IS MAINTAINED, INCLUDING N.E.C. REQUIREMENTS. ACCESS PANELS WHERE REQUIRED, SHALL BE COORDINATED WITH ARCHITECT, AND PROVIDED BY FACTORY OR BE FIELD-PROVIDED. FOR ATTIC EQUIPMENT, G.C. TO PROVIDE A CATWALK & LIGHT PER CMC FOR ATTIC EQUIPMENT.
26. FOR INACCESSIBLE AREAS THE CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR ALL DAMPERS, EQUIPMENT, SMOKE DETECTORS, AND CONTROL DEVICES. THESE PANELS SHALL MATCH THE RATING OF THE WALL AND/OR CEILING WHERE THEY ARE LOCATED IN. MINIMUM ACCESS PANEL SIZES SHALL BE AS FOLLOWS:
   1) HAND ACCESS: 12"x12" MIN.
   2) BODY ACCESS: 30"x30" MIN.
27. ALL EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH FLEXIBLE DUCT AND PIPE CONNECTIONS.
28. LABEL ALL EQUIPMENT AS TO THE SPACE IT SERVES. SEE SPECIFICATIONS FOR IDENTIFICATION STANDARDS. LABEL DUCT SMOKE DETECTOR LOCATIONS (AT CEILING) AS TO THE EQUIPMENT IT SERVES.
29. A/C UNITS PROVIDED WITH ECONOMIZER CYCLE DAMPERS SHALL HAVE OSA DAMPERS SET UP TO CLOSE AUTOMATICALLY ON FAN SHUT DOWN.
30. PROVIDE MANUAL VOLUME DAMPERS AND BACKDRAFT DAMPERS FOR FRESH AIR INTAKES ON ALL AIR HANDLING EQUIPMENT AND EXHAUST FANS SERVING CONDITIONED SPACES. EXCEPTION: EQUIPMENT WITH FACTORY-ECONOMIZERS.
31. DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION PRIOR TO BID DATE.
32. OWNER RETAINS SALVAGE RIGHTS, PROVIDE A MINIMUM OF 72 HOURS NOTICE PRIOR TO REMOVAL OF ROOF TOP UNITS AND EXHAUST FANS.
33. PATCH AND SEAL ALL SLAB, ROOF AND WALL OPENINGS WITH LIKE MATERIAL WHERE MECHANICAL EQUIPMENT ONCE PENETRATED.
34. REMOVE EXISTING AND PROVIDE ALL NEW DUCT AND PIPE HANGER SUPPORTS WHERE DUCT AND PIPE IS BEING REPLACED.
35. PROVIDE ALL NEW PIPE SUPPORTS WHERE PIPING IS SCHEDULED TO BE REPLACED.
36. OUTDOOR REFRIGERANT PIPING TO BE INSULATED AND ALUMINUM WRAPPED.
37. CONTRACTOR IS RESPONSIBLE FOR COMPLETE AND OPERABLE SYSTEM.
38. ALL MECHANICAL EQUIPMENTS, PIPES AND DUCTS SHALL BE SUPPORTED AND BRACED PER THE CURRENT CALIFORNIA BUILDING CODE. ALL MECHANICAL COMPONENTS SHALL BE ABLE TO RESIST THE EFFECTS OF SEISMIC FORCES.
39. MECHANICAL WORK SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
40. CONTRACTOR SHALL PROTECT EXISTING BUILDING INFRASTRUCTURE DURING CONSTRUCTION FROM OUTDOOR ELEMENT. IF DAMAGED, CONTRACTOR SHALL REPLACE DAMAGED BUILDING COMPONENTS WITH NEW AT NO ADDITIONAL COST TO THE OWNER.
41. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.
42. ALL DUCT JOINTS SHALL BE MADE WITH MASTIC SEALANT, SHEET METAL SCREWS AND TAPED AIR TIGHT WITH HARDCAST OR EQUIV., MINIMUM 2-1/2" WIDTH.
43. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND DSA FIELD ENGINEER.
44. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.
45. CONTRACTOR SHALL COORDINATE ALL DUCTWORK ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSET AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, TRUSSES, ETC.
46. COORDINATE ALL EQUIPMENT VOLTAGES WITH ELECTRICAL PRIOR TO ORDERING ANY EQUIPMENT.
47. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT

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 CHAPTER 13, 26 AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 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:

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND 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 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 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 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 FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY 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 & DETAILS.

MP ☒ MD ☒ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) # 0203-13.

CAL GREEN NOTES

1. TESTING AND ADJUSTING. TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDING LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO SECTION 303.1
2. SYSTEMS. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT:
   - A. HVAC SYSTEMS AND CONTROLS.
   - B. INDOOR AND OUTDOOR LIGHTING AND CONTROLS.
   - C. WATER HEATING SYSTEMS.
   - D. RENEWABLE ENERGY SYSTEMS.
   - E. LANDSCAPE IRRIGATION SYSTEMS.
   - F. WATER REUSE SYSTEMS.
3. PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.
   - A. HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.
4. REPORTING. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
5. OPERATION AND MAINTENANCE (O & M) MANUAL. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.
   - A. INSPECTIONS AND REPORTS. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
6. TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM REPORTING VALUE (MERV 13) OF 13, BASED ON ASHRAE 52.2-1999 OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATIONS, AT THE CONCLUSION OF CONSTRUCTION.
7. COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH WRAP, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.
8. FILTERS. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDE AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV 13) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.

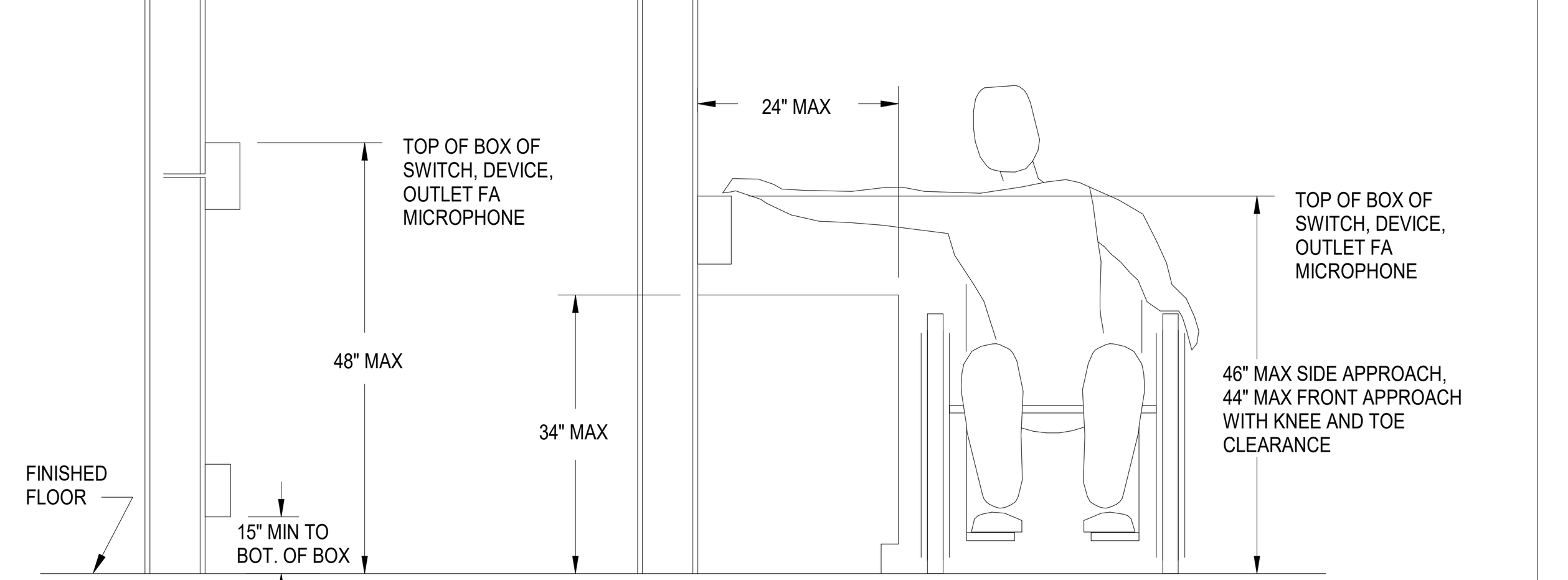
   EXCEPTIONS:
   - A. AN ASHRAE 10-PERCENT TO 15-PERCENT EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2019 CALIFORNIA ENERGY CODE HAVING 60,000 BTU/H OR LESS CAPACITY PER FAN COIL, IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 W/CFM OR LESS AT DESIGN AIR FLOW.
   - B. EXISTING MECHANICAL EQUIPMENT.
9. OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2.
   - A. CHLOROFLOUROCARBONS (CFCS). INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCS.
   - B. HALONS. INSTALL HVAC REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.
10. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLES 5.504.4.1.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	KEY NOTES
	DEMOLITION KEY NOTES
01 / M-2	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN
AC / 1	EQUIPMENT DESIGNATION UNIT ABBREVIATION NUMBER
10X10-3 / 120 F/S	GRILLE DESIGNATION NECK SIZE & BLOW FIRE/SMOKE DAMPER WHERE REQ'D CFM
	SECTION CALLOUT
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	NEW LINEWORK
	EXISTING LINEWORK
	DEMOLITION LINEWORK
16"x12"	SHEET METAL DUCT
16"x12"	HIDDEN SHEET METAL DUCT
16"x12"	INTERNALLY INSULATED SHEET METAL DUCT
	DIRECTION OF FLOW
	STANDARD BRANCH FOR SUPPLY AND RETURN
	ROUND ELBOW DOWN
	ROUND ELBOW UP
	RECTANGULAR TO ROUND TRANSITION
8"	FLEXIBLE DUCT
FC	FLEX CONNECTION
BDD	BACK DRAFT DAMPER
FD	FIRE DAMPER
F/S	COMBINATION FIRE AND SMOKE DAMPER
M	MOTORIZED DAMPER
	SUPPLY DIFFUSER: 2-WAY/3-WAY/4-WAY
	GRILLE: RETURN/EXHAUST
	1'x2' RETURN AIR GRILLE
	2'x2' RETURN AIR GRILLE
UP / DN	SUPPLY AIR DUCT SECTION
UP / DN	RETURN AIR DUCT SECTION
UP / DN	EXHAUST AIR DUCT SECTION
	POWER OR GRAVITY ROOF VENTILATOR - EXHAUST
	POWER OR GRAVITY ROOF VENTILATOR - SUPPLY
UC	UNDERCUT DOOR
TG	TRANSFER GRILLE OR LOUVER
DG	DOOR GRILLE OR LOUVER

SYMBOL	DESCRIPTION
D X	DX COOLING COIL
H C	HEATING COIL
	DAMPER, OPPOSED BLADE
	DAMPER, PARALLEL BLADE
	FILTER
	HUMIDIFIER
	LOUVER
AD	ACCESS DOOR OR ACCESS PANEL (AP) IN DUCTWORK
1" 2"	STATIC PRESSURE CHANGE TAG
2"	STATIC PRESSURE TAG
	TURNING VANES (RECTANGULAR)
	DRAIN, FUNNEL
	CENTRIFUGAL FAN
	ANALOG SIGNAL
	DIGITAL SIGNAL
	ELECTRIC LEAD
	INSTRUMENT CAPILLARY TUBING
	ELECTRONIC 3-WAY VALVE
	ELECTRONIC 2-WAY VALVE
	DDC INPUT
	DDC OUTPUT
	LOCALLY MOUNTED INSTRUMENT
C02	CARBON DIOXIDE SENSOR
DPS	DIFFERENTIAL PRESSURE SENSOR
FM	FLOW METER
FS	AIRFLOW SENSOR
HS	RELATIVE HUMIDITY SENSOR
TS	TEMPERATURE SENSOR
TS	AVERAGING TEMPERATURE SENSOR
	METAL DUCT
R	EMS CO2 SENSOR
T	THERMOSTAT
PS	PRESSURE SWITCH
SD	SMOKE DETECTOR
SP	STATIC PRESSURE SENSOR
RS	REFRIGERANT SENSOR
D	DEW POINT SENSOR
H	SPACE HUMIDITY SENSOR
S	SWITCH
	FIRE WALL PENETRATION
(E)	EXISTING
(N)	NEW

MOUNTING OVER OBSTRUCTION DETAIL



NOTE:
1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

SHEET INDEX

ABRREVIATIONS

ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALUM	ALUMINUM
AO	ANALOG OUTPUT
AP	ACCESS PANEL
B	BOILER
BDD	BACK DRAFT DAMPER
BEL	BELOW
BFC	BELOW FINISHED CEILING
BFP	BACK FLOW PREVENTER
BG	BLAST GATE
BHP	BREAK HORSEPOWER
BLDG	BUILDING
BOB	BOTTOM OF BEAM
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CO	CLEANOUT
COL	COLUMN
CP	CONDENSATE PUMP
CT	COOLING TOWER
CU	CONDENSING UNIT
CV	CONSTANT VOLUME BOX
D	DRAIN
DB	DRY BULB
DEG	DEGREES
DI	DIGITAL INPUT
DIA	DIAMETER
DL	DOOR LOUVER
DN	DOWN
DO	DIGITAL OUTPUT
DP	DIFFERENATIAL PRESSURE
DS	DUCT SILENCER
DX	DIRECT EXPANSION
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EFF	EFFICIENCY
EGC	EGGCRATE GRILLE
EJ	EXPANSION JOINT
EL	ELEVATION
EQ	EQUAL
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EXIST / (E)	EXISTING
°F	DEGREES FAHRENHEIT
FA	FREE AREA
FC	FAN COIL UNIT
FD	FIRE DAMPER
FG	FILTER GRILLE
FLA	FULL LOAD AMPS
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIRE PUMP
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FT	FEET / FOOT
FX	FLEXIBLE CONNECTION
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HEAD
HOA	HANDS OFF AUTO
HP	HEAT PUMP
HP	HORSEPOWER
HT	HEIGHT
HV	HEATING AND VENTILATING UNIT
HWC	HOT WATER CONVERTER
HWP	HEATING HOT WATER RETURN
HWR	HOT WATER PUMP
HWS	HEATING HOT WATER SUPPLY
HZ	HERTZ
IC	MOTOR STATUS
ICW	INDUSTRIAL COLD WATER
ID	INSIDE DIAMETER
IN	INCHES
IW	INDIRECT WASTE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERLOAD CIRCUIT PROTECTION
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSA	OUTSIDE AIR
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PR	PRESSURE RELIEF
PS	PRESSURE SWITCH
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE TRANSMITTER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RF	RETURN FAN
RG	RETURN AIR GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SAV	STAGED AIR VOLUME
SD	SMOKE DAMPER
SF	SUPPLY FAN
SI	SPEED INDICATOR
SK	SPEED CONTROL
SMBH	SENSIBLE MBH
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
TAD	TRANSFER AIR DUCT
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TI	TEMPERATURE INDICATOR
TMBH	TOTAL MBH
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UC	UNDERCUT
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
V	VOLTS
VA	DAMPER/VALVE ACTUATOR
VAV	VARIABLE AIR VOLUME UNIT
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VP	VELOCITY PRESSURE
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WT	WEIGHT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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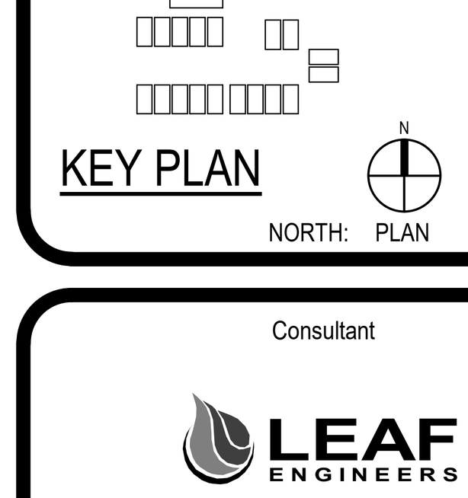
PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##



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Exp.09-30-2024
MECHANICAL
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL SHEET INDEX, LEGEND, AND NOTES

M0.0

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 1 of 22)
Project Address:	7200 Trask Ave, Westminster, CA 92683	**Date Prepared:** 2022-12-19T20:27:14-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Westminster	04	Total Conditioned Floor Area	22750
02	Climate Zone	6	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1
☐ Office (B)	☐ Retail (M)	☐ Non-refrigerated Warehouse (S)			
☐ Hotel/ Motel Guest Rooms (R-1)	☒ School (E)	☐ Healthcare Facility (I)			
☐ High-Rise Residential (R-2/R-3)	☐ Relocatable Class Bldg (E)	☒ Other (Write In)			Classroom Building;

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
☒ Heating Air System	☐ Water Economizer	☒ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☐ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

Registration Number: — Generated Date/Time: — Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Compliance ID: 80083, Report Generated: 2022-12-19 17:27:15

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 2 of 22)
Project Address:	7200 Trask Ave, Westminster, CA 92683	**Date Prepared:** 2022-12-19T20:27:14-05:00

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 §110.1, §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(l)	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)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES with Exceptional Conditions
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES			

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.
The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

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

Registration Number: — Generated Date/Time: — Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Compliance ID: 80083, Report Generated: 2022-12-19 17:27:15

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 3 of 22)
Project Address:	7200 Trask Ave, Westminster, CA 92683	**Date Prepared:** 2022-12-19T20:27:14-05:00

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(k) 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&b)						
				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)
FC/K-1, HP/K-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	12000	12000	0	12000	12000	1200	2600
FC/K-2, HP/K-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	12000	12000	0	12000	12000	2200	4200
FC/K-3, HP/K-3	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	18000	18000	0	18000	18000	6200	13400
FC/K-4, HP/K-4	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	12000	12000	0	12000	12000	2300	5800
FC/C-1, HP/C-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	12000	12000	0	12000	12000	5500	9500
FC/C-2, HP/C-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, split (1phase)	Yes	24000	24000	0	24000	24000	13500	23300
AC/A-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-3	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 4 of 22)
Project Address:	7200 Trask Ave, Westminster, CA 92683	**Date Prepared:** 2022-12-19T20:27:14-05:00

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
AC/A-4	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-5	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-6	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-7	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/A-8	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-3	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-4	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-5	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-6	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-7	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/B-8	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/AC-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 5 of 22)
Project Address:	7200 Trask Ave, Westminster, CA 92683	**Date Prepared:** 2022-12-19T20:27:14-05:00

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
AC/C-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/C-3	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	42680	49400	30300	42000
AC/C-4	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	41900	48000	0	426800	49400	30300	42000
AC/K-1	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	58890	72000	0	65590	74960	34700	49500
AC/K-2	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	58890	72000	0	65590	74960	34700	49500

[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 excepted.*
[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
		Heating Mode				Cooling Mode		
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
FC/K-1, HP/K-1	<65,000		HSPF	8.19	10.6	SEER	14	21.5
FC/K-2, HP/K-2	<65,000		HSPF	8.19	10.6	SEER	14	21.5
FC/K-3, HP/K-3	<65,000		HSPF	8.19	11	SEER	14	19.6
FC/K-4, HP/K-4	<65,000		HSPF	8.19	10.6	SEER	14	21.5

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STATE OF CALIFORNIA
Mechanical Systems
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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
		Heating Mode				Cooling Mode		
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
FC/C-1, HP/C-1	<65,000		HSPF	8.19	10.6	SEER	14	21.5
FC/C-2, HP/C-2	<65,000		HSPF	8.19	12.6	SEER	14	20.6
AC/A-1	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-2	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-3	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-4	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-5	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-6	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-7	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/A-8	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/B-1	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/B-2	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/B-3	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/B-4	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/B-5	<65,000		HSPF	8	8.1	SEER	14	14.8
AC/B-6	<65,000		HSPF	8	8.1	SEER	14	14.8
AC/B-7	<65,000		HSPF	8	8.1	SEER	14	14.8
AC/B-8	<65,000		HSPF	8	8.1	SEER	14	14.8
AC/AC-1	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/C-2	<65,000		HSPF	8	8.1	SEER	14	14.3

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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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
		Heating Mode				Cooling Mode		
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
AC/C-3	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/C-4	<65,000		HSPF	8	8.1	SEER	14	14.3
AC/K-1	>=65,000 and <135,000	47 °Fdb/ 43 °Fwb OSA	COP	3.3	3.6	EER IEER	10.8 12	11.2 15
AC/K-2	>=65,000 and <135,000	47 °Fdb/ 43 °Fwb OSA	COP	3.3	3.6	EER IEER	10.8 12	11.2 15

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

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:	FC/K-1, HP/K-1	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/K-1	Supply	1	400	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			400	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	FC/K-2, HP/K-2	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/K-2	Supply	1	400	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			400	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	FC/K-3, HP/K-3	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/K-3	Supply	1	480	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			480	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	FC/K-4, HP/K-4	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/K-4	Supply	1	400	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			400	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:** (Page 9 of 22)
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	FC/C-1, HP/C-1	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/C-1	Supply	1	400	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			400	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	FC/C-2, HP/C-2	Economizer:[1]	NA: <=54 kBtu/h cooling	Economizer Controls:		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	
						Device	Design Airflow through Device (CFM)
FC/C-2	Supply	1	780	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			780	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/A-1	Economizer:[1]	Differential Enthalpy	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	
						Device	Design Airflow through Device (CFM)
AC/A-1	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT — PBK Architects, Inc.
COSTA MESA — PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

AD K MP
A
B
C
KEY PLAN — N — NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
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Engineer
REGISTERED PROFESSIONAL ENGINEER — REA DAVID WANG — No.M36155 Exp.09-30-2024 — STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL TITLE 24

M0.1

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/A-2	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-2	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/A-3	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-3	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/A-4	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-4	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/A-5	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-5	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/A-6	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-6	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/A-7	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-7	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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Mechanical Systems
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/A-8	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/A-8	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-1	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-1	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-2	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-2	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:**	**(Page 13 of 22)**
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/B-3	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-3	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-4	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-4	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-5	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-5	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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Report Version: 2019.1.003
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	Schmitt Elementary School HVAC Upgrade & Modernization	**Report Page:**	**(Page 14 of 22)**
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/B-6	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-6	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-7	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-7	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/B-8	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/B-8	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/C-1	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/C-1	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/C-2	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/C-2	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/C-3	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/C-3	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	AC/C-4	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/C-4	Supply	1	1600	Nameplate HP	0.75	N/A	N/A
Total System Design Supply Airflow (CFM):			1600	Total System Design (B)HP:	0.75	**Maximum System Fan Power (B)HP:**	

System Name:	AC/K-1	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/K-1	Supply	1	2400	Nameplate HP	1	N/A	N/A
Total System Design Supply Airflow (CFM):			2400	Total System Design (B)HP:	1	**Maximum System Fan Power (B)HP:**	

System Name:	AC/K-2	Economizer:[1]	Differential Enthalpy	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: Device	Fan Power Pressure Drop Adjustment - Table 140.4-B: Design Airflow through Device (CFM)
AC/K-2	Supply	1	2400	Nameplate HP	1	N/A	N/A
Total System Design Supply Airflow (CFM):			2400	Total System Design (B)HP:	1	**Maximum System Fan Power (B)HP:**	

[1] FOOTNOTES: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.
[2] The unit used for HP must be consistent for all fans within a system.

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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
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I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats §110.2(b) & (c)[1], §120.2(a)or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
FC/K-1, HP/K-1	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows
FC/K-2, HP/K-2	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows
FC/K-3, HP/K-3	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows
FC/K-4, HP/K-4	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows
FC/C-1, HP/C-1	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows
FC/C-2, HP/C-2	Single zone	<= 25,000 ft^2	EMCS	EMCS	EMCS	EMCS	NA: Alteration	NA: No operable windows

[1] FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.
*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d) ; EXCEPTION 1 to §140.4(f)

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
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J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☒	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project included Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project included new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)2.

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing			
The answers to the questions below apply to the following duct systems:		Supply Air	Duct leakage testing triggered for these systems? / No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft^2 of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
		☐ Outdoors	
		☐ 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)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐ In an unconditioned crawl space	
		☐ In other unconditioned spaces	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	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		Duct system shall be sealed in accordance with the California Mechanical Code	

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

AD K MP
A
B
C
KEY PLAN
N
NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER
REX DAVID IWAMI
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-28-2022
PROJECT NUMBER 220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL TITLE 24

M0.2

M0.2 - MECHANICAL TITLE 24

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/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

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
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.	AC/A-1; AC/A-2; AC/A-3; AC/A-4; AC/A-5; AC/A-6; AC/A-7; AC/A-8; AC/B-1; AC/B-2; AC/B-3; AC/B-4; AC/B-5; AC/B-6; AC/B-7; AC/B-8; AC/C-1; AC/C-2; AC/C-3; AC/C-4; AC/K-1; AC/K-2
NRCA-MCH-05-A - Air Economizer Controls	AC/A-1; AC/A-2; AC/A-3; AC/A-4; AC/A-5; AC/A-6; AC/A-7; AC/A-8; AC/B-1; AC/B-2; AC/B-3; AC/B-4; AC/B-5; AC/B-6; AC/B-7; AC/B-8; AC/C-1; AC/C-2; AC/C-3; AC/C-4; AC/K-1; AC/K-2
NRCA-MCH-18-A Energy Management Control Systems	FC/K-1, HP/K-1; FC/K-2, HP/K-2; FC/K-3, HP/K-3; FC/K-4, HP/K-4; FC/C-1, HP/C-1; FC/C-2, HP/C-2

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	No	
03		**04**
Mandatory Measure		**Plan sheet or construction document location**
Heating Equipment Efficiency per §110.1		M5.1 & M5.2
Cooling Equipment Efficiency per §110.1		M5.1 & M5.2
Furnace Standby Loss Control per §110.2(d)		N/A
Duct Insulation per §120.4		M0.0
Heat Pump with Supplemental electric Resistance Heater Controls per §110.2(b)		NA
The air duct and plenum system is designed per §120.4(a) -(f)		M0.0
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		N/A

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Maher Dandachi	Documentation Author Signature:
Company: LEAF Engineers	Signature Date: 12/19/2022
Address: 8163 Rochester Avenue	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cucamonga, CA 91730	Phone: 909.987.0909

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: Rex Wang	Responsible Designer Signature:
Company: LEAF Engineers	Date Signed: 12/19/2022
Address: 8163 Rochester Avenue	License: M36155
City/State/Zip: Rancho Cucamonga, CA 91730	Phone: 909.987.0909

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

AD K MP
A
B
C

KEY PLAN N
NORTH: PLAN

Consultant

LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL TITLE 24

M0.3

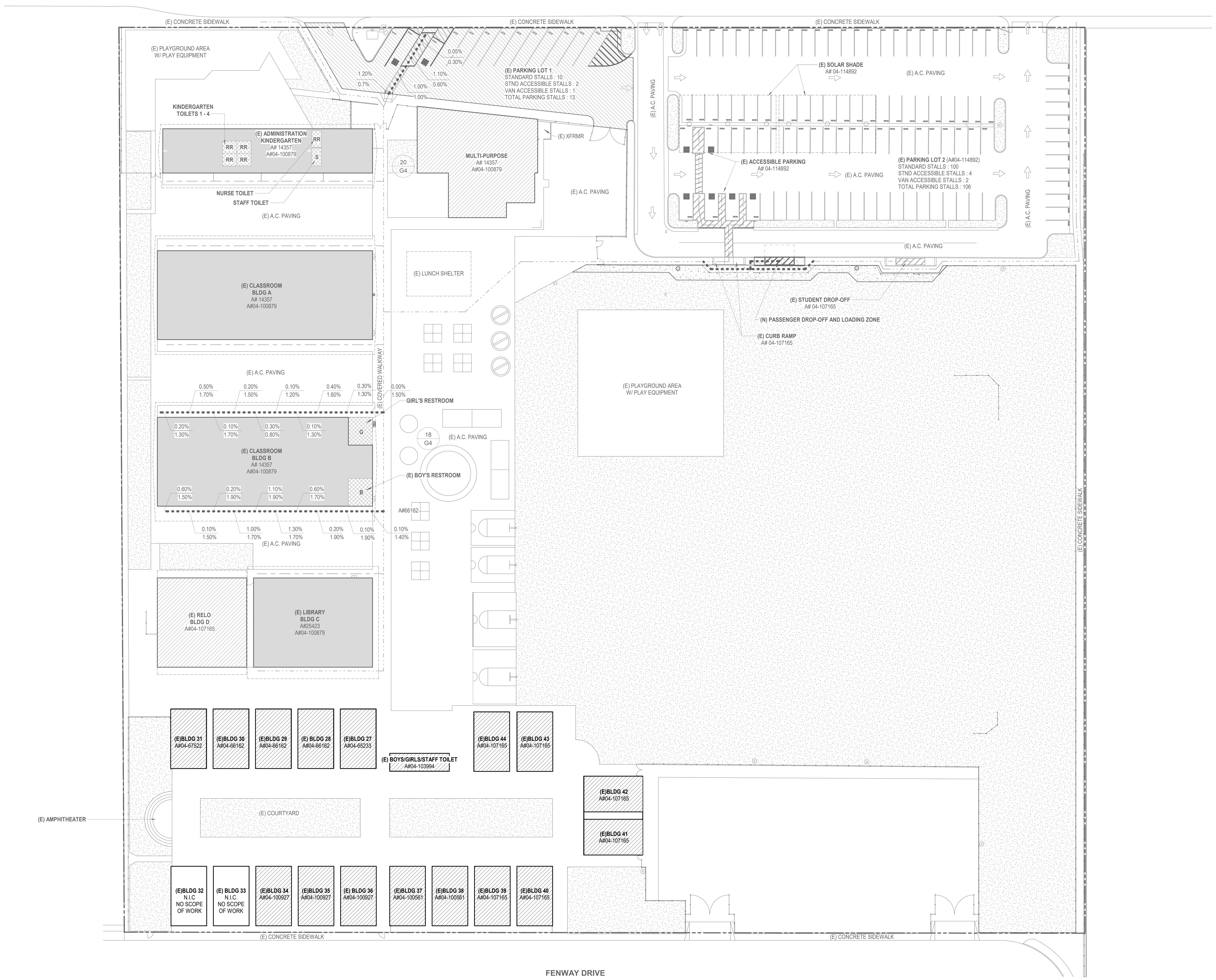
M0.3 - MECHANICAL TITLE 24

FILE PATH: Z:\Projects\...
6/19/2023 2:00:13 PM

M1.0 - MECHANICAL SITE PLAN

KEY NOTES

1 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX



1 SITE PLAN
1" = 30'-0"

FILE PATH: Z:\Projects\...
6/19/2023 2:00:15 PM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

KEY PLAN
NORTH PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

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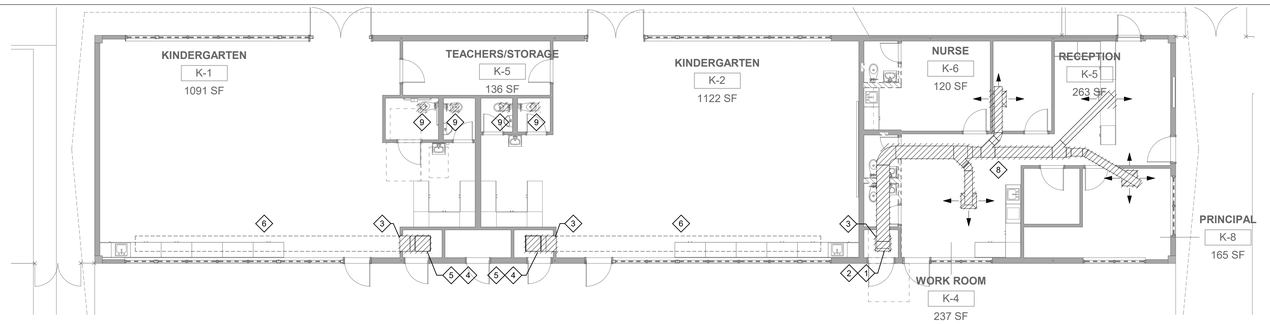
MECHANICAL SITE PLAN

M1.0

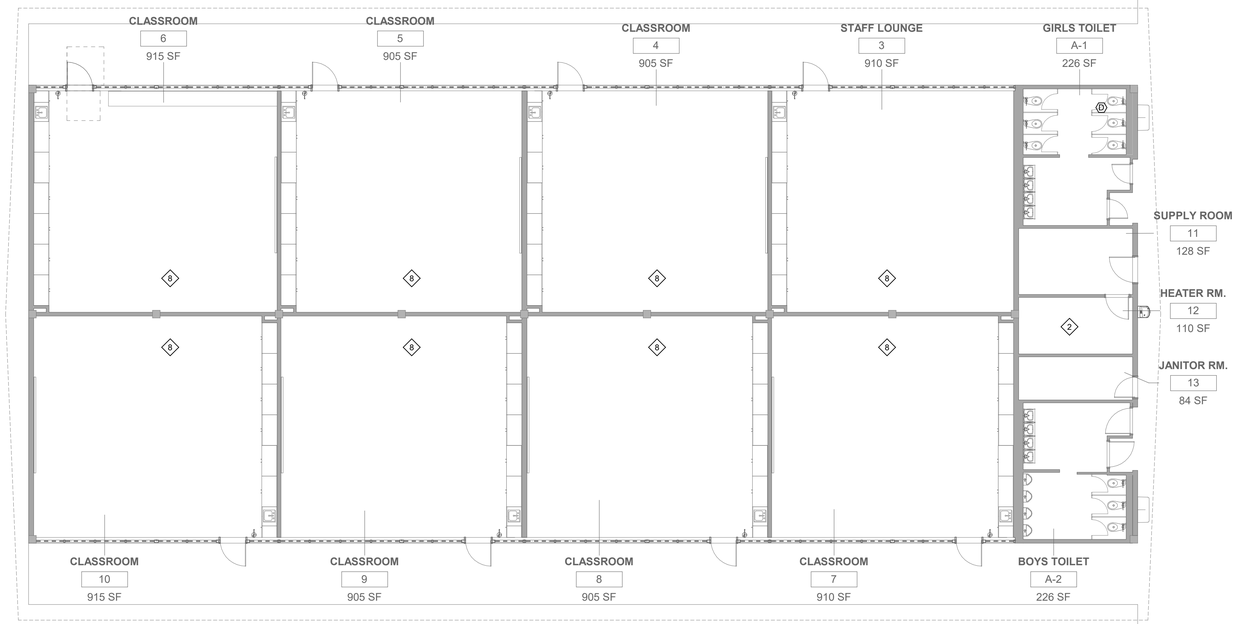
0" 1"

MD2.1 - MECHANICAL DEMO FLOOR PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C



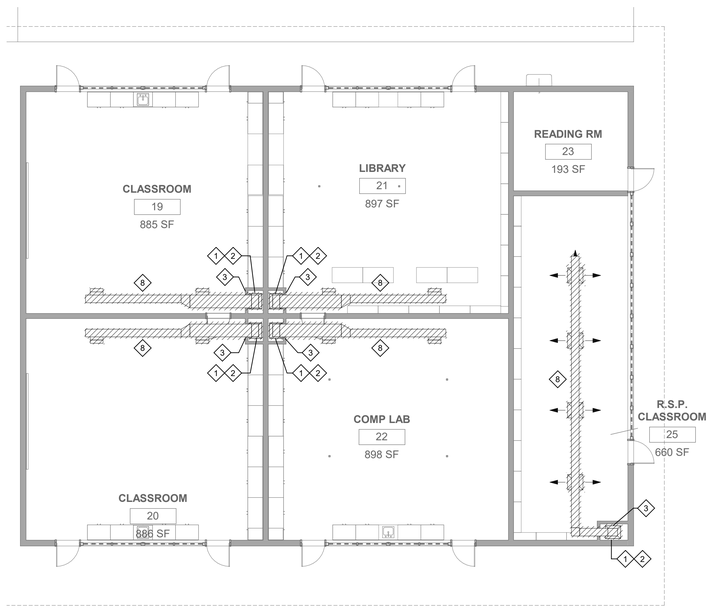
4 DEMO FLOOR PLANS - ADMIN/KINDERGARTEN

1/8" = 1'-0"



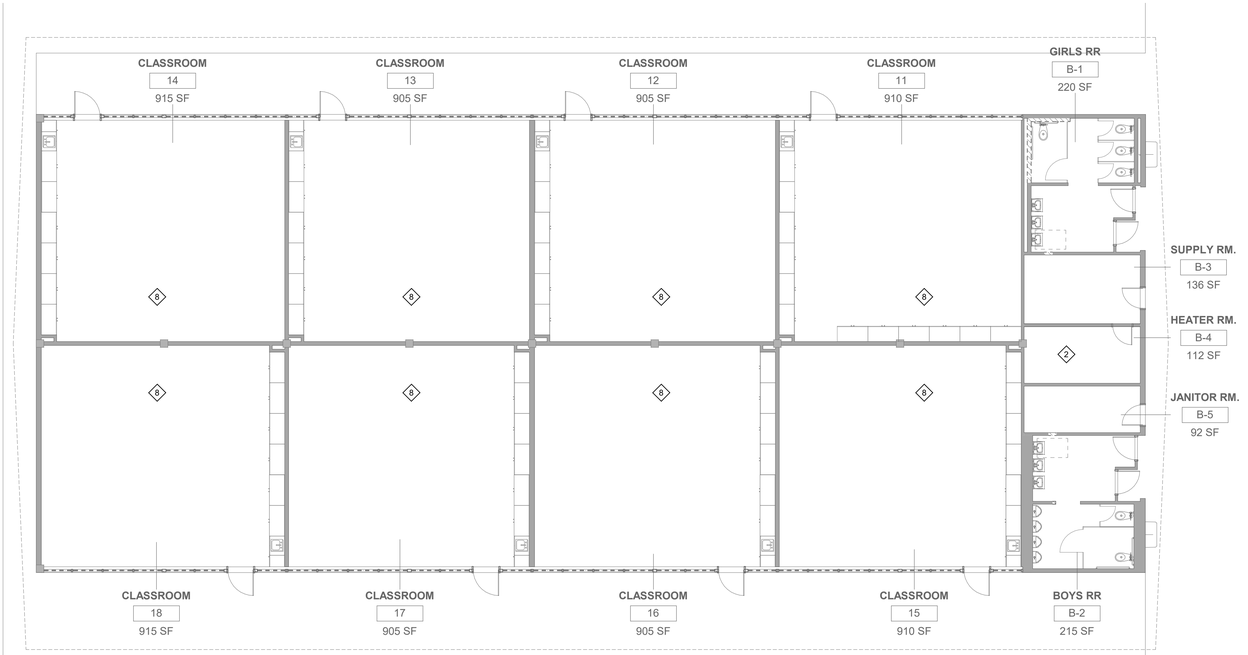
3 DEMO FLOOR PLANS - BUILDING A

1/8" = 1'-0"



2 DEMO FLOOR PLANS - BUILDING C

1/8" = 1'-0"



1 DEMO FLOOR PLANS - BUILDING B

1/8" = 1'-0"

DEMO GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT LOCATED WITHIN THE AREA OF THE NEW SCOPE OF WORK, DUCTWORK, LOUVERS, ACCESSORIES, ETC. BEFORE COMMENCING WORK.

DEMO KEY NOTE

1. DISCONNECT (E) GAS AT POINT OF DISCONNECT & CAP. PATCH REPAIR AND PAINT SURFACE TO MATCH EXISTING
2. (E) HEATER TO BE DEMOLISHED WITH ALL ASSOCIATED DUCTWORK, PIPES, WIRING, ACCESSORIES, ETC.
3. (E) RETURN GRILLE/LOUVER TO BE DEMOLISHED WITH ALL ASSOCIATED DUCTWORK ETC. PATCH, REPAIR AND PAINT SURFACE TO MATCH EXISTING.
4. (E) FLOOR MOUNTED HEATER TO BE DEMOLISHED WITH ALL ASSOCIATED DUCTWORK PIPING WIRING DAMPERS ETC. PATCH REPAIR AND PAINT SURFACES TO MATCH EXISTING
5. DISCONNECT (E) UNDERGROUND DUCT BELOW FLOOR AND CAP, PATCH , REPAIR AND PAINT SURFACES TO MATCH EXISTING.
6. (E) UNDERGROUND DUCT TO BE ABANDONED.
7. (E) THERMOSTAT TO BE DEMOLISHED WITH ALL ASSOCIATED WIRING, ACCESSORIES, ETC. PATCH, REPAIR AND PAINT SURFACE TO MATCH EXISTING.
8. (E) DUCTWORK, GRILLES, DIFFUSERS AND ACCESSORIES LOCATED IN ROOM TO BE DEMOLISHED
9. (E) CEILING EXHAUST FAN TO BE DEMOLISHED

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14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ###

AD K MP
A
B
C

KEY PLAN NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
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909.987-0909
leafengineers.com

Engineer

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

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MECHANICAL DEMO FLOOR PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

MD2.1

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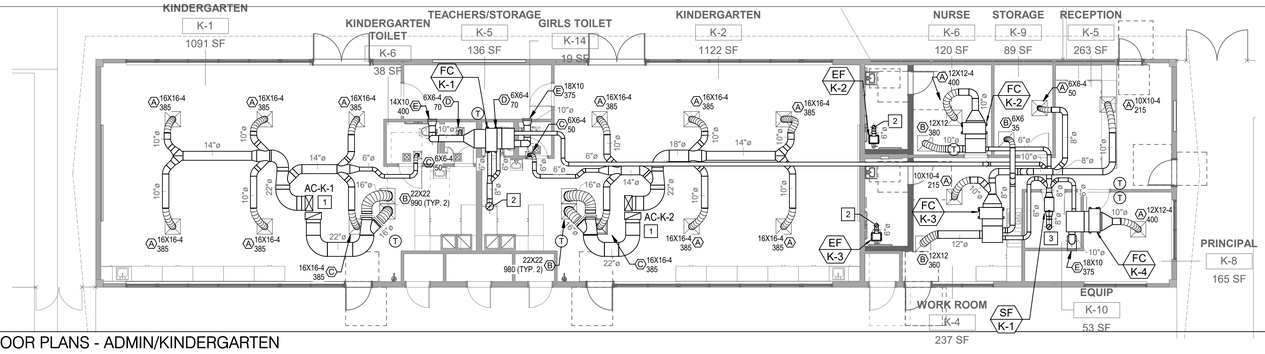
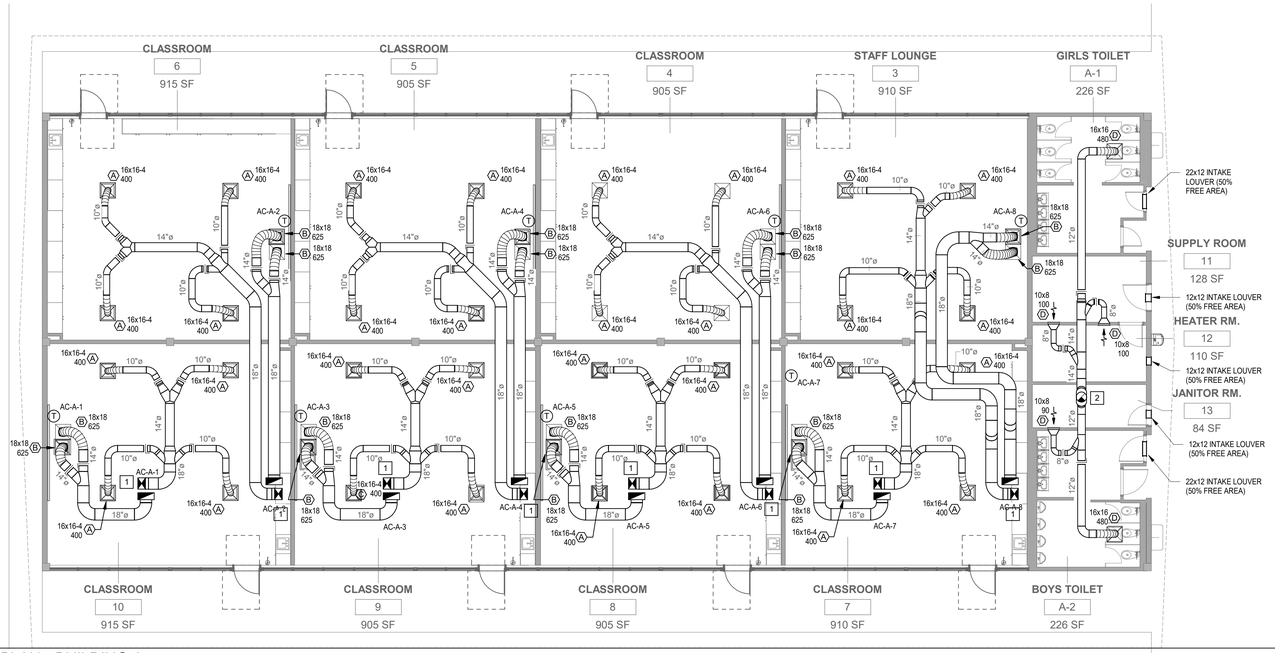
M2.1 - MECHANICAL FLOOR PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

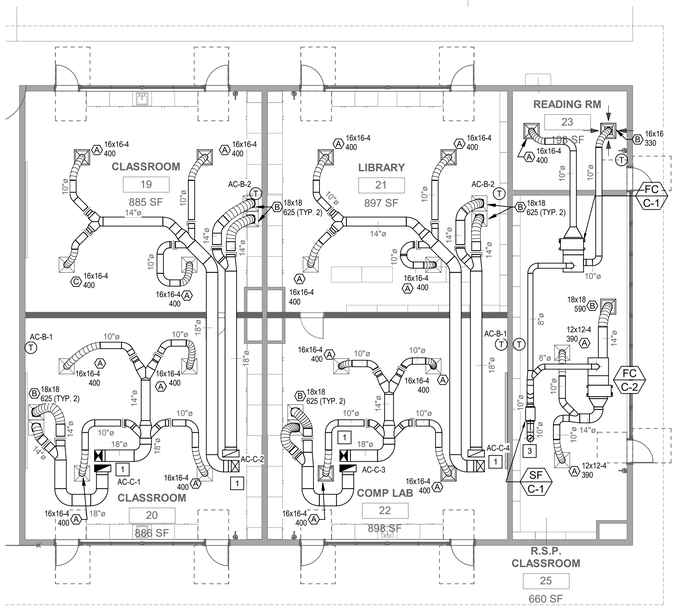
0" 1"



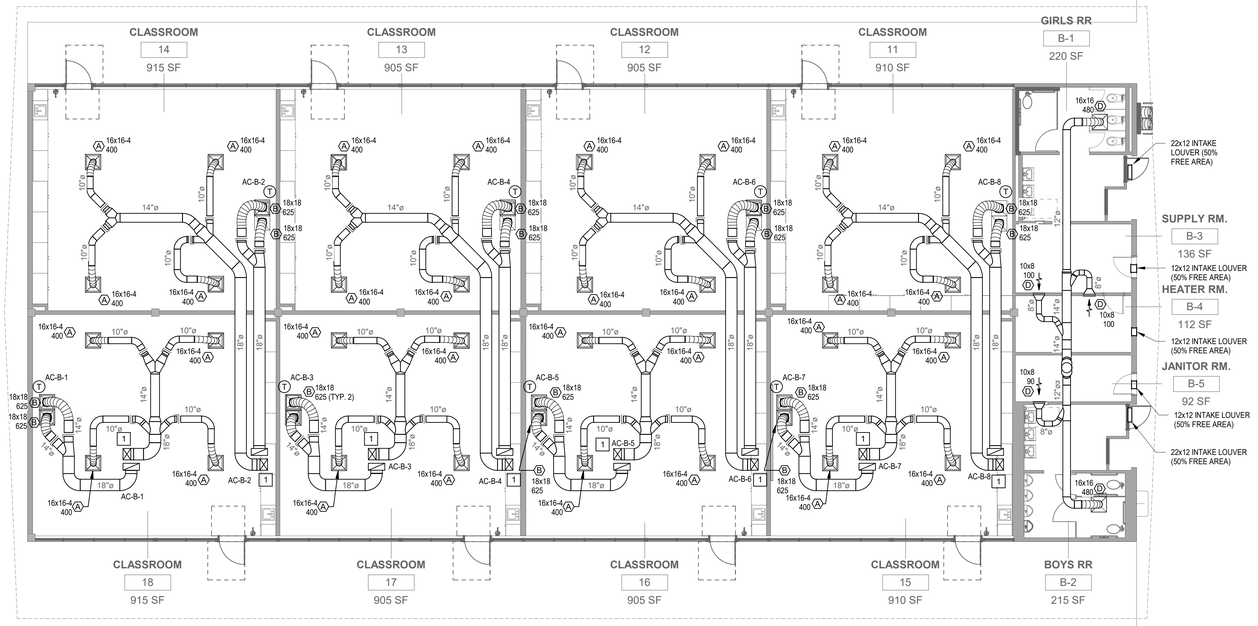
4 FLOOR PLANS - ADMIN/KINDERGARTEN
1/8" = 1'-0"



3 FLOOR PLAN - BUILDING A
1/8" = 1'-0"



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



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

GENERAL NOTES

1. PROVIDE NEW ROOFTOP PACKAGE UNITS AND SPLIT DX SYSTEMS & ASSOCIATED CONTROLS, DUCTWORK AND GRILLES TO SERVE THE CLASSROOM BUILDINGS & ADMIN/KINDERGARTEN BUILDING.

2. PROVIDE NEW ROOFTOP EXHAUST FANS AND CEILING EXHAUST FANS & ASSOCIATED CONTROLS, DUCTWORK AND GRILLES TO SERVE THE RESTROOM AREAS

3. PROVIDE ALL NECESSARY CONTROLS REQUIRED TO CONNECT NEW ROOTOP PACKAGE UNITS, SPLIT DX UNITS & FANS TO EXISTING BMS

KEY NOTES

1. SA & RA DUCTS UTR. REFER TO STRUCTURAL DETAIL 15/SD3
2. EA DUCT UTR. REFER TO STRUCTURAL DETAIL 15/SD3
3. OSA DUCT UTR. REFER TO STRUCTURAL DETAIL 15/SD3

DEMO NOTES

1. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT LOCATED WITHIN THE AREA OF THE NEW SCOPE OF WORK, DUCTWORK, LOUVERS, ACCESSORIES, ETC. BEFORE COMMENCING WORK.
2. ALL EXISTING DUCT, DIFFUSER, REGISTER, THERMOSTAT, DAMPER, ETC. TO BE DEMOLISHED WITH ALL ASSOCIATED ACCESSORIES. PATCH, REPAIR AND PAINT TO MATCH WITH EXISTING SURFACES

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

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Westminster, CA 92683

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DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
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leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER
REA DAVID WANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

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MECHANICAL FLOOR PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

M2.1

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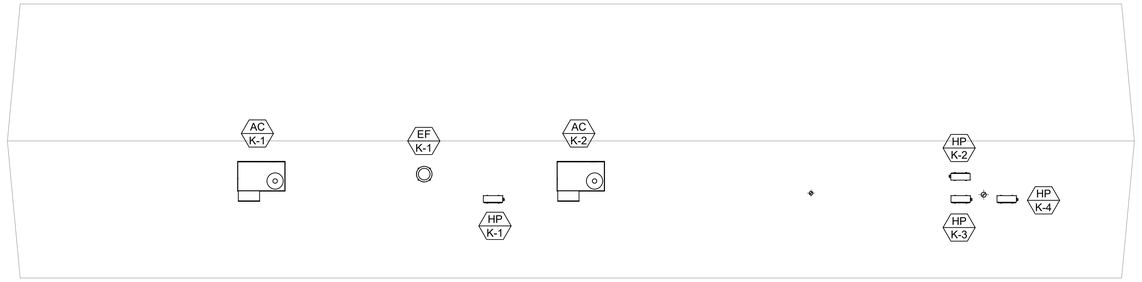
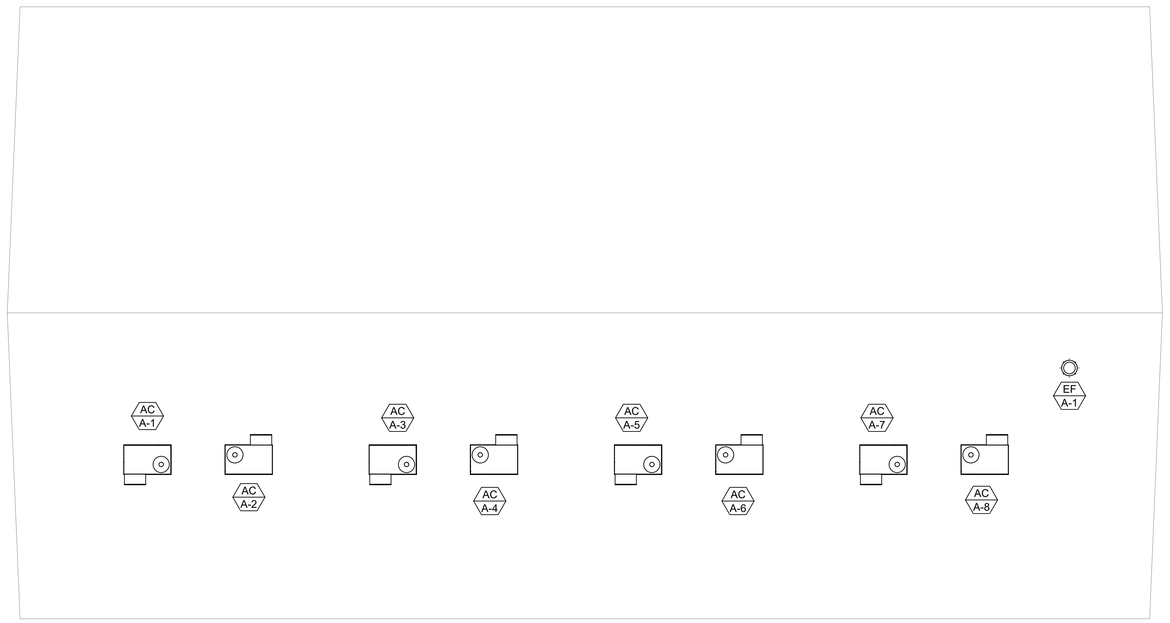
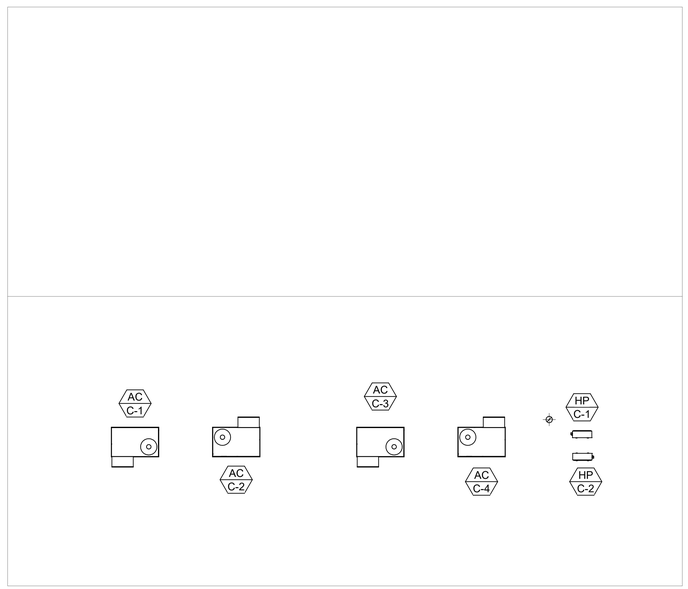
0" 1"



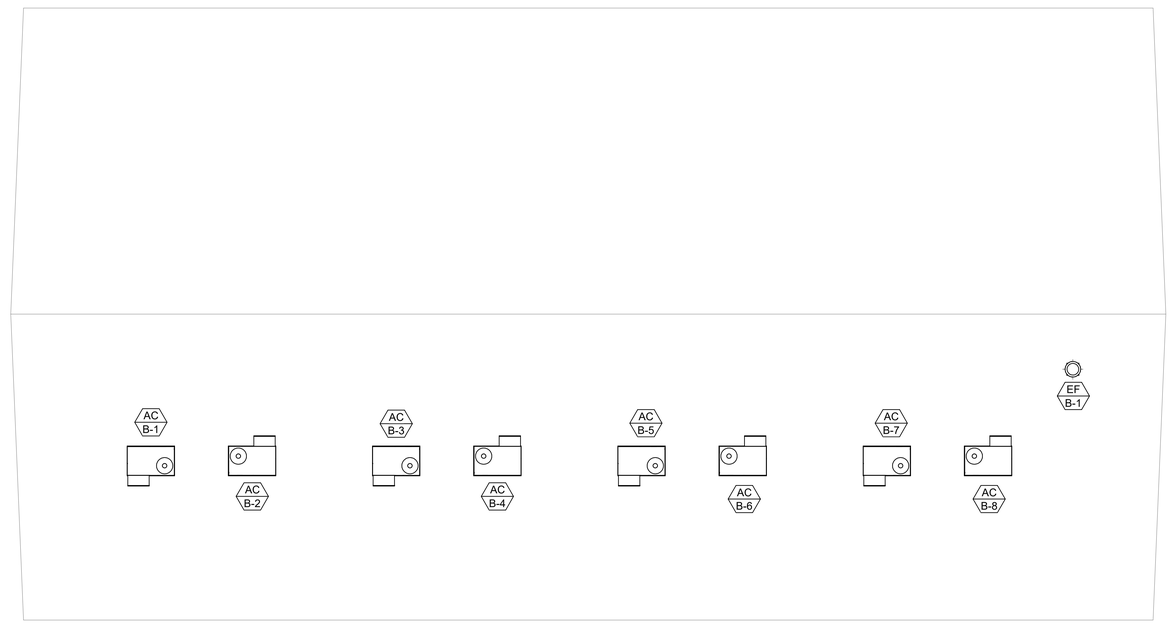
4 ROOF PLANS - ADMIN/KINDERGARTEN
1/8" = 1'-0"



3 ROOF PLAN - BUILDING A
1/8" = 1'-0"



2 ROOF PLAN - BUILDING C
1/8" = 1'-0"



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

DEMO NOTES

1. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT BEFORE COMMENCING WORK.
2. ALL MECHANICAL ROOFTOP EQUIPMENT TO BE DEMOLISHED. PATCH, REPAIR AND PAINT TO MATCH WITH EXISTING SURFACES

GENERAL NOTES

1. PROVIDE NEW ROOFTOP PACKAGE UNITS AND SPLIT DX SYSTEMS & ASSOCIATED CONTROLS, DUCTWORK AND GRILLES TO SERVE THE CLASSROOM BUILDINGS & ADMIN/KINDERGARTEN BUILDING.
2. PROVIDE NEW ROOFTOP EXHAUST FANS AND CEILING EXHAUST FANS & ASSOCIATED CONTROLS, DUCTWORK AND GRILLES TO SERVE THE RESTROOM AREAS
3. PROVIDE ALL NECESSARY CONTROLS REQUIRED TO CONNECT NEW ROOTOP PACKAGE UNITS, SPLIT DX UNITS & FANS TO EXISTING BMS
4. PROVIDE NEW LEVEL PLATFORMS AND BUILT UP ROOF CURBS FOR NEW ROOFTOP PACKAGE UNITS

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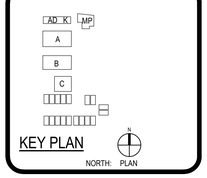

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MECHANICAL ROOF PLANS

M4.1

FILE PATH: Z:\Projects\...
6/19/2023 2:00:27 PM

ROOFTOP PACKAGED AIR CONDITIONING (HEAT PUMP) UNIT SCHEDULE

UNIT	MANUFACTURER & MODEL NO.	CFM	TONNAGE	TYPE	ESP (IN. WG)	COOLING CAP (MBH)		EVAP. ENT. AIR TEMP. (°F)		EVAP. LEAV. AIR TEMP. (°F)		ENT. COND. TEMP. (°F)			EER SEER	HEATING CAPACITIES (MBH)		COP		HSPF
						TOTAL	SENS.	DB	WB	DB	WB	SUMMER DB	SUMMER WB	WINTER DB		TOTAL	INTEGRATED	HIGH TEMP.	LOW TEMP.	
AC A-1	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-2	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-3	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-4	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-5	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-6	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-7	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC A-8	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-1	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-2	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-3	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-4	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-5	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-6	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-7	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC B-8	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC C-1	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC C-2	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC C-3	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC C-4	CARRIER 50FCQM05	1,600	4.0	VERTICAL	1.0	49.40	42.68	80.3	64.4	55.5	54.0	88.0	68.0	41.0	- 14.3	41.91	41.00	3.7	2.7	-
AC K-1	CARRIER 50FCQM07	2,400	6.0	VERTICAL	1.0	74.96	65.59	80.0	64.3	54.6	53.8	88.0	68.0	41.0	11.20 -	58.89	57.63	3.6	2.4	-
AC K-2	CARRIER 50FCQM07	2,400	6.0	VERTICAL	1.0	74.96	65.59	80.0	64.3	54.6	53.8	88.0	68.0	41.0	11.20 -	58.89	57.63	3.6	2.4	-

UNIT	INDOOR FAN				COMPRESSOR			POWER EXHAUST								ELECTRICAL									FILTERS (IN.) MERV 13	OPER. WT. (LBS)	OSA CFM	REMARKS
	NO.	RPM	HP/ BHP	DRIVE	NO.	RLA	LRA	PART #	CFM	HP	FLA	MCA	MOCP	V	PHASE	HZ	OPER. WT. (LBS)	OFM NO.	OFM (FLA)	IFM (FLA)	ELECTRIC HEATER (FLA)	V	PHASE	HZ	UNIT MCA	UNIT MCOP			
AC A-1	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-2	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-3	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-4	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-5	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-6	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-7	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC A-8	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-1	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-2	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-3	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-4	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-5	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-6	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-7	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC B-8	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC C-1	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC C-2	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC C-3	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC C-4	1	1680	0.51	-	1	13.7	83	PECD-SRT12CB-D2DH-2LH	1,600	1/2	3.9	4.9	8.8	230	3	60	191	1	-	-	-	230	3	60	24	30	(4) 16"x16"x2"	762	350	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC K-1	1	2008	0.84	-	1	18	136	PECD-SRT12CB-D2DH-2L1	2,400	1.0	6.4	8.0	14.4	230	3	60	191	1	-	-	-	230	3	60	32	45	(4) 16"x16"x2"	930	415	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A
AC K-2	1	2008	0.84	-	1	18	136	PECD-SRT12CB-D2DH-2L1	2,400	1.0	6.4	8.0	14.4	230	3	60	191	1	-	-	-	230	3	60	32	45	(4) 16"x16"x2"	930	440	(1) THRU (14) FOR ANCHORAGE SEE 18/SD2A

NOTES:

1. SCHEDULED LOADS INCLUDE FAN AND MOTOR HEAT.
2. PROVIDE ANTI-RECYCLE TIMER, CRANKCASE HEATER, LOW AMBIENT KIT AND HIGH CAPACITY FILTER RACK.
3. PROVIDE FACTORY "MICROMETL" MODULATING ECONOMIZER WITH POWER EXHAUST. AC UNIT SHALL HAVE C02 CONTROL. PROVIDE WITH LOCKING MESH COVER. POWER EXHAUST SHALL BE PROVIDED WITH A SEAPARTE DISCONNECT SWITCH. FIELD WIRED BY ELECTRICAL.
4. PROVIDE VIBRATION ISOLATORS.
5. BYPASS UNIT ANTI-RECYCLE TIMER WHEN ANTI-RECYCLE FUNCTION IS INCLUDED IN THE THERMOSTAT.
6. OVERALL SMOKE DETECTION SYSTEM PROVIDED BY ELECTRICAL FOR ALL UNITS TO SHUT-OFF UPON DETECTION OF SMOKE AND SIGNAL THE FIRE ALARM SYSTEM, INSTALL IN STRICT ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE, SECTION 608. REFER TO ELECTRICAL PLANS AND MECHANICAL TO CONNECT TO ELECTRICAL RELAY. PRIOR TO MECHANICAL PERMIT FINAL, A SMOKE DETECTOR SYSTEM SHUT-OFF TEST WILL BE REQUIRED.
7. PROVIDE WITH FACTORY MOUNTED NON-FUSED DISCONNECT SWITCH.
8. PROVIDE FACTORY CONDENSER COIL GUARDS.
9. PROVIDE T-24 COMPLIANT INTERNET PROGRAMMABLE THERMOSTAT "NT" MODEL 241003-000 WITH DEMAND CONTROL VENTILATION (DCV), C02 SENSORS AND CONNECT TO EXISTING EMS.
10. UNITS SHALL HAVE DUCT FLEX CONNECTIONS INSTALLED WITHIN ROOF CURB.
11. ALL AC UNITS SHALL HAVE R-410A REFRIGERANT.
12. PROVIDE WITH FACTORY MOUNTED NON-POWERED CONVENIENCE OUTLET.
13. WEIGHT INCLUDES RTU, POWER EXHAUST AND ROOF CURB.
14. UNIT SHALL BE INSTALLED ON LEVEL PLATFORM (PROVIDED BY OTHERS)

AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	MAKE & MODEL	DESCRIPTION
A	CEILING SUPPLY	TITUS MODEL MCD	MODULAR CORE DIFFUSER WITH FRAME FOR LAY-IN T-BAR CEILING, FLUSH FACE MOUNTING.
B	CEILING RETURN	TITUS MODEL PAR	PERFORATED FACE DIFFUSER WITH FRAME FOR LAY-IN T-BAR CEILING, FLUSH FACE MOUNTING.
C	CEILING SUPPLY	TITUS MODEL MCD	MODULAR CORE DIFFUSER WITH RAPID MOUNT FRAME MODEL TRM FOR SURFACE MOUNTING.
D	CEILING RETURN/EXHASUT	TITUS MODEL 50F	EGG CRATE GRILLE REGISTER WITH RAPID MOUNT FRAME TRM FOR SURFACE MOUNTING.
E	SIDEWALL SUPPLY/RETURN	TITUS MODEL 1700	DOUBLE DEFLECTION HORIZONTAL 5" DOWN FRONT GRILLE WITH 1/2" BLADE SPACING, FRAME FOR WALL MOUNTING.
F	CEILING SUPPLY	TITUS MODEL ML-38-2B	ALUMINUM LINEAR SLOT DIFFUSER, 3/4" SLOT,4-SLOT, PATTERN CONTROLLER, FLANGED BORDER FOR SURFACE MOUNTING, OPTIONAL PLENUM IN 2,3,4 OR 5 FOOT SECTIONS PER PLANS, COLOR PER ARCHITECT.

NOTES:
1. REFER TO THE FLOOR PLANS FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN AND FIRE/DAMPER, IF REQUIRED.
2. PROVIDE AIR CONTROL GRID FOR ALL CEILING SUPPLY DIFFUSERS SET AT 90°.

FANS SCHEDULE

UNIT	MANUFACTURER & MODEL NO.	SERVICE	TYPE	CFM	SP IN W.G.	FAN RPM	MOTOR HP/ BHP	MOTOR FLA	MOTOR VOLT	MOTOR PH	MOTOR HZ	SONES	OPER WT. (LBS)	REMARKS
EF K-2	GREENHECK SP-110-VG	BUILDING "ADM" MEN'S TOILET AD9	CEILING/SUSPENDED	70	0.25	-	-	0.29	115	1	60	-	15	(2) (3) (4) (7) FOR ANCHORAGE SEE 11/M6.1
EF K-3	GREENHECK SP-110-VG	BUILDING "ADM" WOMEN'S TOILET AD12	CEILING/SUSPENDED	70	0.25	-	-	0.29	115	1	60	-	15	(2) (3) (4) (7) FOR ANCHORAGE SEE 11/M6.1
EF A-1	GREENHECK GB-100-3	BUILDING "C1" GIRL'S TOILET C1-1	ROOF MOUNTED	1,250	0.5	-	1/3	-	115	1	60	-	58	(1) THRU (7) FOR ANCHORAGE SEE 19/SD3
EF B-1	GREENHECK GB-100-3	BUILDING "C2" BOY'S TOILET C2-1	ROOF MOUNTED	1,250	0.5	-	1/3	-	115	1	60	-	58	(1) THRU (7) FOR ANCHORAGE SEE 19/SD3
EF K-1	GREENHECK GB-098-6	BUILDING "C3" GIRL'S TOILET C3-1	ROOF MOUNTED	280	0.5	-	1/6	-	115	1	60	-	74	(1) THRU (7) FOR ANCHORAGE SEE 19/SD3
EF M-1	GREENHECK GB-100-4	BUILDING "C4" JANITORS C4-1	ROOF MOUNTED	780	0.5	-	1/4	-	115	1	60	-	72	(1) THRU (7) FOR ANCHORAGE SEE 19/SD3

NOTES:
1. PROVIDE FACTORY ROOF CURB. SLOPE TO MATCH EXISTING ROOF SLOPE, AS REQUIRED.
2. FAN SHALL OPERATE ON A TIME CLOCK SCHEDULE PROVIDED BY THE SCHOOL DISTRICT.
3. PROVIDE BACKDRAFT DAMPER FOR ALL FANS
4. PROVIDED FACTORY SOLID STATE CONTROLLER MOUNTED WITHIN THE FAN'S CASING.
5. PROVIDE CONTROL TRANSFORMER AND PRESSURE TRANSDUCER.
6. PROVIDE WITH MERV 13 FILTERS.
7. CONNECT TO EXISTING EMS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##-##

AD K MP
A
B
C
KEY PLAN N NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER REX DAVID RAMOS No.M36155 Exp.09-30-2024 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL SCHEDULES

M5.1

SUPPLY FAN SCHEDULE

UNIT	MANUFACTURER & MODEL NO.	SERVICE	TYPE	CFM	SP IN. W.G.	FAN RPM	DRIVE	MOTOR				SONES		OPER WT. (LBS)	REMARKS
								HP/ BHP	VOLT	PH	HZ	INLET	RADIATED		
SF K-1	GREENHECK SQ-97-VG	ADMIN/ KINDERGARTEN	CEILING SUSPENDED	180	0.75	1853	DIRECT	1/2 0.18	115	1	60	15.3	13.8	60	SEE NOTES BELOW. REFER TO STRUCTURAL DETAIL 4/SD3 FOR ANCHORAGE
SF C-1	GREENHECK SQ-97-VG	BLDG C	CEILING SUSPENDED	105	0.5	1364	DIRECT	1/4 0.07	115	1	60	9.5	9.1	55	SEE NOTES BELOW. REFER TO STRUCTURAL DETAIL 4/SD3 FOR ANCHORAGE

NOTES:
1. PROVIDE BACKDRAFT DAMPER FOR ALL FANS.
2. PROVIDE INTERLOCK WITH ALL RESPECTIVE FC UNITS.
3. PROVIDE CONTROL TRANSFORMER AND PRESSURE TRANSDUCER.
4. PROVIDE WITH MERV 13 FILTERS.

INDOOR FAN COIL UNIT SCHEDULE

UNIT	MANUFACTURER AND MODEL NO.	CAPACITY (MBH)		OSA TEMP. (°F)		EAT. (°F) (DB/WB)	LAT. (°F) (DB/WB)	SUPPLY FAN		ELECTRICAL			OPER. WT. (LBS.)	REMARKS
		COOLING (TOTAL/SENSIBLE)	HEATING	SUMMER (DB/WB)	WINTER (DB)			CFM	E.S.P. (IN.)	VOLTAGE	UNIT MCA	MOCP		
FC K-1	CARRIER 40MBCQ12	12.0	12.0	91.0/68.0	36.0	57.6	95	400 H 340 M 280 L	0.6	208V/ 1Ø / 60HZ	1.11	(6)	40	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3
FC K-2	CARRIER 40MBCQ12	12.0	12.0	91.0/68.0	36.0	57.6	95	400 H 340 M 280 L	0.6	208V/ 1Ø / 60HZ	1.11	(6)	40	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3
FC K-3	CARRIER 40MBCQ18	18.0	18.0	91.0/68.0	36.0	57.6	109.7	480 H 400 M 300 L	0.6	208V/ 1Ø / 60HZ	1.2	(6)	54	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3
FC K-4	CARRIER 40MBCQ12	12.0	12.0	91.0/68.0	36.0	57.6	109.7	400 H 340 M 280 L	0.6	208V/ 1Ø / 60HZ	1.11	(6)	40	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3
FC C-1	CARRIER 40MBCQ12	12.0	12.0	91.0/68.0	36.0	57.6	109.7	400 H 340 M 280 L	0.6	208V/ 1Ø / 60HZ	1.11	(6)	40	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3
FC C-2	CARRIER 40MBDQ24	24.0	24.0	91.0/68.0	36.0	63.1	87.4	780 H 700 M 440 L	0.6	208V/ 1Ø / 60HZ	1.2	(6)	87	(1)(2)(3)(4)(7) FOR ANCHORAGE SEE 4/SD3

NOTES:
1. PROVIDE WITH CONDENSATE DRAIN PAN (PRIMARY AND SECONDARY) FOR FAN COIL UNIT AND ASSOCIATED PIPING.
2. PROVIDE WITH FACTORY FURNISHED & INSTALLED CONDENSATE DRAIN LIFT PUMP (CONDENSATE PUMP SHALL BE POWERED THRU INDOOR FAN COIL UNIT).
3. SIZE REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS.
4. CONNECT TO EMS FOR CONTROLS.
5. CEILING MOUNTED FAN COIL UNIT.
6. CASSETTE TYPE DUCTLESS FAN COIL UNIT, POWERED BY OUTDOOR HEAT PUMP.
7. PROVIDE WITH MEDIUM STATIC MOTOR.

OUTDOOR HEAT PUMP UNIT SCHEDULE

UNIT	MANUFACTURER AND MODEL NO.	COOLING CAP. (MBH)		COP/ HSPF	AMB. TEMP.(°F)		E.E.R. I.E.E.R.	ELECTRICAL						OPER WT. (LBS)	REMARKS
		COOLING (TOTAL/SENSIBLE)	HEATING		SUMMER (DB/WB)	WINTER (DB)		COMPRESSOR QTY.	COMPRESSOR RLA	OUTDOOR FAN QTY.	MCA	MOCP	VOLTAGE		
HP K-1	CARRIER 38MARBQ12AA3	12.0	12.0	3.22/ 10.6	91.0/68.0	36.0	12.7 EER 21.5 SEER	1	8.5	1	15	15	208V / 1Ø / 60HZ	75	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1
HP K-2	CARRIER 38MARBQ12AA3	12.0	12.0	3.22/ 10.6	91.0/68.0	36.0	12.7 EER 21.5 SEER	1	8.5	1	15	15	208V / 1Ø / 60HZ	75	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1
HP K-3	CARRIER 38MARBQ18AA3	18.0	18.0	2.93/ 11.0	91.0/68.0	36.0	12.5 EER 19.6 SEER	1	14.5	1	16	25	208V / 1Ø / 60HZ	101	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1
HP K-4	CARRIER 38MARBQ12AA3	12.0	12.0	3.22/ 10.6	91.0/68.0	36.0	12.7 EER 21.5 SEER	1	8.5	1	15	15	208V / 1Ø / 60HZ	75	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1
HP C-1	CARRIER 38MARBQ12AA3	12.0	12.0	3.22/ 10.6	91.0/68.0	36.0	12.7 EER 21.5 SEER	1	8.5	1	15	15	208V / 1Ø / 60HZ	75	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1
HP C-2	CARRIER, 38MARBQ24AA3	24.0	24.0	3.66/ 12.6	91.0/68.0	36.0	12.5 EER 20.6 SEER	1	14.8	1	25	35	208V / 1Ø / 60HZ	135	(1) THRU (8) FOR ANCHORAGE SEE 6/M6.1

NOTES:
1. PROVIDE CRANKCASE HEATER, HIGH & LOW PRESSURE SWITCHES.
2. PROVIDE LOW AMBIENT KIT.
3. PROVIDE 3/4" EXPAND METAL CONDENSING COIL GUARD.
4. PROVIDE MINIMUM CLEARANCE AROUND EACH UNIT PER THE MANUFACTURER'S RECOMMENDATIONS.
5. SIZE REFRIGERANT (R410A) LINES PER MANUFACTURERS RECOMMENDATIONS. PROVIDE LONG LINE KIT IF REQUIRED.
6. PROVIDE HAIL-GUARD.
7. PROVIDE WITH HOUSEKEEPING PAD.
8. ALL HEAT PUMP UNITS ARE ROOF MOUNTED.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

ARCHITECT PBK Architects, Inc.
COSTA MESA
600 Anton Boulevard, Suite 375
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ##

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant
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Engineer
REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

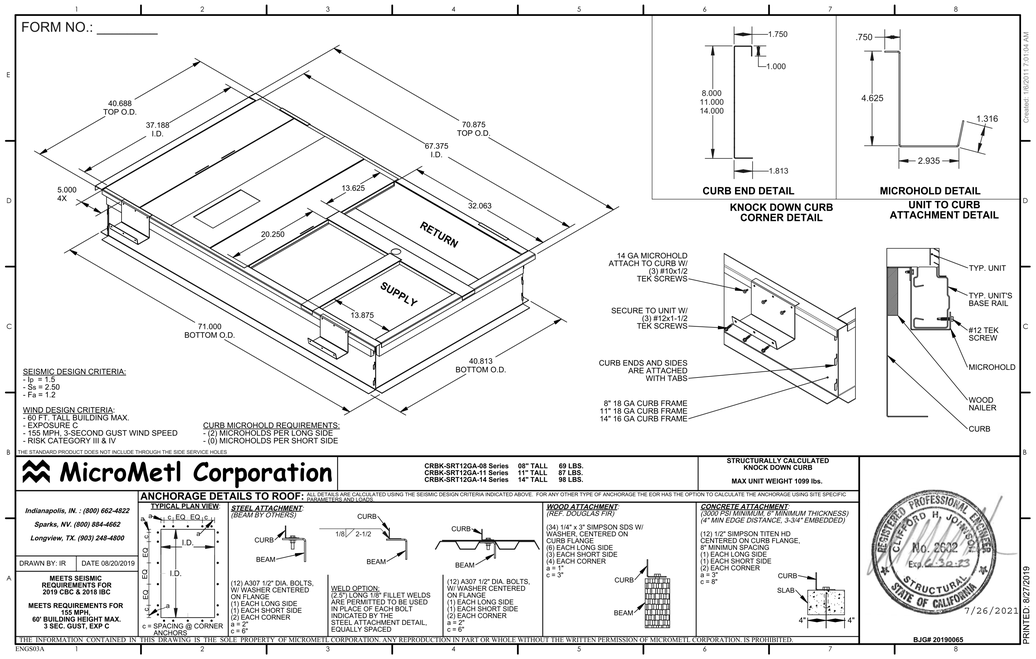
REVISIONS

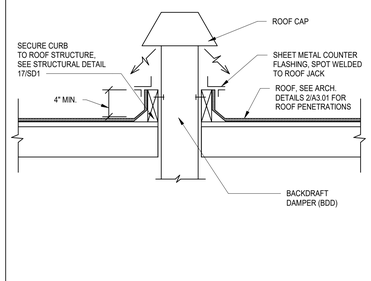
No.	Description	Date

DSA SUBMITTAL

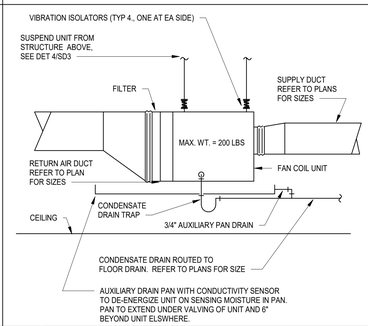
MECHANICAL SCHEDULES

M5.2





21 ROOF JACK DETAIL
NOT TO SCALE



20 DUCTED FAN COIL UNIT DETAIL
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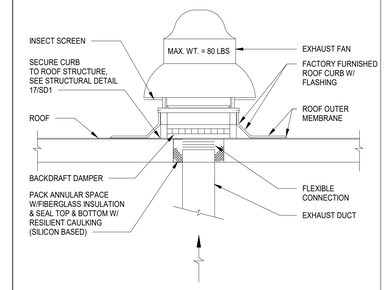
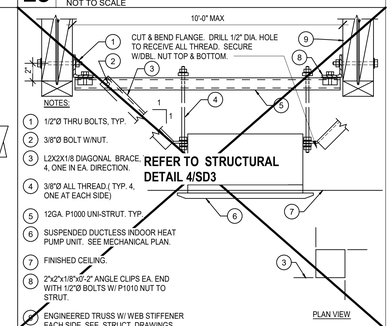


25 ROOF MOUNTED EXHAUST FAN DETAIL
NOT TO SCALE



19 DUCTLESS FAN COIL UNIT DETAIL
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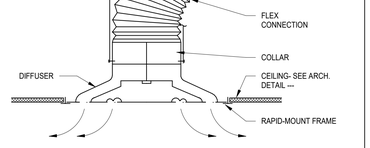
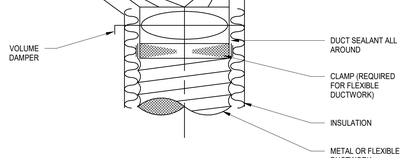
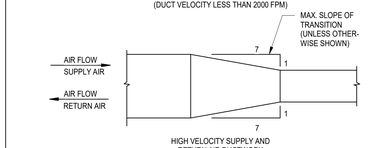


18 HARD LID DIFFUSER CONNECTION DETAIL
NOT TO SCALE

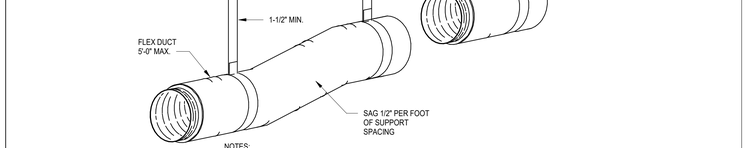
ROUND DUCT SIZE	BUCKLEY TAKE-OFF SIZE	MINIMUM MAIN DUCT DEPTH
6"	6"X12"	8"
8"	6"X12"	8"
9"	6"X14"	8"
10"	6 1/2" X16"	8 1/2"
12"	7 3/4"X18"	9 3/4"
14"	9"X20"	11"
16"	10"X20"	12"



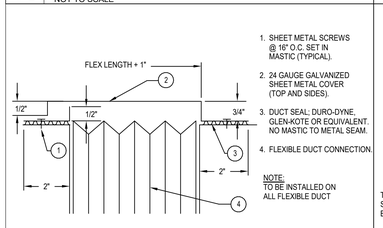
17 RECTANGULAR TO ROUND TRANSITION TAKE-OFF DETAIL
NOT TO SCALE



15 RECTANGULAR DUCT TRANSITION DETAIL
NOT TO SCALE



14 FLEXIBLE DUCTWORK HANGER DETAIL
NOT TO SCALE



12 FLEX CONNECTOR DETAIL
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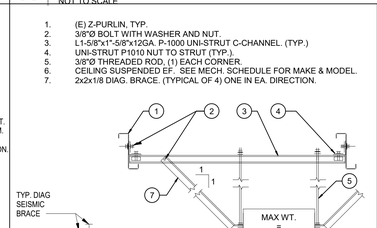
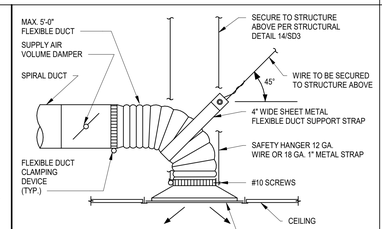
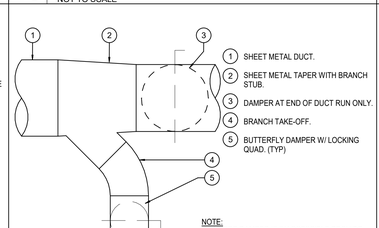


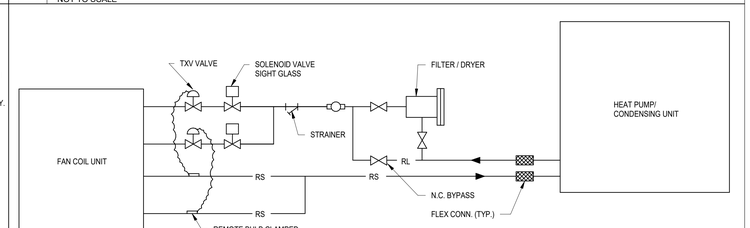
11 SUSPENDED EXHAUST FAN DETAIL
NOT TO SCALE



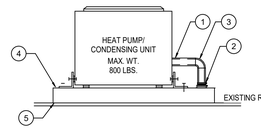
10 LAY IN DIFFUSER CONNECTION DETAIL
NOT TO SCALE



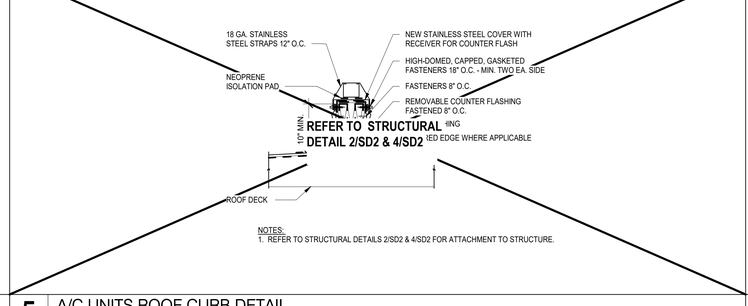
9 BRANCH DUCT DAMPER DETAIL
NOT TO SCALE



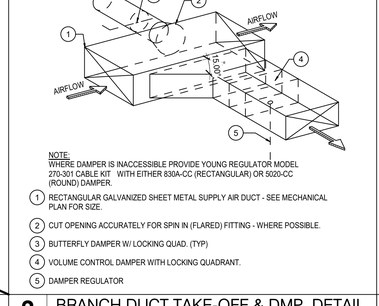
8 REFRIGERANT PIPING SCHEMATIC DETAIL
NOT TO SCALE



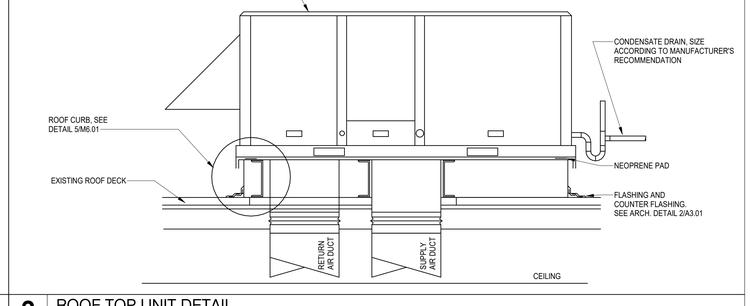
6 HP/CU ROOF MOUNTING DETAIL
NOT TO SCALE



5 A/C UNITS ROOF CURB DETAIL
NOT TO SCALE



3 BRANCH DUCT TAKE-OFF & DMP. DETAIL
NOT TO SCALE



2 ROOF TOP UNIT DETAIL
NOT TO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT
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PBK.com
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P 949-548-5000

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ###

AD K MP
A
B
C
KEY PLAN
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NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER REX DAVID IWAMA No.M36155 Exp.09-30-2024 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

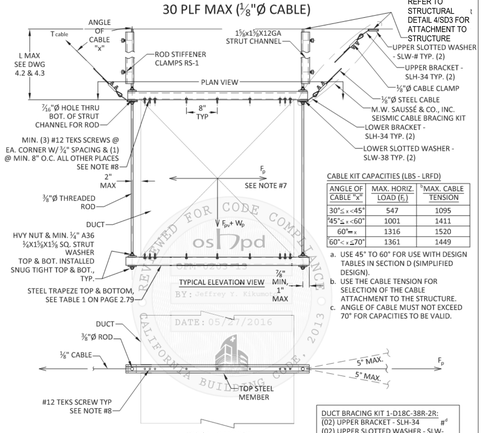
MECHANICAL DETAILS

M6.1

FILE PATH: Z:\Projects\...
6/19/2023 2:00:32 PM

CABLE BRACING SYSTEM - TRAPEZE HUNG DUCT - TRANSVERSE 30 PLF MAX (⅛"Ø CABLE)

REFER TO STRUCTURAL DETAIL 4/SD3 FOR ATTACHMENT TO STRUCTURE



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_h)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

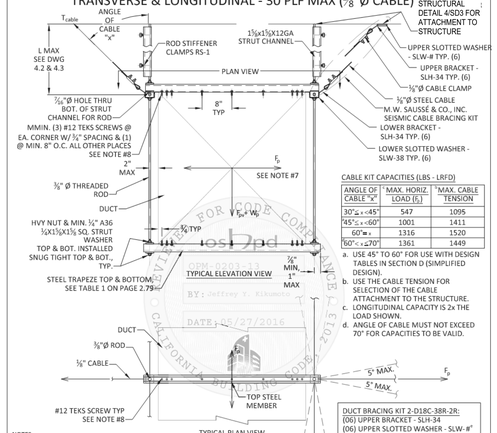
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.
d. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

DUCT BRACING KIT 1-D18C-38R-2R:
(02) UPPER BRACKET - SLH-34
(02) UPPER SLOTTED WASHER - SLW-#
(02) LOWER BRACKET - SLH-34
(02) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(02) ⅛" CABLE - 10 FT.
(04) ⅛" CABLE CLAMPS

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PG 4.5
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. RDP SHALL CONSIDER THE ECCENTRIC LOAD DISTRIBUTION WHEN DETERMINING THE F_p VALUE USED IN THE DESIGN.
8. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - TRAPEZE HUNG DUCT TRANSVERSE & LONGITUDINAL - 30 PLF MAX (⅜"Ø CABLE)

REFER TO STRUCTURAL DETAIL 4/SD3 FOR ATTACHMENT TO STRUCTURE



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_h)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

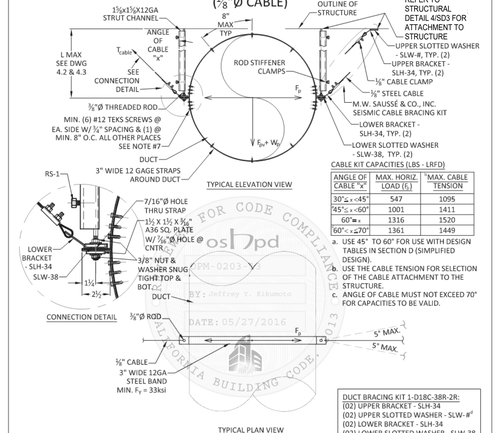
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. LONGITUDINAL CAPACITY IS 2x THE LOAD SHOWN.
d. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.
e. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

DUCT BRACING KIT 2-D18C-38R-2R:
(06) UPPER BRACKET - SLH-34
(06) UPPER SLOTTED WASHER - SLW-#
(06) LOWER BRACKET - SLH-34
(06) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(06) ⅛" CABLE - 10 FT.
(12) ⅛" CABLE CLAMPS

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PG 4.5
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. RDP SHALL CONSIDER THE ECCENTRIC LOAD DISTRIBUTION WHEN DETERMINING THE F_p VALUE USED IN THE DESIGN.
8. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - HUNG ROUND DUCT - TRANSVERSE - 30 PLF MAX (⅛"Ø CABLE)

REFER TO STRUCTURAL DETAIL 4/SD3 FOR ATTACHMENT TO STRUCTURE



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_h)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

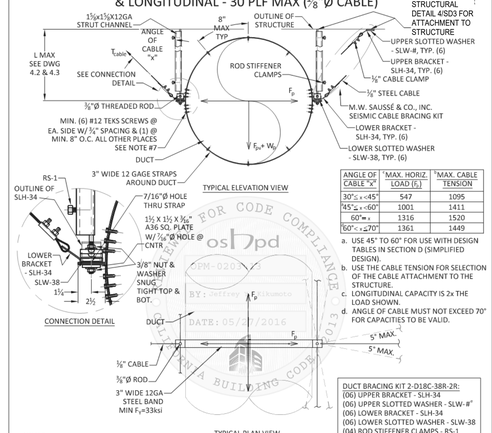
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.
d. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

DUCT BRACING KIT 1-D18C-38R-2R:
(02) UPPER BRACKET - SLH-34
(02) UPPER SLOTTED WASHER - SLW-#
(02) LOWER BRACKET - SLH-34
(02) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(02) ⅛" CABLE - 10 FT.
(04) ⅛" CABLE CLAMPS

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PAGE 4.5.
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - HUNG ROUND DUCT TRANSVERSE & LONGITUDINAL - 30 PLF MAX (⅜"Ø CABLE)

REFER TO STRUCTURAL DETAIL 4/SD3 FOR ATTACHMENT TO STRUCTURE



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_h)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. LONGITUDINAL CAPACITY IS 2x THE LOAD SHOWN.
d. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.
e. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

DUCT BRACING KIT 2-D18C-38R-2R:
(06) UPPER BRACKET - SLH-34
(06) UPPER SLOTTED WASHER - SLW-#
(06) LOWER BRACKET - SLH-34
(06) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(06) ⅛" CABLE - 10 FT.
(12) ⅛" CABLE CLAMPS

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PAGE 4.5.
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

RS-1 - ROD STIFFENER DETAILS & REQUIREMENTS

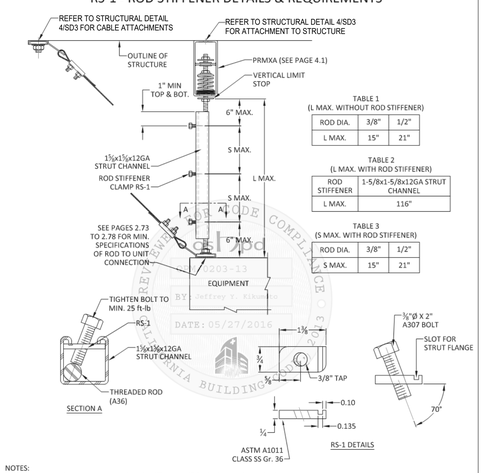


TABLE 1
(L MAX. WITHOUT ROD STIFFENER)

ROD DIA.	3/8"	1/2"
L MAX.	15"	21"

TABLE 2
(L MAX. WITH ROD STIFFENER)

ROD STIFFENER	1-5/8x1-5/8x12GA STRUT CHANNEL
L MAX.	116"

TABLE 3
(S MAX. WITH ROD STIFFENER)

ROD DIA.	3/8"	1/2"
S MAX.	15"	21"

NOTES:
1. SEE TABLE 1 FOR MAXIMUM LENGTH OF ⅜" THRU ¾"Ø RODS WITHOUT ROD STIFFENER.
2. SEE TABLE 2 FOR MAXIMUM LENGTH OF ⅜" THRU ¾"Ø RODS WITH ROD STIFFENER.
3. SEE TABLE 3 TO DETERMINE NUMBER OF ROD STIFFENER CLIPS REQUIRED.
4. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD.
5. SEE SECTION 3 FOR STRUCTURAL ATTACHMENTS FOR HANGER BOX AND CABLE BRACING

RS-1 - ROD STIFFENER DETAILS & REQUIREMENTS

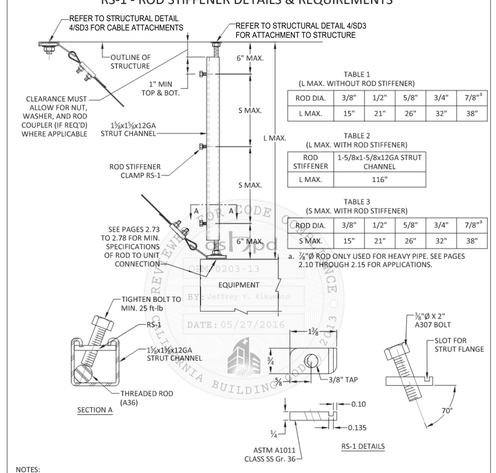


TABLE 1
(L MAX. WITHOUT ROD STIFFENER)

ROD DIA.	3/8"	1/2"	5/8"	3/4"	7/8"[a]
L MAX.	15"	21"	26"	32"	38"

TABLE 2
(L MAX. WITH ROD STIFFENER)

ROD STIFFENER	1-5/8x1-5/8x12GA STRUT CHANNEL
L MAX.	116"

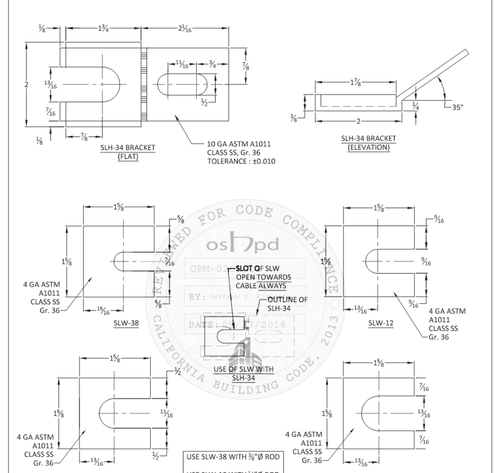
TABLE 3
(S MAX. WITH ROD STIFFENER)

ROD DIA.	3/8"	1/2"	5/8"	3/4"	7/8"[a]
S MAX.	15"	21"	26"	32"	38"

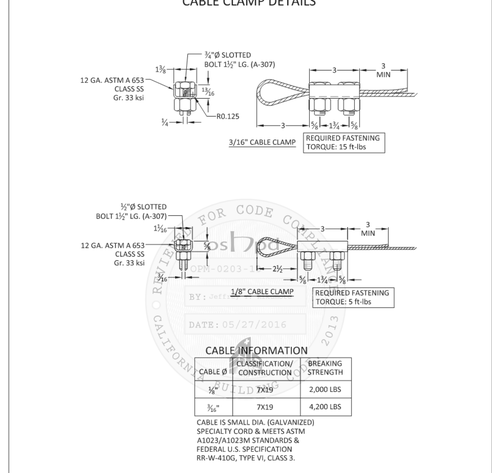
a. ⅞"Ø ROD ONLY USED FOR HEAVY PIPE. SEE PAGES 2.10 THROUGH 2.15 FOR APPLICATIONS.

NOTES:
1. SEE TABLE 1 FOR MAXIMUM LENGTH OF ⅜" THRU ¾"Ø RODS WITHOUT ROD STIFFENER.
2. SEE TABLE 2 FOR MAXIMUM LENGTH OF ⅜" THRU ¾"Ø RODS WITH ROD STIFFENER.
3. SEE TABLE 3 TO DETERMINE NUMBER OF ROD STIFFENER CLIPS REQUIRED.
4. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD.
5. SEE SECTION 3 FOR STRUCTURAL ATTACHMENTS FOR HANGER BOX AND CABLE BRACING

SLH-34 & SLW-38, 12, 58, & 34 DETAILS



CABLE CLAMP DETAILS



CABLE INFORMATION

CABLE Ø	CLASS/DESCRIPTION/ CONSTRUCTION	BREAKING STRENGTH
⅛"	7X19	2,000 LBS
³⁄₁₆"	7X19	4,200 LBS

CABLE IS SMALL DIA. (GALVANIZED) SPECIALTY CORD & MEETS ASTM A1023/A1023M STANDARDS & FEDERAL U.S. SPECIFICATION RR-W-410G, TYPE VI, CLASS 3.

1 PRE-APPROVED OPM HANGER DETAILS
NOT TO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Homer St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: ###

AD K MP
A
B
C
KEY PLAN
N
NORTH: PLAN

Consultant
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

Engineer
REGISTERED PROFESSIONAL ENGINEER REA. DAVID WANG No.M36155 Exp.:09-30-2024 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-28-2022
PROJECT NUMBER 220307

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL DETAILS

M6.2

E0.0 - ELECTRICAL SHEET INDEX, LEGEND, AND NOTES

ELECTRICAL SYMBOL LEGEND

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. DASHED ELEECTRICAL EQUIPMENT GENERALLY INDICATES EXISTING EQUIPMENT.
3. LONG-SHORT-SHORT-LONG DASHING GENERALLY INDICATES MATCH LINE OR DEFINES AREA FOR SPECIAL NOTE.

CIRCUIT RELATED:

LIGHTING OR POWER CIRCUIT(S). ARROW INDICATES HOME RUN, LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING, SLASH THROUGH ARROW INDICATES PARTIAL CIRCUIT, "D" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT: PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET; COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THHN/THWN CONDUCTORS IN A SINGLE RACEWAY; GROUNDING CONDUCTOR IS NOT COUNTED.
NOTE: HOMERUN INDICATES INSTALLATION OF NEW WIRE AND CONDUIT (#12 WIRE, 3/4"C, UNLESS OTHERWISE NOTED) FROM SOURCE PANELBOARD TO LOAD. HOMERUN INDICATES CONNECTION OF NEW LOADS TO EXISTING CIRCUITS IN LIEU OF PANELBOARD WHERE NOTED ON PLANS.

JUNCTION BOX

GROUNDING FIXTURE

LIGHTING:

LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, CROSS HATCHING INDICATES FIXTURE ON EMERGENCY SYSTEM, FOR SOLID CIRCLE WITHIN FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

STRIP TYPE LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE ATTACHED TO FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

DESIGNATES FIXTURE ON EMERGENCY POWER. RE: LIGHTING PLAN NOTES AND FIXTURE SCHEDULE NOTES FOR ADDITIONAL INFORMATION

WALL OR BRACKET MOUNTED FIXTURE OR DEVICE

EXIT LIGHT FIXTURE. LETTER INDICATES TYPE, NUMBER INDICATES CIRCUIT, NUMBER AND LOCATION OF SHADED TRIANGLE SECTIONS INDICATE NUMBER OF EXIT SIGN FACES AND DIRECTION OF EACH FACE. PROVIDE CHEVRON DIRECTIONAL INDICATORS AS SHOWN ON DRAWINGS

CONTROL:

$ — SWITCH. SMALL LETTER INDICATES FIXTURES CONTROLLED, "P" INDICATES PILOT LIGHT, "WP" INDICATES WEATHERPROOF, "K" INDICATES KEY POERATED, "MO" INDICATES SPDT MOMENTARY CONTACT, "2" INDICATES DPDT, "3" INDICATES 3-WAY, "4" INDICATES 4-WAY, "M" INDICATES MANUAL MOTOR STARTER, CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER

$D — WALL BOX DIMMER SWITCH. "MARK" INDICATES WATTAGE IF OTHER THAN 600, "3D" INDICATES 3-WAY DIMMER

$$ — MULTI-LEVEL SWITCH. CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER

$T — DIGITAL TIME SWITCH

PC — PHOTOELECTRIC CONTROL

EMERGENCY POWER OFF (EPO) PUSHBUTTON

PUSH BUTTON

$OC — WALL MOUNT OCCUPANCY SENSOR

$OC/D — WALL MOUNT OCCUPANCY SENSOR WITH DIMMING CONTROLS

DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR

R — CEILING MOUNTED RESTROOM OCCUPANCY SENSOR

C — CEILING MOUNTED CORRIDOR OCCUPANCY SENSOR

HB — CEILING MOUNTED HIGH CEILING OCCUPANCY SENSOR

POWER OUTLETS:

20A-125V DUPLEX RECEPTACLE

20A-125V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE. "WP" INDICATES WEATHER PROOF DEVICE

20A-125V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP. REFER TO ARCHITECT FOR EXACT HEIGHT ABOVE COUNTER

C — 20A-125V CONTROLLED DUPLEX RECEPTACLE

20A-125V ISOLATED GROUND TYPE DUPLEX RECEPTACLE

CH — 20A-125V DUPLEX TAMPER RESISTANT RECEPTACLE WITH (2) USB CHARGING PORTS

20A-125V FOURPLEX RECEPTACLE. SAME SYMBOLOGY AS DUPLEX RECEPTACLE

SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED, RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED), "C" INDICATES CLOCK OUTLET

20A-125V FLUSH FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. PROVIDE CARPED FLANGE WHERE APPLICABLE

LC1-X — CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. SEE PANEL SCHEDULES FOR INFORMATION.

TELEPHONE/DATA:

FLUSH FLOOR TELEPHONE OUTLET WITH CARPET FLANGE WHERE APPLICABLE

WALL COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS

FLUSH FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

SURFACE FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

EQUIPMENT:

+42" — A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE

MOTOR

DISCONNECT SWITCH. FRAME SIZE/FUSE SIZE/POLES AS INDICATED, "NF" INDICATES NON-FUSIBLE. NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY. ALL DISCONNECT SWITCHES SHALL BE 30/NF/3 UNLESS OTHERWISE NOTED

SINGLE CIRCUIT BREAKER IN INDIVIDUAL ENCLOSURE

MAGNETIC MOTOR CONTROLLER. NUMBER INDICATES NEMA SIZE. STARTER NEMA SIZE SHALL BE "NEMA 1" UNLESS OTHERWISE NOTED

COMBINATION DISCONNECT SWITCH / MOTOR CONTROLLER

CONTACTOR

PANELBOARD

SWITCHBOARD / DP

T — TRANSFORMER

GROUNDING CONNECTION TO GROUNDING ELECTRODE AS DEFINED IN CEC ARTICLE 250

B — BELL. "WP" INDICATED OUTDOOR RATED

REMODEL:

(E) — EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.

(R) — EXISTING EQUIPMENT WITH "R" ADJACENT IS TO BE COMPLETELY DISCONNECTED AND REMOVED.

(RR) — EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.

(ER) — EQUIPMENT WITH "ER" ADJACENT IS RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.

NO TAG INDICATES NEW EQUIPMENT.

(E) PNL-CKT — CIRCUIT DESIGNATION WITH PREFIX "(E)" DENOTES EXISTING CIRCUIT AND EQUIPMENT IS TO REMAIN.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS AND ADDENDA (DRAWINGS AND SPECIFICATIONS.) HE SHALL CHECK THE CONTRACT DOCUMENTS OF THE OTHER TRADES AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM COMPLETING ALL RESPONSIBLE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
4. ALL ELECTRICAL WORK REFERENCED HEREIN SHALL BE COORDINATED WITH OTHER TRADES AND SITE CONDITIONS. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS, BRANCH CIRCUITS OR SIGNAL AND COMMUNICATIONS SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION.
6. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE AND OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANEL BOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.
7. AFTER ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS HAVE BEEN FULLY COMPLETED. REPRESENTATIVES OF THE OWNERS WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCETANCE FROM EACH REPRESENTATIVE.
8. FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF PUNCH LIST COMPLETION.
9. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
10. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE OR MASONARY WALLS, GRADEBEAMS, FLOORS OR STRUCTURAL STEEL MEMBER SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL. FLOOR OR CEILING EXACT METHOD AND LOCATION OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.
11. FINAL CONNECTIONS TO VIBRATING EQUIPMENT AND AT SEISMIC SEPARATIONS SHALL BE FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS, AND LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS.
12. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE.
13. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING, ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
14. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED WALLS, OR 24" MINIMUM BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.
15. LOCATE ELECTRICAL EQUIPMENT AND BOXES IN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS. ACCESS DOORS SHALL BE A MINIMUM DIMENSION OF 24" x 24" ACCESS DOOR LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
16. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILING TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
17. WHENEVER A DISCREPANCY OF ANY SYSTEM AND/OR EQUIPMENT ARISES ON THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.
18. STRAIGHT FEEDER BRANCH CIRCUIT AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS.
19. PANEL SCHEDULES SHALL BE REVISED TO REFLECT FINAL ROOM NAMES AND NUMBERS USING OWNER'S ROOM NAMES AND NUMBERS DESIGNATIONS. CONTRACTOR TO PROVIDE FINAL PANEL SCHEDULE TO EEOR AT COMPLETION OF PROJECT.
20. WHERE OUTLETS OCCUR AT TACKABLE WALL PANELS OR OTHER WALL FINISHES. PROVIDE EXTENSION RINGS AS REQUIRED SO THAT NO SPACE WILL EXIST BETWEEN DEVICE PLATE AND BACKBOX PER CALIFORNIA ELECTRICAL CODE 314.20 SEE ARCHITECTURAL ELEVATIONS FOR WALL FINISHES AND LOCATIONS.
21. COORDINATE LOCATIONS OF ALL SEISMIC SEPARATIONS.
22. ALL 120V POWER REQUIRED FOR THE FUNCTIONALITY OF ALL LOW VOLTAGE / TECHNOLOGY SYSTEMS SHALL BE A DEDICATED CIRCUIT AND ON EMERGENCY POWER WHEN AVAILABLE. CABLING CONTRACTOR SHALL COORDINATE ALL 120V POWER REQUIREMENTS AND LOCATIONS WITH ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT.
23. SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AS ESTABLISHED BY THE EIA AND THE CEC.
24. ALL AC POWER CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM TECHNOLOGY LOW VOLTAGE CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
25. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
26. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
27. ALL CONDUCTORS SHALL BE UL LISTED, COPPER #12 MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY, UNLESS NOTED OTHERWISE.
28. ALL CABLING SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH MAXIMUM 40% CABLE FILL. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERIOR & 1" EXTERIOR.
29. ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED.

UTILITY PENETRATIONS NOTE

UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED UL LISTED SYSTEM OR MATERIAL.

STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILING, OR AREA SEPARATION UNLESS THEY:

1. OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER IN THIS CASE , ONLY ONE OUTLET BOX NEEDS TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.
2. OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED TO BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

FIRESTOPPING MATERIAL:
MPP-1 MOLDABLE PUTTY PADS

3M CONTRACTOR PRODUCTS
MINNEAPOLIS,
MN 3M TEST REPORT NO. 1167
DATED AUGUST 21, 1987

FLAMESAFE FSP 1077 FIRESTOP PADS
INTERNATIONAL PROTECTIVE COATINGS
OAKHURST, NJ

FSP FIRESTOP PUTTY PADS
HEVI-DUTY NELSON PRODUCTS
TULSA, OK

STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020 *
2022 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 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 (CALGREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE, 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: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

EQUIPMENT ANCHORAGE NOTES

MEP COMPONENT ANCHORAGE NOTES:

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

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 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:

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND 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 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 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 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 FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY 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 & DETAILS.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #____________.

SHEET INDEX

SHEET	DESCRIPTION
E0.0	ELECTRICAL SHEET INDEX, LEGEND, AND NOTES
E0.1	ELECTRICAL TITLE 24
E1.0	ELECTRICAL SITE PLAN
E2.1	ELECTRICAL POWER PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C
E2.2	ELECTRICAL LIGHTING PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C
E4.1	ELECTRICAL ROOF PLANS
E5.1	ELECTRICAL SINGLE LINE DIAGRAM
E5.2	ELECTRICAL PANEL SCHEDULES
E6.1	ELECTRICAL DETAILS

DIAGRAMMATIC NOTE

DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE DETAILED CONDUIT ROUTING OR LENGTHS REQUIRED FOR COMPLETE INSTALLATION. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR BUT SHALL BE IN STRICT COMPLIANCE WITH STRUCTURAL REQUIREMENTS, CONTRACT DOCUMENTS AND SPECS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL AND/OR MECHANICAL ITEMS OR FEATURES. REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR FEATURES, REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR DIMENSIONS.

DEVICE LOCATIONS NOTE

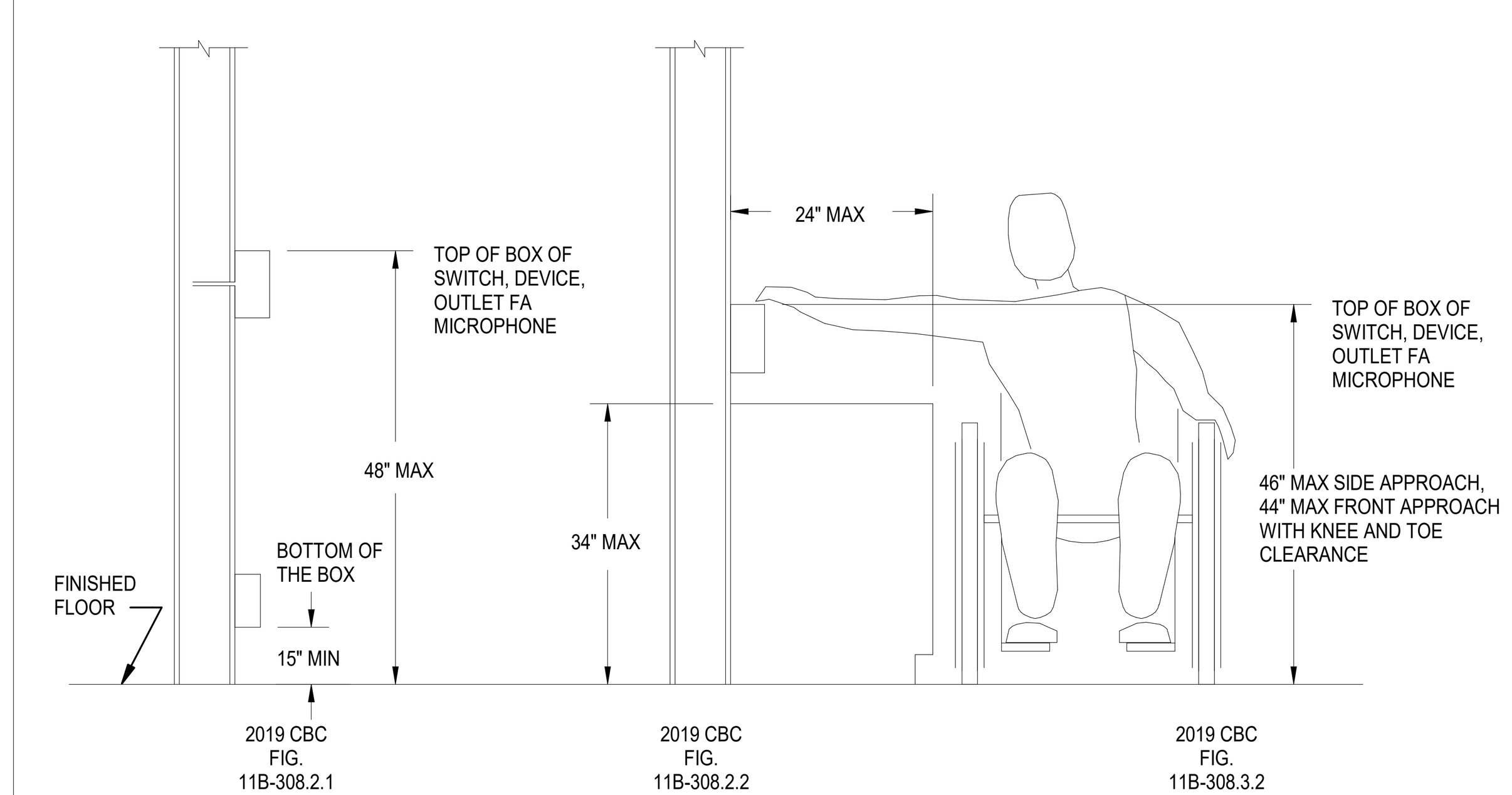
THE LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN, UNLESS OTHERWISE NOTED. ELECTRICAL DEVICES SHALL BE MOUNTED PER "ACCESSIBLE DEVICE MOUNTING HEIGHT" DETAIL.

COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT, DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS.. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

STRUCTURAL NOTE

UNLESS SPECIFICALLY SHOWN ON THESE PLANS, STRUCTURAL MEMBERS SHALL NOT BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

MOUNTING OVER OBSTRUCTION DETAIL



NOTE:

1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

UL LISTINGS NOTE

ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATIES (UL) AND BEAR THEIR LABEL OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY.

ALL EQUIPMENT/DEVICES INSTALLED RECESSED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED UL LISTED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT — PBK Architects, Inc.
COSTA MESA
PBK.com
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Costa Mesa, CA 92626
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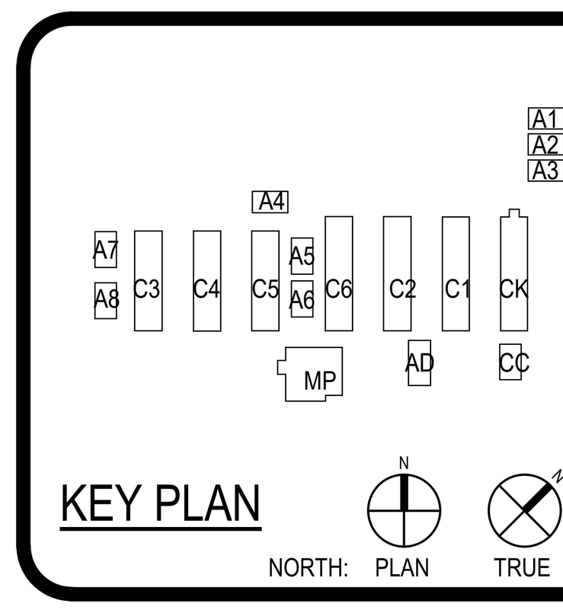
CONSULTANT — LEAF Engineers
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL SHEET INDEX, LEGEND, AND NOTES

E0.0

FILE PATH: Z:\Projects\...
5/11/2023 11:47:02 AM

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path.		
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 1 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminster	04	Total Conditioned Floor Area (ft²)	22,563
02	Climate Zone	6	05	Total Unconditioned Floor Area (ft²)	
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

☐ Office ☐ Retail ☐ Warehouse ☐ Hotel/Motel ☑ School ☐ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (write in):

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☑ Altered Lighting System	Complete Building	22,563		
Total Area of Work (ft²)	**22,563**			

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1.	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)					Compliance Results
	01	02	03	04		05	06	07		08		09
	Complete Building §140.6(c1)	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Control Credits §140.6(a)2 (-)	=	**Total Adjusted** (Watts) *Includes Adjustments		**05 Must be ≥ 08** §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)				
Conditioned:	14,015.95				=	**14,015.95**	≥ 9,399		=	**9,399**		**COMPLIES**
Unconditioned:					=		≥		=			

Table Continued

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 2 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

Controls Compliance (See Table H for Details)	**COMPLIES**
Rated Power Reduction Compliance (See Table Q for Details)	**Not Applicable**

D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. INDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: Include all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watts	Field Inspector	
									Pass	Fail
FX-A & C	2x4 TROFFER	☐	☐	38	Mfr. Spec[2]	221	☐	8,398	☐	☐
FX-B & E	1x4 TROFFER	☐	☐	37	Mfr. Spec[2]	26	☐	962	☐	☐
FX-D	7" DOWNLIGHT	☐	☐	13	Mfr. Spec[2]	3	☐	39	☐	☐
							Total Designed Watts CONDITIONED SPACES:	**9,399**		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*
[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This Section Does Not Apply

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 3 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

*Table Instructions: Please include lighting controls for conditioned and unconditioned spaces in this table. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-Off Controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
CLASSROOM	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
ADMIN	Office Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
RESTROOM	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. *EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*	13 Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Table Instructions: Complete the table for each area complying using the Complete Building or Area Category Methods per §140.6(b). Indicate if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment	
					Area Category	PAF
CLASSROOM	School Building	0.65	21,563	14,015.95	☐	☐
		TOTAL:	**21,563**	**14,015.95**	See Tables J or P for detail	

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 4 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment	
					Area Category	PAF

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
This Section Does Not Apply

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
This Section Does Not Apply

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS
This Section Does Not Apply

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
This Section Does Not Apply

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
This Section Does Not Apply

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
This Section Does Not Apply

R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIONS
This Section Does Not Apply

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 5 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
This Section Does Not Apply

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
○	◉	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐
○	◉	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐	☐
◉	○	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐	☐
○	◉	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	☐	☐
○	◉	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) — CALIFORNIA ENERGY COMMISSION — NRCC-LTI-E

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Schmitt Elementary - HVAC Upgrade & Modernization	Report Page:	Page 6 of 6
Project Address: 14142 HOOVER ST. WESTMINSTER CA. 92683	Date Prepared:	12-15-2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	NICOLE OROPEZA	Documentation Author Signature:	Nicole Oropeza
Company:	LEAF ENGINEERS	Signature Date:	12-15-2022
Address:	8163 ROCHESTER AVE.	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	RANCHO CUCAMONGA, CA. 91730	Phone:	909-987-0909

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:	RONALD DELA CRUZ	Responsible Designer Signature:	
Company :	LEAF ENGINEERS	Date Signed:	12-15-2022
Address:	8163 ROCHESTER AVE.	License:	E23576
City/State/Zip:	RANCHO CUCAMONGA, CA. 91730	Phone:	909-987-0909

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

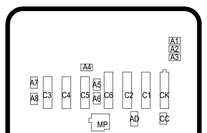
CONSULTANT LEAF Engineers
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN TRUE

Consultant
REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp: 03-30-2023 STATE OF ELECTRICITY STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL TITLE 24

E0.1

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E1.0 - ELECTRICAL SITE PLAN

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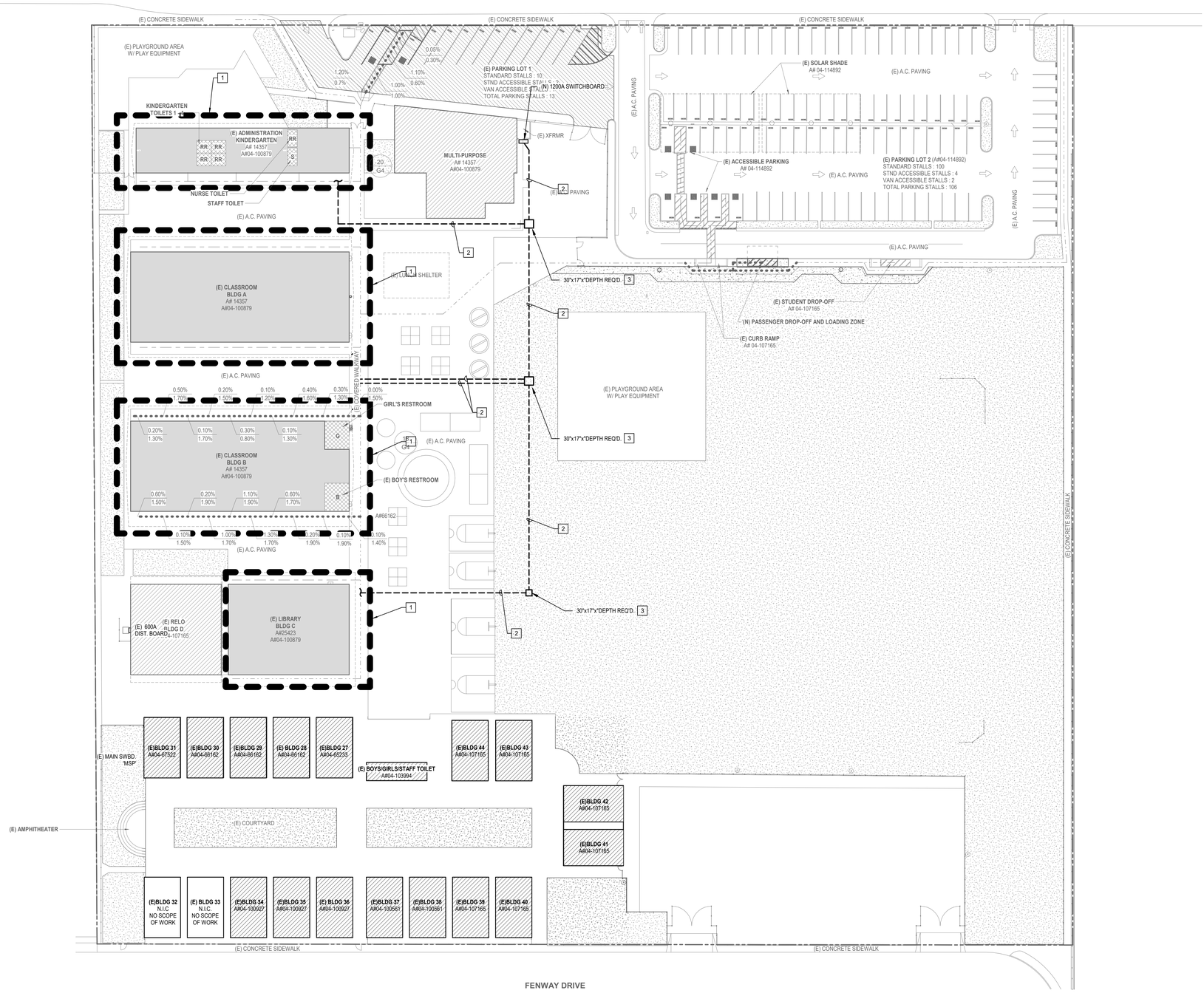

1 SITE PLAN
1" = 30'-0"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ELECTRICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS, AND FIELD VISIT OF THE ELECTRICAL SYSTEM. IN CASE OF ANY DISCREPANCIES WITH EXISTING FIELD CONDITIONS, ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE ELECTRICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.
3. COORDINATE ROUTING FOR ALL UNDERGROUND ELECTRICAL BRANCH CIRCUITS AND FEEDERS WITH OTHER DISCIPLINES PRIOR TO TRENCHING.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY INSTALLATION OF NEW WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE TO DEMOLISH TEMPORARY INFRASTRUCTURE SERVING THE INTERIM HOUSING AND BRING IT BACK TO ORIGINAL CONDITION, UPON COMPLETION OF THE MODERNIZATION PROJECT.

KEY NOTES

1. SEE ENLARGED PLANS ON SHEETS E2.1 & E2.2 FOR MORE INFORMATION.
2. SEE SINGLE LINE DIAGRAM ON SHEET E5.1 FOR SIZING.
3. PROVIDE NEW HEAVY DUTY TRAFFIC RATED IN-GROUND PULLBOX.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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CONSULTANT LEAF Engineers
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8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
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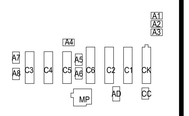
leafengineers.com

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23076
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

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ELECTRICAL SITE PLAN

E1.0

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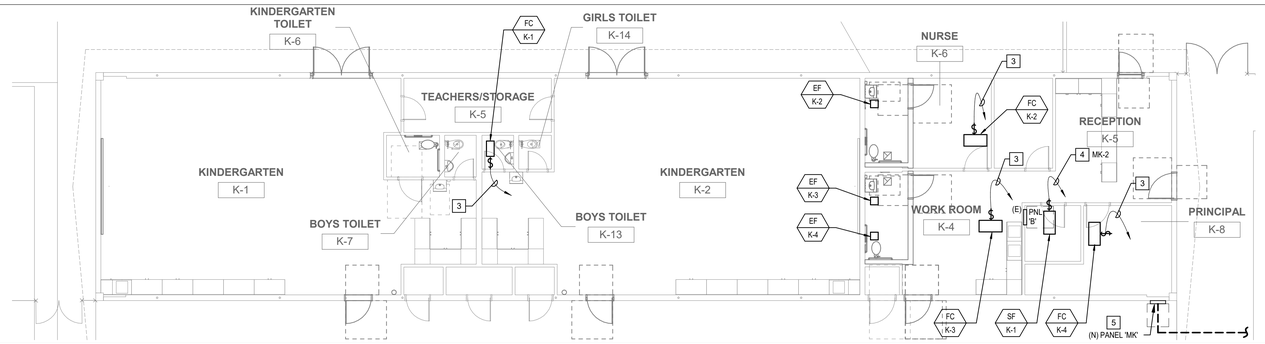
0" 1"

E2.1 - ELECTRICAL POWER PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

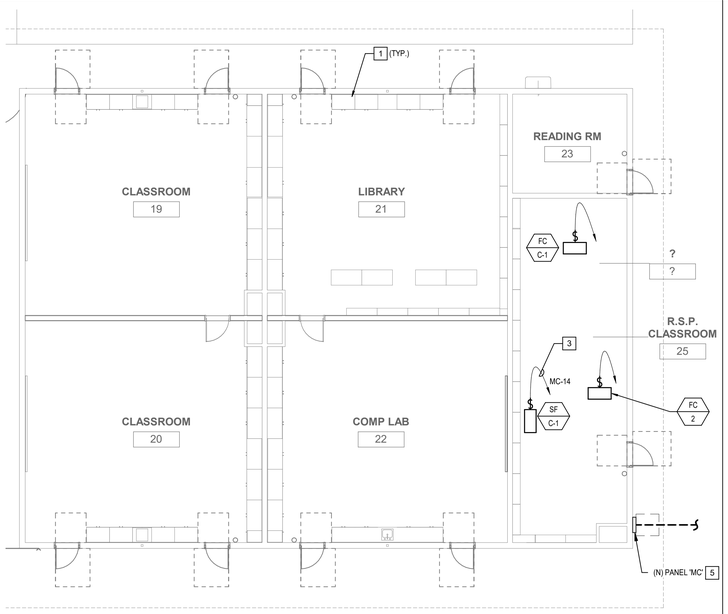


4 POWER PLAN - ADMIN/KINDERGARTEN

1/8" = 1'-0"

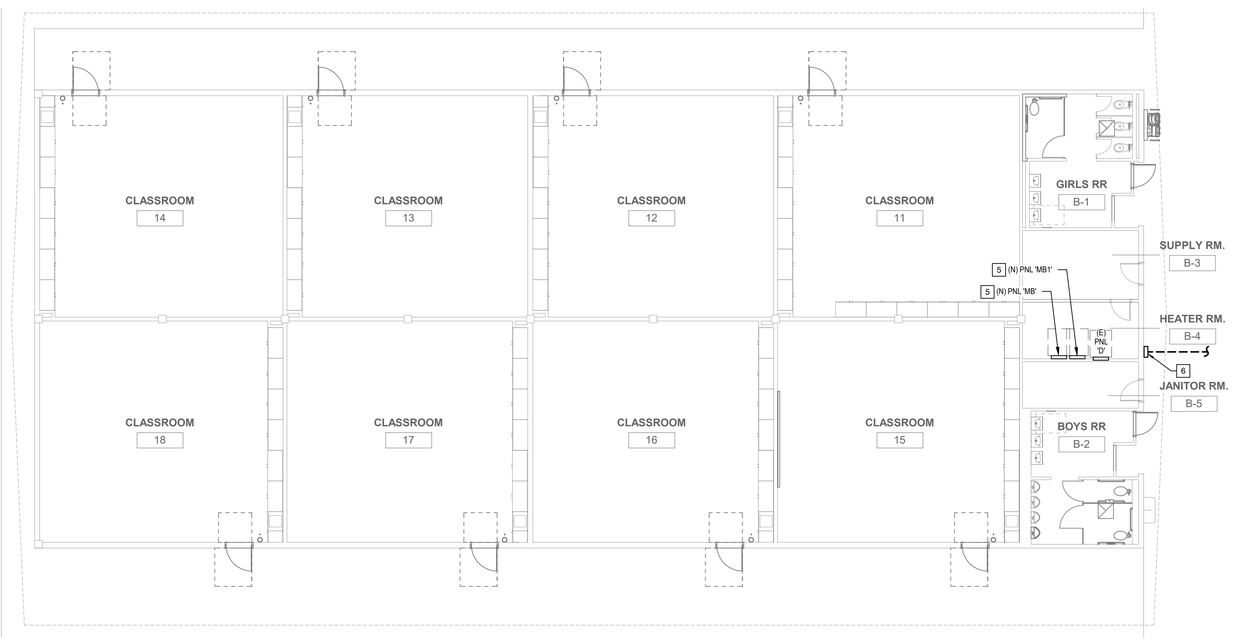
3 POWER PLAN - BUILDING A

1/8" = 1'-0"



2 POWER PLAN - BUILDING C

1/8" = 1'-0"



1 POWER PLAN - BUILDING B

1/8" = 1'-0"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ALL EXISTING POWER/DATA OUTLETS SHALL REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
3. ALL EXISTING CEILING MOUNTED DEVICES SHALL BE REMOVED, STORED AND PROTECTED FOR RE-INSTALLATION.
4. FOR ALL EXISTING CIRCUITS AND DEVICES THAT ARE TO REMAIN, CONTRACTOR TO INCLUDE IN THEIR BID TO REMOVE AND REPLACE ALL MC CABLES ABOVE CEILING SPACES. INTERCEPT ALL CONDUITS ABOVE THE CEILING. PROVIDE NEW HOMERUNS WITH MINIMUM 3/4" EMT AND NEW WIRING THAT MATCHES THE EXISTING, BACK TO THE PANEL SOURCE.

KEY NOTES

1. EXISTING POWER/DATA OUTLETS SHALL REMAIN AND BE PROTECTED IN PLACE.
2. PROVIDE LOCAL DISCONNECT SWITCH TO NEW MECHANICAL UNITS.
3. NEW FAN COIL IS POWERED FROM OUTDOOR HEAT PUMP. PROVIDE 2#12 + 1#12 GRD., STUB UP TO ROOFTOP PACKAGE UNIT.
4. PROVIDE 120V POWER CONNECTION TO SUPPLY FAN.
5. NEW 208/120V-3PH PANEL DEDICATED TO NEW MECHANICAL EQUIPMENT.
6. NEW WALL MOUNTED PULLBOX, 12"x12"xDEPTH REQ'D.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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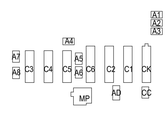
SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horner St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER
DONALD C. DELA CRUZ
No. E 23570
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL POWER PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

E2.1

FILE PATH: Z:\Projects\...
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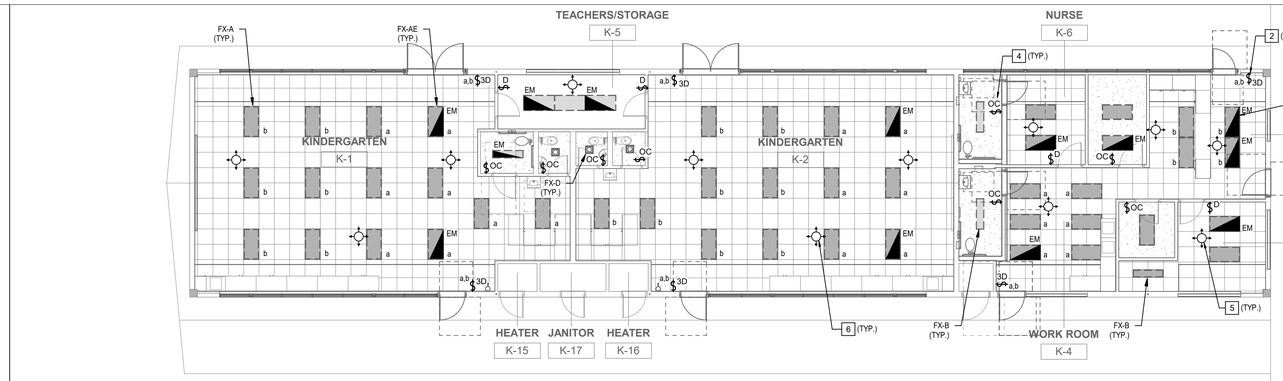
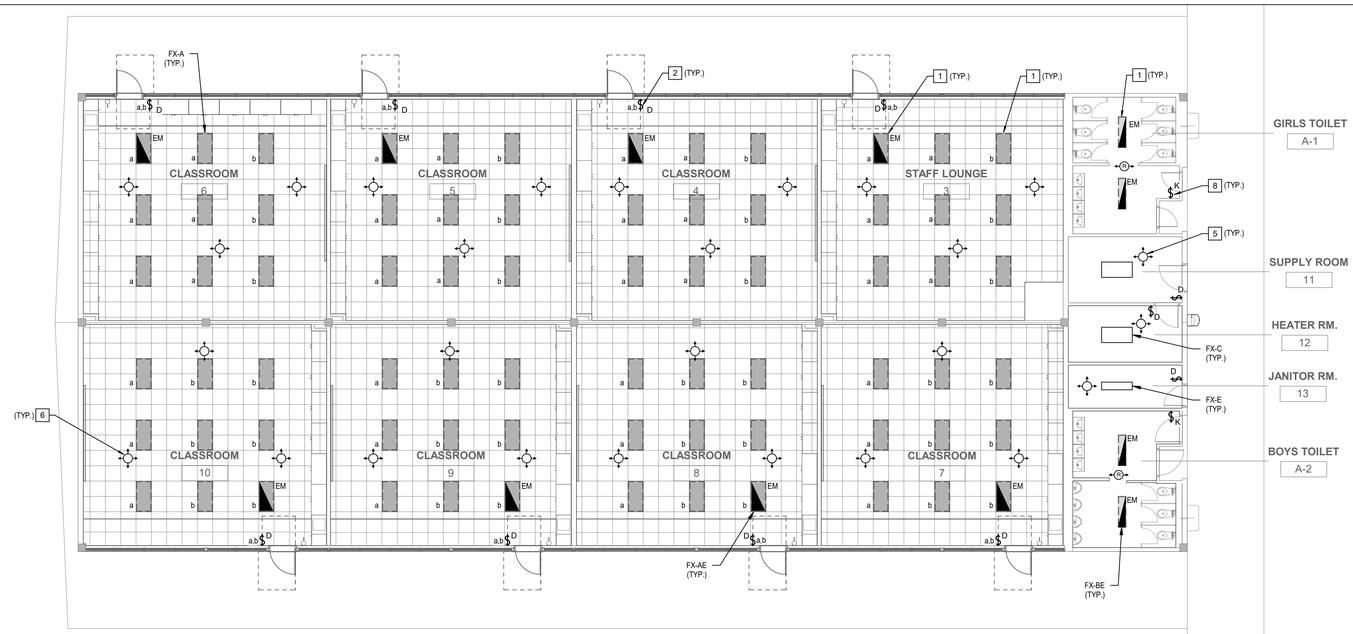
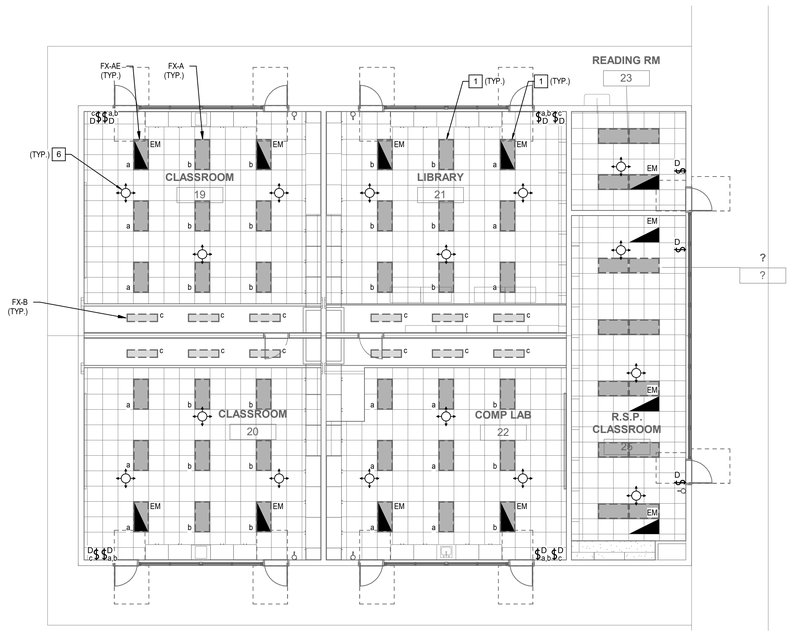


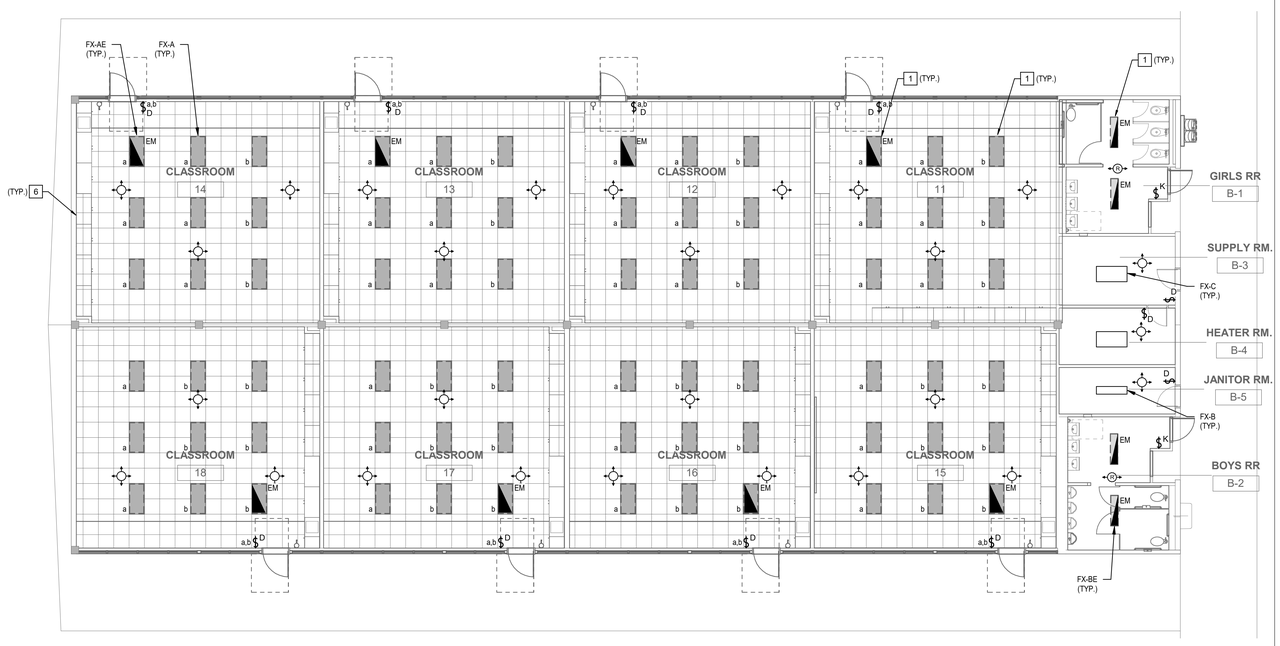
4 LIGHTING PLANS - ADMIN/KINDERGARTEN
1/8" = 1'-0"



3 LIGHTING PLAN - BUILDING A
1/8" = 1'-0"



2 LIGHTING PLAN - BUILDING C
1/8" = 1'-0"



1 LIGHTING PLAN - BUILDING B
1/8" = 1'-0"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. EXTEND EXISTING CIRCUIT TO THE NEW LIGHT FIXTURES WITH 3/4" CONDUIT, 12 AWG WIRE MINIMUM AND ADDITIONAL LOW VOLTAGE WIRING FOR DIMMING AS REQUIRED.
3. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM OF OCCUPANCY SENSOR FOR ON/OFF CONTROL OF ALL LIGHT FIXTURES INCLUDING BUT NOT LIMITED TO POWER PACKS, WIRING, ETC. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE EMERGENCY BATTERY PACKS FOR ALL LIGHTING FIXTURES DESIGNATED TO BE ON EMERGENCY POWER AND EXIT SIGNS. PROVIDE UNSWITCHED UNSWITCHED HOT TO BATTERY SO THAT LAMPS CAN BE SWITCHED OFF AND ON WITHOUT DRAING BATTERY. RE: DIVISION 26 SPECEFICATIONS FOR ADDITIONAL INFOMRATION. PROVIDE 20A UNSWITCHED BRANCH CIRCUIT (2#12,1#12G, 3/4"C.) FROM LIGHTING PANEL TO ALL EXIT SIGNS IN THIS AREA.
5. FOR ALL EXISTING CIRCUITS AND DEVICES THAT ARE TO REMAIN, CONTRACTOR TO INCLUDE IN THEIR BID TO REMOVE AND REPLACE ALL MC CABLES ABOVE CEILING SPACES. INTERCEPT ALL CONDUITS ABOVE THE CEILING. PROVIDE NEW HOMERUNS WITH MINIMUM 3/4" EMT AND NEW WIRING THAT MATCHES THE EXISTING, BACK TO THE PANEL SOURCE.

KEY NOTES

1	REMOVE AND REPLACE EXISTING LIGHT FIXTURE WITH NEW LED LIGHT FIXTURE. CONTRACTOR TO EXTEND EXISTING CIRCUIT FROM PANELBOARD TO ALL THE FIXTURES IN THE ROOM. PROVIDE NEW FIXTURE WITH 3/4"C - 2#12, 1#12 GRD FOR LINE VOLTAGE, PLUS DIMMING WIRES AS REQUIRED. SEE LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
2	LOW VOLTAGE WALL ON/OFF SWITCH WITH DIMMING, LUTRON MAESTRO SERIES
3	LOW VOLTAGE WALL ON/OFF MANUAL SWITCH, LUTRON MAESTRO SERIES
4	LOW VOLTAGE WALL ON/OFF SWITCH WITH DIMMING AND OCCUPANCY SENSOR, LUTRON MAESTRO SERIES
5	LOW VOLTAGE CEILING MOUNTED WIRELESS OCCUPANCY SENSOR, RADIO PWR SAVR SERIES
6	LOW VOLTAGE WALL MOUNTED WIRELESS OCCUPANCY SENSOR, RADIO PWR SAVR SERIES
7	LOW VOLTAGE LIGHTING CONTROLS POWER/RELAY PACK, RADIO PWR SAVR SERIES
8	PROVIDE KEYSWITCH LIGHT SWITCH, LUTRON QSWS2-KSN3MOC-WH.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF Engineers
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

KEY PLAN
NORTH: PLAN TRUE

Consultant
REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp. 8-30-2024 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL LIGHTING PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

E2.2

FILE PATH: Z:\Projects\...
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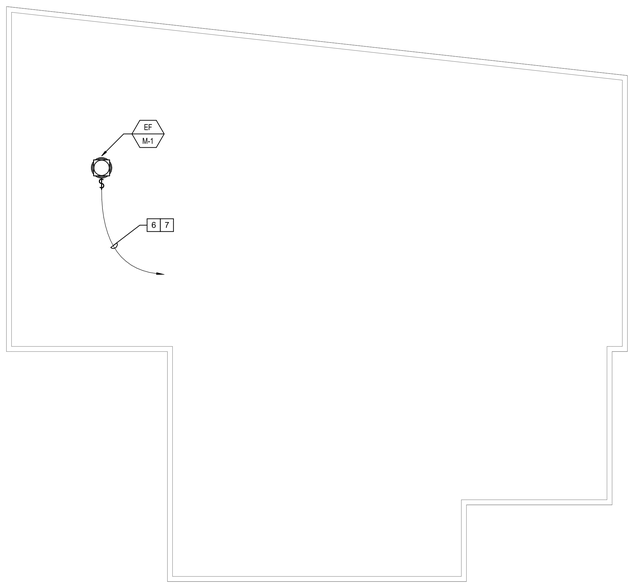
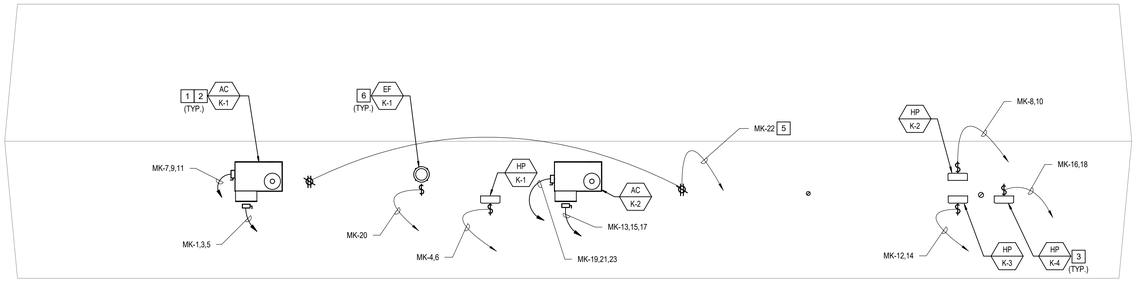
E4.1 - ELECTRICAL ROOF PLANS

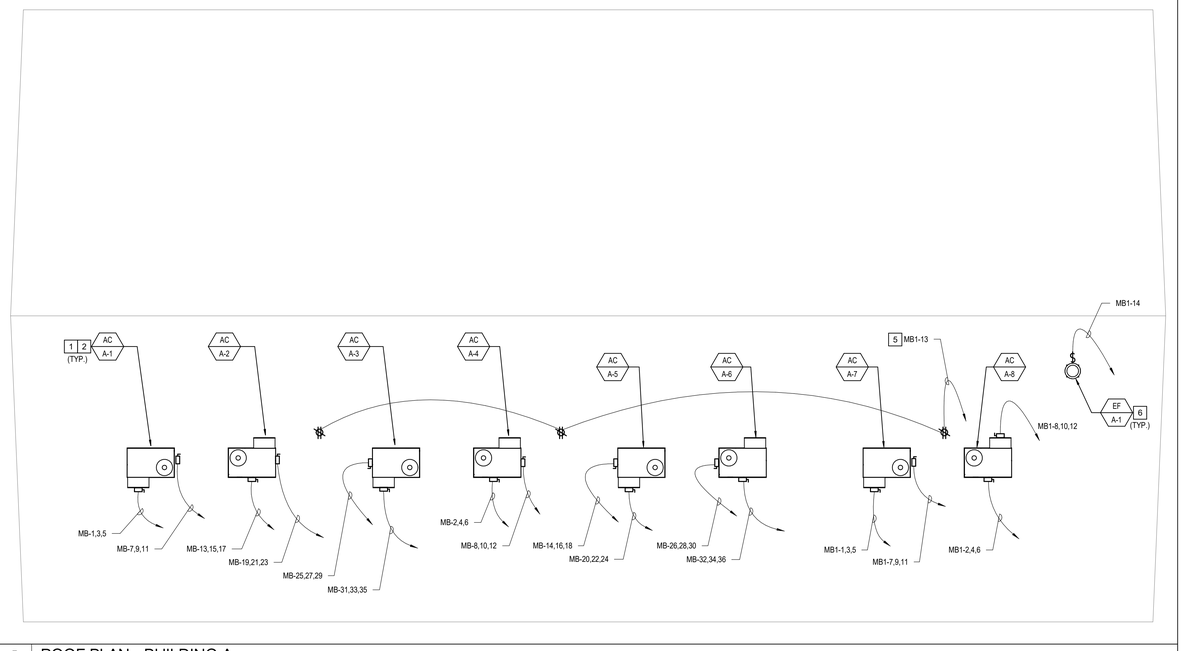
0" 1"



3 ROOF PLAN - MULTI-PURPOSE BUILDING
1/8" = 1'-0"



2 ROOF PLAN - ADMIN/KINDERGARTEN
NOT TO SCALE



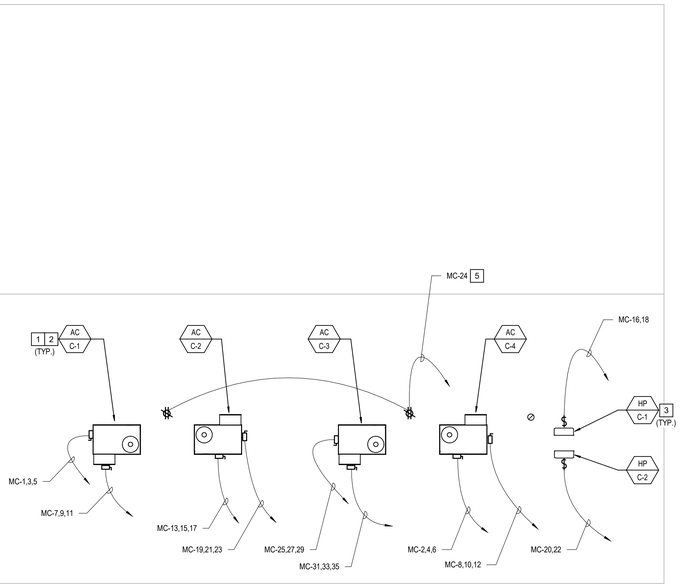
4 ROOF PLAN - BUILDING A
1/8" = 1'-0"

GENERAL NOTES

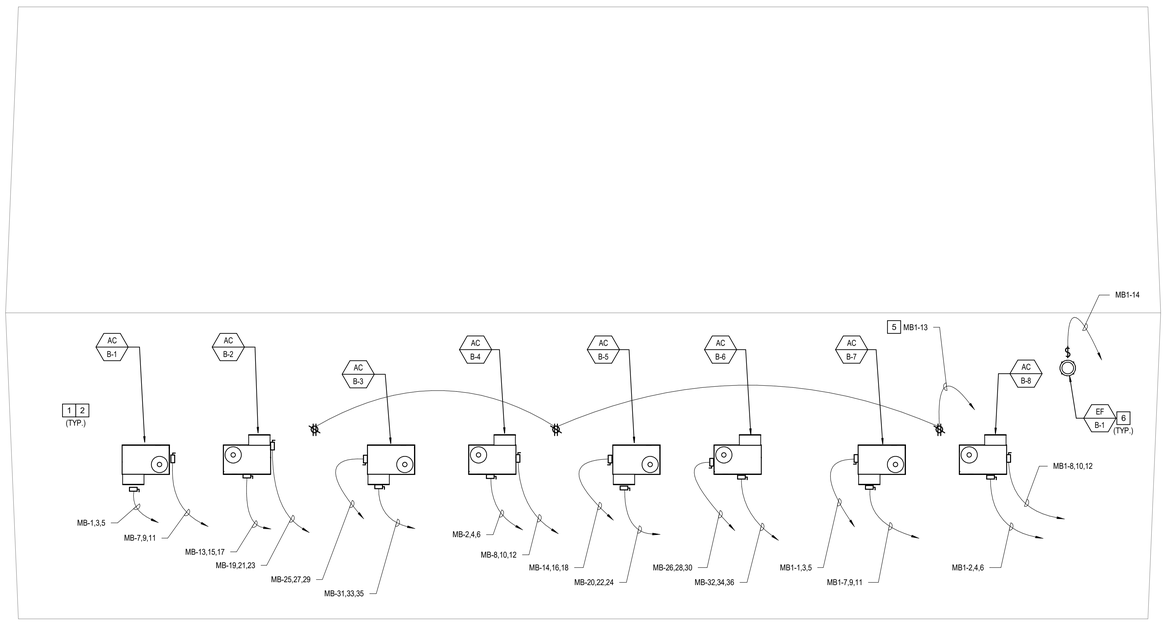
1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ELECTRICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS, AND A FIELD VISIT OF THE ELECTRICAL SYSTEM. IN CASE OF ANY DISCREPENCIES WITH EXISTING FIELD CONDITIONS, ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE ELECTRICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.
3. ALL ELECTRICAL EQUIPMENT/DEVICES ON THE ROOF SHALL BE WEATHER PROOF, NEMA 3R AND +8" ABOVE FINISHED ROOF LEVEL AND ROOF PENETRATIONS SHALL BE FLASHED.

KEY NOTES

1. PROVIDE 208V/3PH POWER CONNECTION TO AC UNIT, 1"C-3#10+1#10 GRD. (TYP.)
2. PROVIDE 208V/3PH POWER CONNECTION TO POWER EXHAUST. 3/4"C-3#12+1#12 GRD. (TYP.)
3. PROVIDE 208V/1PH POWER CONNECTION TO HP UNITS, 3/4"C 3#12 + 1#12 GRD. (TYP.)
4. FUSED DISCONNECT SWITCH, NEMA 3R FACTORY MOUNTED BY MECHANICAL. SEE MECHANICAL SCHEDULES FOR ADDITIONAL INFORMATION.
5. PROVIDE NEW ROOF TOP RECEPTACLE (WP) GFCI TYPE.
6. PROVIDE 120V/1PH POWER CONNECTION TO EXHAUST FAN, 3/4"C - 2#12 + 1#12 GRD. (TYP.)
7. PROVIDE POWER CONNECTION FROM NEAREST 120V CIRCUIT AVAILABLE. CONTRACTOR TO FIELD VERIFY CIRCUIT AVAILABILITY PRIOR TO ROUGH-IN.



5 ROOF PLAN - BUILDING C
1/8" = 1'-0"



6 ROOF PLAN - BUILDING B
1/8" = 1'-0"

IDENTIFICATION STAMP
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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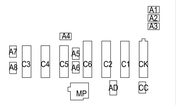
DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN TRUE

Consultant
REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 22870
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL ROOF PLANS

E4.1

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E5.1 - ELECTRICAL SINGLE LINE DIAGRAM

0" 1"

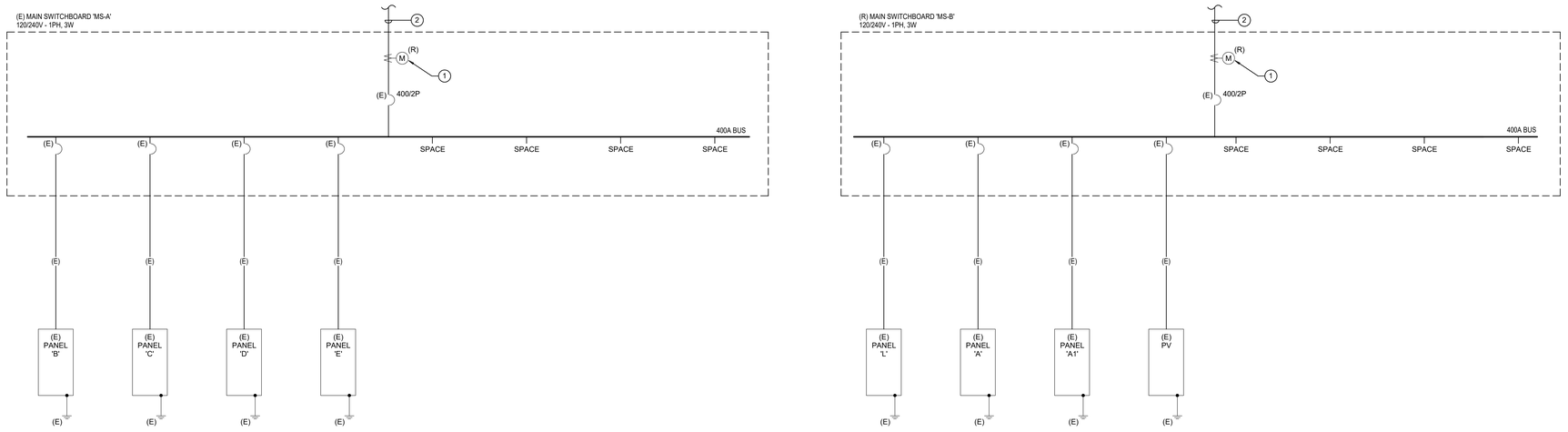
ELECTRICAL ONE-LINE DIAGRAM NOTES:

#. INDICATES GENERAL NOTE.
Ⓑ INDICATES KEYED NOTE.

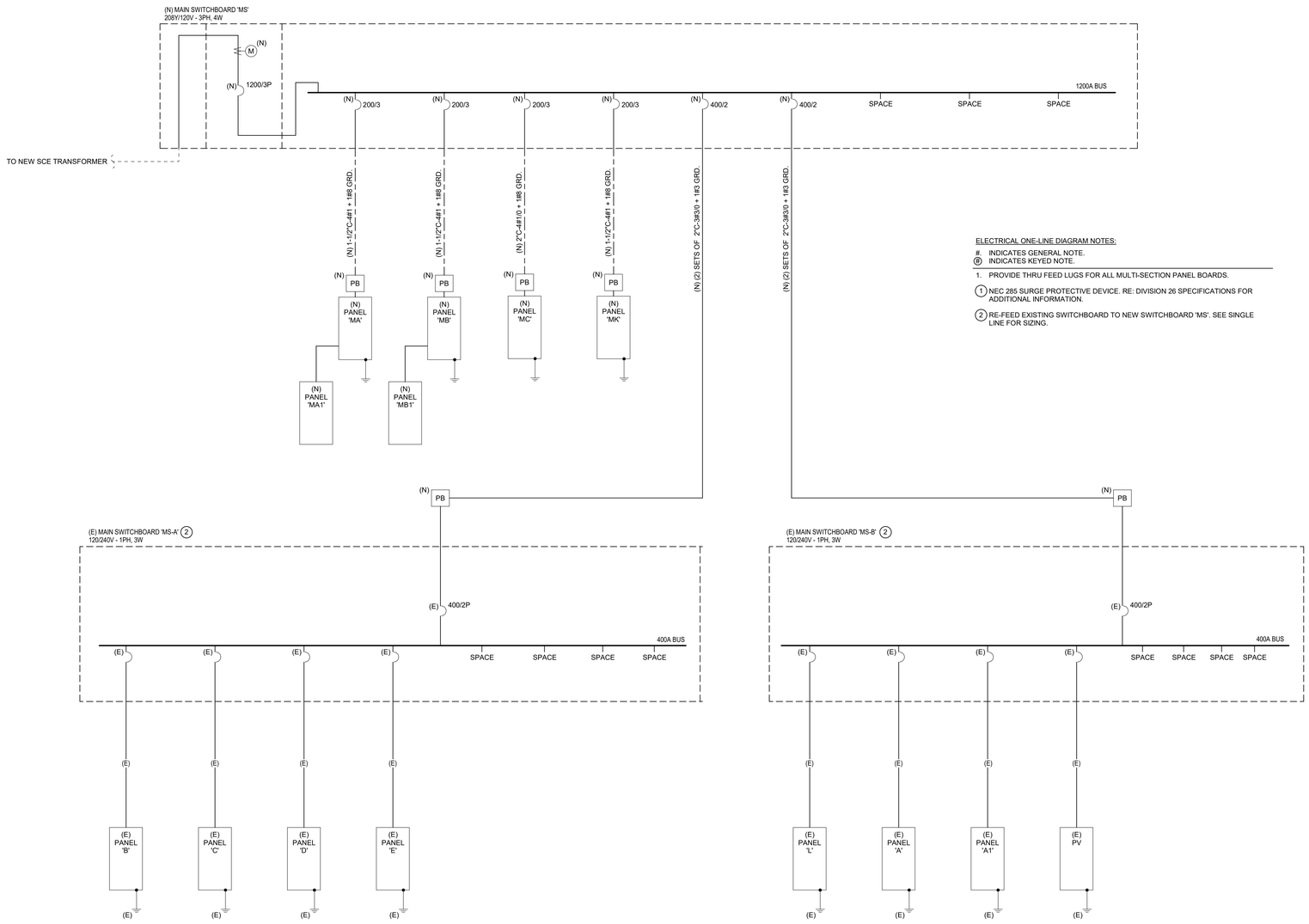
1. REFER TO RISER DIAGRAM FOR FEEDER WIRE / CONDUIT SIZES AND FOR ALL FEEDER SIZES NOT SHOWN ON THIS SHEET.

(1) SCE SHALL REMOVE EXISTING METER. COORDINATE ALL WORK EFFORTS WITH SCE REPRESENTATIVE.

(2) EXISTING FEEDERS AND CONDUIT SHALL BE DEMOLISHED BACK TO SWITCHBOARD. SEE NEW SINGLE LINE 2/5.1 FOR NEW FEEDERS AND CONDUIT SIZING.



1 ELECTRICAL ONE-LINE DIAGRAM - EXISTING
NOT TO SCALE



ELECTRICAL ONE-LINE DIAGRAM NOTES:

#. INDICATES GENERAL NOTE.
Ⓟ INDICATES KEYED NOTE.

1. PROVIDE THRU FEED LUGS FOR ALL MULTI-SECTION PANEL BOARDS.

(1) NEC 285 SURGE PROTECTIVE DEVICE. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

(2) RE-FEED EXISTING SWITCHBOARD TO NEW SWITCHBOARD 'MS'. SEE SINGLE LINE FOR SIZING.

2 ELECTRICAL ONE-LINE DIAGRAM - NEW
NOT TO SCALE

FILE PATH: Z:\Projects\...
5/11/2023 11:47:19 AM

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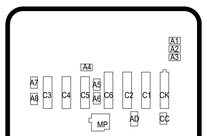
DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DE LA CRUZ
No. E 23570
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

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ELECTRICAL SINGLE LINE DIAGRAM

E5.1

0" 1"

Job: Schmitt ES - Modernization — Job No. 220308AR

Mounting: **SURFACE** — Main Type: **MCB (200A)** — Neutral: **100%** — Voltage: **208Y/120V-3PH 4W** — Main Size: **225 AMPS** — AIC Rating: **42000** — Ground: **Equipment Ground** — Lugs: **FEED THRU**

PANEL: **MA**

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S
		1664					0.00	AC "A-1"	30/3	10	**1**	**A**	**2**	10	30/3	AC "A-4"			1664					0.00
		1664					0.00	----	--	10	**3**	**B**	**4**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**5**	**C**	**6**	10	--	----			1664					0.00
		270					0.00	AC "A-1" PWR EXH	15/3	12	**7**	**A**	**8**	12	15/3	AC "A-4" PWR EXH			270					0.00
		270					0.00	----	--	12	**9**	**B**	**10**	12	--	----			270					0.00
		270					0.00	----	--	12	**11**	**C**	**12**	12	--	----			270					0.00
		1664					0.00	AC "A-2"	30/3	10	**13**	**A**	**14**	10	30/3	AC "A-5"			1664					0.00
		1664					0.00	----	--	10	**15**	**B**	**16**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**17**	**C**	**18**	10	--	----			1664					0.00
		270					0.00	AC "A-2" PWR EXH	15/3	12	**19**	**A**	**20**	12	15/3	AC "A-6" PWR EXH			270					0.00
		270					0.00	----	--	12	**21**	**B**	**22**	12	--	----			270					0.00
		270					0.00	----	--	12	**23**	**C**	**24**	12	--	----			270					0.00
		1664					0.00	AC "A-3"	30/3	10	**25**	**A**	**26**	10	30/3	AC "A-6"			1664					0.00
		1664					0.00	----	--	10	**27**	**B**	**28**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**29**	**C**	**30**	10	--	----			1664					0.00
		270					0.00	AC "A-3" PWR EXH	15/3	12	**31**	**A**	**32**	12	15/3	AC "A-6" PWR EXH			270					0.00
		270					0.00	----	--	12	**33**	**B**	**34**	12	--	----			270					0.00
		270					0.00	----	--	12	**35**	**C**	**36**	12	--	----			270					0.00
							1.00	SPARE	20/1		**37**	**A**	**38**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**39**	**B**	**40**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**41**	**C**	**42**		20/1	SPARE								1.00
0	0	17410	0	0	0	0	3.00	**TOTALS**								**TOTALS**	0	0	17410	0	0	0	0	3.00

LOAD SUMMARY

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.0	0.0	34.8	0.0	0.0	0.0	0.0	6.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
0.0	0.0	34.8	0.0	0.0	0.0	0.0	3.0	Design KVA

Phase Load	
Ph	KVA
A	11.6
B	11.6
C	11.6

Panel Remarks:
NEW PANEL
FED FROM MAIN SWITCHBOARD 'MS'

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	40.8	113.3		37.8	105.0

PANEL **MA**

Date: 12/15/2022 By: N.OROPEZA

Job: Schmitt ES - Modernization — Job No. 220308AR

Mounting: **SURFACE** — Main Type: **MLO** — Neutral: **100%** — Voltage: **208Y/120V-3PH 4W** — Main Size: **125 AMPS** — AIC Rating: **22000** — Ground: **Equipment Ground** — Lugs: **SINGLE**

PANEL: **MB1**

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S
		1664					0.00	AC "A-7"	30/3	10	**1**	**A**	**2**	10	30/3	AC "A-8"			1664					0.00
		1664					0.00	----	--	10	**3**	**B**	**4**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**5**	**C**	**6**	10	--	----			1664					0.00
		270					0.00	AC "A-7" PWR EXH	15/3	12	**7**	**A**	**8**	12	15/3	AC "A-8" PWR EXH			270					0.00
		270					0.00	----	--	12	**9**	**B**	**10**	12	--	----			270					0.00
		270					0.00	----	--	12	**11**	**C**	**12**	12	--	----			270					0.00
	360						0.00	ROOFTOP CONV. REC.	20/1	12	**13**	**A**	**14**	12	15/1	EF "B-1"			530					0.00
							1.00	SPARE	20/1		**15**	**B**	**16**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**17**	**C**	**18**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**19**	**A**	**20**		20/1	SPARE								1.00
							0.00	SPACE			**21**	**B**	**22**			SPACE								0.00
							0.00	SPACE			**23**	**C**	**24**			SPACE								0.00
0	360	5803	0	0	0	0	3.00	**TOTALS**								**TOTALS**	0	0	6333	0	0	0	0	3.00

LOAD SUMMARY

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.0	0.4	32.2	0.0	0.0	0.0	0.0	6.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
0.0	0.4	32.2	0.0	0.0	0.0	0.0	3.0	Design KVA

Phase Load	
Ph	KVA
A	11.0
B	11.9
C	9.7

Panel Remarks:
NEW PANEL
FED FROM MAIN SWITCHBOARD 'MS'

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	38.6	107.1		35.6	98.8

PANEL **MC**

Date: 12/15/2022 By: N.OROPEZA

Job: Schmitt ES - Modernization — Job No. 220308AR

Mounting: **SURFACE** — Main Type: **MCB (200A)** — Neutral: **100%** — Voltage: **208Y/120V-3PH 4W** — Main Size: **225 AMPS** — AIC Rating: **14000** — Ground: **Equipment Ground** — Lugs: **SINGLE**

PANEL: **MA1**

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S
		1664					0.00	AC "A-7"	30/3	10	**1**	**A**	**2**	10	30/3	AC "A-8"			1664					0.00
		1664					0.00	----	--	10	**3**	**B**	**4**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**5**	**C**	**6**	10	--	----			1664					0.00
		270					0.00	AC "A-7" PWR EXH	15/3	12	**7**	**A**	**8**	12	15/3	AC "A-8" PWR EXH			270					0.00
		270					0.00	----	--	12	**9**	**B**	**10**	12	--	----			270					0.00
		270					0.00	----	--	12	**11**	**C**	**12**	12	--	----			270					0.00
	360						0.00	ROOFTOP CONV. REC.	20/1	12	**13**	**A**	**14**	12	15/1	EF "A-1"			530					0.00
							1.00	SPARE	20/1		**15**	**B**	**16**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**17**	**C**	**18**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**19**	**A**	**20**		20/1	SPARE								1.00
							0.00	SPACE			**21**	**B**	**22**			SPACE								0.00
							0.00	SPACE			**23**	**C**	**24**			SPACE								0.00
0	360	5803	0	0	0	0	3.00	**TOTALS**								**TOTALS**	0	0	6333	0	0	0	0	3.00

LOAD SUMMARY

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.0	0.4	12.1	0.0	0.0	0.0	0.0	6.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
0.0	0.4	12.1	0.0	0.0	0.0	0.0	3.0	Design KVA

Phase Load	
Ph	KVA
A	4.8
B	3.9
C	3.9

Panel Remarks:
NEW PANEL
PROVIDE THRU FEED LUGS FROM PANEL 'MA'

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	18.5	51.3		15.5	43.0

PANEL **MA1**

Date: 12/15/2022 By: N.OROPEZA

Job: Schmitt ES - Modernization — Job No. 220308AR

Mounting: **SURFACE** — Main Type: **MCB (200A)** — Neutral: **100%** — Voltage: **208Y/120V-3PH 4W** — Main Size: **225 AMPS** — AIC Rating: **22000** — Ground: **Equipment Ground** — Lugs: **FEED THRU**

PANEL: **MB**

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S
		1664					0.00	AC "B-1"	30/3	10	**1**	**A**	**2**	10	30/3	AC "B-4"			1664					0.00
		1664					0.00	----	--	10	**3**	**B**	**4**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**5**	**C**	**6**	10	--	----			1664					0.00
		270					0.00	AC "B-1" PWR EXH	15/3	12	**7**	**A**	**8**	12	15/3	AC "B-4" PWR EXH			270					0.00
		270					0.00	----	--	12	**9**	**B**	**10**	12	--	----			270					0.00
		270					0.00	----	--	12	**11**	**C**	**12**	12	--	----			270					0.00
		1664					0.00	AC "B-2"	30/3	10	**13**	**A**	**14**	10	30/3	AC "B-5"			1664					0.00
		1664					0.00	----	--	10	**15**	**B**	**16**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**17**	**C**	**18**	10	--	----			1664					0.00
		270					0.00	AC "B-2" PWR EXH	15/3	12	**19**	**A**	**20**	12	15/3	AC "B-5" PWR EXH			270					0.00
		270					0.00	----	--	12	**21**	**B**	**22**	12	--	----			270					0.00
		270					0.00	----	--	12	**23**	**C**	**24**	12	--	----			270					0.00
		1664					0.00	AC "B-3"	30/3	10	**25**	**A**	**26**	10	30/3	AC "B-6"			1664					0.00
		1664					0.00	----	--	10	**27**	**B**	**28**	10	--	----			1664					0.00
		1664					0.00	----	--	10	**29**	**C**	**30**	10	--	----			1664					0.00
		270					0.00	AC "B-3" PWR EXH	15/3	12	**31**	**A**	**32**	12	15/3	AC "B-6" PWR EXH			270					0.00
		270					0.00	----	--	12	**33**	**B**	**34**	12	--	----			270					0.00
		270					0.00	----	--	12	**35**	**C**	**36**	12	--	----			270					0.00
							1.00	SPARE	20/1		**37**	**A**	**38**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**39**	**B**	**40**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**41**	**C**	**42**		20/1	SPARE								1.00
0	0	17410	0	0	0	0	3.00	**TOTALS**								**TOTALS**	0	0	17410	0	0	0	0	3.00

LOAD SUMMARY

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.0	0.0	34.8	0.0	0.0	0.0	0.0	6.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
0.0	0.0	34.8	0.0	0.0	0.0	0.0	3.0	Design KVA

Phase Load	
Ph	KVA
A	11.6
B	11.6
C	11.6

Panel Remarks:
NEW PANEL
FED FROM MAIN SWITCHBOARD 'MS'

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	40.8	113.3		37.8	105.0

PANEL **MB**

Date: 12/15/2022 By: N.OROPEZA

Job: Schmitt ES - Modernization — Job No. 220308AR

Mounting: **SURFACE** — Main Type: **MCB (200A)** — Neutral: **100%** — Voltage: **208Y/120V-3PH 4W** — Main Size: **225 AMPS** — AIC Rating: **22000** — Ground: **Equipment Ground** — Lugs: **SINGLE**

PANEL: **MK**

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S
		2219					0.00	AC "K-1"	40/3	8	**1**	**A**	**2**	12	20/1	SF "K-1"			1176					0.00
		2219					0.00	----	--	8	**3**	**B**	**4**	12	15/2	HP "K1"			884					0.00
		2219					0.00	----	--	8	**5**	**C**	**6**	12	--	----			884					0.00
		444					0.00	AC "K-1" - PWR EXH	15/3	12	**7**	**A**	**8**	12	15/2	HP "K2"			884					0.00
		444					0.00	----	--	12	**9**	**B**	**10**	12	--	----			884					0.00
		444					0.00	----	--	12	**11**	**C**	**12**	12	15/2	HP "K3"			1508					0.00
		2219					0.00	AC "K-2"	40/3	8	**13**	**A**	**14**	12	--	----			1508					0.00
		2219					0.00	----	--	8	**15**	**B**	**16**	12	15/2	HP "K4"			884					0.00
		2219					0.00	----	--	8	**17**	**C**	**18**	12	--	----			884					0.00
		444					0.00	AC "K-2" - PWR EXH	15/3	12	**19**	**A**	**20**	12	15/1	EF "K-1"			530					0.00
		444					0.00	----	--	12	**21**	**B**	**22**	12	20/1	ROOFTOP CONV. REC.		360						0.00
		444					0.00	----	--	12	**23**	**C**	**24**											0.00
							1.00	SPARE	20/1		**25**	**A**	**26**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**27**	**B**	**28**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**29**	**C**	**30**		20/1	SPARE								1.00
							1.00	SPARE	20/1		**31**	**A**	**32**		20/1	SPARE								1.00
							0.00	SPACE			**33**	**B**	**34**			SPACE								0.00
							0.00	SPACE			**35**	**C**	**36**			SPACE								0.00
							0.00	SPACE			**37**	**A**	**38**			SPACE								0.00
							0.00	SPACE			**39**	**B**	**40**			SPACE								0.00
							0.00	SPACE			**41**	**C**	**42**			SPACE								0.00
0	0	15974	0	0	0	0	5.00	**TOTALS**								**TOTALS**	0	360	10026	0	0	0	0	5.00

LOAD SUMMARY

Ltg.	Receipt	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.0	0.4	26.0	0.0	0.0	0.0	0.0	10.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
0.0	0.4	26.0	0.0	0.0	0.0	0.0	5.0	Design KVA

Phase Load	
Ph	KVA
A	9.4
B	8.3
C	8.6

Panel Remarks:
NEW PANEL
FED FROM MAIN SWITCHBOARD 'MS'

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	36.4	100.9		31.4	87.0

PANEL **MK**

Date: 12/15/2022 By: N.OROPEZA

TYPE	DESCRIPTION	VOLTAGE	MOUNTING	MANUFACTURER & NO.	REMARKS
FX-A	2X4 TROFFER	MVOLT	RECESSED	LITHONIA LIGHTING EPANL 2X4 4000LM 80CRI 35K MIN1 MVOLT	
FX-AE	2X4 TROFFER - EMERG.	MVOLT	RECESSED	LITHONIA LIGHTING EPANL 2X4 4000LM 80CRI 35K MIN1 MVOLT E10WCP	PROVIDE 90 MIN. EMERGENCY BATTERY BACKUP 'E10WCP'
FX-B	1X4 TROFFER	MVOLT	RECESSED	LITHONIA LIGHTING EPANL 1X4 4000LM 80CRI 35K MIN1 MVOLT	
FX-BE	1X4 TROFFER - EMERG.	MVOLT	RECESSED	LITHONIA LIGHTING EPANL 1X4 4000LM 80CRI 35K MIN1 MVOLT E10WCP	PROVIDE 90 MIN. EMERGENCY BATTERY BACKUP 'E10WCP'
FX-C	2X4 TROFFER	MVOLT	SURFACE	LITHONIA LIGHTING EPANL 2X4 4000LM 80CRI 35K MIN1 MVOLT	PROVIDE SURFACE MOUNT KIT 'SMKSH'.
FX-D	5" DOWNLIGHT	MVOLT	SURFACE	JUNO LIGHTING JSF 5IN 07LM 35K 90CRI 120 FRPC WH E10WLCP	PROVIDE EMERGENCY BATTERY BACKUP 'E10WLCP'
FX-E	1X4 TROFFER	MVOLT	SURFACE	LITHONIA LIGHTING EPANL 1X4 4000LM 80CRI 35K MIN1 MVOLT	PROVIDE SURFACE MOUNT KIT 'SMKSH'.
FX-EE	1X4 TROFFER	MVOLT	SURFACE	LITHONIA LIGHTING EPANL 1X4 4000LM 80CRI 35K MIN1 MVOLT E10WCP	PROVIDE 90 MIN. EMERGENCY BATTERY BACKUP 'E10WCP'
FX-EX	EMERGENCY EXIT	MVOLT	SURFACE	LITHONIA LIGHTING LE S 1 R EL N SD - WITH MOUNTING KIT 'ELA WG1'	COORDINATE WITH MANUFACTURER AND ARCHITECT PRIOR TO PROCUREMENT.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT — PBK Architects, Inc. — PBK.com
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

KEY PLAN

Consultant

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL PANEL SCHEDULES

E5.2

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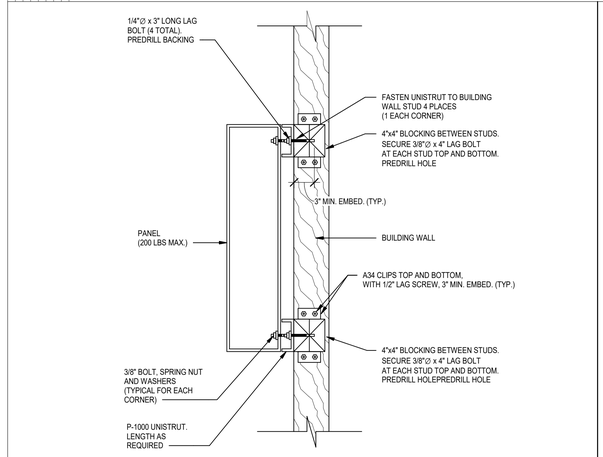
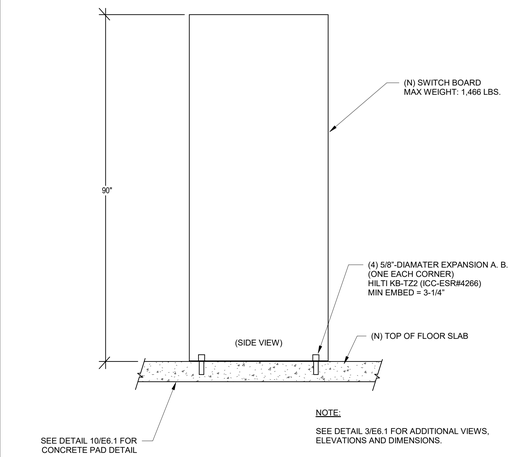
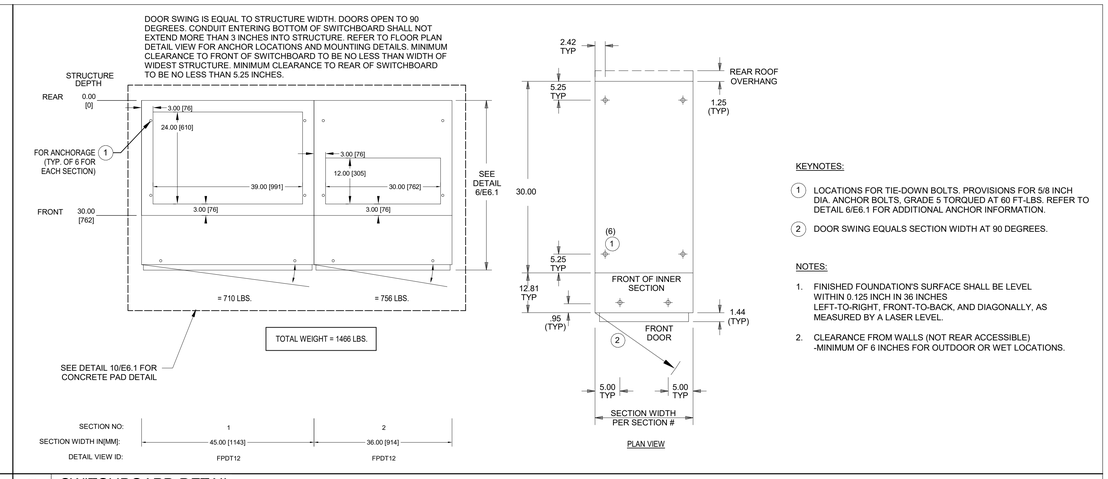


8 SURFACE MOUNTED PANEL AT WOOD FRAMING DETAIL
NOT TO SCALE



6 SWITCHBOARD ANCHORAGE DETAIL
NOT TO SCALE



3 SWITCHBOARD DETAIL
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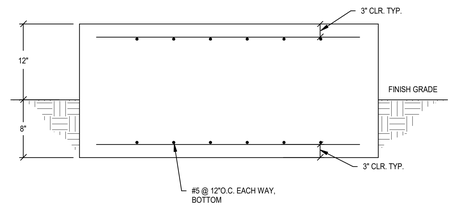

10 CONCRETE HOUSE KEEPING PAD DETAIL
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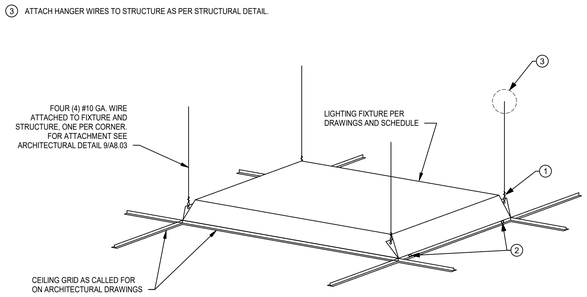
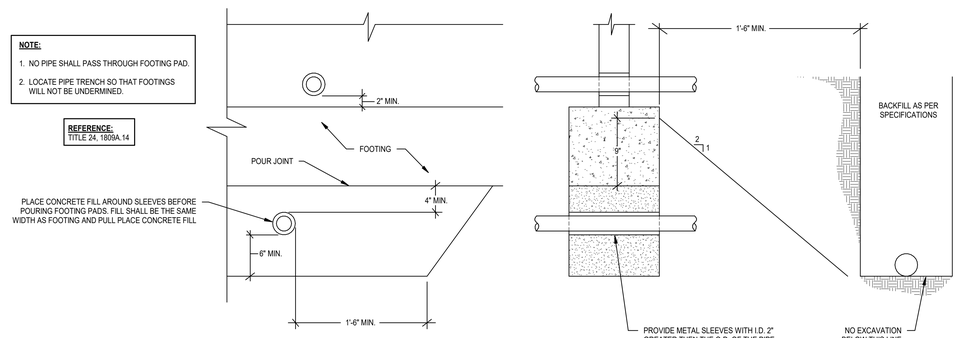
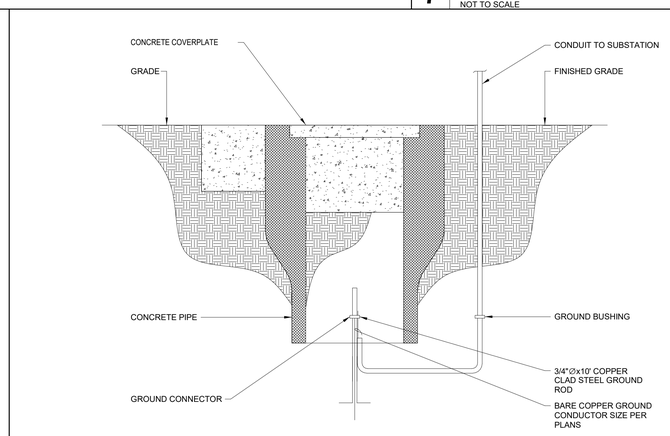


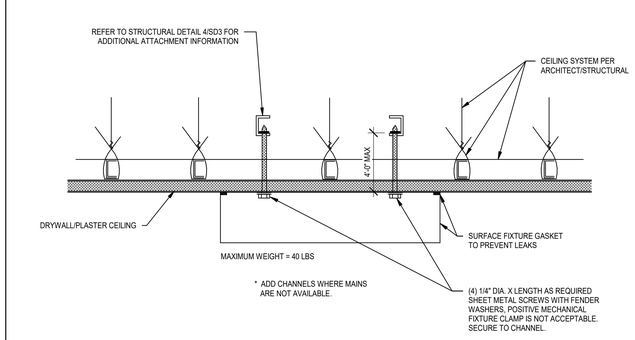
9 RECESSED FIXTURE IN LAY-IN GRID DETAIL
NOT TO SCALE



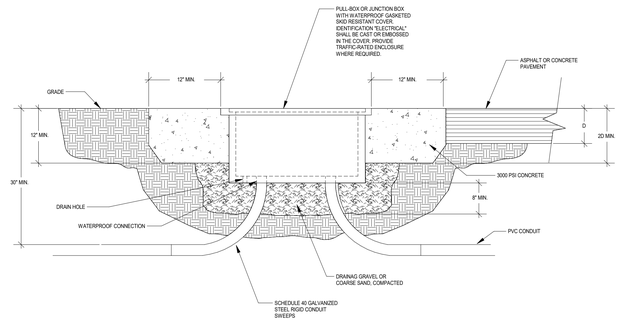
7 TYPICAL PIPE TRENCH/FOOTING DETAIL
NOT TO SCALE



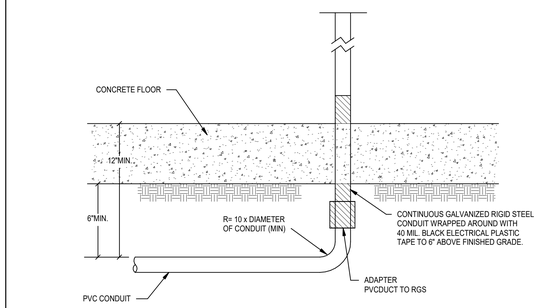
5 GROUND ROD DETAIL
NOT TO SCALE



4 SURFACE MOUNTED FIXTURE DETAIL
NOT TO SCALE



2 EXTERIOR JUNCTION BOX
NOT TO SCALE



1 CONDUIT RISER DETAIL
NOT TO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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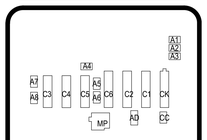
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN TRUE

Consultant
REGISTERED PROFESSIONAL ENGINEER
RONALD C. DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL DETAILS

E6.1

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P0.0 - PLUMBING SHEET INDEX, LEGEND, AND NOTES

0" 1"

PLUMBING LEGEND

NOTE: NOT ALL SYMBOLS TABULATED BELOW ARE NECESSARILY USED ON THE DRAWINGS.

SYMBOL	ITEM	ABBR.
S / 1	FIXTURE DESIGNATION UNIT ABBREVIATION NUMBER	
01 / P-1	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN	
	DOMESTIC COLD WATER	CW
	DOMESTIC HOT WATER	HW
	DOMESTIC HW RETURN	HWR
	EXISTING PIPING	
X	POINT OF CONNECTION	POC
C	CONDENSATE DRAIN	
	SHUT-OFF VALVE IN BOX	SOV
	PIPING RISE	
	PIPING DROP	
S / W	SOIL OR WASTE	S OR W
V	VENT	V
	VENT THRU ROOF	VTR
FCO	FLOOR CLEANOUT	FCO
COTG	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	HOSE BIBB	HB
RD	ROOF DRAIN	RD
OD	OVERFLOW DRAIN	OD
	DOWN SPOUT	DS
	UNDERGROUND	UG
TP	TRAP PRIMER	TP
SD	STORM DRAIN	SD
(E)	EXISTING	EXIST.
(N)	NEW	NEW
	UNDERFLOOR	UF
	OVERHEAD	OH
R	RELIEF	
D	DRAIN	
	CONDENSATE DRAIN CLEAN OUT	CO
SC	SECONDARY CONDENSATE DRAIN	
FC	FURNACE CONDENSATE	
	GAS SHUT OFF VALVE	GSOV
	CONDENSATE DRAIN TRAP	CDT
LPG	LIQUIFIED PETROLEUM GAS	LPG
G	NATURAL GAS	G
	FIRE SPRINKLER RISER	FSR
FSL	FIRE SPRINKLER LINE	FSL
	FIRE DEPARTMENT CONNECTION	FDC
	FINISHED FLOOR	FF
	FLOW LINE	FL
▲	FIRE RATED PENETRATION	
	POINT OF DISCONNECTION	POD
	POINT OF CONNECTION	POC

CALIFORNIA GREEN BUILDING STANDARDS

THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:

5.303.1 METERS: SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR USES DESCRIBED IN SECTIONS 5.303.1.1 AND 5.303.1.2.

5.303.1.1 NEW BUILDINGS OR ADDITIONS IN EXCESS OF 50,000 SQUARE FEET:

1. FOR EACH INDIVIDUAL LEASED, RENTED, OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTEED TO CONSUME MORE THAN 100 GAL/DAY, INCLUDING, BUT NOT LIMITED TO, SPACES USED FOR LAUNDRY OR CLEANERS, RESTAURANT OR FOOD SERVICE, MEDICAL OR DENTAL OFFICE, LABORATORY, OR BEAUTY SALON OR BARBER SHOP.
2. WHERE SEPARATE SUBMETERS FOR INDIVIDUAL BUILDING TENANTS ARE UNFEASIBLE, FOR WATER SUPPLIED TO THE FOLLOWING SUBSYSTEMS:
   a. MAKE-UP WATER FOR COOLING TOWERS WHERE FLOW THROUGH IS GREATER THAN 500 GPM.
   b. MAKE-UP WATER FOR EVAPORATIVE COOLERS GREATER THAN 6 GPM.
   c. STEAM AND HOT-WATER BOILERS WITH ENERGY INPUT MORE THAN 500,000 BTUH/H.

5.303.1.2 EXCESS CONSUMPTION: A SEPARATE SUBMETER OR BE PROVIDED FOR ANY TENANT WITHIN A NEW BUILDING OR WITHIN AN ADDITION THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY.

5.303.2 RESERVED

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS: PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

5.303.3.1 WATER CLOSETS: THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS. NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

5.303.3.2 URINALS:

5.303.3.2.1 WALL-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.

5.303.3.2.2 FLOOR-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

5.303.3.2.1 WALL-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.

5.303.3.2.2 FLOOR-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

5.303.3.3 SHOWERHEADS:

5.303.3.3.1 SINGLE SHOWERHEAD: SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 2.0 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.

5.303.3.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER: WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. NOTE: A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

5.303.3.4 FAUCETS AND FOUNTAINS:

5.303.3.4.1 NONRESIDENTIAL LAVATORY FAUCETS: LAVATORY FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.5 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.2 KITCHEN FAUCETS: KITCHEN FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.3 WASH FOUNTAINS: WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE/20 [RIM SPACE (INCHES) AT 60 PSI].

5.303.3.4.4 METERING FAUCETS: METERING FAUCETS SHALL NOT DELIVER MORE THAN 0.20 GALLONS PER CYCLE.

5.303.3.4.5 METERING FAUCETS FOR WASH FOUNTAINS: METERING FAUCETS FOR WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.20 GALLONS PER CYCLE/20 [RIM SPACE (INCHES) AT 60 PSI], NOTE: WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

PLUMBING TESTING

1. ALL EQUIPMENT AND/OR SYSTEMS NOTED ON THE DRAWINGS "TO REMAIN" SHALL BE INSPECTED AND TESTED ON SITE TO CERTIFY WORKING CONDITION. A WRITTEN REPORT ON THE CONDITION OF ALL EQUIPMENT TO REMAIN, INCLUDING A COPY OF THE TEST RESULTS AND RECOMMENDED REMEDIAL ACTIONS AND COSTS SHALL BE MADE BY THIS CONTRACTOR TO THE ARCHITECT/ENGINEER FOR REVIEW.

2. PIPE COVER AND BACKFILLING:
   A. AFTER HYDROSTATIC TEST, EVENLY BACKFILL ENTIRE TRENCH WIDTH BY HAND PLACING BACKFILL MATERIAL AND HAND TAMPING IN FOUR (4) ICHES COMPACTED LAYERS TO 12 INCHES MINIMUM COVER OVER TOP OF JACKET. COMPACT TO 95 PERCENT MAXIMUM DENSITY.
   B. EVENLY AND CONTINUOUSLY BACKFILL REMAINING TRENCH DEPTH IN
   C. UNIFORM LAYERS WITH BACKFILL MATERIAL
   D. DO NOT USE WHEELED OR TRACKED VEHICLES FOR TAMPING.

3. PRESSURE TEST ALL DOMESTIC WATER PIPING. AFTER INSTALLATION AND PRIOR TO BACKFILL OR COVER-UP, RINSE PIPING SYSTEM OF PARTICULATE CONTAMINANTS, CAP AND SUBJECT TO STATIC WATER PRESSURE OF 125 PSIG FOR FOUR (4) HOURS. REPAIR LEAKS AND DEFECTS AND RE-TEST ANY PORTION OF PIPING SYSTEM THAT FAILS. PROVIDE WRITTEN TEST REPORT INCLUDING DATE AND TIME OF TEST, PASS OR FAIL INDICATION, SUMMARY OF REMEDIAL WORK REQUIRED AND DATE AND TIME OF EACH RE-TEST.

4. PRIOR TO COVER UP, WATER PIPE, SANITARY PIPE, AND GAS PIPING SHALL BE PRESSURE TESTED. TESTS SHALL BE WITNESSED BY CONSULTANT AND OWNER. NOTIFY OWNER 48 HOURS PRIOR TO TEST. TEST SHALL BEWITNESSED BY CLIENT PLUMBING TECHNICIAN.

5. UPON COMPLETION OF THE SANITARY PIPING SYSTEM, THE CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER TO OBSERVE A SMOKE TEST OF THE SYSTEM. SMOKE TESTING SHALL BE PERFORMED ON SANITARY PIPING SYSTEM TWICE DURING CONSTRUCTION.

6. PRESSURE TEST NATURAL GAS PIPING IN ACCORDANCE WITH NFPA 54. CA PLUMBING CODE SECTION 1213

GENERAL PLUMBING NOTES

1. ALL BRACING OF PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES, HAZARD LEVEL 'A'.

2. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR.

3. SUPPORT AND BRACING OF ALL PIPING SHALL BE IN ACCORDANCE WITH THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF PLUMBING PIPING SYSTEMS", OR THE "SUPERSTRUT SEISMIC RESTRAINT SYSTEM" FOR PIPING ONLY.

4. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PIPE ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH DUCTWORK, LIGHT FIXTURES, SKYLIGHTS, ETC.

6. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL CONDENSATE DRAIN CONNECTIONS TO MECHANICAL EQUIPMENT.

7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PLUMBING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.

8. FOR PLUMBING FIXTURE MOUNTING HEIGHTS AND LOCATIONS, REFER TO THE ARCHITECTURAL DRAWINGS.

9. ALL PLUMBING CONVEYING OR DISPENSING WATER FOR HUMAN CONSUMPTION SHALL COMPLY WITH AB 1953 FOR LEAD CONTENT.

10. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.

11. ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.

12. PROVIDE A DOUBLE EXTERIOR CLEAN-OUT (DFCO) ON ALL SANITARY LINES EXITING THE BUILDING.

13. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER.

14. FIXTURES DESIGNATED AS ADA ACCESSIBLE BY ARCHITECT SHALL BE INSTALLED AT ADA ACCESSIBLE HEIGHT PER ARCHITECTURAL DETAILS.

15. ALL DOMESTIC COLD AND HOT WATER TAKE-OFFS SHALL HAVE AN ISOLATION SHUT-OFF VALVE.

16. CONTRACTOR SHALL DEWATER ANY AREA AT OR BELOW GRADE PRIOR TO SETTING EQUIPMENT.

17. ANY AND ALL WATER PIPING EXPOSED TO OUTSIDE ELEMENTS SHALL BE INSULATED TO PREVENT FREEZING.

LIST OF APPLICABLE CODES
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARD CODE (CALGREEN), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCE STANDARDS CODE (CBC), PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS
FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

19. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE FACILITY, UTILITIES AND APPURTENANCE CAUSED BY THE WORK IN THEIR SCOPE. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO THE OWNERS BY INSTALLATION THE FACILITY OF NEW WORK.

20. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

MEP COMPONENT ANCHORAGE NOTES:

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

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 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:

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND 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 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 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTION 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 FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY 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 & DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #_____.

SHEET INDEX

ABBREVIATIONS

NOTE: 1. ALL ABBREVIATIONS MAY NOT BE USED ON THESE DRAWINGS.

AAP	AREA ALARM PANEL	MH	MANHOLE
AAV	AUTOMATIC AIR VENT	MS	MOP SINK
A.F.F.	ABOVE FINISHED FLOOR	N.C.	NORMALLY CLOSED
AP	ACCESS PANEL	NIC	NOT IN CONTRACT
B.F.F.	BELOW FINISHED FLOOR	N.O.	NORMALLY OPEN
BFP	BACKFLOW PREVENTER	O.F./C.I.	OWNER FURNISHED/CONTRACTOR INSTALLED
BOB	BOTTOM OF BEAM	O.F./O.I.	OWNER FURNISHED/OWNER INSTALLED
BOP	BOTTOM OF PIPE	OFD	OVERFLOW DRAIN
BTUH	BRITISH THERMAL UNITS PER HOUR	PH	PHASE
CA	COMPRESSED AIR	PIV	POST INDICATOR VALVE
C/C	CUT AND CAP	PRV	PRESSURE REDUCING VALVE
CFH	CUBIC FEET PER HOUR	RD	ROOF DRAIN
CFS	CUBIC FEET PER SECOND	RE:	REFER TO
CI	CAST IRON	R.I.C.	ROUGH-IN AND CONNECT
CLG	CEILING	RO	REVERSE OSMOSIS
CO	CLEANOUT	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
CONN	CONNECTION	RPM	REVOLUTIONS PER MINUTE
CONT.	CONTINUATION	RVB	REFRIGERATOR VALVE BOX
DF	DRINKING FOUNTAIN	SD	STORM DRAIN
DPV	DRY PIPE VALVE	S.F.	SQUARE FEET
DWG.	DRAWING	SIA.	SIAMESE
EA	EACH	SK	SINK
EL.	ELEVATION	T.O.P.	TOP OF PIPE
EDF	ELECTRIC DRINKING FOUNTAIN	TP	TRAP PRIMER
FCO	FLOOR CLEANOUT	TYP	TYPICAL
FD	FLOOR DRAIN	U	URINAL
FDV	FIRE DEPARTMENT VALVE	U/F	UNDERFLOOR
F.F.	FINISHED FLOOR	U/S	UNDERSLAB
FHC	FIRE HOSE CABINET	VAC. BRKR.	VACUUM BREAKER
F.L.	FLOW LINE	VIF	VERIFY IN FIELD
FS	FLOOR SINK	VTR	VENT THRU ROOF
FT	FEET	WC	WATER CLOSET
FU	FIXTURE UNITS	WCO	WALL CLEANOUT
GC	GENERAL CONTRACTOR	WH	WALL HYDRANT
GPH	GALLONS PER HOUR	WMB	WASHING MACHINE BOX
GPM	GALLONS PER MINUTE	YH	YARD HYDRANT
HB	HOSE BIBB	ZV	ZONE VALVE
HP	HORSEPOWER	(A)	ITEM NOTED TO BE ABANDONED
I.E.	INVERT ELEVATION	(D)	ITEM NOTED TO BE DEMOLISHED
KW	KILOWATTS	(E)	EXISTING ITEM
LAV	LAVATORY	(N)	NEW ITEM
MAP	MASTER ALARM PANEL	(R)	ZFITEM NOTED TO RELOCATED
MECH	MECHANICAL		

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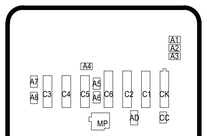
DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN TRUE

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DATE	PROJECT NUMBER
12-29-2022	220308

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PLUMBING SHEET INDEX, LEGEND, AND NOTES

P0.0

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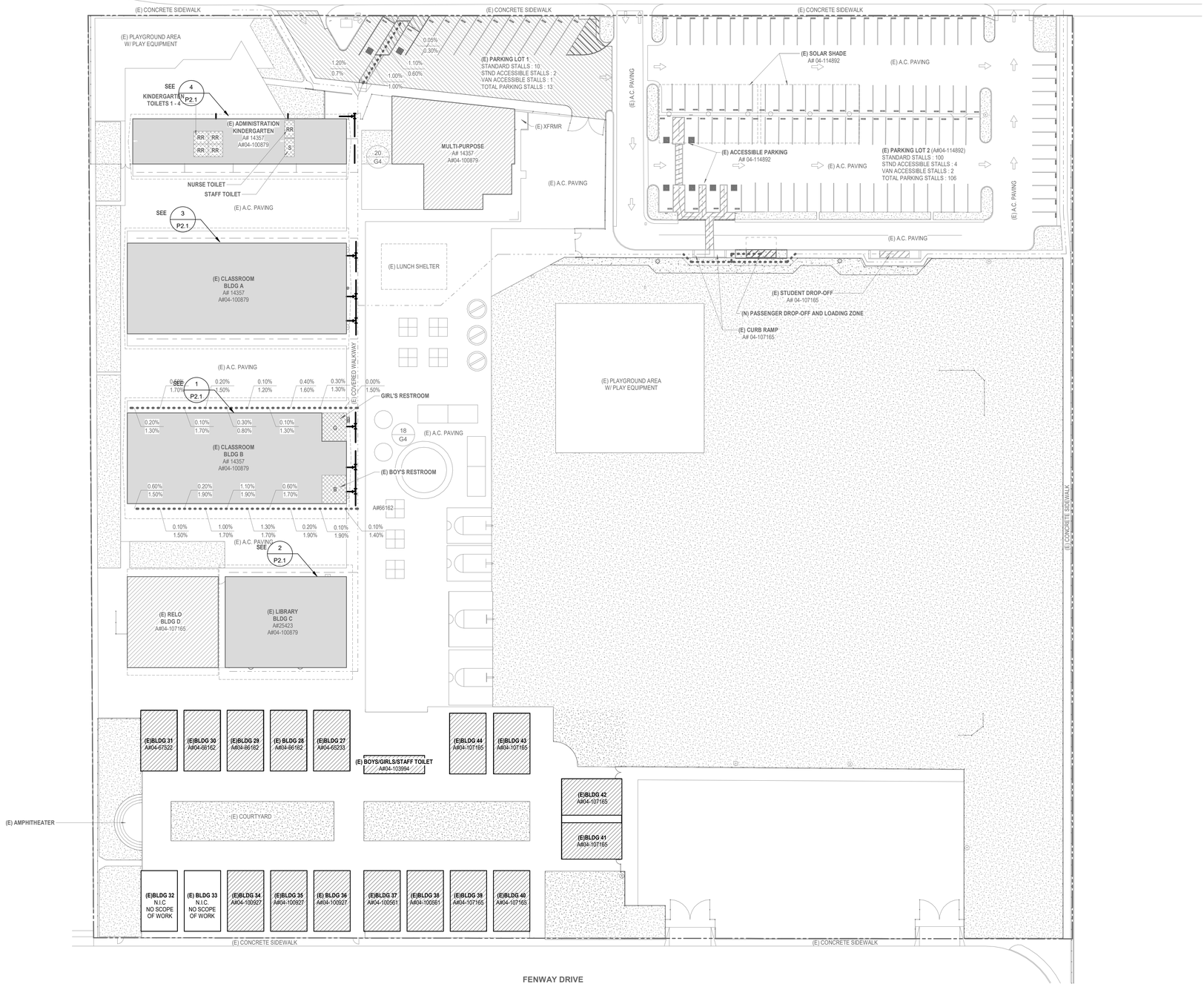
P1.0 - PLUMBING SITE PLAN

0" 1"



1 SITE PLAN
1" = 30'-0"

CONSTRUCTION NOTES

1. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILTS
2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTIONS PRIOR TO BIDDING THE PROJECT.
4. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND OR EXTEND EXISTING PIPING OR ROUGH INS AS REQUIRED TO SUIT THE NEW FIXTURE.

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A1 A2 A3 A4 A5 A6 A7 A8 A9 B C1 C2 C3 C4 C5 C6 CK MP

KEY PLAN
NORTH: PLAN TRUE

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PLUMBING SITE PLAN

P1.0

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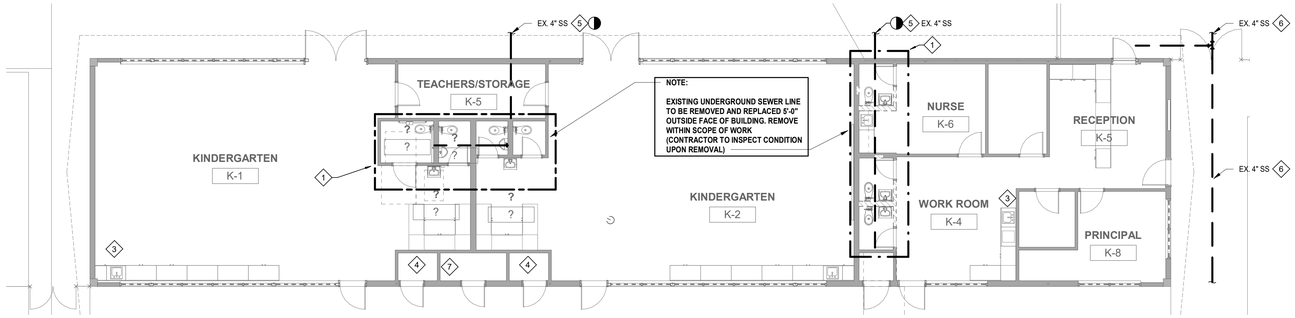
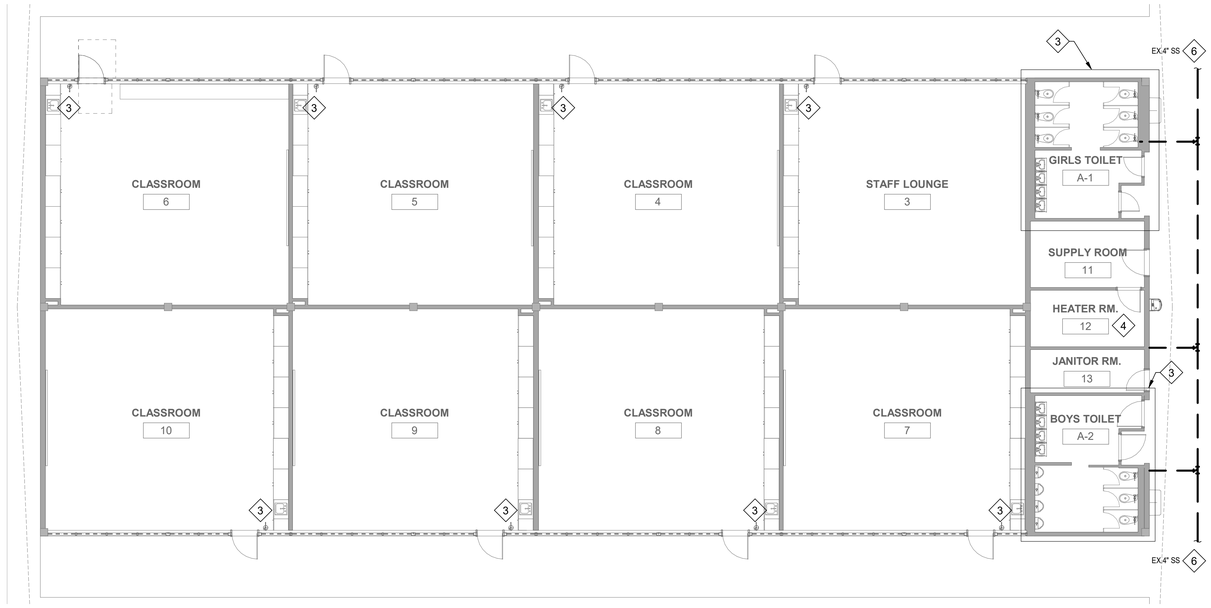
PD2.1 - PLUMBING DEMOLITION PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

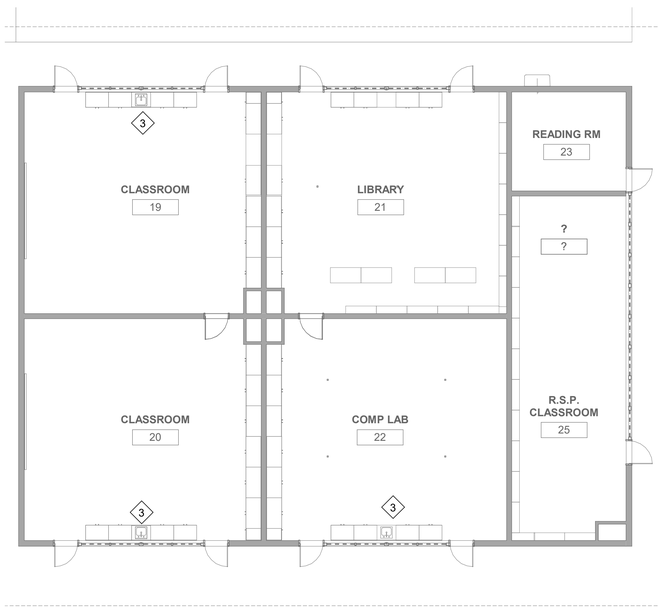
0" 1"



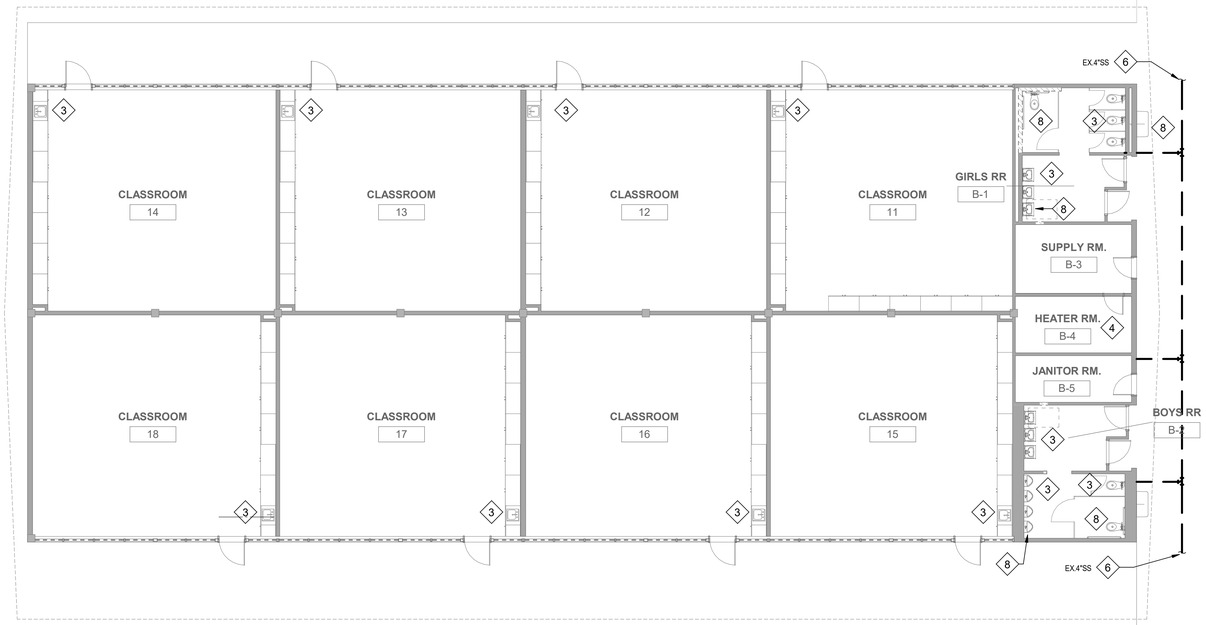
4 DEMOLITION FLOOR PLANS- ADMIN/KINDERGARTEN
1/8" = 1'-0"



3 DEMOLITION FLOOR PLAN - BUILDING A
1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN - BUILDING C
1/8" = 1'-0"



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

KEY NOTES

1. EXISTING RESTROOMS TO BE RE-CONFIGURED. EXISTING PLUMBING FIXTURE TO BE REMOVED AND ALL APPURTENANCES. REMOVE AND REPLACE EXISTING 4" SANITARY BELOW GRADE WITHIN SCOPE OF WORK. UPON REMOVAL OF 4" SEWER LINE TEMPORARILY DISCONNECT OTHER LINES CONNECTING. TEMPORARILY CAP EXISITNG VENT AND WATER LINES ABOVE IN CEILING SPACE BACK TO THE MAIN BRANCH.
2. EXISTING WATER CLOSET AND TRIM TO BE REPLACED; OFFSET EXISTING WASTE , VENT AND WATER FOR NEW WATER CLOSET ROUGH - IN DIMENSION (REFER TO ARCHITECTURAL).
3. EXISTING PLUMBING FIXTURES TO REMAIN
4. EXISTING HEATER UNIT TO BE REMOVED (SEE MECHANICAL DWGS.) AND ALL APPURTENANCES. DISCONNECT AND CAP GAS SUPPLY .
5. DISCONNECT EX. 4" SEWER UP TO THIS POINT 5'-0" OUTSIDE OF BUILDING
6. EXISTING TO REMAIN
7. EXISTING 40 GALLON GAS WATER HEATER TO REMAIN
8. EXISTING FIXTURE TO BE REMOVED AND REPLACED. CAP EXISTING SEWER , VENT AND WATER LINES TEMPORARILY, FOR NEW REPLACEMENT

CONSTRUCTION NOTES

1. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILTS
2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTIONS PRIOR TO BIDDING THE PROJECT.
4. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND OR EXTEND EXISTING PIPING OR ROUGH INS AS REQUIRED TO SUIT THE NEW FIXTURE.

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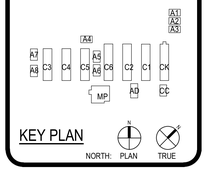

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PLUMBING DEMOLITION PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

PD2.1

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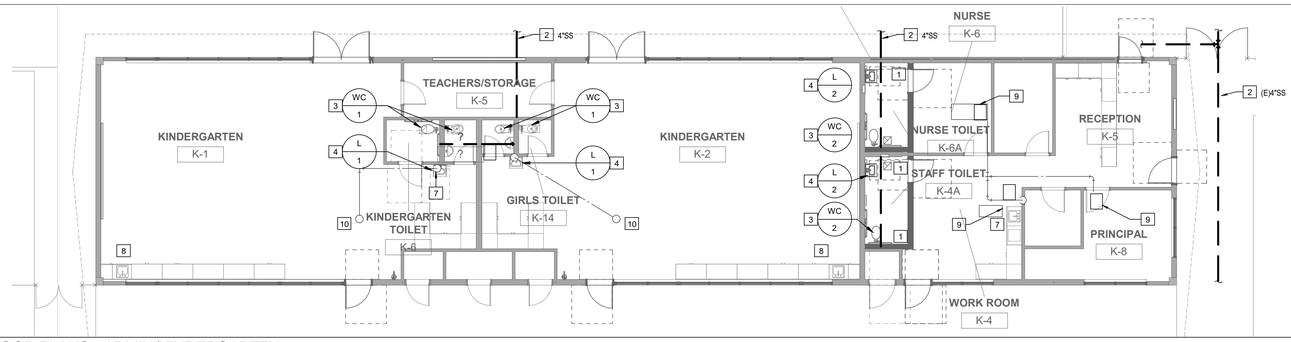
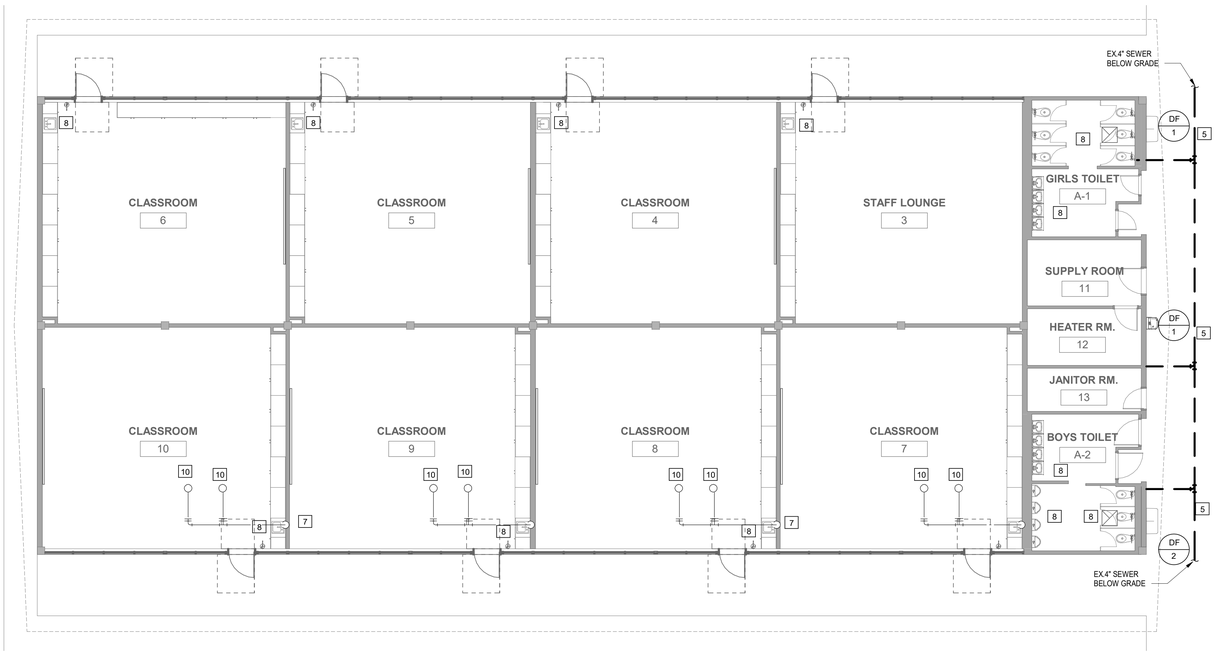
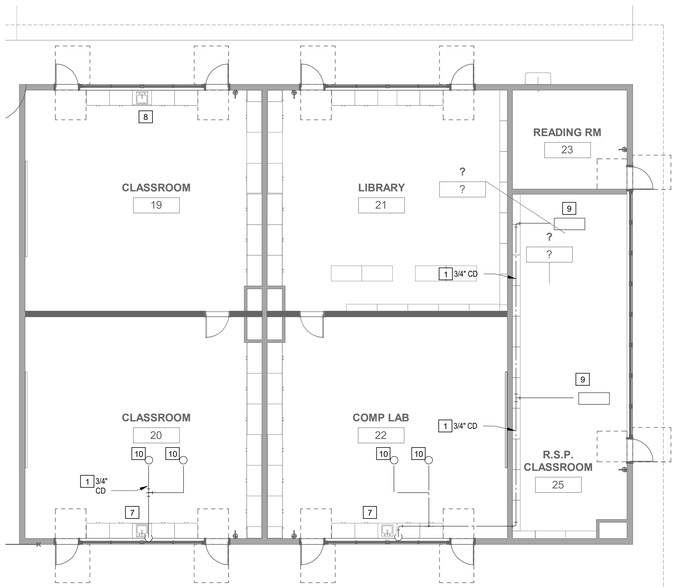


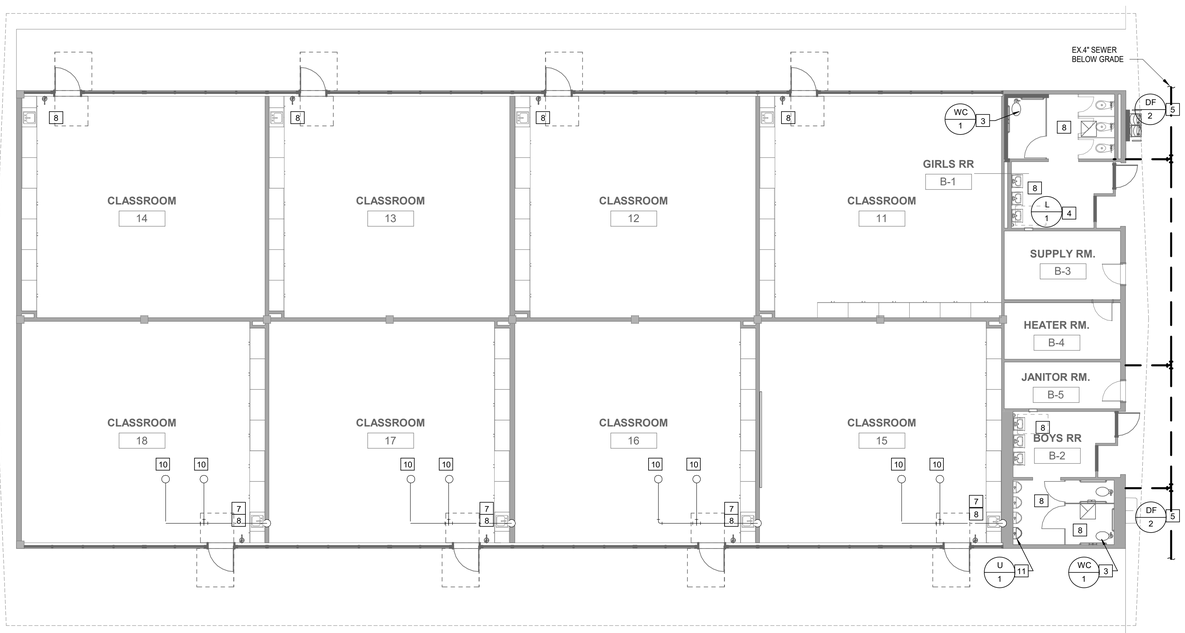
4 FLOOR PLANS - ADMIN/KINDERGARTEN
1/8" = 1'-0"



3 FLOOR PLAN - BUILDING A
1/8" = 1'-0"



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



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

KEY NOTES

1. PIPING ABOVE IN CEILING SPACE
2. PIPING BELOW FLOOR / GRADE
3. ROUGH IN AND CONNECT 4" SANITARY SEWER , 2" VENT AND 1 -1/4" CW TO WATER CLOSET.
4. LAVATORY AND FAUCET TO BE INSTALLED ADA COMPLIANT. PLUMBING CONTRACTOR TO SUPPLY & INSTALL NEW ANGLE STOP, SINK SUPPLY, COMPLETE WITH LOOSE KEY, CHROME ESCUTCHEON PLATE COMPRESSION INLET, HEAVY DUTY OUTLET RISER. ROUGH IN AND CONNECT 2" SANITARY SEWER , 2" VENT AND 1/2" H/ CW
5. DRINKING FOUNTAIN POC TO (E) 2" SS AND 2" VENT AND (E) 3/4" CW .
6. POC TO EXISTING VENT ABOVE IN CEILING SPACE
7. 3/4" CONDENSATE FROM ABOVE. DROP DN. IN WALL TO LAV TAIL PIECE SEE DETAIL 1/ P6.1
8. EXISTING PLUMBING FIXTURE
9. NEW FAN COIL UNIT (BY MECHANICAL) PROVIDE 3/4" CONDENSATE DRAIN LINE FOR CONDENSATE PIPE CONNECTION TO UNIT REFER TO MANUFACTURE'S RECOMMENDATION.
10. 3/4" CONDENSATE DRAIN LINE UP TO A/C UNIT ON ROOF.
11. ROUGH IN AND CONNECT 2" SANITARY SEWER , 2" VENT AND 1" CW TO URINAL.

CONSTRUCTION NOTES

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2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
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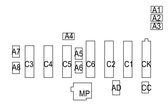

KEY PLAN
NORTH: PLAN TRUE

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WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

PLUMBING FLOOR PLANS - ADMIN & KINDERGARTEN, BLDG A,B & C

P2.1

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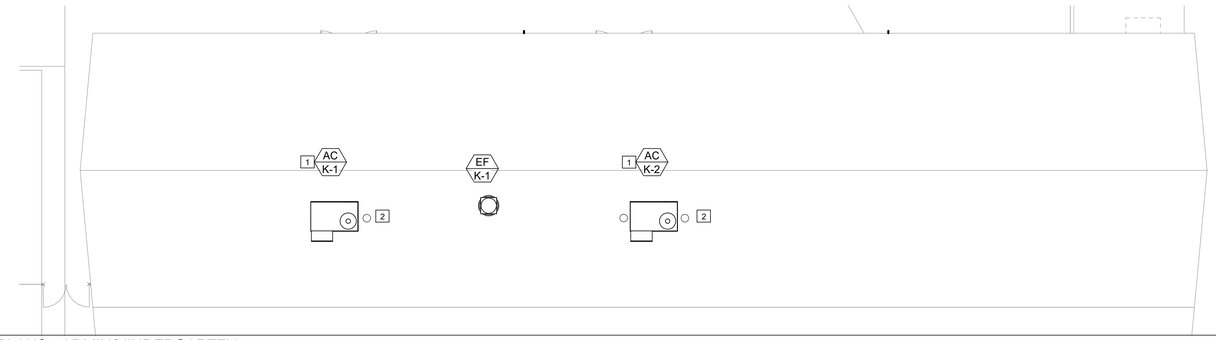
P4.1 - PLUMBING ROOF PLANS

0" 1"



4 ROOF PLANS - ADMIN/KINDERGARTEN
1/8" = 1'-0"

3 ROOF PLAN - BUILDING A
1/8" = 1'-0"

KEY NOTES

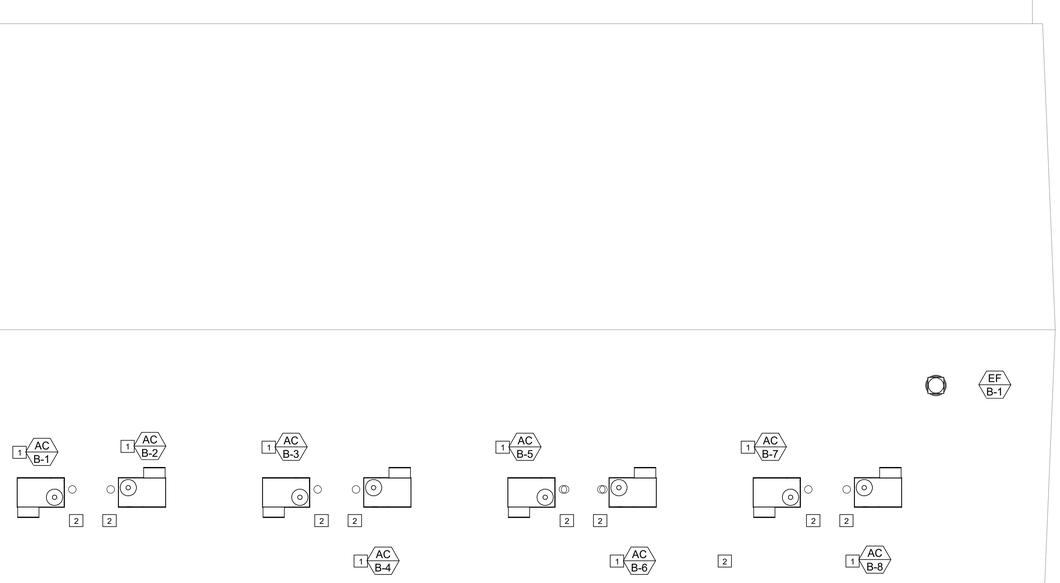
1 NEW A/C UNITS (BY MECHANICAL) PROVIDE 3/4" CONDENSATE LINE, TRAP AND VENT AS REQUIRED. DETAIL ON SHEET 3/P6.1

2 3/4" CONDENSATE DOWN THROUGH ROOF

CONSTRUCTION NOTES

1. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILTS
2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTIONS PRIOR TO BIDDING THE PROJECT.
4. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND OR EXTEND EXISTING PIPING OR ROUGH INS AS REQUIRED TO SUIT THE NEW FIXTURE.

2 ROOF PLAN - BUILDING C
1/8" = 1'-0"



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

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horser St
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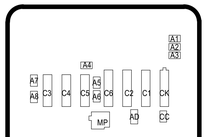
DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43



KEY PLAN NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

Architect

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PLUMBING ROOF PLANS

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0" 1"

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
WC 1	WATER CLOSET (KINDER)	4"	2"	1-1/2"	---	AMERICAN STANDARD MADERA YOUTHWISE # 2599.001.128 FLOOR MOUNTED TOILET SYSTEM WITH 6047.161.002 MANUAL FLUSH VALVE WITH METAL COVER AND 5901.100 HEAVY DUTY OPEN FRONT ADJUSTABLE SEAT. FLUSH VALVE HANDLE TO BE MOUNTED ON WIDE SIDE OF STALL , CBC COMPLIANT
WC 2	WATER CLOSET	4"	2"	1-1/2"	---	AMERICAN STANDARD MADERA FLOWISE # 2857.128 FLOOR MOUNTED TOILET SYSTEM WITH SLOAN ROYAL 111-1.28 MANUAL FLUSH VALVE WITH METAL COVER AND 5901.100 HEAVY DUTY OPEN FRONT ADJUSTABLE SEAT. FLUSH VALVE HANDLE TO BE MOUNTED ON WIDE SIDE OF STALL . (ACCESSIBLE) CBC COMPLIANT
U 1	URINAL	2"	1-1/2"	1"	---	AMERICAN STANDARD # 6590.001 WASHBROOK FLOWISE WALL HUNG URINAL " VITREOUS CHINA" 0.125 GPF, SLOAN ROYAL 186.125 EXPOSED MANUAL FLUSH VALVE J.R. SMITH # 0600 SERIES URINAL SUPPORTS. INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. FOR MOUNTING HEIGHT REFER TO ARCH PLANS. CBC COMPLIANT
L 1	LAVATORY (KINDER GARTEN)	2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD NO. 0356.041"LUCERNE WALL HUNG LAVATORY" 20"X18" WALL HUNG, COMPLETE WITH FAUCET WITH 0.5 GPM AERATOR AND VANDAL RESISTANT COVER PLATE, MCGUIRE NO. 155A 1-1/4" OUTLET "OPEN GRID P.O. PLUG" MCGUIRE NO. P/V8090NCO 1-1/4" L.A. PATTERN P-TRAP WITH TRAP AND SUPPLYCOVERS, GALVANIZED NIPPLE AND CHROMIUM PLATED BRASS CASING, CHICAGO NO. 1017 -ABCP LOOSE KEY STOPSWITH RIGID SUPPLIES, AND ZURN NO. Z-1231CARRIER WITH STEEL PLATE, MOUNT AT ADA
L 2	LAVATORY (STAFF)	2"	1-1/2"	1/2"	1/2"	SAME AS L-1 MOUNT AT ADULT ACCESSIBLE HEIGHT
DF 1	DRINKING FOUNTAIN	2"	2"	1/2"	---	ELKAY NO. LZS8WSLP / FILTERED SINGLE LZ COOLER, WALL MOUNTED W TOUCHLESS BOTTLE FILLER EZH2O, W/ SOLENOID VALVE, CONTROLLED BY TRANSFORMER 115 / 60HZ / 4.2 FLA 14 GAUGE STAINLESS STEEL W/ INTEGRAL 1/4" STAINLESS STEEL MOUNTING PLATE, ADA APPROVED, COMPLETE WITH VANDAL PROOF BOTTOM CHICAGO NO. 45LKABCP ANGLE STOP W/ 1/2" FEMALE INLET & OUTLET. MOUNT AT ADA ACCESSIBLE HEIGHT.
DF 2	DRINKING FOUNTAIN	2"	2"	1/2"	---	ELKAY NO.VRC8TLWS / FILTERED HIGH LOW LZ COOLER, WALL MOUNTED. W TOUCHLESS BOTTLE FILLER EZH2O, W/ SOLENOID VALVE, CONTROLLED BY TRANSFORMER 120 / 60HZ / 4.2 FLA 14 GAUGE STAINLESS STEEL W/ INTEGRAL 1/4" STAINLESS STEEL MOUNTING PLATE, ADA APPROVED, COMPLETE WITH VANDAL PROOF BOTTOM CHICAGO NO. 45LKABCP ANGLE STOP W/ 1/2" FEMALE INLET & OUTLET. MOUNT AT ADA ACCESSIBLE HEIGHT.
WHA 1	WATER HAMMER ARRESTER	---	---	VARIES	VARIES	PPP SC SERIES HYDRA-RESTER, SEAMLESS COPPER CHAMBER SUITABLE FOR CONCEALED INSTALLATION, SIZE INDICATED ON PLANS. INSTALL PER MANUFACTURER RECOMMENDATION.
TP 1	TRAP PRIMER	---	---	1/2"	---	PRECISION PLUMBING PRODUCTS INC. BRASS DIAPHRAM TYPE TRAP PRIMER W/INTEG. VAC. BREAKER & GRAVITY OUTLET, PROVIDE INLET BALL VALVE & ACCESS PANEL. SEE PLANS FOR NUMBER OF TRAPS SERVED.

NOTES:

1. REFER TO ARCHITECHTURAL DRAWINGS FOR EXACT SPECIFICATIONS AND LOCATIONS OF ALL APPLIANCES, PLUMBING FIXTURES AND FAUCETS, WHERE THERE IS A DISCREPANCY BETWEEN THE ENGINEERING AND ARCHITECTURAL DRAWINGS OF APPLIANCES AND FIXTURE SPECIFICATIONS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
2. ALL FIXTURES AND APPLIANCES SHALL BE APPROVED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. PLUMBING CONTRACTOR TO COORDINATE NUMBER OF REQUIRED HOLES FOR ALL SINKS BASED ON EQUIPMENT / ACCESSORIES SPECIFIED. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
4. ALL FITTINGS AND FAUCETS TO BE USED SHALL BE IN COMLIANCE WITH STATE ASSEMBLY BILL AB1953 (LEAD FREE)

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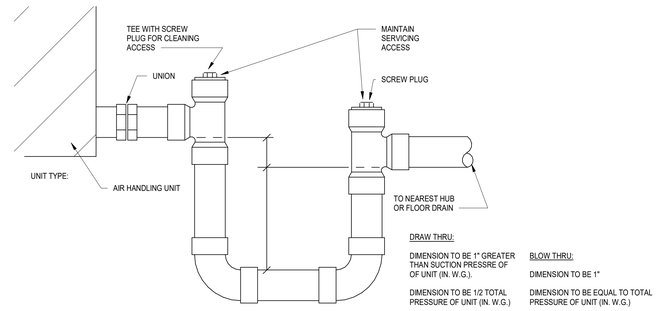
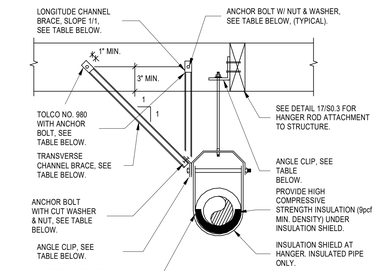
PLUMBING SCHEDULES

P5.1



3 CONDENSATE TRAP PIPING DETAIL
12" = 1'-0"

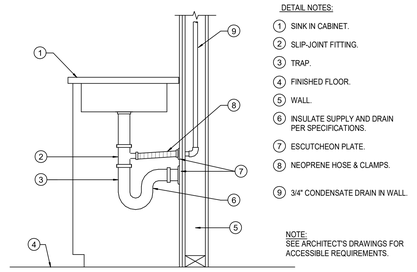


TYPICAL SEISMIC BRACING FOR PIPE

PIPE SIZE	* CHANNEL BRACE	ROD SIZE	MAX. VERT. SUPPORT SPACING	MAX. TRANS./ LONGITUDE SUPPORT SPACING	ANCHOR BOLT SIZE	ANGLE CLIP
1/2"	1-5/8"x1-5/8"x12 GA	1/4"	5'	10'	1/4"	2"x2"x1/8"x0'-2"
3/4"	1-5/8"x1-5/8"x12 GA	1/4"	6'	12'	3/8"	2"x2"x1/8"x0'-2"
1"	1-5/8"x1-5/8"x12 GA	3/8"	7'	14'	3/8"	3"x3"x1/4"x0'-3"
1-1/4"	1-5/8"x1-5/8"x12 GA	3/8"	8'	16'	3/8"	3"x3"x1/4"x0'-3"
1-1/2"	1-5/8"x1-5/8"x12 GA	3/8"	9'	18'	3/8"	3"x3"x1/4"x0'-3"
2"	1-5/8"x1-5/8"x12 GA	3/8"	10'	20'	3/8"	3"x3"x1/4"x0'-3"
2-1/2"	1-5/8"x1-5/8"x12 GA	3/8"	10'	22'	3/8"	3"x3"x1/4"x0'-3"
3", 4"	1-5/8"x1-5/8"x12 GA	3/8"	11'	24'	1/2"	3"x3"x1/4"x0'-3"

* CHANNEL MAX. 5'-0" LENGTH

2 PIPE SUPPORT DETAIL (WOOD STRUCTURE)
12" = 1'-0"



DETAIL NOTES:

1. SINK IN CABINET.
2. SLIP-JOINT FITTING.
3. TRAP.
4. FINISHED FLOOR.
5. WALL.
6. INSULATE SUPPLY AND DRAIN PER SPECIFICATIONS.
7. ESCUTCHEON PLATE.
8. NEOPRENE HOSE & CLAMPS.
9. 3/4" CONDENSATE DRAIN IN WALL.

NOTE:
SEE ARCHITECT'S DRAWINGS FOR ACCESSIBLE REQUIREMENTS.

1 CONDENSATE TO TAILPIECE DETAIL
12" = 1'-0"

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PLUMBING DETAILS

P6.1

FIRE ALARM MATRIX OF OPERATION

*REFERENCE NFPA 72 2016, FIGURE A.14.6.2.4

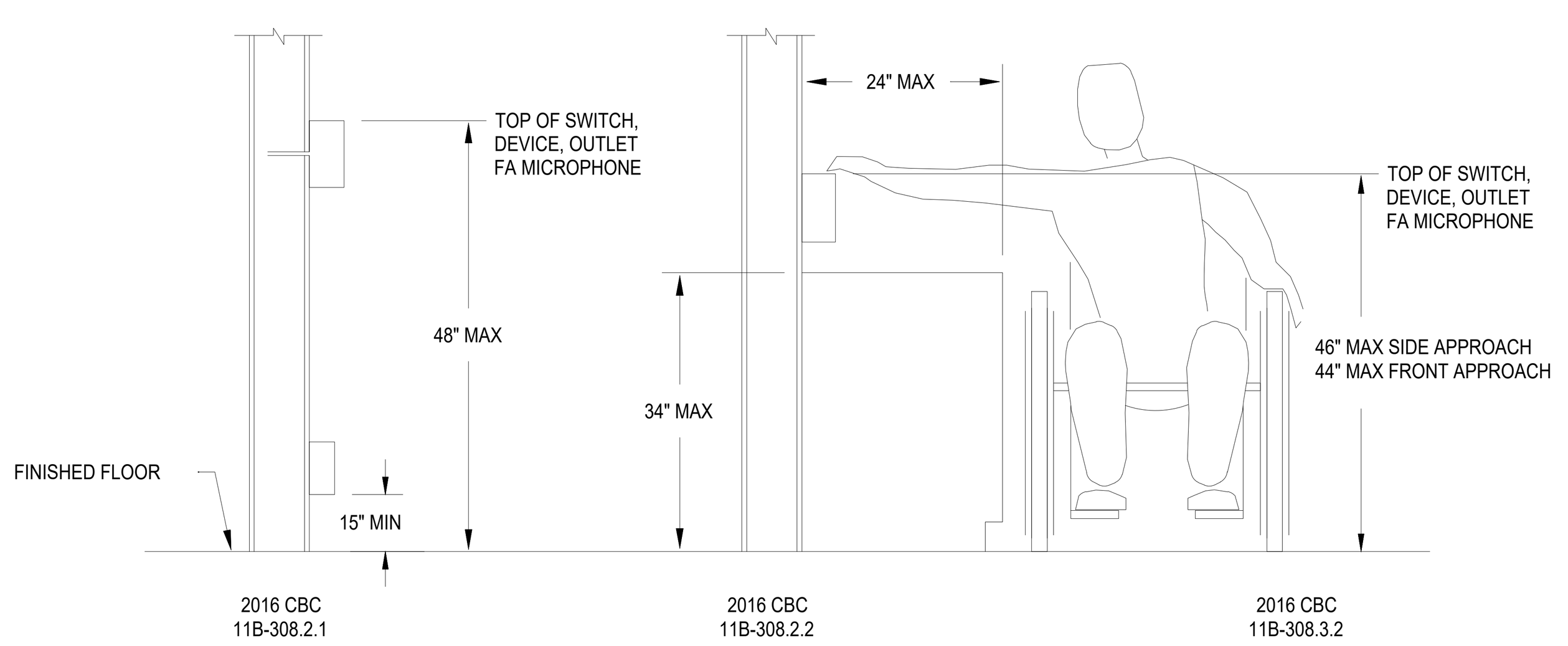
● = ACTION

☐ = NO ACTION

FIRE ALARM SYSTEM OUTPUTS:
- A. ACTUATE COMMON ALARM SIGNAL INDICATOR
- B. ACTUATE ALL AUDIBLE/VISUAL ALARM SIGNALS IN BUILDING
- C. ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR
- D. ACTUATE AUDIBLE SUPERVISORY SIGNAL
- E. ACTUATE AUDIBLE COMMON TROUBLE SIGNAL
- F. SOUND CODE 4 TEMPORAL PATTERN
- G. TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION
- H. TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION
- I. TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION
- J. CLOSE FSD's AND FIRE DOORS IN RATED WALLS
- K. CLOSE ELECTRONICALLY CLOSED DOORS
- L. SHUNT ALL HVAC UNIT FANS (GLOBAL)
- M. SHUNT B.A.F.s IN MPR
- N.

	FIRE ALARM SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1.	MANUAL FIRE ALARM PULL STATION	●	●					●				●		●	
2.	SMOKE OR HEAT DETECTOR	●	●					●			●	●	●	●	
3.	FIRE SPRINKLER WATER FLOW	●	●					●			●	●	●	●	
4.	DUCT SMOKE DETECTOR			●	●				●		●		●		
5.	TAMPER SWITCH, PIV & OS&Y			●	●				●						
6.	FIRE ALARM AC POWER FAILURE					●				●					
7.	FIRE ALARM SYSTEM LOW BATTERY					●				●					
8.	FIRE ALARM OPEN CIRCUIT					●				●					
9.	FIRE ALARM GROUND FAULT					●				●					
10.	NAC CIRCUIT SHORT					●				●					
11.	CELLULAR COMMUNICATOR FAULT					●				●					
12.	CO DETECTOR			●	●		●		●						
13.															
14.															
15.															
16.															

MOUNTING OVER OBSTRUCTION DETAIL



NOTES:

1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

FIRE ALARM DEVICE ADDRESS LEGEND

A 01 — SLC OR ZONE DEVICE # / BUILDING SLC

1. SIGNATURE LINE CIRCUIT (INITIATION) DEVICE ADDRESS. ADDRESSES MAY DIFFER DEPENDING ON MANUFACTURER.

N1. 1 — NAC DEVICE / NAC CIRCUIT (FACP)

2. FACP NOTIFICATION APPLIANCE CIRCUIT ADDRESS.

A. 1. 1 — NAC DEVICE / NAC CIRCUIT / NAC POWER SUPPLY # (FIRST # ANNOTATES BLDG. #)

3. REMOTE POWER SUPPLY NOTIFICATION APPLIANCE CIRCUIT ADDRESS.

("cd" = CANDELA SETTING)
(DECIBEL SETTINGS DEPEND ON MANUFACTURER)

S1. 1 — SPEAKER/SPEAKER STROBE / SPEAKER CIRCUIT

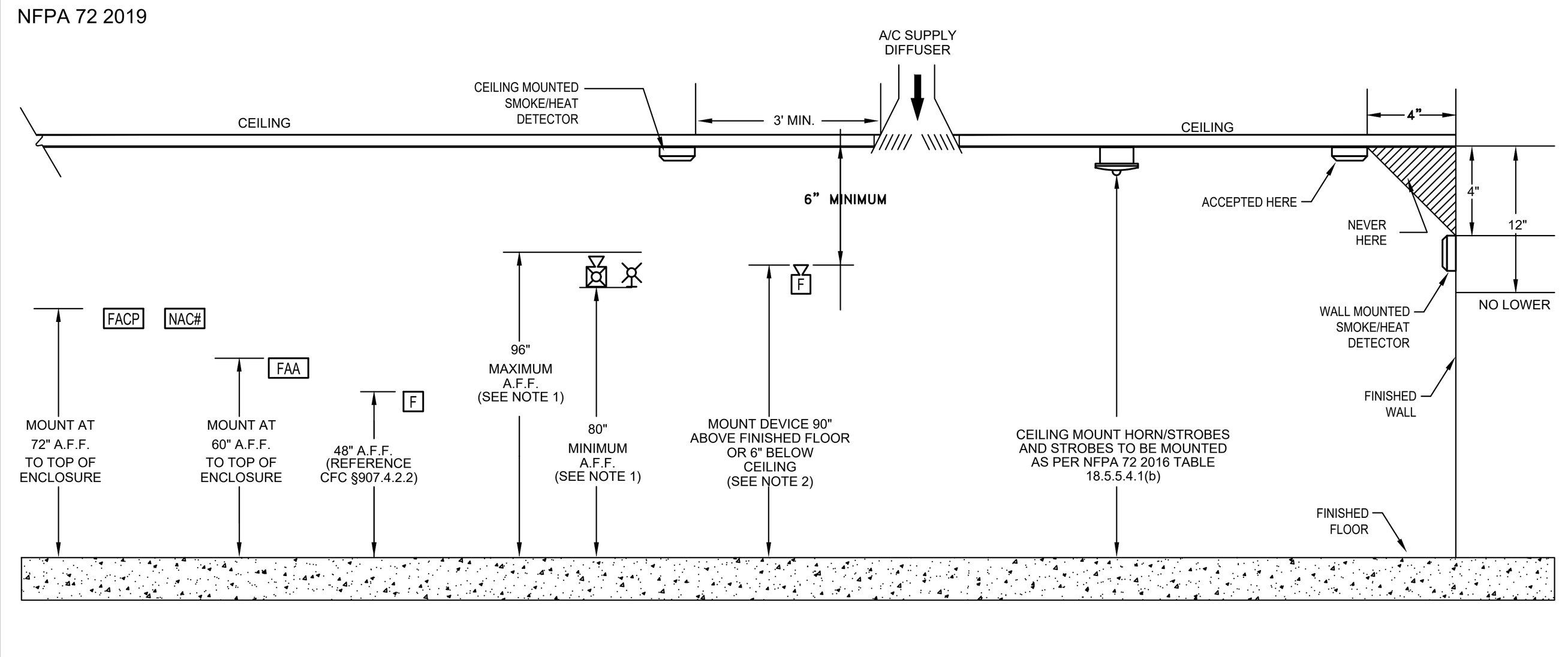
4. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM AMPLIFIER AND SPEAKER ADDRESSES.

("W" = WATTS)

*DEVICE ADDRESSING VARIES DEPENDING ON THE MANUFACTURER. F/A CONTRACTOR TO PROGRAM DEVICES ACCORDING TO THE MANUFACTURER'S OPERATION MANUAL.

FIRE ALARM ELEVATION MOUNTING DETAIL

NFPA 72 2019



NOTES:
1. VISUAL, WALL MOUNTED APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80 in. (2.03 m) AND NOT GREATER THAN 96 IN. (2.44 M) ABOVE FINISHED FLOOR OR AT THE MOUNTING HEIGHT SPECIFIED USING THE PERFORMANCE BASED ALTERNATIVE OF 18.5.5.6. (NFPA 72 2016 SECTION 18.5.5.1*)
2. IF CEILING HEIGHTS ALLOW, AND UNLESS OTHERWISE PERMITTED, AUDIBLE WALL MOUNT APPLIANCES SHALL HAVE THEIR TOPS ABOVE FINISHED FLOOR AT HEIGHTS NOT LESS THAN 90 in. (2.29 m) AND BELOW THE FINISHED CEILING AT DISTANCES OF NOT LESS THAN 6 in (155 mm). (NFPA 72 2016 SECTION 18.4.8.1)

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FIRE ALARM SYSTEM EQUIPMENT LEGEND AND SYMBOLS

SYM.	MODEL	MANUFACTURER	DESCRIPTION	MOUNTING	CSFM #
EVAC	IFP-2100ECS	FARENHYT	EMERGENCY VOICE/ALARM COMMUNICATION PANEL ECS-INT50W, INTERNAL 50 WATT AMPLIFIER 6815, SLC EXPANDER	WALL MOUNTED	7165-0559:0505 7300-0559:0176
FAC	HWF2V-COM	HONEYWELL/ADEMCO	CELLULAR FIRE ALARM COMMUNICATOR	WALL MOUNTED	7300-1645:0511
AMP#	ECS-50W	FARENHYT	SINGLE CHANNEL 50W, 25/70V AMPLIFIER	WALL MOUNTED	7165-0559:0505
NAC#	RPS-1000	FARENHYT	INTELLIGENT 6 AMP NAC POWER SUPPLY	WALL MOUNTED	7165-0559:0505
FATC	SSU00636	SAE	FIRE ALARM TERMINAL CABINET	WALL MOUNTED	UL & NEMA LISTED
AIM	IDP-MONITOR	FARENHYT	ADDRESSABLE INPUT MODULE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7300-0559:0155
ARM	IDP-RELAY	FARENHYT	ADDRESSABLE RELAY MODULE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7300-0559:0155
S P	IDP-PHOTO-W B210LP	FARENHYT	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR HEAD 6" DETECTOR BASE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7272-0559:0149 7300-1653:0109
	IDP-HEAT-W B210LP	FARENHYT	ADDRESSABLE FIXED (135°F) HEAT SENSOR HEAD (F = FIXED, A = ATTIC) 6" DETECTOR BASE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7270-0559:0147 7300-1653:0109
F	IDP-PULL-DA	FARENHYT	ADDRESSABLE DOUBLE ACTION MANUAL PULL STATION	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7150-0559:0157
	SRL	SYSTEM SENSOR	MULTI CANDELA STROBE, CEILING MOUNT-RED	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7125-1653:0504
	SPSRL	SYSTEM SENSOR	MULTI CANDELA TEMPORAL SPEAKER STROBE, CEILING MOUNT-RED	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7320-1653:0505
WP S	SPRK	SYSTEM SENSOR	WEATHER PROOF SPEAKER, WALL MOUNT-RED	WBB BACK BOX IS INCLUDED	7320-1653:0201
DOC	SSU00672	SAE	FIRE DOCUMENT BOX-RED	WALL MOUNT @ FACP	UL LISTED
SS	DTK-120HWLOK	DITEK	120VAC SURGE PROTECTOR	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7300-2105:0102
JB	TBD	TBD	ELECTRICAL JUNCTION BOX (SIZES WILL VARY)	TBD	UL LISTED
****	PS-12260VdS	POWER SONIC	12VDC, 26AH RECHARGEABLE SEALED LEAD ACID BATTERY	INSTALL IN EVAC ENCLOSURE	UL LISTED
****	PS-1270	POWER SONIC	12VDC, 7AH RECHARGEABLE SEALED LEAD ACID BATTERY	INSTALL IN POWER SUPPLY, AMPLIFIER & FAC ENCLOSURES	UL LISTED

NOTES:
1. INSTALL TWO 12VDC, 26Ah BATTERIES IN EVAC ENCLOSURE.
2. INSTALL TWO 12VDC, 7AH BATTERIES IN EACH NAC POWER SUPPLY & AMPLIFIER ENCLOSURES.
3. INSTALL ONE 12VDC, 7AH BATTERY IN COMMUNICATOR ENCLOSURE.

FIRE ALARM WIRE SCHEDULE

TAG	COND.	TYPE	AWG	DESCRIPTION	USE
A	2	SOLID	18	#18/2, RED JACKET, FPLP	SIGNAL LINE CIRCUIT (SLC)
Au	2	STRANDED	18	#18/2, RED JACKET (FIRE UNDERGROUND RATED)	SIGNAL LINE CIRCUIT (SLC) - UNDERGROUND
B	2	SOLID	16	#16/2, RED JACKET, FPLP	SBUS
Bu	2	STRANDED	16	#16 THWN RED(+) BLACK(-) JACKET (FIRE UNDERGROUND RATED)	SBUS - UNDERGROUND
H	2	SOLID	16	#16/2, RED JACKET, FPLP	INDICATING CIRCUIT (IDC)
Hu	2	STRANDED	16	#16 THWN RED(+) BLACK(-) JACKET (FIRE UNDERGROUND RATED)	INDICATING CIRCUIT (IDC) - UNDERGROUND
N	2	SOLID / STRANDED	12	#12/2, RED JACKET, FPLP / #12, THWN, RED (+) BLACK (-) WHEN USED IN CONDUIT	NOTIFICATION APPLIANCE CIRCUIT
Nu	2	STRANDED	12	#12 THHN, THWN RED(+) BLACK(-) (FIRE UNDERGROUND RATED)	NOTIFICATION APPLIANCE CKT.-UNDERGROUND
S	2	STRANDED	16	#16/2 -OVERALL SHIELDED CLASS 2 CABLE	SPEAKER CIRCUIT
Su	2	STRANDED	16	#16/2 -OVERALL SHIELDED C2 CABLE (UNDERGROUND RATE)	SPEAKER CIRCUIT - UNDERGROUND

NOTES:
1. ALL SIGNAL LINE CIRCUITS (SLC) ARE TO BE CLASS "B", STYLE "Y".
2. ALL NOTIFICATION APPLIANCE CIRCUITS (NAC) ARE TO BE CLASS "B", STYLE "Y".

FIRE ALARM REQUIREMENTS

THE CONTRACTOR SHALL PROVIDE AND SUBMIT THE FIRE ALARM SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE FIRE ALARM SYSTEM SUBMITTAL SHALL CONTAIN THE FOLLOWING:

A. SHOP DRAWINGS: COMPLETE 1/8" SCALE FLOOR PLANS SHOWING ALL DEVICES, COMPONENTS, CONDUIT AND WIRING INDICATING A COMPLETE AND OPERABLE SYSTEM AS DESIGNED AND SPECIFIED. REPRODUCED COPIES OF BID SET FIRE ALARM PLANS ARE NOT ACCEPTABLE AS SHOP DRAWINGS. SHOP DRAWINGS MUST ALSO INDICATE DEVICE MOUNTING HEIGHTS, ROOM NAMES AND NUMBERS AND THE LOCATION OF ALL FIRE RATED WALLS.

B. ELECTRICAL CONTRACTOR'S AND FIRE ALARM SYSTEM INSTALLER'S NAME, ADDRESS, PHONE NUMBER AND C-10 LICENSE NUMBER.

C. LIST OF SYSTEM COMPONENTS, EQUIPMENT AND DEVICES, INCLUDING MANUFACTURER'S MODEL NUMBER(S) AND CALIFORNIA STATE FIRE MARSHALL LISTING NUMBERS.

D. ORIGINAL COPIERS OF MANUFACTURERS' SPECIFICATION SHEETS FOR ALL EQUIPMENT AND DEVICES INDICATED.

E. VOLTAGE DROP CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION FOR THE WORST CASE:
1. POINT-TO-POINT OR OHMS LAW CALCULATIONS.
2. IDENTIFICATION OF ZONE USED IN CALCULATIONS.
3. VOLTAGE DROP PERCENT (NOT TO EXCEED MANUFACTURERS' REQUIREMENTS).
   a. NOTE: IF VOLTAGE DROP EXCEEDS 10%, INDICATE MANUFACTURERS' LISTED OPERATING RANGE(S) OR EQUIPMENT AND DEVICES.
4. NOTE CIRCUIT NUMBER FOR WORST CASE CALCULATION.

F. BATTERY TYPE(S), AMPS HOURS AND LOAD CALCULATIONS, INCLUDE THE FOLLOWING INFORMATION:
1. NORMAL OPERATION: 100% OF APPLICABLE DEVICES FOR 24 HOURS = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.:
   a. ZONE MODULES
   b. DETECTORS
   c. OTHER DEVICES (IDENTIFY)
2. ALARM CONDITION: 100% OF APPLICABLE DEVICES FOR 15 MINUTES = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.:
   a. ZONE MODULES
   b. SIGNAL MODULES
   c. DETECTORS
   d. SIGNAL DEVICES
   e. ANNUNCIATOR
   f. OTHER DEVICES (IDENTIFY)
3. NORMAL OPERATION + ALARM OPERATION
   a. TOTAL AMP HOURS REQUIRED.
   b. TOTAL AMP HOURS PROVIDED.

FIRE ALARM SYSTEM APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2017 *

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR *
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
(2015 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
(2015 IAPMO UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
(2015 IAPMO UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
(2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2015 INTERNATIONAL EXISTING BUILDING CODE AND 2016 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE, 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

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED): 2016 EDITION
NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT; 2015 EDITION
UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES; 2003 EDITION
UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS; 1999 EDITION
UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED; 2002 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

* ALL PARTS OF THE 2019 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2017 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2016 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS FEBRUARY 25, 2016 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 20, 2016.

FIRE ALARM SYSTEM ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
ARCH.	ARCHITECT; ARCHITECTURAL
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CFC	CALIFORNIA FIRE CODE
CKT	CIRCUIT
C.O.	CONDUIT ONLY WITH PULL WIRE
CU	COPPER
DWG	DRAWING
(E)	EXISTING
EMT	ELECTRICAL METALLIC TUBING
FA	FIRE ALARM
FLR	FLOOR
FT	FEET
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
(N)	NEW
NIC	NOT IN CONTRACT
PNL	PANEL
(R)	REMOVE or REPLACE or RELOCATE
REQ'D	REQUIRED
SF	SQUARE FEET
SHT	SHEET
SW	SWITCH
TBD	TO BE DETERMINED
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF

FIRE ALARM SHEET INDEX

FIRE ALARM SCOPE OF WORK

1. PROVIDE AND INSTALL A NEW AUTOMATIC EMERGENCY VOICE/FIRE ALARM COMMUNICATIONS SYSTEM FOR AN EXISTING SCHOOL CAMPUS IN ACCORDANCE WITH NFPA 101, NFPA 72, CFC §907.2.3, CMC §606 & 608, DSA GL-2, IR 9-1 AND 9-2 AND THE AUTHORITY HAVING JURISDICTION.

FIRE ALARM GENERAL NOTES

1. APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35.
2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM THE FINISHED FLOOR.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
10. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
11. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
12. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
13. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
14. ALL FIRE ALARM WIRING SHALL BE FPLOR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
15. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
16. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
17. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS.
18. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS' SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL" CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 7.8.2.
22. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
23. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
27. ALL CARBON MONOXIDE SIGNALS SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.8.6.5.1.
28. ALL EQUIPMENT SHALL BE NEW AND U.L. & CALIFORNIA STATE FIRE MARSHAL LISTED.
29. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLESHOOTING, ETC.
30. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
31. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES, AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM INTERFACE SHALL BE BY MECHANICAL CONTRACTOR.
32. ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS EXPOSED TO THE WEATHER SHALL BE WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.
33. ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
34. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES, AND ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
35. SMOKE DETECTOR TESTING SHALL BE ACCOMPLISHED PER THE MANUFACTURER'S INSTRUCTIONS.
36. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
37. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.
38. POINT, COMMON ANNUNCIATION, AND T-TAPPING ARE PROHIBITED.
39. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING.
40. ALL CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED.
41. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.
42. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
43. FIRE ALARM SYSTEM SHALL BE UL LISTED (UUJS).
44. CBC 907.6.5.3 (SFM AMENDMENT) REQUIRES FIRE ALARM TO: "TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISORY STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISORY STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD, FM 3011)."
45. SUBSTITUTION OF SYSTEM COMPONENTS OR MANUFACTURER WILL REQUIRE THE CONTRACTOR TO SEPARATELY OBTAIN APPROVAL WITH THE CSFM AT CONTRACTOR'S EXPENSE AND SHALL MEET ALL REQUIREMENTS OF THE SYSTEM AS DESIGNED AND PRE-APPROVED. ALL PROPOSED SUBSTITUTIONS SHALL BE LISTED WITH THE CALIFORNIA STATE FIRE MARSHAL.
46. FINAL ACCEPTANCE TEST TO INCLUDE TESTING THE CONNECTION BETWEEN THE FIRE ALARM PANEL AND THE SUPERVISING STATION.
47. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

ADDITIONAL/SPECIAL NOTES

1. BIG ASS FANS IN MPR ARE EXISTING.
2. ALL RELOCATEABLE BUILDINGS ARE EXISTING.

IDENTIFICATION STAMP
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APP: 04-121817 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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PROJECT ADDRESS:
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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

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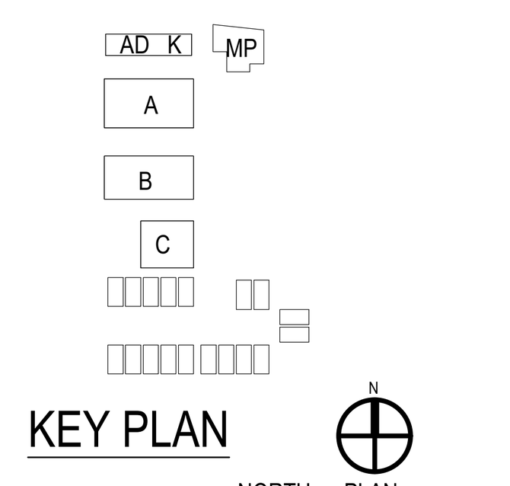

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
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No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220308

REVISIONS

No.	Description	Date

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FIRE ALARM COVER SHEET

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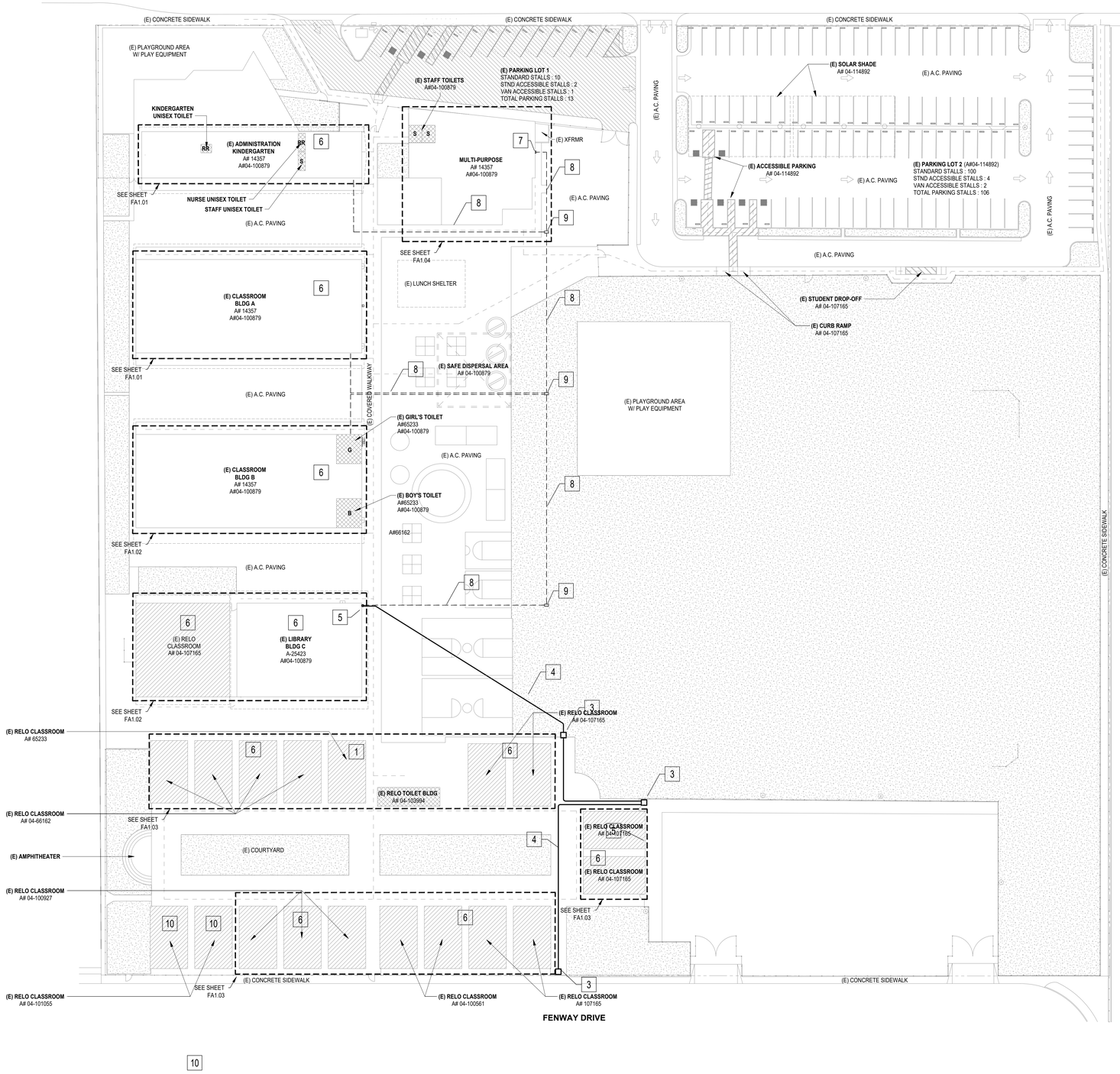

1 FIRE ALARM OVERALL SITE PLAN
SCALE: 1" = 30'-0"

FIRE ALARM SHEET NOTES

1	EXISTING FIRE-LITE FACP LOCATED IN PORTABLE "P".
2	EXISTING EXTERIOR NOTIFICATION APPLIANCE.
3	EXISTING UNDERGROUND PULL BOX.
4	EXISTING UNDERGROUND CONDUIT. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING CONDUIT FOR SERVICEABILITY PRIOR TO CONSTRUCTION.
5	EXISTING NOTIFICATION APPLIANCES POWER SUPPLY.
6	ALL EXISTING FIRE ALARM DEVICES ARE TO BE REMOVED (DEMO'D) FROM ALL BUILDINGS AND REPLACED WITH NEW DEVICES, WIRE AND CONDUIT WHERE APPLICABLE.
7	NEW EXTERIOR WEATHERPROOF ENCLOSURE.
8	NEW UNDERGROUND CONDUIT SYSTEM. ROUTE ALL NEW FIRE ALARM WIRING IN NEW UNDERGROUND CONDUIT SYSTEM FROM BUILDING TO BUILDING.
9	NEW IN-GROUND PULL BOX.
10	NOT IN THIS SCOPE OF WORK.

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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp. 09.30.2023 ELECTRICAL STATE OF CALIFORNIA

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FIRE ALARM SITE PLAN

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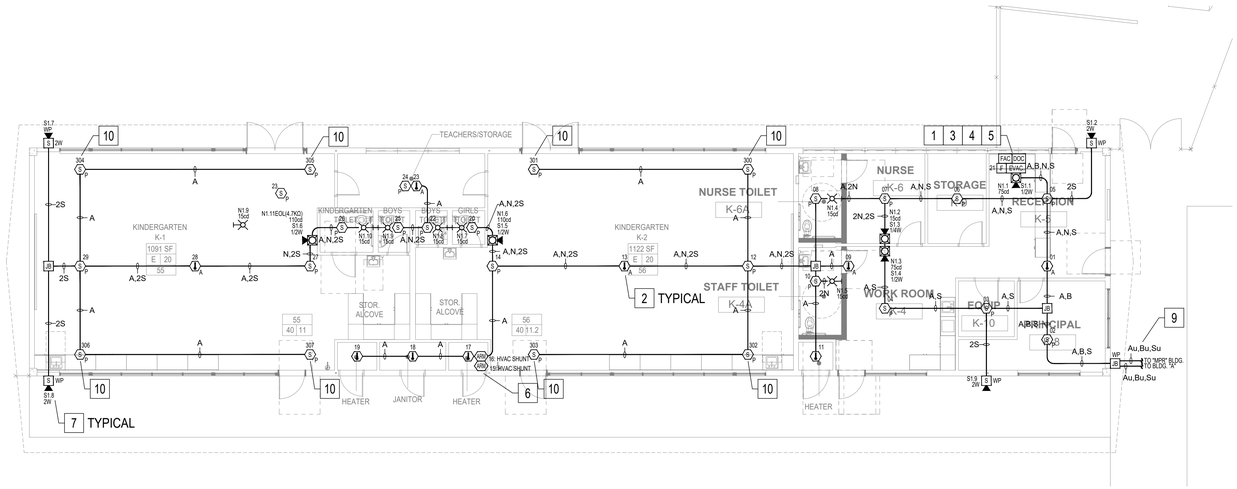
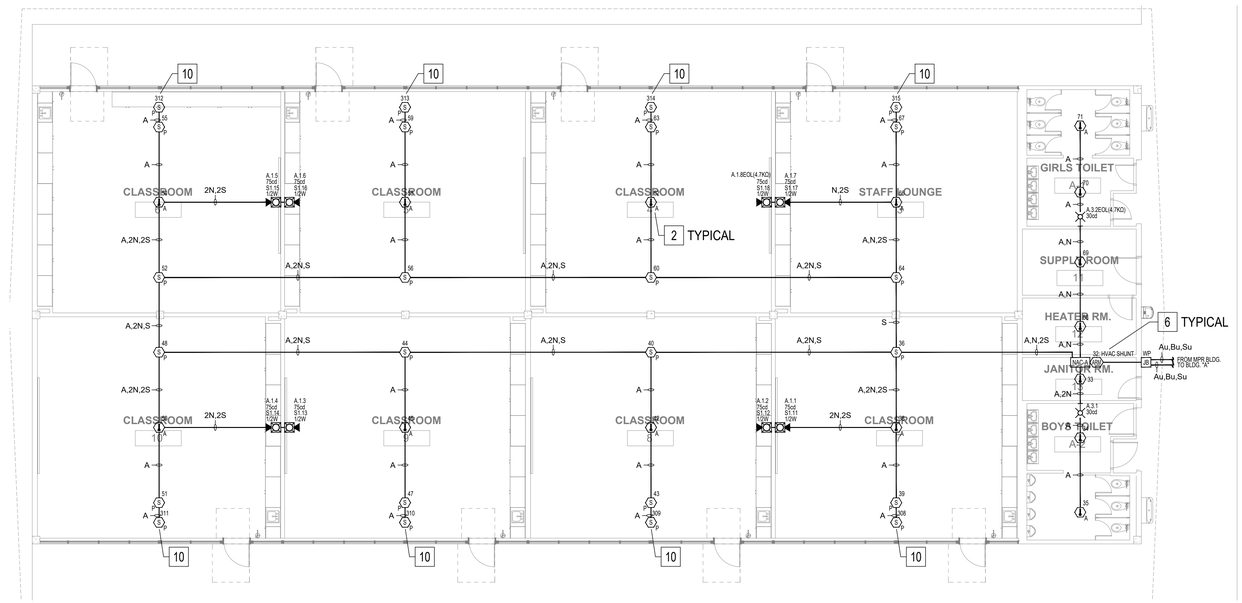


1 FIRE ALARM FLOOR PLAN: ADMINISTRATION/KINDERGARTEN BUILDING

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



2 FIRE ALARM FLOOR PLAN: BUILDING "A"

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

FIRE ALARM SHEET NOTES

1	INSTALL NEW EMERGENCY VOICE/ALARM COMMUNICATION PANEL WITH MICROPHONE IN FRONT OFFICE. FIELD VERIFY EXISTING LOCATION PRIOR TO ROUGH IN.
2	INSTALL HEAT DETECTION IN ALL ABOVE CEILING SPACES. FIELD VERIFY ALL WALLS THAT ARE FULL HEIGHT WALLS AND ADD ADDITIONAL DETECTION AS REQUIRED.
3	INSTALL NEW CELLULAR COMMUNICATOR AT EVAC LOCATION. FIELD VERIFY AND COORDINATE WITH STAFF FOR EXACT LOCATION.
4	INSTALL NEW FIRE ALARM DOCUMENT ENCLOSURE AT EVAC LOCATION. FIELD VERIFY AND COORDINATE WITH STAFF FOR EXACT LOCATION.
5	INSTALL ONE (1) MANUAL PULL STATION AT MAIN EVAC PANEL IN ACCORDANCE WITH DSA GL-2 §1.2.4, NFPA 72 AND CFC §907.
6	INSTALL ADDRESSABLE RELAY MODULE(S) FOR HVAC UNIT SHUNT. UPON DETECTION ALL HVAC UNITS ARE TO SHUNT TO STOP AIR FLOW. (REFERENCE CMC §608.1 EXCEPTION 1.)
7	EXTERIOR AUDIO APPLIANCES ARE MOUNTED IN EVERY OTHER HALL/CORRIDOR AS TO PREVENT UNINTELLIGIBILITY. (REFERENCE NFPA 72 §18.4.1.5* & §18.4.10*)
8	INSTALL COMBINATION SMOKE/CARBON MONOXIDE DETECTORS IN ALL CLASSROOMS THAT ARE SERVICED BY A NATURAL GAS OR FUEL BASED HVAC SYSTEM IN ACCORDANCE WITH CFC §915.
9	NEW UNDERGROUND CONDUIT SYSTEM BY ELECTRICAL. REFER TO FA SITE PLAN OR ELECTRICAL SITE PLAN FOR NEW CONDUIT SYSTEM LOCATION.
10	INSTALL SMOKE DETECTION IN IRREGULAR SPACE IN ACCORDANCE WITH NFPA 72, CHAPTER 17 AND ANNEX *A". REFERENCE SHEET A4.01 DETAILS.

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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

KEY PLAN
NORTH: PLAN

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FIRE ALARM FLOOR PLAN: ADMINISTRATION & BLDG. "A"

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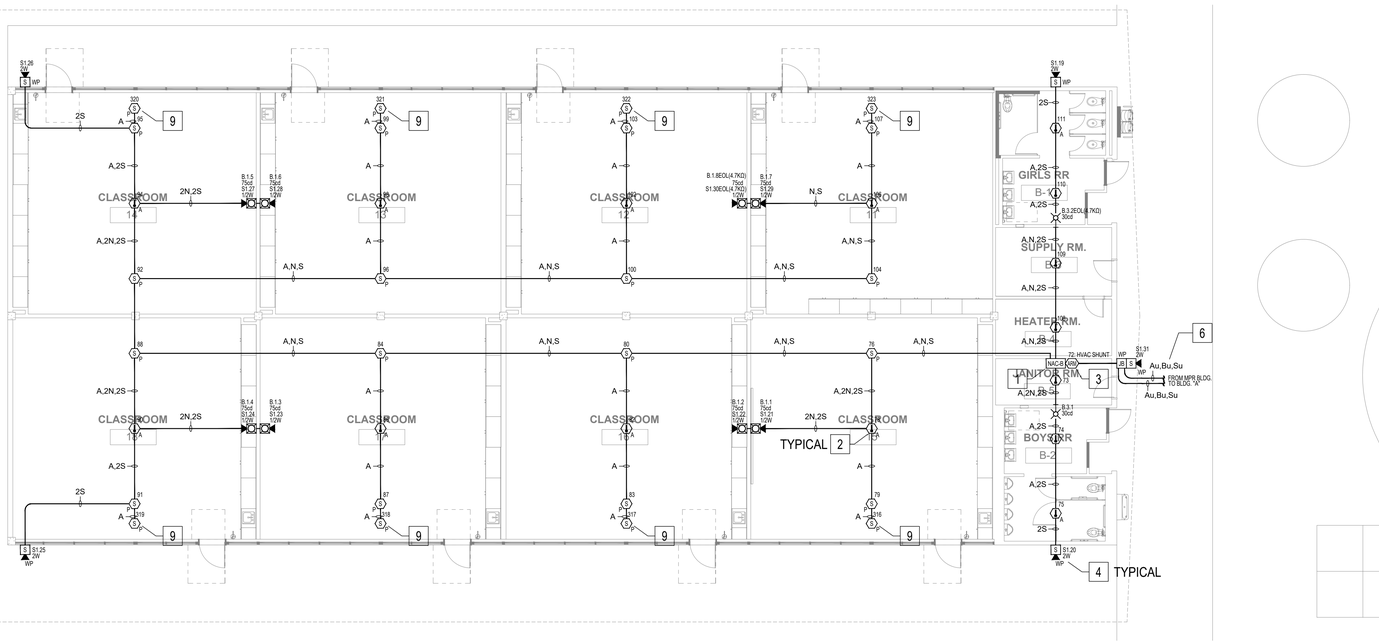
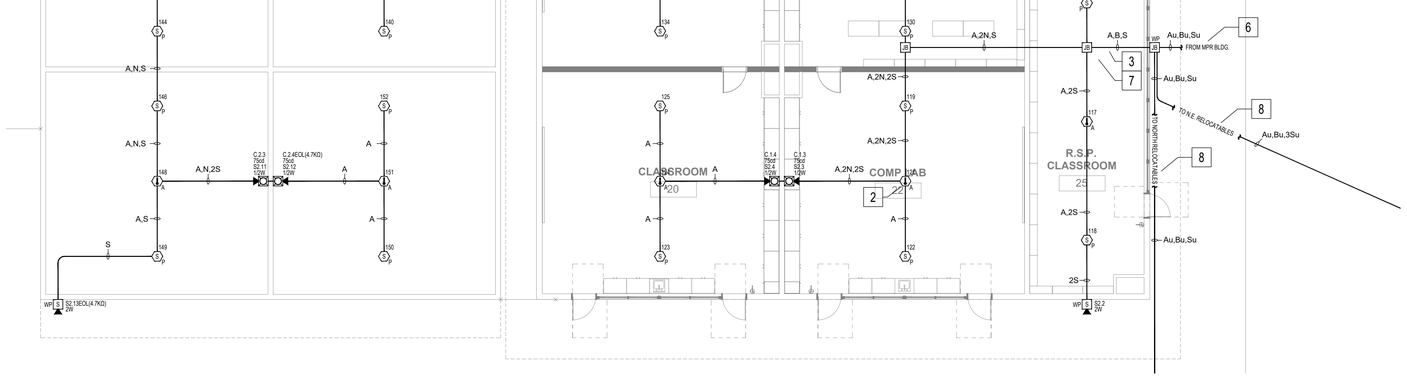


1 FIRE ALARM FLOOR PLAN: BUILDING "B"
SCALE: 1/8" = 1'-0"



2 FIRE ALARM FLOOR PLAN: BUILDING "C" & "P"
SCALE: 1/8" = 1'-0"

FIRE ALARM SHEET NOTES

1. INSTALL NEW NOTIFICATION APPLIANCE POWER SUPPLY. FIELD VERIFY LOCATION PRIOR TO ROUGH IN.
2. INSTALL HEAT DETECTION IN ALL ABOVE CEILING SPACES. FIELD VERIFY ALL WALLS THAT ARE FULL HEIGHT WALLS AND ADD ADDITIONAL DETECTION AS REQUIRED.
3. INSTALL ADDRESSABLE RELAY MODULE FOR HVAC UNIT SHUNT. UPON DETECTION ALL HVAC UNITS ARE TO SHUNT TO STOP AIR FLOW. (REFERENCE CMC §608.1 EXCEPTION 1.)
4. EXTERIOR AUDIO APPLIANCES ARE MOUNTED IN EVERY OTHER HALL/CORRIDOR TO PREVENT UNINTELLIGIBILITY. (REFERENCE NFPA 72 §18.4.1.5* & §18.4.10*)
5. INSTALL COMBINATION SMOKE/CARBON MONOXIDE DETECTORS IN ALL CLASSROOMS THAT ARE SERVICED BY A NATURAL GAS OR FUEL BASED HVAC SYSTEM IN ACCORDANCE WITH CFC §915.
6. INSTALL ALL NEW FIRE ALARM WIRING BETWEEN BUILDINGS IN NEW CONDUIT SYSTEM. FIELD VERIFY LOCATION OF NEW CONDUIT PRIOR TO INSTALLATION. REFER TO F/A AND ELECTRICAL SITE PLAN FOR NEW UNDERGROUND CONDUIT LOCATION(S).
7. INSTALL NEW AUDIO AMPLIFIER IN BLDG. "C". INSTALL AUDIO ZONE EXPANDER (FOUR (4) ZONE/CKT) AND 6815 SLC ZONE EXPANDER IN AMPLIFIER ENCLOSURE.
8. INSTALL ALL FA CIRCUITS IN EXISTING CONDUIT FROM BUILDING "C" TO EAST AND SOUTH RELO BUILDINGS. FIELD VERIFY CONDUIT AVAILABILITY PRIOR TO ROUGH IN. REFER TO SITE PLAN FOR EXISTING CONDUIT AND PULL BOX LOCATIONS.
9. FIELD VERIFY CONDITION OF EXISTING ROUTE BETWEEN BUILDINGS. REPLACE ROUTE CONDUIT, HANGERS AND BOXES IF NEEDED.
10. INSTALL SMOKE DETECTION IN IRREGULAR SPACE IN ACCORDANCE WITH NFPA 72, CHAPTER 17 AND ANNEX "A". REFERENCE SHEET A4.01 DETAILS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

ARCHITECT PBK Architects, Inc.
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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.,
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
DONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

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CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220308

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FIRE ALARM FLOOR PLAN: BUILDINGS "B" & "C"

FA1.02

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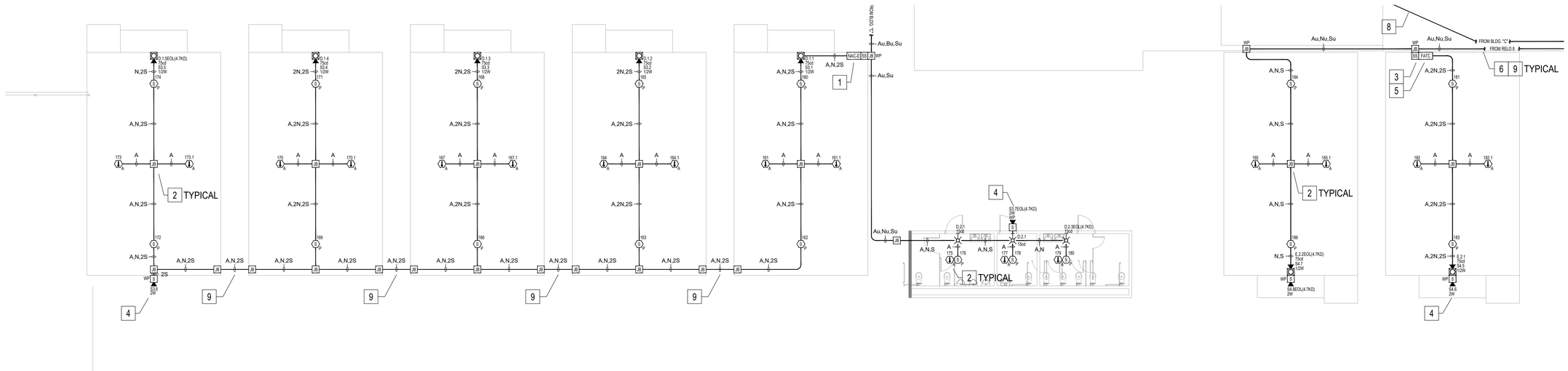
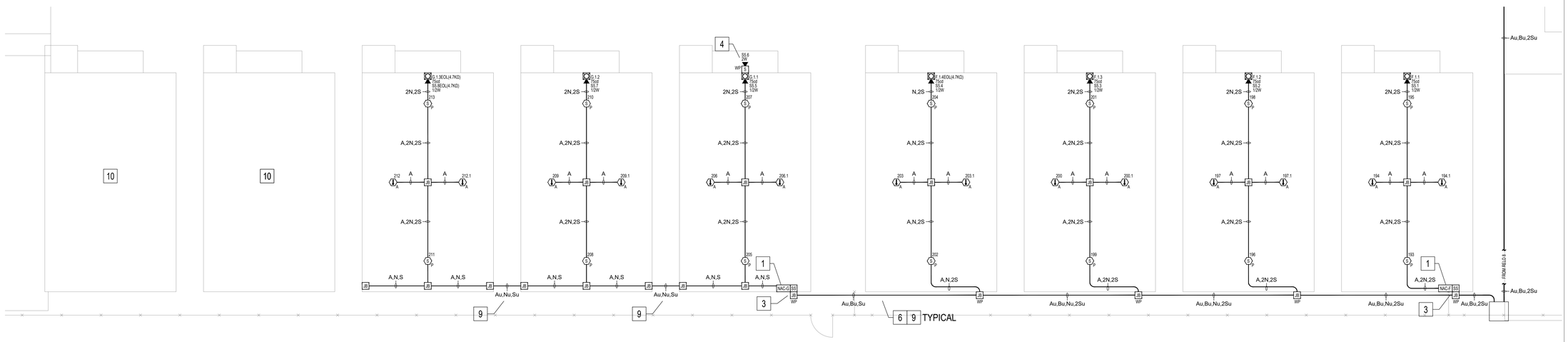
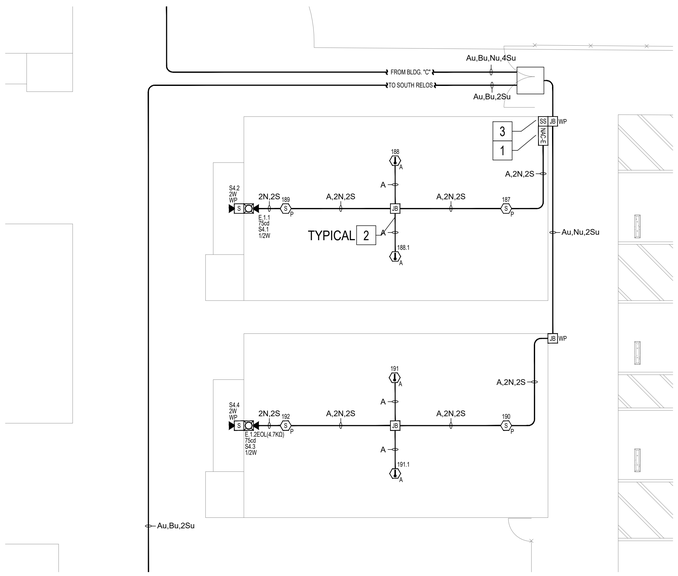
0" 1"



1 FIRE ALARM FLOOR PLAN: NORTH RELO CLASSROOMS
SCALE: 1/8" = 1'-0"



2 FIRE ALARM FLOOR PLAN: SOUTH RELO CLASSROOMS
SCALE: 1/8" = 1'-0"



3 FIRE ALARM FLOOR PLAN: EAST RELO CLASSROOMS
SCALE: 1/8" = 1'-00"

FIRE ALARM SHEET NOTES

1	INSTALL NEW NOTIFICATION APPLIANCE POWER SUPPLY. FIELD VERIFY LOCATION PRIOR TO ROUGH IN.
2	INSTALL HEAT DETECTION IN ALL ABOVE CEILING SPACES. FIELD VERIFY ALL WALLS THAT ARE FULL HEIGHT WALLS AND ADD ADDITIONAL DETECTION AS REQUIRED.
3	INSTALL SURGE PROTECTION IN ACCORDANCE WITH NFPA 72 AND CEC.
4	EXTERIOR AUDIO APPLIANCES ARE LOCATED IN THE COURTYARD AREA IN A MANNER TO PREVENT UNINTELLIGIBILITY. (REFERENCE NFPA 72 §18.4.1.5* & §18.4.10*)
5	INSTALL FIRE ALARM TERMINAL CABINET (FATC) FOR FIRE ALARM CONNECTION AND CONTINUATION.
6	INSTALL ALL NEW FIRE ALARM WIRING BETWEEN BUILDINGS IN EXISTING CONDUIT SYSTEM. FIELD VERIFY CONDITION OF EXISTING CONDUIT PRIOR TO INSTALLATION. COORDINATE WITH STAFF FOR DEDICATED CONDUITS. REPLACE ANY DAMAGED OR NON-SERVICEABLE CONDUIT WITH NEW.
7	INSTALL NEW AUDIO AMPLIFIER IN BLDG. "C". INSTALL AUDIO ZONE EXPANDER (FOUR (4) ZONE/CKT) AND 6815 SLC ZONE EXPANDER IN AMPLIFIER ENCLOSURE.
8	INSTALL ALL FA CIRCUITS IN EXISTING CONDUIT FROM BUILDING "C" TO EAST AND SOUTH RELO BUILDINGS. FIELD VERIFY CONDUIT AVAILABILITY PRIOR TO ROUGH IN. REFER TO SITE PLAN FOR EXISTING CONDUIT AND PULL BOX LOCATIONS.
9	FIELD VERIFY CONDITION OF EXISTING ROUTE BETWEEN BUILDINGS. REPLACE, RE-ROUTE CONDUIT, HANGERS AND BOXES IF NEEDED.
10	NOT IN THIS SCOPE OF WORK.

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SCHMITT E.S. HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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FIRE ALARM FLOOR PLAN: RELO CLASSROOMS

FA1.03

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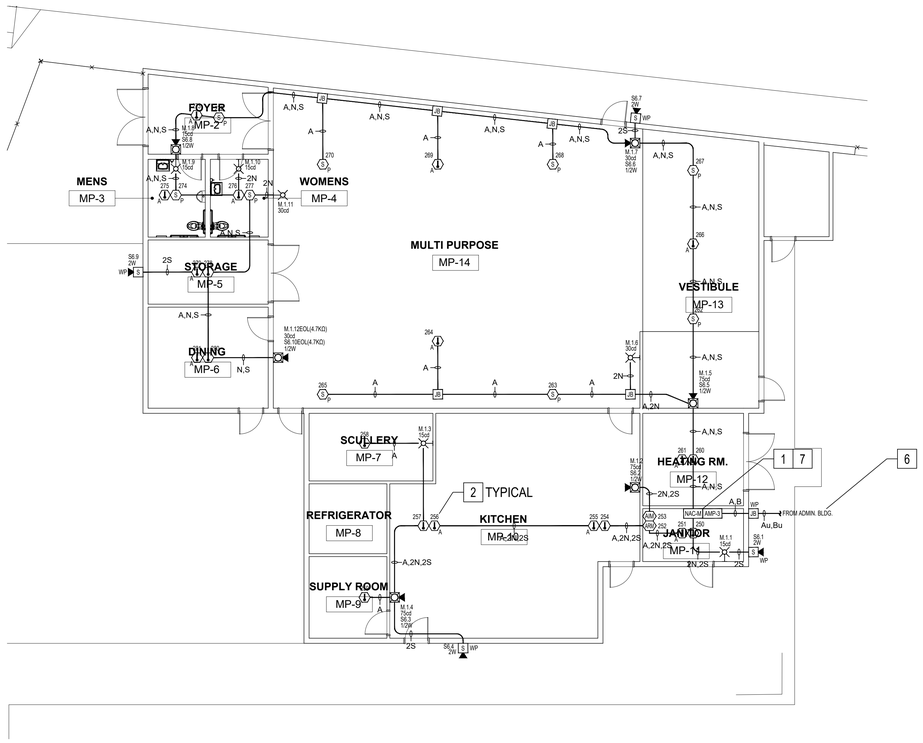

1 FIRE ALARM FLOOR PLAN: MULTI-PURPOSE ROOM

SCALE: 1/8" = 1'-00"

FIRE ALARM SHEET NOTES

1. INSTALL NEW NOTIFICATION APPLIANCE POWER SUPPLY AND AMPLIFIER. FIELD VERIFY LOCATION PRIOR TO ROUGH IN.
2. INSTALL HEAT DETECTION IN ALL ABOVE CEILING SPACES. FIELD VERIFY ALL WALLS THAT ARE FULL HEIGHT WALLS AND ADD ADDITIONAL DETECTION AS REQUIRED.
3. INSTALL SURGE PROTECTION IN ACCORDANCE WITH NFPA 72 AND CEC.
4. EXTERIOR AUDIO APPLIANCES ARE LOCATED IN THE COURTYARD AREA IN A MANNER TO PREVENT UNINTELLIGIBILITY. (REFERENCE NFPA 72 §18.4.1.5* & §18.4.10*)
5. INSTALL FIRE ALARM TERMINAL CABINET (FATC) FOR FIRE ALARM CONNECTION AND CONTINUATION.
6. INSTALL ALL NEW FIRE ALARM WIRING BETWEEN BUILDINGS IN NEW CONDUIT SYSTEM. FIELD VERIFY LOCATION OF NEW CONDUIT PRIOR TO INSTALLATION. REFER TO F/A AND ELECTRICAL SITE PLAN FOR NEW UNDERGROUND CONDUIT LOCATION(S).
7. INSTALL NEW AUDIO AMPLIFIER IN MPR BLDG. INSTALL AUDIO ZONE EXPANDER (FOUR (4) ZONE/CKT) AND 6815 SLC ZONE EXPANDER IN AMPLIFIER ENCLOSURE.

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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

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A
B
C

KEY PLAN

NORTH: PLAN

Consultant

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RONALD C DE LA CRUZ
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WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-28-2022	220308

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No.	Description	Date

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FIRE ALARM FLOOR PLAN: MULTI-PURPOSE ROOM

FA1.04

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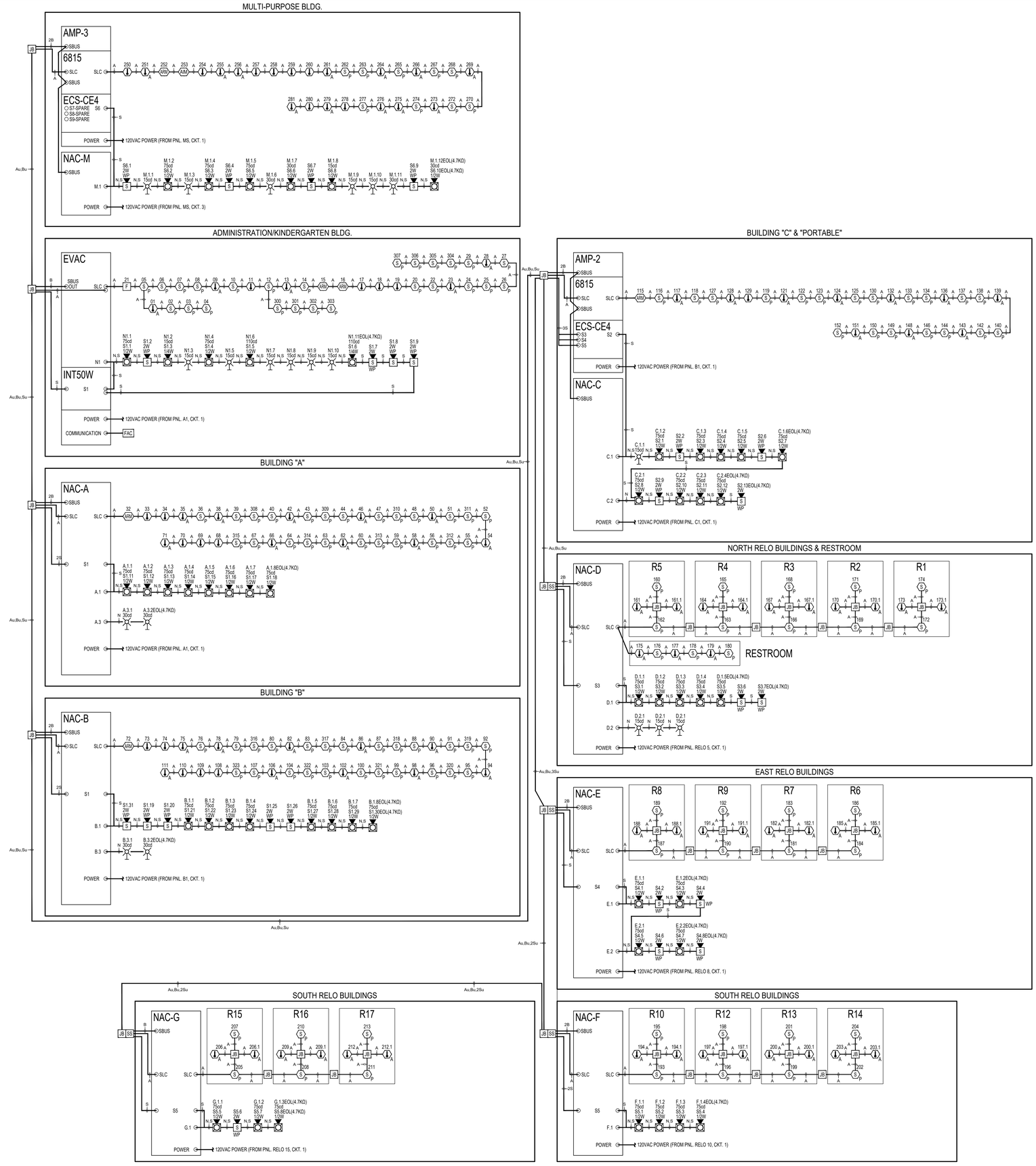

1 FIRE ALARM RISER DIAGRAM
SCALE: NO SCALE

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DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

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KEY PLAN
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WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
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FIRE ALARM RISER DIAGRAM

FA2.00

FIRE ALARM CALCULATIONS

FIRE ALARM BATTERY CALCULATIONS

Honeywell SILENT KNIGHT — IntelliKnight IFP-2100ECS Battery Calculation

Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
1. Control Panel										
2100 Control Panel	1	x	0.230000	=	0.230000	1	x	0.415000	=	0.415000
2. Addressable SLC Devices										
IDP-PHOTO-W(-T)	140	x	0.000200	=	0.028000	140	x	0.000450	=	0.063000
IDP-HEAT-W(HT) (ROR)	93	x	0.000200	=	0.018600	93	x	0.000450	=	0.041850
IDP-MONITOR	5	x	0.000375	=	0.001875	5	x	0.000375	=	0.001875
IDP-PULL-SA	1	x	0.000375	=	0.000375	1	x	0.000375	=	0.000375
IDP-RELAY	6	x	0.000255	=	0.001530	6	x	0.000255	=	0.001530
6. Accessory Modules										
6815	2	x	0.078000	=	0.156000	2	x	0.078550	=	0.157100
RPS-1000	8	x	0.010000	=	0.080000	8	x	0.010000	=	0.080000
ECS-INT50W@70V	1	x	0.052000	=	0.052000	1	x	0.310000	=	0.310000
ECS-50W	2	x	0.010000	=	0.020000	2	x	0.010000	=	0.020000
ECS-VCM	1	x	0.070000	=	0.070000	1	x	0.100000	=	0.100000
8. Output Circuits										
NAC 1	1		0.000000	=				0.811000	=	0.811000
			Total Standby Load		0.848380			Total Alarm Load		2.251730

Honeywell SILENT KNIGHT — IntelliKnight 6820-EVS Battery Calculation

Note 1: You are fully responsible for verifying these calculations.
Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

		Required Standby Time in Hours		
		24 Hours		
Standby Load Current	0.84838 Amps	x 24	=	20.361 AH
		Required Alarm Time in Minutes		
		15 Minutes		
Alarm Load Current (Amps)	2.25173 Amps	x 0.25	=	0.563 AH
		Total Current Load		20.924 AH
	Multiply by the Derating Factor	1.2	=	x 1.20
		Total Ampere Hours Required		**25.11 AH**

RPS-1000 NAC-A
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.856	0.856
N3	NOTIFICATION APPLIANCE CIRCUIT -N1.3	1	0.000	0.000	0.086	0.086
			NAC TOTALS	0.000		0.942
			OVERALL TOTALS	0.010		0.952

TOTAL ALARM AMPS 0.952 X 15 MINS= 0.238
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.478
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.1 AMP HOURS

RPS-1000 NAC-B
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.856	0.856
N3	NOTIFICATION APPLIANCE CIRCUIT -N1.3	1	0.000	0.000	0.086	0.086
			NAC TOTALS	0.000		0.942
			OVERALL TOTALS	0.010		0.952

TOTAL ALARM AMPS 0.952 X 15 MINS= 0.238
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.478
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.1 AMP HOURS

RPS-1000 NAC-C
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.578	0.578
N2	NOTIFICATION APPLIANCE CIRCUIT -N1.2	1	0.000	0.000	0.428	0.428
			NAC TOTALS	0.000		1.006
			OVERALL TOTALS	0.010		1.016

TOTAL ALARM AMPS 1.016 X 15 MINS= 0.254
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.494
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.1 AMP HOURS

RPS-1000 NAC-D
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.535	0.535
N2	NOTIFICATION APPLIANCE CIRCUIT -N1.2	1	0.000	0.000	0.129	0.129
			NAC TOTALS	0.000		0.664
			OVERALL TOTALS	0.010		0.674

TOTAL ALARM AMPS 0.674 X 15 MINS= 0.169
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.409
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.2 AMP HOURS

RPS-1000 NAC-E
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.214	0.214
N2	NOTIFICATION APPLIANCE CIRCUIT -N1.2	1	0.000	0.000	0.214	0.214
			NAC TOTALS	0.000		0.428
			OVERALL TOTALS	0.010		0.438

TOTAL ALARM AMPS 0.438 X 15 MINS= 0.110
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.350
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.3 AMP HOURS

RPS-1000 NAC-F
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.428	0.428
			NAC TOTALS	0.000		0.428
			OVERALL TOTALS	0.010		0.438

TOTAL ALARM AMPS 0.438 X 15 MINS= 0.110
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.350
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.3 AMP HOURS

RPS-1000 NAC-G
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.321	0.321
			NAC TOTALS	0.000		0.321
			OVERALL TOTALS	0.010		0.331

TOTAL ALARM AMPS 0.331 X 15 MINS= 0.083
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.323
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.3 AMP HOURS

RPS-1000 NAC-M
BATTERY CALCULATIONS FOR 24 HOUR STANDBY (● 24 ○ 60)

PART#	DESCRIPTION	QTY	STANDBY CURRENT	TOTAL STANDBY	ALARM CURRENT	TOTAL ALARM
PANEL CONTROLLER AND CARDS						
RPS-1000	SILENT KNIGHT POWER EXPANDER	1	0.01000	0.01000	0.01000	0.01000
			PANEL TOTALS	0.010		0.010
24V AUXILIARY DEVICES						
			24V AUX. DEVICE TOTALS	0.000		0.000
PANEL CIRCUIT	**FIELD NOTIFICATION APPLIANCE CIRCUITS**					
N1	NOTIFICATION APPLIANCE CIRCUIT -N1.1	1	0.000	0.000	0.914	0.914
			NAC TOTALS	0.000		0.914
			OVERALL TOTALS	0.010		0.924

TOTAL ALARM AMPS 0.924 X 15 MINS= 0.231
TOTAL STANDBY AMPS 0.010 X 24 HOURS= 0.240
5 MINS = 0.083
15 MINS = 0.250
TOTAL AMP HOURS REQUIRED= 0.471
RECOMMENDED MINIMUM BATTERY SIZE= 7.0 AMP HOURS
LESS 20% DERATING FACTOR= 5.6 AMP HOURS
SPARE AMP HOURS 5.1 AMP HOURS

SILENT KNIGHT — ECS-50W

Global Project Values:
Project Name: WUSD
Project ID: SCHMITT
Prepared By: CY
Date: 3/20/2023
Standby Hours: 24
Alarm Mins: 15
Derating: 1.2

Panel ID: ECS-50W — Model: ECS-50W Audio Amplifier
Location:

Ckt.#	Circuit Name	Qty	Current Draw Standby	Current Draw Alarm
EVS-50W	EVS-50W Amplifier 25 Volts*		0.000	0.000
EVS-50W	EVS-50W Amplifier 70.7V Volts*	1	0.100	0.580
EVS-CE4	4 Zone Expander	1	0.020	0.180
Watts	Enter Number of Watts	33.5	0.000	1.508
	Total Standby Current (AMPS)		0.120	2.268
	Standby Time In Hours		24	0.250
	Total Standby AH Required		2.880	0.567
	Total Combined AH Required		3.45	
	Multiply By The Derating Factor		1.20	
	Minimum Battery AmpHours Required		4.14	

SILENT KNIGHT — ECS-50W, AMP-3

Global Project Values:
Project Name: WUSD
Project ID: SCHMITT
Prepared By: CY
Date: 3/20/2022
Standby Hours: 24
Alarm Mins: 15
Derating: 1.2

Panel ID: ECS-50W, AMP-3 — Model: ECS-50W Audio Amplifier
Location: MPR

Ckt.#	Circuit Name	Qty	Current Draw Standby	Current Draw Alarm
EVS-50W	EVS-50W Amplifier 25 Volts*		0.000	0.000
EVS-50W	EVS-50W Amplifier 70.7V Volts*	1	0.100	0.580
EVS-CE4	4 Zone Expander	1	0.020	0.180
Watts	Enter Number of Watts	11	0.000	0.495
	Total Standby Current (AMPS)		0.120	1.255
	Standby Time In Hours		24	0.250
	Total Standby AH Required		2.880	0.314
	Total Combined AH Required		3.19	
	Multiply By The Derating Factor		1.20	
	Minimum Battery AmpHours Required		3.83	

SPEAKER LOAD SUMMARY — 5/17/2023

BUILDING	Quantity at .25 W	Quantity at .50 W	Quantity at 2 W
BUILDING A		8	
BUILDING B		8	5
BUILDING C		9	4
R1 THRU R5		5	2
R6 THRU R9		4	4
R10 THRU R18		6	1
ADMINISTRATION	2	4	4
MPR		6	4
Total Speakers	2	50	24
	x .25	x .5	x 2
Total Watts	0.5	25	48

Total Watts Used:	73.5
Amplifier to be installed:	100
Remaining Watts:	26.5

DECIBEL LOSS CALCULATOR

ROOM # / NAME: CAMPUS
SPEAKER #: ALL
SPEAKER TAP: 1/2 WATT

MODEL #	VOLTAGE	REVERBERANT DBA AT 10 FEET PER UL 1480 (RATED WATTS) 1/8W	1/4W	1/2W	1W	2W
SPCW	25/70	N/A	77	80	83	86

Decibel Loss Formula L=20XLog10(V2/V1)
L=loss
V1=Value of Starting Reference
V2=Value of Distance from Reference

Ambient Noice Level 60 — Enter Ambient Noise here
dB at 10' from Source 80 — Enter Audio Device Decibel level here

Start Reference from Source in Feet	Farthest Distance from Reference Point in Feet	Decibel Loss Between Start & Distance Reference Points	Decibel Level at Finish Reference Point	dB Above Ambient (must be 15dB above Ambient)
10	10	0.00	80.00	20.00
	11	-0.83	79.17	19.17
	12	-1.58	78.42	18.42
	13	-2.28	77.72	17.72
	14	-2.92	77.08	17.08
	15	-3.52	76.48	16.48
	16	-4.08	75.92	15.92
	17	-4.61	75.39	15.39
	18	-5.11	74.89	14.89

AMBIENT NOISE LEVEL PER OCCUPANCY TYPE

Use or Occupancy	NFPA 72G	NFPA 72	IFC/IBC
Business Occupancies	45 + 15 = 60	55 + 15 = 70	60
Educational Occupancies	45 + 15 = 60	45 + 15 = 60	60
Industrial Occupancies	80 + 15 = 95	80 + 15 = 95	60
Institutional Occupancies	50 + 15 = 65	50 + 15 = 65	75
Mercantile Occupancies	40 + 15 = 55	40 + 15 = 55	60
Piers and Water surrounded structures	40 + 15 = 55	40 + 15 = 55	60
Places of Assembly	40 + 15 = 55	55 + 15 = 70	60
Residential Occupancies	35 + 15 = 50	35 + 15 = 50	75
Residential at the pillow	Na	75 dBA	not specified
Storage Occupancies	30 + 15 = 45	30 + 15 = 45	60
Thoroughfares, High Density Urban	70 + 15 = 85	70 + 15 = 85	60
Thoroughfares, Medium Density Urban	55 + 15 = 70	55 + 15 = 70	60
Thoroughfares, Rural and Suburban	40 + 15 = 55	40 + 15 = 55	60
Tower Occupancies	35 + 15 = 50	35 + 15 = 50	60
Underground Structures and Windowless Buildings	40 + 15 = 55	40 + 15 = 55	60
Vehicles and Vessels	50 + 15 = 65	50 + 15 = 65	60
Mechanical Equipment Rooms	85 + 15 = 100	85 + 15 = 100	90

FIRE ALARM VOLTAGE LOSS CALCULATIONS

Each notification circuit calculation below carries the following notes:
1) STARTING VOLTAGE (24Vdc) AT 85% EFFICIENCY: Vdc = 24Vdc x .85 = 20.4Vdc
2) WIRE RESISTANCE (OHMS) = (#14 FEET x 3.07/1000 +#12 FEET x 1.93/1000 + #10 FEET x 1.21/1000) x 2
3) UTILIZING EOL OHM'S CALCULATIONS, ACCEPTABLE VOLTAGE DROP IS NO LESS THAN 16VDC EOL AS PER UL864 10TH EDITION
* FORMULA = CURRENT X DISTANCE^2 X RESISTIVITY CONSTANT / CIRCULAR MILLS / VOLTAGE X 1000 = % OF DROP

NOTIFICATION CIRCUIT - N1- VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-15	SPKR/STRB SET @ 15cd	1					0.043	0.043	
SPSL-75	SPKR/STRB SET @ 75cd	2					0.107	0.214	
SPSL-110	SPKR/STRB SET @ 110cd	2					0.148	0.296	
SL-15	STROBE SET @ 15CD	6					0.043	0.258	
				185		0.714		0.811	0.579

TOTAL AMPS: 0.811 — TOTAL % DROP: 2.84% — TOTAL V-DROP: 0.579
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.82 VDC

NOTIFICATION CIRCUIT - A.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	8					0.107	0.856	
				430		1.660		0.856	1.421

TOTAL AMPS: 0.856 — TOTAL % DROP: 6.96% — TOTAL V-DROP: 1.421
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 18.98 VDC

NOTIFICATION CIRCUIT - A.3 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SL-15	STROBE SET @ 15CD	2					0.043	0.086	
				50		0.193		0.086	0.017

TOTAL AMPS: 0.086 — TOTAL % DROP: 0.08% — TOTAL V-DROP: 0.017
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.38 VDC

NOTIFICATION CIRCUIT - B.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	8					0.107	0.856	
				430		1.660		0.856	1.421

TOTAL AMPS: 0.856 — TOTAL % DROP: 6.96% — TOTAL V-DROP: 1.421
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 18.98 VDC

NOTIFICATION CIRCUIT - B.3 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SL-15	STROBE SET @ 15CD	2					0.043	0.086	
				50		0.193		0.086	0.017

TOTAL AMPS: 0.086 — TOTAL % DROP: 0.08% — TOTAL V-DROP: 0.017
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.38 VDC

NOTIFICATION CIRCUIT - C.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	5					0.107	0.535	
SL-15	STROBE SET @ 15CD	1					0.043	0.043	
				133		0.513		0.578	0.297

TOTAL AMPS: 0.578 — TOTAL % DROP: 1.45% — TOTAL V-DROP: 0.297
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.10 VDC

NOTIFICATION CIRCUIT - C.2 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	4					0.107	0.428	
				275		1.062		0.428	0.454

TOTAL AMPS: 0.428 — TOTAL % DROP: 2.23% — TOTAL V-DROP: 0.454
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.95 VDC

NOTIFICATION CIRCUIT - D.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	5					0.107	0.535	
				430		1.660		0.535	0.888

TOTAL AMPS: 0.535 — TOTAL % DROP: 4.35% — TOTAL V-DROP: 0.888
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.51 VDC

NOTIFICATION CIRCUIT - D.2 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SL-15	STROBE SET @ 15CD	3					0.043	0.129	
				150		0.579		0.129	0.075

TOTAL AMPS: 0.129 — TOTAL % DROP: 0.37% — TOTAL V-DROP: 0.075
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.33 VDC

NOTIFICATION CIRCUIT - E.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	2					0.107	0.214	
				185		0.714		0.214	0.153

TOTAL AMPS: 0.214 — TOTAL % DROP: 0.75% — TOTAL V-DROP: 0.153
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.25 VDC

NOTIFICATION CIRCUIT - E.2 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	2					0.107	0.214	
				310		1.197		0.214	0.256

TOTAL AMPS: 0.214 — TOTAL % DROP: 1.26% — TOTAL V-DROP: 0.256
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 20.14 VDC

NOTIFICATION CIRCUIT - F.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	4					0.107	0.428	
				405		1.563		0.428	0.669

TOTAL AMPS: 0.428 — TOTAL % DROP: 3.28% — TOTAL V-DROP: 0.669
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.73 VDC

NOTIFICATION CIRCUIT - G.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-75	SPKR/STRB SET @ 75cd	3					0.107	0.321	
				400		1.544		0.321	0.496

TOTAL AMPS: 0.321 — TOTAL % DROP: 2.43% — TOTAL V-DROP: 0.496
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.90 VDC

NOTIFICATION CIRCUIT - M.1 - VOLTAGE DROP CALCULATIONS

PART #	DEVICE TYPE	NO. OF DEVICE ON CKT	TOTAL LINEAR FEET OF WIRE #14	#12	#10	RES. OF WIRES (OHMS)	DEVICE LOAD (AMPS)	TOTAL LOAD (AMPS)	VOLTAGE DROP (VOLTS)
SPSL-15	SPKR/STRB SET @ 15cd	1					0.043	0.043	
SPSL-30	SPKR/STRB SET @ 30cd	3					0.063	0.189	
SPSL-75	SPKR/STRB SET @ 75cd	3					0.107	0.321	
SL-15	STROBE SET @ 15CD	4					0.043	0.172	
SL-30	STROBE SET @ 30CD	3					0.063	0.189	
				385		1.486		0.914	1.358

TOTAL AMPS: 0.914 — TOTAL % DROP: 6.66% — TOTAL V-DROP: 1.358
STARTING VOLTAGE 20.4VDC — ACTUAL FINISH VOLTAGE 19.04 VDC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121817 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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PROJECT ADDRESS:
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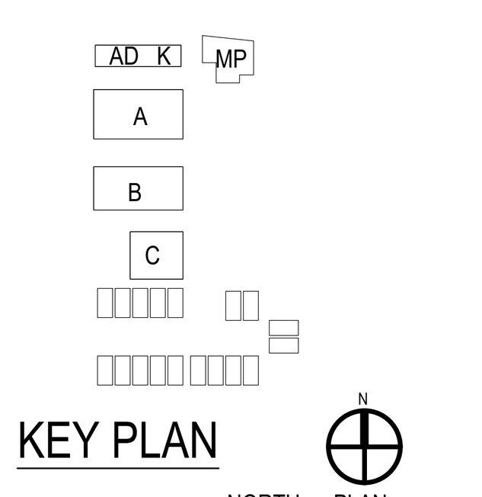
DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT EST. 1872



KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER — RONALD C DELA CRUZ — No. E 23576 — Exp. 09-30-2023 — ELECTRICAL — STATE OF CALIFORNIA

Architect

CLIENT	
WESTMINSTER SCHOOL DISTRICT	
DATE 12-28-2022	PROJECT NUMBER 220308

REVISIONS

No.	Description	Date

DSA SUBMITTAL

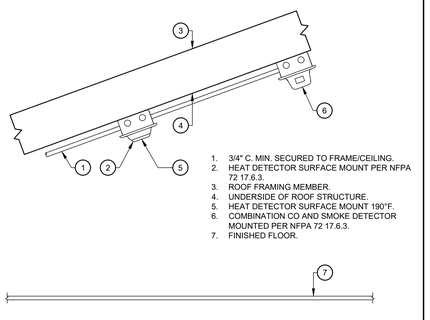
FIRE ALARM CALCULATIONS

FA3.00

FILE PATH: Z:\Projects\...

NOTES: (#)

1. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM CONTROL PANEL.
2. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM VOICE CONTROL MODULE.
3. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM INTERIOR MOUNTED AUDIO AMPLIFIER.
4. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM REMOTE LOCAL OPERATOR CONTROL.
5. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOUR CIRCUIT AUDIO EXPANDER.
6. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM AUDIO AMPLIFIER.
7. NOTIFICATION APPLIANCE REMOTE POWER SUPPLY.
8. FIRE ALARM SYSTEM REMOTE ANNUNCIATOR.
9. TYPICAL SMOKE DETECTOR.
10. TYPICAL HEAT DETECTOR.
11. TYPICAL SMOKE/CARBON MONOXIDE DETECTOR WITH SOUNDER BASE.
12. TYPICAL ADDRESSABLE INPUT MONITOR MODULE.
13. TYPICAL ADDRESSABLE RELAY MODULE.
14. TYPICAL VISUAL NOTIFICATION APPLIANCE WIRING.
15. TYPICAL AUDIO NOTIFICATION APPLIANCE WIRING.
16. VISUAL NOTIFICATION APPLIANCE CIRCUIT CONTINUED OR TO END OF LINE.
17. AUDIO NOTIFICATION APPLIANCE CIRCUIT CONTINUED OR TO END OF LINE.
18. SLC CONTINUED TO NEXT DEVICE OR END OF CIRCUIT.
19. SBUS CONTINUED OR TO NEXT SBUS DEVICE OR END OF CIRCUIT.
20. VBUS CONTINUED OR TO NEXT VBUS DEVICE OR END OF LINE.
21. SOUNDER BASE NOTIFICATION CIRCUIT CONTINUED TO NEXT BASE OR END OF LINE.
22. 120VAC POWER.
23. 24VDC BATTERY CONNECTION.

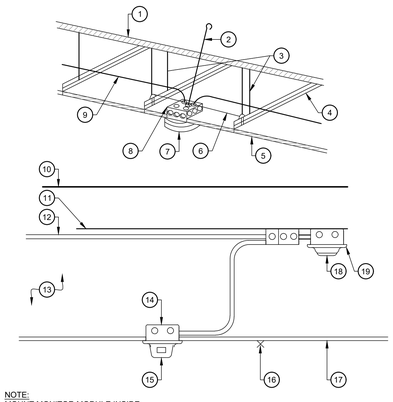


1. 3/4" C. MIN. SECURED TO FRAME/CEILING.
2. HEAT DETECTOR SURFACE MOUNT PER NFPA 72 17.6.3.
3. ROOF FRAMING MEMBER.
4. UNDERSIDE OF ROOF STRUCTURE.
5. HEAT DETECTOR SURFACE MOUNT 190°F.
6. COMBINATION CO AND SMOKE DETECTOR MOUNTED PER NFPA 72 17.6.3.
7. FINISHED FLOOR.

SLOPED CEILING INSTALLATION DETAIL

N.T.S | 02

1. PERMANENT CEILING.
2. SEISMIC HANGER.
3. HANGERS
4. T-BAR
5. DROP CEILING TILE.
6. T-BAR BOX SUPPORT BRACKET.
7. SMOKE DETECTOR
8. 4" S BOX.
9. 3/4" MINIMUM METALLIC CONDUIT.
10. UNDERSIDE OF ROOF STRUCTURE.
11. ROOF FRAMING MEMBER.
12. 3/4" MINIMUM CONDUIT, CONCEAL IN ATTIC SPACE.
13. CEILING SPACE.
14. JUNCTION BOX MOUNTED IN CEILING (SEE NOTE).
15. SMOKE DETECTOR.
16. "PERMANENT MARKER" INDICATES THE LOCATION OF THE HEAT DETECTOR IN THE ATTIC-SPACE. RED LETTER ON WHITE BACKGROUND SHALL BE 3/4" HIGH.
17. FINISH CEILING.
18. 200° FIXED HEAT DETECTOR.
19. ATTIC HEAT DETECTOR MOUNTED PER NFPA 72 2.4.3.



NOTE:
MOUNT MONITOR MODULE INSIDE BOX FOR THE HEAT DETECTOR. SEE WIRING DETAIL ON THIS SHEET.

DROP CEILING DEVICE INSTALLATION DETAIL

N.T.S | 03

FILE PATH: Z:\Projects\...

FARENHYT IFP-2100ECS WITH ECS-INT50W, ECS-VCM, ECS-LOC, ECS-50W WITH ECS-CE4 EXPANDER, RPS-1000 INTELLIGENT POWER SUPPLY AND RA-1000 ANNUNCIATOR TYPICAL WIRE DIAGRAM | 01

IDENTIFICATION STAMP
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APP: 04-121817 INC:
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DSA SUBMITTAL

DSA APPL NO.: 04-121817 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

AD K MP
A
B
C

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09.30.2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
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REVISIONS

No.	Description	Date

DSA SUBMITTAL

FIRE ALARM DETAILS

FA4.00