MODERNIZATION
HOUSTON SCHOOL
LODI UNIFIED SCHOOL DISTRICT
4600 ACAMPO RD, ACAMPO, CA 95220

ABBREVIATIONS

&	And
L	Angle
@	At
℄	Centerline
Ø	Diameter or Round
⊥	Perpendicular
#	Pound or Number
℔	Plate
A.C.	Asphalt Concrete
ACOUS.	Acoustical
A.D.	Area Drain
ADJ.	Adjustable
AGGR.	Aggregate
ALUM./AL.	Aluminum
ARCH.	Architectural
ASPH.	Asphalt
AUTO.	Automatic
A.V.	Auto Visual
B	Bolt
BD.	Board
BLDG.	Building
BLK.	Block
BLKG.	Blocking
BM.	Beam
BOT.	Bottom
B.S.	Both Sides
CAB.	Cabinet
C.B.	Catch Basin
CB.	Chalkboard
CEM.	Cement
CER.	Ceramic
C.G.	Corner Gaurd
C.I.	Cast Iron
C.J.	Construction Joint/Control Joint
C.L.	Chain Link
CLG.	Ceiling
CLKG.	Calking
CLR.	Clear
C.M.P.	Corrugated Metal Pipe
C.M.U.	Concrete Masonry Unit
CNTR.	Counter
COL.	Column
CONC.	Concrete
CONN.	Connection
CONSTR.	Construction
CONT.	Continuous
CORR.	Corridor
d	Pennyweight (Nails)
D.A.	Disabled Accessible
DBL.	Double
DET.	Detail
D.F.	Drinking Fountain
D.I.	Drain Inlet
DIA.	Diameter
DIM.	Dimension
DIM.PT.	Dimension Point
DN.	Down
DP.	Deep
D.P.	Damp Proofing
DR.	Door
D.S.	Downspout
DWG.	Drawing
E.	East
(E)/EXST.	Existing
EA.	Each
E.J.	Expansion Joint
EL.	Elevation
ELEC.	Electrical
EMER.	Emergency
ENCL.	Enclosure
EQ.	Equal
EQPT.	Equipment
E.W.C.	Electric Water Cooler
EXP.	Expansion
EXT.	Exterior
F.A.	Fire Alarm
F.B.	Fiberboard
F.D.	Floor Drain
FDN.	Foundation
F.E.	Fire Extinguisher
F.F.E.	Finish Floor Elevation
F.H.M.B.	Flat Head Machine Bolt
F.H.M.S.	Flat Head Machine Screw
FIN.	Finish
FL.	Floor
F.L.	Fusible Link
FLASH'G	Flashing
F.O.C.	Face of Concrete/Curb
F.O.F.	Face of Finish
F.O.S.	Face of Studs
F.R.P.	Fiberglass Reinforced Plastic
F.S.	Full Size
FT.	Foot/Feet
FTG.	Footing
FURR.	Furring
FUT.	Future
GA.	Gauge
GALV.	Galvanized
G.B.	Grab Bar
GL.	Glass/Glazing
GND.	Ground
GR.	Grade
GYP.	Gypsum
G.I.	Galvanized Iron
G.S.M.	Galvanized Sheet Metal
GYP.	Gypsum
GYP.BD.	Gypsum Board
HDR.	Header
HDWD.	Hardwood
HDW.	Hardware
HOR.	Horizontal
H.B.	Hose Bib
HR.	Hour (Fire Rating)
HGT.	Height
I.D.	Inside Diameter
IN.	Inch
INFO.	Information
INSUL.	Insulation
INT.	Interior
JAN.	Janitor
JST.	Joist
JT.	Joint
K.P.	Kickplate
KIT.	Kitchen
LAM.	Laminate
LAV.	Lavatory
LKR.	Locker
LT.WT.	Light Weight
L.V.	Louver Vent
MAX.	Maximum
M.B.	Machine Bolt
MAT'L.	Material
MECH.	Mechanical
MEMB.	Membrane
MEZZ.	Mezzanine
MFR.	Manufacturer
MH.	Manhole
MIN.	Minimum
MIR.	Mirror
MISC.	Miscellaneous
MTD.	Mounted
MET.	Metal
(N)	New
N.	North
N.I.C.	Not in Contract
NO./#	Number
NOM.	Nominal
N.T.S.	Not to Scale
O/	Over
O.A.	Overall
OBS.	Obscure
O.C.	On Center
O.D.	Outside Diameter
OFF.	Office
PRCST.	Precast
PERF.	Perforated
P.LAM.	Plastic Laminate
PLAS.	Plaster
PLYWD.	Plywood
P.M.	Pressed Metal
P.M.F.	Pressed Metal Frame
PR.	Pair
PRE-FAB	Prefabricated
PROJ.	Project
P.T.D.	Paper Towel Dispenser
P.T.D./R.	Paper Towel Dispenser Receptacle
PTN.	Partition
P.T.R.	Paper Towel Receptacle
R.	Riser
RAD.	Radius
R.B.	Rubber Base
R.D.	Roof Drain
R.E.	Rim Elevation
REFR.	Refrigerator
RGTR.	Register
REINF.	Reinforced
REQ.	Required
RET.	Return
RM.	Room
R.O.	Rough Opening
RWD.	Redwood
R.W.L.	Rain Water Leader
R.H.W.S.	Round Head Wood Screw
S.	South
S.D.	Soap Dispenser
SECT.	Section
SHR.	Shower
SHT.	Sheet
SHTG.	Sheeting
SIM.	Similar
S.M.	Sheet Metal
S.M.S.	Sheet Metal Screw
S.N.D.	Sanitary Napkin Dispenser
S.N.R.	Sanitary Napkin Receptacle
SPEC.	Specification
SQ.	Square
S.R.V.	Semi Rigid Vinyl
S.SK.	Service Sink
SST	Stainless Steel
ST.	Street
STD.	Standard
STL.	Steel
STOR.	Storage
STRL.	Structural
SUSP.	Suspended
SYM.	Symmetrical
SHT.VNL.	Sheet Vinyl
T.	Toilet
TB.	Tackboard
T.B.	Towel Bar
T.&G.	Tongue & Groove
TEL.	Telephone
THK.	Thick
THRES.	Threshold
THRU.	Through
T.O.C.	Top of Curb
T.O.P.	Top of Pavement
T.O.W.	Top of Wall
T.P.D.	Toilet Paper Dispenser
TYP.	Typical
U.O.N.	Unless Otherwise Noted
UR.	Urinal
V.C.T.	Vinyl Composition Tile
VERT.	Vertical
V.F.	Vinyl Fabric
W.	West
W/	With
W.C.	Water Closet
WD.	Wood
W.H.	Water Heater
W/O	Without
WSCT.	Wainscot
W.W.M.	Welded Wire Mesh
WDW.	Window
WT.	Weight
YD.	Yard

SYMBOL LEGEND

SHEET NUMBERING SYSTEM
Discipline Designation
Drawing Type Designation
Sheet Number
A2.6.A — Building Designation

ROOM NAME and NUMBER REFERENCE
WOMEN — Room Name
A103 — Room Number / Building Unit

KEYNOTE REFERENCE
2200.A7.05

SHEET NOTE REFERENCE
SN.01

DETAIL REFERENCE
X — Detail Number
XX/XX — Sheet Number

BUILDING SECTION REFERENCE
X / XX/XX — Section Number / Sheet Number

STOREFRONT, WINDOW OR LOUVER REFERENCE
EA / X — Windows Covering Reference
H=HORIZONTAL BLINDS
V=VERTICAL BLINDS
D=DARKENING DRAPES

DOOR REFERENCE
A101

CEILING TYPE REFERENCE
C2

WALL TYPE REFERENCE
C2

EXTERIOR FINISH REFERENCE
A

STRUCTURAL GRID INDICATOR
(Center of Framing)
A

STRUCTURAL GRID INDICATOR
(Face of Framing)
3

MATCH LINE

CENTERLINE

PROPERTYLINE

WORK POINT, CONTROL POINT OR DATUM

WINDOW (PLAN VIEW)
Window Covering Location

REVISION
Revision Number

RADIUS
Radius Point Number
R=92'-4" (1)
Radius Dimension

CASEWORK REFERENCE
221A L - Indicates all drawers and doors to have locks installed

METAL SHELVING REFERENCE
MS1

LABORATORY CASEWORK REFERENCE
99

MUSIC CASEWORK REFERENCE
99

ACOUSITICAL PANEL REFERENCE
AP1

SIGN REFERENCE
S2

MATERIAL LEGEND

EARTH
GRAVEL/AGGREGATE BASE
SAND OR PLASTER
CONCRETE
BLOCKING
FRAMING (CONTINUOUS)
PLYWOOD
WOOD TRIM
STEEL
TILE
BATT INSULATION
BRICK
GYPSUM BOARD
FIRTEX

APPLICABLE CODES

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24 CCR, PART 1 2019 BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR, PART 2 - 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC)
TITLE 24 CCR, PART 3 - 2016 CALIFORNIA ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA)
TITLE 24 CCR, PART 4 - 2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 IAPMO UMC, AS AMENDED BY CA)
TITLE 24 CCR, PART 5 - 2016 CALIFORNIA PLUMBING CODE (CPC) (2015 IAPMO UPC, AS AMENDED BY CA)
TITLE 24 CCR, PART 6 - 2016 CALIFORNIA ENERGY CODE
TITLE 24 CCR, PART 9 - 2016 CALIFORNIA FIRE CODE (CFC) (2015 IFC, AS AMENDED BY CA)
TITLE 24 CCR, PART 11 - 2016 CALIFORNIA GREEN BUILDING STDS CODE
TITLE 24 CCR, PART12 - CALIFORNIA REFERENCED STANDARDS (partial list - see CBC Ch. 35 and CFC Ch. 80)
2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)
2013 NFPA 14, INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
2013 NFPA 17, DRY CHEMICAL EXTINGUISHING SYSTEMS
2013 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2013 NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION
2016 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS
2016 NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED); See UL Std 1971 for "Visual Devices"
2016 NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVE
2015 NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
2005 UL 300, CLASS I HOOD FIRE SUPPRESSION SYSTEMS
2003 UL 464, AUDIBLE SIGNAL APPLIANCES
1999 UL 521, HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
2012 ICC 300, BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS (ICC300-2012)

CONTRACTOR SHALL KEEP A COPY OF TITLE 24, PARTS 1-5 ON THE SITE AT ALL TIMES.
TITLE 24, PART 1, SECTION 4.317(c):

"THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS A CONSTRUCTION CHANGE DOCUMENT, OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH REPAIR WORK."

NOTES:

1. ALL NEW WORK SHALL CONFORM TO THE 2016 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS.
2. CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN APPROVED SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, CAC, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. ALL CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATIONS IA A-6. CONSTRUCTION CHANGE DOCUMENTS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24, AND NO WORK SHALL COMMENCE UNTIL APPROVED BY DSA.
3. A DSA "CERTIFIED 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 4-343, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)
4. A DSA CERTIFIED INSPECTOR WITH CLASS 2 IS REQUIRED FOR THIS PROJECT (IR A-7)
5. AN LEA TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
6. GRADING PLANS, DRAINAGE IMPROVEMENT, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
7. ADDENDA SHALL BE APPROVED BY DSA.

SHEET INDEX

- SHEET COUNT IS 79 SHEETS

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

The drawings or sheets listed on the cover or index sheet prepared by Custom Canopies, Inc..

Have/has been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1. design intent, and appears to meet the appropriate requirements of Title 24, California Code of Regulations, and the project specifications prepared by me, and
2. coordination with my plans and specifications, and is acceptable for incorporation into the construction of this project.

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

02/20/2020

ARCHITECTS NAME: STEPHEN HENRY DATE

DEFERRED APPROVALS - NONE

PROJECT TEAM

OWNER
LODI UNIFIED SCHOOL DISTRICT
1305 E. VINE STREET
LODI, CA 95240
CONTACT: JOE PATTY
PHONE: (209) 712-6363
EMAIL: jpatty@lodiusd.net

ELECTRICAL
M. NEILS ENGINEERING, INC.
100 HOWE AVENUE, SUITE 235N
SACRAMENTO, CA 95825
CONTACT: SINISHA GLISIC
PHONE: (916) 923-4400
EMAIL: SGlisic@mneilsengineering.com

MECHANICAL
CAPITAL ENGINEERING CONSULTANTS INC
11020 SUN CENTER DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
CONTACT: MICHAEL MINGE
PHONE: (916) 851-3500
mminge@capital-engineering.com

ARCHITECTURAL
HENRY + ASSOCIATES ARCHITECTS
730 HOWE AVE, SUITE 450
SACRAMENTO, CA 95825
CONTACT: STEPHEN HENRY
PHONE: (916) 921-2112
EMAIL: stephen@henry-architects.com

CIVIL
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762
CONTACT: MARTY GEE
PHONE: (916) 985-1870
EMAIL: marty@wceinc.com

STRUCTURAL
BARRISH PELHAM
3001 E. STREET
SACRAMENTO, CA 95816
CONTACT: GREG RICHARDS
PHONE: (916) 418-9100
GRichards@degenkolb.com

PROJECT DESCRIPTION

- Modernization of student and staff restrooms
- HVAC systems replacement
- Energy Management System
- Asbestos removal
- Fire alarm system replacement
- Emergency lighting
- ADA site improvements
- HVAC at MDF and IDF rooms
- Remodel Relocatable P3
- New shade structure

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

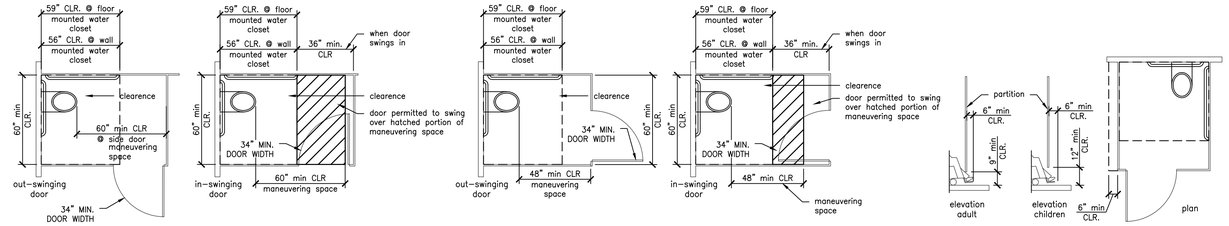
COVER SHEET

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE N.T.S.		
CADFILE		
UPDATED		

SHEET NO.
CS

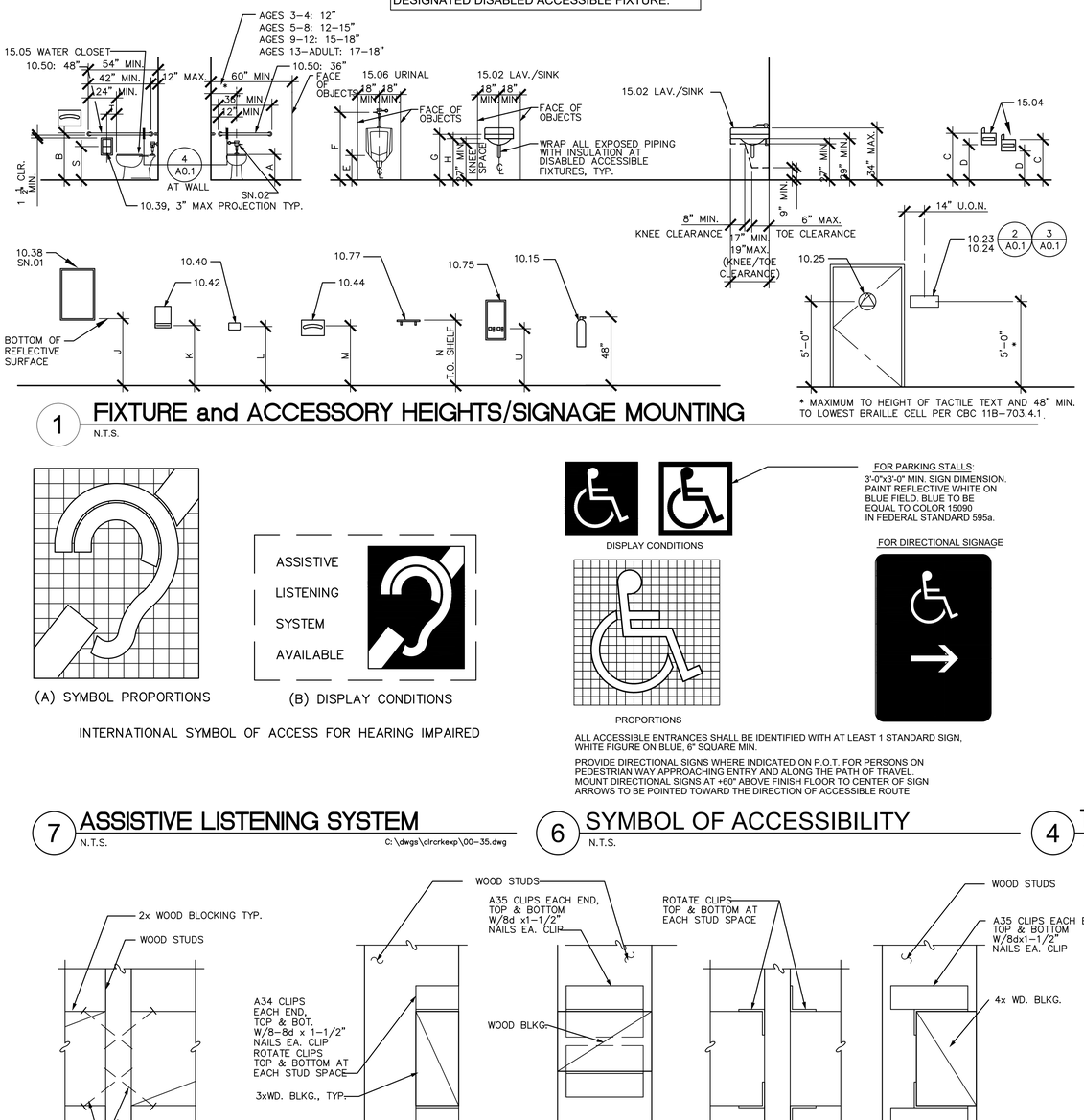
01 OF 79 SHEETS



SIDE OPENING | END OPENING | TOE CLEARANCE

D.A. TOILET STALL

NOTE: "D.A." ON PLANS AND ELEVATIONS INDICATE DESIGNATED DISABLED ACCESSIBLE FIXTURE.



* MAXIMUM TO HEIGHT OF TACTILE TEXT AND 48" MIN. TO LOWEST BRAILLE CELL PER CBC 11B–703.4.1

1 FIXTURE and ACCESSORY HEIGHTS/SIGNAGE MOUNTING

N.T.S.

ACCESSORY MOUNTING HEIGHTS

DIM.	KEYNOTE	ELEMENTARY SCHOOL AGES 3–4		ELEMENTARY SCHOOL AGES 5–8		MIDDLE SCHOOL AGES 9–12		HIGH SCHOOL/ COLLEGE/STAFF	
		STD	DA	STD	DA	STD	DA	STD	DA
A	15.05 (WC) SEAT	12"	11–12"	14"	12–15"	15"	15"–17"	15"	17"–19"
B	10.50 (GB)	N/A	18–20"	N/A	20–25"	N/A	25" MIN. 27" MAX.	N/A	33" MIN. 36" MAX.
C	15.04 (BUBBLER HEIGHT)	24"	30"	28"	32"	38"–43"	36" MAX.	38"–43"	36" MAX.
D	15.04 (KNEE CLEARANCE)	17"	23"	20"	24"	31" MIN.	27" MIN.	31" MIN.	27" MIN.
E	15.06 (LIP HEIGHT)	11"	13"	11"	15"	24"	17" MAX.	N/A	17" MAX.
F	15.06 (FLUSH HANDLE HEIGHT)	36"	32"	39"	36"	51"	44" MAX.	51"	44" MAX.
G	15.02 (TOP HEIGHT)	24"	24"	26"	29"	34"	34" MAX.	34"	34" MAX.
H	15.02 (APRON)	19"	19"	21"	24"	29"	29" MIN.	29"	29" MIN.
J	10.38 (BOTTOM OF MIRROR)	35"	32"	38"	36"	48"	40" MAX.	52"	40" MAX.*
K	10.42 (P.T.D.)	27"	32"	33"	36"	40"	40" MAX.	N/A	40" MAX.
L	10.40 (SOAP)	27"	32"	32"	36"	40"	40" MAX.	42"	40" MAX.
M	10.44 (S.C.)	27"	32"	40"	36"	42"	40" MAX.	42"	40" MAX.
N	10.77 (SHELF)	N/A	N/A	N/A	N/A	42"	40" MAX.	46"	40" MAX.
P–R	(NOT USED)								
S	10.39 (T.P.DISPENSER OUTLET HEIGHT)	12"	14"	15"	14–17"	18"	17–19"	18"	19" MIN.
T	10.39 (C.L.IN FRONT OF TOILET)	12"	6"	12"	6"	12"	7"–9"	12"	7"–9"
U	10.75	N/A	N/A	N/A	N/A	42"	40" MAX.	N/A	40" MAX.

* ONLY OVER LAVATORY – 35" OTHERWISE

GENERAL NOTES

1. ALL DISABLED ACCESS DIMENSIONS ARE MAXIMUM OR MINIMUM U.O.N.
2. MOUNTING HEIGHTS SHOWS FOR ELEMENTARY SCHOOL,MIDDLE SCHOOL AND STAFF ARE APPLICABLE TO THIS PROJECT.

SHEET NOTES

SN.01 SEE DETAIL 4 FOR BLOCKING REQUIREMENTS
SN.02 AT ADA ACCESSIBLE WATER CLOSETS, FLUSH VALVES TO BE MOUNTED ON WIDE SIDE OF ENCLOSURE

KEYNOTES

10.15 FIRE EXTINGUISHER

10.23 SIGN: ROOM IDENTIFICATION
10.24 SIGN: TACTILE EXIT SIGN
10.25 SIGN: TOILET ROOM DOOR SYMBOL

10.38 TOILET ROOM ACCESSORY: MIRROR (BOTTOM OF REFLECTIVE SURFACE)
10.39 TOILET ROOM ACCESSORY: TOILET TISSUE DISPENSER
10.40 TOILET ROOM ACCESSORY: SOAP DISPENSER
10.42 TOILET ROOM ACCESSORY: PAPER TOWEL DISPENSER
10.44 TOILET ROOM ACCESSORY: SEAT COVER DISPENSER
10.50 TOILET ROOM ACCESSORY: GRAB BAR
10.75 TOILET ROOM ACCESSORY: SANITARY NAPKIN DISPENSER
10.77 TOILET ROOM ACCESSORY: SHELF

15.02 SINK/LAVATORY
15.04 DRINKING FOUNTAIN
15.05 WATER CLOSET
15.06 URINAL

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

DETAILS

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE N.T.S.		
CADFILE		
UPDATED		

SHEET NO.

A0.1

02 OF 79 SHEETS

(A) SYMBOL PROPORTIONS

(B) DISPLAY CONDITIONS

INTERNATIONAL SYMBOL OF ACCESS FOR HEARING IMPAIRED

7 ASSISTIVE LISTENING SYSTEM

N.T.S.

C:\dwgs\clrcrkexp\00-35.dwg

DISPLAY CONDITIONS

FOR PARKING STALLS:
3'-0"x3'-0" MIN. SIGN DIMENSION. PAINT REFLECTIVE WHITE ON BLUE FIELD. BLUE TO BE EQUAL TO COLOR 15090 IN FEDERAL STANDARD 595a.

FOR DIRECTIONAL SIGNAGE

PROPORTIONS

ALL ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST 1 STANDARD SIGN, WHITE FIGURE ON BLUE, 6" SQUARE MIN.

PROVIDE DIRECTIONAL SIGNS WHERE INDICATED ON P.O.T. FOR PERSONS ON PEDESTRIAN WAY APPROACHING ENTRY AND ALONG THE PATH OF TRAVEL. MOUNT DIRECTIONAL SIGNS AT +60" ABOVE FINISH FLOOR TO CENTER OF SIGN ARROWS TO BE POINTED TOWARD THE DIRECTION OF ACCESSIBLE ROUTE

6 SYMBOL OF ACCESSIBILITY

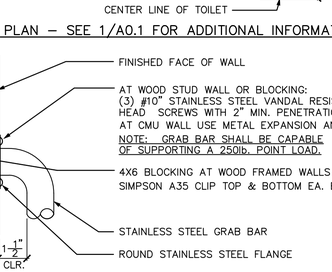
N.T.S.

8 TYPICAL WOOD BLOCKING

3"=1'-0"

4 TYPICAL GRAB BAR @ WALL

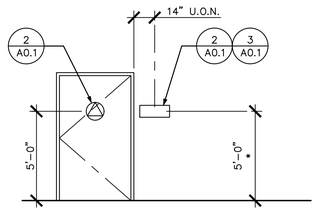
3" = 1'-0"



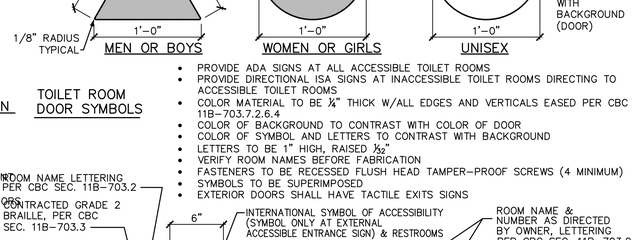
PLAN – SEE 1/A0.1 FOR ADDITIONAL INFORMATION

5 SIGN MOUNTING HEIGHT & LOCATION

N.T.S.

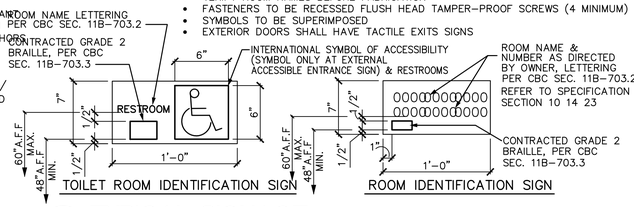


* 60" MAXIMUM IS TO THE TOP LINE OF RAISED CHARACTERS AND 48" MINIMUM IS TO THE "BASELINE" OF BOTTOM LINE OF BRAILLE. SEE DETAILS 2 AND 3 ABOVE.



TOILET ROOM DOOR SYMBOLS

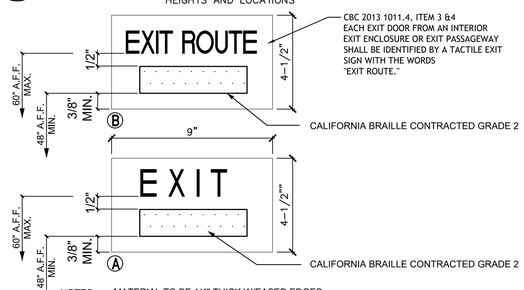
- PROVIDE ADA SIGNS AT ALL ACCESSIBLE TOILET ROOMS
- PROVIDE DIRECTIONAL ISA SIGNS AT INACCESSIBLE TOILET ROOMS DIRECTING TO ACCESSIBLE TOILET ROOMS
- COLOR MATERIAL TO BE ¼" THICK W/ALL EDGES AND VERTICALS EASED PER CBC 11B–703.7.2.6.4
- COLOR OF BACKGROUND TO CONTRAST WITH COLOR OF DOOR
- COLOR OF SYMBOL AND LETTERS TO CONTRAST WITH BACKGROUND
- LETTERS TO BE 1" HIGH, RAISED 1/32"
- VERIFY ROOM NAMES BEFORE FABRICATION
- FASTENERS TO BE RECESSED FLUSH HEAD TAMPER–PROOF SCREWS (4 MINIMUM)
- SYMBOLS TO BE SUPERIMPOSED
- EXTERIOR DOORS SHALL HAVE TACTILE EXITS SIGNS



2 TYPICAL SIGNAGE

1 1/2"=1'-0"

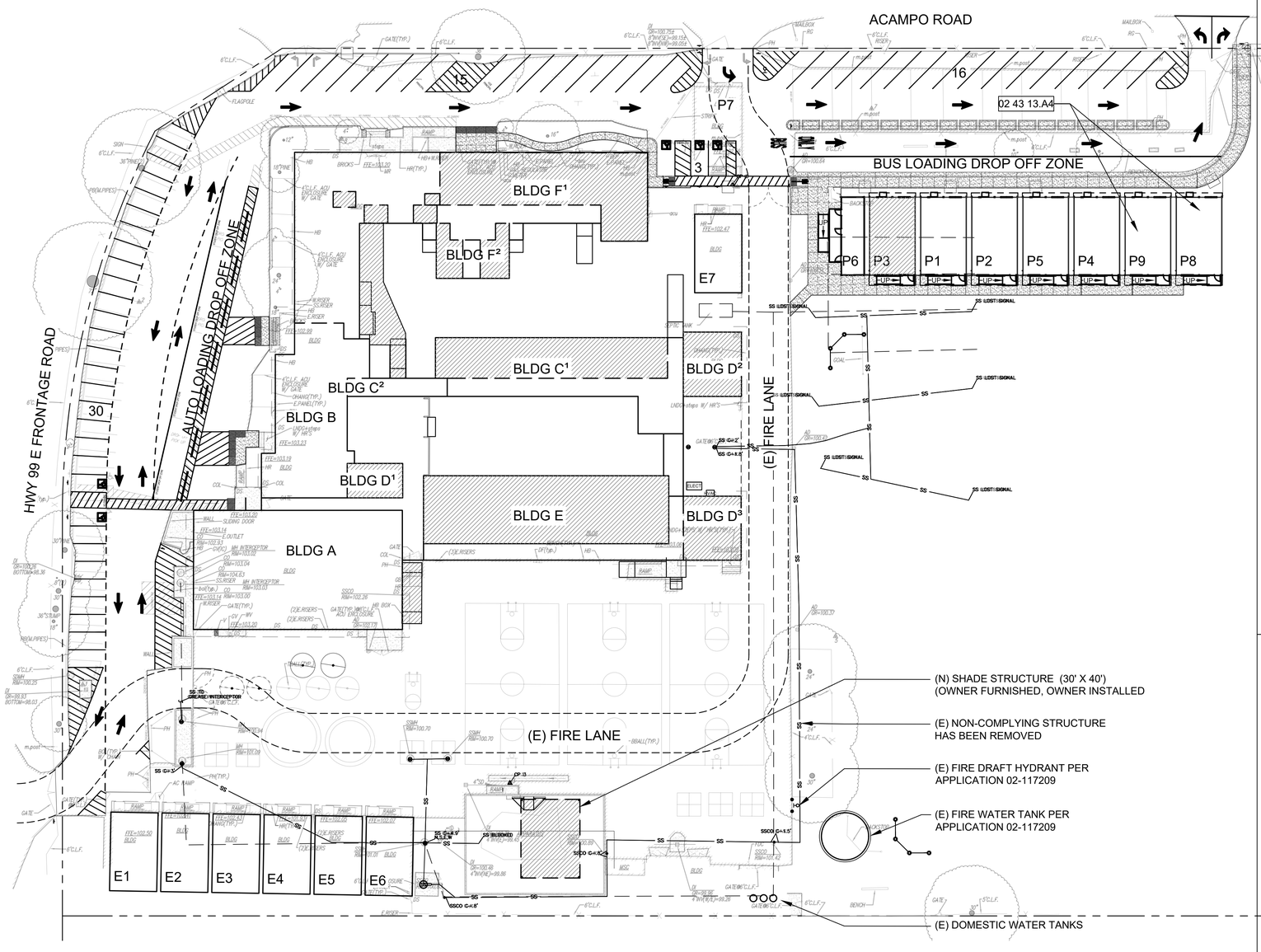
SEE DETAIL 1/A0.1 FOR TYP. MOUNTING HEIGHTS AND LOCATIONS



NOTES:
- MATERIAL TO BE 1/4" THICK W/EASED EDGES
- COLOR OF BACKGROUND TO CONTRAST 70% W/COLOR OF DOOR
- COLOR OF LETTERS TO CONTRAST 70% W/BACKGROUND
- LETTERS TO BE RAISED 1/32"
- FASTENERS: RECESSED FLUSH HEAD TAMPER-PROOF SCREWS (MIN. 4)
- SEE FLOOR PLAN FOR LOCATIONS
- SEE SPECIFICATION SECTION 10445, ARTICLE 2.01, FOR ADDITIONAL LETTERING REQUIREMENTS.

3 TACTILE EXIT SIGN

N.T.S.



1 A1.1 FIRE AUTHORITY APPROVAL SITE PLAN

SCALE: 1" = 30'-0"

30' 60'

NORTH

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

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

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

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

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

PROJECT INFORMATION
School District/Owner: Lodi Unified School District
Project Name/School: Houston School
Project Address: 4600 ACAMPO ROAD, ACAMPO, CA 95220

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

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

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

School District Acceptance of Acceptable Design Alternates

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

Accepted by: LEONARD KAHN Title: CHIEF BUSINESS OFFICER

Signature: Leonard Kahn Digitally signed by Leonard Kahn Date: 2019.12.17 15:24:11 -08'00' Date: 12/17/2019

LOCAL FIRE AUTHORITY (LFA) INFORMATION
LFA Agency Name: WOODBRIDGE FIRE DISTRICT
LFA Review Official: Jaime Ramirez
Title: Captain
Work E-mail: jaime.ramirez@woodbridgefire.org

Signature: Date: 12/17/2019

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FIRE AUTHORITY APPROVAL
SITE PLAN

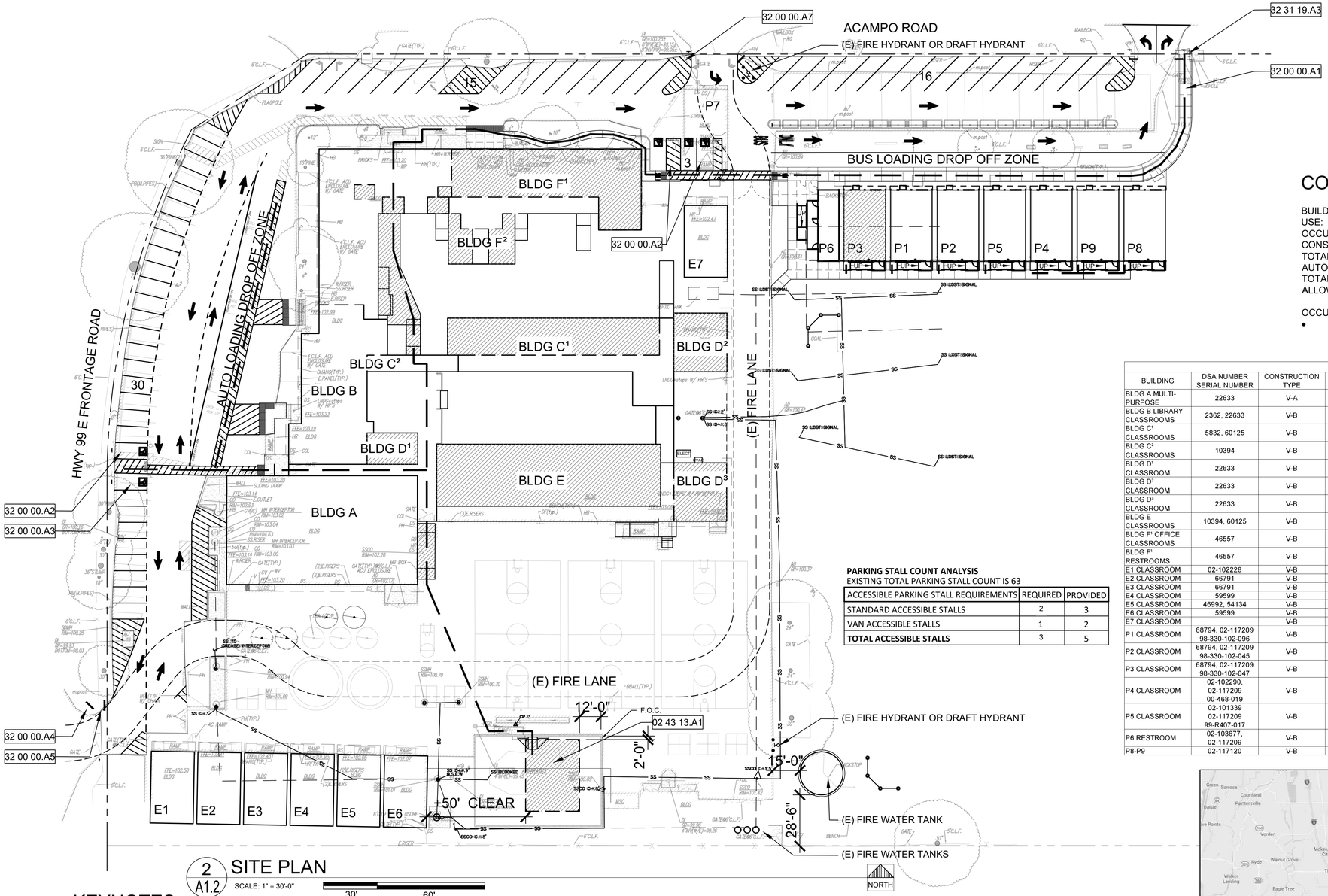
CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A1.1

03 OF 79 SHEETS



2 A1.2 SITE PLAN

SCALE: 1" = 30'-0"

30' 60'

KEYNOTES

02 43 13 SHADE STRUCTURE
02 43 13.A1 owner furnished and contractor installed 30' x 40' shade structure.

06 10 00 ROUGH CARPENTRY
06 10 00.A1 Install closure panels between relocatable buildings front and rear per detail 8/A0.1 - typical all relocated buildings.

10 14 23 SIGNAGE
10 14 23.A1 provide room identification sign and tactile exit sign per details 2/A0.1 and 3/A0.1 at two (2) door locations buildings P8-P9.

10 44 16 FIRE EXTINGUISHERS
10 44 16.A1 provide one UL rated 2A-10 BC multipurpose fire extinguisher at each building (seven locations). mount on wall with bracket near door.

32 00 00 EXTERIOR IMPROVEMENTS
32 00 00.A1 accessible path of travel shown dashed
32 00 00.A2 accessible parking stall per 02-117209
32 00 00.A3 accessible van parking stall per 02-117209
32 00 00.A4 tow away sign per 02-117209
32 00 00.A5 stop sign per 02-1172019
32 00 00.A6 end of accessible path of travel this project
32 00 00.A7 New tow away sign - see Civil

32 16 00 SITE
32 16 00.A1 concrete walk per civil

32 31 13 CHAIN LINK FENCE
32 31 13.A1 chain link fence 6' high
32 31 13.A2 chain link gate per 02-117209

32 31 19 ORNAMENTAL METAL FENCE
32 31 19.A3 ornamental metal gate per 02-117209

PARKING STALL COUNT ANALYSIS
EXISTING TOTAL PARKING STALL COUNT IS 63

ACCESSIBLE PARKING STALL REQUIREMENTS	REQUIRED	PROVIDED
STANDARD ACCESSIBLE STALLS	2	3
VAN ACCESSIBLE STALLS	1	2
TOTAL ACCESSIBLE STALLS	3	5

Design Professional in General Responsible Charge Statement

The POT identified in the construction documents is compliant with current applicable California Building Code accessibility provisions **for path of travel requirements for alterations and structural repairs**. As part of the design of this project, the POT was examined and any elements, components or portion 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 thus project's work through details, drawings and specification incorporated into these construction documents. Any noncompliant elements, components or portion of the POT that will not be corrected by this project based on valuation threshold limitations or a finding of unreasonable hardship are so indicated in these construction documents.

During construction, if POT items within the scope of the project represented as code compliant are found to be nonconforming beyond reasonable construction tolerances, they shall be brought into compliance with the CBC as a part of this project by means of a "Construction Change Document" (form **DSA 140**).

PATH OF TRAVEL REQUIREMENTS

Path of travel (P.O.T.) as indicated is a barrier free access without any abrupt vertical changes exceeding ½" at 1:2 Maximum slope, except that level changes do not exceed ¼" vertical(11B-303 & 11B-403.4). P.O.T. is a minimum of 48" wide (11B-403.5.1Ex3) slip resistant surface with 5% max. slope and 1:48 max. cross slope(11B-403.3). Passing spaces(11B-403.5.3) of 60"x60" min. are located not more than 200' apart. Walks with continuous gradients have 60" in length of level areas (11B-403.7) not more than 400' apart. P.O.T. shall be maintained free of overhanging obstructions to 80" min(11B-307.4) and protruding objects(11B-307) greater than 4" projection from wall above 27" and less than 80". There is no drop-off over 4" at the edge of walk or landing unless identified by a guard, a handrail, or a warning curb at least 6" in height above the walk(11B-303.5).

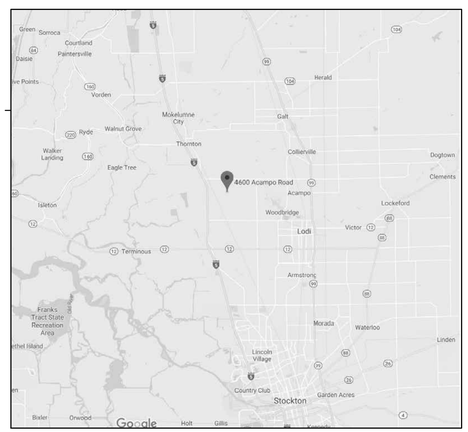
CODE ANALYSIS

BUILDING NUMBERS	A, B, C, D, E & F
USE:	CLASSROOMS/ADMIN./MP
OCCUPANCY GROUP:	E, B, A-2
CONSTRUCTION:	TYPE V-B
TOTAL BUILDING STORIES:	1
AUTOMATIC FIRE SPRINKLER:	No
TOTAL BUILDING AREAS:	SEE BELOW
ALLOWABLE AREA:	9,500 SF

OCCUPANT LOAD FACTOR:
- CLASSROOM: 20

BUILDING DATA

BUILDING	DSA NUMBER SERIAL NUMBER	CONSTRUCTION TYPE	OCCUPANCY	SQUARE FOOTAGE	CERTIFIED	RELO MFR
BLDG A MULTI-PURPOSE	22633	V-A	A-3	6360	Y	
BLDG B LIBRARY CLASSROOMS	2362, 22633	V-B	E	3600	Y	
BLDG C¹ CLASSROOMS	5832, 60125	V-B	E	3864	Y	
BLDG C² CLASSROOMS	10394	V-B	E	469	Y	
BLDG D¹ CLASSROOM	22633	V-B	E	522	Y	
BLDG D² CLASSROOM	22633	V-B	E	960	Y	
BLDG D³ CLASSROOM	22633	V-B	E	960	Y	
BLDG E CLASSROOMS	10394, 60125	V-B	E	6020	Y	
BLDG F¹ OFFICE CLASSROOMS	46557	V-B	E	8533	Y	
BLDG F² RESTROOMS	46557	V-B	E	964	Y	
E1 CLASSROOM	02-102228	V-B	E	960	Y	
E2 CLASSROOM	66791	V-B	E	960	Y	
E3 CLASSROOM	66791	V-B	E	960	Y	
E4 CLASSROOM	59599	V-B	E	960	Y	
E5 CLASSROOM	46992, 54134	V-B	E	960	Y	
E6 CLASSROOM	59599	V-B	E	960	Y	
E7 CLASSROOM		V-B	E	960	Y	
P1 CLASSROOM	68794, 02-117209 98-330-102-096	V-B	E	960	Y	PACESETTER INDUSTRIES
P2 CLASSROOM	68794, 02-117209 98-330-102-045	V-B	E	960	Y	PACESETTER INDUSTRIES
P3 CLASSROOM	68794, 02-117209 98-330-102-047	V-B	E	960	Y	PACESETTER INDUSTRIES
P4 CLASSROOM	02-102290, 02-117209 00-468-019	V-B	E	960	Y	American Modular PC 02-101837
P5 CLASSROOM	02-101339 02-117209 99-R407-017	V-B	E	960	Y	American Modular PC 02-101837
P6 RESTROOM	02-103677, 02-117209	V-B	E	480	Y	American Modular PC 02-101741
P8-P9	02-117120	V-B	E	960 x 2 = 1920	Y	American Modular



HOUSTON MIDDLE SCHOOL
4600 ACAMPO ROAD, ACAMPO, CA 95220

1 A1.2 VICINITY MAP

NO SCALE

NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

VICINITY MAP
BUILDING DATA
SITE PLAN

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A1.2

04 OF 79 SHEETS

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

Window Covering Location

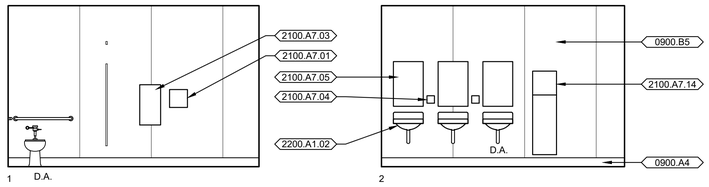
WINDOW (PLAN VIEW)

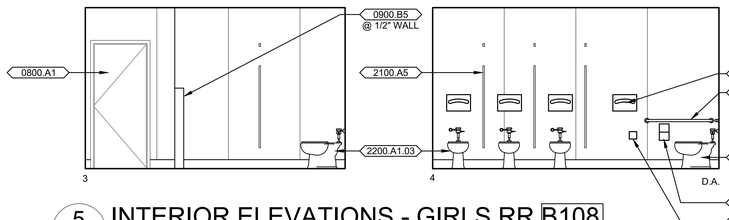
HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

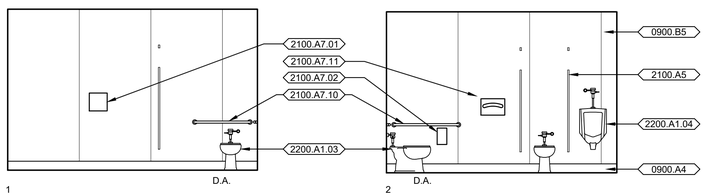
REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

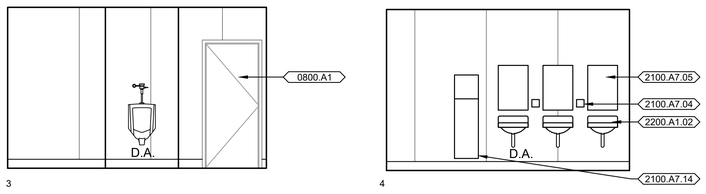




5 A2.1.BD INTERIOR ELEVATIONS - GIRLS RR B108

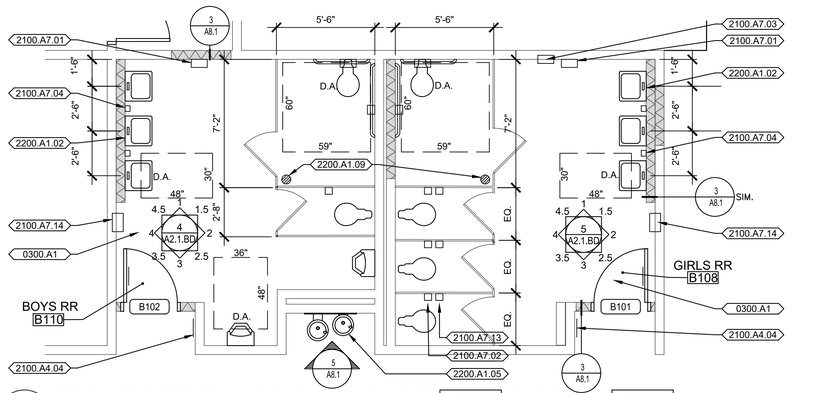
SCALE: 1/4" = 1'- 0"





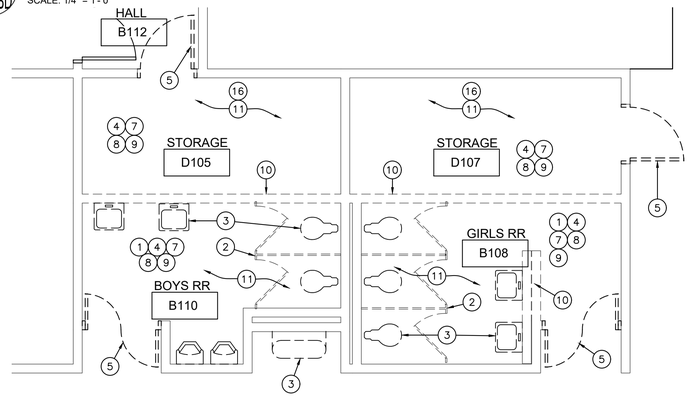
4 A2.1.BD INTERIOR ELEVATIONS - BOYS RR B110

SCALE: 1/4" = 1'- 0"



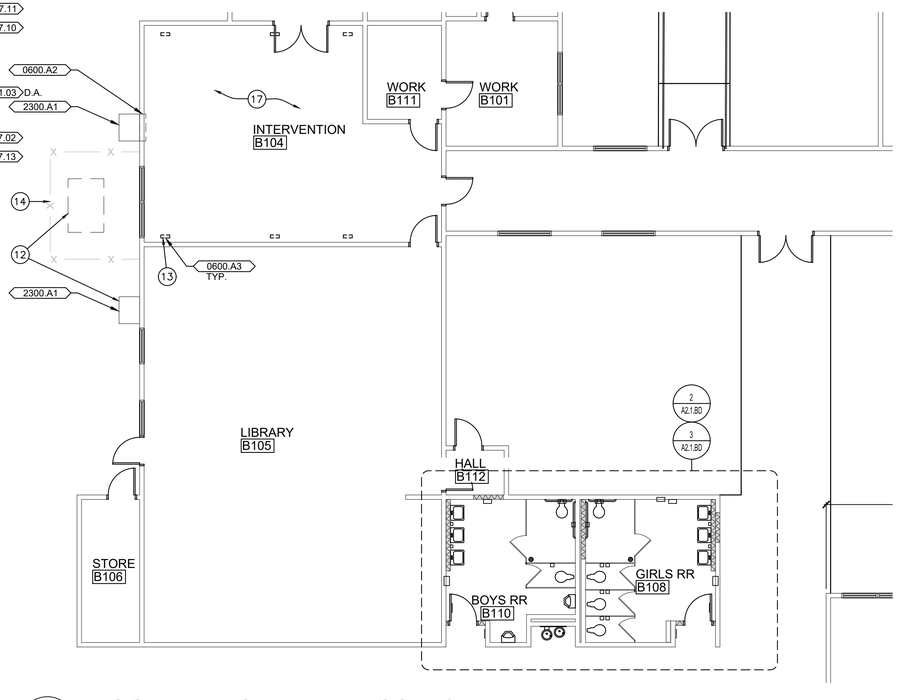
3 A2.1.BD ENLARGED FLOOR PLAN BOYS B110 & GIRLS B108

SCALE: 1/4" = 1'- 0"



2 A2.1.BD DEMOLITION FLOOR PLAN BOYS B110 & GIRLS B108

SCALE: 1/4" = 1'- 0"



1 A2.1.BD FLOOR PLANS - BUILDINGS B & D

SCALE: 1/8" = 1'- 0"

KEYNOTES

0300	CONCRETE	2100	SPECIALTIES
0300.A1	concrete slab on grade - replace where removed - see plumbing and structural	2100.A1	display case
		2100.A2	marker board
0300.A2	concrete footing	2100.A3	TV/monitor bracket
0300.A4	expansion joint	2100.A4	signs:
0300.A5	splash block	.01	parking lot entrance sign "towaway" per Civil
0300.A6	Concrete curb	.02	ADA accessible parking stall sign per Civil
0300.A7	Concrete curb, walkway, stairs & pilasters - see civil	.03	room identification sign per dtl. 2/A0.1
		.04	restroom identification sign per dtl. 2/A0.1
0400	MASONRY	.05	ADA Tactile exit sign per dtl. 3/A0.1
0400.A1	concrete masonry wall	.06	self-illuminating exit
		.07	assistive listening system per detail 7/A0.1
0500	METALS	.08	Monument sign
0500.A2	corrugated structural metal roof deck	.09	Building sign
0500.A3	metal pipe bollard concrete fill	.10	Dedication plague
0500.A4	metal pipe bollard removable	2100.A5	toilet partition
0500.A5	metal pipe hand rail - 1.5" diameter	2100.A6	urinal partition
0500.A6	metal roof access ladder with security door	2100.A7	toilet accessories:
0500.A7	metal louver	.01	paper towel dispenser
0500.A8	Metal pipe handrails & guardrails - see civil	.02	toilet paper dispenser
0500.B1	rolled channel (structural support grid)	.03	sanitary napkin dispenser
0500.B2	metal furring channel	.04	soap dispenser
		.05	mirror
0600	WOOD, PLASTICS AND COMPOSITES	.09	trash receptacle
0600.A1	wood framing - see structural	.10	grab bar
0600.A2	frame opening for new door, window, or HVAC	.11	toilet seat cover
0600.A3	in-fill frame door/window/duct opening	.13	sanitary napkin disposal
0600.A4	wood beam	.14	paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.A8	folding panel partition
0600.A6	wood joist	2100.B1	fire extinguisher
0600.A7	wood trusses	2100.B2	metal shelving
0600.A8	2 x 4 furred wall	2100.B3	metal lockers
0600.A9	blocking	2100.B4	knox box
0600.B1	exterior wood wall sheathing		
0600.B2	exterior wood roof sheathing	2110	EQUIPMENT
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A1	projection screen
		2110.A2	refrigerator (owner furnished, contractor installed)
0600.C1	wood trim	2110.A3	microwave (owner furnished, contractor installed)
0600.C2	wood hand rail		
		2120	FURNISHINGS
0700	THERMAL AND MOISTURE PROTECTION	2120.A1	window coverings & track
0700.A1	insulation	2120.A2	plastic laminate casework
.01	R-13 batt/blanket (3.5" thick)	.01	ada accessible sink base cabinet
.02	R-21 batt/blanket (6.5" thick)	.02	plastic laminate countertop with 4" backsplash
.03	R-30 batt/blanket (10" thick)	2120.A3	casework
.04	R-38 batt/blanket (12" thick)		
.05	board insulation (2" thick)	2200	PLUMBING
.06	board insulation tapered cricket	2200.A1	plumbing equipment
0700.B1	Standing seam roofing system	.01	sink
0700.B2.	single ply membrane roofing system	.02	lavatory
.01	extend roofing up and over parapet wall	.03	toilet
.02	walk pad	.04	urinal
.03	Parapet Wall Flashing	.05	drinking fountain
0700.B3	built up roofing	.06	mop sink
0700.B4	modified bitumen roofing	.07	water heater
0700.B5	composition shingle roofing	.08	Roof drain/Overflow Combo Unit
0700.C1	galvanized sheet metal	.09	Floor drain - slope floor to drain 2% max. slope
.01	two piece Fry Springlok flashing system		
.02	parapet cap flashing	2300	HVAC
.02	valley flashing	2300.A1	mechanical equipment
.03	splash pan	2300.A2	ceiling register
.05	scupper	2300.A3	mechanical duct
.06	gutter	2300.A4	Condensate Line
.07	downspout		
.08	22 GA GSM Siding/Soffit	2600	ELECTRICAL
.09	22 GA GSM Corner Guard	2600.A1	electrical equipment
0700.C2	vent	2600.A2	light fixture
.01	roof vent - typ. of 4	2600.A3	MDF
.02	pipe vent		
.03	hot vent	3200	SITEWORK
.04	duct penetration	3200.A1	gas meter assembly
0700.D1	sealant	3200.A2	water meter box
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A3	backflow assembly
		3200.A4	fire hydrant
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A5	trench drain
		3200.A6	area drain
		3200.A7	drain inlet
0800	OPENINGS	3200.B1	decomposed granite
0800.A1	door and frame	3200.B2	aggregate base rock
0800.A2	door	3200.B3	concrete paving
0800.A3	door frame	3200.B4	asphalt paving
0800.A4	roll up door	3200.B5	concrete curb
0800.A5	window	3200.B6	concrete mow strip
0800.A6	storefront window system		
0800.A7	access door	3200.B7	trash enclosure
0800.A8	extruded alum. corner		
0800.A9	Roof hatch	3200.C1	line paint striping
		3200.C2	fire lane striping
0900	FINISHES	3200.C3	game line striping
0900.A1	vinyl composition tile flooring and base	3200.D1	ada accessible car parking stall
0900.A2	resilient sheet flooring and base	3200.D2	ada accessible van parking stall
0900.A3	carpet and base	3200.D3	ada accessible ramp per civil
0900.A4	base	3200.D4	truncated domes
0900.A5	ceramic tile	3200.D5	ada accessible path of travel
0900.B1	gypsum board	3200.D6	ada accessible restrooms (men's and women's)
0900.B2	wainscot	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B3	vinyl wall covering	3200.D8	ada accessible drinking fountain
0900.B4	vinyl wall covering wrapped tackboard panels	3200.E1	chain link fence
0900.B5	fiberglass reinforced plastic panels (FRP)	.01	single 3'-0" wide swing gate
0900.B6	acoustical wall panels	.02	pair 6'-0" wide swing gate
0900.C1	suspended acoustical ceiling system	3200.E2	chain link fence with vinyl slats
0900.C2	glued or stapled on acoustical tile	.01	single 3'-0" wide swing gate
0900.D1	cement plaster wall finish	.02	pair 6'-0" wide swing gate
.01	Expansion Screed	3200.E3	ornamental metal fence
.02	4" soffit vent screed	3200.F1	reconfigure (e) irrigation and sprinklers
0900.D2	exterior panel wall system	3200.F2	sod turf landscaping planting area - patch & repair
0900.D3	Metal Siding/Soffits	3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH **LIGHT LINE)**
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLANS
INTERIOR ELEVATIONS
BUILDINGS B & D

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.1.BD

05 OF 79 SHEETS

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

WINDOW (PLAN VIEW)

HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

KEYNOTES

0300 CONCRETE
0300.A1 concrete slab on grade - replace where removed - see plumbing and structural
0300.A2 concrete footing
0300.A4 expansion joint
0300.A5 splash block
0300.A6 Concrete curb
0300.A7 Concrete curb, walkway, stairs & pilasters - see Civil

0400 MASONRY
0400.A1 concrete masonry wall

0500 METALS
0500.A2 corrugated structural metal roof deck
0500.A3 metal pipe bollard concrete fill
0500.A4 metal pipe bollard removable
0500.A5 metal pipe hand rail - 1.5" diameter
0500.A6 metal roof access ladder with security door
0500.A7 metal louver
0500.B1 rolled channel (structural support grid)
0500.B2 metal furring channel

0600 WOOD, PLASTICS AND COMPOSITES
0600.A1 wood framing - see structural
0600.A2 frame opening for new door, window, or HVAC
0600.A3 in-fill frame door/window/duct opening
0600.A4 wood beam
0600.A5 wood post
0600.A6 wood joist
0600.A7 wood trusses
0600.A8 2 x 4 furred wall
0600.A9 blocking
0600.B1 exterior wood wall sheathing
0600.B2 exterior wood roof sheathing
0600.B3 wood framed and sheathed cricket - use fire retardant treated wood
0600.C1 wood trim
0600.C2 wood hand rail

0700 THERMAL AND MOISTURE PROTECTION
0700.A1 insulation
.01 R-13 batt/blanket (3.5" thick)
.02 R-21 batt/blanket (6.5" thick)
.03 R-30 batt/blanket (10" thick)
.04 R-38 batt/blanket (12" thick)
.05 board insulation (2" thick)
.06 board insulation tapered cricket
0700.B1 Standing seam roofing system
0700.B2. single ply membrane roofing system
.01 extend roofing up and over parapet wall
.02 walk pad
.03 Parapet Wall Flashing
0700.B3 built up roofing
0700.B4 modified bitumen roofing
0700.B5 composition shingle roofing
0700.C1 galvanized sheet metal
.01 two piece Fry Springlok flashing system
.02 parapet cap flashing
.02 valley flashing
.03 splash pan
.05 scupper
.06 gutter
.07 downspout
.08 22 GA GSM Siding/Soffit
.09 22 GA GSM Corner Guard
0700.C2 vent
.01 roof vent - typ. of 4
.02 pipe vent
.03 hot vent
.04 duct penetration
0700.D1 sealant
.01 remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical
.02 remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical

0800 OPENINGS
0800.A1 door and frame
0800.A2 door
0800.A3 door frame
0800.A4 roll up door
0800.A5 window
0800.A6 storefront window system
0800.A7 access door
0800.A8 extruded alum. corner
0800.A9 Roof hatch

0900 FINISHES
0900.A1 vinyl composition tile flooring and base
0900.A2 resilient sheet flooring and base
0900.A3 carpet and base
0900.A4 base
0900.A5 ceramic tile
0900.B1 gypsum board
0900.B2 wainscot
0900.B3 vinyl wall covering
0900.B4 vinyl wall covering wrapped tackboard panels
0900.B5 fiberglass reinforced plastic panels (FRP)
0900.B6 acoustical wall panels
0900.C1 suspended acoustical ceiling system
0900.C2 glued or stapled on acoustical tile
0900.D1 cement plaster wall finish
.01 Expansion Screed
.02 4" soffit vent screed
0900.D2 exterior panel wall system
0900.D3 Metal Siding/Soffits

2100 SPECIALTIES
2100.A1 display case
2100.A2 marker board
2100.A3 TV/monitor bracket
2100.A4 signs:
.01 parking lot entrance sign "towaway" per Civil
.02 ADA accessible parking stall sign per Civil
.03 room identification sign per dtl. 2/A0.1
.04 restroom identification sign per dtl. 2/A0.1
.05 ADA Tactile exit sign per dtl. 3/A0.1
.06 self-illuminating exit
.07 assistive listening system per detail 7/A0.1
.08 Monument sign
.09 Building sign
.10 Dedication plague
2100.A5 toilet partition
2100.A6 urinal partition
2100.A7 toilet accessories:
.01 paper towel dispenser
.02 toilet paper dispenser
.03 sanitary napkin dispenser
.04 soap dispenser
.05 mirror
.09 trash receptacle
.10 grab bar
.11 toilet seat cover
.13 sanitary napkin disposal
.14 paper towel dispenser/ waste receptacle
2100.A8 folding panel partition
2100.B1 fire extinguisher
2100.B2 metal shelving
2100.B3 metal lockers
2100.B4 knox box

2110 EQUIPMENT
2110.A1 projection screen
2110.A2 refrigerator (owner furnished, contractor installed)
2110.A3 microwave (owner furnished, contractor installed)

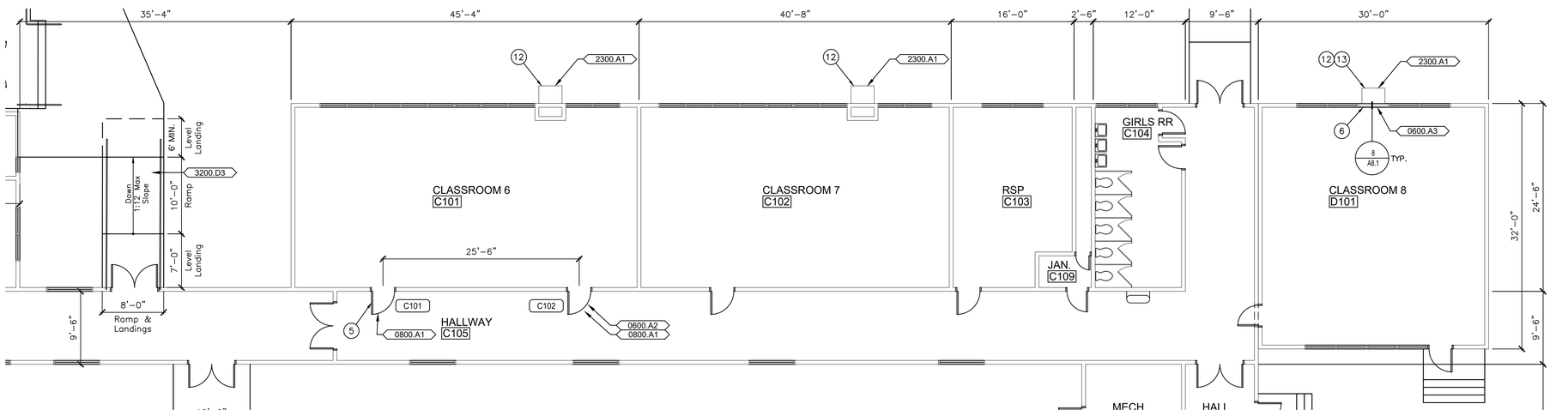
2120 FURNISHINGS
2120.A1 window coverings & track
2120.A2 plastic laminate casework
.01 ada accessible sink base cabinet
.02 plastic laminate countertop with 4" backsplash
2120.A3 casework

2200 PLUMBING
2200.A1 plumbing equipment
.01 sink
.02 lavatory
.03 toilet
.04 urinal
.05 drinking fountain
.06 mop sink
.07 water heater
.08 Roof drain/Overflow Combo Unit
.09 Floor drain - slope floor to drain 2% max. slope

2300 HVAC
2300.A1 mechanical equipment
2300.A2 ceiling register
2300.A3 mechanical duct
2300.A4 Condensate Line

2600 ELECTRICAL
2600.A1 electrical equipment
2600.A2 light fixture
2600.A3 MDF

3200 SITEWORK
3200.A1 gas meter assembly
3200.A2 water meter box
3200.A3 backflow assembly
3200.A4 fire hydrant
3200.A5 trench drain
3200.A6 area drain
3200.A7 drain inlet
3200.B1 decomposed granite
3200.B2 aggregate base rock
3200.B3 concrete paving
3200.B4 asphalt paving
3200.B5 concrete curb
3200.B6 concrete mow strip
3200.B7 trash enclosure
3200.C1 line paint striping
3200.C2 fire lane striping
3200.C3 game line striping
3200.D1 ada accessible car parking stall
3200.D2 ada accessible van parking stall
3200.D3 ada accessible ramp per civil
3200.D4 truncated domes
3200.D5 ada accessible path of travel
3200.D6 ada accessible restrooms (men's and women's)
3200.D7 ada accessible restrooms (girl's and boy's)
3200.D8 ada accessible drinking fountain
3200.E1 chain link fence
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
3200.E2 chain link fence with vinyl slats
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
3200.E3 ornamental metal fence
3200.F1 reconfigure (e) irrigation and sprinklers
3200.F2 sod turf landscaping planting area - patch & repair
3200.F3 remove (e) trees
3200.F4 remove (e) ada parking symbol



1 A2.1.CD FLOOR PLANS - BUILDINGS C & D

SCALE: 1/8" = 1'- 0"

NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLANS
BUILDINGS C & D

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.1.CD

06 OF 79 SHEETS

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

WINDOW (PLAN VIEW)

HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

KEYNOTES

0300 CONCRETE
0300.A1 concrete slab on grade - replace where removed - see plumbing and structural
0300.A2 concrete footing
0300.A4 expansion joint
0300.A5 splash block
0300.A6 Concrete curb
0300.A7 Concrete curb, walkway, stairs & pilasters - see Civil

0400 MASONRY
0400.A1 concrete masonry wall

0500 METALS
0500.A2 corrugated structural metal roof deck
0500.A3 metal pipe bollard concrete fill
0500.A4 metal pipe bollard removable
0500.A5 metal pipe hand rail - 1.5" diameter
0500.A6 metal roof access ladder with security door
0500.A7 metal louver
0500.B1 rolled channel (structural support grid)
0500.B2 metal furring channel

0600 WOOD, PLASTICS AND COMPOSITES
0600.A1 wood framing - see structural
0600.A2 frame opening for new door, window, or HVAC
0600.A3 in-fill frame door/window/duct opening
0600.A4 wood beam
0600.A5 wood post
0600.A6 wood joist
0600.A7 wood trusses
0600.A8 2 x 4 furred wall
0600.A9 blocking
0600.B1 exterior wood wall sheathing
0600.B2 exterior wood roof sheathing
0600.B3 wood framed and sheathed cricket - use fire retardant treated wood
0600.C1 wood trim
0600.C2 wood hand rail

0700 THERMAL AND MOISTURE PROTECTION
0700.A1 insulation
.01 R-13 batt/blanket (3.5" thick)
.02 R-21 batt/blanket (6.5" thick)
.03 R-30 batt/blanket (10" thick)
.04 R-38 batt/blanket (12" thick)
.05 board insulation (2" thick)
.06 board insulation tapered cricket
0700.B1 Standing seam roofing system
0700.B2. single ply membrane roofing system
.01 extend roofing up and over parapet wall
.02 walk pad
.03 Parapet Wall Flashing
0700.B3 built up roofing
0700.B4 modified bitumen roofing
0700.B5 composition shingle roofing
0700.C1 galvanized sheet metal
.01 two piece Fry Springlok flashing system
.02 parapet cap flashing
.02 valley flashing
.03 splash pan
.05 scupper
.06 gutter
.07 downspout
.08 22 GA GSM Siding/Soffit
.09 22 GA GSM Corner Guard
0700.C2 vent
.01 roof vent - typ. of 4
.02 pipe vent
.03 hot vent
.04 duct penetration
0700.D1 sealant
.01 remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical
.02 remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical

0800 OPENINGS
0800.A1 door and frame
0800.A2 door
0800.A3 door frame
0800.A4 roll up door
0800.A5 window
0800.A6 storefront window system
0800.A7 access door
0800.A8 extruded alum. corner
0800.A9 Roof hatch

0900 FINISHES
0900.A1 vinyl composition tile flooring and base
0900.A2 resilient sheet flooring and base
0900.A3 carpet and base
0900.A4 base
0900.A5 ceramic tile
0900.B1 gypsum board
0900.B2 wainscot
0900.B3 vinyl wall covering
0900.B4 vinyl wall covering wrapped tackboard panels
0900.B5 fiberglass reinforced plastic panels (FRP)
0900.B6 acoustical wall panels
0900.C1 suspended acoustical ceiling system
0900.C2 glued or stapled on acoustical tile
0900.D1 cement plaster wall finish
.01 Expansion Screed
.02 4" soffit vent screed
0900.D2 exterior panel wall system
0900.D3 Metal Siding/Soffits

2100 SPECIALTIES
2100.A1 display case
2100.A2 marker board
2100.A3 TV/monitor bracket
2100.A4 signs:
.01 parking lot entrance sign "towaway" per Civil
.02 ADA accessible parking stall sign per Civil
.03 room identification sign per dtl. 2/A0.1
.04 restroom identification sign per dtl. 2/A0.1
.05 ADA Tactile exit sign per dtl. 3/A0.1
.06 self-illuminating exit
.07 assistive listening system per detail 7/A0.1
.08 Monument sign
.09 Building sign
.10 Dedication plague
2100.A5 toilet partition
2100.A6 urinal partition
2100.A7 toilet accessories:
.01 paper towel dispenser
.02 toilet paper dispenser
.03 sanitary napkin dispenser
.04 soap dispenser
.05 mirror
.09 trash receptacle
.10 grab bar
.11 toilet seat cover
.13 sanitary napkin disposal
.14 paper towel dispenser/ waste receptacle
2100.A8 folding panel partition
2100.B1 fire extinguisher
2100.B2 metal shelving
2100.B3 metal lockers
2100.B4 knox box

2110 EQUIPMENT
2110.A1 projection screen
2110.A2 refrigerator (owner furnished, contractor installed)
2110.A3 microwave (owner furnished, contractor installed)

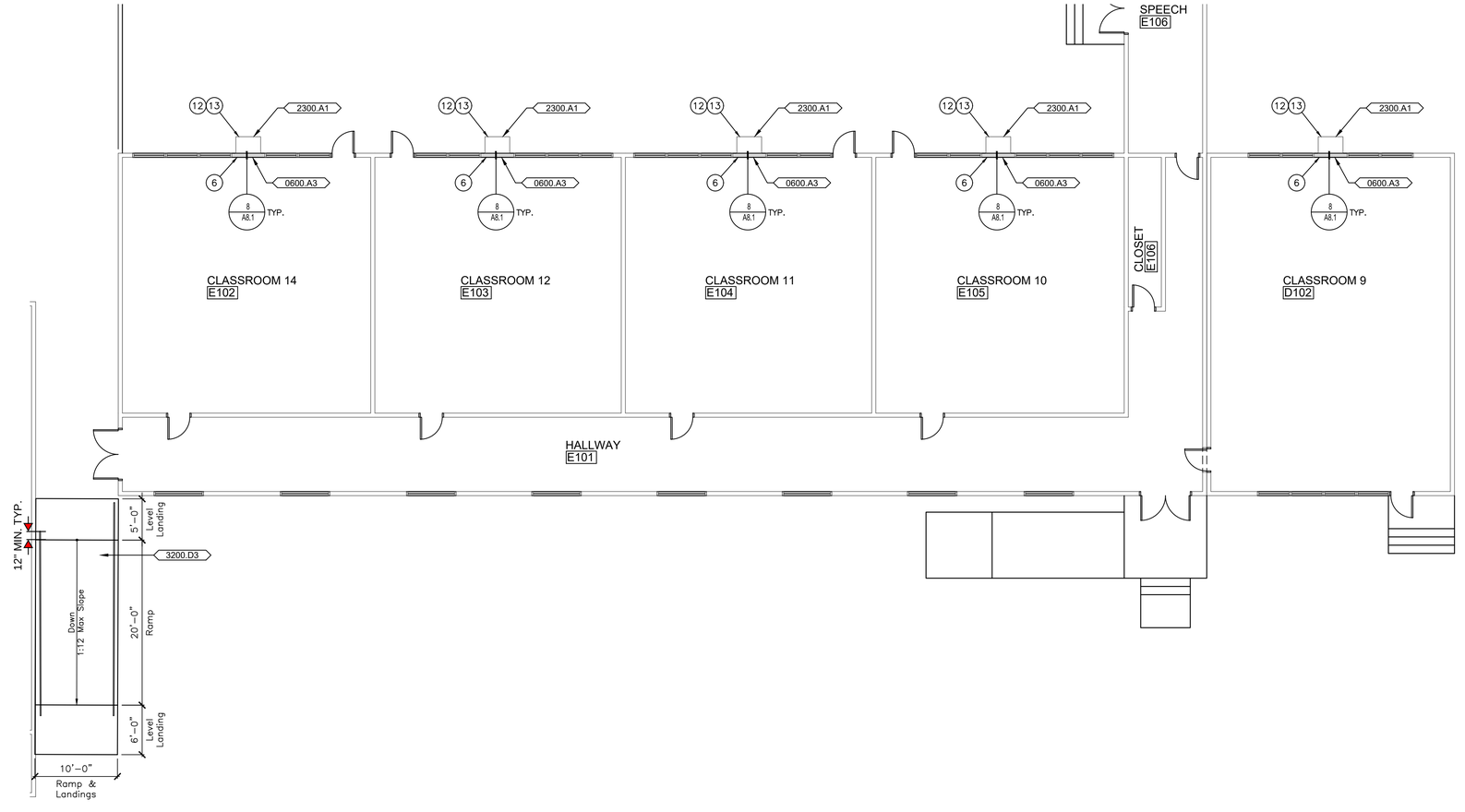
2120 FURNISHINGS
2120.A1 window coverings & track
2120.A2 plastic laminate casework
.01 ada accessible sink base cabinet
.02 plastic laminate countertop with 4" backsplash
2120.A3 casework

2200 PLUMBING
2200.A1 plumbing equipment
.01 sink
.02 lavatory
.03 toilet
.04 urinal
.05 drinking fountain
.06 mop sink
.07 water heater
.08 Roof drain/Overflow Combo Unit
.09 Floor drain - slope floor to drain 2% max. slope

2300 HVAC
2300.A1 mechanical equipment
2300.A2 ceiling register
2300.A3 mechanical duct
2300.A4 Condensate Line

2600 ELECTRICAL
2600.A1 electrical equipment
2600.A2 light fixture
2600.A3 MDF

3200 SITEWORK
3200.A1 gas meter assembly
3200.A2 water meter box
3200.A3 backflow assembly
3200.A4 fire hydrant
3200.A5 trench drain
3200.A6 area drain
3200.A7 drain inlet
3200.B1 decomposed granite
3200.B2 aggregate base rock
3200.B3 concrete paving
3200.B4 asphalt paving
3200.B5 concrete curb
3200.B6 concrete mow strip
3200.B7 trash enclosure
3200.C1 line paint striping
3200.C2 fire lane striping
3200.C3 game line striping
3200.D1 ada accessible car parking stall
3200.D2 ada accessible van parking stall
3200.D3 ada accessible ramp per civil
3200.D4 truncated domes
3200.D5 ada accessible path of travel
3200.D6 ada accessible restrooms (men's and women's)
3200.D7 ada accessible restrooms (girl's and boy's)
3200.D8 ada accessible drinking fountain
3200.E1 chain link fence
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
3200.E2 chain link fence with vinyl slats
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
3200.E3 ornamental metal fence
3200.F1 reconfigure (e) irrigation and sprinklers
3200.F2 sod turf landscaping planting area - patch & repair
3200.F3 remove (e) trees
3200.F4 remove (e) ada parking symbol



1 A2.1.DE FLOOR PLANS - BUILDING D & E
SCALE: 1/8" = 1'- 0"

NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

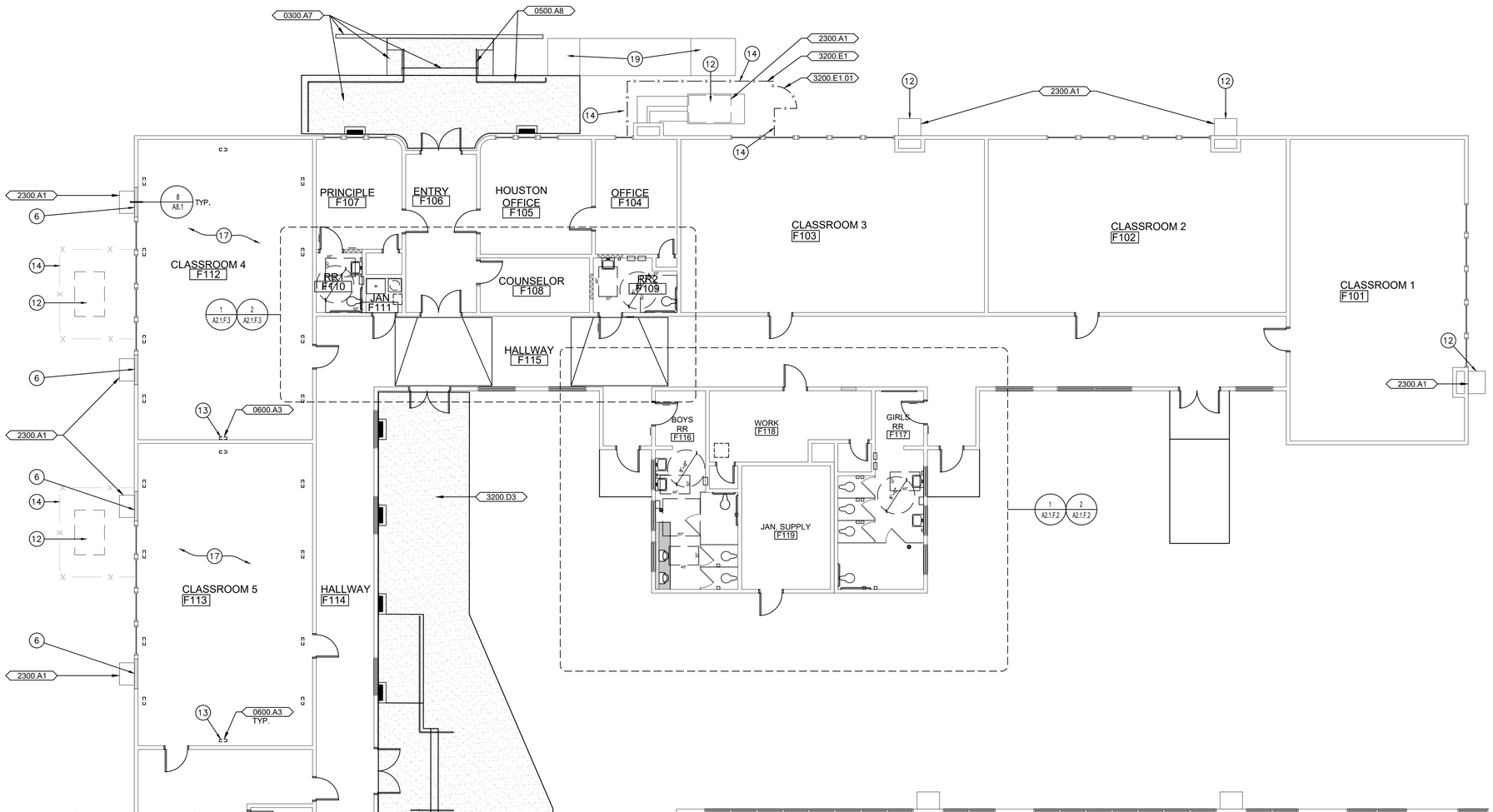
MODERNIZATION
HOUSTON SCHOOL

FLOOR PLANS
BUILDINGS D & E

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.
A2.1.DE
07 OF 79 SHEETS



1 A2.1.F.1 FLOOR PLAN - BUILDING F

SCALE: 1/8" = 1'- 0"

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

Window Covering Location

WINDOW (PLAN VIEW)

HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

KEYNOTES

0300	CONCRETE	2100	SPECIALTIES
0300.A1	concrete slab on grade - replace where removed - see plumbing and structural	2100.A1	display case
		2100.A2	marker board
0300.A2	concrete footing	2100.A3	TV/monitor bracket
0300.A4	expansion joint	2100.A4	signs:
0300.A5	splash block		.01 parking lot entrance sign "towaway" per Civil
0300.A6	Concrete curb		.02 ADA accessible parking stall sign per Civil
0300.A7	Concrete curb, walkway, stairs & pilasters - see civil		.03 room identification sign per dtl. 2/A0.1
			.04 restroom identification sign per dtl. 2/A0.1
0400	MASONRY		.05 ADA Tactile exit sign per dtl. 3/A0.1
0400.A1	concrete masonry wall		.06 self-illuminating exit
			.07 assistive listening system per detail 7/A0.1
0500	METALS		.08 Monument sign
0500.A2	corrugated structural metal roof deck		.09 Building sign
0500.A3	metal pipe bollard concrete fill		.10 Dedication plague
0500.A4	metal pipe bollard removable	2100.A5	toilet partition
0500.A5	metal pipe hand rail - 1.5" diameter	2100.A6	urinal partition
0500.A6	metal roof access ladder with security door	2100.A7	toilet accessories:
0500.A7	metal louver		.01 paper towel dispenser
0500.A8	Metal pipe handrails & guardrails - see civil		.02 toilet paper dispenser
0500.B1	rolled channel (structural support grid)		.03 sanitary napkin dispenser
0500.B2	metal furring channel		.04 soap dispenser
			.05 mirror
0600	WOOD, PLASTICS AND COMPOSITES		.09 trash receptacle
0600.A1	wood framing - see structural		.10 grab bar
0600.A2	frame opening for new door, window, or HVAC		.11 toilet seat cover
0600.A3	in-fill frame door/window/duct opening	2100.A8	.13 sanitary napkin disposal
0600.A4	wood beam	2100.B1	.14 paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.B2	folding panel partition
0600.A6	wood joist	2100.B3	fire extinguisher
0600.A7	wood trusses	2100.B4	metal shelving
0600.A8	2 x 4 furred wall		metal lockers
0600.A9	blocking	2110	knox box
0600.B1	exterior wood wall sheathing	2110.A1	EQUIPMENT
0600.B2	exterior wood roof sheathing	2110.A2	projection screen
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A3	refrigerator (owner furnished, contractor installed)
0600.C1	wood trim		microwave (owner furnished, contractor installed)
0600.C2	wood hand rail		
		2120	FURNISHINGS
0700	THERMAL AND MOISTURE PROTECTION	2120.A1	window coverings & track
0700.A1	insulation	2120.A2	plastic laminate casework
	.01 R-13 batt/blanket (3.5" thick)		.01 ada accessible sink base cabinet
	.02 R-21 batt/blanket (6.5" thick)		.02 plastic laminate countertop with 4" backsplash
	.03 R-30 batt/blanket (10" thick)	2120.A3	casework
	.04 R-38 batt/blanket (12" thick)		
	.05 board insulation (2" thick)	2200	PLUMBING
	.06 board insulation tapered cricket	2200.A1	plumbing equipment
0700.B1	Standing seam roofing system		.01 sink
0700.B2.	single ply membrane roofing system		.02 lavatory
	.01 extend roofing up and over parapet wall		.03 toilet
	.02 walk pad		.04 urinal
	.03 Parapet Wall Flashing		.05 drinking fountain
0700.B3	built up roofing		.06 mop sink
0700.B4	modified bitumen roofing		.07 water heater
0700.B5	composition shingle roofing		.08 Roof drain/Overflow Combo Unit
0700.C1	galvanized sheet metal		.09 Floor drain - slope floor to drain 2% max. slope
	.01 two piece Fry Springlok flashing system		
	.02 parapet cap flashing		
	.02 valley flashing	2300	HVAC
	.03 splash pan	2300.A1	mechanical equipment
	.05 scupper	2300.A2	ceiling register
	.06 gutter	2300.A3	mechanical duct
	.07 downspout	2300.A4	Condensate Line
	.08 22 GA GSM Siding/Soffit		
	.09 22 GA GSM Corner Guard	2600	ELECTRICAL
0700.C2	vent	2600.A1	electrical equipment
	.01 roof vent - typ. of 4	2600.A2	light fixture
	.02 pipe vent	2600.A3	MDF
	.03 hot vent		
	.04 duct penetration		
0700.D1	sealant	3200	SITEWORK
	.01 remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A1	gas meter assembly
		3200.A2	water meter box
	.02 remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A3	backflow assembly
		3200.A4	fire hydrant
		3200.A5	trench drain
		3200.A6	area drain
0800	OPENINGS	3200.A7	drain inlet
0800.A1	door and frame	3200.B1	decomposed granite
0800.A2	door	3200.B2	aggregate base rock
0800.A3	door frame	3200.B3	concrete paving
0800.A4	roll up door	3200.B4	asphalt paving
0800.A5	window	3200.B5	concrete curb
0800.A6	storefront window system	3200.B6	concrete mow strip
0800.A7	access door		
0800.A8	extruded alum. corner	3200.B7	trash enclosure
0800.A9	Roof hatch		
		3200.C1	line paint striping
0900	FINISHES	3200.C2	fire lane striping
0900.A1	vinyl composition tile flooring and base	3200.C3	game line striping
0900.A2	resilient sheet flooring and base	3200.D1	ada accessible car parking stall
0900.A3	carpet and base	3200.D2	ada accessible van parking stall
0900.A4	base	3200.D3	ada accessible ramp per civil
0900.A5	ceramic tile	3200.D4	truncated domes
0900.B1	gypsum board	3200.D5	ada accessible path of travel
0900.B2	wainscot	3200.D6	ada accessible restrooms (men's and women's)
0900.B3	vinyl wall covering	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D8	ada accessible drinking fountain
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.E1	chain link fence
0900.B6	acoustical wall panels		.01 single 3'-0" wide swing gate
0900.C1	suspended acoustical ceiling system		.02 pair 6'-0" wide swing gate
0900.C2	glued or stapled on acoustical tile	3200.E2	chain link fence with vinyl slats
0900.D1	cement plaster wall finish		.01 single 3'-0" wide swing gate
	.01 Expansion Screed		.02 pair 6'-0" wide swing gate
	.02 4" soffit vent screed	3200.E3	ornamental metal fence
0900.D2	exterior panel wall system	3200.F1	reconfigure (e) irrigation and sprinklers
0900.D3	Metal Siding/Soffits	3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLAN
BUILDING F

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.1.F.1

08 OF 79 SHEETS

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

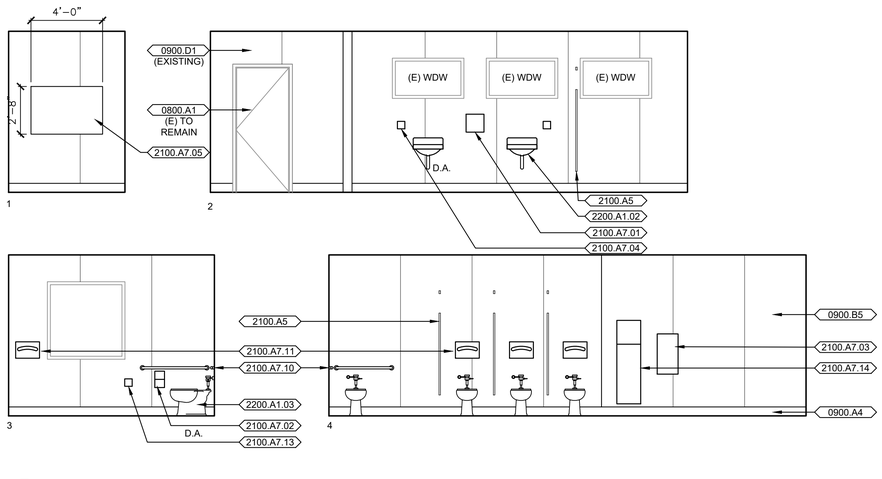
Window Covering Location

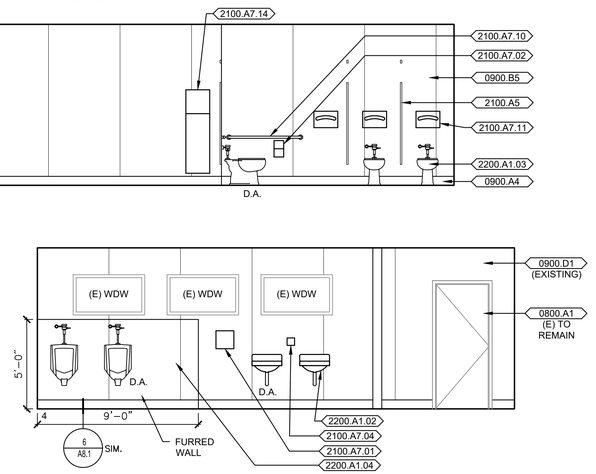
WINDOW (PLAN VIEW)

HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.



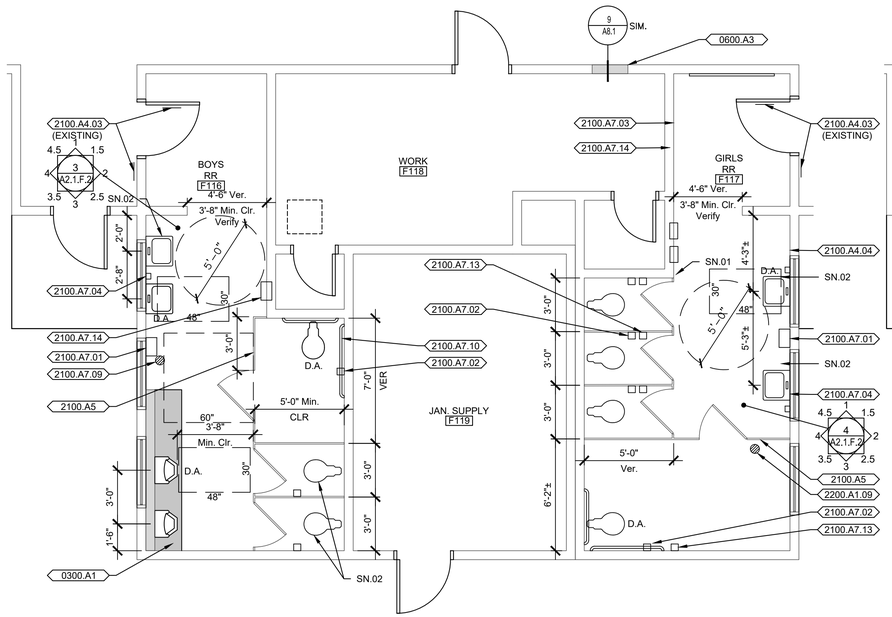


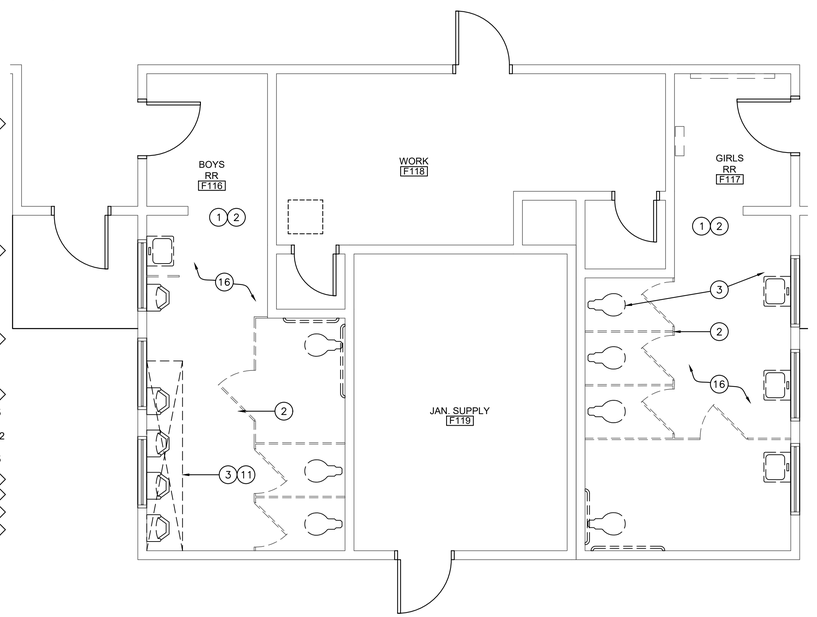
4 A2.1.F.2 INTERIOR ELEVATIONS - GIRLS RR F117

SCALE: 1/4" = 1'- 0"

3 A2.1.F.2 INTERIOR ELEVATIONS - BOYS RR F116

SCALE: 1/4" = 1'- 0"





2 A2.1.F.2 ENLARGED FLOOR PLAN - BOYS RR F116 & GIRLS F117

SCALE: 1/4" = 1'- 0"

NORTH

1 A2.1.F.2 DEMOLITION PLAN - BOYS RR F116 & GIRLS F117

SCALE: 1/4" = 1'- 0"

NORTH

KEYNOTES

0300	CONCRETE	2100	SPECIALTIES
0300.A1	concrete slab on grade - replace where removed - see plumbing and structural	2100.A1	display case
		2100.A2	marker board
0300.A2	concrete footing	2100.A3	TV/monitor bracket
0300.A4	expansion joint	2100.A4	signs:
0300.A5	splash block	.01	parking lot entrance sign "towaway" per Civil
0300.A6	Concrete curb	.02	ADA accessible parking stall sign per Civil
0300.A7	Concrete curb, walkway, stairs & pilasters - see civil	.03	room identification sign per dtl. 2/A0.1
		.04	restroom identification sign per dtl. 2/A0.1
0400	MASONRY	.05	ADA Tactile exit sign per dtl. 3/A0.1
0400.A1	concrete masonry wall	.06	self-illuminating exit
		.07	assistive listening system per detail 7/A0.1
0500	METALS	.08	Monument sign
0500.A2	corrugated structural metal roof deck	.09	Building sign
0500.A3	metal pipe bollard concrete fill	.10	Dedication plague
0500.A4	metal pipe bollard removable		toilet partition
0500.A5	metal pipe hand rail - 1.5" diameter		urinal partition
0500.A6	metal roof access ladder with security door		toilet accessories:
0500.A7	metal louver	.01	paper towel dispenser
0500.A8	Metal pipe handrails & guardrails - see civil	.02	toilet paper dispenser
0500.B1	rolled channel (structural support grid)	.03	sanitary napkin dispenser
0500.B2	metal furring channel	.04	soap dispenser
		.05	mirror
0600	WOOD, PLASTICS AND COMPOSITES	.09	trash receptacle
0600.A1	wood framing - see structural	.10	grab bar
0600.A2	frame opening for new door, window, or HVAC	.11	toilet seat cover
0600.A3	in-fill frame door/window/duct opening	.13	sanitary napkin disposal
0600.A4	wood beam	.14	paper towel dispenser/ waste receptacle
0600.A5	wood post		folding panel partition
0600.A6	wood joist		fire extinguisher
0600.A7	wood trusses		metal shelving
0600.A8	2 x 4 furred wall		metal lockers
0600.A9	blocking		knox box
0600.B1	exterior wood wall sheathing	2110	EQUIPMENT
0600.B2	exterior wood roof sheathing	2110.A1	projection screen
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A2	refrigerator (owner furnished, contractor installed)
		2110.A3	microwave (owner furnished, contractor installed)
0600.C1	wood trim		
0600.C2	wood hand rail		
		2120	FURNISHINGS
0700	THERMAL AND MOISTURE PROTECTION	2120.A1	window coverings & track
0700.A1	insulation	2120.A2	plastic laminate casework
.01	R-13 batt/blanket (3.5" thick)	.01	ada accessible sink base cabinet
.02	R-21 batt/blanket (6.5" thick)	.02	plastic laminate countertop with 4" backsplash
.03	R-30 batt/blanket (10" thick)		
.04	R-38 batt/blanket (12" thick)	2120.A3	casework
.05	board insulation (2" thick)		
.06	board insulation tapered cricket	2200	PLUMBING
0700.B1	Standing seam roofing system	2200.A1	plumbing equipment
0700.B2.	single ply membrane roofing system	.01	sink
.01	extend roofing up and over parapet wall	.02	lavatory
.02	walk pad	.03	toilet
.03	Parapet Wall Flashing	.04	urinal
0700.B3	built up roofing	.05	drinking fountain
0700.B4	modified bitumen roofing	.06	mop sink
0700.B5	composition shingle roofing	.07	water heater
0700.C1	galvanized sheet metal	.08	Roof drain/Overflow Combo Unit
.01	two piece Fry Springlok flashing system	.09	Floor drain - slope floor to drain 2% max. slope
.02	parapet cap flashing		
.02	valley flashing		
.03	splash pan	2300	HVAC
.05	scupper	2300.A1	mechanical equipment
.06	gutter	2300.A2	ceiling register
.07	downspout	2300.A3	mechanical duct
.08	22 GA GSM Siding/Soffit	2300.A4	Condensate Line
.09	22 GA GSM Corner Guard		
0700.C2	vent	2600	ELECTRICAL
.01	roof vent - typ. of 4	2600.A1	electrical equipment
.02	pipe vent	2600.A2	light fixture
.03	hot vent	2600.A3	MDF
.04	duct penetration		
0700.D1	sealant	3200	SITEWORK
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A1	gas meter assembly
		3200.A2	water meter box
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A3	backflow assembly
		3200.A4	fire hydrant
		3200.A5	trench drain
		3200.A6	area drain
0800	OPENINGS	3200.A7	drain inlet
0800.A1	door and frame	3200.B1	decomposed granite
0800.A2	door	3200.B2	aggregate base rock
0800.A3	door frame	3200.B3	concrete paving
0800.A4	roll up door	3200.B4	asphalt paving
0800.A5	window	3200.B5	concrete curb
0800.A6	storefront window system	3200.B6	concrete mow strip
0800.A7	access door		
0800.A8	extruded alum. corner	3200.B7	trash enclosure
0800.A9	Roof hatch		
		3200.C1	line paint striping
0900	FINISHES	3200.C2	fire lane striping
0900.A1	vinyl composition tile flooring and base	3200.C3	game line striping
0900.A2	resilient sheet flooring and base	3200.D1	ada accessible car parking stall
0900.A3	carpet and base	3200.D2	ada accessible van parking stall
0900.A4	base	3200.D3	ada accessible ramp per civil
0900.A5	ceramic tile	3200.D4	truncated domes
0900.B1	gypsum board	3200.D5	ada accessible path of travel
0900.B2	wainscot	3200.D6	ada accessible restrooms (men's and women's)
0900.B3	vinyl wall covering	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D8	ada accessible drinking fountain
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.E1	chain link fence
0900.B6	acoustical wall panels	.01	single 3'-0" wide swing gate
0900.C1	suspended acoustical ceiling system	.02	pair 6'-0" wide swing gate
0900.C2	glued or stapled on acoustical tile	3200.E2	chain link fence with vinyl slats
0900.D1	cement plaster wall finish	.01	single 3'-0" wide swing gate
.01	Expansion Screed	.02	pair 6'-0" wide swing gate
.02	4" soffit vent screed	3200.E3	ornamental metal fence
0900.D2	exterior panel wall system	3200.F1	reconfigure (e) irrigation and sprinklers
0900.D3	Metal Siding/Soffits	3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

SHEET NOTES
SN.01 ALIGNED PARTITION W/ FACE OF WALL
SN.02 (N) PLUMBING FIXTURE TO REPLACE (E) FIXTURE @ SAME LOCATION

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

ENLARGED FLOOR PLANS
INTERIOR ELEVATIONS
BUILDING F

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.1.F.2

09 OF 79 SHEETS

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

Window Covering Location

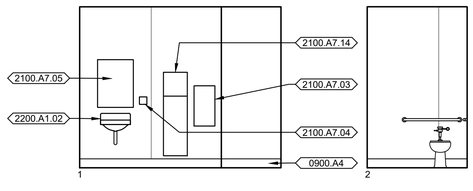
WINDOW (PLAN VIEW)

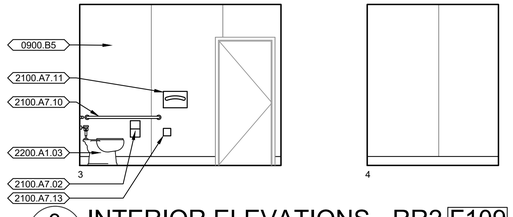
HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

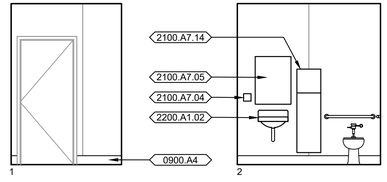
REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE REPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

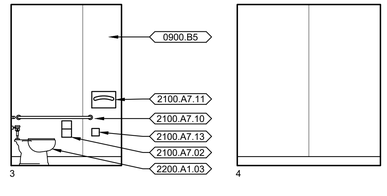




3 A2.1.F.3 INTERIOR ELEVATIONS - RR2 F109

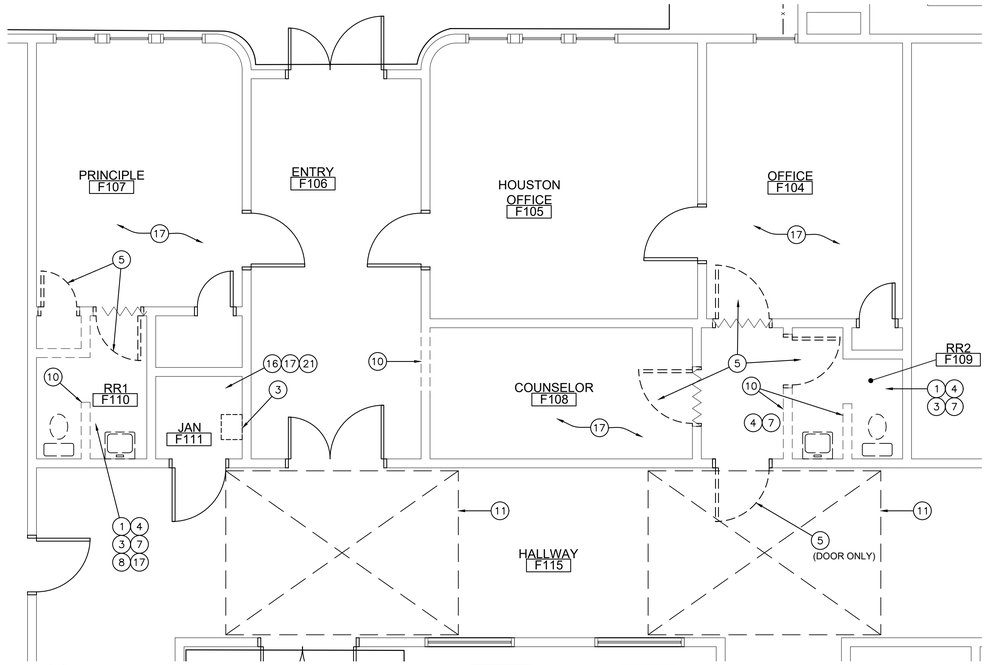
SCALE: 1/4" = 1'- 0"





4 A2.1.F.3 INTERIOR ELEVATIONS - RR1 F110

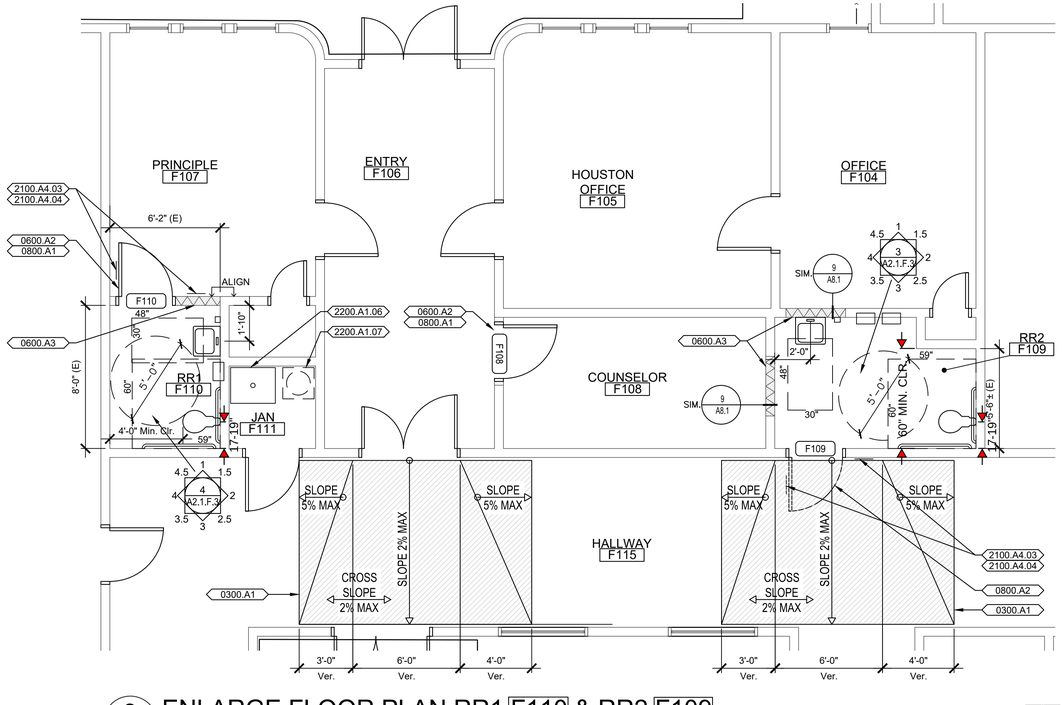
SCALE: 1/4" = 1'- 0"



1 A2.1.F.3 DEMOLITION FLOOR PLAN RR1 F110 & RR2 F109

SCALE: 1/4" = 1'- 0"

NORTH



2 A2.1.F.3 ENLARGE FLOOR PLAN RR1 F110 & RR2 F109

SCALE: 1/4" = 1'- 0"

NORTH

KEYNOTES

0300	CONCRETE	2100	SPECIALTIES
0300.A1	concrete slab on grade - replace where removed - see plumbing and structural	2100.A1	display case
		2100.A2	marker board
0300.A2	concrete footing	2100.A3	TV/monitor bracket
0300.A4	expansion joint	2100.A4	signs:
0300.A5	splash block		.01 parking lot entrance sign "towaway" per Civil
0300.A6	Concrete curb		.02 ADA accessible parking stall sign per Civil
0300.A7	Concrete curb, walkway, stairs & pilasters - see civil		.03 room identification sign per dtl. 2/A0.1
			.04 restroom identification sign per dtl. 2/A0.1
0400	MASONRY		.05 ADA Tactile exit sign per dtl. 3/A0.1
0400.A1	concrete masonry wall		.06 self-illuminating exit
			.07 assistive listening system per detail 7/A0.1
0500	METALS		.08 Monument sign
0500.A2	corrugated structural metal roof deck		.09 Building sign
0500.A3	metal pipe bollard concrete fill		.10 Dedication plague
0500.A4	metal pipe bollard removable	2100.A5	toilet partition
0500.A5	metal pipe hand rail - 1.5" diameter	2100.A6	urinal partition
0500.A6	metal roof access ladder with security door	2100.A7	toilet accessories:
0500.A7	metal louver		.01 paper towel dispenser
0500.A8	Metal pipe handrails & guardrails - see civil		.02 toilet paper dispenser
0500.B1	rolled channel (structural support grid)		.03 sanitary napkin dispenser
0500.B2	metal furring channel		.04 soap dispenser
			.05 mirror
0600	WOOD, PLASTICS AND COMPOSITES		.09 trash receptacle
0600.A1	wood framing - see structural		.10 grab bar
0600.A2	frame opening for new door, window, or HVAC		.11 toilet seat cover
0600.A3	in-fill frame door/window/duct opening		.13 sanitary napkin disposal
0600.A4	wood beam		.14 paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.A8	folding panel partition
0600.A6	wood joist	2100.B1	fire extinguisher
0600.A7	wood trusses	2100.B2	metal shelving
0600.A8	2 x 4 furred wall	2100.B3	metal lockers
0600.A9	blocking	2100.B4	knox box
0600.B1	exterior wood wall sheathing	2110	EQUIPMENT
0600.B2	exterior wood roof sheathing	2110.A1	projection screen
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A2	refrigerator (owner furnished, contractor installed)
		2110.A3	microwave (owner furnished, contractor installed)
0600.C1	wood trim		
0600.C2	wood hand rail		
		2120	FURNISHINGS
0700	THERMAL AND MOISTURE PROTECTION	2120.A1	window coverings & track
0700.A1	insulation	2120.A2	plastic laminate casework
	.01 R-13 batt/blanket (3.5" thick)		.01 ada accessible sink base cabinet
	.02 R-21 batt/blanket (6.5" thick)		.02 plastic laminate countertop with 4" backsplash
	.03 R-30 batt/blanket (10" thick)		
	.04 R-38 batt/blanket (12" thick)	2120.A3	casework
	.05 board insulation (2" thick)		
	.06 board insulation tapered cricket	2200	PLUMBING
0700.B1	Standing seam roofing system	2200.A1	plumbing equipment
0700.B2.	single ply membrane roofing system		.01 sink
	.01 extend roofing up and over parapet wall		.02 lavatory
	.02 walk pad		.03 toilet
	.03 Parapet Wall Flashing		.04 urinal
0700.B3	built up roofing		.05 drinking fountain
0700.B4	modified bitumen roofing		.06 mop sink
0700.B5	composition shingle roofing		.07 water heater
0700.C1	galvanized sheet metal		.08 Roof drain/Overflow Combo Unit
	.01 two piece Fry Springlok flashing system		.09 Floor drain - slope floor to drain 2% max. slope
	.02 parapet cap flashing		
	.02 valley flashing		
	.03 splash pan	2300	HVAC
	.05 scupper	2300.A1	mechanical equipment
	.06 gutter	2300.A2	ceiling register
	.07 downspout	2300.A3	mechanical duct
	.08 22 GA GSM Siding/Soffit	2300.A4	Condensate Line
	.09 22 GA GSM Corner Guard		
0700.C2	vent	2600	ELECTRICAL
	.01 roof vent - typ. of 4	2600.A1	electrical equipment
	.02 pipe vent	2600.A2	light fixture
	.03 hot vent	2600.A3	MDF
	.04 duct penetration		
0700.D1	sealant	3200	SITEWORK
	.01 remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A1	gas meter assembly
		3200.A2	water meter box
	.02 remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A3	backflow assembly
		3200.A4	fire hydrant
		3200.A5	trench drain
		3200.A6	area drain
0800	OPENINGS	3200.A7	drain inlet
0800.A1	door and frame	3200.B1	decomposed granite
0800.A2	door	3200.B2	aggregate base rock
0800.A3	door frame	3200.B3	concrete paving
0800.A4	roll up door	3200.B4	asphalt paving
0800.A5	window	3200.B5	concrete curb
0800.A6	storefront window system	3200.B6	concrete mow strip
0800.A7	access door		
0800.A8	extruded alum. corner	3200.B7	trash enclosure
0800.A9	Roof hatch		
		3200.C1	line paint striping
0900	FINISHES	3200.C2	fire lane striping
0900.A1	vinyl composition tile flooring and base	3200.C3	game line striping
0900.A2	resilient sheet flooring and base	3200.D1	ada accessible car parking stall
0900.A3	carpet and base	3200.D2	ada accessible van parking stall
0900.A4	base	3200.D3	ada accessible ramp per civil
0900.A5	ceramic tile	3200.D4	truncated domes
0900.B1	gypsum board	3200.D5	ada accessible path of travel
0900.B2	wainscot	3200.D6	ada accessible restrooms (men's and women's)
0900.B3	vinyl wall covering	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D8	ada accessible drinking fountain
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.E1	chain link fence
0900.B6	acoustical wall panels		.01 single 3'-0" wide swing gate
0900.C1	suspended acoustical ceiling system		.02 pair 6'-0" wide swing gate
0900.C2	glued or stapled on acoustical tile	3200.E2	chain link fence with vinyl slats
0900.D1	cement plaster wall finish		.01 single 3'-0" wide swing gate
	.01 Expansion Screed		.02 pair 6'-0" wide swing gate
	.02 4" soffit vent screed	3200.E3	ornamental metal fence
0900.D2	exterior panel wall system	3200.F1	reconfigure (e) irrigation and sprinklers
0900.D3	Metal Siding/Soffits	3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

ENLARGED FLOOR PLANS
INTERIOR ELEVATIONS
BUILDING F

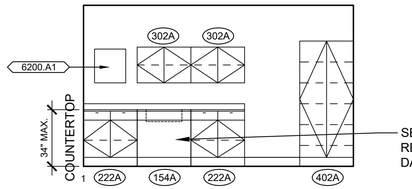
CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

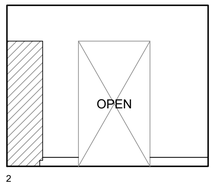
SHEET NO.

A2.1.F.3

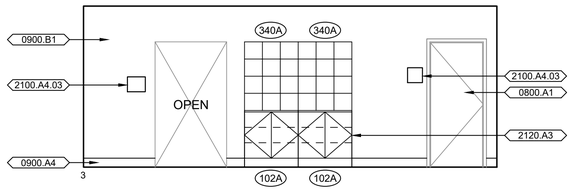
10 OF 79 SHEETS



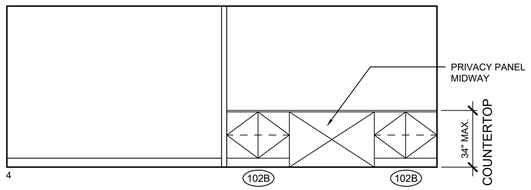
1



2



3

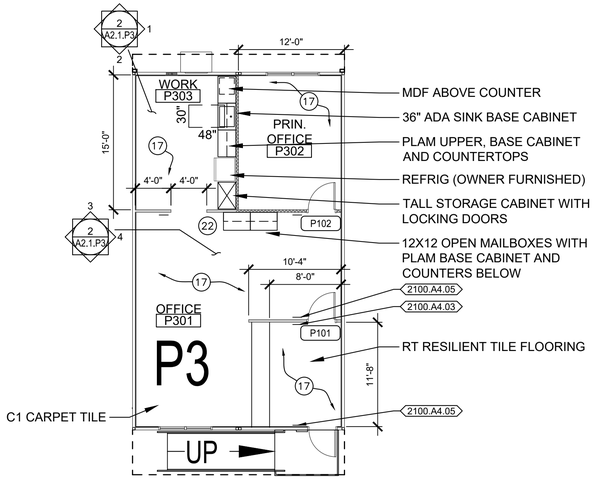


4

2 A2.1.P3 INTERIOR ELEVATIONS - P3

SCALE: 1/4" = 1'- 0"

BID ALTERNATE #1



1 A2.1.P3 FLOOR PLAN - BUILDING P3

SCALE: 1/8" = 1'- 0"

BID ALTERNATE #1

NORTH

LEGEND

SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C.

CONSECUTIVE NUMBERING
CONVENTION FOR
INTERIOR ROOM ELEVATIONS

WINDOW (PLAN VIEW)

HATCH INDICATES SOUND INSULATION @ INTERIOR WALLS THERMAL BATT INSULATION @ EXTERIOR WALLS

GENERAL NOTES

1. ALL EXTERIOR WALLS, JANITOR ROOM AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE DETAIL.
2. FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, FURRING WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL. OR PROVIDE COMPLETE INSULATION INFILL AT ALL CAVITIES. PROVIDE INSULATION OR FIREBLOCKING PER CBC SECTION 718.
3. CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
4. SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

REMOVAL & REPLACEMENT OF FINISHES:
ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS INDICATE PATCHING AND REPAIRING FINISHES TO MATCH EXISTING FINISHES AT SEVERAL LOCATIONS WHERE EXISTING EQUIPMENT AND COMPONENTS ARE BEING REMOVED OR MODIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS AND ALL DRAWINGS AND LOCATIONS WHERE PATCH-BACK OF FINISHES IS REQUIRED OR WHERE FINISHES WILL NEED TO BE REMOVED AND REPLACED IN ORDER TO INSTALL NEW WORK. AT THESE LOCATIONS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR, AS A PART OF THIS CONTRACT, TO PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR THE REMOVAL AND REPLACEMENT OF FINISHES WITH NEW TO MATCH EXISTING FINISHES.

DEMOLITION NOTES

1. REMOVE RESTROOM ACCESSORIES
2. REMOVE TOILET PARTITIONS
3. REMOVE PLUMBING FIXTURES
4. REMOVE ELECTRICAL
5. REMOVE DOOR & FRAME
6. REMOVE WINDOW
7. REMOVE WALL FINISHES
8. REMOVE CEILING FINISHES
9. REMOVE INSULATION
10. REMOVE WALLS
11. SAWCUT AND REMOVE CONCRETE SLAB
12. REMOVE HVAC EQUIPMENT & CONCRETE PAD
13. REMOVE HVAC DUCT / SHEET METAL / PANELS
14. REMOVE CHAIN LINK FENCE & GATES & REPLACE W/ (NEW)
15. SAWCUT AND REMOVE CONCRETE CURB
16. BEAD BLAST & REMOVE PAINT FROM (E) SLAB. IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17. REMOVE (E) FLOOR & BASE FINISHES
18. (E) CHAIN LINK FENCE TO REMAIN (SHOWN WITH LIGHT LINE)
19. (E) CONC. RAMP AND HANDRAILS TO REMAIN
20. SEE MECHANICAL FOR EXHAUST FAN TO BE REMOVED AT ROOF-CONTRACTOR TO PATCH BACK ROOF OPENING W/ COMPATIBLE ROOFING MATERIAL TO MAKE WATERPROOF
21. REMOVE WALL AND CEILING FINISHES AS REQUIRED TO INSTALL W.H. SHELF STRUCTURE AND PLUMBING
22. REMOVE & MODIFY (E) CEILING GRID TO ACCOMMODATE (N) WALLS THAT PASS THROUGH

KEYNOTES

0300	CONCRETE	2100	SPECIALTIES
0300.A1	concrete slab on grade - replace where removed - see plumbing and structural	2100.A1	display case
0300.A2	concrete footing	2100.A2	marker board
0300.A4	expansion joint	2100.A3	TV/monitor bracket
0300.A5	splash block	2100.A4	signs:
0300.A6	Concrete curb	.01	parking lot entrance sign "towaway" per Civil
0300.A7	Concrete curb, walkway, stairs & pilasters - see civil	.02	ADA accessible parking stall sign per Civil
0400	MASONRY	.03	room identification sign per dtl. 2/A0.1
0400.A1	concrete masonry wall	.04	restroom identification sign per dtl. 2/A0.1
0500	METALS	.05	ADA Tactile exit sign per dtl. 3/A0.1
0500.A2	corrugated structural metal roof deck	.06	self-illuminating exit
0500.A3	metal pipe bollard concrete fill	.07	assistive listening system per detail 7/A0.1
0500.A4	metal pipe bollard removable	.08	Monument sign
0500.A5	metal pipe hand rail - 1.5" diameter	.09	Building sign
0500.A6	metal roof access ladder with security door	.10	Dedication plague
0500.A7	metal louver	2100.A5	toilet partition
0500.A8	Metal pipe handrails & guardrails - see civil	2100.A6	urinal partition
0500.B1	rolled channel (structural support grid)	2100.A7	toilet accessories:
0500.B2	metal furring channel	.01	paper towel dispenser
0600	WOOD, PLASTICS AND COMPOSITES	.02	toilet paper dispenser
0600.A1	wood framing - see structural	.03	sanitary napkin dispenser
0600.A2	frame opening for new door, window, or HVAC	.04	soap dispenser
0600.A3	in-fill frame door/window/duct opening	.05	mirror
0600.A4	wood beam	.09	trash receptacle
0600.A5	wood post	.10	grab bar
0600.A6	wood joist	.11	toilet seat cover
0600.A7	wood trusses	.13	sanitary napkin disposal
0600.A8	2 x 4 furred wall	.14	paper towel dispenser/ waste receptacle
0600.A9	blocking	2100.A8	folding panel partition
0600.B1	exterior wood wall sheathing	2100.B1	fire extinguisher
0600.B2	exterior wood roof sheathing	2100.B2	metal shelving
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2100.B3	metal lockers
0600.C1	wood trim	2100.B4	knox box
0600.C2	wood hand rail	2110	EQUIPMENT
0700	THERMAL AND MOISTURE PROTECTION	2110.A1	projection screen
0700.A1	insulation	2110.A2	refrigerator (owner furnished, contractor installed)
.01	R-13 batt/blanket (3.5" thick)	2110.A3	microwave (owner furnished, contractor installed)
.02	R-21 batt/blanket (6.5" thick)	2120	FURNISHINGS
.03	R-30 batt/blanket (10" thick)	2120.A1	window coverings & track
.04	R-38 batt/blanket (12" thick)	2120.A2	plastic laminate casework
.05	board insulation (2" thick)	.01	ada accessible sink base cabinet
.06	board insulation tapered cricket	.02	plastic laminate countertop with 4" backsplash
0700.B1	Standing seam roofing system	2120.A3	casework
0700.B2.	single ply membrane roofing system	2200	PLUMBING
.01	extend roofing up and over parapet wall	2200.A1	plumbing equipment
.02	walk pad	.01	sink
.03	Parapet Wall Flashing	.02	lavatory
0700.B3	built up roofing	.03	toilet
0700.B4	modified bitumen roofing	.04	urinal
0700.B5	composition shingle roofing	.05	drinking fountain
0700.C1	galvanized sheet metal	.06	mop sink
.01	two piece Fry Springlok flashing system	.07	water heater
.02	parapet cap flashing	.08	Roof drain/Overflow Combo Unit
.02	valley flashing	.09	Floor drain - slope floor to drain 2% max. slope
.03	splash pan	2300	HVAC
.05	scupper	2300.A1	mechanical equipment
.06	gutter	2300.A2	ceiling register
.07	downspout	2300.A3	mechanical duct
.08	22 GA GSM Siding/Soffit	2300.A4	Condensate Line
.09	22 GA GSM Corner Guard	2600	ELECTRICAL
0700.C2	vent	2600.A1	electrical equipment
.01	roof vent - typ. of 4	2600.A2	light fixture
.02	pipe vent	2600.A3	MDF
.03	hot vent	3200	SITEWORK
.04	duct penetration	3200.A1	gas meter assembly
0700.D1	sealant	3200.A2	water meter box
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A3	backflow assembly
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A4	fire hydrant
0800	OPENINGS	3200.A5	trench drain
0800.A1	door and frame	3200.A6	area drain
0800.A2	door	3200.A7	drain inlet
0800.A3	door frame	3200.B1	decomposed granite
0800.A4	roll up door	3200.B2	aggregate base rock
0800.A5	window	3200.B3	concrete paving
0800.A6	storefront window system	3200.B4	asphalt paving
0800.A7	access door	3200.B5	concrete curb
0800.A8	extruded alum. corner	3200.B6	concrete mow strip
0800.A9	Roof hatch	3200.B7	trash enclosure
0900	FINISHES	3200.C1	line paint striping
0900.A1	vinyl composition tile flooring and base	3200.C2	fire lane striping
0900.A2	resilient sheet flooring and base	3200.C3	game line striping
0900.A3	carpet and base	3200.D1	ada accessible car parking stall
0900.A4	base	3200.D2	ada accessible van parking stall
0900.A5	ceramic tile	3200.D3	ada accessible ramp per civil
0900.B1	gypsum board	3200.D4	truncated domes
0900.B2	wainscot	3200.D5	ada accessible path of travel
0900.B3	vinyl wall covering	3200.D6	ada accessible restrooms (men's and women's)
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.D8	ada accessible drinking fountain
0900.B6	acoustical wall panels	3200.E1	chain link fence
0900.C1	suspended acoustical ceiling system	.01	single 3'-0" wide swing gate
0900.C2	glued or stapled on acoustical tile	.02	pair 6'-0" wide swing gate
0900.D1	cement plaster wall finish	3200.E2	chain link fence with vinyl slats
.01	Expansion Screed	.01	single 3'-0" wide swing gate
.02	4" soffit vent screed	.02	pair 6'-0" wide swing gate
0900.D2	exterior panel wall system	3200.E3	ornamental metal fence
0900.D3	Metal Siding/Soffits	3200.F1	reconfigure (e) irrigation and sprinklers
		3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLAN
INTERIOR ELEVATIONS
BUILDING P3

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.1.P3

11 OF 79 SHEETS

BID ALTERNATE #1

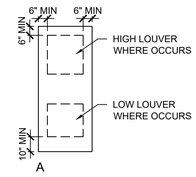
DOOR SCHEDULE

DOOR MARK/TYPE	DOOR SIZE WIDTH X HEIGHT	DOOR TYPE	CONSTRUCTION	FINISH	GLAZING	FIRE RATING	HARDWARE GROUP	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	DOOR NOTES
	BUILDING B												
B101	3'-0" X 7'-0"	A	HM	P	-	-	01	HM	P	4/A8.2	5/A8.2	6/A8.2	1, 4, 5, 6, 8
B102	3'-0" X 7'-0"	A	HM	P	-	-	01	HM	P	4/A8.2	5/A8.2	6/A8.2	1, 4, 5, 6, 8
	BUILDING F												
F108	3'-0" X 7'-0"	A	HM	P	-	-	02	HM	P	2/A8.2	2/A8.2	6/A8.2	3, 6, 10
F109	3'-0" X 7'-0"	A	HM	P	-	-	03	E	P	-	-	6/A8.2	4, 5, 6, 12, 16
F110	3'-0" X 7'-0"	A	HM	P	-	-	04	HM	P	2/A8.2	2/A8.2	6/A8.2	4, 5, 6, 12
P101	3'-0" X 7'-0"	A	HM	P	-	-	02	HM	P	2/A8.2	2/A8.2	6/A8.2	2, 3
P102	3'-0" X 7'-0"	A	HM	P	-	-	02	HM	P	2/A8.2	2/A8.2	6/A8.2	3
	BUILDING C												
C101	3'-0" X 7'-0"	A	HM	P	-	20 min. door/ 1 hr frame	05	HM	P	4/A8.2	5/A8.2	6/A8.2	2, 3, 6, 7, 13 , 17
C102	3'-0" X 7'-0"	A	HM	P	-	20 min. door/ 1 hr frame	05	HM	P	4/A8.2	5/A8.2	6/A8.2	2, 3, 6, 7 , 17

DOOR LEGEND

WD	WOOD	FG	FIBER GLASS
T	TEMPERED SAFETY	HM	HOLLOW METAL
S	STAIN	SC	SOLID CORE WOOD
P	PAINT	PM	PREFINISHED METAL
F	FACTORY FINISH	AL	ALUMINUM
E	EXISTING	T.CLR	TEMPERED CLEAR
		SS	STAINLESS STEEL

DOOR TYPES



DOOR NOTES

1. EXTERIOR DOORS SHALL BE WEATHER STRIPPED AND ALL JOINTS AND PENETRATIONS SHALL BE CHALKED AND SEALED.
2. PROVIDE TACTILE EXIT SIGN PER DETAIL 3/A0.1
3. PROVIDE ROOM IDENTIFICATION SIGN PER DETAIL 2/A0.1.
4. PROVIDE TOILET ROOM IDENTIFICATION SIGN PER DETAIL 2/A0.1
5. PROVIDE TOILET ROOM DOOR SYMBOLS PER DETAIL 2/A0.1.
6. ALL DOORS INTERIOR AND EXTERIOR SHALL HAVE ½" MAXIMUM HIGH THRESHOLD (ABOVE FLOOR AND LANDING ON BOTH SIDES), WITH MAXIMUM DOOR OPENING EFFORT OF 5 LBS. AT EXTERIOR AND AT INTERIOR DOORS AND ARE EQUIPPED WITH SINGLE-EFFORT, NON-GRASPING TYPE HARDWARE (I.E.LEVER) CENTERED BETWEEN 34" & 44" ABOVE FLOOR. 2016 CBC, SECTIONS 11B-404.2.5, 11B-404.2.7, 11B-404.2.9.
7. EXIT DOORS TO BE EQUIPPED WITH PANIC HARDWARE
8. PROVIDE 1'-6" WIDE X 1'-0" HIGH LOUVER
9. ALL EXTERIOR DOOR GLAZING SHALL BE DOUBLE PANE INSULATING GLASS.
10. FLOOR DOOR STOPS TO BE LOCATED SO AS NOT TO CAUSE A TRIPPING HAZARD AND 4" MAX. FROM WALL.
11. UNDERCUT DOOR FOR ½" MIN. CLEARANCE.
12. UNDERCUT DOOR 1" FOR VENTILATION
13. DOOR EQUIPPED WITH ELECTRONIC ACCESS CONTROL SYSTEM - RE-CONNECT SYSTEM
14. PROVIDE POWER FOR ELECTRIC MOTOR OPERATION. VERIFY SWITCH LOCATION.
15. SEE ORNAMENTAL METAL FENCE DETAILS.
16. EXISTING DOOR FRAME - FIELD VERIFY FRAME DIMENSIONS.
17. PROVIDE SMOKE SEALS AT FIRE RATED DOORS.

CASEWORK SCHEDULE

KEY / CABINET NUMBER	W.I. NUMBER	SIZE (INCHES) WIDTH	HEIGHT	DEPTH	FINISH CASEWORK PLASTIC LAMINATE	COUNTERTOP FINISH PLASTIC LAMINATE	NOTES
102A	102	36	34	24	●	●	1, 2
102B	102	42	34	24	●	●	1, 2
154A	154	36	34	24	●	●	1, 2, 3
222A	222	36	34	24	●	●	1, 2
302A	302	36	30	12	●	●	1, 2
340A	340	36	48	12	●	●	1, 2, 4
402A	412	36	84	24	●	●	1, 2
222B	222						

NOTES

1. HEIGHT PROVIDED FOR BASE CABINETS IF FROM FINISHED FLOOR TO TOP OF COUNTER TOP. ACTUAL HEIGHT OF BASE CABINET IS LESS.
2. SEE DETAILS 11 & 12/A8.2 FOR CASEWORK ANCHORAGE
3. SEE DETAIL 10/A8.2 FOR DISABLED ACCESSIBLE SINK CABINET
4. PROVIDE QUANTITY OF CUBBIES AS INDICATED

MATERIAL & FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	FLOOR FINISH	BASE MATERIAL	BASE FINISH	WAINSCOT MATERIAL	WAINSCOT HEIGHT	WALLS N MATERIAL	WALLS N FINISH	WALLS E MATERIAL	WALLS E FINISH	WALLS S MATERIAL	WALLS S FINISH	WALLS W MATERIAL	WALLS W FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	NOTES
	BUILDING B																		
B108	GIRLS RR	RE	-	6B	-	FRP1	9'-0"	G1	-	G1	-	G1	-	G1	-	G1	P	9'-0"	1, 2, 3, 4, 5, 6
B110	BOYS RR	RE	-	6B	-	FRP1	9'-0"	G1	-	G1	-	G1	-	G1	-	G1	P	9'-0"	1, 2, 3, 4, 5, 6
B104	INTERVENTION	C1	-	4B	-	-	-	E	P	-	E	P	-	E	P	E	P	11'-0"	
F109	RR2	RS	-	6B	-	FRP1	9'-0"	G1	-	G1	-	G1	-	G1	-	E	P	9'-0"	1, 2, 3, 6
F110	RR1	RS	-	6B	-	FRP1	9'-0"	G1	-	G1	-	G1	-	G1	-	E	P	9'-0"	1, 2, 3, 6
F116	BOYS RR	RE	-	6B	-	FRP1	9'-0"	E	P	E	P	P	-	E / G1	P	E	P	9'-0"	1, 2
F117	GIRLS RR	RE	-	6B	-	FRP1	9'-0"	E	P	E	P	P	-	E / G1	P	E	P	9'-0"	1, 2
F104	OFFICE	C1	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	9'-0"	
F107	PRINCIPLE	C1	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	9'-0"	
F108	COUNSELOR	C1	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	9'-0"	
F111	JAN	RS	F	6B	-	FRP1	7'-0"	E	P	E	P	E	P	E	P	E	P	9'-0"	1, 2
P301	OFFICE	C1 / RT	F	4B	-	-	-	G1	P	E	P	E	P	E	P	E	-	9'-0"	6, 7
P302	PRINCIPLE	C1	F	4B	-	-	-	E	P	E	P	G1	P	G1	P	E	-	9'-0"	6, 7
P303	WORK	RT	F	4B	-	-	-	E	P	G1	P	G1	P	E	P	E	-	9'-0"	6, 7
F112	CLASSROOM 4	C1	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	11'-0"	
F113	CLASSROOM 5	C1	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	11'-0"	

MATERIAL/FINISH LEGEND

4B	4" RUBBER BASE
6B	6" INTEGRAL COVE BASE
C1	CARPET TILE
C2	WALK-OFF CARPET TILE
RT	RESILIENT TILE FLOORING
RS	RESILIENT SHEET VINYL FLOORING
RE	RESINOUS FLOORING
G1	5/8" GYPSUM BOARD
G2	5/8" TYPE "X" GYPSUM BOARD
GE	GYPSUM BOARD EXISTING
CON	CONCRETE
CS	CONCRETE SEAL
P	PAINT
N	NO FINISH
F	FACTORY
FRP1	FIBER REINFORCED PLASTIC PANEL
FRP2	FIBER REINFORCED PLASTIC PANEL
VWT	VINYL WRAPPED TACKBOARD
A1	2' X 4' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE 1
A2	2' X 2' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE 1
A3	2' X 4' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE 2 INSULATION
E	EXISTING

NOTES

1. USE WATER RESISTANT GYPSUM BOARD AT KITCHEN, BATHROOMS AND WET AREAS - TYPICAL.
2. INTEGRAL COVE BASE MUST HAVE ⅜" MINIMUM RADIUS COVING AND SHALL EXTEND AT LEAST 6" UP WALL.
3. PROVIDE R-19 THERMAL BATT INSULATION AT EXTERIOR WOOD STUD WALLS; PROVIDE R-38 THERMAL BATT INSULATION AT ROOF JOISTS WHERE CEILING FINISH IS REMOVED
4. EXTERIOR THERMAL BATT WALL INSULATION SHALL EXTEND TO THE ROOF STRUCTURE AND SHALL CREATE AN ENVELOPE WITH THE ROOF INSULATION.
5. THERMAL BATT INSULATION INSTALLED AT THE ROOF SHALL BE INSTALLED BETWEEN JOISTS. WHERE BATT ROOF INSULATION IS EXPOSED TO OCCUPIED SPACE BELOW, THE INSULATION SHALL BE PAPER FACE AND INSTALLED NEATLY, READY FOR PAINT.
6. PROVIDE SOUND INSULATION AT INTERIOR WALLS AND CEILING WHERE INDICATED.
7. REPLACE (E) ACOUSTICAL CEILING PANELS

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

MODERNIZATION
HOUSTON SCHOOL

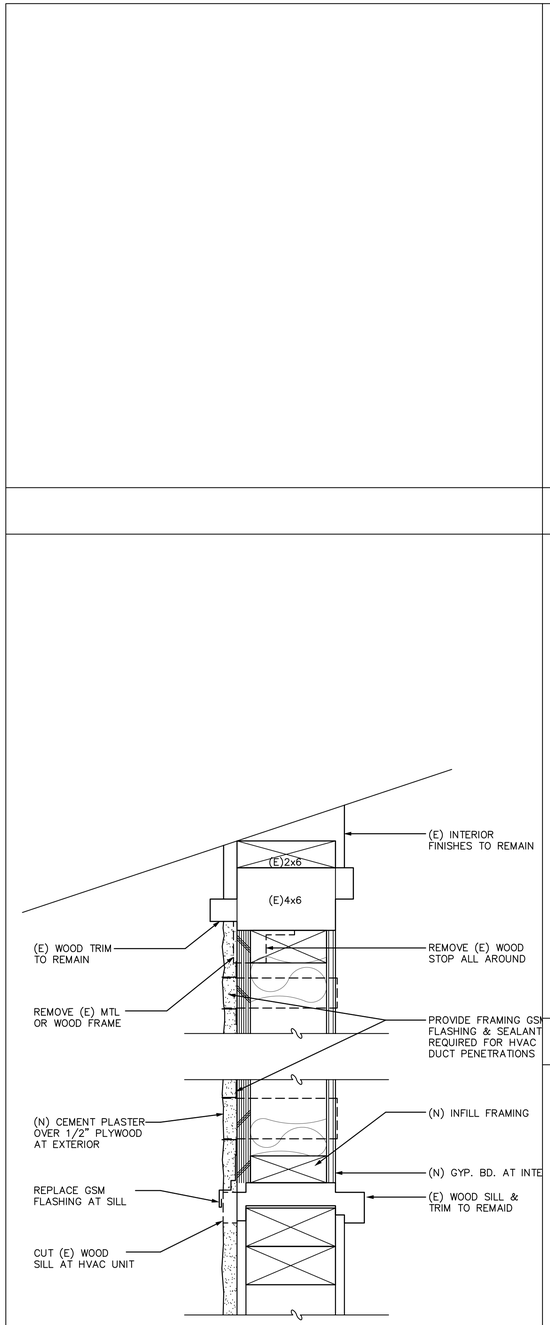
FINISH SCHEDULE
DOOR SCHEDULE

CONSULTANT

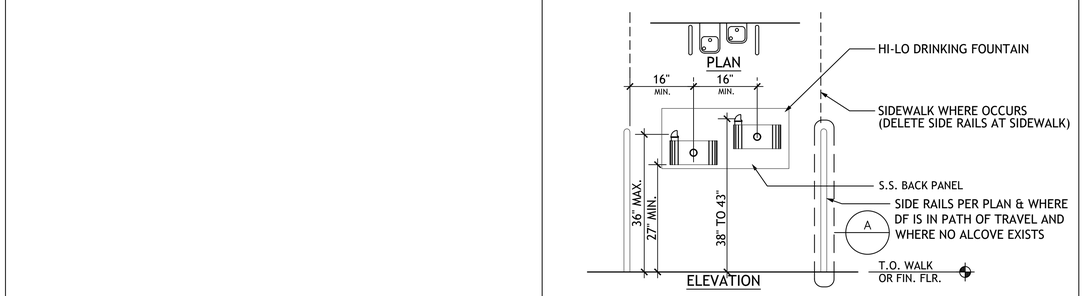
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

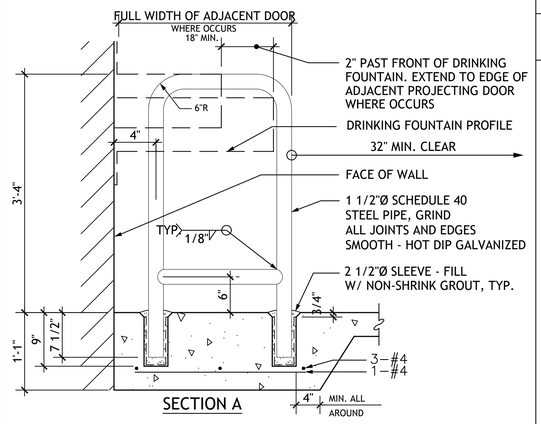
SHEET NO.

A3.1

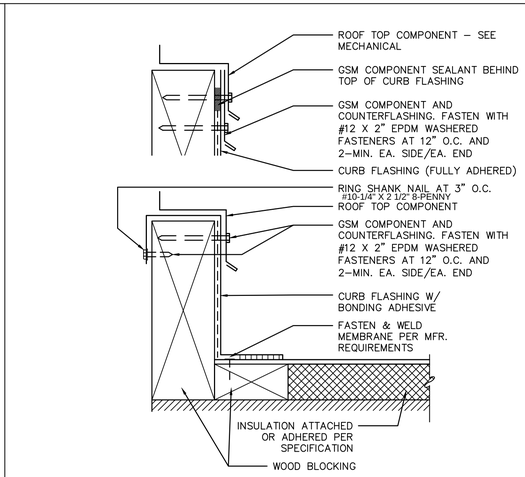


12 WINDOW INFILL AT HVAC
SCALE: 3" = 1'-0"

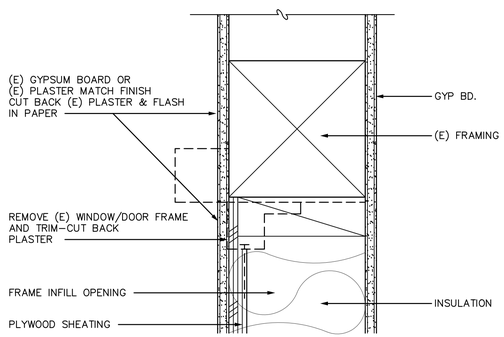




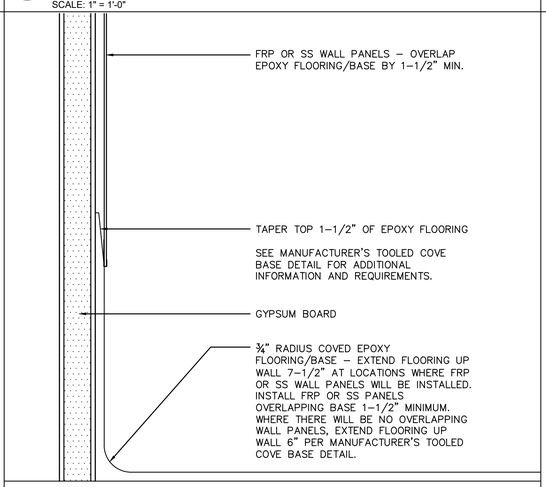
5 ACCESSIBLE HIGH-LOW DRINKING FOUNTAIN
SCALE: 1" = 1'-0"



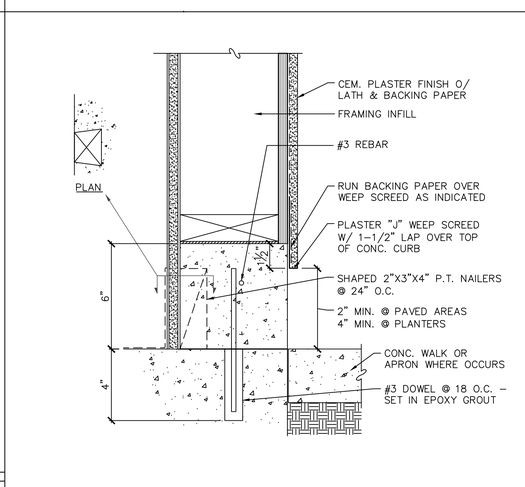
1 COMPONENT CURB
SCALE: 3" = 1'-0"



9 WALL INFILL
SCALE: 3" = 1'-0"



6 FIBERGLASS REINFORCED PANEL/STAINLESS STEEL PANEL
SCALE: 3" = 1'-0"



3 CURB @ EXTERIOR WALL
SCALE: 3"=1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

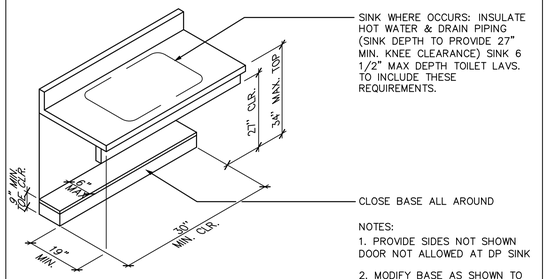
MODERNIZATION
HOUSTON SCHOOL

DETAILS

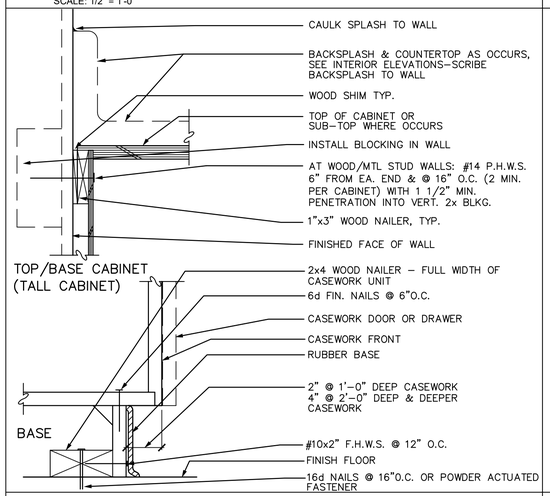
CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

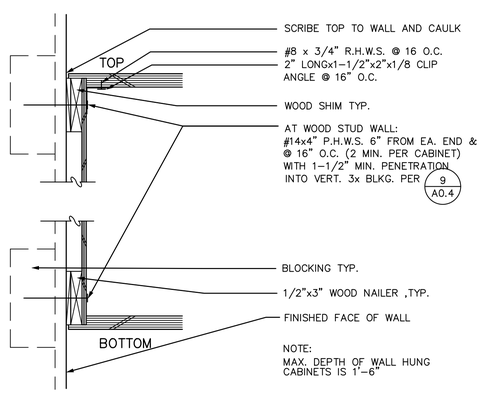
SHEET NO.
A8.1
13 OF 79 SHEETS



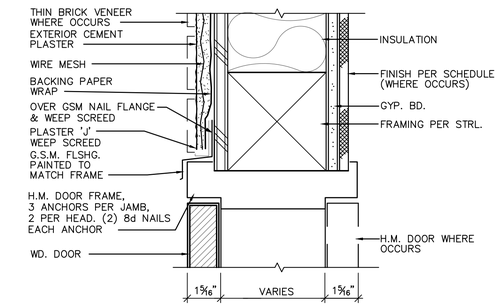
10 ACCESSIBLE CASEWORK
SCALE: 1/2" = 1'-0"



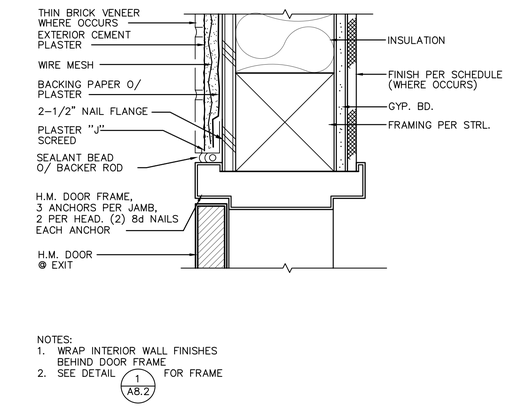
11 CABINET ANCHORAGE
SCALE: 3" = 1'-0"



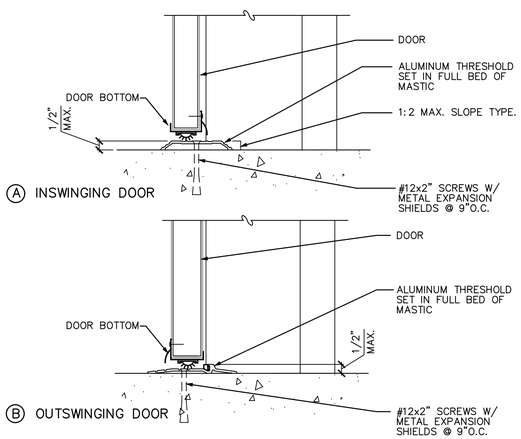
12 WALL HUNG CABINET ANCHORS
SCALE: 3" = 1'-0"



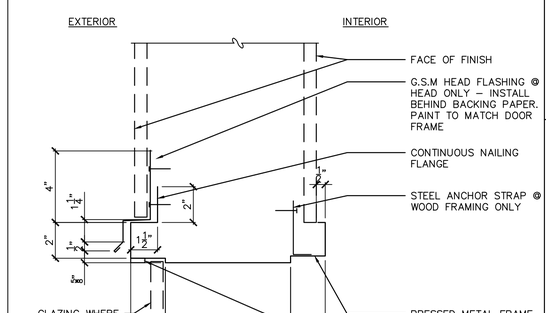
4 EXTERIOR DOOR HEAD
SCALE: 3" = 1'-0"



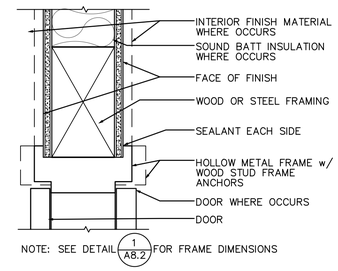
5 EXTERIOR DOOR JAMB
SCALE: 3" = 1'-0"



6 DOOR THRESHOLD
SCALE: 3" = 1'-0"



1 TYP. DR./TRANSOM FRAME HEAD/JAMB AT EXTERIOR STUD WALL
SCALE: 3" = 1'-0"



2 INTERIOR DOOR HEAD/JAMB
SCALE: 3" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

DETAILS

CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 02/20/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A8.2

♦ Bolt and Washer Notes

1. Provide washers under heads and nuts of all bolts and lags bearing against wood.
2. Installation of bolts, lags, screws and washers shall be in accordance with Title 24 Section 2304.10.
3. Washers shall be square plate steel or round malleable iron:
   - A. ½"ø bolt ———————— 2"x2"x¼" or 2½"øx¼"
   - B. ⅝"ø bolt ———————— 2½"x2½"x¼" or 2¾"øx⅝"
   - C. ¾"ø bolt ———————— 2¾"x2¾"x⅝" or 3"øx⅜"
   - D. ⅞"ø bolt ———————— 3¼"x3¼"x⅜" or 3½"øx7⁄16"
   - E. 1"ø bolt ———————— 3¾"x3¾"x⅜" or 4"øx½"
   - F. Sill ℗ ABs ——————— 3"x3"x¼", UNO.
4. All exposed washers shall be malleable iron, UNO. Upset (rolled) threads are not permitted.
5. Refer to Shear Wall Diagram & Legend for plate washer requirements at wood shear wall sill plate anchor bolts.
6. All bolts, nuts and washers in contact with pressure treated wood shall be hot dipped galvanized.

♦ Drilled-In Anchors — Installation & Testing

1. Anchors shall be installed in accordance with the recommendations given in the ICC Reports listed below and the manufacturer's instructions.
   - Expansion Anchors:
     - A. To Concrete .... Hilti Kwik Bolt-TZ (KB-TZ), ESR-1917
     - B. To CMU .... Hilti Kwik Bolt 3 (KB-3), ESR-1385
   - Epoxy Anchors:
     - A. To Concrete .... Hilti HIT-HY 200, ESR-3187
     - B. To CMU .... Hilti HIT-HY 70, ESR-2682
2. Anchors shall be tested per all applicable requirements of the 2016 CBC & Evaluation Report (ICC-ES, ESR, IAPMO UES, etc.)
3. The following criteria apply for the acceptance of installed anchors.
   - A. Hydraulic Ram Method: The anchor should have no observable movement after 15 seconds at the applicable test load. For wedge type anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.
   - B. Torque Wrench Method: The applicable test for torque must be reached within ½-turn of the nut.
4. All anchors used in structural applications shall be tested. 50% of all anchors used in non-structural applications shall be tested per CBC Section 1910A.5. If any anchor fails the test, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then resume initial testing frequency.
5. When installing drilled-in anchors in existing concrete or masonry, do not cut or damage existing reinforcing bars.
6. The testing of the anchors shall be done by the testing laboratory and a report of the test results shall be submitted to DSA and the Architect / Structural Engineer.
7. Substitution of an alternative manufacturer is subject to the approval of the Structural Engineer of Record and DSA.
8. Test expansion anchors to values listed below. Contact Structural Engineer for epoxy anchor test values and procedures.
9. Test equipment (including torque wrenches) is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
10. Testing shall occur at a minimum of 24 hours after the installation of the anchors.
11. All tests shall be performed in the presence of a Special Inspector per CBC Section 1910A.5.
12. Test proof loads for repair conditions are not part of these documents and will require a separate approval by the Structural Engineer of Record and DSA.

Concrete Anchors

Expansion Anchors Hilti Kwik Bolt TZ ICC No. ESR-1917 May 1, 2019	Minimum Embed * (in)	Torque Proof Load (ft-lb)
⅜"ø	2¼"	25
½"ø	3⅝"	40
⅝"ø	4½"	60
¾"ø	5½"	110

CMU Anchors

Expansion Anchors Hilti Kwik Bolt 3 ICC No. ESR-1385 February 1, 2020	Minimum Embed (in)	Torque Proof Load (ft-lb)
⅜"ø	2½"	15
½"ø	3½"	25
⅝"ø	4"	65
¾"ø	4⅜"	120

* — UNO on plans

♦ Inspection Notes

1. General: In addition to the inspections required by the current CBC the owner shall employ a Special Inspector during construction of the following types of work. All special inspections shall be performed in accordance to Chapter 17A of the current CBC. Submit the name of all Special Inspectors to the Division of the State Architect for approval prior to starting work requiring special inspection.
2. Refer to Chapter 17A for additional requirements of the Special Inspector.
3. Special Inspector: All Special Inspectors shall have a minimum of 3 years experience in the specific material / trade being inspected and shall not be less than 25 years of age.
4. Earthwork: A representative of the Geotechnical Engineer of Record shall be present during the grading, excavation and foundation construction.
5. Specific materials / trades requiring special inspection: See 'Structural Tests and Inspections' sheet and all applicable sections of the project specifications.
   - A. Concrete — During the placing of reinforcing steel and inserts, during the taking of test specimens, and during the placing of all reinforced concrete including batch plant inspection.

♦ Carpentry Notes

1. Use DF No. 1 at 4x and smaller UNO. Use DF Select Structural at 6x and larger, UNO. Maximum moisture content = 19%, typical. All SP used for wall, roof and flooring is to be Structural 1, UNO.
2. Center ABs on 2x sill ℗s equal to or less than 2x6. Place ABs @ 2¾" from exterior face @ 2x8 sills. Use 2 rows of ABs at 2¾" from ea edge @ sills > 2x8. For "shot" sills see details.
3. All wood sills to be pressure treated douglas fir. Sill plate anchor bolts are to be F1554 Gr 36, cut threads. Use ⅝"øx12" long bolts (18" at curbs) w/4" max projection & 8" min embed below T.O. slab. Bolts to be placed no more than 9" or less than 4½" from ends of sill pieces & not over 4'-0"cc between bolts. Holes over ⅓ the ℗ width and notches in sills are considered ends. Use 2-anchor bolts minimum per sill ℗.
4. All studs shall be 2x6 @ 16"cc UNO.
5. Provide continuous 2x stud width blocking between studs at mid-height of stud or so spaced that the unbraced length of studs does not exceed 10'-0". Provide blocking in all walls at ceiling lines.
6. Where wood studs or nailer abut steel, concrete or masonry, fasten to same with ⅝"ø bolts at 4'-0"cc. Use 8" long bolts in concrete or masonry. If heads of bolts will be exposed, use welded studs in place of bolts for wood to steel connections. Dap 1" maximum on 3x and larger as required (no dap allowed on 2x's). Provide SPIN min at all nailers, typ UNO.
7. Lap wall plates at corners and intersections.
8. Provide 2x solid blocking between joists or rafters over supports.
9. For roof joists or rafters, 8¼" deep or deeper, provide 2x3 cross-bridging at not over 10'-0"cc (8'-0"cc for 2x12). For floor joists 4¼" deep or deeper, provide X-bridging at not over 8'-0"cc. Alternate metal X-bridging is acceptable.
10. Bolt holes in wood or steel shall be 1⁄16" larger than bolt diameter.
11. All bolts, expansion anchors and lag screws shall be provided with metal washers under the heads and nuts which bear on wood. Lag screws and wood screws shall be screwed and not driven into place. All bolts and lag screws shall be tightened on installation and retightened before closing in or completion of the job.
12. Provide shaped and dapped pieces as shown on drawings. Dap 1" max on 3x and larger members (no dap allowed on 2x members).
13. Window and door frames shall be firmly secured in place to blocking between jambs and rough openings at top, bottom and at a maximum interval of 24" between. Nail blocking to rough frame with 16d finish nails at 8"cc staggered, set ½".
14. All cabinets, lockers, etc. shall be firmly secured in place by 4-8d minimum nails per stud thru plywood back except if cabinets are wall hung, #14 wood screws shall be used in place of nails penetrating the studs 2" minimum. See Architectural drawings for additional anchorage details.
15. All joist hangers are to be face-mounted typical, UNO on plans or details.
16. Installation of bolts, lags, screws and washers shall be in accordance with Ch. 10 of the AF&PA National Design Specifications.
17. Nails, timber rivets, wood screws, lag screws, nuts, and washers in contact with pressure treated or fire retardant treated wood shall be hot dipped galvanized minimum.
18. All other fasteners in contact with pressure treated or fire retardant treated wood are permitted to have mechanically deposited zinc coating, Class 55 min.
19. Connectors in contact with pressure treated or fire retardant treated wood shall comply with manufacturer's recommendations. In absence of manufacturer recommendations, type G185 zinc coated galvanized steel min.
20. All bolted connections, including sill plate AB's & holdown AB's shall be retightened immediately prior to installation of finishes.

♦ Nailing Notes

1. All nails for structural work shall be common wire nails unless noted otherwise.
2. Nails shall be spaced not less than 11 diameters on center. Edge or end distances shall not be less than 6 diameters. Nail holes shall be sub- drilled where necessary to prevent splitting of wood. Sub-drill not to exceed ¾ of the shank diameter.
3. Where plaster or gyp. bd. ceilings occur, ceiling stripping nails shall be annular grooved shanks, "stronghold" or approved equal. Use 2-16d min at each contact.
4. Nailing not noted on this sheet or on details elsewhere, shall be a minimum of 2 nails at each contact using 8d nails thru 1x's and 16d thru 2x's.
5. Minimum nailing shall be:
   - A. Studs and posts @ top and bottom to bearing:
     - 2x6 & smaller .... 2-8d TN, ea side or 3-16d end nails
     - 2x8 .... 3-8d TN, ea side or 4-16d end nails
     - 2x10 & larger .... 4-8d TN, ea side or 5-16d end nails
     - 3x6 (sub-drill) .... 3-8d TN, ea side or 4-20d end nails
     - 3x8 & larger (sub-drill) .... 4-8d TN, ea side or 5-20d end nails
   - B. Joists or rafters:
     - to side of stud up to 8" 3-16d
     - each additional 4" .... 1-16d additional
     - to bearing .... 2-10d TN, ea side
     - at laps (12" minimum) 4-16d
   - C. Blocking:
     - to joists, rafters or blkg .... 2-10d TN, ea side, ea end
     - to bearings .... 2-10d TN, ea side, ea end, staggered
     - to studs .... 2-10d TN or 2-16d ea end
   - D. Sheathing:
     - floor -¾" plywood .... 10d at 6"cc at edges of sheets and over all walls (SPPN), 10d at 10"cc at all interior contacts (SPIN)
     - wall -½" plywood .... 10d at 6"cc at edges of sheets and holdown studs (SPPN), 10d at 12"cc at all interior contacts (SPIN)
     - roof -½ or ⅝" plywood .... 10d at 6"cc at edges of sheets and over all walls (SPPN) 10d at 12"cc at all interior contacts (SPIN)
   - E. Ribbons and ledgers to studs:
     - 1x ribbons .... 2-8d ea stud
     - 2x ribbons .... 2-16d ea stud
     - 2x ledgers .... 2-16d ea stud
     - 3x ledgers .... 2-40d ea stud
   - F. Double top plates:
     - upper plate to lower plate .... 16d at 16"cc staggered
     - corner or intersection 3-16d
   - G. Minimum plate laps:
     - 4'-0" .... 12-16d ea side
   - H. Multiple studs:
     - stagr for over 4" widths .... 16d @ 12"cc
   - I. Built-up beams:
     - 10" or less .... 16d at 12"cc stagr (2x)
     - more than 10" .... ½" dia bolts at 24"cc
   - J. Double joists:
     - not blocked apart .... 16d at 12"cc stagr
     - blocked apart with 2x blocking at 24"cc .... 2-20d ea end, ea block
   - K. T&G decking:
     - nail each 2x T&G board to each bearing contact with 1-16d straight nail and 1-16d slant nail thru tongue.
6. At metal strap ties, fill all holes with nails UNO. Use nail size & type as specified in allowable load table in the most current Simpson catalog. Where two sizes are given, use larger size. All nails exposed to weather shall be hot dipped galvanized.
7. All nails driven into pressure treated wood shall be hot dipped galvanized.

♦ Concrete & Reinforcing Steel Notes

1. Concrete construction shall conform to ACI 318-14.
2. Concrete shall be as follows:
   - Class A: Use in foundations and other concrete of the like nature where minimum thickness equals or exceeds 8".
     f'c = 3500 psi @ 28 days
     max agg size = 1½"
     max w/c ratio = 0.55
     entrained air = 3-5%
     slump = 3½"±1"
   - Class B: Use in structural concrete where minimum thickness is less than 8", interior slab on grade.
     f'c = 4000 psi @ 28 days
     max agg size = ¾"
     max w/c ratio = 0.45
     entrained air = 3-5%
     slump = 4"±1"
   - Class C: Use in exterior slab on grade.
     f'c = 3000 psi @ 28 days
     max agg size = 1"
     max w/c ratio = 0.55
     slump = 4"±1"
     include specified water-repellant admixture
3. Cement shall conform to ASTM C-150, type I or II.
4. Concrete Aggregate: Natural sand and aggregate shall conform to ASTM C-33.
5. Reinforcing shall conform to ASTM A615 Grade 60, UNO.
6. Welding of reinforcing steel shall conform to AWS DI.4 using proper low hydrogen electrodes. Tack welding to rebar is strictly prohibited.
7. Reinforcing steel shall be fabricated and installed according to Manual of Standard Practice of Reinforced Concrete Construction by the Concrete Reinforcing Steel Institute.
8. Wire fabric shall conform to ASTM A-185.
9. Dimensions shown below for location of reinforcing are to the face of reinforcing and denote clear coverage. Concrete coverage shall be as follows UNO on drawings.
   - A. Concrete deposited directly against ground except slabs .... 3"
   - B. Concrete exposed to ground but placed in forms .... 2"
   - C. Slabs on the ground .... position in center of slab
   - D. Not exposed to weather nor in contact with earth:
     elevated slabs, walls and joists .... ¾"
     beams, girders and columns (main bars, ties and spirals) .... 1½"
10. Lap splices in concrete: 74 bar dia, 36" min, unless otherwise shown for #6 bars and smaller. 93 bar dia min for #7 and larger bars. Splices in adjacent bars shall be at least 5'-0" apart. Bars may be wired together at splices or laps.
11. General:
    - A: No pipes or ducts shall be placed in concrete slabs or walls unless specifically detailed on the Structural drawings.
    - B: Refer to Architectural, Structural, Civil, Electrical and Mechanical drawings for all molds, grooves, ornaments clips, and grounds to be cast in concrete.
12. The exposed concrete face at a horizontal construction joint shall be kept continuously moist from time of initial set until placing of concrete. Thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean, hard aggregate solidly embedded, or by an approved method that will ensure equal bond, such as green cutting. If contact surface becomes coated with earth, sawdust, etc, after being cleaned, rechip entire surface.
13. Remove all debris from the forms before placing any concrete.
14. Reinforcing dowels, bolts, anchors sleeves etc. to be embedded in concrete shall be securely positioned before placing concrete. Obtain approval of all affected trades prior to placing concrete.
15. Maximum free fall on concrete should be 4'-0". If necessary, provide openings in forms to reduce fall.
16. Walls shall be placed in horizontal layers of 2'-0".
17. No wood spreaders or wood stakes allowed in areas to be concreted.
18. Drill through steel columns and beams to pass continuous reinforcing (1"ø max).
19. Concrete mix design shall be prepared by an independent laboratory approved by the school district.
20. Welded wire mesh shall be lap spliced two squares minimum in each direction.
21. Notify the Structural Engineer 48 hours prior to placing concrete.
22. Reinforcing steel not specifically detailed shall be per ACI 315-17 Detailing Manual.
23. All rebar to be welded shall be provided with mill certificates showing chemical analysis and shall be continuously inspected by a qualified special welding inspector. All preheating and welding shall be done by welders certified to weld reinforcing bars in accordance with ANSI/AWS D1.4-11 standards. Use only A706 grade rebar for applications involving welded rebar.

♦ Remodeling and Addition Notes

1. It shall be the Contractor's responsibility to make himself familiar with all existing conditions, any existing building plans, and all site conditions which may affect his work. He shall ascertain the extent of demolition work required to complete the structure per new plans and be responsible for its safe completion.
2. When existing building plans are available, the Contractor shall keep a full set of such plans at the job site during construction. If any existing conditions are discovered which deviate from these plans or from the new plans, the Contractor shall notify the Architect and Structural Engineer for instruction prior to proceeding with work in the affected area.
3. The Contractor shall match existing heights, lines, materials, and conditions unless noted otherwise on new plans.
4. The intent of these drawings and specifications is that the work of the alteration, rehabilitation or reconstruction is to be in accordance with Title 24, California Code of Regulations. Should any existing conditions be discovered which is not covered by the contract documents wherein the finished work will not comply with Title 24, California Code of Regulations, a change order, 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.

♦ Symbols Legend

Sheet Numbering System:

S2.2.1
- Discipline designation
- Drawing type designation
- Building unit designation
- Sheet number beyond zero

Detail and Elevation Callout:

- 2 / S4.1 — Indicates that detail 2 will be found on sheet S4.1
- 2 / — — Indicates that detail 2 will be found on the same sheet
- 2 / S3.1 — Section or elevation indicating that Detail 2 will be found on Sheet S3.1. Arrow indicates viewing direction

Structural Grid Identifier:

- A — Grid at face of framing
- A — Grid at center of framing

Miscellaneous Symbols:

- Work point, control point or datum

Material Legend:

- Indicates a continuous wood member in section
- Indicates solid wood blocking in section
- Indicates earth
- Indicates gravel/ aggregate base
- Indicates plywood
- Indicates metal
- Indicates sand
- Indicates concrete

The following represents a permanent address numbering system. Details and sections may be used together on the same sheet.

13	9	5	1
14	10	6	2
15	11	7	3
16	12	8	4

Details

D	A
E	B
F	C

Building Sections and Wall Framing Elevations

♦ Design Criteria

1. Building Code .... 2016 California Building Code
2. WIND LOADS:
   - Basic Wind Speed, V-3 seconds .... 115 mph (USD) 89 mph (ASD)
   - Risk Category III
   - Exposure Category C
   - Kzt 1.00
   - Kd 0.85
   - Internal Pressure, GCPi .... ±0.18
3. SEISMIC LOADS (Equivalent Method):
   - Risk Category III, I **1.25**
   - Ss = **0.701g** S1 = **0.29g**
   - Site Class **D**
   - Sds = **0.579g** Sd1 = **0.352g**
   - Seismic Design Category **D**
   - **Wood Framed Shear Walls**, R **6.5**
   - Omega = **2.5** Rho = **1.3**
   - Vbase = CsW = **0.081W** (ASD) = **0.116W** (USD)
   - Horizontal Irregularities: A) N/A
   - Vertical Irregularities: A) N/A
4. VERTICAL LOADS:
   - Roof Dead Load = 15 psf
   - Roof Live Load = **20** psf (Reducible)
   - Ext Wall Dead Load = **20** psf
   - Int Wall Dead Load = **15** psf
   - Floor Dead Load = **40** psf
   - Floor Live Load = **50** psf (Reducible) UNO = **80** psf (Reducible) @ corridors
   - Future Solar Panels = 5 psf
   - Ground Snow, Pg = **0** psf
   - Flat Roof Snow Load = **0** psf
   - Snow Exposure Factor = N/A
   - Snow Load Importance Factor = N/A
   - Thermal Factor = N/A

♦ Foundation Notes

1. The Contractor shall give the Division of the State Architect and the Structural Engineer a minimum of 48 hours notice before the reinforcing and/or forms are placed in excavated footings.
2. Footings shall bear on firm, dry undisturbed soil, depths indicated on plans shall be the minimum depth of footing.
3. Excavations shall be cleared of all debris. Standing water shall be removed.
4. All foundations are shown and dimensioned as being formed. Foundations may be placed in neat excavations provided footings are increased 1" in width at each vertical face, for a total increase of 2" in width overall.
5. At the discretion of the Contractor, foundations can be over-excavated in order to place lean mix concrete to facilitate debris and standing water removal.
6. Contractor has the option to use threaded rod (fy=36ksi min) w/dbl nuts @ holdowns and sill bolts. Embedment of holdown bolt is considered as the length projection below the lowest construction joint.
7. Construction joints in foundation shall not occur, except as approved in writing by the Structural Engineer and DSA.
8. Soils Report by: Terracon
   File No.: NA 185174 Dated: December 14, 2018
9. Bearing soil is classified as dense silty sand with an estimated allowable soil pressure of **2000** psf for total load (including wind and seismic).

♦ General Notes

1. All construction shall conform to 2016, Title 24 of the California Code of Regulations and all other applicable codes and regulations.
2. General Notes, Plan Notes and Typical Details shown are typical and shall apply unless noted otherwise in the contract documents.
3. If conflicting information is shown on construction documents, the most restrictive requirement shall apply.
4. Overall wall dimensions are typically from ℄ of wall to ℄ of wall at steel framed buildings and from face of wall to face of wall at wood framed, concrete tilt-up and CMU buildings.
5. Contractor shall verify all dimensions and elevations on the job including existing construction.
6. Prior to fabrication, shop drawings shall be submitted to the Structural Engineer for review.
   Shop drawings: Contractor agrees that shop drawing submittals processed by the Engineer are not change orders and that the purpose of shop drawing submittals by the Contractor is to demonstrate to the Engineer that the Contractor understands the design intent by indicating which material he intends to furnish and install and by detailing the fabrication and installation method he intends to use.
7. Contractor shall verify all dimensions, elevations and property lines etc., on the job.
8. Contractor shall notify the Architect and Structural Engineer where a conflict occurs on any of the contract drawings or documents. Contractor is not to order material or construct any portion of the building that is in conflict, until conflict is resolved with the affected parties.
9. Contractor shall be responsible for the design and construction of all foundation forms.
10. Contractor shall be responsible for the design and construction of all shoring and temporary bracing.

♦ Abbreviations

abv	above	jt	joint
AFF	Above Finish Floor	jst	joist
addl	additional	JH	Joist Hanger
agg	aggregate		
alt	alternate	ksi	Kips per Square Inch
AB	Anchor Bolt		
&	and	LS	Lag Screw
L	angle	lwt	light weight
Arch	Architect/ural	long	longitudinal
@	at	LLH	Long Leg Horizontal
		LLV	Long Leg Vertical
bm	beam		
blw	below	MB	Machine Bolt
btwn	between	mfgr	manufacture/d/r
blk	block	max	maximum
blkg	blocking	Mech	Mechanical
bot	bottom	mtl	metal
B.O.	Bottom Of (Conc, Ftg, etc)	min	minimum
BF	Braced Frame		
brcg	bracing	NA	Neutral Axis
bldg	building	(N)	new
		NC	No Camber
CBC	California Building Code	nom	nominal
C	Camber	nwt	normal weight
CIP	Cast In Place	NTS	Not To Scale
clg	ceiling	#	number/pounds
℄	center line		
cc	center to center	opng	opening
ctrd	centered	OH	Opposite Hand
C	channel	OD	Outside Diameter
clr	clear	ov/	over
col	column		
CJP	Complete Joint Penetration	PJP	Partial Joint Penetration
conc	concrete	pen	penetration
CMU	Concrete Masonry Unit	d	penny
CTUP	Concrete Tilt-up Panel	perp	perpendicular
conn	connection	pc	piece
CJ	Construction/Cold Joint	℗	plate
cont	continuous	plumb	Plumbing
contr	contractor	plywd	plywood
ctsk	countersink	psf	Pounds per Square Foot
		psi	Pounds per Square Inch
diag	diagonal	lbs	pounds
DS	Diagonal Sheathing	PDF	Powder Drive Fastener
ø	diameter	PCC	PreCast Concrete
dim	dimension	PT	Pressure Treated
dbl	double	proj	projection
DF	Douglas Fir		
dn	down	R	radius
dwgs	drawings	RWL	Rain Water Leader
		reinf	reinforce/ing/ment/d
ea	each	reqd	required
EF	Each Face	rf	roof
EW	Each Way	RO	Rough Opening
E.O.	Edge Of (Conc, Ftg, etc)		
Elec	Electric/al	sect	section
elev	elevation	shtg	sheathing
embed	embedment	SMS	Sheet Metal Screws
EN	End Nail	sim	similar
eq	equal	SJ	Slab Joint
equip	equipment	spcg	spacing
(E)	existing	sq	square
EJ	Expansion Joint	stagr	stagger/ed
ext	exterior	std	standard
		stl	steel
F.O._	Face Of (Conc, Ftg, etc)	stiff	stiffener
FF	Finish Floor	struct	structure/al
flr	floor	SP	Structural Plywood
ft	foot/feet	SPIN	Structural Plywood Interior Nailing
ftg	footing		
fdn	foundation	SPPN	Structural Plywood Perimeter Nailing
frmg	framing		
ga	gage	thk	thick
galv	galvanized	thrd	threaded
GT	Girder Truss	thru	through
GL	glu-lam	TN	Toe Nail
gr	grade	T&G	Tongue and Groove
gyp	gypsum wall board	T&B	Top and Bottom
		TFJH	Top Flange Joist Hanger
hgr	hanger	T.O.	Top Of (Conc, Ftg, etc)
HWS	Headed Welded Stud	tran	transverse
hdr	header	TWS	Threaded Welded Stud
ht	height	typ	typical
HSB	High Strength Bolt		
HD	Holdown	UNO	Unless Noted Otherwise
HSS	Hollow Structural Shape		
horiz	horizontal	vert	vertical
info	information	wt	weight
ID	Inside Diameter	WWF	Welded Wire Fabric
int	interior	w/	with
		WS	Wood Screw
		WP	Work Point

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN ...
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

GENERAL NOTES

CONSULTANT

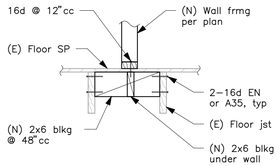
REGISTERED PROFESSIONAL ENGINEER
GREGORY I. RICHARDS
STRUCTURAL
STATE OF CALIFORNIA
2/25/2020

PROJECT NO.	REVISIONS	BY
19-32-047		
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

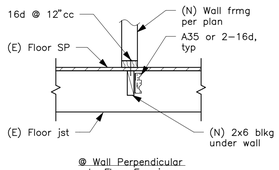
SHEET NO.

S0.1

OF 7 SHEETS

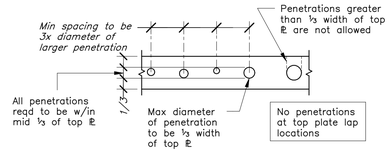


@ Wall Parallel to Floor Framing



@ Wall Perpendicular to Floor Framing

7 S0.2 Wall Sole PL to (E) Floor Structure

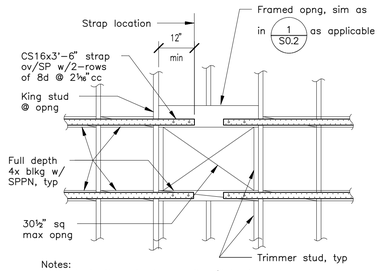


Bored holes in studs & wall ℄s not exceeding one third of the stud or ℄ width shall be located on the center–line of the member being penetrated & at a minimum spacing of 12" & 12" from end of stud or wall ℄. Bored holes at studs to occur @ 3 max consecutive studs.

Any other conditions requiring holes must be specifically detailed on the contract documents. Contact the S.E.O.R. if detail is required & provide sketch of proposed penetration indicating size and location of hole.

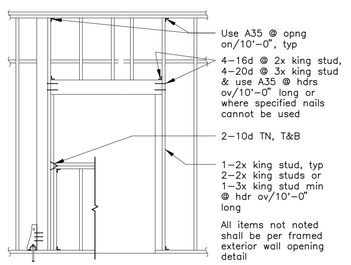
NOTCHES IN STRUCTURAL MEMBERS ARE NOT ALLOWED

4 S0.2 Holes Thru Structural Members

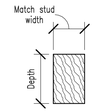


Notes:
1. All ducts through shear walls will be framed as shown, typ.
2. Provide SPPN around entire opng & w/SPPN @ cont king stud.
3. Blocking & strapping not required @ holes that are contained w/in one stud bay, no bigger than 36 in², & only on shear wall w/SPPN @ 6"cc. For opngs greater than those noted or openings on shear walls w/SPPN less than 6"cc, blocking & straps required

5 S0.2 Shear Wall Opening

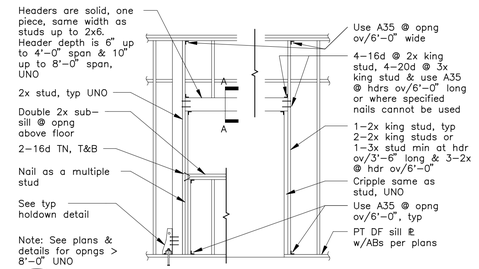


6 S0.2 Framed Interior Wall Openings

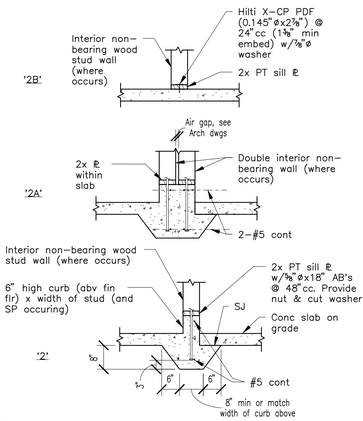


Header @ 2x6 max

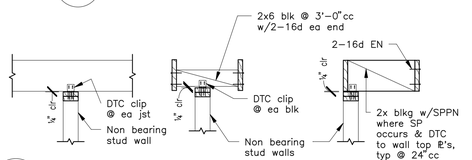
SECTION A–A



1 S0.2 Framed Exterior Wall Openings



2 S0.2 Non–Structural Sill Plate



3 S0.2 Non–Bearing Wall to Joists

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN L. HENRY C–22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

TYPICAL WOOD FRAMING DETAILS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER GREGORY I. RIDENOUR S-4554 STRUCTURAL STATE OF CALIFORNIA

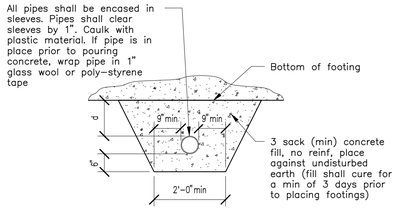
2/25/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

SHEET NO.

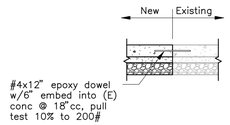
S0.2

OF 7 SHEETS

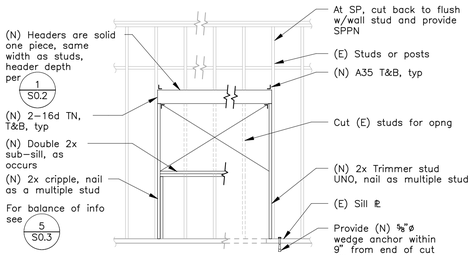


Notes:
1. Sleeve @ pipe only, conduit may be cast directly into concrete
2. Pipes and conduit must be aligned perpendicular to footings
3. No pipes or conduit allowed thru or under spread footings
4. 4" < d < 3'-0". If d > 3'-0", steel pipe/conduit okay in trench w/compacted backfill under typ footing. If plastic, provide 10'-0" steel pipe sleeve centered under footing

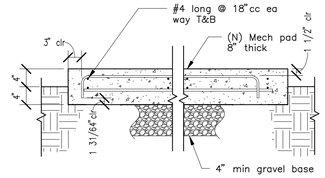
9 / S0.3 Pipe Below Footing



10 / S0.3 (N) Slab to (E) Slab on Grade

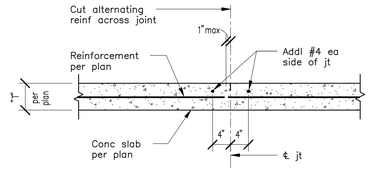


6 / S0.3 (N) Framed Wall Openings @ (E) Wall



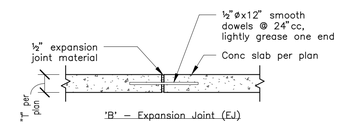
NOTE: Coord mech pad size w/Mech

7 / S0.3 Mechanical Unit Pad

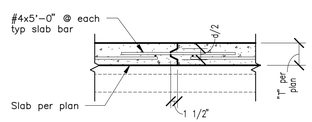


1. Form weakened-plane contraction joints, sectioning concrete into areas as indicated (see specifications for area limitations).
2. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness (one-inch min). Form contraction joints with power saws equipped with shatterproof abraisive or diamond-rimmed blades. Cut ⅛-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete developes random contraction cracks: time frame: one to four hours after last trowel is pulled off. Contractor shall schedule concrete placement so that cuts are made the same day. No saw cutting is permitted for slabs that have been allowed to sit overnight. When saw cutting slabs within the required time frame will not be possible, slab joints with 26ga (min thickness) tongue and groove steel shape shall be provided.

'A' - Contraction in Slab Joint (SJ)

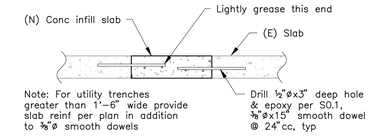


'B' - Expansion Joint (EJ)



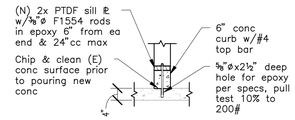
'C' - Keyed Cold Joint (CJ)

8 / S0.3 Slab Joints

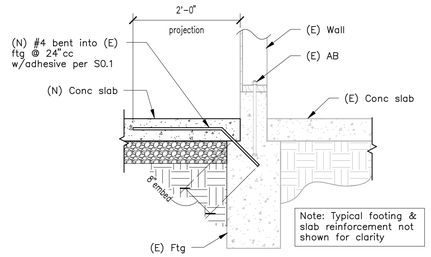


Note: For utility trenches greater than 1'-6" wide provide slab reinf per plan in addition to ⅝"ø smooth dowels

1 / S0.3 (N) Slab to (E) Slab @ Utility Trench

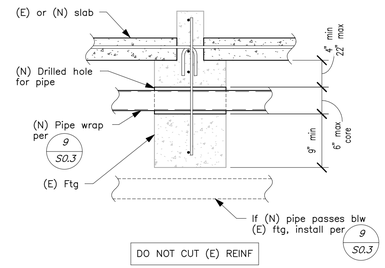


2 / S0.3 (N) Curb to (E) Slab

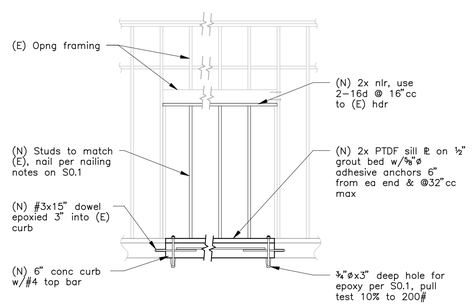


3 / S0.3 (N) Slab to (E) Footing

Notes:
1. Pipes must be aligned perpendicular to footings.
2. No pipes allowed through, or under, spread footings.
3. 3 diameter minimum center to center spacing between.



4 / S0.3 (N) Utility thru (E) Footing



5 / S0.3 Infill Framing with Curb

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN HENRY
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

TYPICAL FOUNDATION & RENOVATION DETAILS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
GREGORY I. RICHTER
S4554
STRUCTURAL
STATE OF CALIFORNIA
2/25/2020

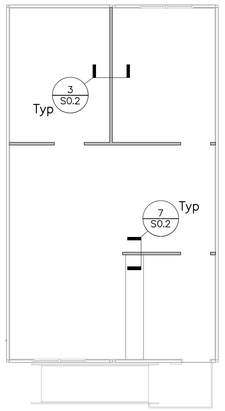
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

SHEET NO.
S0.3
OF 7 SHEETS

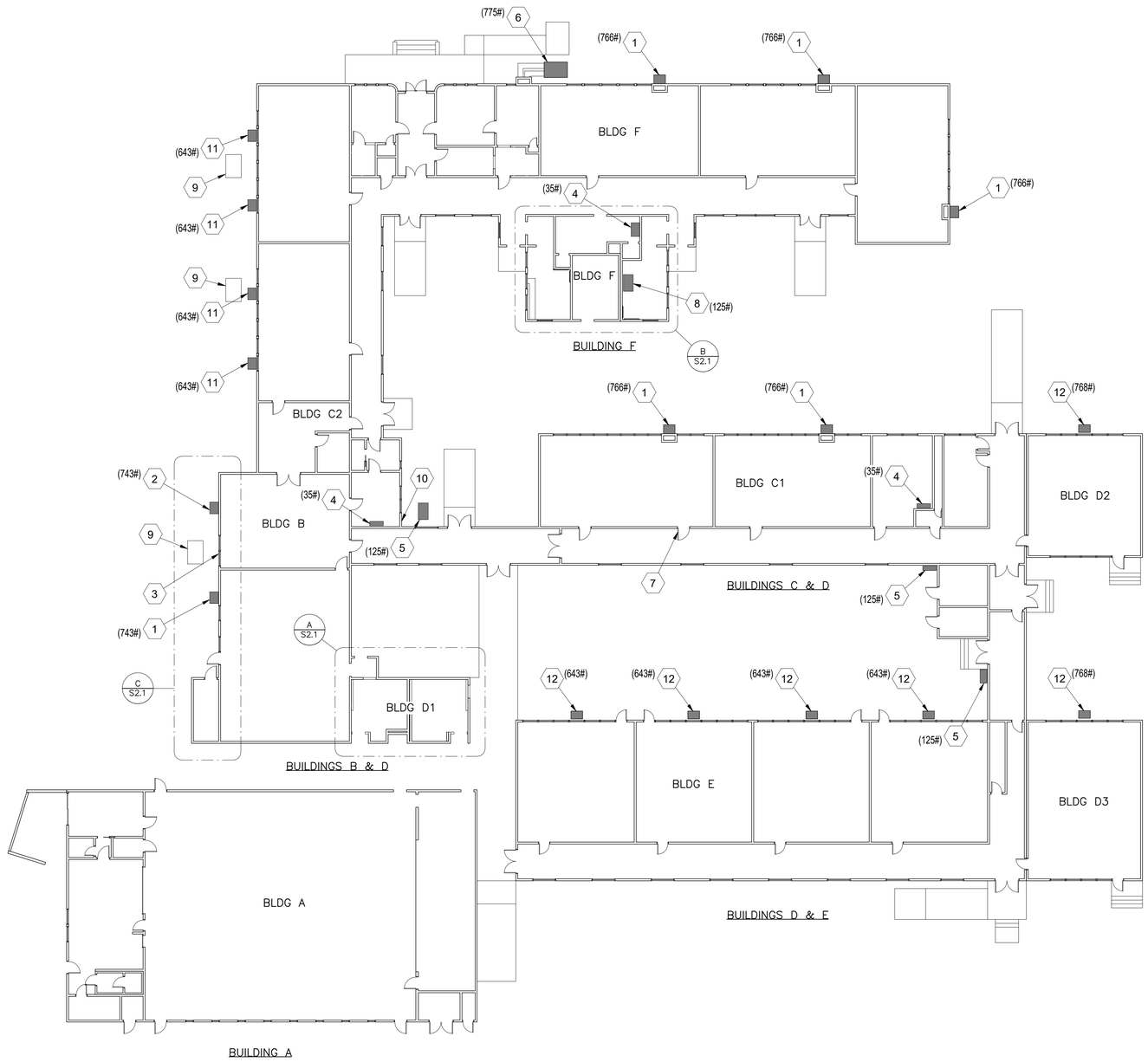
Wall Framing Legend

(E) Wall Framing

(N) Non–structural partition walls. 2x4 wall studs @ 16"cc. Frame walls per 6/S0.2



Building P3 – Wall Framing Plan
1/8" = 1'–0"



Structural Site Plan
1/16" = 1'–0"

Ref North

Structural Site Plan Sheet Notes

1. Location of (N) wall mounted mechanical unit. Attached to (E) wall framing per 1/S4.1. See mechanical drawings for exact location
2. Location of (N) wall mounted mechanical unit. Provide (N) wall opening and attach to (N) wall framing per 2/S4.1. See mechanical drawings for exact location
3. Provide infill framing at cripple wall framing at existing duct penetration per 3/S4.1
4. (N) Wall mounted unit. Weight in parentheses. See Detail 3/M5.1 for mounting detail
5. (N) Floor mounted unit. Weight in parentheses. See Detail 2/M5.1 for anchorage
6. (N) Unit mounted to (E) concrete exterior slab. Weight in parentheses
7. (N) Door opening. See Arch for location. See Detail 6/S0.3 for framing modification
8. (N) Roof mounted unit. Weight in parentheses. See Detail 1/M5.1 for mounting detail
9. (E) Unit
10. Provide blocking around minor (less than 8") new wall opening in (E) wall
11. Location of (N) wall mounted mechanical unit. See mechanical drawings for exact location. Remove the existing window and frame. Provide (N) wood infill framing and mount (N) unit to (E) wall framing per 6/S4.1
12. Location of (N) wall mounted mechanical unit. See mechanical drawings for exact location. Remove the existing unit's metal frame and concrete slab. Remove the existing window and frame. Provide (N) wood infill framing and mount (N) unit to (E) wall framing per 6/S4.1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN I. HENRY C–22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

STRUCTURAL SITE PLAN and INTERIOR WALL FRAMING - BUILDING P3

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER GREGORY I. RICHARDS S4558 STRUCTURAL STATE OF CALIFORNIA

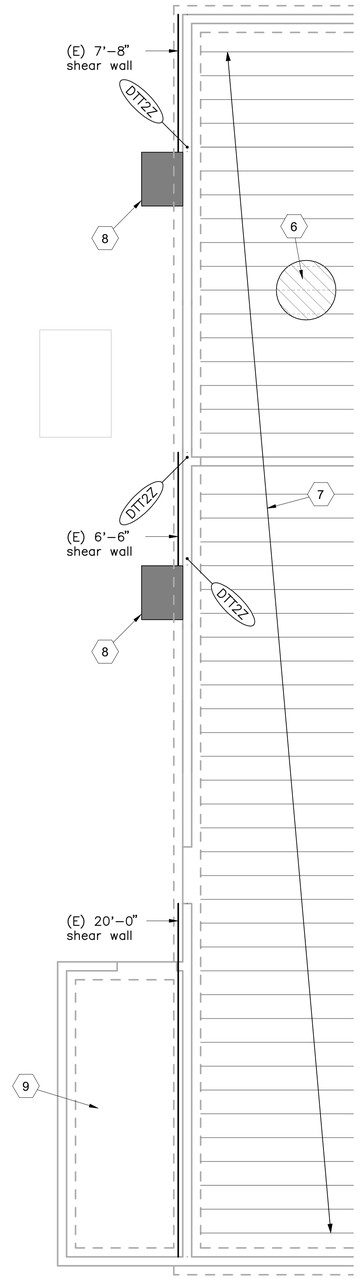
2/25/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

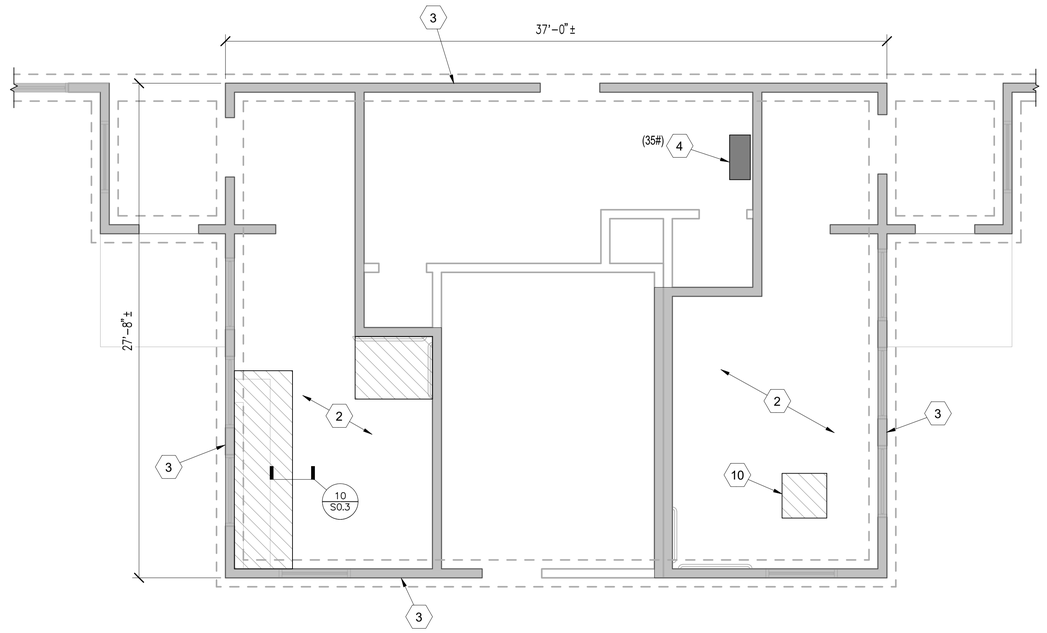
SHEET NO.

S1.1

OF 7 SHEETS

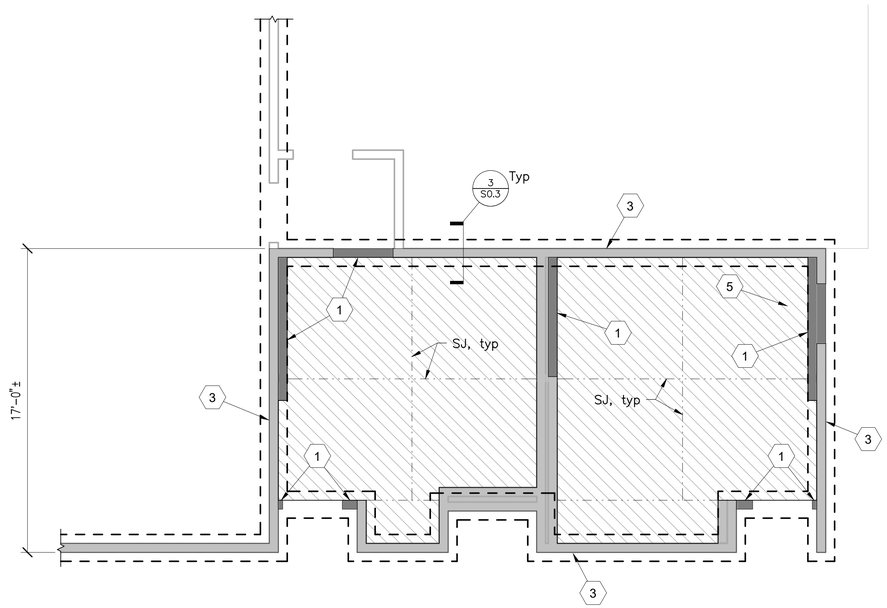


C S2.1 Partial Foundation Plan – Bldg B
1/4" = 1'-0"



B S2.1 Partial Foundation Plan – Bldg F
1/4" = 1'-0"

Ref North



A S2.1 Partial Foundation Plan – Bldg D1
1/4" = 1'-0"

Ref North

Foundation Plan Legend and Notes

- (E) Structural stud wall on 6" high curb on line footing
- (E) Concrete stem ov/concrete footing
- (E) Non-structural stud wall on 6" high curb
- (N) 6" concrete curb w/(N) 2x6 @ 16"cc wood framed wall, see Detail 5/S0.3
- (E) Non-structural wall per plan
- Slab joint per 8/S0.3
- Approximate extent of (E) slab removal. Replace removed slab per Note 1
- HDUX — Indicates (N) HD per 5/S4.1

Notes:

1. All interior replaced slabs are to be 4" thick w/#4 ea way @ 18"cc ov/15 mil vapor barrier ov/5" gravel.
2. Verify & coordinate all dimensions & elevations w/Arch. Existing stud walls are 2x6 @ 16"cc unless noted otherwise (UNO).
3. All existing exterior stud walls are fully sheathed w/⅜" Structural Plywd (SP).
4. All structural stud walls have bolted sill plates per 2/S0.2.
5. Non-bearing interior stud walls without curbs have "shot" sills per 2/S0.2 & are not shown on these plans, see Arch dwgs.
6. See Arch for special details @ thresholds, metal frames, depressed slabs, sloped slabs, floor drains, etc… Depress slabs @ ceramic tile floors per Arch.
7. Exterior slabs are not shown on these plans, see Arch & Civil drawings.
8. See detail 4/S0.3 for new utility pipes passing through footings.

Foundation Plan Sheet Notes

1. (N) 6" concrete curb. See details 2/S0.2 and 2/S0.3
2. Provide minor concrete patch as needed
3. (E) ⅜" SP
4. (N) Wall mounted unit. Weight in parentheses. See Detail 3/M5.1 for mounting detail
5. Coordinate plumbing trenches with Plumbing dwgs
6. (E) Plywood floor sheathing
7. (E) Floor framing
8. (N) Unit per plan
9. (E) Slab on grade
10. (N) Slab removal and replacement for (N) floor drain

NOTE: Contractor to coordinate slab removal with Plumbing drawings

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN J. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

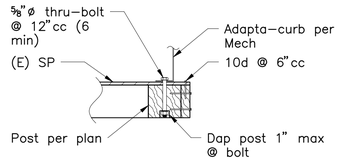
PARTIAL FOUNDATION PLANS

CONSULTANT

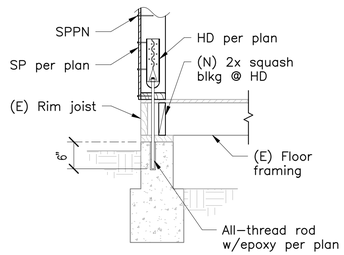
REGISTERED PROFESSIONAL ENGINEER
GREGORY I. RICHARDS
S-5551
STRUCTURAL
STATE OF CALIFORNIA
2/25/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

SHEET NO.
S2.1
OF 7 SHEETS



4 S4.1 **Detail**
1" = 1'-0"

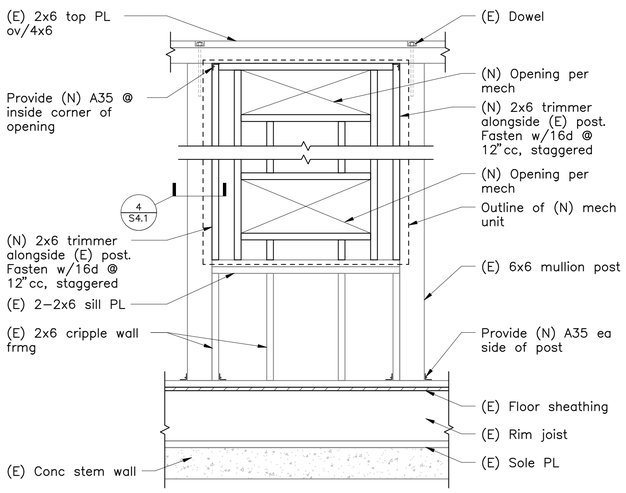


Simpson HD No.	Fastener (No. & Type)	HD Bolt ø	Min Post (match stud width)	Pull Test Tension (lb)
DTT2Z	8-¼x1½ SDS	½"ø	2-2x	1300

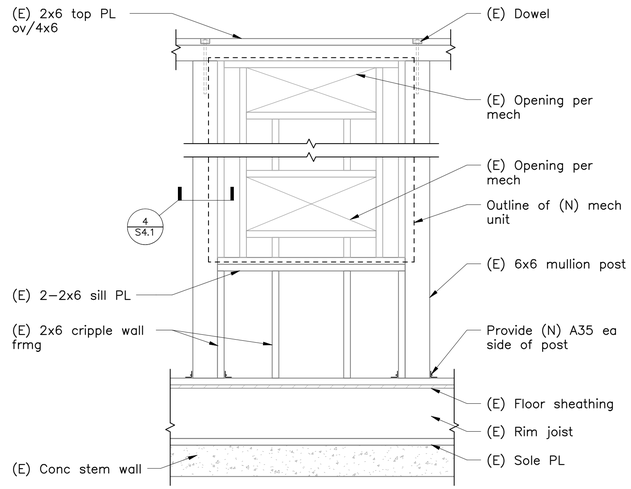
Notes:

1. HD's do not substitute for sill bolts.
2. Install HD per Simpson catalog.
3. HD post may be used as a king stud.
4. Pull test epoxy rod per value shown in chart.

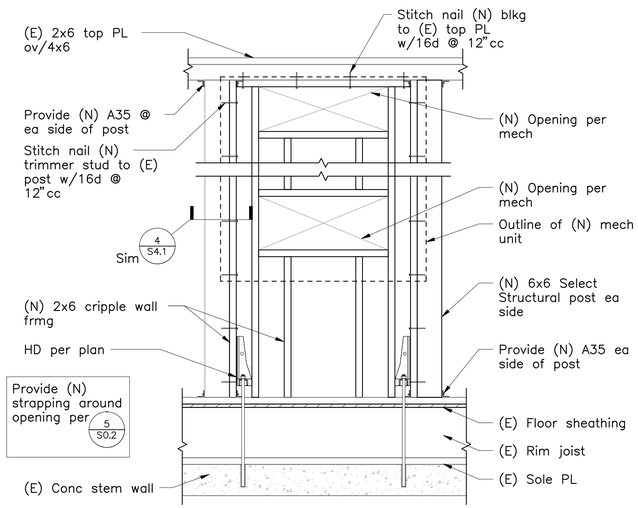
5 S4.1 **Detail**
3/4" = 1'-0"



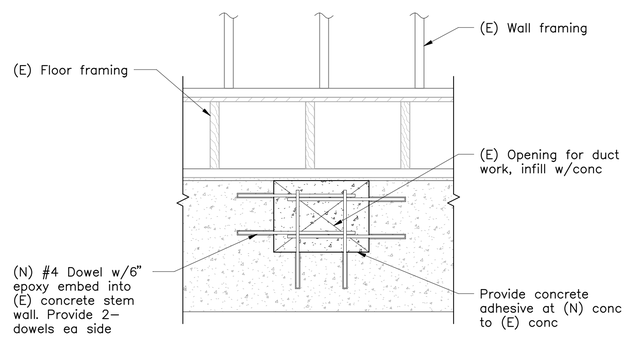
6 S4.1 **Elevation**
3/4" = 1'-0"



1 S4.1 **Elevation**
3/4" = 1'-0"



2 S4.1 **Elevation**
3/4" = 1'-0"



Elevation View

3 S4.1 **Elevation**
1" = 1'-0"

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN I. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

DETAILS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER GREGORY T. RICHARDS 5855 STRUCTURAL STATE OF CALIFORNIA

2/25/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 2/11/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

SHEET NO.

S4.1

OF 7 SHEETS

QC	
INI	%

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAILOR	TITUS	TUTTLE & BAILEY
CD	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME Ž" DROP	1240 FRAME 21 - 1""	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
CD-2	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	1240 FRAME 22	9000-1	7500-B	MCD BORDER TYPE 1	SQD-SF
CDL	MODULAR CORE LAY-IN CEILING DIFFUSER FOR T-BAR CEILING 24x24 PANEL	1240 FRAME 23	9000-6P	7500-L	MCD BORDER TYPE 3	SQD-LT
CR	CEILING RETURN WITH * EGG CRATE CORE SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
CRL	CEILING RETURN WITH * EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	EGC-5TB	CC5D-TBD	61 EC-L	MODEL 50 F BORDER TYPE 3	CRE500-LT
S *	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, Ž" SPACING	880 V	V 4004 S	61 DV	300 RS	T54
R & E *	RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS.	S 80 H	SRH	7145 H	350 RL	T70D
SG	SOFFIT GRILLE - HEAVY DUTY SINGLE DEFLECTION GRILLE WITH 10 GAUGE, "" WOVEN STEEL MESH SECURED BEHIND FACE BARS. PROVIDE PLASTER FRAME IN PLASTER SOFFIT	S 480 H WITH "" MESH AND PF WHERE REQUIRED	HDRH WITH "" MESH AND PF WHERE REQUIRED	6145 HD WITH " MESH & PLASTER FRAME WHERE REQUIRED	33 RL HD WITH "" MESH AND PF WHERE REQUIRED	T75D WITH "" MESH AND PF WHERE REQUIRED
RH & EH	HEAVY DUTY RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS	S 480 H	HDRH	6145 HD	33 RL	T115H-40

NOTES:

1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.

* ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS

4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.
5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.
6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.

MECHANICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2. VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3. COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4. COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
6. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DUFFUSER.
7. FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8. ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10. WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"Ø & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMODATE THE ROUND DUCT CONNECTION.
11. THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALLED AT 48" ABOVE FINISHED FLOOR (TO TOP OF DEVICE). DO NOT INSTALL THERMOSTATS AND ROOM TEMPERATURE SENSORS ABOVE CASEWORK, SHELVING OR OTHER OBSTRUCTIONS OVER 24" IN DEPTH AND 34" IN HEIGHT.

MECHANICAL LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	ABV	ABOVE
	ABC	ABOVE CEILING
	AF	ABOVE FLOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AD , AP	ACCESS DOOR , ACCESS PANEL
	AC	AIR CONDITIONING
	APD	AIR PRESSURE DROP, INCHES WATER COLUMN
	AB	ANCHOR BOLT
	BDD	BACK DRAFT DAMPER
	BF	BELOW FLOOR
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	CC	CENTER TO CENTER
	CLG	CEILING
	CEF	CEILING EXHAUST FAN
	CLR	CLEAR
	CONC	CONCRETE
CD	CD	CONDENSATE DRAIN
	CONN	CONNECT OR CONNECTION
	CONT	CONTINUATION
	CONTR	CONTRACTOR
	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DPR	DAMPER
°F		DEGREES FAHRENHEIT
–	DIA	DIAMETER , PHASE
	DL	DOOR LOUVER
	DN	DOWN
	DB	DRY BULB (DEGREES FAHRENHEIT)
	EP	ELECTRICAL PANEL
	EL	ELEVATION
	ENT	ENTERING
	EDB	ENTERING DRY BULB
	EW	ENTERING WATER
	EWT	ENTERING WATER TEMPERATURE
	EWB	ENTERING WET BULB
	EVAP	EVAPORATOR
	EC	EVAPORATIVE COOLER
	EA	EXHAUST AIR
	EAD	EXHAUST AIR DAMPER
	EF	EXHAUST FAN
	(E), EXIST	EXISTING
	(E)	EXISTING TO BE REMOVED
	ESP	EXTERNAL STATIC PRESSURE
	FPM	FEET PER MINUTE
F	FD	FIRE DAMPER
FS	FS	FIRE/SMOKE DAMPER
	FC	FLEXIBLE CONNECTION
	FLR	FLOOR
		FLOW IN DIRECTION OF ARROW
	FLV	FLOW LIMITING VALVE
	FA	FROM ABOVE
	FB	FROM BELOW
	FLA	FULL LOAD AMPS
	GALV	GALVANIZED
	GI	GALVANIZED IRON
	GA	GAUGE
	HTG	HEATING

MECHANICAL LEGEND cont'd

SYMBOL	ABBREVIATION	DESCRIPTION
	KW	KILOWATTS
	KWH	KILOWATT HOUR
	LDB	LEAVING DRY BULB IN DEGREES FAHRENHEIT
	LWB	LEAVING WET BULB IN DEGREES FAHRENHEIT
	LRA	LOCKED ROTOR AMPERES
	LVR	LOUVER
	MAD, MD	MANUAL AIR DAMPER
	MAV	MANUAL AIR VENT
	MFR	MANUFACTURER
	MAX	MAXIMUM
	MIN	MINIMUM
	MCC	MOTOR CONTROL CENTER
	(N)	NEW
	OA	OUTSIDE AIR
	OAD	OUTSIDE AIR DAMPER
	OD	OUTSIDE DIAMETER
	OV	OUTLET VELOCITY
	OH	OVERHEAD
	POC	POINT OF CONNECTION
	LBS	POUNDS
RG	RG	REFRIGERANT GAS PIPING
RS	RS	REFRIGERANT SUCTION PIPING
RL	RL	REFRIGERANT LIQUID PIPING
	RA	RETURN AIR
	RAD	RETURN AIR DAMPER
	RPM	REVOLUTIONS PER MINUTE
	RLA	RUNNING LOAD AMPERES
	SM	SHEET METAL
SD	SD	SMOKE DAMPER
SD	SKD	SMOKE DETECTOR
	SQFT, FT``2~~	SQUARE FEET
	SQIN, IN``2	SQUARE INCHES
	SP	STATIC PRESSURE
	SPD	STATIC PRESSURE DROP
	SA	SUPPLY AIR
	SF	SUPPLY FAN
	TCP	TEMPERATURE CONTROL PANEL
	TCV	TEMPERATURE CONTROL VALVE
T x	T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED. 48" MAX. AFF (TO TOP OF STAT)
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	TA	TO ABOVE
	TB	TO BELOW
	TP	TOTAL PRESSURE
	TSP	TOTAL STATIC PRESSURE
	TYP	TYPICAL
	UG	UNDERGROUND
	UCD	UNDER CUT DOOR
	UON	UNLESS OTHERWISE NOTED
	WPD	WATER PRESSURE DROP
	W	WATTS
	WT	WEIGHT
	WB	WET BULB
	WMS	WIRE MESH SCREEN
	WP	WORKING PRESSURE

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

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

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

MP☒ MD☒ PP☐ E☐ — OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS

MP☒ MD☒ PP☐ E☐ — OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0052-13, #0043-13

MP☐ MD☐ PP☐ — OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

REGISTERED PROFESSIONAL ENGINEER — THOMAS A. DUVALL — M 22836 — EXPIRES 9/30/20 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT — STEPHEN L. HENRY — C-22525 — 12/31/21 RENEWAL DATE — STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL LEGEND
SCHEDULES & NOTES

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California

MCM - RLJ/SV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M0.1

OF XX SHEETS

QC	
INI	%

SPLIT SYSTEM AC UNIT SCHEDULE

UNIT	LOCATION	"JCI" MODEL NO. (INDOOR UNIT)	CFM	FAN FLA	MCA	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	UNIT	"PCI" MODEL NO. (OUTDOOR UNIT)	TOTAL COOLING CAPACITY (MBH)	COMPRESSOR RLA	COMPRESSOR LRA	MCA	MOCP	FAN FLA	VOLT/PH	SEER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
SHPI B1	WORK B101	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	3 M5.1	SHPO B1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	2 M5.1	2 M6.2	1,2,3,4,5
SHPI C1	RSP C103	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	3 M5.1	SHPO C1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	2 M5.1	2 M6.2	1,2,3,4,5
SHPI E1	SPEECH E106	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	3 M5.1	SHPO E1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	2 M5.1	2 M6.2	1,2,3,4,5
SHPI F1	WORK F118	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	3 M5.1	SHPO F1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	1 M5.1	2 M6.2	1,2,3,4,5,6

NOTES:
1. PROVIDE WITH FACTORY FILTERS.
2. PROVIDE WITH FACTORY "PELICAN" STAT.
3. PROVIDE WITH WASHABLE FILTER.
4. INDOOR FAN COIL POWERED BY CONDENSING UNIT, REFER TO MRF'S INSTALLATION DATA.
5. PROVIDE "REFCO" MODEL GOBI CONDENSATE PUMP, 120V/3PH/60HZ, 16 WATT POWER CONSUMPTION, 5.0 AMPS ALARM RELAY, 3.17 GAL/HR CAPACITY, 65FT MAX. VERTICAL HEAD. INSTALL PUMP ON WALL BRACKET BELOW INDOOR UNIT.
6. TOP OF UNIT TO MATCH BOTTOM OF SOFFIT HEIGHT.

WALL MOUNT HP UNIT SCHEDULE

NEW UNIT DESIGNATION	LOCATION	"BARD" MODEL NO.	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	SENS. COOLING CAP. (BTUH)	TOTAL COOLING CAP. (BTUH)	EVAP. EDB (°F)	EVAP. EWB (°F)	ELECTRIC HEATING NOMINAL HEAT SIZE KW	ELECTRICAL DATA VOLT/PH	SUPPLY FAN HP	SUPPLY FAN FLA	COMPRESSOR QTY	COMPRESSOR RLA	COMPRESSOR LRA	COND. FAN HP	COND. FAN FLA	MCA	MOCP	EER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
WHP B1	LIBRARY B105	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 230	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6
WHP C1	CLASSROOM 6 C101	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 165	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6
WHP C2	CLASSROOM 7 C102	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 150	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6
WHP F1	CLASSROOM 3 F103	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 145	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6
WHP F2	CLASSROOM 2 F102	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 145	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6
WHP F3	CLASSROOM 1 F101	C60H1-B06SP4XXE	1650	UPPER 450 / LOWER 145	0.5	40,300	55,500	80.0	67.0	6.0	208V/3PH	3/4	4.7	1.0	13.1 / 14.2	153	1/2	4.1	50	60	11.0	766	2 M5.2	2 M6.3	1, 2, 3, 4, 5, 6

NOTES:
1. UNIT SELECTED AT 101F DB / 70°F WB SUMMER AMBIENT, AND 23°F DB WINTER AMBIENT AIR TEMPERATURES.
2. PROVIDE WITH 2" 30% THROWAWAY FILTER
3. SINGLE STAGE COOLING WITH 100% OSA HOOD AND STAINLESS STEEL HEAT EXCHANGER.
4. 6.0 KW ELECTRIC HEAT, ECONOMIZER FULLY MODULATING w/EXHAUST w/ TCURBT4860-A-4 WALL CURB, FRONT OUTLET, STANDARD COILS, STANDARD CONTROLS.
5. ALL CLASSROOMS TO HAVE ECONOMIZER CONTROL THROUGH THE "PELICAN" THERMOSTAT.
6. LOWER OUTSIDE AIR POSITION INDICATED IS BASED ON 0.15 CFM/SQ.FT., ALLOWABLE FOR CO2 DEMAND CONTROLLED SYSTEMS AT MINIMUM OCCUPANCY. UPPER OUTSIDE AIR POSITION INDICATED IS BASED ON 15 CFM/OCCUPANT WHEN SPACE IS AT MAXIMUM OCCUPANCY, UNLESS SYSTEM IS IN ECONOMIZER MODE. SEE CONTROLS FOR SEQUENCE OF OPERATION. FOR THESE UNITS WITH CO2 CONTROL, ENTERING TEMPERATURES SCHEDULED REPRESENT CONDITIONS AT UPPER OSA POSITION.

GAS/ELECTRIC WALL MOUNT AC UNIT SCHEDULE

NEW UNIT DESIGNATION	LOCATION	NEW "BARD" MODEL NO.	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	SENS. COOLING CAP. (BTUH)	TOTAL COOLING CAP. (BTUH)	EVAP. EDB (°F)	EVAP. EWB (°F)	GAS HEATING INPUT (BTUH)	GAS HEATING OUTPUT (BTUH)	GAS HEATING HX/EDB (°F)	ELECTRICAL DATA VOLT/PH	SUPPLY FAN HP	SUPPLY FAN FLA	COMPRESSOR QTY	COMPRESSOR RLA	COMPRESSOR LRA	COND. FAN HP	COND. FAN FLA	MCA	MOCP	EER	THERMAL EFF'Y (%)	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
WAC B1	INTERVENTION 15 B104	WG4S2-AXAEX4XXH	1400	UPPER 450 / LOWER 130	0.5	34,375	46,500	80.0	67.0	50,000	41,000	70.0	208V/1PH	3/4	4.7	1	8.8 / 8.9	73	1/3	2.5	36	45	11.7	82.0	743	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC D1	CLASSROOM 8 D101	WG5S2-AXAEX4XXH	1600	UPPER 450 / LOWER 145	0.5	40,800	56,500	80.0	67.0	50,000	41,000	70.0	208V/1PH	3/4	6.0	1	12.8 / 14.1	110	1/3	2.5	45	60	11.2	82.0	768	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC D2	CLASSROOM 9 D102	WG5S2-AXAEX4XXH	1600	UPPER 450 / LOWER 185	0.5	40,800	56,500	80.0	67.0	50,000	41,000	70.0	208V/1PH	3/4	6.0	1	12.8 / 14.1	110	1/3	2.5	45	60	11.2	82.0	768	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC E1	CLASSROOM 14 E102	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC E2	CLASSROOM 12 E103	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC E3	CLASSROOM 11 E104	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC E4	CLASSROOM 10 E105	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC F1	CLASSROOM 4 F112	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC F2	CLASSROOM 4 F112	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC F3	CLASSROOM 5 F113	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6
WAC F4	CLASSROOM 5 F113	WG3S2-AXAEX4XXH	1100	UPPER 450 / LOWER 150	0.5	26,475	35,600	80.0	67.0	50,000	41,000	70.0	208V/1H	1/2	3.6	1	8.8 / 8.9	73	1/3	2.5	27	40	11.3	82.0	643	1,2 M5.2	1 M6.3	1, 2, 3, 4, 5, 6

NOTES:
1. UNIT SELECTED AT 101F DB / 70°F WB SUMMER AMBIENT, AND 23°F DB WINTER AMBIENT AIR TEMPERATURES.
2. PROVIDE WITH 2" 30% THROWAWAY FILTER
3. SINGLE STAGE COOLING WITH 100% OSA HOOD AND STAINLESS STEEL HEAT EXCHANGER.
4. 50 BTUH INPUT, ECONOMIZER (INTERNAL) FULLY MODULATING WITH EXHAUST, FRONT OUTLET, STANDARD COILS + LAC, STANDARD CONTROLS.
5. ALL CLASSROOMS TO HAVE ECONOMIZER CONTROL THROUGH THE "PELICAN" THERMOSTAT.
6. LOWER OUTSIDE AIR POSITION INDICATED IS BASED ON 0.15 CFM/SQ.FT., ALLOWABLE FOR CO2 DEMAND CONTROLLED SYSTEMS AT MINIMUM OCCUPANCY. UPPER OUTSIDE AIR POSITION INDICATED IS BASED ON 15 CFM/OCCUPANT WHEN SPACE IS AT MAXIMUM OCCUPANCY, UNLESS SYSTEM IS IN ECONOMIZER MODE. SEE CONTROLS FOR SEQUENCE OF OPERATION. FOR THESE UNITS WITH CO2 CONTROL, ENTERING TEMPERATURES SCHEDULED REPRESENT CONDITIONS AT UPPER OSA POSITION.

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL EQUIPMENT SCHEDULES

CONSULTANT

CAPITAL ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RLJ/SV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M0.2

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%

AIR CONDITIONING UNIT SCHEDULE

UNIT	SERVES	"JCI" MODEL NO. U.N.O.	NOM. TONS	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	DX COOLING					GAS HEATING			AC UNIT ELECTRICAL DATA										EFFICIENCY		OPERATING WEIGHT (LBS.)				MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
							LOW CFM (66%)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EVAP. EDB (°F)	EVAP. EWB (°F)	INPUT (MBH)	OUTPUT (MBH)	HX EDB (°F)	VOLT/PH	SUPPLY FAN BHP	SUPPLY FAN FLA	COMPRESSOR QTY	COMPRESSOR RLA	COMPRESSOR LRA	COND. FAN QTY	COND. FAN FLA	COMB. FAN FLA	MCA	MOCP	SEER (EER)	AFUE (TE)	AC UNIT	ROOF CURB	HAIL GUARD / ECON.	TOTAL			
AC F1	BLDG F OFFICE SPACES	ZQG05D2CIAB1A114A3	4	1400	UPPER 185 / LOWER 145	0.8	N/A	37.0	47.0	78.4	63.4	70.0	56.0	40.0	208/3	2.40	5.2	1	137	83.1	1	1.4	1.4	23.7	MIN 25 MAX 35	14.0	(80%)	566	84	50 / 75	775	1,2,3 M5.3	3 M6.2	1 2 3 4 5 6 7 8

NOTES:

1. UNITS SELECTED AT 101 F DB / 70 F WB SUMMER AMBIENT, 23 F DB WINTER AMBIENT AIR TEMPERATURES. COOLING CAPACITIES SCHEDULED ARE NET SENSIBLE & NET TOTAL CAPACITIES.
2. PROVIDE UNIT WITH EXPANDED METAL CONDENSER COIL GUARDS, AND 2" THICK MERV 8 DISPOSABLE PLEATED MEDIA FILTER(S). THE ESP SCHEDULED ABOVE INCLUDES AIR PRESSURE DROP THRU FILTER(S).
3. PROVIDE "UNI-PRODUCTS" STRUCTURALLY CALC'D 8" TALL STANDARD ROOF CURB.
4. PROVIDE WITH HINGE TOOL-LESS ACCESS, BAROMETRIC RELIEF, STANDARD STAGED HEAT EXCHANGER, AND STANDARD STAGED COOLING.
5. LOWER OUTSIDE AIR POSITION INDICATED IS BASED ON 0.15 CFM/SQ.FT., ALLOWABLE FOR CO2 DEMAND CONTROLLED SYSTEMS AT MINIMUM OCCUPANCY. UPPER OUTSIDE AIR POSITION INDICATED IS BASED ON 15 CFM/OCCUPANT WHEN SPACE IS AT MAXIMUM OCCUPANCY, UNLESS SYSTEM IS IN ECONOMIZER MODE. SEE CONTROLS FOR SEQUENCE OF OPERATION. FOR THESE UNITS WITH CO2 CONTROL, ENTERING TEMPERATURES SCHEDULED REPRESENT CONDITIONS AT UPPER OSA POSITION.
6. HORIZONTAL SUPPLY AND RETURN AIR DUCT CONFIGURATION.
7. EXISTING DUCTWORK THAT IS BEING RE-USED SHALL BE THOROUGHLY CLEANED PER SPEC SECTION 23 01 30.52.
8. PROVIDE WITH ECONOMIZER, DB, HORIZONTAL FLOW, SMALL FOOTPRINT, SHORT CABINET WITH BAROMETRIC RELIEF.

OUTSIDE AIR FAN SCHEDULE

UNIT	LOCATION	"S&P" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	VOLT/PH	OPER. WT. (LBS.)	CONTROL DIAGRAM	NOTES
IOAF B1	RR3 A106	PV-100	45	0.01	OUTSIDE AIR	INLINE	120/1	7	2 M6.2	1

NOTES:

1. INTERLOCK WITH ASSOCIATED SPLIT SYSTEM.

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAILOR	TITUS	TUTTLE & BAILEY
CD	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 2" DROP	1240 FRAME 21 - 1""	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
CD-2	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	1240 FRAME 22	9000-1	7500-B	MCD BORDER TYPE 1	SQD-SF
CD-3	SPIRAL DUCT MOUNTED GRILLE. GRILLE SHALL BE PROVIDED WITH GALVANIZED STEEL FINISH TO MATCH SPIRAL DUCT.				S300	
CDL	MODULAR CORE LAY-IN CEILING DIFFUSER FOR T-BAR CEILING 24x24 PANEL	1240 FRAME 23	9000-6P	7500-L	MCD BORDER TYPE 3	SQD-LT
CR	CEILING RETURN WITH * EGG CRATE CORE SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
CRL	CEILING RETURN WITH * EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	EGC-5TB	CC5D-TBD	61 EC-L	MODEL 50 F BORDER TYPE 3	CRE500-LT
S *	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 2" SPACING	880 V	V 4004 S	61 DV	300 RS	T54
R & E *	RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS.	S 80 H	SRH	7145 H	350 RL	T70D
SG	SOFFIT GRILLE - HEAVY DUTY SINGLE DEFLECTION GRILLE WITH 10 GAUGE, "" WOVEN STEEL MESH SECURED BEHIND FACE BARS. PROVIDE PLASTER FRAME IN PLASTER SOFFIT	S 480 H WITH "" MESH AND PF WHERE REQUIRED	HDRH WITH "" MESH AND PF WHERE REQUIRED	6145 HD WITH " MESH & PLASTER FRAME WHERE REQUIRED	33 RL HD WITH "" MESH AND PF WHERE REQUIRED	T75D WITH "" MESH AND PF WHERE REQUIRED
RH & EH	HEAVY DUTY RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS	S 480 H	HDRH	6145 HD	33 RL	T115H-40
LD	ALUMINUM LINEAR SLOT DIFFUSER WITH 4-" SLOTS & FIELD FABRICATED PLENUM	-	-	-	ML-38	6000
LD-2	ALUMINUM LINEAR SLOT DIFFUSER WITH 8-" SLOTS & FIELD FABRICATED PLENUM	-	-	-	ML-38	6000

NOTES:

1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.
4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.
5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.
6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.

* ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS

REGISTERED PROFESSIONAL ENGINEER — THOMAS A. DUCAY — M 22836 EXPIRES 9/30/20 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT — STEPHEN L. KENT — C-22328 — 12/31/21 RENEWAL DATE — STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL EQUIPMENT SCHEDULES

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California

MCM - RLJSV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

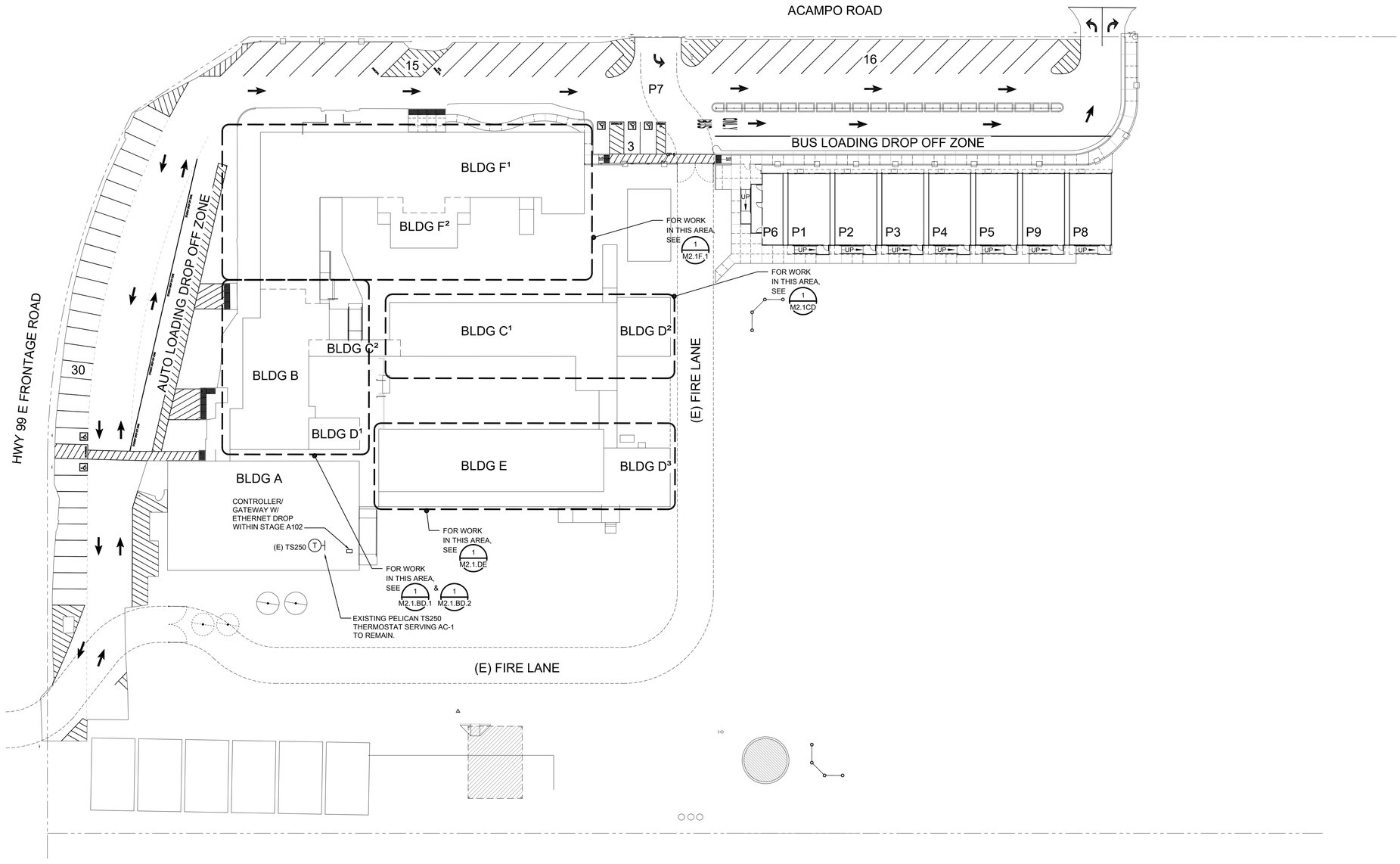
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M0.3

OF XX SHEETS

QC	
INI	%



MECHANICAL SITE PLAN

SCALE : 1" = 30'-0"

1 M1.1

N

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

MECHANICAL SITE PLAN

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RL/JSV PM - DESIGN TEAM | 19070S.00 PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

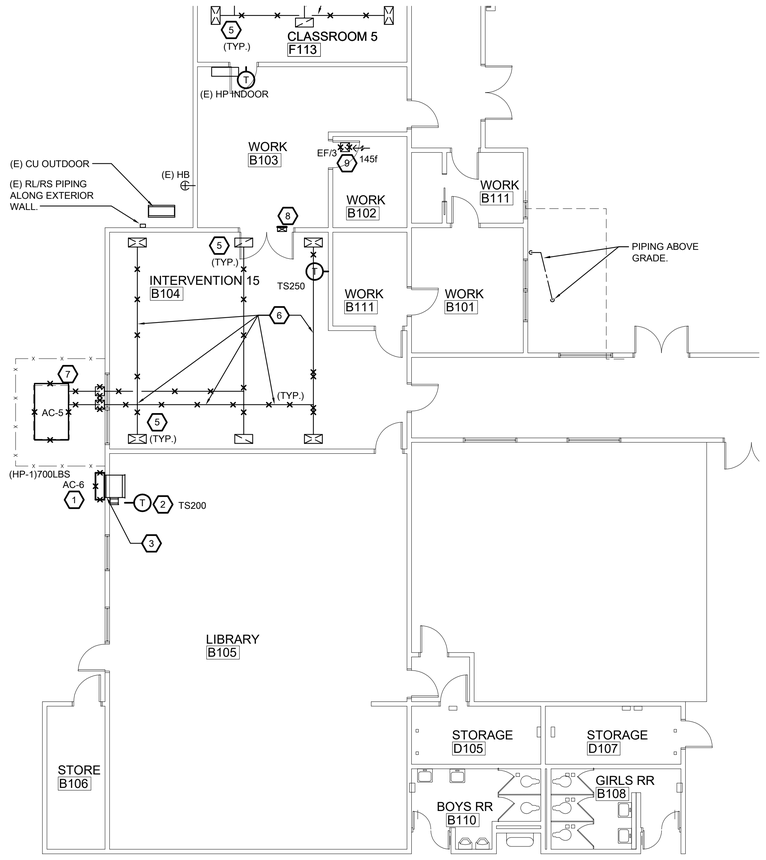
M1.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUGAN M. 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%



MECHANICAL DEMO FLOOR PLAN BUILDINGS B & D

SCALE : 1/8" = 1'-0"

1 / M2.1BD.1

N

DEMOLITION GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

DEMOLITION SHEET NOTES

1. • REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.
   • PREPARE EXISTING SA AND RA DUCTS FOR RECONNECTION TO NEW UNIT.
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS WITH THE ADDITION OF THE PLUS50. ALL STATS (NOT EXISTING TS250 STATS) ON SITE ARE TO REPLACED WITH THE PELICAN TS250 STATS
3. DUCTWORK AND GRILLE(S) TO REMAIN WHERE DUCTWORK IS LOCATED WITHIN SOFFIT. IF NO SOFFIT PROVIDE NEW DUCTWORK FOR WALL HUNG UNITS. PREPARE FOR NEW CONNECTIONS AT SOFFIT LOCATIONS.
4. REMOVE EXHAUST FAN, DUCTWORK, AND SUPPORTS. PATCH ALL WALL, FLOOR, AND ROOF OPENINGS WITH APPROPRIATE BLOCKING TO MATCH SURROUNDING SURFACES PER STRUCTURAL/ ARCHITECTURAL PLANS AND SPECIFICATIONS.
5. REMOVE GRILLE, CAP OPENING WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES. PREPARE FOR REINSTALLATION OF GRILLE AFTER CLEANING INTO ORIGINAL LOCATION.
6. REMOVE DUCT AND DUCT SUPPORTS BELOW FLOOR AND WITHIN THE CRAWL SPACE.
7. REMOVE AC-UNIT AND CURB. REMOVE DUCTWORK AND ASSOCIATED DUCT WORK LOCATED OUTSIDE. PATCH THE SIDEWALL TO MATCH SURROUNDING SURFACES. PATCH THE GRADE WORK REQUIRED BY BACKFILLING THE LARGE VOID/ OPENING(S) TO BELOW GRADE PER ARCHITECTURAL DRAWINGS.
8. CAP DUCT BEHIND ARCHITECTURAL SURFACES AND PATCH WALL TO MATCH SURROUNDING SURFACES.
9. REMOVE EXHAUST FAN AND CAP DUCTWORK BEHIND ARCHITECTURAL SURFACE. PATCH OPENING TO MATCH SURROUNDING SURFACES.
10. REMOVE GRILLE AND DUCTWORK. PATCH WALL OPENING TO MATCH SURROUNDING SURFACES AND TO RETAIN THE RATED WALL CONFIGURATION. COORDINATE WITH ARCHITECTURAL PLANS.
11. REMOVE EXHAUST FAN AND CAP DUCTWORK BELOW ROOF DECK AND BEHIND ARCHITECTURAL SURFACE AS NOTED. PATCH OPENING TO MATCH SURROUNDING SURFACES.
12. REMOVE SEGMENT OF DUCT AND PREPARE DUCTWORK FOR NEW OUTSIDE AIR FAN AND DUCT TRANSITIONS.
13. REMOVE FENCE AS REQUIRED TO ACCOMMODATE THE NEW AC-F1 UNIT. COORDINATE NEW FENCE LOCATION WITH ARCHITECTURAL PLANS. NORTHWEST FENCE AND GATE TO BE SHIFTED A MINIMUM 3'-0" TO THE EAST.
14. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS AND REFRIGERANT PIPING SYSTEM. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
15. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS, REFRIGERANT PIPING SYSTEM AND CONCRETE PAD. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
16. REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL DEMO FLOOR PLAN BUILDINGS B & D

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RLJSV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

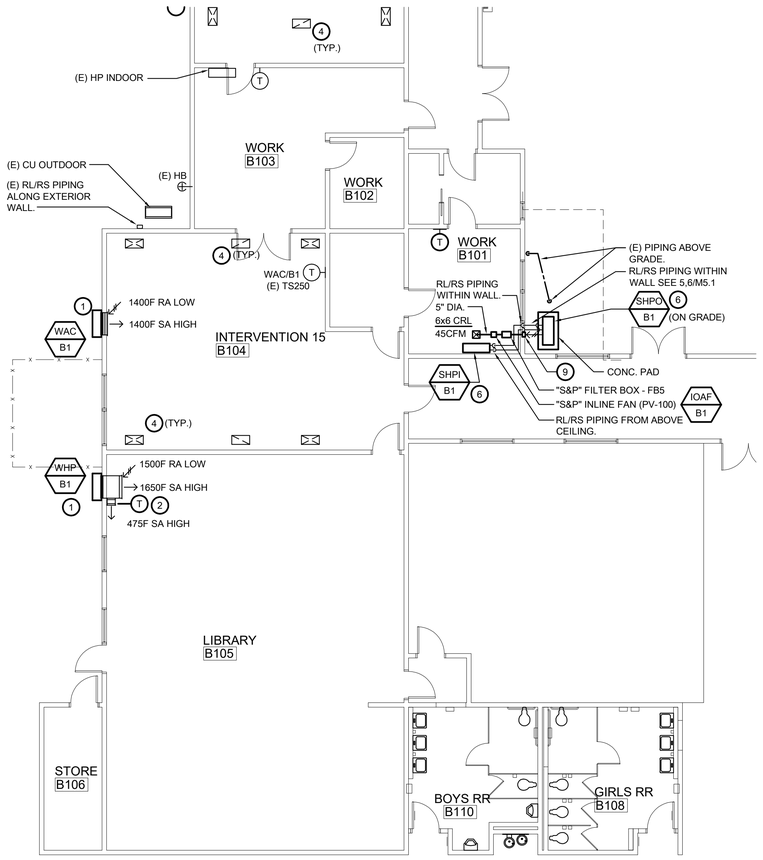
M2.1BD.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M. 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%



MECHANICAL FLOOR PLAN BUILDINGS B & D

SCALE : 1/8" = 1'-0"

1 / M2.1BD.2

N

GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

SHEET NOTES

1. WALL HUNG AC-UNIT OR WALL HUNG HEAT PUMP UNIT. CONNECT TO DUCTWORK AS REQUIRED. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2 OR 2/M5.2
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS PER MANUFACTURER'S "PELICAN" INSTRUCTIONS WITH THE ADDITION OF THE PLUS50 TO THE EXISTING TS200.
3. NEW WALL PENETRATION FOR NEW WALL HUNG EQUIPMENT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. REINSTALL (E) GRILLE AFTER CLEANING INTO ORIGINAL LOCATION. CAP OPENING BELOW GRILLE WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES.
5. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON EXISTING CONCRETE CURB. RUN REFRIGERANT PIPING PER PLAN.
6. 8" HIGH CONCRETE PAD, SEE STRUCTURAL DETAIL.
7. OUTDOOR EQUIPMENT ON EXISTING CONCRETE. FENCING WILL NEED TO BE REMOVED IN ORDER FOR INSTALLATION OF THE NEW PACKAGED AC-UNIT. COORDINATE FENCE MODIFICATIONS WITH ARCHITECTURAL PLANS.
8. REBALANCE THE SPACE(S) PER THE CFM's NOTED.
9. 6" DIA. "SEIHO" SFX 6S METAL LOUVER SHUTTER PAINTED TO MATCH SURROUNDING SURFACES COMPLETE WITH INSECT SCREEN AND CAP COVER. COORDINATE LOCATION THRU WALL WITH FIELD CONDITIONS.
10. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON ROOF CURB. RUN REFRIGERANT PIPING PER PLAN. TOP OF UNIT TO MATCH BOTTOM OF SOFFIT HEIGHT.
11. NEW PELICAN TS250 THERMOSTAT.
12. WALL HUNG AC-UNIT. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN LAMB C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL FLOOR PLAN
BUILDINGS B & D

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California
MCM - RLJSV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

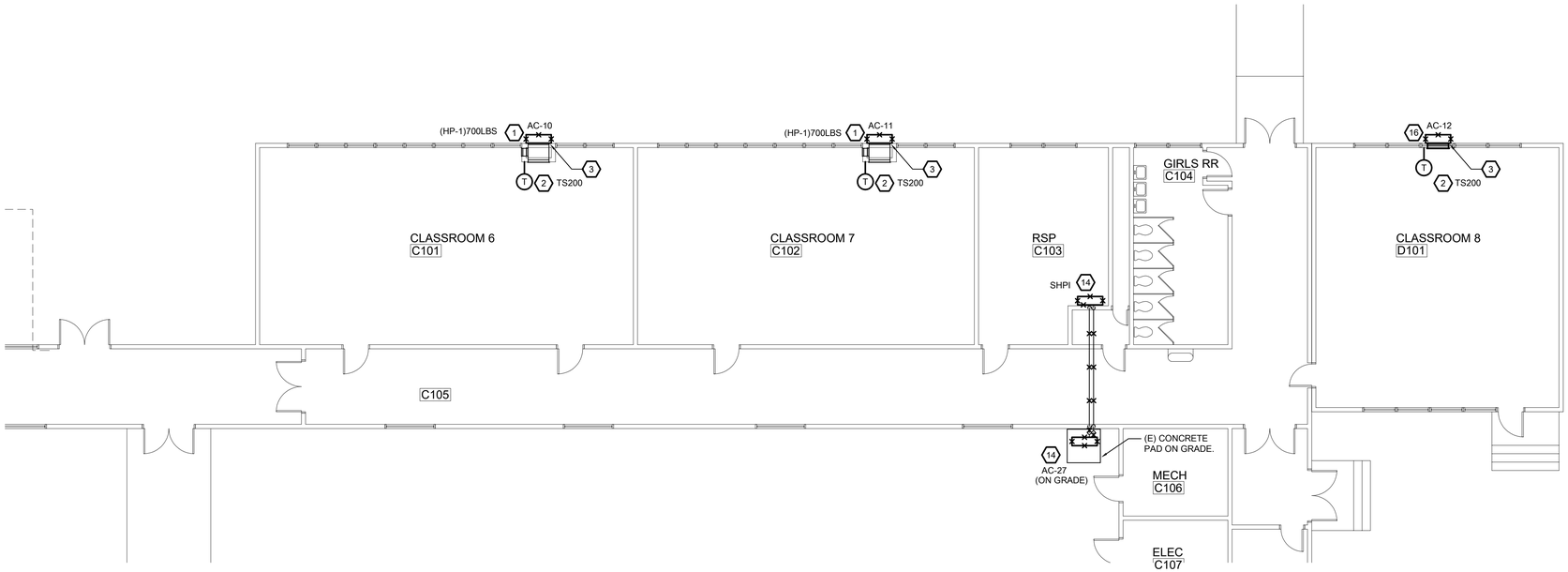
M2.1BD.2

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

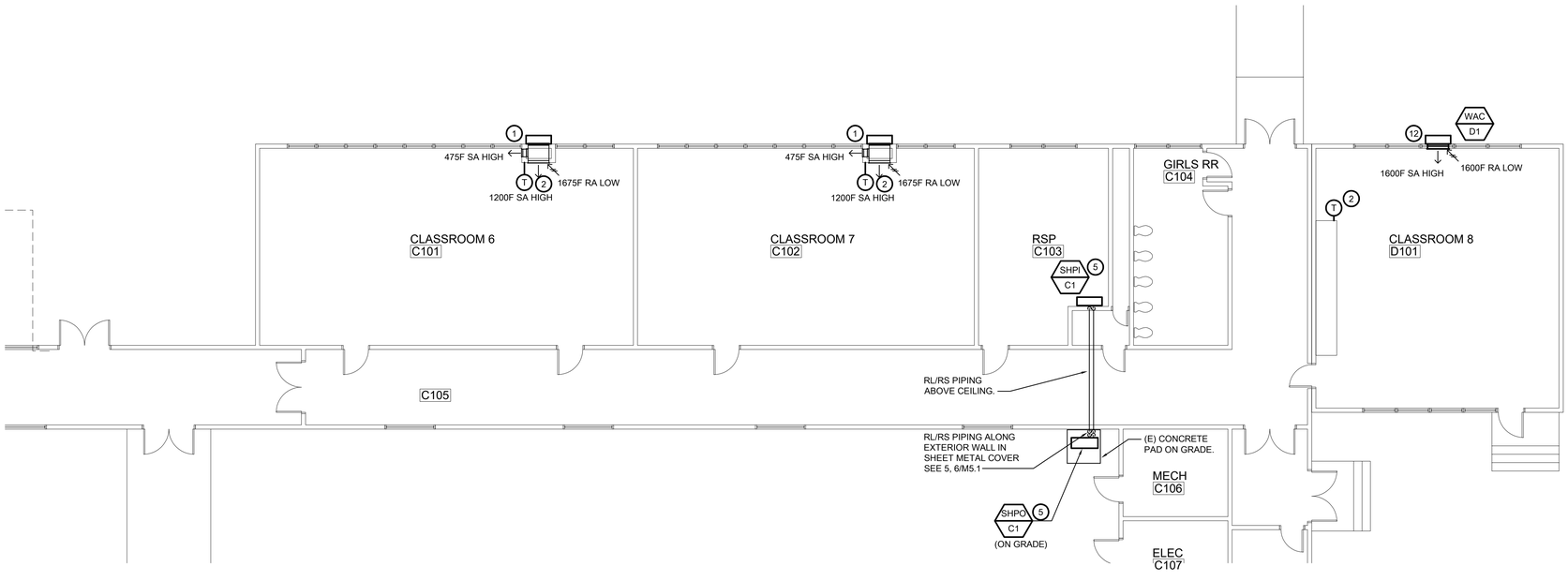
QC	
INI	%



MECHANICAL DEMOLITION FLOOR PLAN BUILDINGS C & D

1
M2.1CD

SCALE : 1/8" = 1'-0"



MECHANICAL FLOOR PLAN BUILDINGS C & D

2
M2.1CD

SCALE : 1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

DEMOLITION SHEET NOTES

1. • REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.
   • PREPARE EXISTING SA AND RA DUCTS FOR RECONNECTION TO NEW UNIT.
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS WITH THE ADDITION OF THE PLUS50. ALL STATS (NOT EXISTING TS250 STATS) ON SITE ARE TO REPLACED WITH THE PELICAN TS250 STATS
3. DUCTWORK AND GRILLE(S) TO REMAIN WHERE DUCTWORK IS LOCATED WITHIN SOFFIT. IF NO SOFFIT PROVIDE NEW DUCTWORK FOR WALL HUNG UNITS. PREPARE FOR NEW CONNECTIONS AT SOFFIT LOCATIONS.
4. REMOVE EXHAUST FAN, DUCTWORK, AND SUPPORTS. PATCH ALL WALL, FLOOR, AND ROOF OPENINGS WITH APPROPRIATE BLOCKING TO MATCH SURROUNDING SURFACES PER STRUCTURAL/ ARCHITECTURAL PLANS AND SPECIFICATIONS.
5. REMOVE GRILLE, CAP OPENING WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES. PREPARE FOR REINSTALLATION OF GRILLE AFTER CLEANING INTO ORIGINAL LOCATION.
6. REMOVE DUCT AND DUCT SUPPORTS BELOW FLOOR AND WITHIN THE CRAWL SPACE.
7. REMOVE AC-UNIT AND CURB. REMOVE DUCTWORK AND ASSOCIATED DUCT WORK LOCATED OUTSIDE. PATCH THE SIDEWALL TO MATCH SURROUNDING SURFACES. PATCH THE GRADE WORK REQUIRED BY BACKFILLING THE LARGE VOID/ OPENING(S) TO BELOW GRADE PER ARCHITECTURAL DRAWINGS.
8. CAP DUCT BEHIND ARCHITECTURAL SURFACES AND PATCH WALL TO MATCH SURROUNDING SURFACES.
9. REMOVE EXHAUST FAN AND CAP DUCTWORK BEHIND ARCHITECTURAL SURFACE. PATCH OPENING TO MATCH SURROUNDING SURFACES.
10. REMOVE GRILLE AND DUCTWORK. PATCH WALL OPENING TO MATCH SURROUNDING SURFACES AND TO RETAIN THE RATED WALL CONFIGURATION. COORDINATE WITH ARCHITECTURAL PLANS.
11. REMOVE EXHAUST FAN AND CAP DUCTWORK BELOW ROOF DECK AND BEHIND ARCHITECTURAL SURFACE AS NOTED. PATCH OPENING TO MATCH SURROUNDING SURFACES.
12. REMOVE SEGMENT OF DUCT AND PREPARE DUCTWORK FOR NEW OUTSIDE AIR FAN AND DUCT TRANSITIONS.
13. REMOVE FENCE AS REQUIRED TO ACCOMMODATE THE NEW AC-F1 UNIT. COORDINATE NEW FENCE LOCATION WITH ARCHITECTURAL PLANS. NORTHWEST FENCE AND GATE TO BE SHIFTED A MINIMUM 3'-0" TO THE EAST.
14. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS AND REFRIGERANT PIPING SYSTEM. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
16. REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.

GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

SHEET NOTES

1. WALL HUNG AC-UNIT OR WALL HUNG HEAT PUMP UNIT. CONNECT TO DUCTWORK AS REQUIRED. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2 OR 2/M5.2
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS PER MANUFACTURER'S "PELICAN" INSTRUCTIONS WITH THE ADDITION OF THE PLUS50 TO THE EXISTING TS200.
3. NEW WALL PENETRATION FOR NEW WALL HUNG EQUIPMENT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. REINSTALL (E) GRILLE AFTER CLEANING INTO ORIGINAL LOCATION. CAP OPENING BELOW GRILLE WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES.
5. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON EXISTING CONCRETE CURB. RUN REFRIGERANT PIPING PER PLAN.
6. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON NEW MINIMUM 50" X 28" X 4" HIGH CONCRETE PAD. RUN REFRIGERANT PIPING PER PLAN.
7. OUTDOOR EQUIPMENT ON EXISTING CONCRETE. FENCING WILL NEED TO BE REMOVED IN ORDER FOR INSTALLATION OF THE NEW PACKAGED AC-UNIT. COORDINATE FENCE MODIFICATIONS WITH ARCHITECTURAL PLANS.
8. REBALANCE THE SPACE(S) PER THE CFM's NOTED.
9. 6" DIA. "SEIHO" SFX 6S METAL LOUVER SHUTTER PAINTED TO MATCH SURROUNDING SURFACES COMPLETE WITH INSECT SCREEN AND CAP COVER. COORDINATE LOCATION THRU WALL WITH FIELD CONDITIONS.
10. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON ROOF CURB. RUN REFRIGERANT PIPING PER PLAN. TOP OF UNIT TO MATCH BOTTOM OF SOFFIT HEIGHT.
11. NEW PELICAN TS250 THERMOSTAT.
12. WALL HUNG AC-UNIT. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2.

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUNN
M 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT
STEPHEN L. HENRY
C- 22328
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL FLOOR PLAN
BUILDINGS C & D

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RLJ/SV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

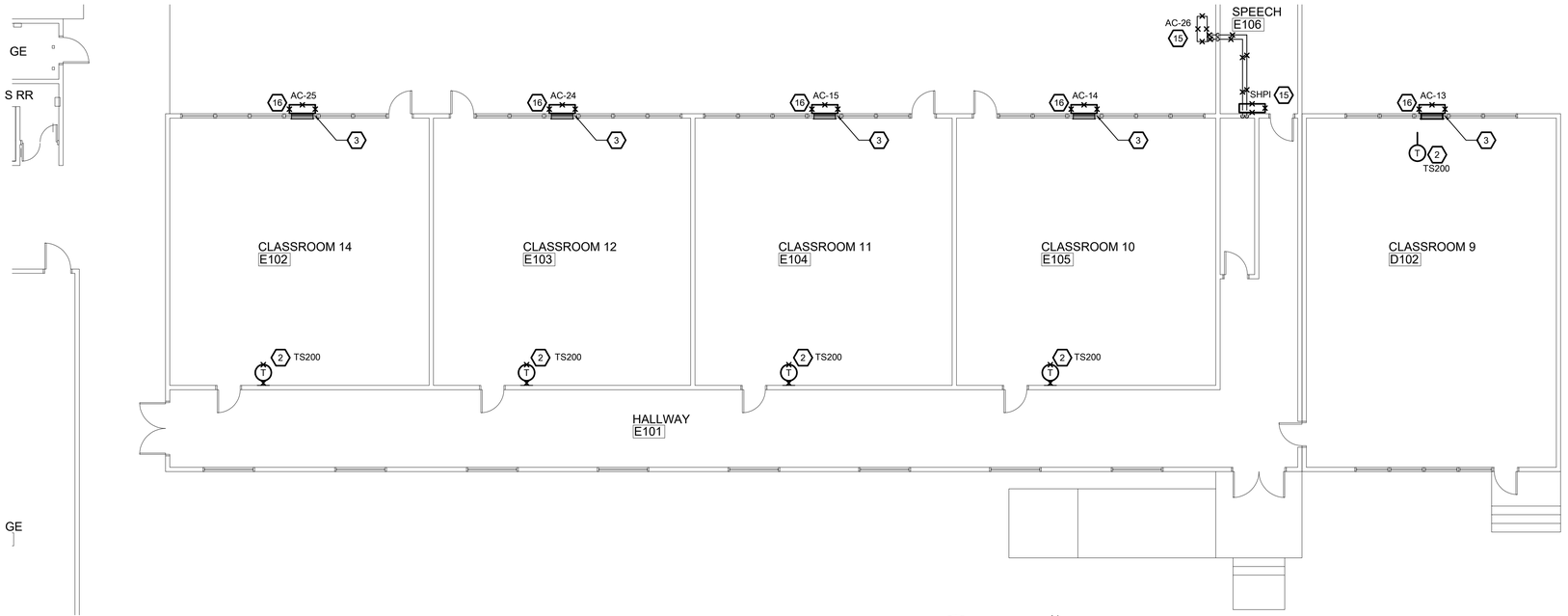
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M2.1CD

OF XX SHEETS

QC	
INI	%

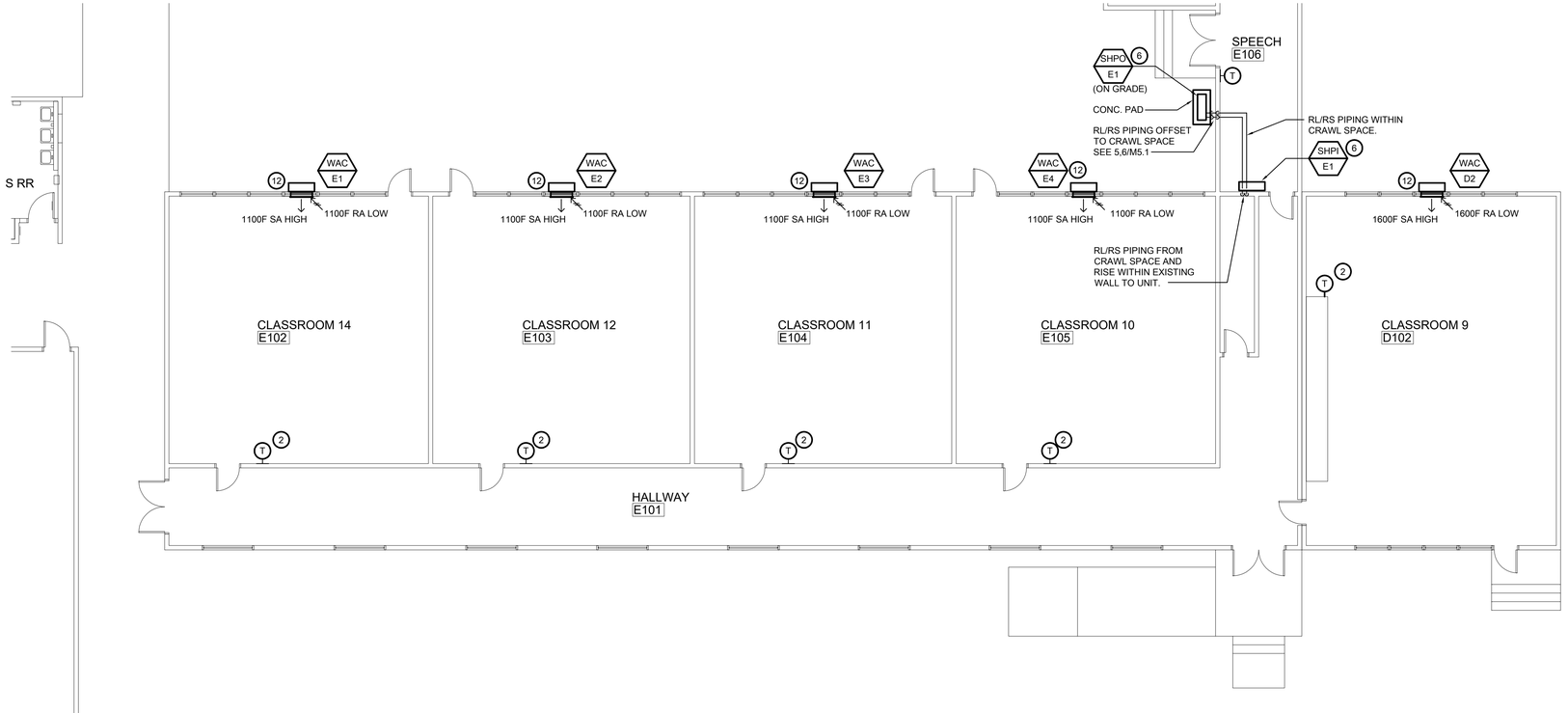


MECHANICAL DEMOLITON FLOOR PLAN BUILDINGS D & E

SCALE : 1/8" = 1'-0"

1 M2.1DE

N



MECHANICAL FLOOR PLAN BUILDINGS D & E

SCALE : 1/8" = 1'-0"

2 M2.1DE

N

DEMOLITION GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

DEMOLITION SHEET NOTES

1. • REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.
   • PREPARE EXISTING SA AND RA DUCTS FOR RECONNECTION TO NEW UNIT.
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS WITH THE ADDITION OF THE PLUS50. ALL STATS (NOT EXISTING TS250 STATS) ON SITE ARE TO REPLACED WITH THE PELICAN TS250 STATS
3. DUCTWORK AND GRILLE(S) TO REMAIN WHERE DUCTWORK IS LOCATED WITHIN SOFFIT. IF NO SOFFIT PROVIDE NEW DUCTWORK FOR WALL HUNG UNITS. PREPARE FOR NEW CONNECTIONS AT SOFFIT LOCATIONS.
4. REMOVE EXHAUST FAN, DUCTWORK, AND SUPPORTS. PATCH ALL WALL, FLOOR, AND ROOF OPENINGS WITH APPROPRIATE BLOCKING TO MATCH SURROUNDING SURFACES PER STRUCTURAL/ ARCHITECTURAL PLANS AND SPECIFICATIONS.
5. REMOVE GRILLE, CAP OPENING WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES. PREPARE FOR REINSTALLATION OF GRILLE AFTER CLEANING INTO ORIGINAL LOCATION.
6. REMOVE DUCT AND DUCT SUPPORTS BELOW FLOOR AND WITHIN THE CRAWL SPACE.
7. REMOVE AC-UNIT AND CURB. REMOVE DUCTWORK AND ASSOCIATED DUCT WORK LOCATED OUTSIDE. PATCH THE SIDEWALL TO MATCH SURROUNDING SURFACES. PATCH THE GRADE WORK REQUIRED BY BACKFILLING THE LARGE VOID/ OPENING(S) TO BELOW GRADE PER ARCHITECTURAL DRAWINGS.
8. CAP DUCT BEHIND ARCHITECTURAL SURFACES AND PATCH WALL TO MATCH SURROUNDING SURFACES.
9. REMOVE EXHAUST FAN AND CAP DUCTWORK BEHIND ARCHITECTURAL SURFACE. PATCH OPENING TO MATCH SURROUNDING SURFACES.
10. REMOVE GRILLE AND DUCTWORK. PATCH WALL OPENING TO MATCH SURROUNDING SURFACES AND TO RETAIN THE RATED WALL CONFIGURATION. COORDINATE WITH ARCHITECTURAL PLANS.
11. REMOVE EXHAUST FAN AND CAP DUCTWORK BELOW ROOF DECK AND BEHIND ARCHITECTURAL SURFACE AS NOTED. PATCH OPENING TO MATCH SURROUNDING SURFACES.
12. REMOVE SEGMENT OF DUCT AND PREPARE DUCTWORK FOR NEW OUTSIDE AIR FAN AND DUCT TRANSITIONS.
13. REMOVE FENCE AS REQUIRED TO ACCOMMODATE THE NEW AC-F1 UNIT. COORDINATE NEW FENCE LOCATION WITH ARCHITECTURAL PLANS. NORTHWEST FENCE AND GATE TO BE SHIFTED A MINIMUM 3'-0" TO THE EAST.
14. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS AND REFRIGERANT PIPING SYSTEM. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
15. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS, REFRIGERANT PIPING SYSTEM AND CONCRETE PAD. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
16. REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.

GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

SHEET NOTES

1. WALL HUNG AC-UNIT OR WALL HUNG HEAT PUMP UNIT. CONNECT TO DUCTWORK AS REQUIRED. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2 OR 2/M5.2
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS PER MANUFACTURER'S "PELICAN" INSTRUCTIONS WITH THE ADDITION OF THE PLUS50 TO THE EXISTING TS200.
3. NEW WALL PENETRATION FOR NEW WALL HUNG EQUIPMENT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. REINSTALL (E) GRILLE AFTER CLEANING INTO ORIGINAL LOCATION. CAP OPENING BELOW GRILLE WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES.
5. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON EXISTING CONCRETE CURB. RUN REFRIGERANT PIPING PER PLAN.
6. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON NEW MINIMUM 50" X 28" X 4" HIGH CONCRETE PAD. RUN REFRIGERANT PIPING PER PLAN.
7. OUTDOOR EQUIPMENT ON EXISTING CONCRETE. FENCING WILL NEED TO BE REMOVED IN ORDER FOR INSTALLATION OF THE NEW PACKAGED AC-UNIT. COORDINATE FENCE MODIFICATIONS WITH ARCHITECTURAL PLANS.
8. REBALANCE THE SPACE(S) PER THE CFM's NOTED.
9. 6" DIA. "SEIHO" SFX 6S METAL LOUVER SHUTTER PAINTED TO MATCH SURROUNDING SURFACES COMPLETE WITH INSECT SCREEN AND CAP COVER. COORDINATE LOCATION THRU WALL WITH FIELD CONDITIONS.
10. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON ROOF CURB. RUN REFRIGERANT PIPING PER PLAN. TOP OF UNIT TO MATCH BOTTOM OF SOFFIT HEIGHT.
11. NEW PELICAN TS250 THERMOSTAT.
12. WALL HUNG AC-UNIT. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2.

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUNN
M 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22328
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

MECHANICAL FLOOR PLAN BUILDINGS D & E

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RLJSV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

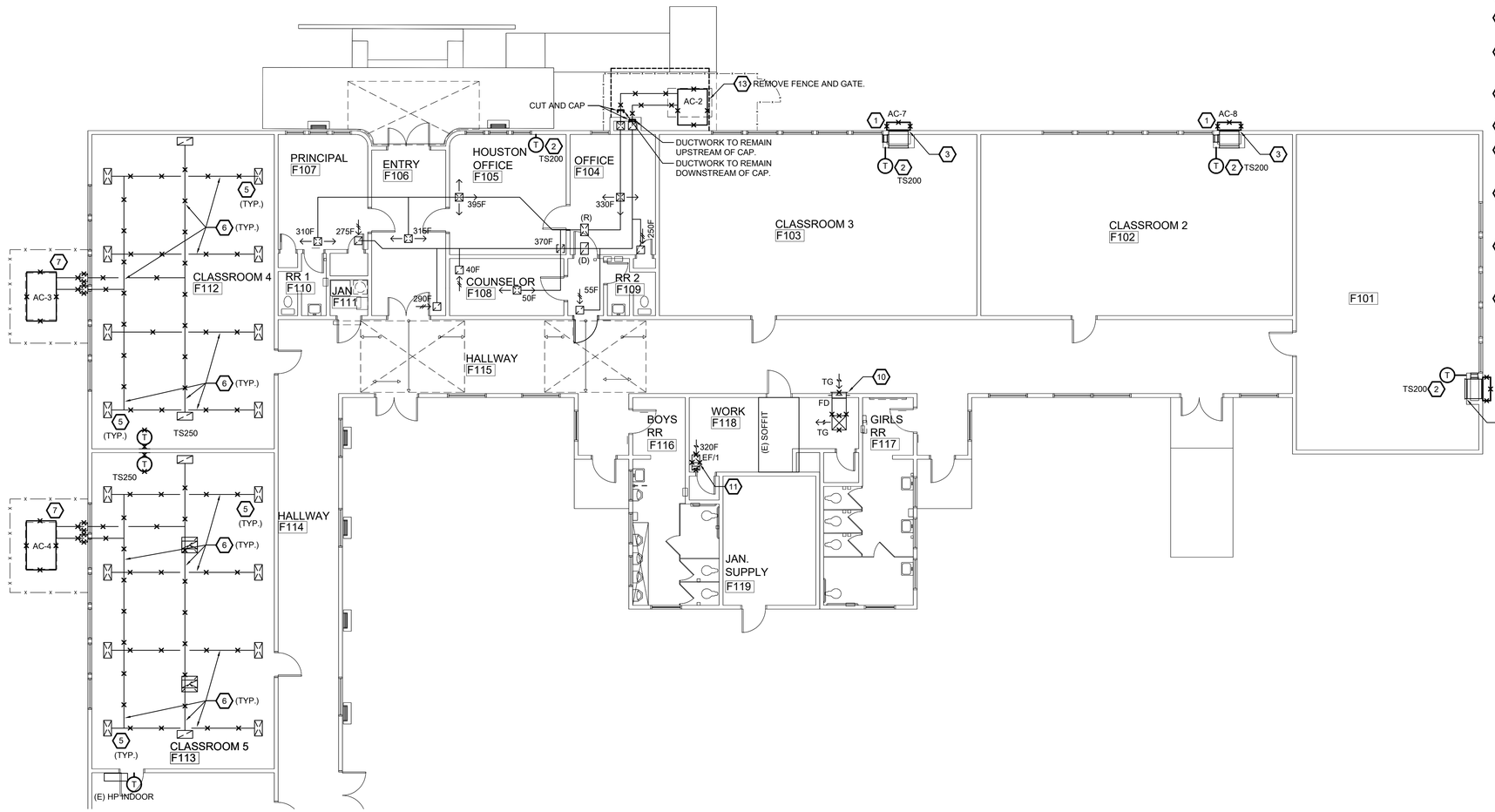
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M2.1DE

OF XX SHEETS

QC	
INI	%



MECHANICAL DEMO FLOOR PLAN BUILDING F

SCALE : 1/8" = 1'-0"

1 / M2.1F.1

N

DEMOLITION GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

DEMOLITION SHEET NOTES

1. • REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.
   • PREPARE EXISTING SA AND RA DUCTS FOR RECONNECTION TO NEW UNIT.
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS WITH THE ADDITION OF THE PLUS50. ALL STATS (NOT EXISTING TS250 STATS) ON SITE ARE TO REPLACED WITH THE PELICAN TS250 STATS
3. DUCTWORK AND GRILLE(S) TO REMAIN WHERE DUCTWORK IS LOCATED WITHIN SOFFIT. IF NO SOFFIT PROVIDE NEW DUCTWORK FOR WALL HUNG UNITS. PREPARE FOR NEW CONNECTIONS AT SOFFIT LOCATIONS.
4. REMOVE EXHAUST FAN, DUCTWORK, AND SUPPORTS. PATCH ALL WALL, FLOOR, AND ROOF OPENINGS WITH APPROPRIATE BLOCKING TO MATCH SURROUNDING SURFACES PER STRUCTURAL/ ARCHITECTURAL PLANS AND SPECIFICATIONS.
5. REMOVE GRILLE, CAP OPENING WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES. PREPARE FOR REINSTALLATION OF GRILLE AFTER CLEANING INTO ORIGINAL LOCATION.
6. REMOVE DUCT AND DUCT SUPPORTS BELOW FLOOR AND WITHIN THE CRAWL SPACE.
7. REMOVE AC-UNIT AND CURB. REMOVE DUCTWORK AND ASSOCIATED DUCT WORK LOCATED OUTSIDE. PATCH THE SIDEWALL TO MATCH SURROUNDING SURFACES. PATCH THE GRADE WORK REQUIRED BY BACKFILLING THE LARGE VOID/ OPENING(S) TO BELOW GRADE PER ARCHITECTURAL DRAWINGS.
8. CAP DUCT BEHIND ARCHITECTURAL SURFACES AND PATCH WALL TO MATCH SURROUNDING SURFACES.
9. REMOVE EXHAUST FAN AND CAP DUCTWORK BEHIND ARCHITECTURAL SURFACE. PATCH OPENING TO MATCH SURROUNDING SURFACES.
10. REMOVE GRILLE AND DUCTWORK. PATCH WALL OPENING TO MATCH SURROUNDING SURFACES AND TO RETAIN THE RATED WALL CONFIGURATION. COORDINATE WITH ARCHITECTURAL PLANS.
11. REMOVE EXHAUST FAN AND CAP DUCTWORK BELOW ROOF DECK AND BEHIND ARCHITECTURAL SURFACE AS NOTED. PATCH OPENING TO MATCH SURROUNDING SURFACES.
12. REMOVE SEGMENT OF DUCT AND PREPARE DUCTWORK FOR NEW OUTSIDE AIR FAN AND DUCT TRANSITIONS.
13. REMOVE FENCE AS REQUIRED TO ACCOMMODATE THE NEW AC-F1 UNIT. COORDINATE NEW FENCE LOCATION WITH ARCHITECTURAL PLANS. NORTHWEST FENCE AND GATE TO BE SHIFTED A MINIMUM 3'-0" TO THE EAST.
14. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS AND REFRIGERANT PIPING SYSTEM. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
15. REMOVE SPLIT INDOOR/ OUTDOOR UNIT INCLUDING SUPPORTS, REFRIGERANT PIPING SYSTEM AND CONCRETE PAD. REMOVE THERMOSTAT AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES. PREPARE FOR INSTALLATION OF NEW.
16. REMOVE (E) "BARD" EXTERIOR MOUNTED SIDE WALL UNIT INCLUDING MOUNTING HARDWARE.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL DEMO
FLOOR PLAN BUILDING F

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California
MCM - RLJ/SV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M2.1F.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M. 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

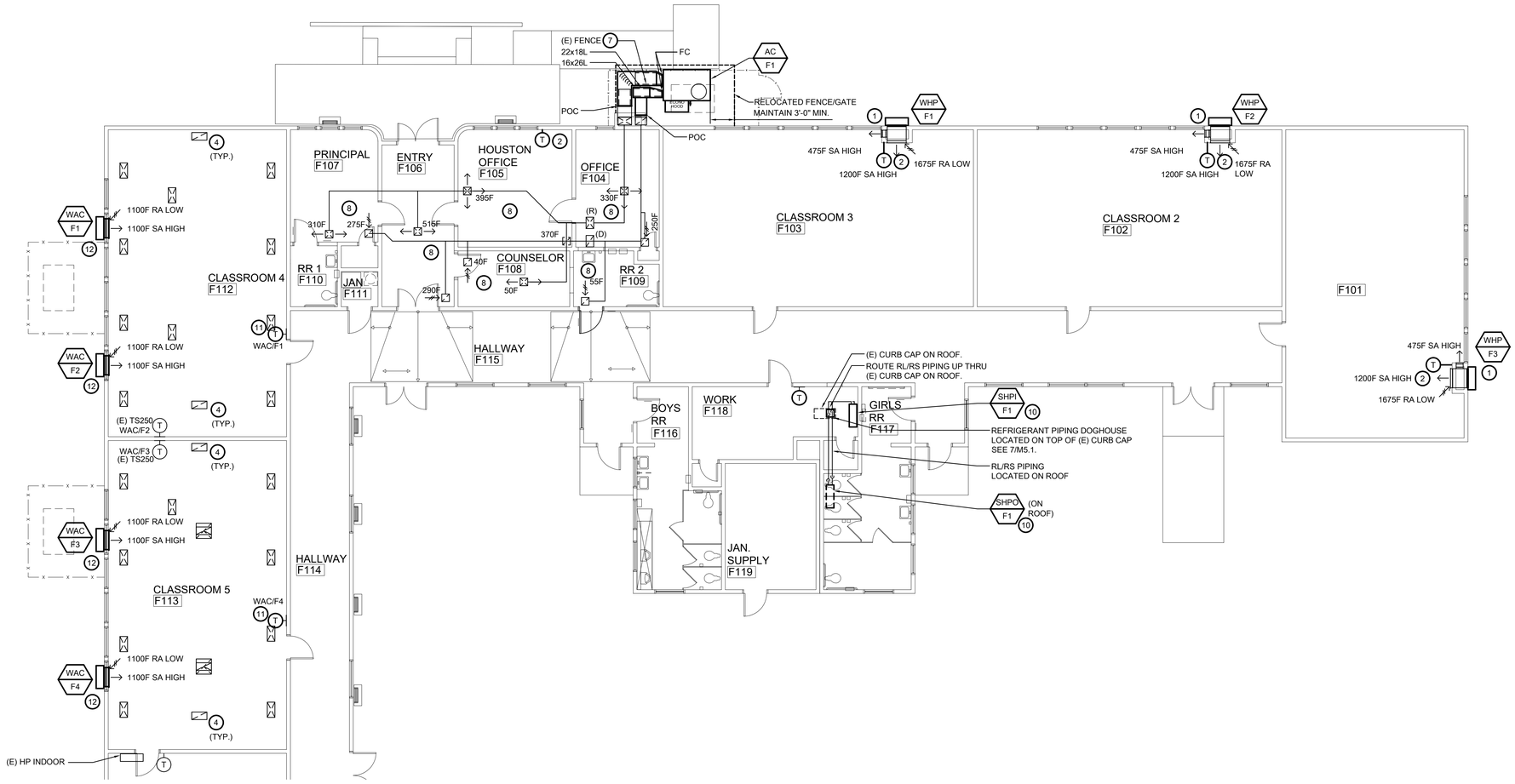
QC	
INI	%

GENERAL NOTES

1. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.
2. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.

SHEET NOTES

1. WALL HUNG AC-UNIT OR WALL HUNG HEAT PUMP UNIT. CONNECT TO DUCTWORK AS REQUIRED. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2 OR 2/M5.2
2. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS PER MANUFACTURER'S "PELICAN" INSTRUCTIONS WITH THE ADDITION OF THE PLUS50 TO THE EXISTING TS200.
3. NEW WALL PENETRATION FOR NEW WALL HUNG EQUIPMENT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. REINSTALL (E) GRILLE AFTER CLEANING INTO ORIGINAL LOCATION. CAP OPENING BELOW GRILLE WITH 12 GA. SHEET METAL. INSULATE UNDERSIDE OF SHEET METAL WITH 2" RIGID. TYPICAL FOR ALL IN FLOOR SUPPLY AND RETURN GRILLES.
5. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON EXISTING CONCRETE CURB. RUN REFRIGERANT PIPING PER PLAN.
6. 8" HIGH CONCRETE PAD, SEE STRUCTURAL DETAIL.
7. OUTDOOR EQUIPMENT ON EXISTING CONCRETE. FENCING WILL NEED TO BE REMOVED IN ORDER FOR INSTALLATION OF THE NEW PACKAGED AC-UNIT. COORDINATE FENCE MODIFICATIONS WITH ARCHITECTURAL PLANS.
8. REBALANCE THE SPACE(S) PER THE CFM's NOTED.
9. 6" DIA. "SEIHO" SFX 6S METAL LOUVER SHUTTER PAINTED TO MATCH SURROUNDING SURFACES COMPLETE WITH INSECT SCREEN AND CAP COVER. COORDINATE LOCATION THRU WALL WITH FIELD CONDITIONS.
10. SPHPI MOUNTED ON WALL. SHPO UNIT MOUNTED ON ROOF CURB. RUN REFRIGERANT PIPING PER PLAN. TOP OF UNIT TO MATCH BOTTOM OF SOFFIT HEIGHT.
11. NEW PELICAN TS250 THERMOSTAT.
12. WALL HUNG AC-UNIT. BALANCE TO CFM's NOTED. FOR MOUNTING DETAIL SEE 1/M5.2.



MECHANICAL FLOOR PLAN BUILDING F

SCALE : 1/8" = 1'-0"

1 / M2.1F.1

N

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL
ENLARGED FLOOR PLAN
BUILDING F

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RLJSV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

M2.1F.2

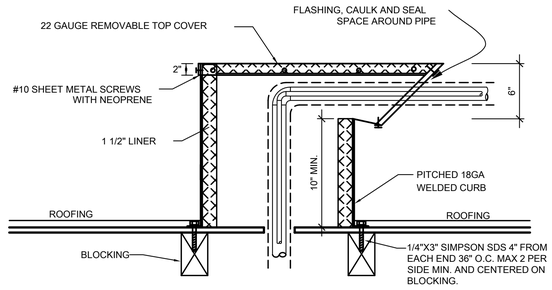
OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUVAL M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

L:\2019\190705.000\1200 Drawings\1206 AutoCAD Project Files\M2.1 F 2.dwg - February 25, 2020 11:24 AM - Tom Bailey

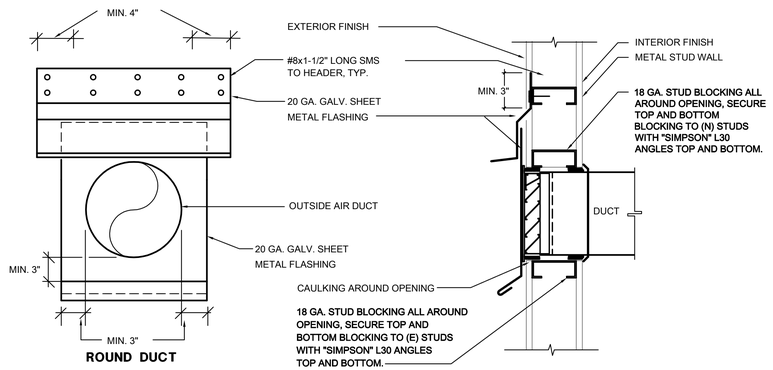
QC	
INI	%



PIPE THRU ROOF SAFE DETAIL - WOOD

7 / M5.1

SCALE : NONE

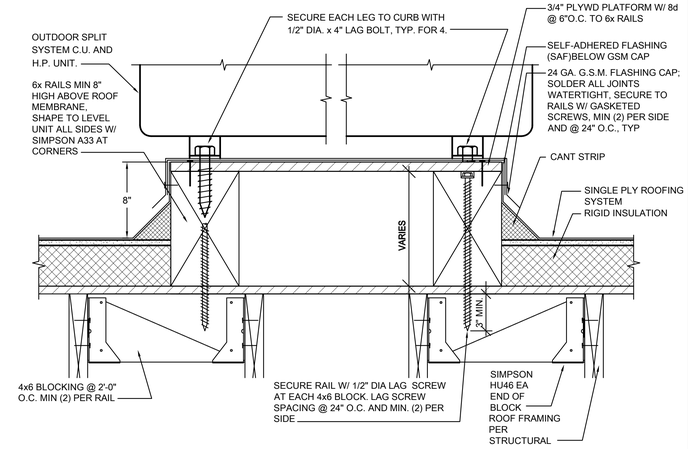


ROUND DUCT

LOUVER AT EXTERIOR WALL DETAIL

4 / M5.1

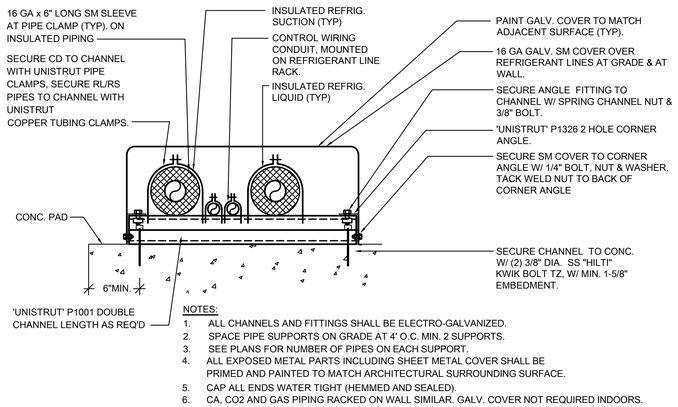
SCALE : NONE



OUTDOOR SPLIT CU, SAC & HP UNIT MTG.

1 / M5.1

SCALE :NONE



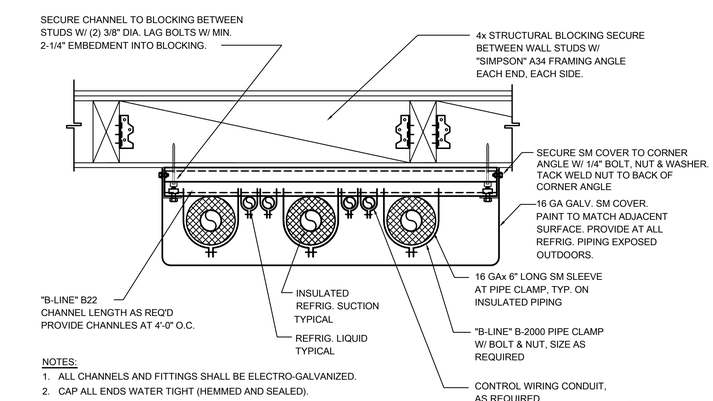
NOTES:

1. ALL CHANNELS AND FITTINGS SHALL BE ELECTRO-GALVANIZED.
2. SPACE PIPE SUPPORTS ON GRADE AT 4' O.C. MIN. 2 SUPPORTS.
3. SEE PLANS FOR NUMBER OF PIPES ON EACH SUPPORT.
4. ALL EXPOSED METAL PARTS INCLUDING SHEET METAL COVER SHALL BE PRIMED AND PAINTED TO MATCH ARCHITECTURAL SURROUNDING SURFACE.
5. CAP ALL ENDS WATER TIGHT (HEMMED AND SEALED).
6. CA, CO2 AND GAS PIPING RACKED ON WALL SIMILAR. GALV. COVER NOT REQUIRED INDOORS.

REFRIG PIPE ON SLAB AT YARD

5 / M5.1

SCALE : NONE **(REFRIG. PIPE ON EXTERIOR WALL SIMILAR)**



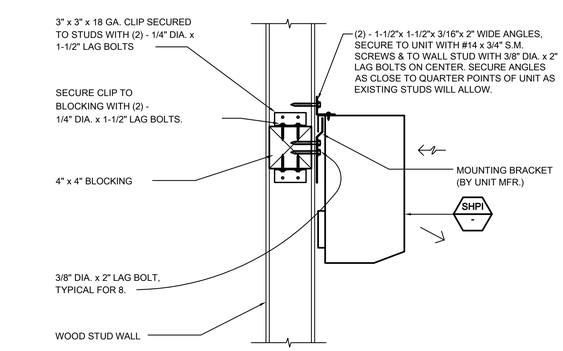
NOTES:

1. ALL CHANNELS AND FITTINGS SHALL BE ELECTRO-GALVANIZED.
2. CAP ALL ENDS WATER TIGHT (HEMMED AND SEALED).

REFRIGERANT PIPING ON WALL

6 / M5.1

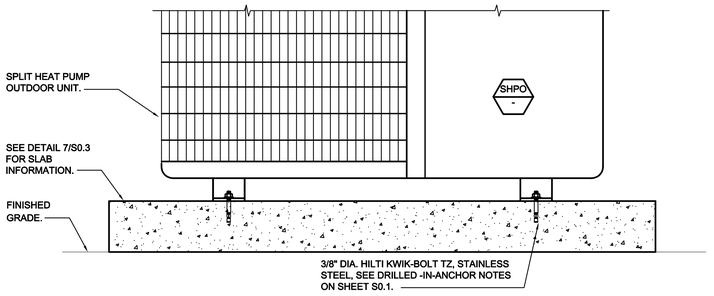
SCALE : NONE



INDOOR SPLIT SHPI UNIT MOUNTING

3 / M5.

SCALE : NONE



SHPO UNIT MOUNTING

2 / M5.1

SCALE : NONE

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

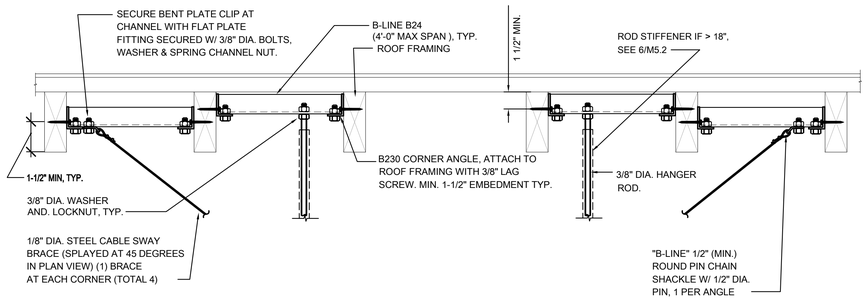
MECHANICAL
DETAILS

CONSULTANT
CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RLJSV 190705.00
PM - DESIGN TEAM PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.
M5.1
OF XX SHEETS

QC	
INI	%

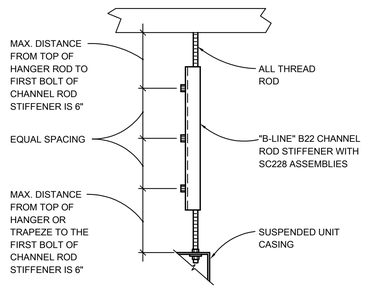


NOTE:
SEE DRAWINGS FOR NUMBER AND SIZE OF PIPES.

REFRIGERANT PIPING SUPPORT

SCALE : NONE

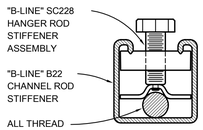
3 / M5.2



ROD STIFFENER

SCALE : NONE

6 / M5.2



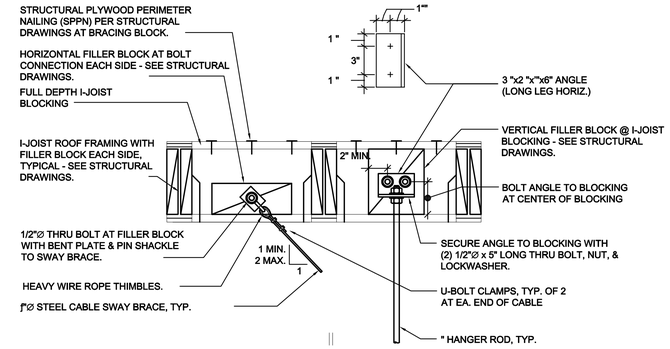
FOR 3/8" THRU 5/8" ROD
(FOR 3/4" & 7/8" ROD USE SC-UB)

ROD STIFFENER CHART

ATR Size	Max. Rod Length Without Rod Stiffener	
	In.	(mm)
3/8"-16	19"	(482.6)
1/2"-13	25"	(635.0)
5/8"-11	31"	(787.4)
3/4"-10	37"	(939.8)
7/8"-9	43"	(1092.2)

Note: Minimum of (2)-SC228 or SC-UB are required per rod.

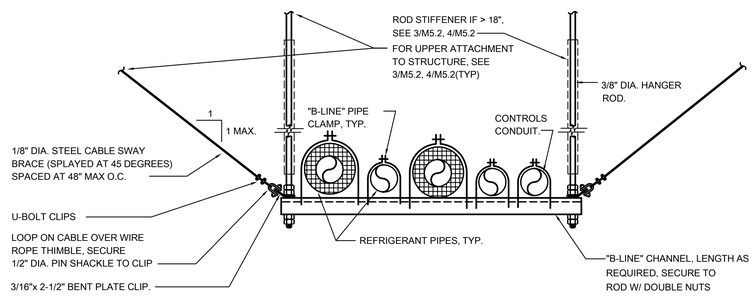
DETAIL FROM "B-LINE" SEISMIC RESTRAINTS SYSTEM, OSHPD PRE-APPROVAL No. R-0114.



HANGER ROD/CABLE UPPER ATTACHMENT

SCALE : NONE

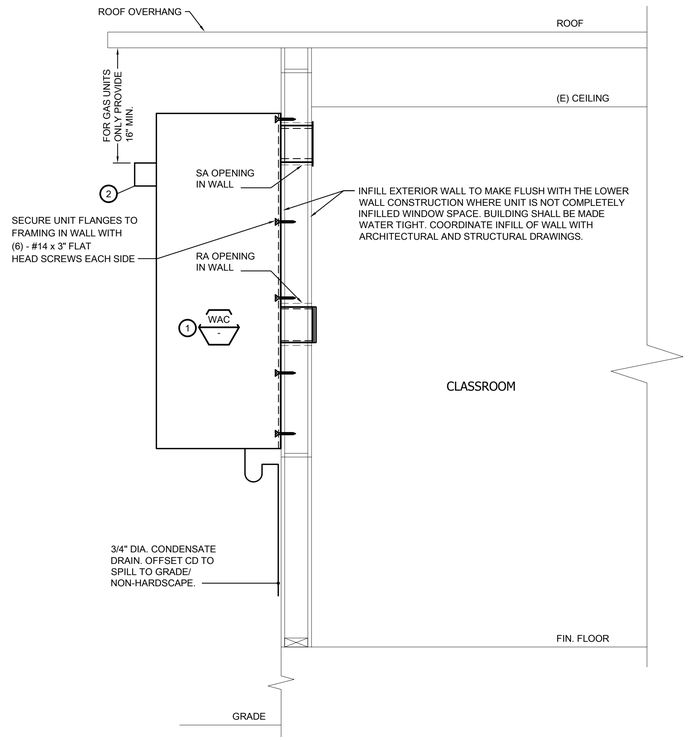
4 / M5.2



REFRIGERANT PIPING SUPPORT

SCALE : NONE

5 / M5.2



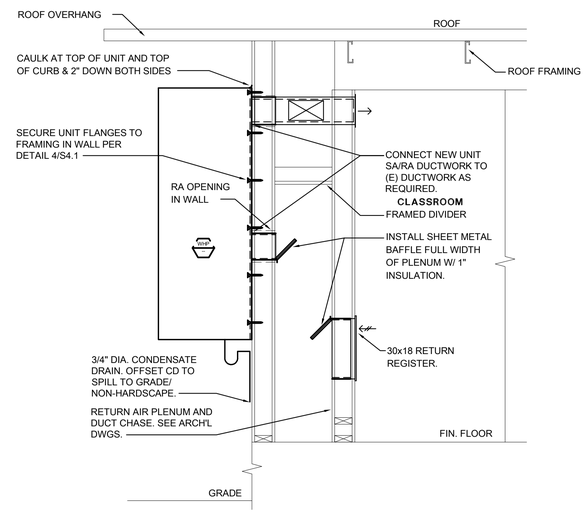
SHEET NOTES:

1. REMOVE (E) WALL MOUNT UNIT AND REPLACE WITH (N) WALL MOUNT UNIT BY BARD MANUFACTURER.
2. MAINTAIN 16" MIN. CLEARANCE FROM TOP OF COMBUSTION AIR EXHAUST TO BOTTOM OF ROOF. GAS FIRED UNIT ONLY.

WALL MOUNTED WAC DETAIL

SCALE : NONE

1 / M5.2



WALL MOUNTED WHP DETAIL

SCALE : NONE

2 / M5.2

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUNN
M. 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22528 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

MECHANICAL DETAILS

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RLJSV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

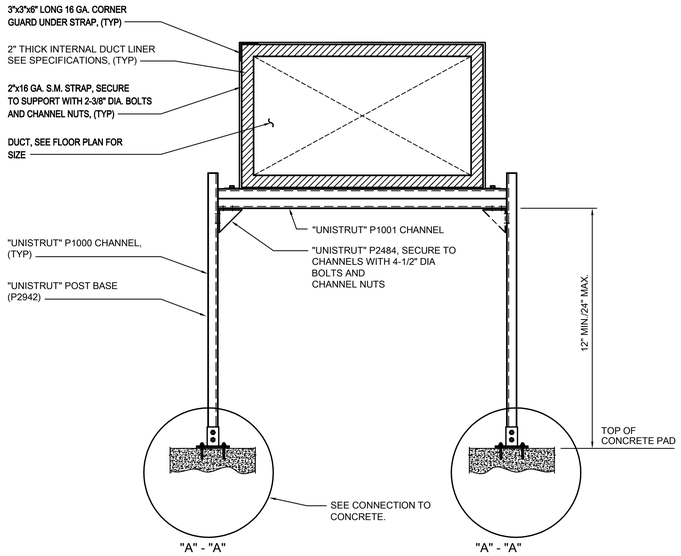
PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M5.2

OF XX SHEETS

QC	
INI	%

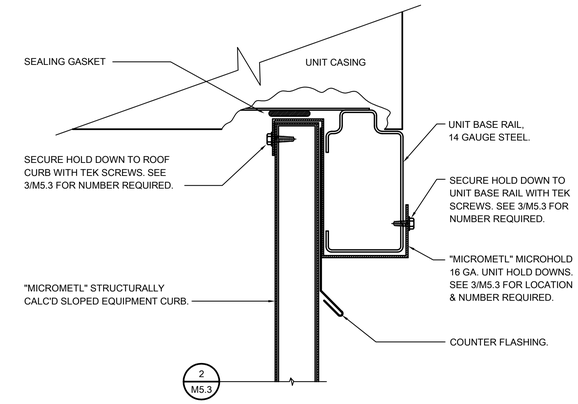


NOTE: PROVIDE DUCT SUPPORT AT 5 FT. MAX. APART

DUCT SUPPORT ON CONCRETE

SCALE : NONE

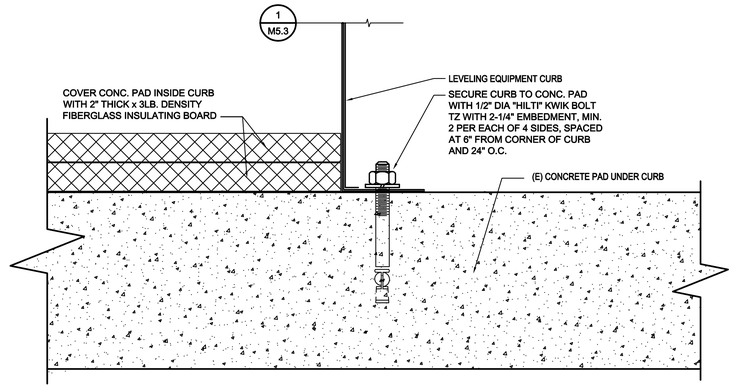
3 / M5.3



AC UNIT TO CURB MOUNTING

SCALE : NONE

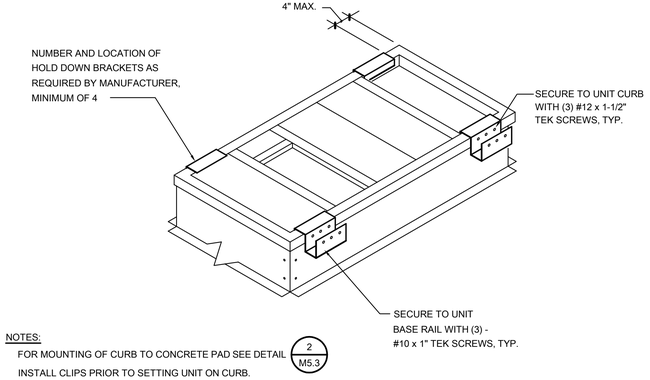
1 / M5.3



CURB TO STRUCTURE MOUNTING

SCALE : NONE

2 / M5.3



NOTES:

FOR MOUNTING OF CURB TO CONCRETE PAD SEE DETAIL 2 / M5.3

INSTALL CLIPS PRIOR TO SETTING UNIT ON CURB.

TYP. AC "HOLD DOWN"

SCALE : NONE

3 / M5.3

REGISTERED PROFESSIONAL ENGINEER — THOMAS A. DUCAY — M 22836 EXPIRES 9/30/20 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT — STEPHEN L. HENRY — C- 22328 — 12/31/21 RENEWAL DATE — STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL
DETAILS

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California

MCM - RLJSV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

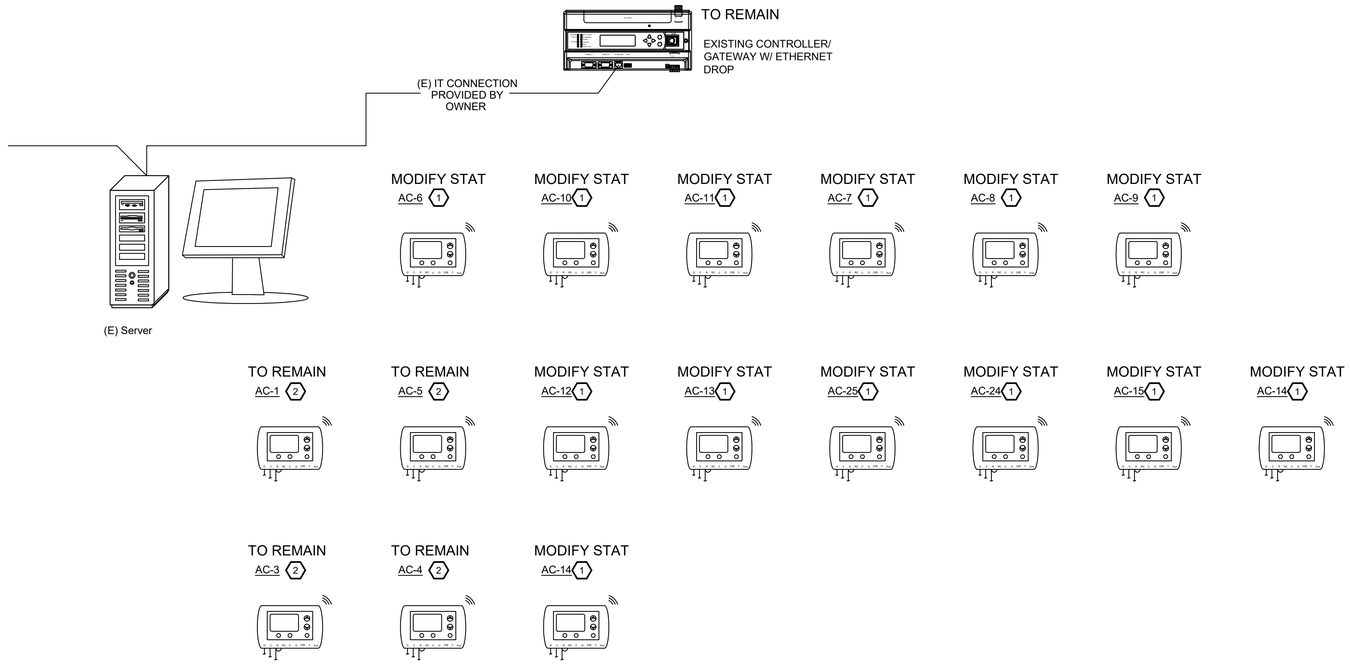
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M5.3

OF XX SHEETS

QC	
INI	%



NETWORK RISER DIAGRAM - DEMOLITION

SCALE : NONE

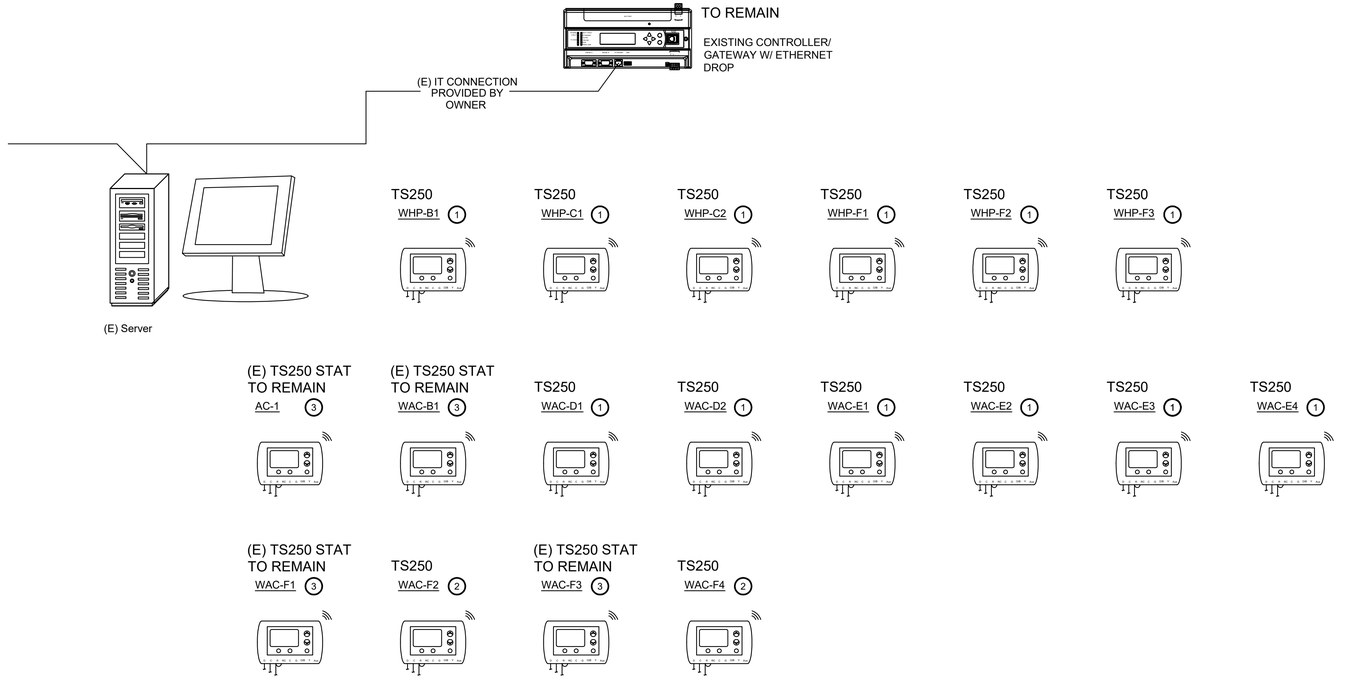
1
M6.1

DEMOLITION KEYNOTES:

1. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS WITH THE ADDITION OF THE PLUS50.
2. EXISTING PELICAN TS250 STAT TO REMAIN.

NEW KEYNOTES:

1. MODIFY THE EXISTING PELICAN TS200 THERMOSTATS PER MANUFACTURER'S "PELICAN" INSTRUCTIONS WITH THE ADDITION OF THE PLUS50 TO THE EXISTING TS200.
2. NEW "PELICAN" STAT.
3. EXISTING "PELICAN" TS250 STAT.



NETWORK RISER DIAGRAM - NEW

SCALE : NONE

2
M6.1

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22528 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

MECHANICAL CONTROLS

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RL/JSV PM - DESIGN TEAM | 190705.00 PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

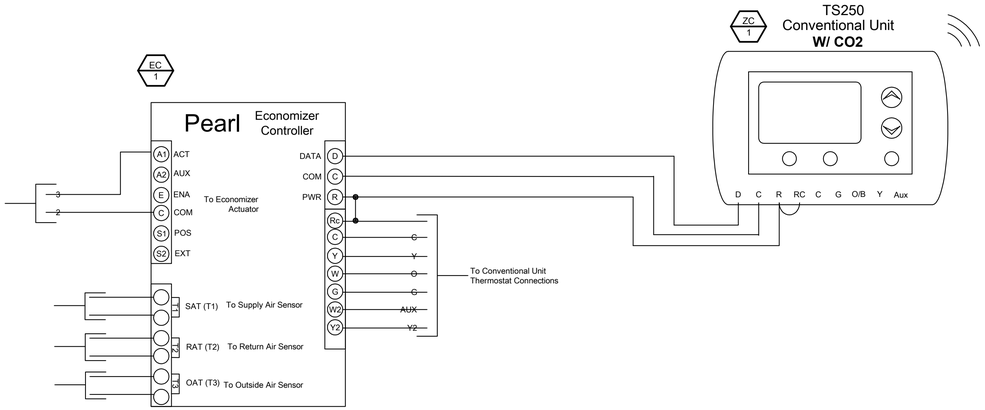
M6.1

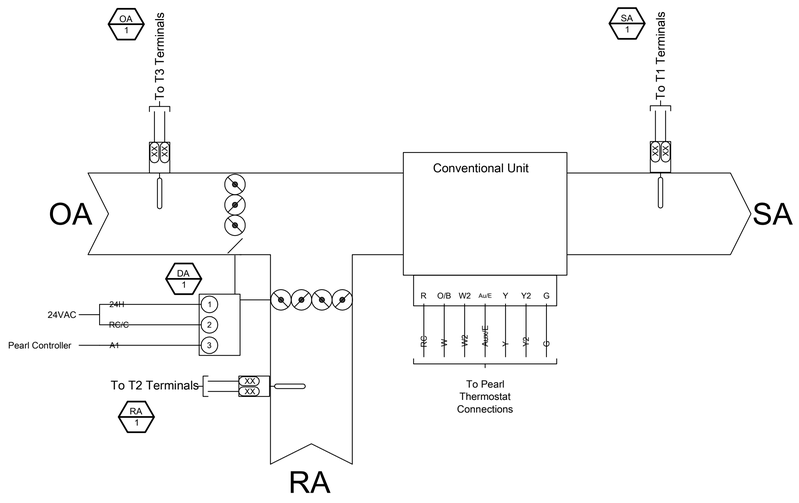
OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUGAL M. 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%



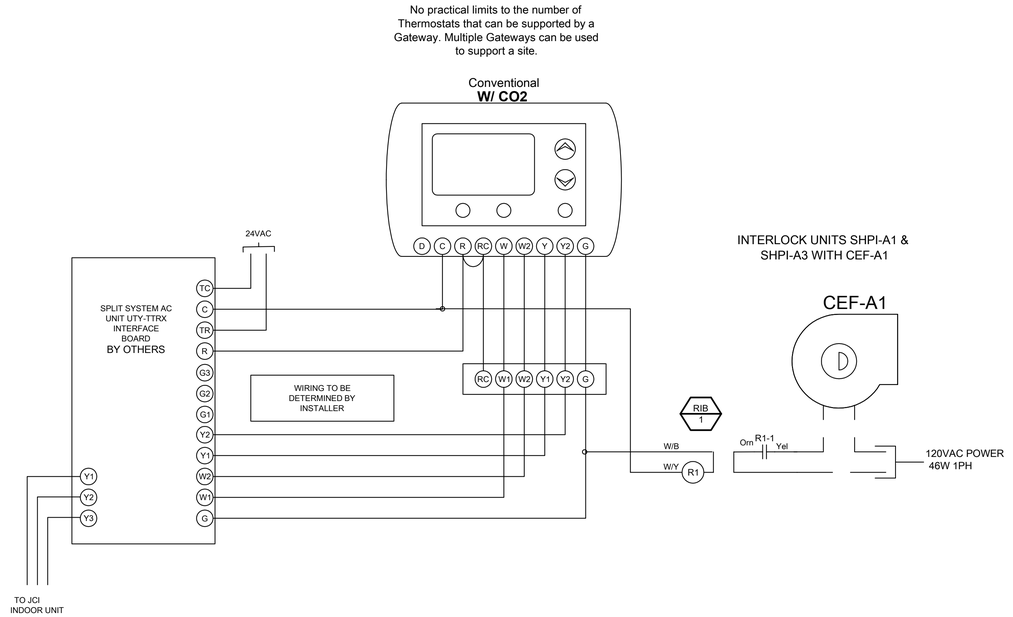


AC UNIT WITH ECONOMIZER DETAIL

SCALE : NONE Typical of AC-F1

3 / M6.2

No practical limits to the number of Thermostats that can be supported by a Gateway. Multiple Gateways can be used to support a site.



WIRELESS COMPONENTS

TAG QTY		PART NUMBER	DESCRIPTION
TS-1	X		PEL TS250 Wireless Thermostat

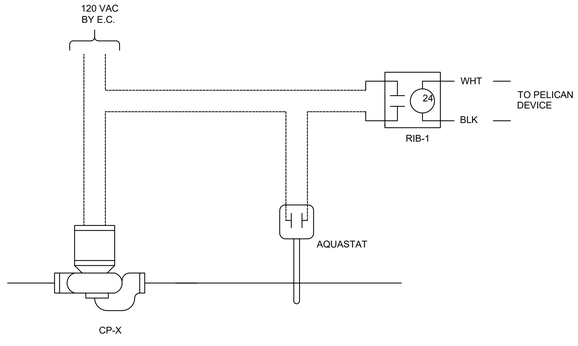
FIELD COMPONENTS

TAG QTY		PART NUMBER	DESCRIPTION
RIB-1		X FUN RIBU1C	24 VAC, SPDT RIB RELAY, 10A CONTACT RATING

SPLIT SYSTEM AC UNIT

SCALE : NONE TYPICAL OF SHPI-A1 THRU SHPI-A3

2 / M6.2



1. CIRCULATING PUMP SHALL RUN DURING OCCUPIED HOURS.
2. SET AQUASTAT TO SHUT OFF PUMP WHEN RETURN WATER TEMPERATURE REACHES 140 DEG F.
3. SEE PLUMBING PLANS FOR LOCATION.

DOMESTIC HW CIRCULATING PUMP CONTROL DIAGRAM

SCALE : NONE

1 / M6.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22328 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

MECHANICAL
CONTROLS

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California
MCM - RLJSV PM - DESIGN TEAM
190705.00 PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M6.2

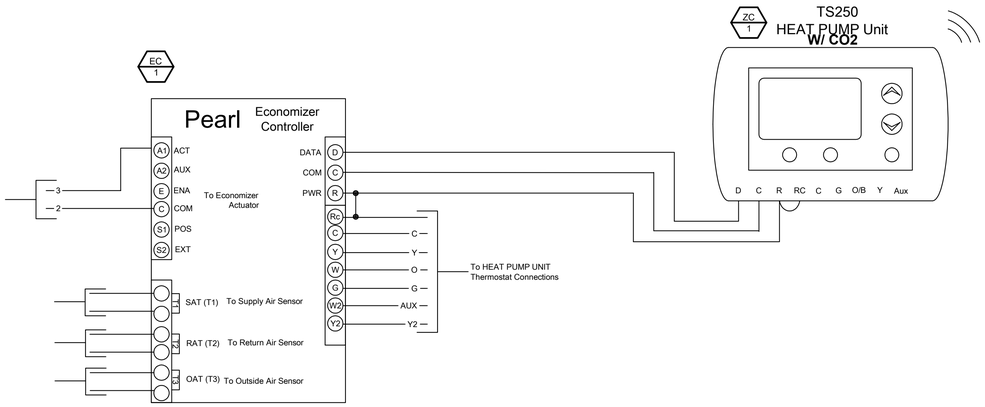
OF XX SHEETS

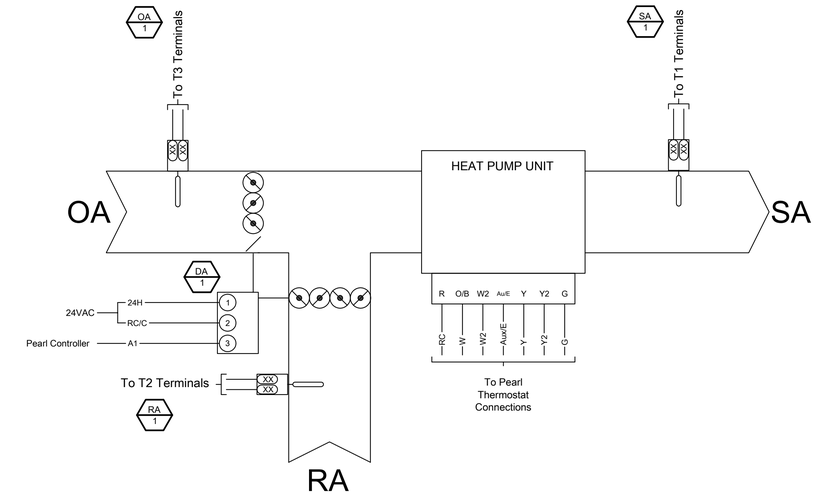
REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M. 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

L:\2019\190705.00\1200 Drawings\1205 AutoCAD Project Files\M6.2.dwg - February 20, 2020 02:18 PM - Richard Lingo

QC	
INI	%



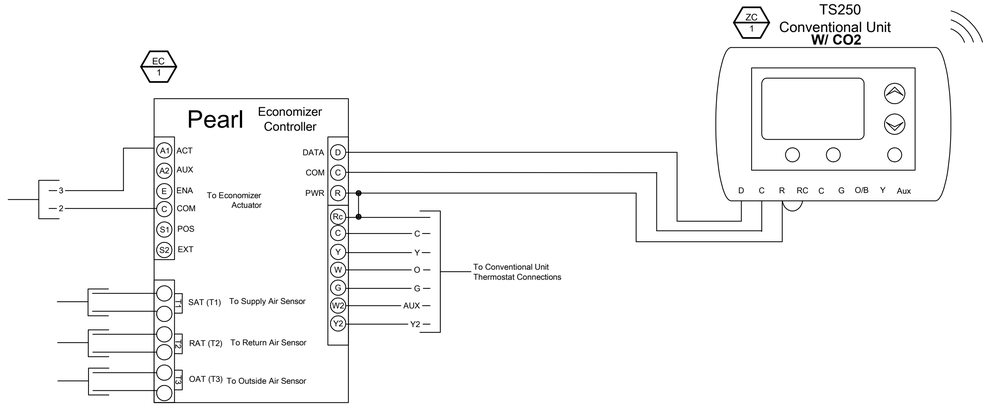


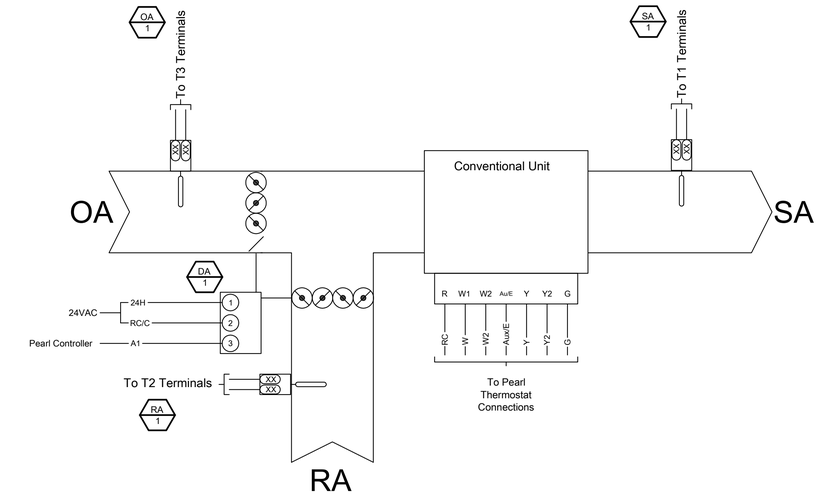
HEAT PUMP

UNIT WITH ECONOMIZER DETAIL

2 / M6.3

SCALE : NONE Typical Of: WHP-B1, WHP-C1, WHP-C2, WHP-F1, WHP-F2, WHP-F3





GAS/ELECTRIC

AC UNIT WITH ECONOMIZER DETAIL

1 / M6.3

SCALE : NONE Typical Of WAC-B1, WAC-D1, WAC-D2, WAC-E1, WAC-E2, WAC-E3, WAC-E4, WAC-F1, WAC-F2, WAC-F3 & WAC-F4.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

MECHANICAL CONTROLS

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California

MCM - RLJSV (PM - DESIGN TEAM) 190705.00 (PROJECT NO.)

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		

SHEET NO.

M6.3

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

L:\2019\190705.00\1200 Drawings\1205 AutoCAD Project Files\M6.3.dwg - February 20, 2020 02:58 PM - Richard Lingo

QC	
INI	%

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	Page 1 of 3
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS
(indicate if worksheet is included)

For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans. The NRCC-MCH-04-E and NRCC-MCH-05-E are alternative compliance documents to NRCC-MCH-01-E, NRCC-MCH-02-E and NRCC-MCH-03-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
○	◉	NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
◉	○	NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
◉	○	NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. It is required on plans when used.
○	◉	NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pools or spas. It is required on plans where applicable.

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	Page 2 of 3
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this compliance document will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:
Systems Acceptance. Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance. Before occupancy permit is granted all newly installed HVAC equipment must be tested using the Acceptance Requirements. The NRCC-MCH-04-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed and replaced equipment. In addition a Certificate of Acceptance compliance documents shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed compliance documents before the building can receive final occupancy.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-11-A	MCH-12-A	MCH-14-A	MCH-18-A	
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Automatic Demand Shed Control	FDD for Packaged DX Units	Distributed Energy Storage DX AC Systems	Energy Management Control System	Test Performed By:
WHP B1, C1, C2, F1, F2, F3	6	☑	☑	☐	☑	☑	☐	☐	☐	☐	☐	Installing Contractor
WAC B1,	1	☑	☑	☐	☑	☑	☐	☐	☐	☐	☐	Installing Contractor
WAC D1, D2,	2	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐	Installing Contractor
WAC E1, thru E4, F1, thru F4	8	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐	Installing Contractor

Add Row | Remove Last

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	Page 3 of 3
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Aaron Wintermith	Documentation Author Signature: [signature]
Company: Capital Engineering	Signature Date: 01/20/2020
Address: 11020 Sun Center DR #100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

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: Thomas A Duval	Responsible Designer Signature: [signature]
Company: Capital Engineering	Date Signed: 01/20/2020
Address: 11020 Sun Center Dr #100	License: M22836
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

Equipment Tag(s)[1]		WHP B1, C1, C2, F1, F2, F3		WAC B1		WAC D1, D2	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	3.0 COP	3.0 COP	81% AFUE	81%	81% AFUE	81%
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	10.0 EER	11.0 EER	10.0 EER	11.0 EER	10.0 EER	11.0 EER
Thermostats[5]	110.2(b), 110.2(c)	Prog	Pelican	Prog	Pelican	Prog	Pelican
Furnace Standby Loss Control[6]	110.2(d)	NA	NA	NA	NA	NA	NA
Low Leakage AHU	110.2(f)	NA	NA	NA	NA	NA	NA
Ventilation[7]	120.1(b)	0.38 cfm/sf	450 cfm	0.38 cfm/sf	450 cfm	0.38 cfm/sf	450 cfm
Demand Control Ventilation[8]	120.1(c)4	Req	Provided	Req	Provided	Req	Provided
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3	NA	NA	NA	NA	NA	NA
Shutoff and Reset Controls[9]	120.2(e)	Req	Provided	Req	Provided	Req	Provided
Outdoor Air and Exhaust Damper Control	120.2(f)	Auto	Auto	Auto	Auto	Auto	Auto
Automatic Demand Shed Controls	120.2(h)	NR	NR	NR	NR	NR	NR
Economizer FDD	120.2(i)	Req	Provided	Req	Provided	Req	Provided
Duct Insulation	120.4	R4.2	R4.2	R4.2	R4.2	R4.2	R4.2
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	Y	Y	Y	Y	Y	Y
Economizer	140.4(e)	Req	FDD	NR	FDD	Req	FDD
Electric Resistance Heating[10]	140.4(g)	None	Complies	None	Complies	None	Complies
Duct Leakage Sealing and Testing.[11]	140.4(l)	None	None	None	None	None	None

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heatpump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥ 225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

Equipment Tag(s)[1]		WAC E1 thru E4, F1 thru F4					
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	81% AFUE	82% AFUE				
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	10.0 EER	11.7 EER				
Thermostats[5]	110.2(b), 110.2(c)	Prog	Pelican				
Furnace Standby Loss Control[6]	110.2(d)	NA	NA				
Low Leakage AHU	110.2(f)	NA	NA				
Ventilation[7]	120.1(b)	0.38 cfm/sf	450 cfm				
Demand Control Ventilation[8]	120.1(c)4	Req	Provided				
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3	NA	NA				
Shutoff and Reset Controls[9]	120.2(e)	Req	Provided				
Outdoor Air and Exhaust Damper Control	120.2(f)	Auto	Auto				
Automatic Demand Shed Controls	120.2(h)	NR	NR				
Economizer FDD	120.2(i)	FDD	FDD				
Duct Insulation	120.4	R4.2	R4.2				
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	Y	Y				
Economizer	140.4(e)	NR	FDD				
Electric Resistance Heating[10]	140.4(g)	NONE	COMPLIES				
Duct Leakage Sealing and Testing.[11]	140.4(l)	NONE	NONE				

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heatpump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥ 225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 2 of 2)
Project Name: Moderinzation Houston School	Date Prepared: 12/12/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Aaron Wintersmith	Documentation Author Signature: [signature]
Company: Capital Engineering	Signature Date: 01/20/2020
Address: 11020 Sun Center DR #100	CEA/ -HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3563

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: Thomas A Duval	Responsible Designer Signature: [signature]
Company: Capital Engineering	Date Signed: 01/20/2020
Address: 11020 Sun Center Dr #100	License: M22836
City/State/Zip: Sacramento CA 95670	Phone: 916-851-3500

STATE OF CALIFORNIA
WATER HEATING SYSTEM GENERAL INFORMATION
CEC-NRCC-PLB-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-PLB-01-E
Water Heating System General Information	(Page 1 of 2)
Project Name: Modernization Houston School	Date Prepared: 12/12/2019

A. GENERAL INFORMATION/SYSTEM INFORMATION

01	Water Heater System Name:	EWF-F1
02	Water Heater System Configuration:	
03	Water Heater System Type:	Domestic Hot Water
04	Building Type:	Nonresidential
05	Total Number of Water Heaters in Systems:	1
06	Central DHW Distribution Type:	
07	Dwelling Unit DHW Distribution Type:	

B. WATER HEATER INFORMATION
Each water heater type requires a separate compliance document.

01	Water Heater Type:	Small Storage - Electric
02	Fuel Type:	Electricity
03	Manufacture Name:	AO SMITH
04	Model Number:	DEL-15 4KW
05	Number of Identical Water Heaters:	1
06	Installed Water Heater System Efficiency:	91% Eff
07	Required Minimum Efficiency:	91% Eff
08	Standby Loss Percent or Standby Loss Total:	
09	Rated Input:	13,640
10	Pilot Energy:	NA
11	Water Heater Tank Storage Volume:	NA
12	Exterior Insulation on Water Heater:	NA
13	Volume of Supplemental Storage:	NA
14	Internal Insulation on Supplemental Storage:	NA
15	Exterior Insulation on Supplemental Storage:	NA

C. PLUMBING COMPLIANCE FORMS & WORKSHEETS
Check box if worksheet is included.
For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans.

YES	NO	Doc/Worksheet #	Title
◉	○	NRCC-PLB-01-E	Certificate of Compliance, Declaration. Required on plans for all submittals.
○	◉	NRCI-PLB-01-E	Certificate of Installation. Required on plans for all submittals.
○	◉	NRCI-PLB-02-E	Certificate of Installation, required on central systems in high-rise residential, hotel/motel application.
○	◉	NRCI-PLB-03-E	Certificate of Installation, required on single dwelling unit systems in high-rise residential, hotel/motel application.
○	◉	NRCI-PLB-21-H	Certificate of Installation, required on HERS verified central systems in high-rise residential, hotel/motel application.
○	◉	NRCI-PLB-22-H	Certificate of Installation, required on HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.
○	◉	NRCI-STH-01-E	Certificate of Installation, required on any solar water heating

STATE OF CALIFORNIA
WATER HEATING SYSTEM GENERAL INFORMATION
CEC-NRCC-PLB-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-PLB-01-E
Water Heating System General Information	(Page 2 of 2)
Project Name: Joe Serna School	Date Prepared: 12/19/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Aaron Wintersmith	Documentation Author Signature: [signature]
Company: Capital Engineering	Signature Date: 01/20/2020
Address: 11020 Sun Center DR #100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

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: Thomas A Duval	Responsible Designer Signature: [signature]
Company: Capital Engineering	Date Signed: 01/20/2020
Address: 11020 Sun Center Dr #100	License: M22836
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. HENRY C-22529 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

T-24 DOCUMENTATION

CONSULTANT
CAPITAL ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
MCM - RL/JSV — PM - DESIGN TEAM
190705.00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/11/2020		
SHEET NO. M7.1		

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUVAL M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA
DATE SIGNED: 02/18/20

L:\2019\190705.00\1200 Drawings\1205 AutoCAD Project Files\M7.1.dwg - February 20, 2020 02:58 PM - Richard Lingo

6.1 MECHANICAL CONTROLS

QC	
INI	%

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	ABC	ABOVE CEILING
	AFF	ABOVE FINISHED FLOOR
	AF , BF	ABOVE FLOOR , BELOW FLOOR
	AD , AP	ACCESS DOOR , ACCESS PANEL
	BV	BALL VALVE
	BFF	BELOW FINISHED FLOOR
		BRANCH - TOP CONNECTION
		BRANCH - BOTTOM CONNECTION
or		BRANCH - SIDE CONNECTION
	COP	CAP ON END OF PIPE
	CW	COLD WATER
CD	CD	CONDENSATE DRAIN LINE
	DN	DOWN
	DFU	DRAIN FIXTURE UNIT
PCD	PCD	PUMPED CONDENSATE DRAIN
CO CO	CO	CLEANOUT
		EXISTING TO BE REMOVED
	(E)	EXISTING TO REMAIN
	(E)	EXISTING TO BE ABANDONED, CAP WHERE SHOWN
	EWH	ELECTRIC WATER HEATER
FF=		FINISHED FLOOR ELEVATION
FU	FU	FIXTURE UNIT
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
	FS	FLOOR SINK
		FLOW IN DIRECTION OF ARROW
FV , FT	FV , FT	FLUSH VALVE , FLUSH TANK
(FA) , (TA)	(FA) , (TA)	FROM ABOVE , TO ABOVE
(FB) , (TB)	(FB) , (TB)	FROM BELOW , TO BELOW
	GSCK , PC	GAS COCK , PLUG COCK
G	G	GAS - LOW PRESSURE
R	GPR	GAS PRESSURE REGULATOR
		GATE VALVE, BALL VALVE, SHUT OFF VALVE
	GPM	GALLONS PER MINUTE
	GCO	GRADE CLEANOUT, EXTERIOR
GW	GW	GREASE WASTE PIPING
	HB	HOSE BIBB
	HW	HOT WATER PIPING
	HWR	HOT WATER RETURN
IW	IW	INDIRECT DRAIN , CONDENSATE DRAIN
	IE or INV	INVERT ELEVATION
	L	LAVATORY SINK
	LL, DL	LONGEST LENGTH (GAS), DEVELOPED LENGTH
MG	MG	MEDIUM PRESSURE GAS
	(N) , (E)	NEW , EXISTING
	(NTS)	NOT TO SCALE
	OH	OVERHEAD
OFL	OFL	OVERFLOW RAINWATER LEADER
	OD	OVERFLOW DRAIN
	POC	POINT OF CONNECTION, NEW TO EXISTING
P & TRV	P & TRV	PRESSURE & TEMPERATURE RELIEF VALVE PIPING
	PRV	PRESSURE REDUCING VALVE
RWL	RWL	RAINWATER LEADER
	WH	RECESSED BOX HOSE BIBB OR WALL HYDRANT
	RV or P&TRV	RELIEF VALVE OR PRESSURE & TEMPERATURE RELIEF VALVE
	(R) , (D)	RISE , DROP
		RISER DOWN (ELBOW)
		RISER UP (ELBOW)
	RD	ROOF DRAIN
		SOLENOID VALVE WITH MOTOR ACTUATOR
SD	SD	STORM DRAIN
	S or SK	SINK
	TP	TRAP PRIMER
TP		TRAP PRIMER PIPING
	TYP	TYPICAL
	UN	UNION OR FLANGE
	UG	UNDERGROUND
	UR	URINAL
		VALVE IN RISER (TYPE AS INDICATED OR NOTED)
	VB	VALVE IN VALVE BOX
	V	VENT PIPING
V , VR , VTR		VENT , VENT RISER , VENT THRU ROOF
	WCO	WALL CLEANOUT
	WC	WATER CLOSET
	WH	WALL HYDRANT
	W OR SS	SOIL, WASTE OR SANITARY SEWER
	WHA	WATER HAMMER ARRESTER
&		CW & HW FIXTURE CONNECTION STUB OR ANGLE STOP
	WSFU	WATER SUPPLY FIXTURE UNIT

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

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

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

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

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

MP☐ MD☐ PP☐ E☐ — OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS

MP☐ MD☐ PP☒ E☐ — OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0043-13 BY MASON INDUSTRIES, INC.

MP☐ MD☐ PP☐ — OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL. OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

PLUMBING GENERAL NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND EXACT LOCATIONS OF PLUMBING FIXTURES.
2. COORDINATE LOCATION OF PIPING WITH OTHER TRADES ON THIS PROJECT.
3. CONCEAL ALL PIPING IN WALL FURRING, PARTITIONS, ETC., EXCEPT AT MECHANICAL ROOMS.
4. PROVIDE BALL VALVES ON WATER PIPE BRANCHES TO EQUIPMENT AND PLUMBING FIXTURES. PROVIDE ACCESS PANELS WHEN LOCATED IN FURRED SPACES OR ABOVE NON-REMOVABLE CEILINGS. ALL VALVES SHALL BE FULL LINE SIZE.
5. SEAL ALL PIPE PENETRATIONS THRU FLOORS WATERTIGHT.
6. PROVIDE GAS SHUT-OFF VALVE, UNION AND DIRT LEG AT EACH GAS CONNECTION TO MECHANICAL EQUIPMENT.
7. DOMESTIC HOT WATER HEATERS SHALL BE SEISMICALLY SECURED TO BUILDING STRUCTURE WITH ADEQUATE STRUCTURAL SUPPORT WITH ANCHOR BOLTS TO WITHSTAND 0.29 LATERAL AND VERTICAL LOADS.
8. PRIOR TO ANY SOLENOID VALVE, QUICK CLOSING VALVE, ETC. PROVIDE AND INSTALL SHOCK ABSORBER OF REQUIRED SIZE.
9. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE-STOPPED. FIRE STOPPING SHALL BE AN APPROVED MATERIAL OF THE ENFORCING AGENCY.
10. OFFSET VENTS THRU ROOF 10 FEET MINIMUM FROM AIR INTAKES AND 4 FEET FROM OUTSIDE WALLS.
11. CONDENSATE DRAIN LINE CONNECTIONS TO MECHANICAL UNITS SHALL INCLUDE MINIMUM 4" DEEP "P" TRAP AND CLEANOUTS AT ALL OFFSETS.
12. ALL MECHANICAL UNITS ARE SHOWN FOR REFERENCE AND COORDINATION ONLY. SEE "M" SHEETS.
13. OFFSET ALL RISERS AND DROPS TO AVOID PENETRATIONS AT TOP PLATES.
14. FIELD VERIFY EXACT SIZES, LOCATIONS AND ELEVATIONS OF ALL PIPING CONNECTIONS, OTHER WORK, ETC., PRIOR TO TRENCHING OR INSTALLING OF ANY NEW WORK.
15. BUILDING SEWER, WATER AND STORM DRAIN RUN APPROXIMATELY 5' MIN. FROM BUILDING SHALL BE PER SPECIFICATIONS DIVISION 22 AND APPLIES TO UTILITIES IN THE BUILDING, UNDER THE BUILDING AND TO 5' OUTSIDE THE BUILDING. FOR PIPING BEYOND 5' OUTSIDE OF THE BUILDING, SPECIFICATIONS DIVISION 33 SHALL GOVERN.

FIRESTOPPING

1. PACK THE ANNULAR SPACE BETWEEN THE PIPE SLEEVES AND THE PIPE THROUGH ALL FLOORS AND WALLS WITH UL LISTED FIRE STOP, AND SEALED AT THE ENDS. ALL PIPE PENETRATIONS SHALL BE UL LISTED, HILTI, 3M PRO-SET, OR EQUAL.
   A. INSTALL FIRE CAULKING BEHIND MECHANICAL SERVICES INSTALLED WITHIN FIRE RATED WALLS, TO MAINTAIN CONTINUOUS RATING OF WALL CONSTRUCTION.
2. PROVIDE SPECSEAL SYSTEMS UL FIRE RATED SLEEVE/COUPLING PENETRATORS FOR EACH PIPE PENETRATION OR FIXTURE OPENING PASSING THROUGH FLOORS, WALLS, PARTITIONS OR FLOOR/CEILING ASSEMBLIES. ALL PENETRATORS SHALL COMPLY WITH UL FIRE RESISTANCE DIRECTORY (LATEST EDITION), AND IN ACCORDANCE WITH CHAPTER 7, CBC REQUIREMENTS.
3. SLEEVE PENETRATORS SHALL HAVE A BUILT IN ANCHOR RING FOR WATERPROOFING AND ANCHORING INTO CONCRETE POURS OR USE THE SPECIAL FIT CORED HOLE PENETRATOR FOR CORED HOLES.
4. COPPER AND STEEL PIPING SHALL HAVE SPECSEAL PLUGS ON BOTH SIDES OF THE PENETRATOR TO REDUCE NOISE AND TO PROVIDE WATERPROOFING.
5. ALL ABOVE SYSTEMS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. 6. ALTERNATE FIRESTOPPING SYSTEMS ARE ACCEPTABLE IF APPROVED EQUAL. HOWEVER, ANY DEVIATION FROM THE ABOVE SPECIFICATION REQUIRES THE CONTRACTOR TO BE RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE PROPOSED PRODUCTS AND THEIR INTENDED USE, AND THE CONTRACTOR SHALL ASSUME ALL RISKS AND LIABILITIES WHATSOEVER IN CONNECTION THEREWITH.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING LEGEND,
SCHEDULES & NOTES

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
MCM RL SV — PM DESIGN TEAM
1 0 0 00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P0.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUVAL
M 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%

ELECTRIC WATER HEATER SCHEDULE

UNIT	LOCATION	"AO SMITH" MODEL NO.	STORAGE CAPACITY GALLONS	RECOVERY GALLONS @ 100°F RISE	MAX. TEMP SETTING	KW	VOLTAGE	AMPS	WEIGHT (FULL)	PIPING DETAIL	MOUNTING DETAIL	NOTES
EWH F1	BLDG F JAN F111	DEL-15 4KW	15	16	120 F	4.0	208V/1Ø	19.2	200LBS	4 P5.1	5 P5.1	PROVIDE WATER HEATER SHELF WITH DRAIN PAN. SLOPE DRAIN FROM PAN TOWARDS APPROVED RECEPTOR. INSTALL SHELF AS HIGH AS POSSIBLE. SET WATER HEATER TO 120F.

EWH-1 WATER HEATER SIZING
ELEC TANK TYPE - KITCHEN

SYMBOL	FIXTURE NAME	QTY	USER HW TEMP	GPH EACH @ USER TEMP	GPH EACH @ WH TEMP	GPH TOTAL PER ITEM
LAV	COMMERCIAL - LAVATORY	2.00	105.00	6.00	4.62	9.23
SINK	SINK	0.00	105.00	10.00	7.69	0.00
HAND SINK	HAND SINK	0.00	105.00	6.00	4.62	0.00
KITCHEN SINK	KITCHEN SINK	0.00	105.00	20.00	15.38	0.00
SERVICE SINK	SERVICE SINK	1.00	110.00	20.00	16.92	16.92
POT FILLER	POT FILLER	0.00	120.00	6.00	6.00	0.00
1 COMP SK	SINGLE COMPARTMENT SINK	0.00	120.00	30.00	30.00	0.00
2 COMP SK	DOUBLE COMPARTMENT SINK	0.00	120.00	60.00	60.00	0.00
3 COMP SK	TRIPLE COMPARTMENT SINK	0.00	120.00	90.00	90.00	0.00
PRE-RINSE UNIT	PRE-RINSE UNIT	0.00	120.00	45.00	45.00	0.00
DISHWASHER	DISHWASHER	0.00	140.00	126.00	164.77	0.00
CAN WASH UNIT	CAN WASH UNIT	0.00	140.00	45.00	58.85	0.00
					TOTAL GPH	26.15

INLET TEMP	55.00	TANK VOL	15	GALLONS
WH TEMP	120.00	±1ST HR RECOV	35.71	GALLONS
TEMP DIFF	65.00	1KW =	3412.142	BTUH
WATER HEATER EFFICIENCY	1.000			
GPH USAGE DIVERSITY FACTOR	0.65			
GPH WITH DIV FACTOR = TOTAL GPH X FACTOR	17.00			

GAS INPUT =	GPH X TEMP DIFF X 8.33LBS/GAL X 1BTU/LB/°F / WATER HEATER EFF					
=	9,204.65	BTUH				
=	2.70	KW				
USE =	4.00	KW				
	25.21	GPH RECOVERY EQUIV @ CONSTANT EFF @ TEMP DIFF ABV				

SEE WATER HEATER EQUIPMENT SCHEDULE.

NOTE(S):
1. USER TEMP ABV IS ASSUMED WARMEST BEARABLE BY USER OR BY FUNCTION.
2. WARNING: PER ASHRAE CHAPTER 50 FIGURE 9, IT TAKES ABT 10 MINS TO CAUSE 3RD DEGREE BURNS USING 120F HOT WATER. FOR 140F HOTWATER, IT ONLY TAKES ABOUT 5 SECONDS TO DO SAME DAMAGE. PLEASE LIMIT HOT WATER TEMP THRU USE OF THERMOSTATIC MIXING VALVES OR USE OF INTEGRAL LIMITING DEVICE IF AVAILABLE.
3. 1ST HR RECOVERY BASED FROM 0.7xWH TANK VOLUME + PERFORMANCE GPH

CIRCULATING PUMP SCHEDULE

UNIT	LOCATION	"B&G" MODEL NO.	GPM	FT OF HEAD	WATTS	VOLTAGE	CONTROLS	NOTES
CP F1	BLDG F JAN F111	NBF-8	1	7	39	115V/1Ø	1 M6.2	9.5 LBS; 0.38FLA PROVIDE AQUASTAT, SEE SPECS

EXPANSION TANK SCHEDULE

UNIT	LOCATION	"AMTROL" MODEL NO.	TANK VOLUME GALLONS	MAX. ACCEPT. VOLUME	DETAIL	NOTES
ET F1	BLDG F JAN F111	ST-5	2.0	0.9	6 P5.1	8"Ø x 13 ", 15 LBS. SUPPORT W/QUICK STRAP #QS-5

ProSet FIRESTOP WALL PENETRATOR GUIDE
Penetrators through Masonry & Gypsum Walls

Recommended drawing numbers are shown below
Other options may be available

Pressure Pipe and PVC/ABS Pipe - All sleeves are 8" long— Consult factory for other options

Size	Type of Wall	Copper	Steel	CPVC	PVC Pressure	PVC/ABS DWV	Other
1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Multiple Pipes
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1003-ax
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	Chilled Water
3/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1000-a
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Glass Pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1015-a
1"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Waterproof
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Thru-pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1017-g
1 1/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Optional Wall
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Sleeve Fasteners
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	For Gypsum Walls
1 1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1012-f and
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1013-f or
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1014-f and
2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1015-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	polypropylene
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Acid waste pipe
2 1/2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	C-9049-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	C-9049-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Polyethylene
3"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1011-a
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	A-1011-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1012-f or
4"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1013-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	Insulated pipe
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1004-a
5"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	A-1010-ai
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	Refrigeration
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	A-1003-a
6"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	

Plumbing Fixture Wall Openings: 1-1/2" Lavatory and Sink Sub Outs: Use ProSet P-90 PVC Pipe See drawing No. C-8112-f
Wall Outlet 3" or 4" Water Closets See ProSet Drawing No. C-4492-a and C-4492-dhc
ProSet Systems, Inc., 1355 Capital Circle Lawrenceville, GA 30043-5866 1-800-262-5355 FAX (770) 339-1784

FIRESTOP WALL PENETRATION GUIDE

SCALE : NONE

1
P0.2

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUVALL
M. 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING
EQUIPMENT SCHEDULE

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
MCM RL SV 1000
PM DESIGN TEAM PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.
P0.2
OF XX SHEETS

QC	
INI	%

PLUMBING FIXTURE SPECIFICATION & CONNECTION SCHEDULE

ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	WC-1	WATER CLOSET FLOOR MOUNTED FLUSH VALVE ACCESSIBLE	"AMERICAN STANDARD" MADERA EL NO. 3461.001, 1.28 GPF FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 16-1/2" RIM HEIGHT.	"SLOAN" ROYAL 111 HET 1.28, ADA COMPLIANT, 1.28 GPF (MANUAL) SEE DETAIL 3/P5.1	SEAT: "CHURCH" MODEL 295SSCT OR "BEMIS" MODEL 1955SSCT. PROVIDE WITH SELF- SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	WHERE USED FOR CBC ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET ENCLOSURE.	2"	4"	4"	1-1/2"	1"	-	-
	WC-2	WATER CLOSET FLOOR MOUNTED FLUSH VALVE STANDARD	"AMERICAN STANDARD" MADERA NO. 3451.001, 1.28 GPF FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 15" RIM HEIGHT.	"SLOAN" ROYAL 111 HET 1.28, ADA COMPLIANT, 1.28 GPF (MANUAL) SEE DETAIL 3/P5.1	SEAT: "CHURCH" MODEL 295SSCT OR "BEMIS" MODEL 1955SSCT. PROVIDE WITH SELF- SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	WHERE USED FOR CBC ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET ENCLOSURE.	2"	4"	4"	1-1/2"	1"	-	-
	UR-1	URINAL WALL MOUNTED FLUSH VALVE ACCESSIBLE	"AMERICAN STANDARD" PINTBROOK NO. 6002.001, 0.125 GPF, WALL HUNG, VITREOUS CHINA, SIPHON JET ACTION. 3/4" TOP SPUD, 2" THREADED OUTLET.	"SLOAN" ROYAL 186-0.125DBP, 0.125 GPF (MANUAL) POLISHED CHROME SEE DETAILS 3/P5.1 & 6/P5.1	CARRIER: "J.R. SMITH" 637 SERIES OR "ZURN" Z1222	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS.	1 1/2"	2"	2"	1-1/2"	3/4"	--	--
	L-1	LAVATORY WALL MOUNTED HOT & COLD STD/ACCESSIBLE STAFF & ADMIN	"AMERICAN STANDARD" LUCERNE NO. 0355.012, WALL HUNG, VITREOUS CHINA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FRONT OVERFLOW, CONCEALED ARM RECESS, 4" CENTERS, 20" x 18" D SHAPED BOWL.	"MOEN" 8886 NEWER VERSION FAUCET, TWO-HANDLE ADA METERING FAUCET, CHROME PLATED SOLID BRASS CONSTRUCTION, 4" CENTERSET, VANDAL RESISTANT, 0.5GPM MAX. PROVIDE AASE 1070 TMV. ADJUST OUTLET WATER TEMPERATURE TO COMFORTABLE TEMPERATURE OR NO MORE THAN 110° F. WATER FLOW MUST BE SET TO 10 SEC. MIN.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL. CARRIER: "J R SMITH" 0700 OR ZURN Z1231	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONCEALED ARMS AND FLOOR SUPPORT, WITH FEET OF SUPPORT SECURELY ANCHORED TO FLOOR. IN ADDITION ANCHOR TOP OF SUPPORT TO WALL CONSTRUCTION.	1 1/2"	2"	1 1/2"	3/4"	1/2"	3/4"	1/2"
	L-2	LAVATORY WALL MOUNTED COLD WATER ONLY STD/ACCESSIBLE	"AMERICAN STANDARD" LUCERNE NO. 0355.012, WALL HUNG, VITREOUS CHINA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FRONT OVERFLOW, CONCEALED ARM RECESS, 4" CENTERS, 20" x 18" D SHAPED BOWL.	"MOEN" 8884 NEWER VERSION, SINGLE-HANDLE ADA METERING LAVATORY FAUCET, CHROME PLATED SOLID BRASS CONSTRUCTION, SINGLE HOLE MOUNT, 0.5GPM MAX, ADA COMPLIANT. PROVIDE WITH DECK PLATE WATER FLOW MUST BE SET TO 10 SEC. MIN.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL. CARRIER: "J R SMITH" 0700 OR ZURN Z1231	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONCEALED ARMS AND FLOOR SUPPORT, WITH FEET OF SUPPORT SECURELY ANCHORED TO FLOOR. IN ADDITION ANCHOR TOP OF SUPPORT TO WALL CONSTRUCTION.	1 1/2"	2"	1 1/2"	3/4"	1/2"	-	-
	SS-1	SERVICE SINK FLOOR MOUNTED HOT AND COLD WATER JANITORS	"ACORN" TSH-24-SSC, TERRAZZO-WARE, 24"x24"x12" DEEP FLOOR MOUNTED, TERRAZZO, WITH STAINLESS STEEL CAP ON ALL FOUR TOP SURFACES. UNIT SHALL INCLUDE MODEL KH36 HOSE WITH WALL HANGER, KMH MOP HANGER WITH 3 SPRING LOADED GRIPS ON A STAINLESS STEEL BRACKET.	"CHICAGO" MODEL 897-CP WALL MOUNTED POLISHED CHROME FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE AND 3/4" MALE THREADED HOSE OUTLET.		AS PART OF ROUGH-IN FOR FAUCET, PROVIDE SUITABLE BLOCKING FOR TOP BRACE. PROVIDE CAP WITH FLANGE ON SIDES ADJACENT TO WALLS.	2"	3"	3"	3/4"	3/4"	3/4"	3/4"
	DF-1	DRINKING FOUNTAIN WALL MOUNTED STD/ACCESSIBLE DUAL HEIGHT W/ BOTTLE FILLER OUTDOOR	"ELKAY" VRCTLDDWSK, DUAL HEIGHT WITH SENSOR BOTTLE FILLER, WALL MOUNTED (ON WALL) ADA INDOOR/OUTDOOR RATED, LEAD FREE, NON-REFRIGERATED. PROVIDE 115V/60HZ, 1 FLA, 15WATTS POWER OUTLET. SEE INSTALLATION INSTRUCTIONS FOR MORE INFORMATION. PROVIDE FILTER.	INTEGRAL	WITH P-TRAP	PROVIDE MANUFACTURER'S INTERNAL SUPPORT SYSTEM ELKAY MLP200. WHERE INSTALLED ON CONCRETE OR CMU WALL, PROVIDE TWO MOUNTING PLATES AND INSTALL WITH ONE PLATE ON EACH SIDE OF WALL. SET AT HEIGHT INDICATED ON ARCH DRAWINGS.	1 1/2"	2"	1 1/2"	3/4"	1/2"	-	-
	FD	FLOOR DRAIN	GENERAL SERVICE FD - ZURN MODEL Z-415, OR EQUAL, WITH TYPE "B" STRAINER FOR EXPOSED CONCRETE AND TYPE "S" STRAINER FOR TILE FLOOR. PROVIDE BRONZE TRIM. FD IN COMPOSITION TYPE FLOORS - ZURN MODEL Z-415, OR EQUAL, WITH TYPE SL STRAINER. FD IN RESINOUS/EPOXY TYPE FLOORS - ZURN MODEL Z-415BL, OR EQUAL, NICKEL BRONZE WITH ADJUSTABLE STRAINER.	WATER FLOW MUST BE SET TO 10 SEC. MIN.			2"	2"	2"	-	-	-	-
	TP TP-2	TRAP PRIMER ELEC TRAP PRIMER	MIFAB "M-500" SERIES, REQUIRES 3PSI DROP TO ACTIVATE. SIOUX CHIEF 695-ES01 ELECTRONIC TRAP PRIMER, PROVIDE DISTRIBUTION SPLITTER TO PRIME UP TO 8 DRAINS. PROVIDE 120VAC 9.2WATTS 60HZ POWER SUPPLY.			PROVIDE ACCESS PANEL SEE DETAIL 2/P5.1	-	-	-	1/2"	1/2"	-	-
	HB	HOSE BIBB	INTERIOR WALL MOUNTED - ACORN MODEL 8121CP-LF WOODFORD MODEL 24PC, OR EQUAL.	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND REMOVABLE KEY HANDLE.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	1"	3/4"	-	-
	WHA	WATER HAMMER ARRESTOR	SEE SPECIFICATIONS										

GENERAL NOTES:

1. WATER SUPPLIES AND STOPS:
   - A. PROVIDE 85 PERCENT IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION, FOR EACH CONNECTION TO FAUCETS, STOPS, HOSE BIBBS, ETC. EACH FIXTURE, EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRS WITHOUT SHUTTING OFF WATER MAINS.
   - B. PROVIDE ALL WATER SUPPLIES TO FIXTURES WITH COMPRESSION SHUT-OFF STOPS WITH IPS INLETS WITH THREADED BRASS NIPPLES AT PIPE CONNECTION AND LOCK SHIELD LOOSE KEY. PROVIDE COMBINATION FIXTURES WITH COMPRESSION STOP AND IPS INLET ON EACH WATER SUPPLY FITTING. PROVIDE LOOSE KEY HANDLE FOR EACH STOP.
   - C. PROVIDE 1/2 INCH RISER TUBES WITH REDUCING COUPLING FOR ALL FIXTURES, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION 22 40 00.

2. PIPE, PLUMBING FITTINGS, FIXTURES, SOLDER AND FLUX SHALL COMPLY WITH LEAD FREE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCTS LISTED AND LABELED AS COMPLYING WITH NSF 61, ANNEX G, OR PROVIDE OTHER EVIDENCE OF COMPLIANCE WITH THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCT SUBMITTAL INFORMATION PROVING COMPLIANCE WITH LEAD FREE REQUIREMENTS. ALSO SEE GENERAL NOTES ON SHEET P0.1 AND SPECIFICATION SECTIONS, 22 00 50, 22 10 00 AND 22 40 00.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN LAMB C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING FIXTURE SCHEDULE

CONSULTANT

CAPITAL
Engineering Consultants, Inc.
Rancho Cordova, California

MCM | RL | SV | 1:0:0:00
PM | DESIGN TEAM | PROJECT NO.

PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

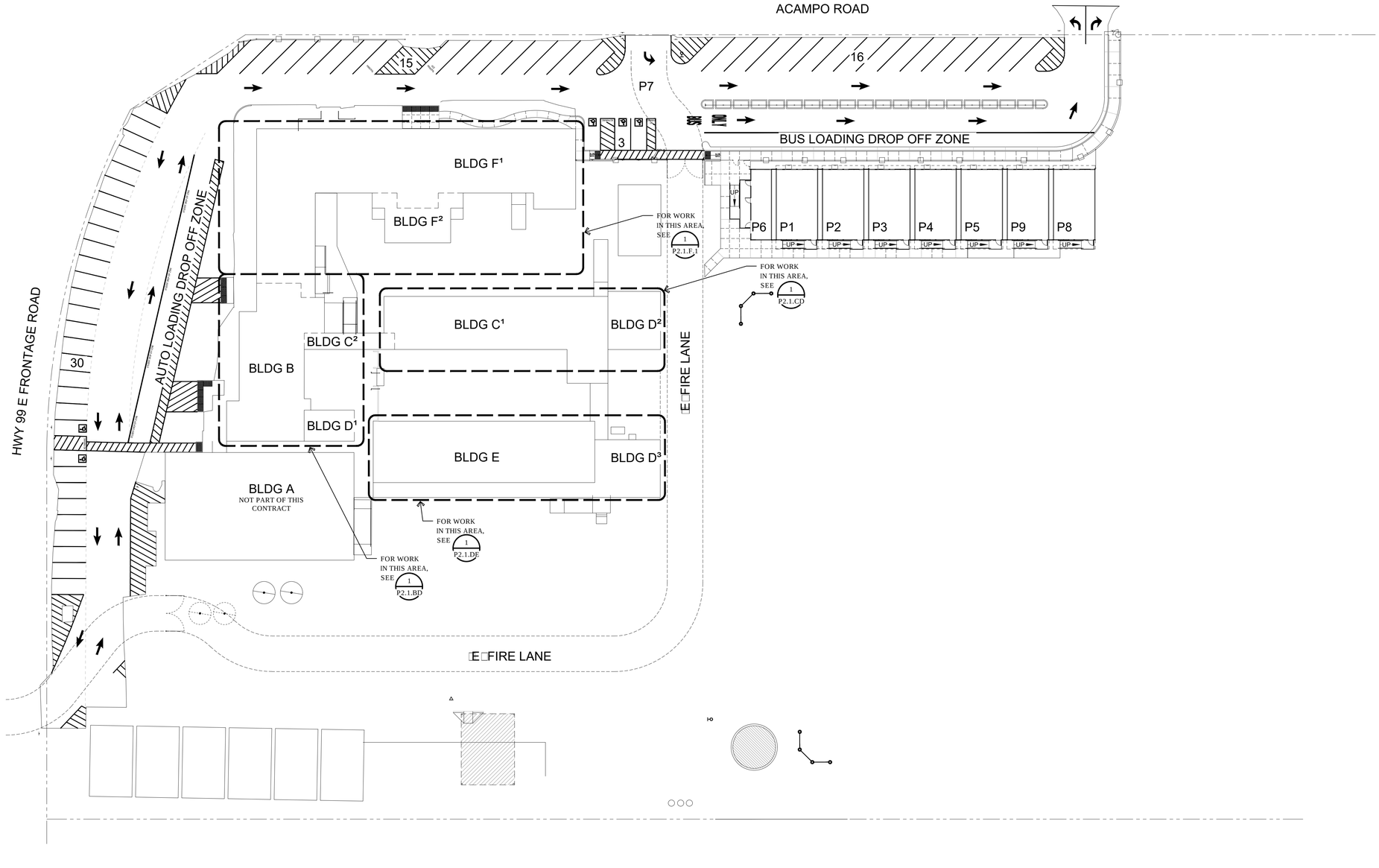
P0.3

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNCAN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

QC	
INI	%



PLUMBING SITE PLAN

SCALE : 1" = 30'-0"

1 / P1.1

N

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. KENT C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

PLUMBING SITE PLAN

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM / RL / SV — PM / DESIGN TEAM
1 0 0 00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

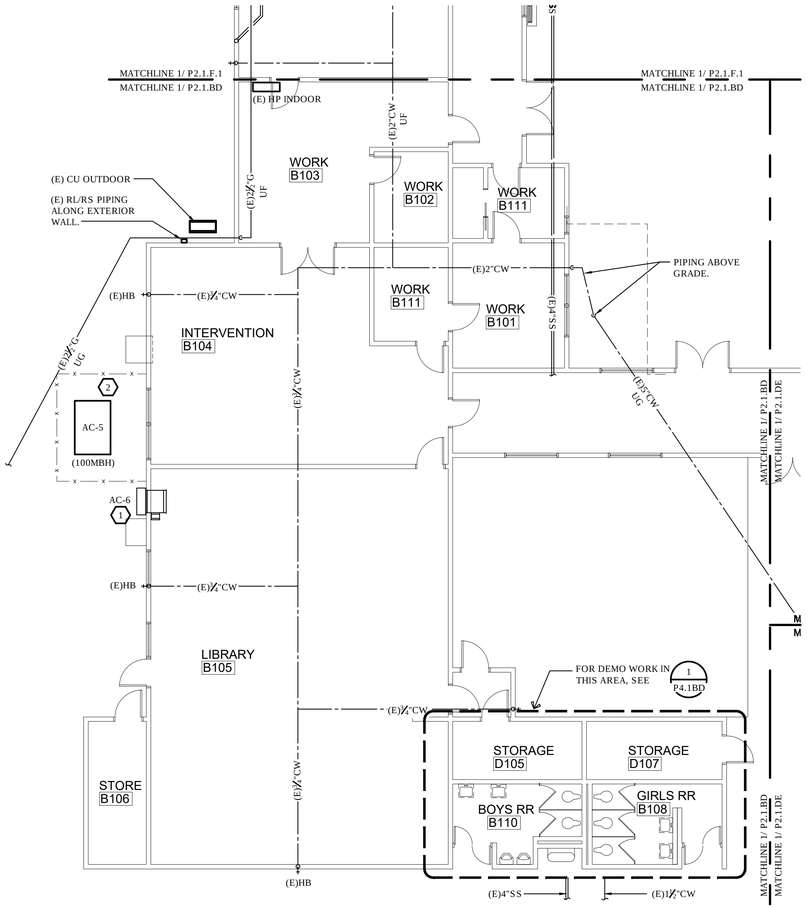
P1.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

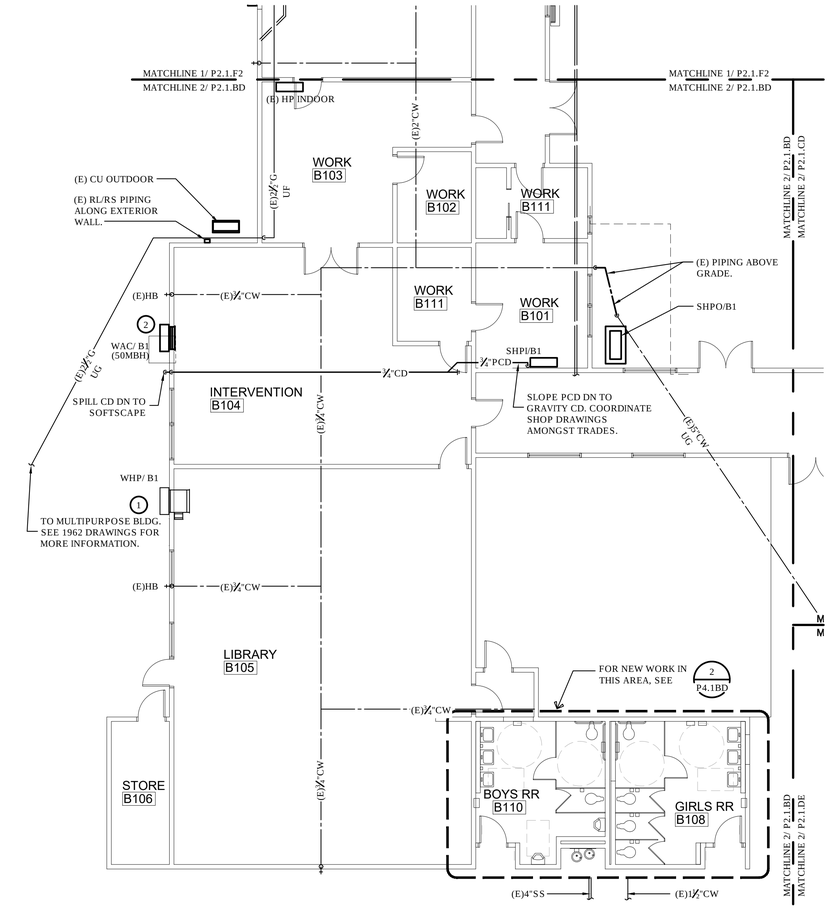
DATE SIGNED: 02/18/20

QC	
INI	%



PLUMBING DEMO FLOOR PLAN - BUILDING BD 1 P2.1.BD

SCALE : 1/8" = 1'-0"



PLUMBING FLOOR PLAN - BUILDING BD 2 P2.1.BD

SCALE : 1/8" = 1'-0"

DEMOLITION KEYNOTES

1. DISCONNECT THE CONDENSATE PIPING AT THE UNIT. PROVIDE TEMPORARY CAP AND PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.
2. DISCONNECT & CAP GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION TO NEW UNIT. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS. PREPARE AREA FOR NEW CD LINE.

CONSTRUCTION KEYNOTES:

1. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
2. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. CONNECT FULL SIZE GAS WITH NEW GSOV AND DIRT LEG TO WALL HUNG EQUIPMENT. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.

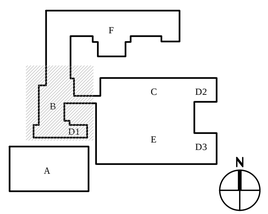
DEMOLITION SHEET NOTES

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING, EXACT LENGTH AND WIDTH OF TRENCH SHALL BE DETERMINED BY CONTRACTOR AS PART OF MEANS AND METHOD. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

CONSTRUCTION SHEET NOTES

1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%, IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
5. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
6. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
7. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
8. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
9. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

KEYPLAN:



REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUNCAN
M 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT
STEPHEN L. HENRY
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING FLOOR PLAN
BUILDINGS B & D

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC
RANCHO CORDOVA, CALIFORNIA

MCM PM RL DESIGN TEAM SV 1:0:0:00 PROJECT NO

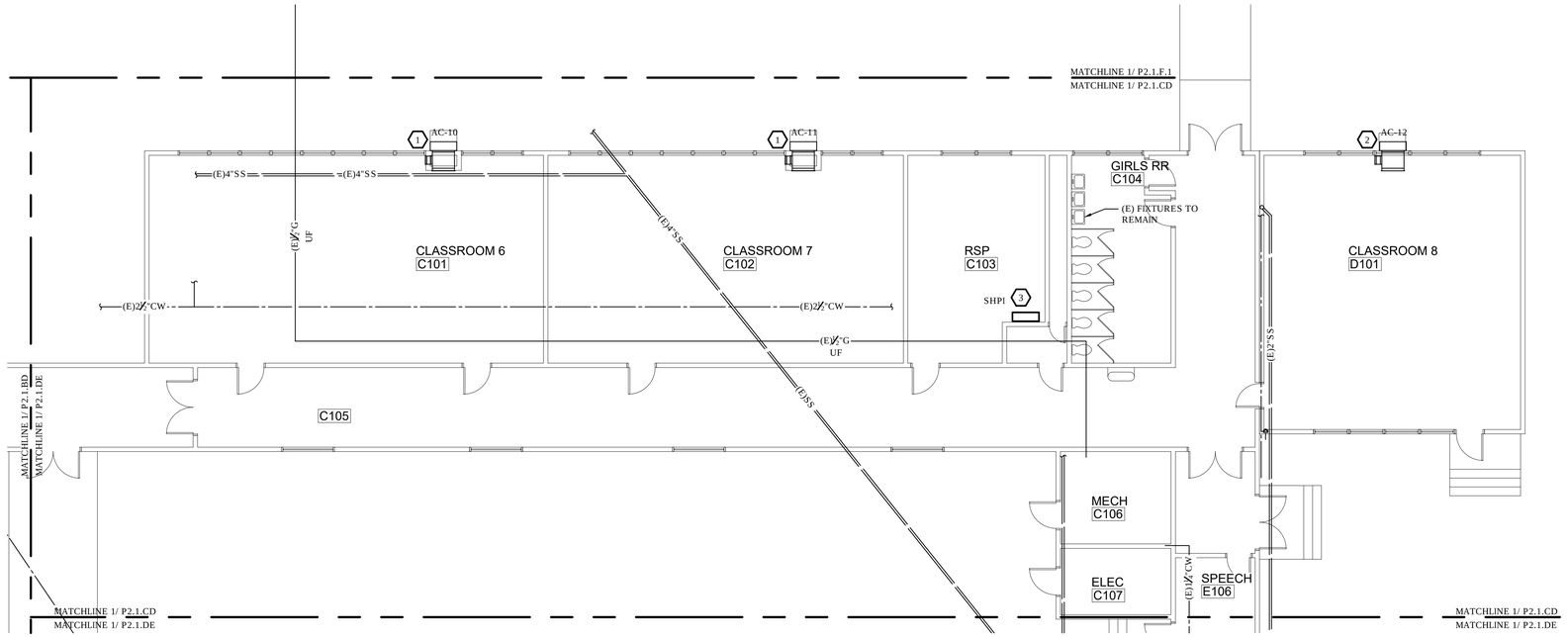
PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P2.1.BD

OF XX SHEETS

QC	
INI	%

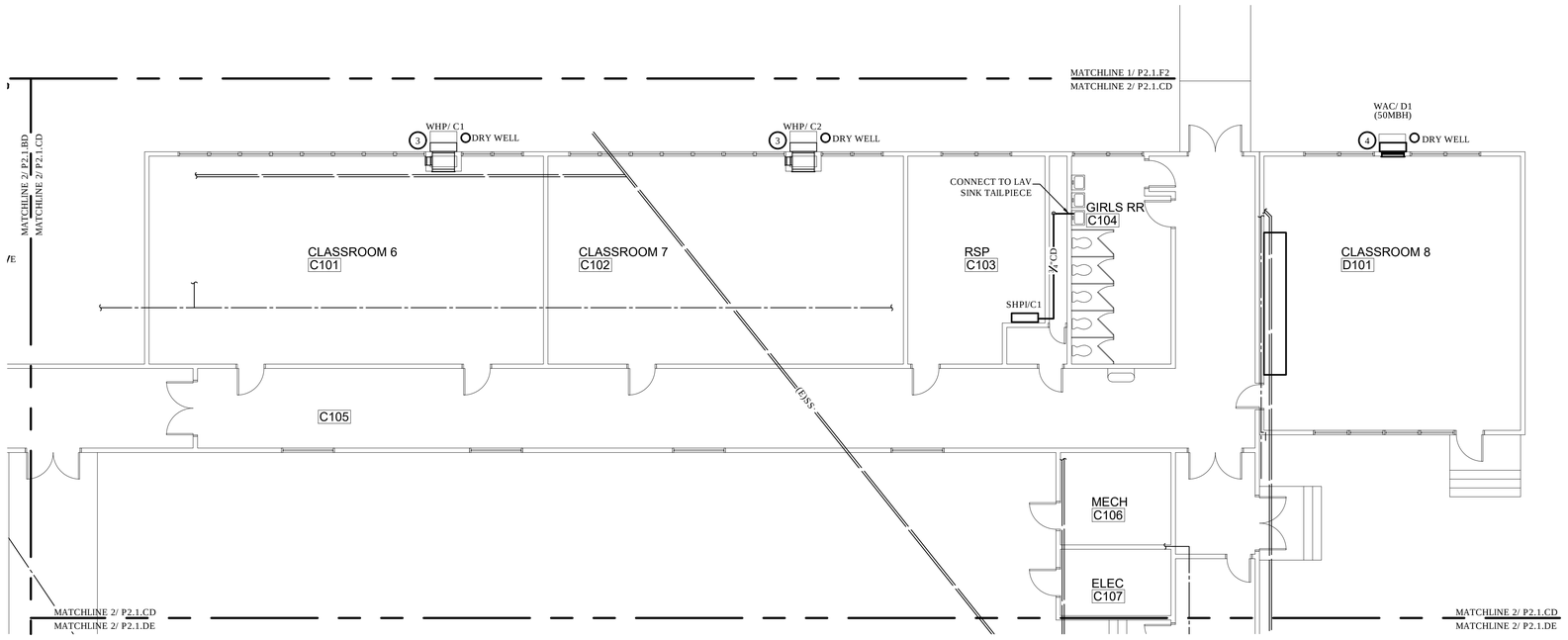


PLUMBING DEMO FLOOR PLAN - BUILDING CD

1 P2.1.CD

SCALE : 1/8" = 1'-0"

N



PLUMBING FLOOR PLAN - BUILDING CD

2 P2.1.CD

SCALE : 1/8" = 1'-0"

N

DEMOLITION SHEET NOTES

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. EXACT LENGTH AND WIDTH OF TRENCH SHALL BE DETERMINED BY CONTRACTOR AS PART OF MEANS AND METHOD. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

DEMOLITION KEYNOTES

1. DISCONNECT THE CONDENSATE PIPING AT THE UNIT. PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.
2. DISCONNECT & CAP GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION TO NEW UNIT. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS. PREPARE AREA FOR NEW CD LINE.
3. DISCONNECT THE CONDENSATE PIPING AT THE INDOOR SPLIT UNIT. PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.

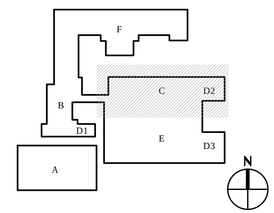
CONSTRUCTION SHEET NOTES

1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
5. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
6. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
7. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
8. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
9. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

CONSTRUCTION KEYNOTES:

3. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL DN WITHIN DRY WELL. SEE DETAIL SEE 1/P5.1. LOCATE DRY WELL CLEAR FROM EXISTING FOOTING. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
4. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL DN WITHIN DRY WELL. SEE DETAIL SEE 1/P5.1. LOCATE DRY WELL CLEAR FROM EXISTING FOOTING. CONNECT FULL SIZE GAS WITH NEW GSOV AND 4" DIRT LEG TO WALL HUNG EQUIPMENT. BOTTOM OF DIRT LEG SHALL BE AT LEAST 2" CLEAR FROM ANY OBSTRUCTION. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.

KEYPLAN:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN LEWIS KENT C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUMAS M-22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

MODERNIZATION
HOUSTON SCHOOL

PLUMBING FLOOR PLAN
BUILDINGS C & D

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
MCM PM / RL DESIGN TEAM / SV
1 0 0 00 PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

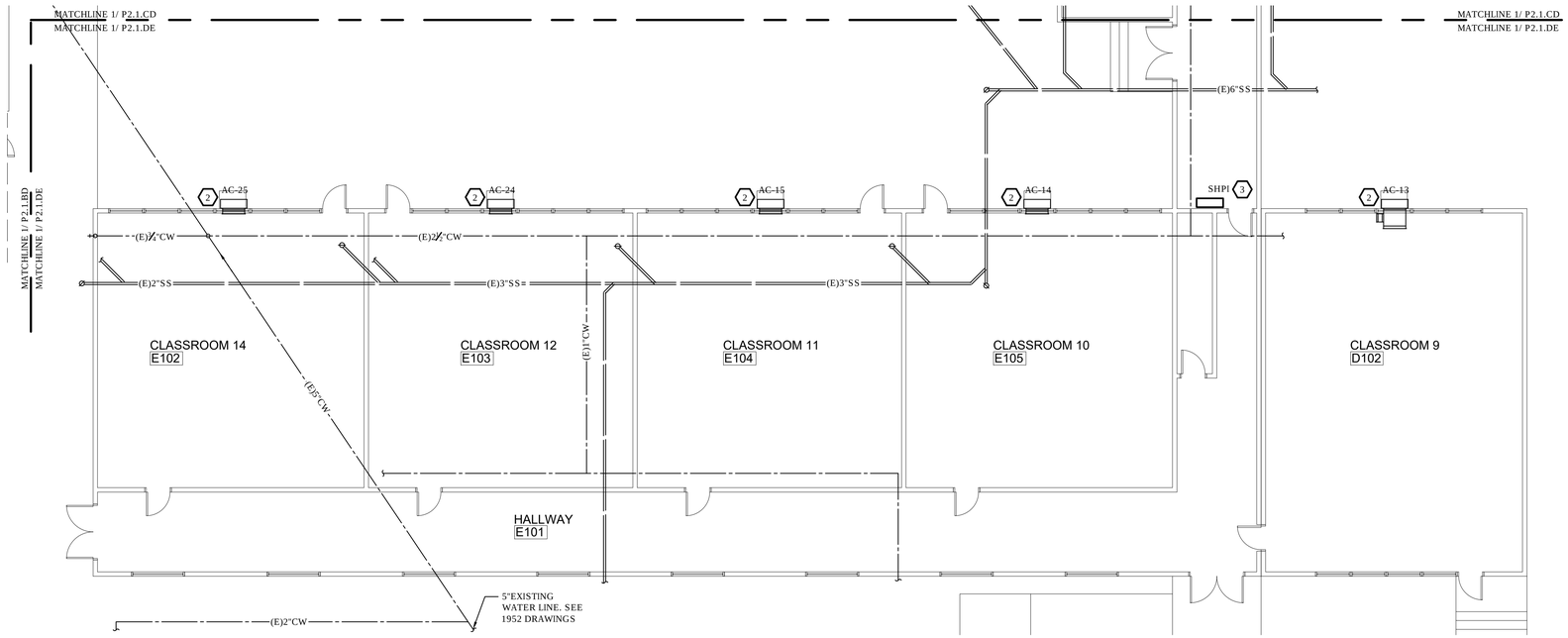
SHEET NO.

P2.1.CD

OF XX SHEETS

QC

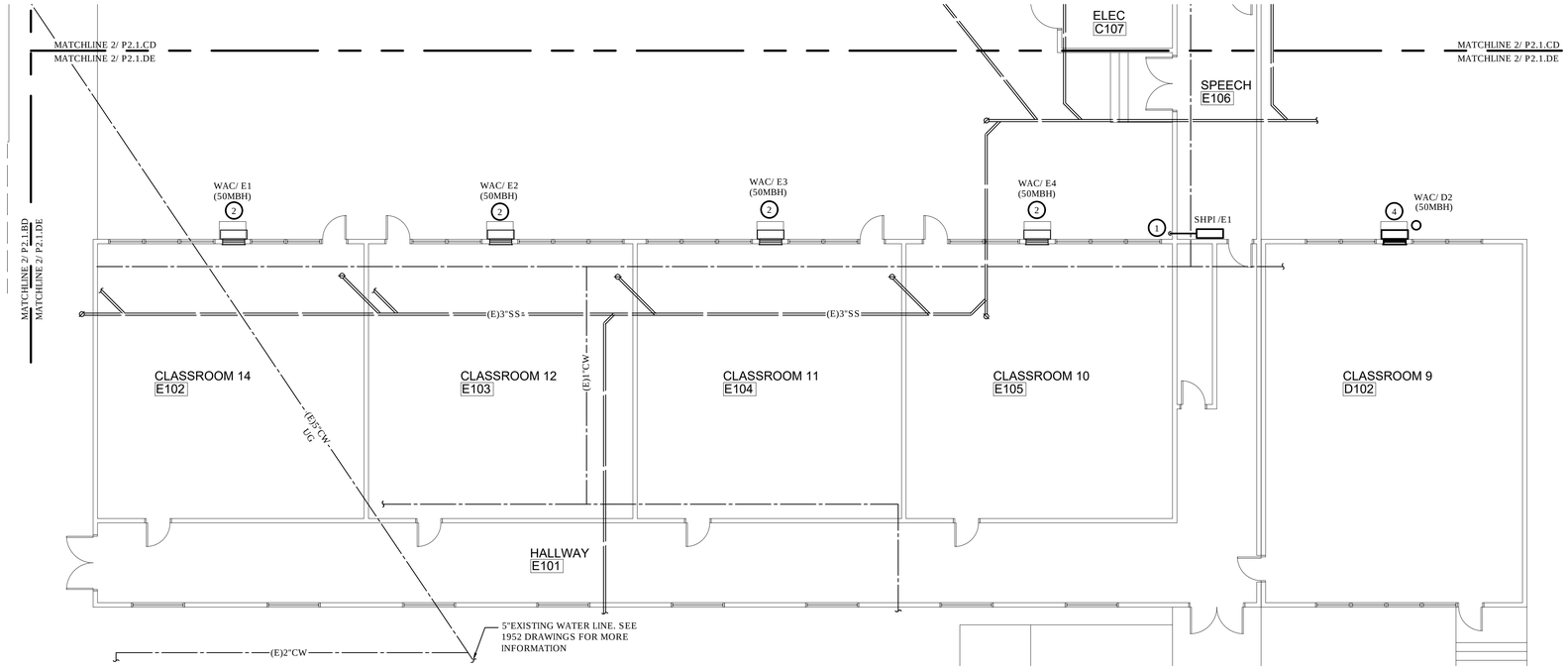
INI	%



PLUMBING DEMO FLOOR PLAN - BUILDING DE

1 P2.1.DE

SCALE : 1/8" = 1'-0"



PLUMBING FLOOR PLAN - BUILDING DE

2 P2.1.DE

SCALE : 1/8" = 1'-0"

DEMOLITION SHEET NOTES

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. EXACT LENGTH AND WIDTH OF TRENCH SHALL BE DETERMINED BY CONTRACTOR AS PART OF MEANS AND METHOD. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

DEMOLITION KEYNOTES

1. DISCONNECT THE CONDENSATE PIPING AT THE UNIT. PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.
2. DISCONNECT & CAP GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION TO NEW UNIT. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS. PREPARE AREA FOR NEW CD LINE.
3. DISCONNECT THE CONDENSATE PIPING AT THE INDOOR SPLIT UNIT. PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.

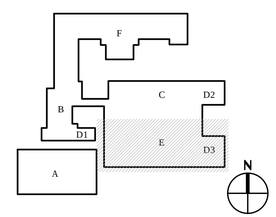
CONSTRUCTION SHEET NOTES

1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
5. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
6. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
7. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
8. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
9. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

CONSTRUCTION KEYNOTES:

1. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
2. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. CONNECT FULL SIZE GAS WITH NEW GSOV AND DIRT LEG TO WALL HUNG EQUIPMENT. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
4. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL DN WITHIN DRY WELL. SEE DETAIL SEE 1/P5.1. LOCATE DRY WELL CLEAR FROM EXISTING FOOTING. CONNECT FULL SIZE GAS WITH NEW GSOV AND DIRT LEG TO WALL HUNG EQUIPMENT. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.

KEYPLAN:



730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING FLOOR PLAN
BUILDINGS D & E

CONSULTANT
CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA CALIFORNIA
MCM RL SV 1000 00
PM DESIGN TEAM PROJECT NO.

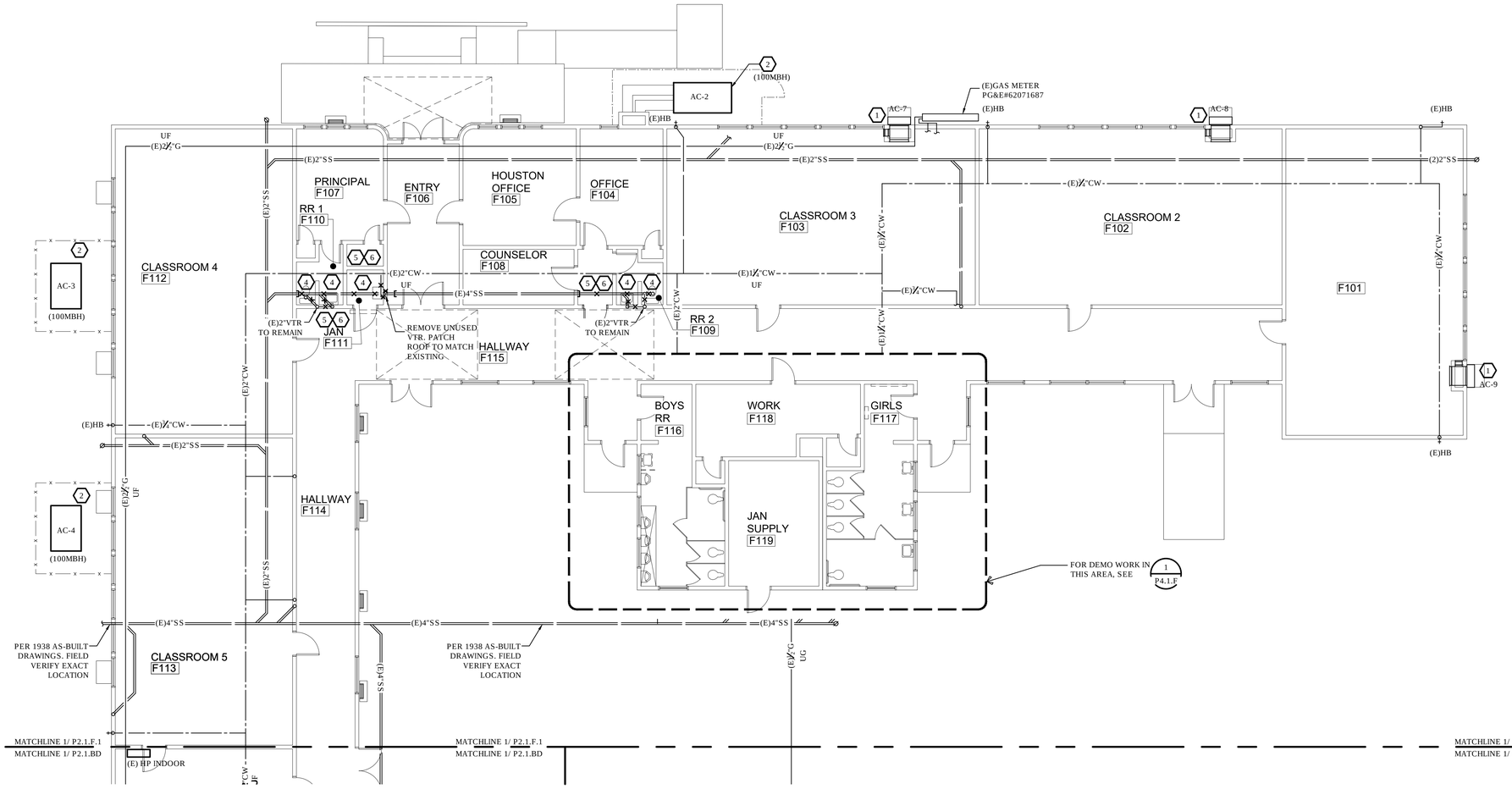
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P2.1.DE

OF XX SHEETS

QC	
INI	%



PLUMBING DEMO FLOOR PLAN - BUILDING F

SCALE : 1/8" = 1'-0"

1 P2.1.F.1

N

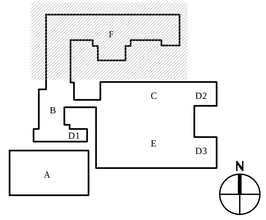
DEMOLITION SHEET NOTES

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. EXACT LENGTH AND WIDTH OF TRENCH SHALL BE DETERMINED BY CONTRACTOR AS PART OF MEANS AND METHOD. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

DEMOLITION KEYNOTES

1. DISCONNECT THE CONDENSATE PIPING AT THE UNIT. PREPARE SERVICES FOR RECONNECTION TO NEW WALL HUNG EQUIPMENT.
2. DISCONNECT & CAP GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION TO NEW UNIT. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS. PREPARE AREA FOR NEW CD LINE.
4. DISCONNECT PIPING FROM FIXTURES AND CAP PIPING BEHIND ARCHITECTURAL SURFACES UNLESS NOTED OR SHOWN OTHERWISE. PREPARE AREA FOR INSTALLATION OF NEW FIXTURES.
5. FIELD VERIFY EXACT SIZE & LOCATION OF EXISTING PIPE AND REFLECT ON AS-BUILT DRAWINGS. USE EXACT LOCATION OBSERVED ON SHOP DRAWINGS. PREPARE FOR CONNECTION TO NEW PIPE.
6. VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS OR ANY OBJECT IN GENERAL THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH.

KEYPLAN:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUVALL M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

MODERNIZATION
HOUSTON SCHOOL

PLUMBING DEMO FLOOR
PLAN BUILDING F

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA

MCM / RL / SV — PM / DESIGN TEAM
1 0 0 00 — PROJECT NO.

PROJECT NO. 19-32-2019	REVISIONS	BY
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

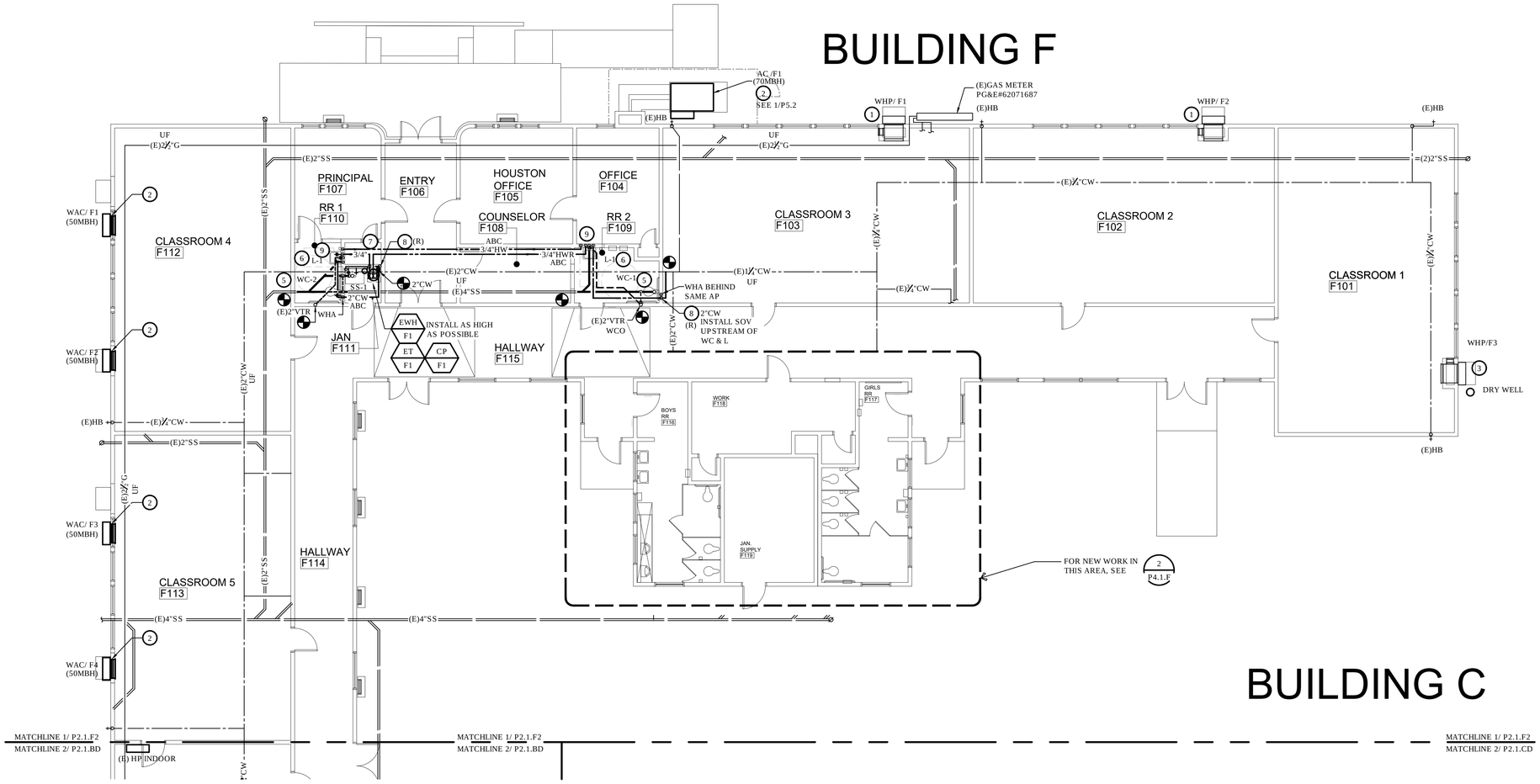
SHEET NO.

P2.1.F.1

OF XX SHEETS

QC	
INI	%

BUILDING F



BUILDING C

PLUMBING FLOOR PLAN - BUILDING F

SCALE : 1/8" = 1'-0"

1 P2.1.F.2

N

CONSTRUCTION SHEET NOTES

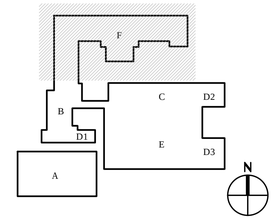
1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
5. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
6. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
7. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
8. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
9. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

CONSTRUCTION KEYNOTES:

1. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
2. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL OVER NON-HARDSCAPE AREA WITH AIR GAP. CONNECT FULL SIZE GAS WITH NEW GSOV AND DIRT LEG TO WALL HUNG EQUIPMENT. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
3. CONNECT AND RUN FULL SIZE CONDENSATE FROM UNIT AND OFFSET CONDENSATE TO SPILL DN WITHIN DRY WELL. SEE DETAIL SEE 1/P5.1. LOCATE DRY WELL CLEAR FROM EXISTING FOOTING. COORDINATE POC AMONGST TRADES PRIOR TO ANY INSTALLATION.
5. ADJUST WASTE CONNECTION BELOW FLOOR TO ACCOMMODATE THE NEW WATER CLOSET. CONNECT THE WASTE, VENT AND CW TO NEW FIXTURE.
6. CONFIGURE WASTE, VENT, CW & HW PIPE ROUTE TO ACCOMMODATE THE NEW LAV SINK.
7. ADJUST WASTE CONNECTION BELOW FLOOR TO ACCOMMODATE THE NEW MOP SINK CONFIGURATION. CONNECT THE WASTE, VENT AND CW TO NEW FIXTURE AND NEW VALVE.

   PROVIDE 2"CW SOV BEHIND AP.
8. HW TO LOOP DOWN THEN UP WITHIN WALL. SEE DETAIL 2/P5.2.
9.

KEYPLAN:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

CONSULTANT
CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
MCM RL SV 1000 00
PM DESIGN TEAM PROJECT NO.

MODERNIZATION
HOUSTON SCHOOL

PLUMBING FLOOR PLAN
BUILDING F

PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P2.1.F.2

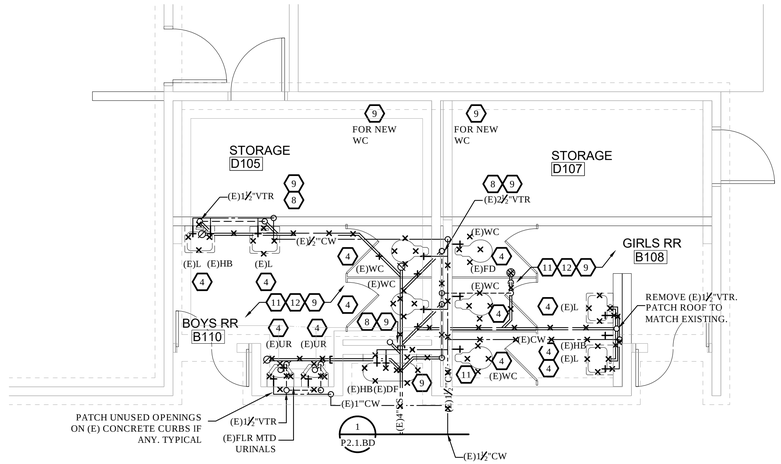
OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUNN M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

N:\Projects_Docs\2019\19035\100\100 Drawing\19305 ArchiCAD Project Files\P2.1.F.2.dwg - February 20, 2020 04:54 PM - Jose Valencia

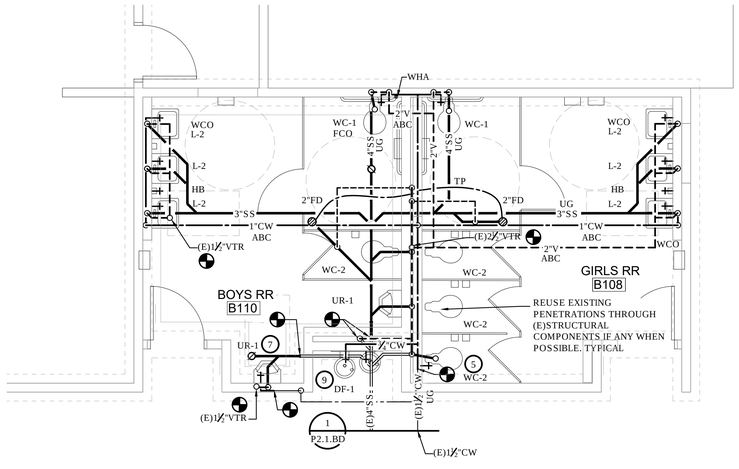
QC	
INI	%



ENLARGED PLUMBING DEMO FLOOR PLAN

1
P4.1.BD

SCALE : 1/4" = 1'-0"



ENLARGED PLUMBING FLOOR PLAN

2
P4.1.BD

SCALE : 1/4" = 1'-0"

DEMO SHEET NOTES:

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

DEMOLITION KEYNOTES

(4) DISCONNECT PIPING FROM FIXTURES AND CAP PIPING BEHIND ARCHITECTURAL SURFACES.

(5) DISCONNECT PIPING FROM FIXTURES AND PREPARE FOR RECONNECTION TO PIPING SERVICES.

(7) DISCONNECT GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS.

(8) PROVIDE TEMPORARY CAP ON EXISTING PIPE. FIELD VERIFY EXACT LOCATION AND REFLECT ON AS-BUILT DRAWINGS. USE EXACT LOCATION OBSERVED ON SHOP DRAWINGS. PREPARE FOR CONNECTION TO NEW PIPE.

(9) VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS OR ANY OBJECT IN GENERAL THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH. TYPICAL.

(11) CLEAN AND FLUSH ALL EXISTING SEWER LINES DOWNSTREAM OF NEW FIXTURES.

(12) REMOVE ALL EXPOSED UNUSED ABOVE GROUND UTILITIES WITHIN WORK AREA. CAP ALL UNUSED PIPING BEHIND OR BELOW ARCHITECTURAL FINISHES. REFLECT CAPPED PIPING ON AS-BUILT DRAWINGS. TYPICAL.

CONSTRUCTION SHEET NOTES

1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
5. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
6. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
7. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
8. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
9. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
10. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

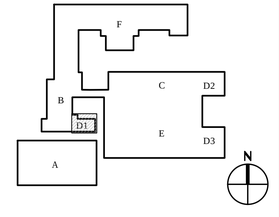
CONSTRUCTION KEYNOTES:

(5) ADJUST WASTE CONNECTION BELOW FLOOR TO ACCOMMODATE THE NEW WATER CLOSET CONFIGURATION. CONNECT THE WASTE, VENT AND CW TO NEW FIXTURE AND NEW VALVE.

(7) ADJUST AND CONNECT THE WASTE, VENT, CW CONNECTIONS TO ACCOMMODATE THE NEW UR CONFIGURATION.

(9) ADJUST AND CONNECT THE WASTE & VENT, CONNECTIONS TO ACCOMMODATE THE NEW DF CONFIGURATION.

KEYPLAN:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. KENT C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING
ENLARGED FLOOR PLAN
BUILDINGS B&D

CONSULTANT
CAPITAL
ENGINEERING CONSULTANTS INC
RANCHO CORDOVA CALIFORNIA
MCM RL SV — PM DESIGN TEAM
1 0 0 00 — PROJECT NO

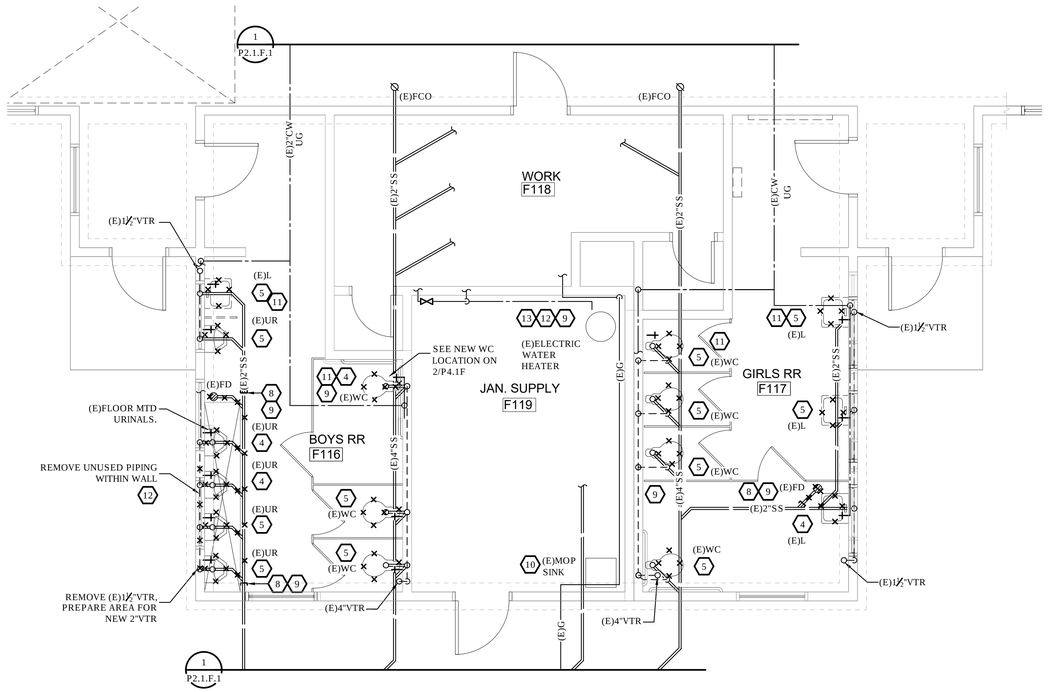
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.
P4.1.BD
OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUMA M 22836 EXPIRES 6/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

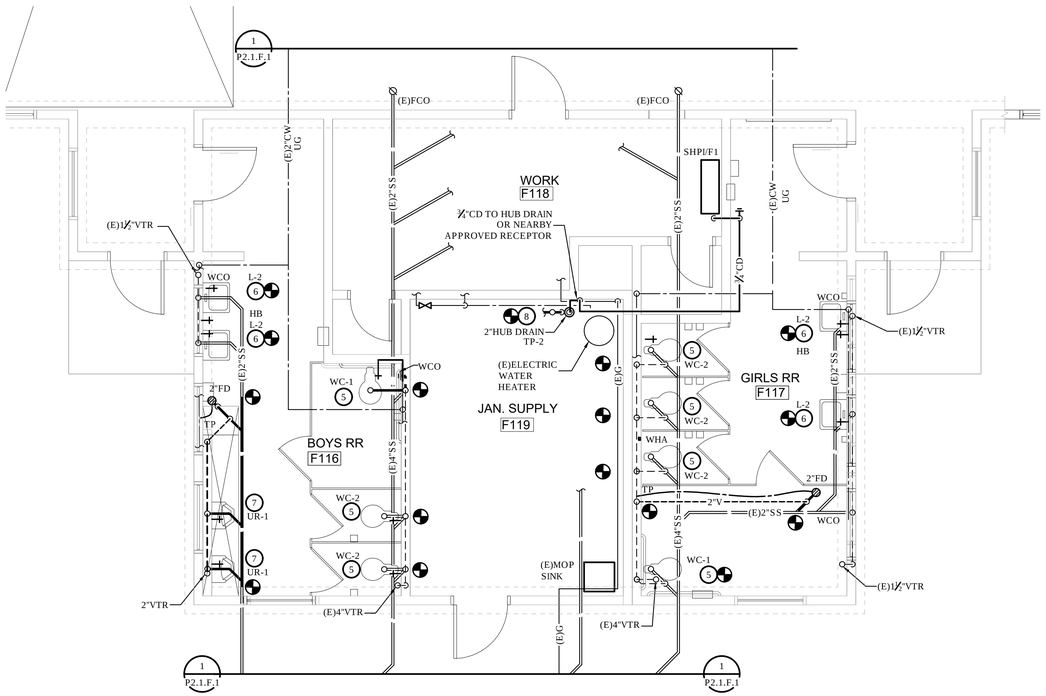
QC	
INI	%



ENLARGED PLUMBING DEMO FLOOR PLAN

SCALE : 1/4" = 1'-0"

1 P4.1.F



ENLARGED PLUMBING FLOOR PLAN

SCALE : 1/4" = 1'-0"

2 P4.1.F

N:\Project_Docs\2019\19070.00\1200 Drawings\1205 Jami\CAD Project Files\P4.1.F.dwg - February 20, 2020 04:54 PM - Joel Valencia

DEMO SHEET NOTES:

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE ALL INACTIVE PLUMBING PIPING ENCOUNTERED/VISIBLE WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISHES. REFLECT CAP ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT PER STRUCTURAL PLANS AND/OR DETAILS.

DEMOLITION KEYNOTES

4. DISCONNECT PIPING FROM FIXTURES AND CAP PIPING BEHIND ARCHITECTURAL SURFACES.
5. DISCONNECT PIPING FROM FIXTURES AND PREPARE FOR RECONNECTION TO PIPING SERVICES.
7. DISCONNECT GAS PIPING AT THE BRANCH TAKE OFF AND PREPARE FOR RECONNECTION. DISCONNECT AND REMOVE ALL CONDENSATE PIPING AND SUPPORTS.
8. PROVIDE TEMPORARY CAP ON EXISTING PIPE. FIELD VERIFY EXACT LOCATION AND REFLECT ON AS-BUILT DRAWINGS. USE EXACT LOCATION OBSERVED ON SHOP DRAWINGS. PREPARE FOR CONNECTION TO NEW PIPE.
9. VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS OR ANY OBJECT IN GENERAL THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH. TYPICAL.
10. PROTECT FIXTURE TO REMAIN IN PLACE DURING DEMO/CONSTRUCTION WORK. PROVIDE TEMPORARY UTILITIES WHEN NEEDED. COORDINATE SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
11. CLEAN AND FLUSH ALL EXISTING SEWER LINES DOWNSTREAM OF NEW FIXTURES.
12. REMOVE ALL EXPOSED UNUSED ABOVE GROUND UTILITIES WITHIN WORK AREA. CAP ALL UNUSED PIPING BEHIND OR BELOW ARCHITECTURAL FINISHES. REFLECT CAPPED PIPING ON AS-BUILT DRAWINGS. TYPICAL.
13. PREPARE AREA FOR CONNECTION TO NEW HUB DRAIN. REROUTE EXISTING ACTIVE PIPING IF NECESSARY.

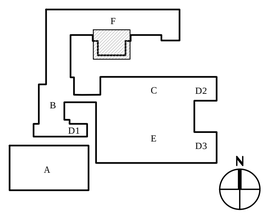
CONSTRUCTION SHEET NOTES

1. ALL FINISH FLOOR ELEVATIONS (FF) BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
2. CONNECT WASTE, VENT & COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
3. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2% TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR IF CONNECTING TO EXISTING PIPE AT ITS EXISTING UPSTREAM/DOWNSTREAM DEPTH IS IMPOSSIBLE WITHOUT SLOPING LESS THAN 2%. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1%. COORDINATE AMONGST TRADES AND REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
4. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY, PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
5. ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
6. CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAD BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL (PDF) FORMAT.
7. SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE FOR REFERENCE.
8. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
9. SLOPE ALL PUMPED CONDENSATE DRAIN LINES (PCD) DOWN TOWARDS GRAVITY CD.
10. PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.

CONSTRUCTION KEYNOTES:

5. ADJUST WASTE CONNECTION BELOW FLOOR TO ACCOMMODATE THE NEW WATER CLOSET CONFIGURATION. CONNECT & ADJUST THE WASTE, VENT AND CW TO NEW FIXTURE AND NEW VALVE.
6. ADJUST AND CONNECT THE WASTE, VENT, CW CONNECTIONS TO ACCOMMODATE THE NEW LAV CONFIGURATION.
7. ADJUST AND CONNECT THE WASTE, VENT, CW CONNECTIONS TO ACCOMMODATE THE NEW UR CONFIGURATION. SEE DETAIL 5/P5.1.
8. CONNECT TO EXISTING SEWER, VENT & CW LINE.

KEYPLAN:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT
LICENSED ARCHITECT STEPHEN L. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

CONSULTANT
CAPITAL ENGINEERING CONSULTANTS, INC. RANCHO CORDOVA, CALIFORNIA
MCM RL SV — PM DESIGN TEAM
1.0.0.00 — PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUDAL M 22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA
DATE SIGNED: 02/18/20

MODERNIZATION
HOUSTON SCHOOL

PLUMBING
ENLARGED FLOOR PLAN
BUILDING F

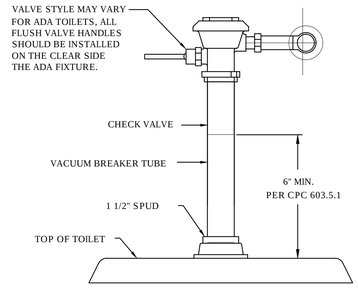
PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P4.1.F

OF XX SHEETS

QC	
INI	%

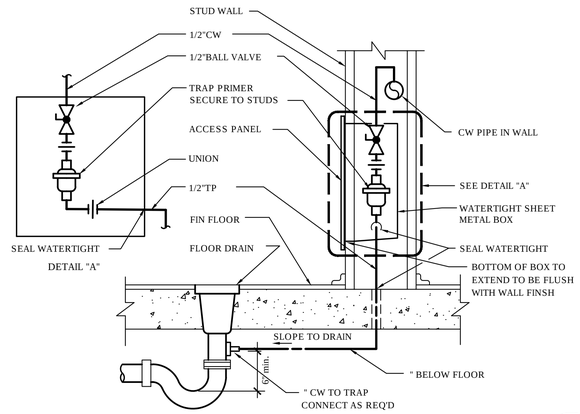


NOTES:
INSTALL FLUSH VALVE PER MANUFACTURER'S INSTRUCTIONS.
VERIFY ROUGH IN OF WATER SUPPLY TO ALLOW FOR PROPER VALVE INSTALLATION.

FLUSH VALVE INSTALLATION

SCALE : NONE

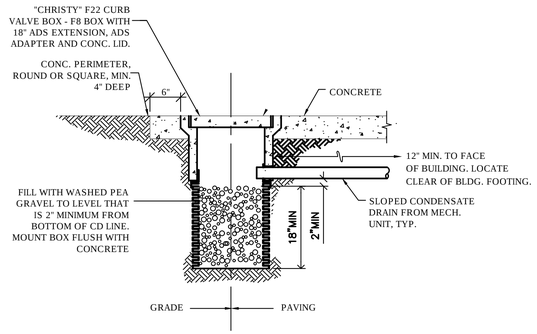
3 / P5.1



TRAP PRIMER TO FLOOR DRAIN

SCALE : NONE

2 / P5.1

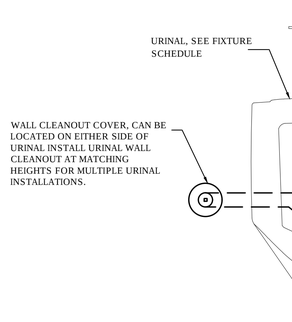


NOTE:
ROUTE CONDENSATE DRAIN THRU WALL AS LOW AS POSSIBLE AND DROP TO BELOW GRADE AS SOON AS POSSIBLE.

DRY WELL

SCALE : NONE

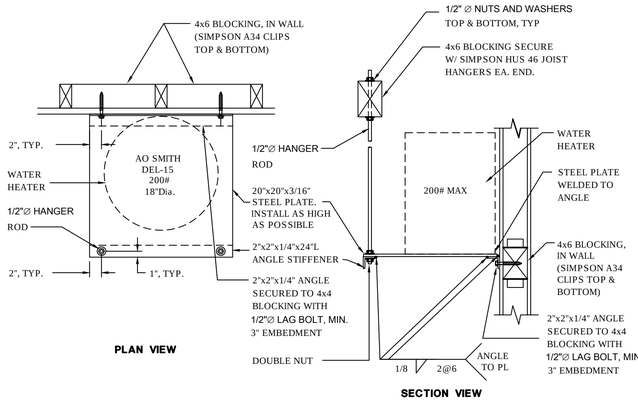
1 / P5.1



CLEANOUT ON URINAL

SCALE : NONE

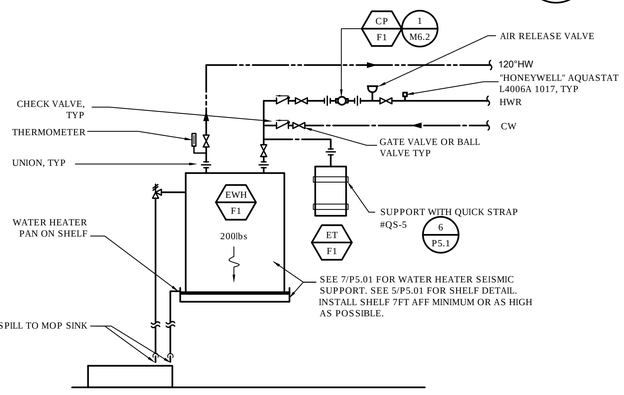
6 / P5.1



SHELF DETAIL FOR SMALL EWH

SCALE : NONE

5 / P5.1

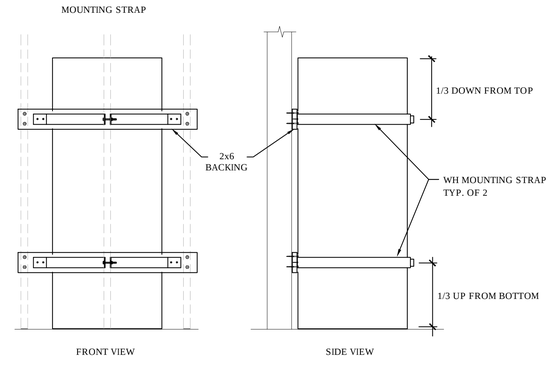


NOTES:
SEE WATER HEATER SCHEDULE FOR MODEL, TEMP SETTING & OTHER INFORMATION.

SMALL ELECTRIC WATER HEATER

SCALE : NONE

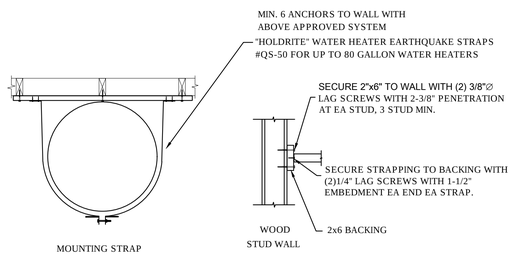
4 / P5.1



WATER HEATER SUPPORT

SCALE : NONE

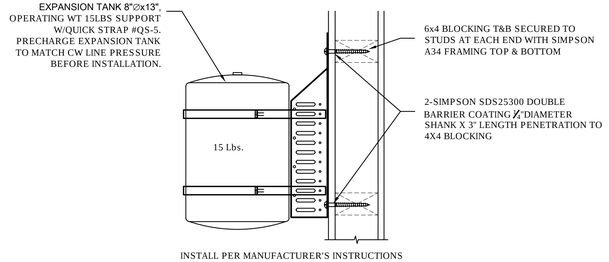
7 / P5.1



EXPANSION TANK MOUNTING

SCALE : NONE

6 / P5.1



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT STEPHEN LEWIS C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

PLUMBING DETAILS

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
MCM PM / RL DESIGN TEAM / SV
1:0:0:00 PROJECT NO.

PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

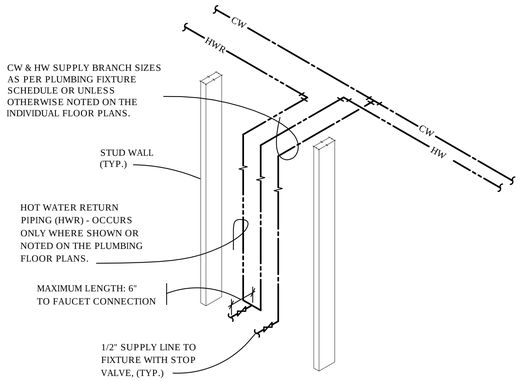
P5.1

OF XX SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUVAL M_22836 EXPIRES 9/30/20 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

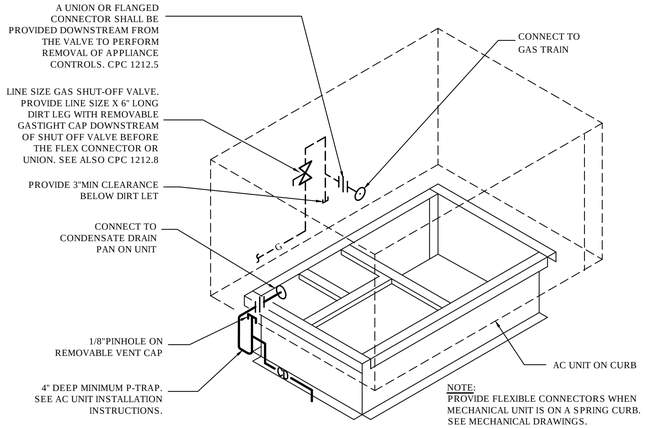
QC	
INI	%



HOT WATER SUPPLY PIPE

SCALE : NONE

2
P5.1



AC UNIT PIPING

SCALE : NONE

1
P5.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

ARCHITECT

LICENSED ARCHITECT
STEPHEN L. KENT
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUNN
M 22836
EXPIRES 9/30/20
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 02/18/20

MODERNIZATION HOUSTON SCHOOL

PLUMBING DETAILS

CONSULTANT

CAPITAL
ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA

MCM RL SV — PM DESIGN TEAM
1.0.0.00 — PROJECT NO.

PROJECT NO.	REVISIONS	BY
19-32-2019		
DATE 02/11/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE -		
UPDATED 02/18/2020		

SHEET NO.

P5.2

OF XX SHEETS

ABBREVIATIONS

A	AMPERES	MAX.	MAXIMUM
AC	ALTERNATING CURRENT	MDF	MAIN DISTRIBUTION FRAME
A.F.F.	ABOVE FINISHED FLOOR	MIN.	MINIMUM
AWG	AMERICAN WIRE GAUGE	N	NEUTRAL
BKR	BREAKER	(N)	NEW
C.	CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CKT.BRKR.	CIRCUIT BREAKER	N.I.C.	NOT IN CONTRACT
CD	CANDELA	PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
CKT	CIRCUIT	(R)	REMOVE
C.O.	CONDUIT ONLY, WITH PULL WIRE	(RE)	RELOCATE EXISTING
(E)	EXISTING	RCPT.	RECEPTACLE
EM	EMERGENCY	S.M.S	SHEET METAL SCREW
(ER)	EXISTING RELOCATED	SWBD	SWITCHBOARD
EMT	ELECTRICAL METALLIC CONDUIT	SYS	SYSTEM
(F)	FUTURE	TYP.	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UG	UNDERGROUND
FAPS	FIRE ALARM POWER SUPPLY	UL	UNDERWRITERS LABORATORY
GA.	GAUGE	V	VOLT
GND	GROUND	VA	VOLT-AMPERES
GFI	GROUND FAULT CIRCUIT INTERRUPTER	W	WATT
HP	HORSEPOWER	WP	WEATHER PROTECTED
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	XFMR	TRANSFORMER
LTG.	LIGHT		

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER / CATALOG NO.	VOLTAGE / DESCRIPTION	LAMP DESCRIPTION	MOUNTING	REMARK NOTE No.
A	DUAL LITE EV-4-R-I	120 VOLT RECESSED EM LIGHT	LED, 4 WATTS,	T-BAR	(2)
B	DUAL LITE EN-2-I	120 VOLT SURFACE EM LIGHT	LED, 2 WATTS,	WALL / CEILING	(2)
C	DUAL LITE PG-x	120 VOLT EXTERIOR EM LIGHT	LED, 2.8 WATTS	WALL MONTED	(1) (2)
DD	CERTOLUX VRSE-3556-48-LED-8-40K-024L	120 VOLT RESTROOM, STORAGE	LED, 22 WATTS, 4000K, 80 CRI	SURFACE	
X	DUAL LITE SEMR-x-R-W-E-I	120 VOLT EXIT SIGN	LED, 3.8 WATTS	WALL / CEILING	(2) (3)

LUMINAIRE SCHEDULE REMARK NOTES:

(1) FINISH SELECTION BY ARCHITECT.

(2) MINIMUM 90 MINUTES BATTERY OPERATION. PROVIDE WITH SELF TESTING OPTION.

(3) REFER TO PLAN FOR SINGLE OR DOUBLE FACE, DIRECTIONAL ARROWS, AND MOUNTING

September 13, 2016

MEP Component Anchorage Note

All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA approved construction documents. Where no detail is indicated, the following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2016 CBC, Sections 1616A.1.18 through 1616A.1.26 and ASCE 7-10 Chapter 13, 26 and 30.

1. All permanent equipment and components.
2. Temporary or movable equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water.
3. Movable equipment which is stationed in one place for more than 8 hours and heavier than 400 pounds or has a center of mass located 4 feet or more above the adjacent floor or roof level that directly support the component are required to be anchored with temporary attachments.

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

A. Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

For those elements that do not require details on the approved drawings, the installation shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and the DSA District Structural Engineer. The project inspector will verify that all components and equipment have been anchored in accordance with above requirements.

Piping, Ductwork, and Electrical Distribution System Bracing Note

Piping, ductwork, and electrical distribution systems shall be braced to comply with the forces and displacements prescribed in ASCE 7-10 Section 13.3 as defined in ASCE 7-10 Section 13.6.5.6, 13.6.7, 13.6.8, and 2016 CBC, Sections 1616A.1.24, 1616A.1.25 and 1616A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a preapproved installation guide (e.g., SMACNA or OSHPD OPM), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start of and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

Mechanical Piping (MP), Mechanical Ducts (MD), Plumbing Piping (PP), Electrical Distribution Systems (E):

MP☐MD☐PP☐ E☒ - Option 1: Detailed on the approved drawings with project specific notes and details.

ELECTRICAL SYMBOL LIST

- EMERGENCY LUMINAIRE - CEILING SURFACE MOUNTED, SEE NOTE 5.
- EMERGENCY LUMINAIRE - EXTERIOR WALL MOUNTED, SEE NOTE 5.
- EMERGENCY LUMINAIRE - CEILING RECESSED, SEE NOTE 5.
- BATTERY PACK EMERGENCY LIGHT FIXTURE - WALL MOUNTED, SEE NOTE 5.
- EXIT LUMINAIRE - REFER TO PLAN FOR MOUNTING. ARROW SIGNIFIES DIRECTION, ONE SHADING = SINGLE FACE, TWO SHADINGS = DOUBLE FACE, SEE NOTE 5.
- ENCLOSED LUMINAIRE - SURFACE MOUNTED
- ENCLOSED LUMINAIRE - CEILING LAY-IN
- ENCLOSED LUMINAIRE - CEILING RECESSED
- A / 2/32 — LUMINAIRE DESIGNATION WITH LAMP QUANTITY AND WATTAGE. SEE LUMINAIRE SCHEDULE.
- ^{a} — SINGLE POLE TOGGLE SWITCH, +45" TO TOP OF BOX - "a" LETTER DENOTES SWITCH FUNCTION, TYPICAL FOR ALL SWITCHES UNLESS NOTED OTHERWISE
- $_{K}$ — SINGLE POLE TOGGLE SWITCH - KEYED
- $_{3}$ — THREE-WAY TOGGLE SWITCH
- $ — DIMMER SWITCH
- $ — OCCUPANCY SENSOR SWITCH WITH MANUAL OVERRIDE - WALL MOUNTED AT +45" TOP OF BOX UNLESS NOTED OTHERWISE
- OCCUPANCY AREA SENSOR SWITCH
- SPACE LIGHTING CONTROLLER - MOUNTED IN ACCESSIBLE CEILING AREA, UNLESS NOTED OTHERWISE
- J — JUNCTION BOX - SIZE AS REQUIRED BY CODE
- DUPLEX CONVENIENCE OUTLET - NEMA 5-20R +18" BOTTOM OF BOX. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (LETTER "A" SHOWN ADJACENT TO OUTLET DESIGNATES MOUNTED HORIZONTALLY ABOVE COUNTER).
- QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R
- FLOOR MOUNTED DUPLEX CONVENIENCE OUTLET - NEMA 5-20R
- CEILING MOUNTED DUPLEX RECEPTACLE
- SPECIAL RECEPTACLE AS SHOWN ON PLANS
- PLUG-IN STRIP - LENGTH AS SHOWN ON PLAN
- IN-FLOOR MULTI-SERVICE BOX WITH FLUSH ACCESSIBLE LID, 2 DUPLEX RECEPTACLES (POWER), TELEPHONE AND DATA OUTLETS. REFER TO PLAN FOR SPECIFIC REQUIREMENTS.
- TELEPHONE OUTLET - FLUSH IN WALL +18" BOTTOM OF BOX. STUB ONE 3/4" CONDUIT WITH BUSHING AT THE END AND PULL ROPE INTO ACCESSIBLE CEILING AREA.
- COMBINATION TELE/DATA OUTLET FLUSH IN WALL +18" BOTTOM OF BOX, 4-11/16" SQUARE BOX, 2-1/8" DEEP WITH 2 DEVICE RING AND PLATE (TOP HALF DEVICE FOR TELEPHONE, BOTTOM HALF DEVICE FOR DATA). STUB ONE 1" CONDUIT WITH BUSHING AT THE END OF CONDUIT AND A PULL ROPE INTO ACCESSIBLE CEILING AREA.
- (2) — DATA OUTLET - FLUSH IN WALL +18" BOTTOM OF BOX. NUMBER IN PARENTHESIS INDICATES NUMBER OF DATA JACKS. STUB ONE 1" CONDUIT WITH BUSHING AT THE END AND PULL ROPE INTO ACCESSIBLE CEILING AREA.
- FIRE ALARM MANUAL PULL STATION, +45" TOP OF BOX, UNLESS NOTED OTHERWISE (ALPHA-NUMBERIC SUBSCRIPT DENOTES LOOP AND DEVICE NUMBER - TYPICAL FOR ALL FIRE ALARM DEVICES)
- FIRE ALARM HEAT DETECTOR - CEILING MOUNTED. THE DEFAULT TYPE IS "FIXED TEMPERATURE AND RATE OF RATE".
- $_{X}$ — FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED. "X" = "R", "T" TO INDICATE "BEAM RECEIVER", "BEAM TRANSMITTER" TYPE DETECTOR RESPECTIVELY. THE DEFAULT TYPE IS "PHOTOELECTRIC" INDICATED BY NO LETTER.
- FIRE ALARM MECHANICAL DUCT DETECTOR - COORDINATE LOCATION WITH HVAC DRAWINGS AND CONTRACTOR.
- RIL — DUCT DETECTOR REMOTE INDICATOR LIGHT
- B — FIRE ALARM BELL
- FIRE ALARM AUDIBLE DEVICE, +90" A.F.F. UNLESS OTHERWISE NOTED. DEFAULT DEVICE IS A SPEAKER.
- X / YY — FIRE ALARM AUDIO / VISUAL DEVICE, +80" A.F.F. DEFAULT AUDIO DEVICE IS A SPEAKER. "YY" INDICATES STROBE CANDELA RATING.
- YY — FIRE ALARM AUDIO / VISUAL DEVICE, CEILING MOUNTED. DEFAULT AUDIO DEVICE IS A SPEAKER. "YY" INDICATES STROBE CANDELA RATING.
- YY — VISUAL FIRE ALARM DEVICE +80" A.F.F. - WALL MOUNTED (LAMP, SIGNAL LIGHT, INDICATOR LAMP, STROBE), "YY" = CANDELA RATING
- YY — VISUAL FIRE ALARM DEVICE - CEILING MOUNTED (LAMP, SIGNAL LIGHT, INDICATOR LAMP, STROBE), "YY" = CANDELA RATING

- F/S — FIRE/SMOKE DAMPER PROVIDED BY OTHER DIVISION, CONNECTION BY ELECTRICAL. SEE MECHANICAL PLANS
- CM — FIRE ALARM RELAY MODULE
- MM — FIRE ALARM MONITOR MODULE
- TS — FIRE RISER TAMPER SWITCH
- FS — FIRE RISER FLOW SWITCH
- EOL — END OF LINE RESISTOR
- FACP — MASTER FIRE ALARM CONTROL PANEL
- FAPS — REMOTE FIRE ALARM POWER SUPPLY
- ANN — FIRE ALARM REMOTE ANNUNCIATOR PANEL - FLUSH MOUNTED
- S — SPEAKER - CEILING MOUNTED
- SPEAKER - WALL MOUNTED +72" A.F.F.
- EXTERIOR SPEAKER - WALL MOUNTED, REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
- CLOCK - WALL MOUNTED +84" A.F.F.
- CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" CONDUIT. TYPICAL FOR ALL CONDUITS.
- FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
- CONDUIT RUN UNDERFLOOR OR UNDERGROUND MINIMUM 1" DIAMETER.
- CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
- CONDUIT WITH CAP
- EXISTING CONDUIT AND WIRING
- EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
- PANELBOARD - SURFACE MOUNTED
- PANELBOARD - FLUSH MOUNTED
- EXISTING PANELBOARD - SURFACE MOUNTED
- EXISTING PANELBOARD - FLUSH MOUNTED
- TERMINAL CABINET
- SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, FUSED WITH FUSE SIZE TO MATCH EQUIPMENT NAMEPLATE
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, NON-FUSIBLE
- EQUIPMENT CONTROLLER
- EQ / 1 — MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
- 1 — DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
- 1 / E-1 — DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER

SYMBOL LIST NOTES:

1. EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.
2. ELECTRICAL OUTLET BOXES MOUNTED ON OPPOSITE SIDES OF FIRE-RATED WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES PER CBC 2016, WHETHER SHOWN ON THE PLANS OR NOT.
3. VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.
4. WHERE CONDUIT STUB IS INDICATED, PROVIDE CONDUIT WITH BUSHING AT THE END OF CONDUIT AND PULL ROPE INTO ACCESSIBLE CEILING AREA.
5. EMERGENCY LIGHT / EXIT SIGN SHALL BE PROVIDED WITH BATTERY THAT ALLOW MINIMUM OF 90 MINUTES OF OPERATION AND SHALL HAVE SELF TESTING OPTION.

PROJECT DESCRIPTION

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO REPLACE EXISTING FIRE ALARM IN BUILDINGS A, B, C, D, E, AND F; TO ADD EMERGENCY LIGHTING AND REPLACE / ADD EXIT SIGNS WHERE REQUIRED; TO PROVIDE POWER AND CONTROL CONDUITS FOR NEW HVAC UNITS, AND TO PROVIDE LIGHTING / POWER IN REMODELED AREAS.

SHOULD ANY CONDITIONS DEVELOP, NOT COVERED BY THE CONTRACT DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH ALL REQUIRED CODES, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO, AND APPROVED BY, THE AGENCY BEFORE PROCEEDING WITH THE WORK.

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JESSE U. BASTIAN
No. C20229
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

SYMBOLS, NOTES, ABBREVIATIONS, SCHEDULES

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

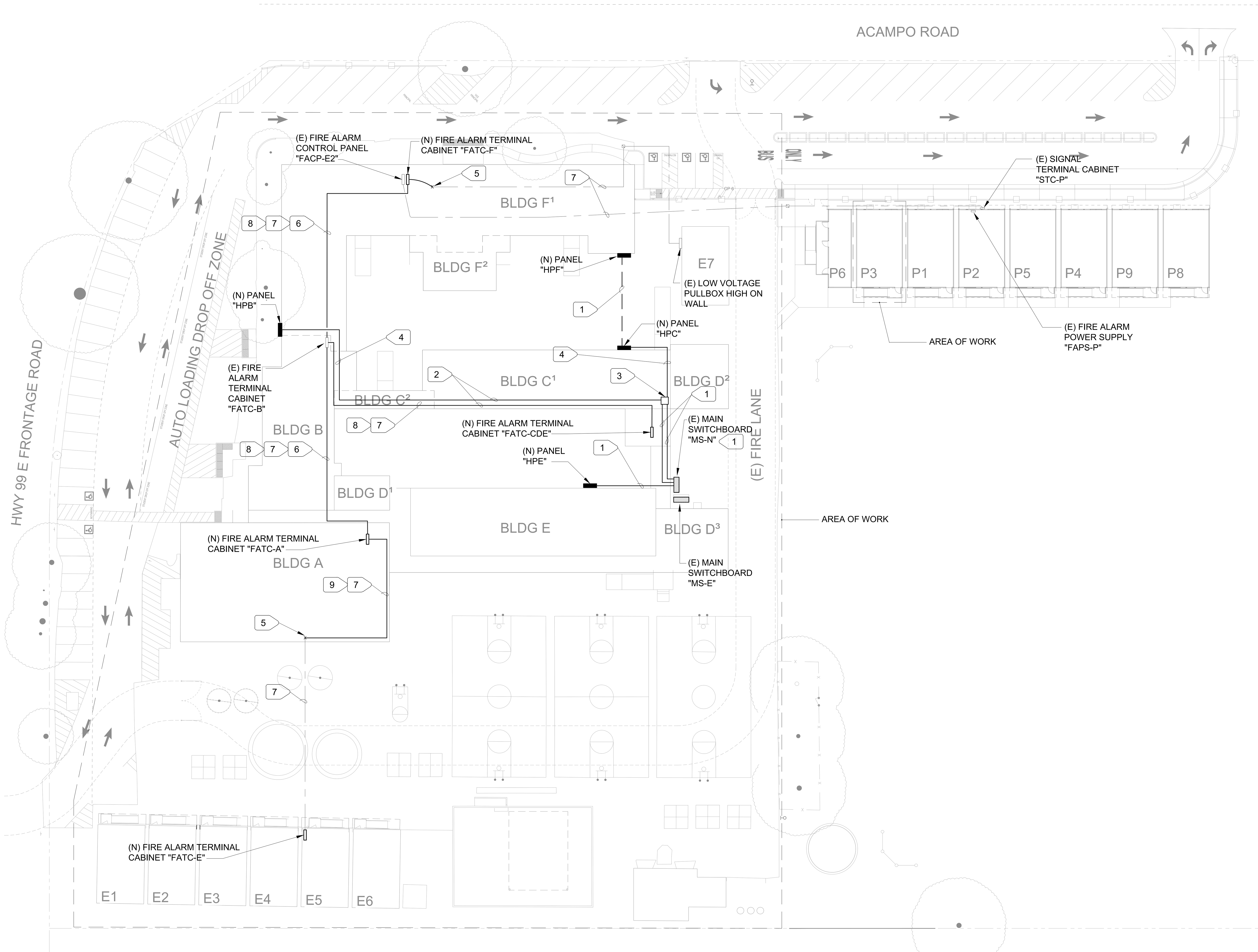
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E0.1

__ OF __ SHEETS

Feb 16, 2020 – 11:42am



1
E1.1

SITE PLANE - ELECTRICAL

SCALE: 1' = 30'-0"

NUMBERED NOTES:

1. REFER TO "ONE LINE DIAGRAM - POWER" FOR (N) CKT. BRKRS., CONDUIT AND CONDUCTORS.
2. RUN CONDUIT ON LOWER ROOF, PROVIDE SUPPORT PER 1/E5.0.
3. PROVIDE NEMA 4X ENCLOSURE WITH SCREW COVER 24"x24"x8". MOUNT PER 1/E5.0.
4. ENTER ATTIC SPACE AND RUN THROUGH. EXIT ATTIC SPACE AND CONTINUE ON WALL JUST BELOW ROOF EAVE, AND TURN DOWN TO (N) PANEL. WATERPROOF ALL EXTERIOR PENETRATIONS.
5. LOCATE (E) CONDUIT. CONNECT (N) CONDUIT TO (E) USING 6"X6"X4" BOX WITH SCREW COVER. IF BOX MOUNTED OUTSIDE, PROVIDE NEMA 3R. BOX IS USED AS PULLBOX, DON'T TERMINATE CABLES IN THIS BOX.
6. RUN IN ATTIC SPACE.
7. REFER TO "FIRE ALARM RISER DIAGRAM" FOR CONDUIT AND CONDUCTORS.
8. RUN 2"C.O. FOR MECHANICAL CONTROL WIRING BY OTHERS. COORDINATE EXACT TERMINATION LOCATION WITH MECHANICAL CONTROL CONTRACTOR PRIOR TO ROUGH IN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

SITE PLAN
ELECTRICAL

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE D. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

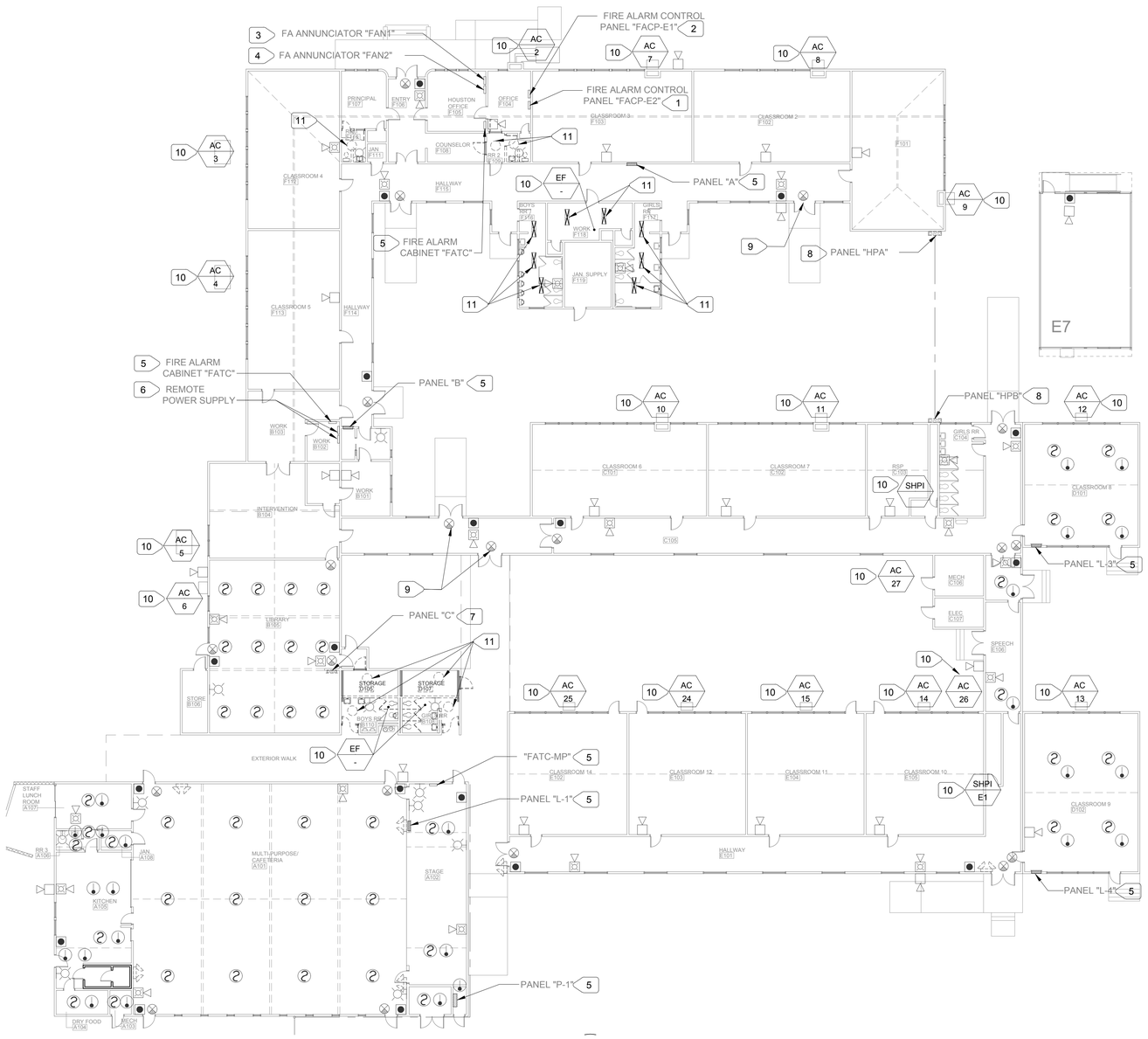
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

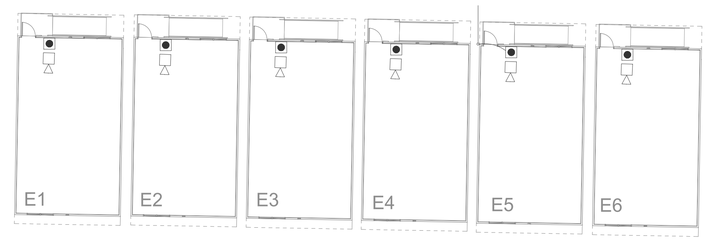
M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

SHEET NO.

E1.1

__ OF __ SHEETS



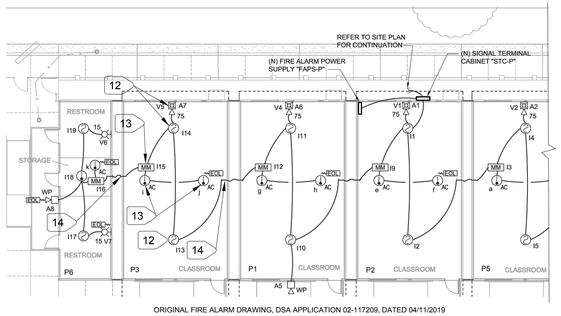


NUMBERED NOTES:

1. (E) FIRE ALARM CONTROL PANEL, EDWARDS EST-3X, ADDRESSABLE PANEL WITH VOICE EVACUATION CAPABILITIES. BUILDING P1-P9 (NOT PART OF THIS MODERNIZATION) ARE CONNECTED TO THIS PANEL. PROTECT PANEL IN PLACE. PROTECT CONNECTIONS TO BUILDINGS P1-P9. PROTECT CONNECTIONS TO OWNERS MONITORING STATION.
2. (E) FIRE ALARM CONTROL PANEL, EST LSS4/36, NON-ADDRESSABLE PANEL. DISCONNECT PANEL AND REMOVE.
3. (E) ANNUNCIATOR CONNECTED TO "FACP-E1". REMOVE ANNUNCIATOR AND CONNECTION TO "FACP-E1".
4. (E) ANNUNCIATOR CONNECTED TO "FACP-E2". PROTECT IN PLACE.
5. PROTECT IN PLACE.
6. CAREFULLY DISCONNECT POWER SUPPLY AND PROTECT FOR REUSE. POWER SUPPLY IS IN GOOD CONDITION. REPLACE BATTERIES, AS SHOWN ELSEWHERE.
7. DISCONNECT PANEL (PANEL CONSIST OF (4) GROUPS OF CKT. BRKRS. AND GUTTER), AND REMOVE. PROTECT (E) FEEDER AND EXISTING CIRCUITS FOR RECONNECTING.
8. DISCONNECT PANEL AND REMOVE. REMOVE FEEDER BACK TO SOURCE. PROTECT CIRCUITS NOT BEING DEMOLISHED FOR RECONNECTION.
9. EXIT LIGHT, DISCONNECT AND REMOVE. TYPICAL FOR EXIT LIGHT/SIGNS. NOT ALL EXISTING LIGHTS AND SIGNS ARE SHOWN ON THIS PLAN. BUILDINGS SHOWN ON THIS PLAN ARE GETTING NEW EXIT LIGHTS, THEREFORE REMOVE ALL EXIT LIGHTS AND SIGNS IN THE BUILDINGS SHOWN ON THIS PLAN EXCEPT IN BUILDINGS "P". REMOVE ALL ASSOCIATED WIRING AND EXPOSED BOXES AND CONDUITS. PATCH AND PAINT.
10. DISCONNECT MECHANICAL UNIT. REMOVE WIRING BACK TO SOURCE. REMOVE EXPOSED CONDUITS AND PATCH AND PAINT ALL FINISHES TO MATCH (E) - COORDINATE.
11. DISCONNECT AND REMOVE LIGHT FIXTURE AND ASSOCIATED SWITCHING. INSURE THAT REMAINING LIGHT CIRCUIT CONTINUITY. PATCH AND PAINT ALL FINISHES TO MATCH (E) - COORDINATE.
12. REMOVE (E) FIRE ALARM DEVICE.
13. PROTECT (E) FIRE ALARM DEVICE.
14. PROTECT (E) FIRE ALARM WIRING COMING BUILDING "P1" AND GETTING TO BUILDING "P6".

GENERAL DEMOLITION NOTES:

1. REMOVE (E) FIRE ALARM SYSTEM IN THE BUILDINGS SHOWN ON THIS PLAN ENTIRELY, EXCEPT WHERE OTHERWISE NOTED. FIRE ALARM DEVICES IN BUILDINGS "P6", "P1", "P2", "P5" SHALL REMAIN IN PLACE. FIRE ALARM DEVICES IN BUILDING "P3" SHALL BE REMOVED OR PROTECTED AS SHOWN ON THIS PLAN.
2. NOT ALL FIRE ALARM DEVICES ARE SHOWN. CONTRACTOR SHALL VISIT SITE BEFORE BID AND FAMILIARIZE THEMSELVES WITH AREA OF DEMOLITION.
3. REMOVE ALL FIRE ALARM WIRING FROM BUILDINGS SHOWN ON THIS PLAN, EXCEPT WHERE NOTED OTHERWISE.
4. REMOVE (E) EXIT SIGNS AND EMERGENCY LIGHTS IN THE BUILDINGS SHOWN ON THIS PLAN ENTIRELY.
5. NOT ALL EXIT LIGHTS/SIGNS AND EMERGENCY LIGHTS ARE SHOWN. CONTRACTOR SHALL VISIT SITE BEFORE BID AND FAMILIARIZE THEMSELVES WITH AREA OF DEMOLITION.
6. REMOVE ALL WIRING ASSOCIATED WITH REMOVED DEVICES BACK TO SOURCE.
7. INSURE THAT REMAINING DEVICES ARE PROPERLY RECONNECTED, AND ARE IN FULL WORKING ORDER.
8. REMOVE ALL EXPOSED BOXES AND EXPOSED CONDUITS / WIREMOLDS USED FOR REMOVED DEVICES. NO EXPOSED UNUSED CONDUITS OR BOXES SHALL BE LEFT IN PLACE.
9. PROTECT FA CONDUITS BETWEEN BUILDINGS.
10. LEAVE CONCEALED, UNUSED CONDUITS IN PLACE.
11. PATCH ALL SURFACES FROM WHICH DEVICES ARE REMOVED, AND PAINT TO BLEND IN. UNUSED BOXES SHALL BE REMOVED, UNLESS OTHERWISE DIRECTED, SURFACE PATCHED AND PAINTED.
12. SOME OF EXIT SIGNS CONTAIN TRITIUM. THESE SIGNS SHALL NOT BE DISPOSED AS NORMAL TRASH. REFER TO UNITED STATES NUCLEAR REGULATORY COMMISSION, TITLE 10 CODE OF FEDERAL REGULATIONS FOR REQUIREMENTS FOR TRITIUM SIGNS DISPOSAL.



ORIGINAL FIRE ALARM DRAWING, DSA APPLICATION 02-117209, DATED 04/11/2019
ALL DEVICES SHOWN AS NEW (N) IS EXISTING.

1 / E2.0 FLOOR PLANS - ELECTRICAL DEMOLITION

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

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JESSE U. BASTIAN
No. C20229
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLANS
ELECTRICAL DEMOLITION

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

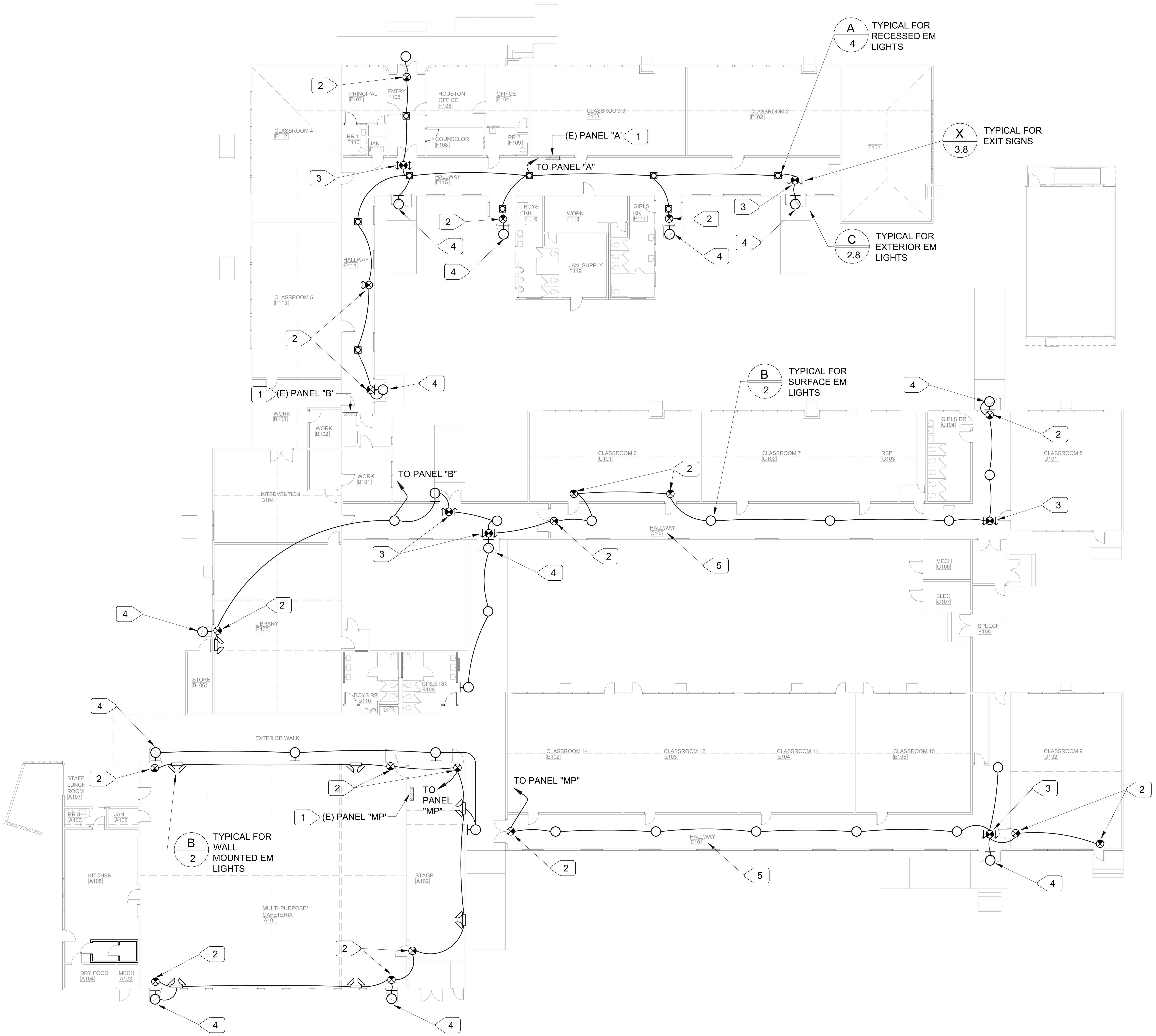
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.0

__ OF __ SHEETS

M. NEILS ENGINEERING INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1 FLOOR PLANS - EMERGENCY AND EXIT LIGHTS
E2.1
SCALE : 1/16"" = 1'-0"

NUMBERED NOTES:

1. PROVIDE (N) 20/1 CKT. BRKR. IN (E) SPACE. CONNECT (N) EMERGENCY LIGHTING CKT. TO THAT CKT. BRKR. UPDATE PANEL DIRECTORY.
2. MOUNT ABOVE DOOR OR ON WALL.
3. PROVIDE CEILING MOUNTING KIT, AND MOUNT SIGN AT CEILING. COORDINATE EXACT LOCATION BEFORE ROUGH IN.
4. MOUNT EXTERIOR EM LIGHT ABOVE DOOR. COORDINATE EXACT REQUIREMENTS WITH STRUCTURAL ENGINEER BEFORE ROUGH IN.
5. PROVIDE STEEL SURFACE RACEWAY, WIREMOLD V700. ROUTE RACEWAY AS CONSPICUOUSLY AS POSSIBLE. COORDINATE WITH THE ARCHITECT BEFORE ROUGH-IN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212
HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FLOOR PLANS
EMERGENCY AND
EXIT LIGHTS

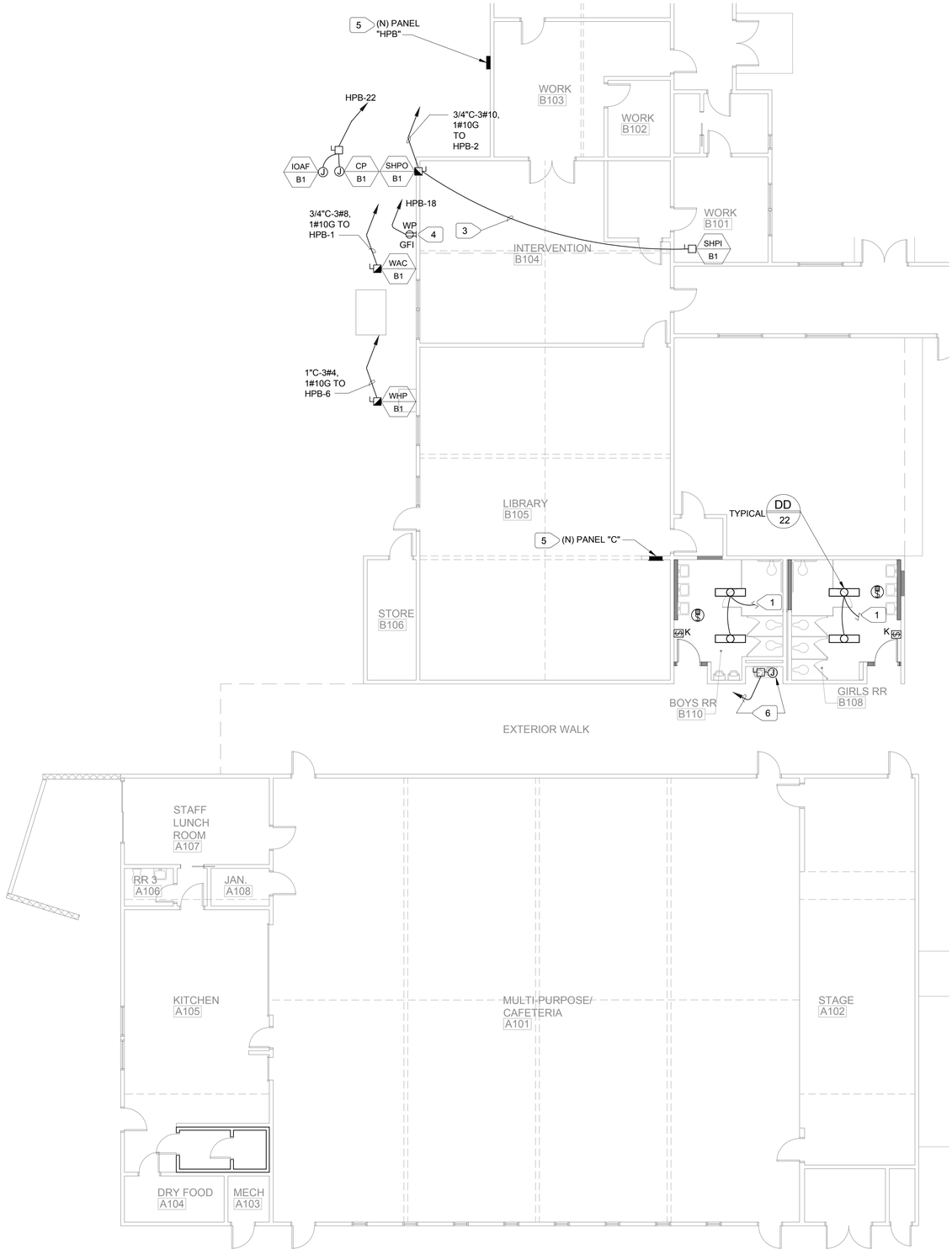
CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE D. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA
02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

E2.1
__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1 / E2.2AB

FLOOR PLAN - ELECTRICAL

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. CONNECT TO SALVAGED LIGHTING CKT., REFER TO DEMOLITION.
2. NOT USED.
3. INDOOR UNIT IS POWER FROM OUTDOOR UNIT. PROVIDE ALL APPURTENANCES TO CONNECT INDOOR AND OUTDOOR UNIT PER MANUFACTURER REQUIREMENTS. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
4. PROVIDE IN METAL LOCKABLE ENCLOSURE WITH WHILE-IN-USE COVER.
5. COORDINATE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH IN.
6. (N) PANEL IN LIEU OF REMOVED. CONNECT (E) FEEDER AND (E) CKTS. PATCH AND PAINT TO BLEND INTO SURROUNDING. ADJUST AS REQUIRED.
7. PROVIDE FOR AND CONNECT POWER FOR WATER BOTTLE FILLING STATION. COORDINATE WITH PLUMBING BEFORE ROUGH IN. CONNECT TO PANEL "C".

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN L. HENRY
No. C20229
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

BUILDINGS A & B
FLOOR PLANS
ELECTRICAL

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

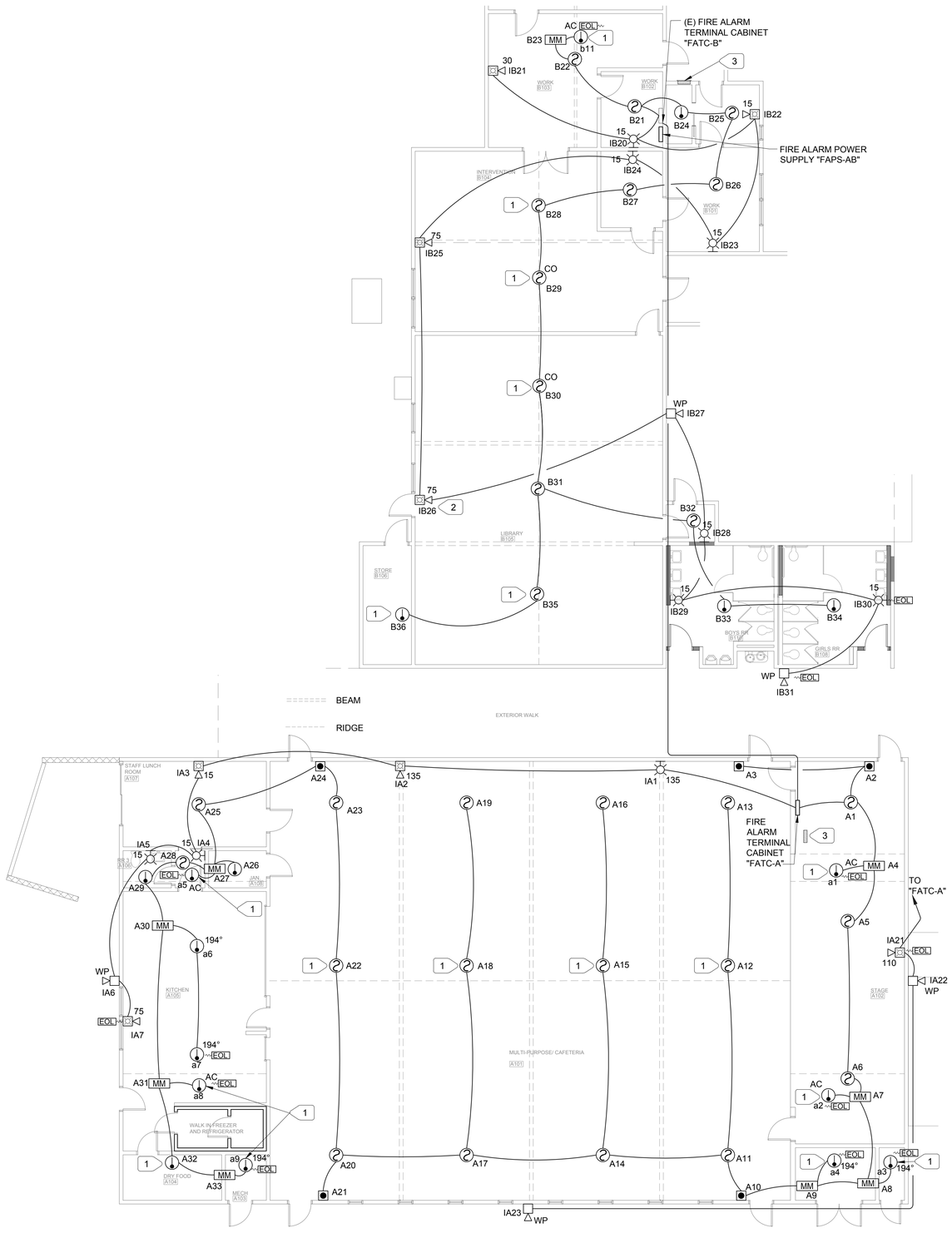
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.2AB

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1 E2.3AB

FLOOR PLAN - FIRE ALARM

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. MOUNT WITHIN 3' OF HIGHEST POINT AT CEILING.
2. MOUNT ABOVE DOOR SUCH STROBE LENS IS MAXIMUM 96" ABOVE FINISHED FLOOR.
3. PROVIDE (N) 20/1 CKT. BRKR. IN (E) PANEL AND CONNECT POWER TO FAPS USING 1/2"C-2#12, 1#12G.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT JOSEPH L. HENRY C-25063 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

BUILDINGS A & B
FLOOR PLANS
FIRE ALARM

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER JESSE U. BASTIAN No. E20229 Exp. 03-31-21 ELECTRICAL STATE OF CALIFORNIA

02/18/2020

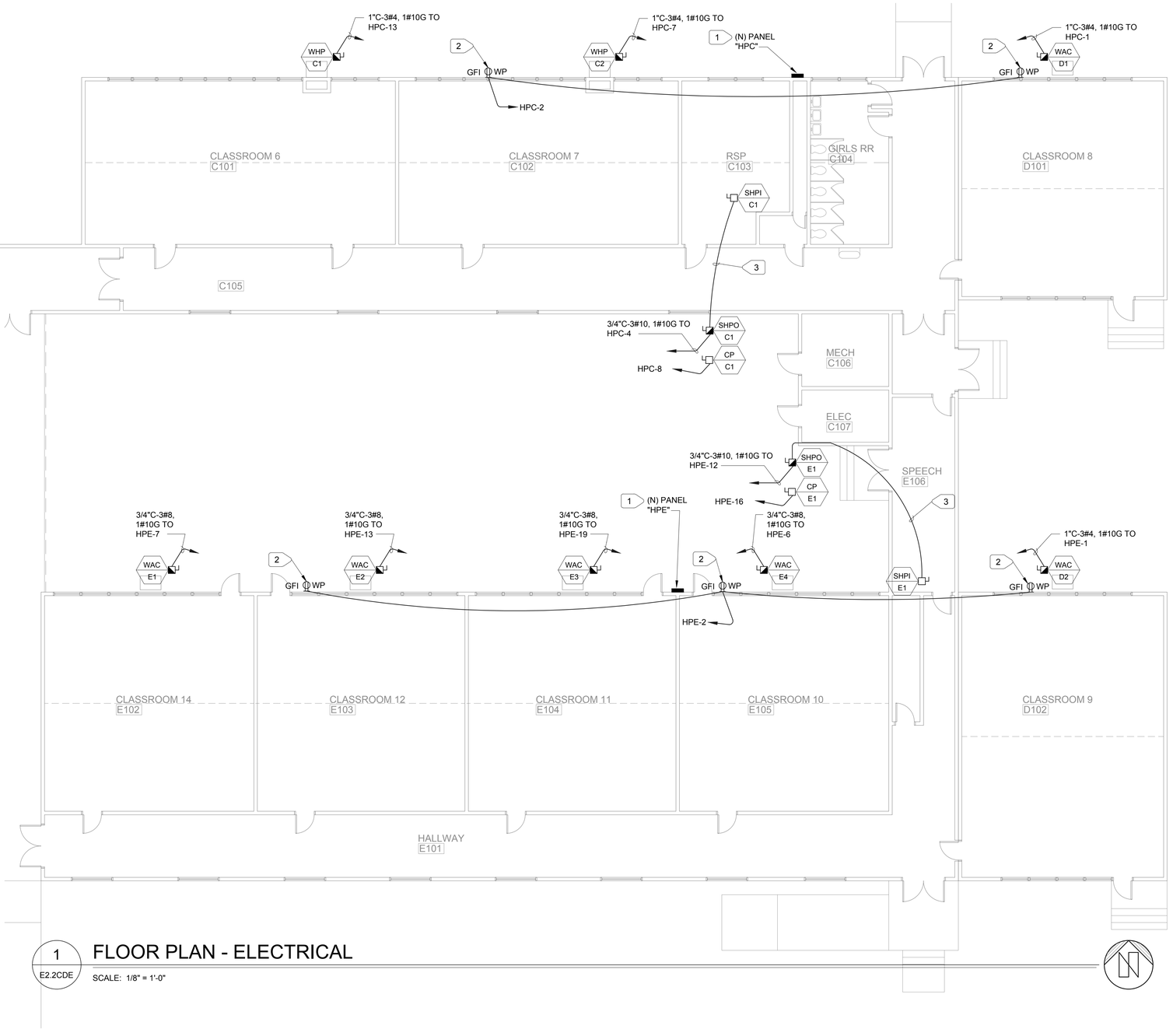
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.3AB

__ OF __ SHEETS

M. NEILS ENGINEERING INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1
E2.2CDE

FLOOR PLAN - ELECTRICAL

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. COORDINATE EXACT LOCATION OF (N) PANEL WITH THE ARCHITECT BEFORE ROUGH IN.
2. PROVIDE IN METAL LOCKABLE ENCLOSURE WITH WHILE-IN-USE COVER.
3. INDOOR UNIT IS POWER FROM OUTDOOR UNIT. PROVIDE ALL APPURTENANCES TO CONNECT INDOOR AND OUTDOOR UNIT PER MANUFACTURER REQUIREMENTS. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JOSEPH L. HENRY
C-25903
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

BUILDINGS C D &E
FLOOR PLANS
ELECTRICAL

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

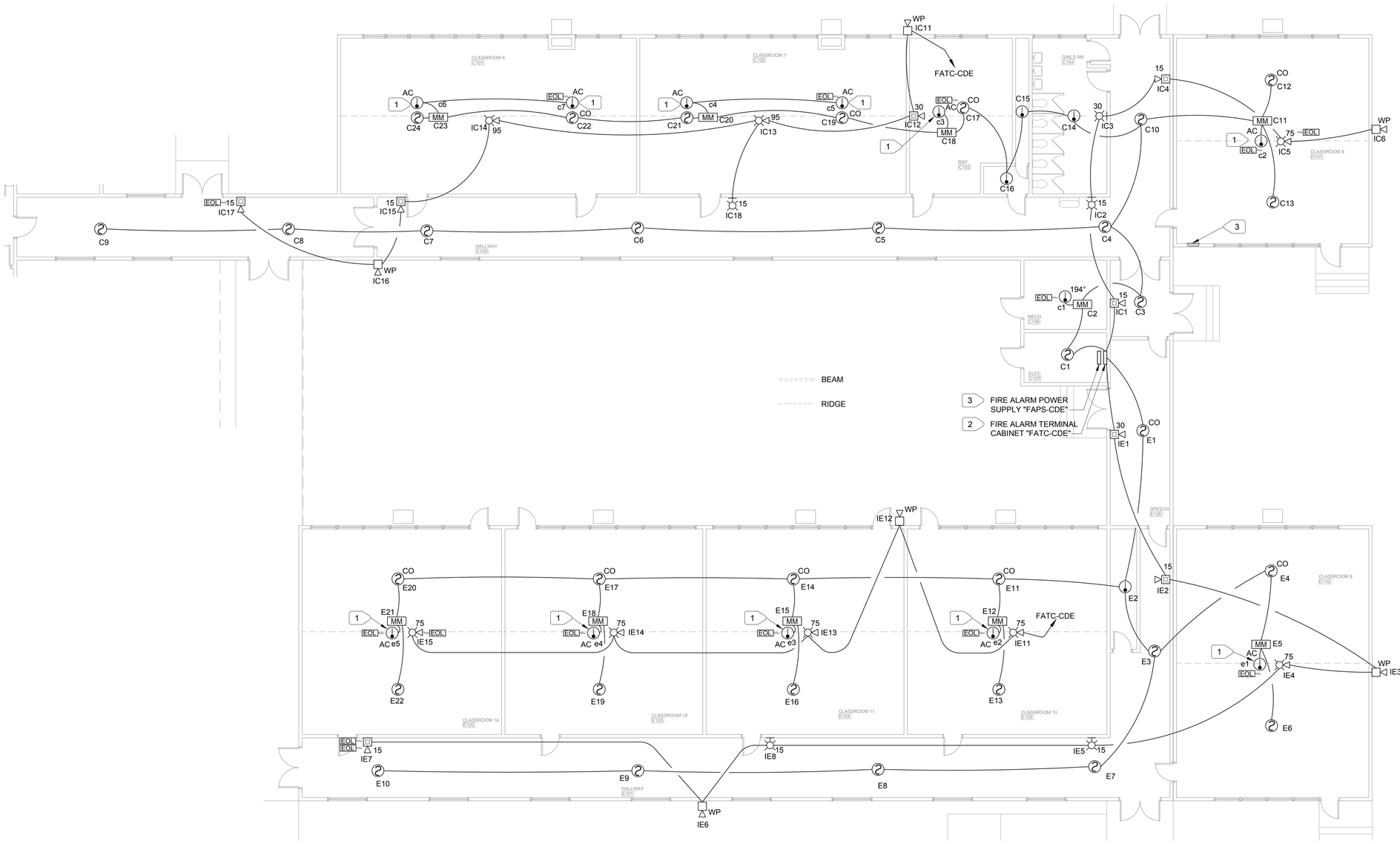
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.2CDE

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1 E2.3CDE

FLOOR PLAN - FIRE ALARM

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. MOUNT WITHIN 3' OF HIGHEST POINT AT CEILING.
2. PROVIDE NEMA 1 ENCLOSURE 18" X 24" X 6" WITH LOCKABLE HINGED DOOR. PROVIDE 3/4" PLYWOOD BACKBOARD INSIDE.
3. PROVIDE (N) 20/1 CKT. BRKR. IN (E) PANEL AND CONNECT POWER TO FAPS USING 1/2"C-2#12, 1#12G.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN J. HENRY
No. C25028
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

BUILDINGS C D &E FLOOR PLANS FIRE ALARM

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

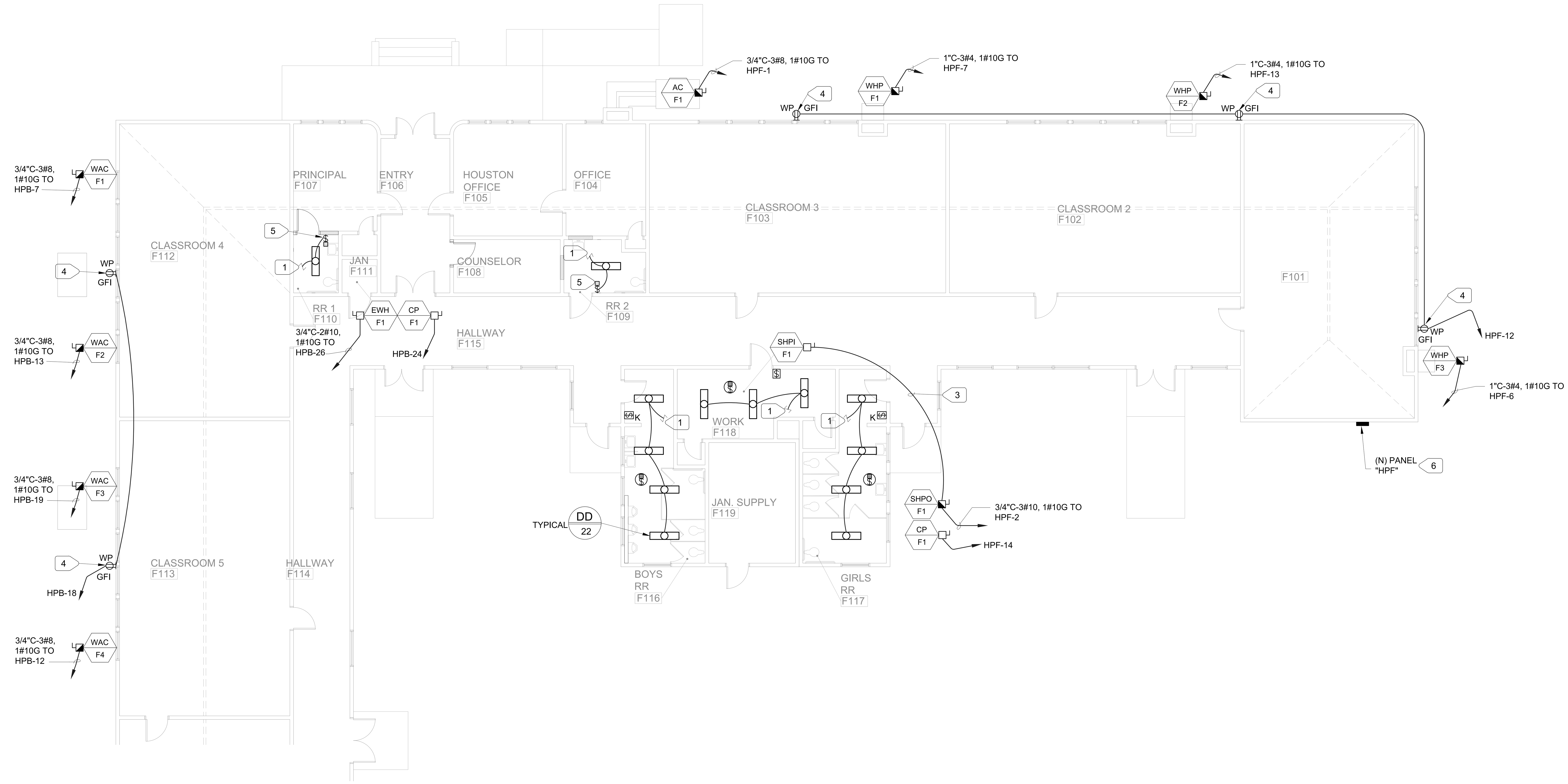
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.3CDE

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-6217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21



1 FLOOR PLAN - ELECTRICAL

E2.2F

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. CONNECT TO SALVAGED LIGHTING CKT., REFER TO DEMOLITION.
2. NOT USED.
3. INDOOR UNIT IS POWER FROM OUTDOOR UNIT. PROVIDE ALL APPURTENANCES TO CONNECT INDOOR AND OUTDOOR UNIT PER MANUFACTURER REQUIREMENTS. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
4. PROVIDE IN METAL LOCKABLE ENCLOSURE WITH WHILE-IN-USE COVER.
5. PROVIDE ON/OFF SWITCH WITH OCCUPANCY SENSOR.
6. COORDINATE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH IN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

BUILDING F FLOOR PLANS ELECTRICAL

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE D. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

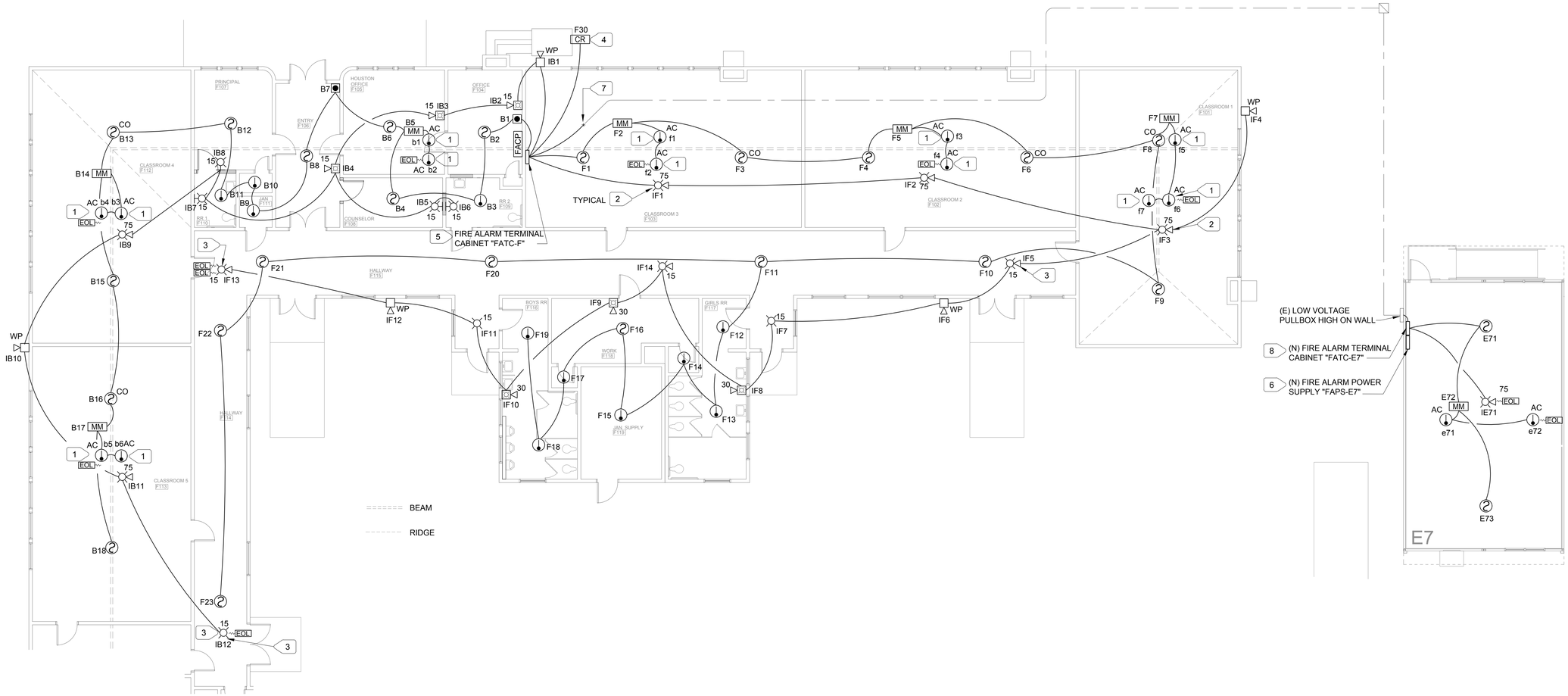
	REVISIONS	BY
PROJECT NO. 19-32-047		
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

SHEET NO.

E2.2F

__ OF __ SHEETS



1 FLOOR PLAN - FIRE ALARM

E2.3F

SCALE: 1/8" = 1'-0"

NUMBERED NOTES:

1. MOUNT WITHIN 3' OF HIGHEST POINT AT CEILING.
2. CEILING MOUNTED NOTIFICATION DEVICE SHALL BE INSTALLED CLOSE TO THE CENTER OF CEILING AS PRACTICABLE. TYPICAL U.O.N.
3. MOUNT WITHIN 15' FROM THE END OF CORRIDOR.
4. PROVIDE FOR SENDING SIGNAL TO MECHANICAL CONTROL FOR SHUTDOWN OF HVAC UNIT AC-F1 (ACTUAL UNIT SHUTDOWN BY MECHANICAL CONTRACTOR) UPON FIRE ALARM CONDITION AT FIRE ALARM CONTROL PANEL. COORDINATE WITH MECHANICAL CONTROL CONTRACTOR PRIOR TO ROUGH IN.
5. PROVIDE NEMA 1 ENCLOSURE 18" X 24" X 6" WITH LOCKABLE HINGED DOOR. PROVIDE 3/4" PLYWOOD BACKBOARD INSIDE.
6. PROVIDE (N) 20/1 CKT. BRKR. IN (E) POWER PANEL AND CONNECT POWER FOR (N) FIRE ALARM POWER SUPPLY USING 1/2"C-2#12, 1#12G.
7. LOCATE (E) CONDUIT AND EXTEND TO (N) FATC-F. REFER TO SHEET E1.1, NOTE #5.
8. PROVIDE NEMA 1 ENCLOSURE, 12"X12"X6", SCREW COVER, WITH 3/4" PLYWOOD BACKBOARD INSIDE. MOUNT ABOVE ACCESSIBLE CEILING.

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 230N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JESSE U. BASTIAN
No. C20229
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

BUILDING F AND E7 FLOOR PLANS FIRE ALARM

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

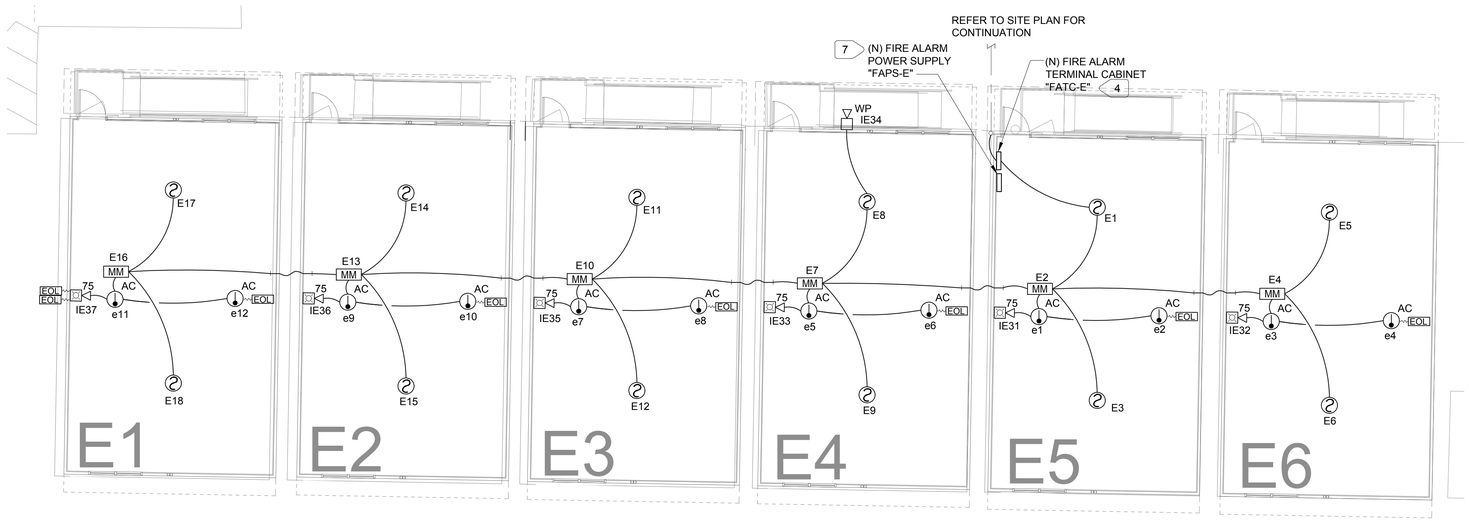
02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E2.3F

__ OF __ SHEETS



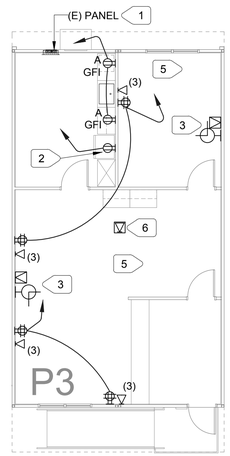
1 E2.3E1-6, P3

FLOOR PLANS - FIRE ALARM BUILDINGS E1-E6

SCAELE: 1/8" = 1'-0"

NUMBERED NOTES:

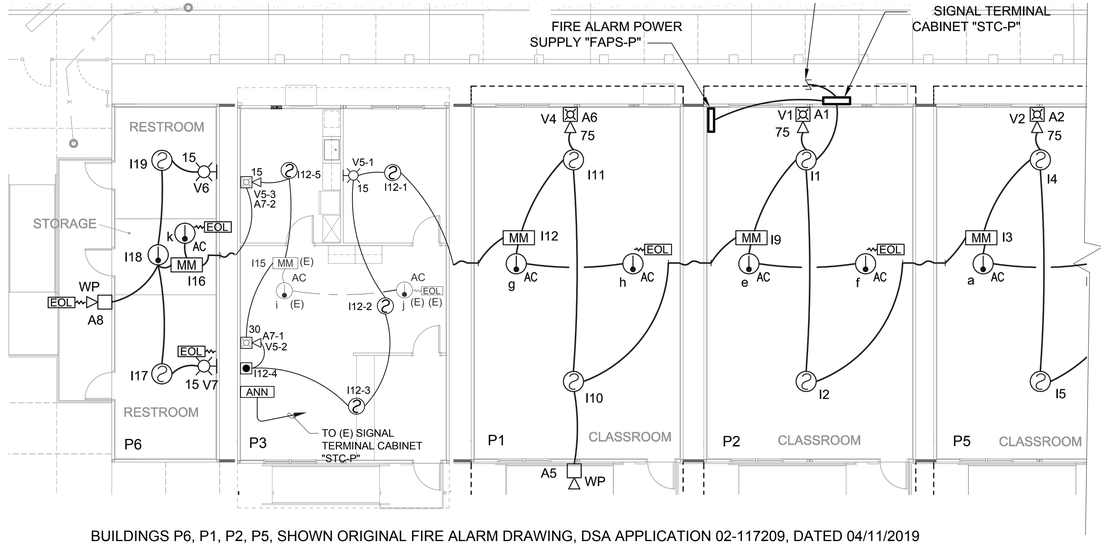
1. PROVIDE (5) (N) 20/1 CKT. BRKRS. IN (E) SPACES. CONNECT (N) RECEPTACLE CKTS. AND (N) FIRE ALARM POWER SUPPLY TO THAESE CKT. BRKRS. UPDATE PANEL DIRECTORY.
2. PROVIDE FOR REFRIGERATOR.
3. PROVIDE DATA OUTLET FOR IP SPEAKER. MOUNT AS DIRECTED IN FIELD. PROVIDE SPEAKER AND CLOCK TO MATCH (E) ON SITE.
4. PROVIDE NEMA 1 ENCLOSURE WITH SCREW COVER, 18"x18"x6" WITH PLYWOOD BACKBOARD INSIDE. MOUNT ABOVE CEILING, IN ACCESSIBLE ATTIC SPACE.
5. RUN (N) DATA CABLES (COMPUTER, CLOCK/SPEAKER, IP PHONE) TO (E) IDF IN PORTABLE BUILDING "P2". (N) DATA CABLES SHALL BE CAT 6A, GENERAL CABLE 71338xx. PROVIDE PURPLE COLOR FOR WORKSTATIONS, GREEN FOR INTERCOM, GRAY FOR VOICE, BLUER FOR WAP.
6. PROVIDE AT CEILING FOR WAP.
7. PROVIDE (N) 20/1 CKT. BRKR. IN (E) BUILDING POWER PANEL AND CONNECT POWER FOR FAPS TO THAT CKT. BRKR. USING 1/2"C-2#12, 1#12G. MOUNT HIGH ON WALL, TOP OF ENCLOSURE 1" BELOW CEILING.



2 E2.3E1-6, P3

FLOOR PLAN - ELECTRICAL BUILDING P3

SCAELE: 1/8" = 1'-0"



BUILDINGS P6, P1, P2, P5, SHOWN ORIGINAL FIRE ALARM DRAWING, DSA APPLICATION 02-117209, DATED 04/11/2019
ALL DEVICES SHOWN IN BUILDINGS P6, P1, P2, P5 IS EXISTING AND IS SHOWN FOR REFERENCE.
DEVICES IN BUILDING P3 IS NEW EXCEPT WHERE SHOWN.

3 E2.3E1-6, P3

FLOOR PLAN - FIRE ALARM BUILDING P3

SCAELE: 1/8" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JESSE U. BASTIAN
No. C20229
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

BUILDINGS E1-E6, P3
FLOOR PLANS
FIRE ALARM, ELECTRICAL

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

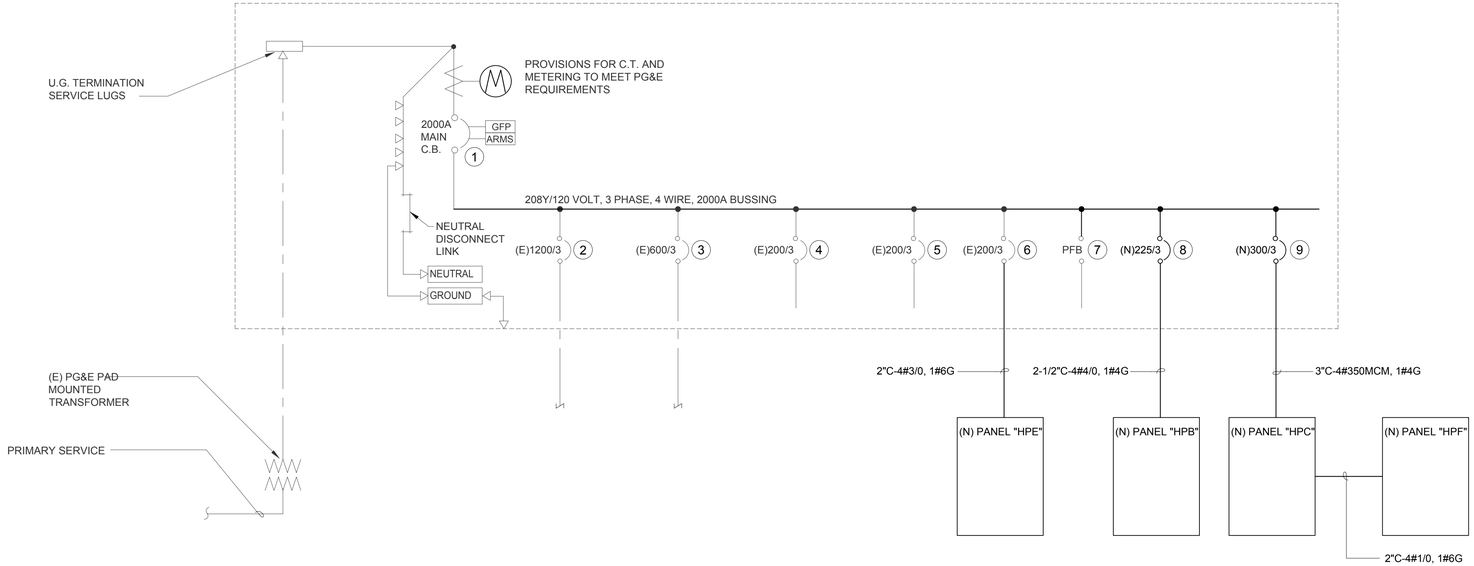
SHEET NO.

E2.3E1-6, P3

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

(E) MAIN SWITCHBOARD "MS-N"



1 / E3.0 — # ONE LINE DIAGRAM - POWER

N.T.S.

NEW PANEL "HPB" SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MS-N" | LOCATION: SEE PLANS

TYPE: | BUS: 250 | MAIN BKR 225A SUB FD: NA | VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PNL TYPE: NEMA 3R | REMARKS: _k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
WAC-B1	3.8	45/3	1	A	2	25/2	2.0	SHPO-B1
	3.8		3	B	4		2.0	
	3.8		5		C 6	60/3	4.4	WHP-B1
WAC-F1	3.5	40/3	7	A	8		4.4	
	3.5		9	B	10		4.4	
	3.5		11		C 12		3.5	
WAC-F2	3.5	40/3	13	A	14	40/3	3.5	WAC-F4
	3.5		15	B	16		3.5	
	3.5		17		C 18	20/1	0.8	RECEPTACLE
WAC-F3	3.5	40/3	19	A	20	20/1	0.8	RECEPTACLE
	3.5		21	B	22	20/1	0.8	CIRCULATION PUMP
	3.5		23		C 24	20/1	0.8	CIRCULATION PUMP
SPARE			25	A	26	25/2	2.0	WH-F1
SPARE			27	B	28		2.0	
SPARE			29		C 30	PFB		SPACE

NOTE(S):
1.
2.
3.

PHASE A= 27.0 kVA
PHASE B= 27.0 kVA
PHASE C= 23.8 kVA
TOTAL = 77.8 kVA
TOTAL = 216.0 Amperes

NEW PANEL "HPC" SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MS-N" | LOCATION: SEE PLANS

TYPE: | BUS: 400 | MAIN BKR 300A | VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PNL TYPE: NEMA 3R | REMARKS: _k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
WHP-C1	4.4	60/3	1	A	2	20/1	0.8	RECEPTACLES
	4.4		3	B	4	25/2	2.0	SHPO-C1
	4.4		5		C 6		2.0	
WHP-C2	4.4	60/3	7	A	8	20/1	0.8	CIRCULATION PUMP
	4.4		9	B	10	20/1		SPARE
	4.4		11		C 12	20/1		SPARE
WAC-D1	4.4	60/3	13	A	14	20/1		SPARE
	4.4		15	B	16	20/1		SPARE
	4.4		17		C 18	20/1		SPARE
SPARE			19	A	20	PFB		SPACE
SPARE			21	B	22	PFB		SPACE
SPARE			23		C 24	PFB		SPACE
			25	A	26	150/3	18.0	PANEL "HPF"
			27	B	28		18.0	
			29		C 30		16.8	

NOTE(S):
1.
2.
3.

PHASE A= 32.8 kVA
PHASE B= 33.2 kVA
PHASE C= 32.0 kVA
TOTAL = 98.0 kVA
TOTAL = 272.0 Amperes

NEW PANEL "HPE" SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MS-N" | LOCATION: SEE PLANS

TYPE: | BUS: 250 | MAIN BKR 200A | VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PNL TYPE: NEMA 3R | REMARKS: _k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
WAC-D2	4.4	60/3	1	A	2	20/1	0.8	RECEPTACLE
	4.4		3	B	4	20/1	0.8	RECEPTACLE
	4.4		5		C 6		3.5	
WAC-E1	3.5	40/3	7	A	8	40/3	3.5	WAC-E4
	3.5		9	B	10		3.5	
	3.5		11		C 12	25/2	2.0	SHPO-E1
WAC-E2	3.5	40/3	13	A	14		2.0	
	3.5		15	B	16	20/1	0.8	CIRCULATION PUMP
	3.5		17		C 18	20/1		SPARE
WAC-E3	3.5	40/3	19	A	20	20/1		SPARE
	3.5		21	B	22	20/1		SPARE
	3.5		23		C 24	20/1		SPARE
SPACE		PFB	25	A	26	PFB		SPACE
SPACE		PFB	27	B	28	PFB		SPACE
SPACE		PFB	29		C 30	PFB		SPACE

NOTE(S):
1.
2.
3.

PHASE A= 21.2 kVA
PHASE B= 20.0 kVA
PHASE C= 20.4 kVA
TOTAL = 61.6 kVA
TOTAL = 171.0 Amperes

NEW PANEL "HPF" SCHEDULE

POWER SOURCE: PANEL "HPC" | LOCATION: SEE PLANS

TYPE: | BUS: 250 | MAIN BKR 150A SUB FD: NA | VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PNL TYPE: NEMA 3R | REMARKS: _k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
AC-F1	2.8	35/3	1	A	2	25/2	2.0	SHPO-F1
	2.8		3	B	4		2.0	
	2.8		5		C 6	60/3	4.4	WHP-F3
WHP-F1	4.4	60/3	7	A	8		4.4	
	4.4		9	B	10		4.4	
	4.4		11		C 12	20/1	0.8	RECEPTACLE
WHP-F2	4.4	60/3	13	A	14	20/1	0.8	CIRCULATION PUMP
	4.4		15	B	16	20/1		SPARE
	4.4		17		C 18	20/1		SPARE
SPARE			19	A	20	20/1		SPARE
SPARE			21	B	22	20/1		SPARE
SPARE			23		C 24	20/1		SPARE
SPACE		PFB	25	A	26	PFB		SPACE
SPACE		PFB	27	B	28	PFB		SPACE
SPACE		PFB	29		C 30	PFB		SPACE

NOTE(S):
1.
2.
3.

PHASE A= 18.8 kVA
PHASE B= 18.0 kVA
PHASE C= 16.8 kVA
TOTAL = 53.6 kVA
TOTAL = 148.8 Amperes

NEW PANEL "C " SCHEDULE

POWER SOURCE: CKT. BRKR. IN JAN. SUPPLY F119 | LOCATION: SEE PLAN

TYPE: | BUS: 125 | MAIN BKR 100A SUB FD: NA | VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES | MOUNTING: FLUSH | REMARKS: _k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
EXISTING LOAD	0.8	20/1	1	A	2	20/1	0.8	EXISTING LOAD
EXISTING LOAD	0.8	20/1	3	B	4	20/1	0.8	EXISTING LOAD
EXISTING LOAD	0.8	20/1	5		C 6	20/1	0.8	EXISTING LOAD
EXISTING LOAD	0.8	20/1	7	A	8	20/1	0.8	EXISTING LOAD
EXISTING LOAD	0.8	20/1	9	B	10	20/1	0.8	EXISTING LOAD
EXISTING LOAD	0.8	20/1	11		C 12	20/1	0.2	WATTER FILLING STATION
EXISTING LOAD	0.8	20/1	13	A	14	20/1		SPARE
EXISTING LOAD	0.8	20/1	15	B	16	20/1		SPARE
EXISTING LOAD	0.8	20/1	17		C 18	20/1		SPARE
EXISTING LOAD	0.8	20/1	19	A	20	20/1		SPARE
EXISTING LOAD	0.8	20/1	21	B	22	20/1		SPARE
EXISTING LOAD	0.8	20/1	23		C 24	20/1		SPARE
EXISTING LOAD	0.8	20/1	25	A	26	PFB		SPACE
EXISTING LOAD	0.8	20/1	27	B	28	PFB		SPACE
EXISTING LOAD	0.8	20/1	29		C 30	PFB		SPACE

NOTE(S):
1.
2.
3.

PHASE A= 5.6 kVA
PHASE B= 5.6 kVA
PHASE C= 5.0 kVA
TOTAL = 16.2 kVA
TOTAL = 45.0 Amperes

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-6217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT — APPROVED — STATE OF CALIFORNIA — 12/31/21 RENEWAL DATE

MODERNIZATION
HOUSTON SCHOOL

ONE LINE DIAGRAM - POWER, PANEL SCHEDULE

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER — JESSE U. BASTIAN — No. E20229 Exp. 03-31-21 — ELECTRICAL — STATE OF CALIFORNIA

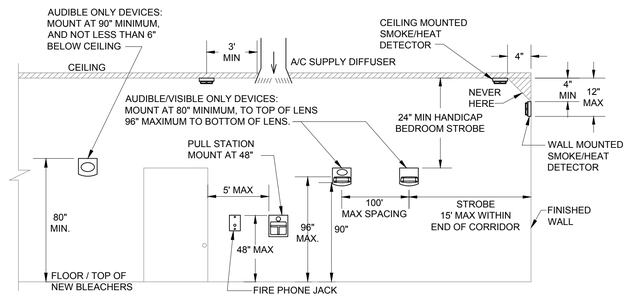
02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E3.0

__ OF __ SHEETS



TYPICAL INITIATION AND NOTIFICATION APPLIANCE ELEVATION DETAIL

1 / E4.0

NO SCALE

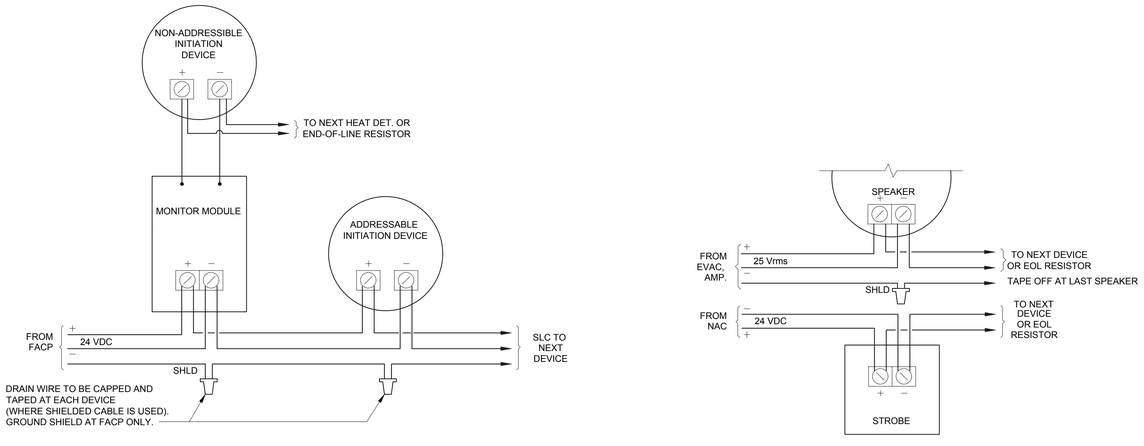
FIRE ALARM SEQUENCE OF OPERATION MATRIX

	FACP ALARM	FACP TROUBLE	FACP SUPERVISORY	ALARM SIGNAL OFF-SITE	TROUBLE SIGNAL OFF-SITE	SUPERVISORY OFF-SITE	ACTIVATE AUDIO/VISUAL THROUGHOUT	ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS	ANNUNCIATE ALARM AT REMOTE ANNUNCIATOR
AREA SMOKE DETECTORS	X			X			X		X
HEAT DETECTORS	X			X			X		X
FIRE TANK WATER LEVEL			X			X			
POWER FAILURE		X			X				X
NOTIFICATION CIRCUIT CLASS B									
OPEN WIRE		X			X				
GROUNDED WIRE		X			X			R	
SHORTED WIRES		X			X				
SIGNALING LINE CIRCUIT CLASS B									
OPEN WIRE		X			X				
GROUNDED WIRE		X			X			R	
WIRE TO WIRE (SHORT & OPEN)		X			X				
WIRE TO WIRE (SHORT & GROUND)		X			X				
OPEN & GROUND		X			X				
LOSS OF CARRIER		X			X				

NOTE: BLANK MEANS NOT APPLICABLE R = REQUIRED ACTION

FIRE ALARM GENERAL NOTES

1. REVISE EXISTING FIRE ALARM IN MODERNIZED PORTION OF THE BUILDING.
2. (E) FIRE ALARM CONTROL PANEL IS CAPABLE OF AUTOMATICALLY TESTING SMOKE DETECTORS AND PRINTING A REPORT OF THE TEST.
3. (E) FIRE ALARM CONTROL PANEL INCLUDES AUTOMATIC DIALING CAPABILITY FOR SENDING A SUPERVISORY SIGNAL, A TROUBLE SIGNAL, AND AN ALARM SIGNAL TO AN APPROVED SUPERVISING OFF-SITE MONITORING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY UL, OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. DIALER SHALL BE CAPABLE OF "GRABBING" A PHONE LINE FOR AN ALARM SIGNAL IF PHONE LINE IS ALREADY IN USE.
4. UPON COMPLETION OF FIRE ALARM SYSTEM REVISION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE WITH THE LOCAL FIRE MARSHALL AND THE PROJECT INSPECTOR OF RECORD AS WITNESSES.
5. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, CALIFORNIA ELECTRICAL CODE, ARTICLE 760, AND THE CALIFORNIA FIRE CODE.
6. REVISION TO THE FIRE ALARM SYSTEM SHALL HAVE AUTOMATIC INITIATION DEVICES, AND FULL COVERAGE.
7. PROVIDE "FIRE WATCH" DURING CONSTRUCTION WHEN EXISTING FIRE ALARM SYSTEM IF TURNED OFF, OR OFF LINE.
8. THE FIRE ALARM WIRING SHALL BE RUN IN CONDUITS.
9. DO NOT START INSTALLATION OF THE FIRE ALARM SYSTEM UNTIL DETAILED PLANS, SPECIFICATIONS AND CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
10. PER NFPA 72 2016, SECTIONS 10.6.5.2.2 AND 10.6.5.2.3, CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE IDENTIFIED AS "FIRE ALARM / ECS CIRCUIT", AND THE DISCONNECTING MEANS FOR THE CIRCUIT SHALL HAVE A RED MARKING, BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL AND SHALL BE MECHANICALLY PROTECTED. LOCATION OF THE DISCONNECT SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. THE CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE DEDICATED TO FIRE ALARM EQUIPMENT.
11. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES, SHALL BE APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
12. 13. A FIRE ALARM ACCEPTANCE TEST OF ALL DEVICES AND APPLIANCES, INCLUDING THE BACKUP BATTERY(IES), SHALL BE PERFORMED. ALL MANUFACTURER OPERATING RANGES SHALL BE MET. TESTING OF THE SUPERVISING STATION SIGNALS, AS WELL AS RELAY TO THE APPROPRIATE RESPONDING AGENCY, SHALL BE INCLUDED IN THE ACCEPTANCE TESTING. THE PROJECT INSPECTOR SHALL WITNESS THE ACCEPTANCE INSPECTION AND SHALL SIGN AS THE AHJ REPRESENTATIVE ON THE "SYSTEM RECORD OF COMPLETION" AT SECTION 12.3 (NFAP 72, FIGURE 7.8.2(a)). ALL SUPPLEMENTARY RECORDS SHALL BE ATTACHED AS APPLICABLE. THE PROJECT INSPECTOR SHALL VERIFY THAT THE FIRE ALARM SYSTEM IS IN SERVICE PRIOR TO COMPLETION OF THE "SYSTEM RECORD OF COMPLETION" FORM. ALL ORIGINAL DECANTATION SHALL BE RETAINED IN THE REQUIRED DOCUMENTATION CABINET (NFPA 72, 7,7,2).
13. A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE CALIFORNIA STATE FIRE MARSHAL UPON COMPLETION OF THE INSTALLATION.



NOTE:
DIAGRAM IS GENERIC THEREFORE CONTRACTOR SHALL COORDINATE WORK FOR SPECIFIC DEVICES USED.
REFER TO MANUFACTURER INFORMATION FOR TYPE OF CABLE, MAX. LENGTH, T-TAPING, GROUNDING, ETC.

FIRE ALARM DEVICES DIAGRAM

2 / E4.0

N.T.S.

FIRE ALARM EQUIPMENT SCHEDULE

SYMBOL	CATALOG NO.	DESCRIPTION	CSFM LISTING No.
WP	WHEELOCK ET-1010 WITH WBB OUTDOOR BACKBOX	SPEAKER, OUTDOOR WALL MOUNTED	7320-0785:0105
	WHEELOCK E70-24MCW-FR, E70-24MCWH-FR	SPEAKER/STROBE, WALL MOUNTED	7125-0785:0152
	WHEELOCK ST	STROBE, WALL MOUNTED	7125-0785:0168
	WHEELOCK E90-24MCW-FR, E90-24MCWH-FR	SPEAKER/STROBE, CEILING MOUNTED	7125-0785:0152
	WHEELOCK STC	STROBE, CEILING MOUNTED	7125-0785:0168
	EST SIGA-PS	SMOKE PHOTOELECTRIC DETECTOR	7272-1657:0126
CO	EST SIGA-PHCOS	SMOKE/HEAT/CO DETECTOR	5278-1657:0300
	EST-HRS	HEAT DETECTOR - FIXED TEMP 135° AND RATE-OF RISE	7270-1657:0125
194°	EDWARDS SIGNALING 282B-PL	HEAT DETECTOR - FIXED TEMP 194° AND RATE-OF RISE	7270-1657:0109
MM	EST SIGA-MM1	MONITOR MODULE	7300-1657:0121
CM	EST SIGA-CR	CONTROL MODULE	7300-1657:0121
FACP	EST3X	(E) FIRE ALARM CONTROL PANEL W/ VOICE EVACUATION CAPABILITIES	7300-1657:0306
ANN	EST E-RLED-C	REMOTE ANNUNCIATOR	7120-1657:0254
FAPS	FIRE LITE FCPS-24FS6	FIRE ALARM POWER SUPPLY	7315-0075:0206

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. C20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

MODERNIZATION
HOUSTON SCHOOL

FIRE ALARM NOTES, DIAGRAMS, SCHEDULE

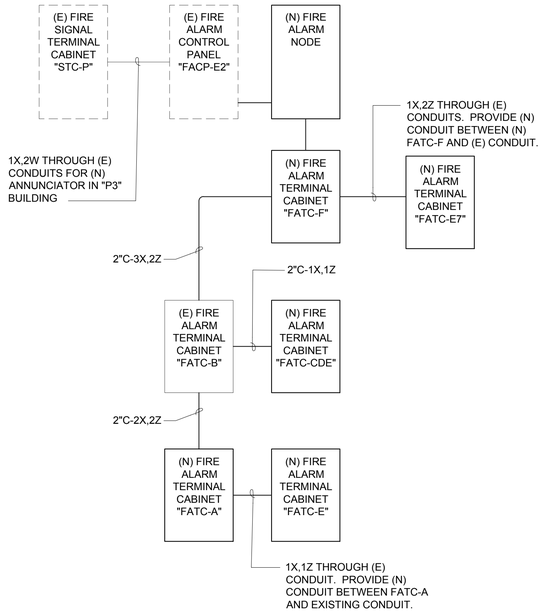
CONSULTANT

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

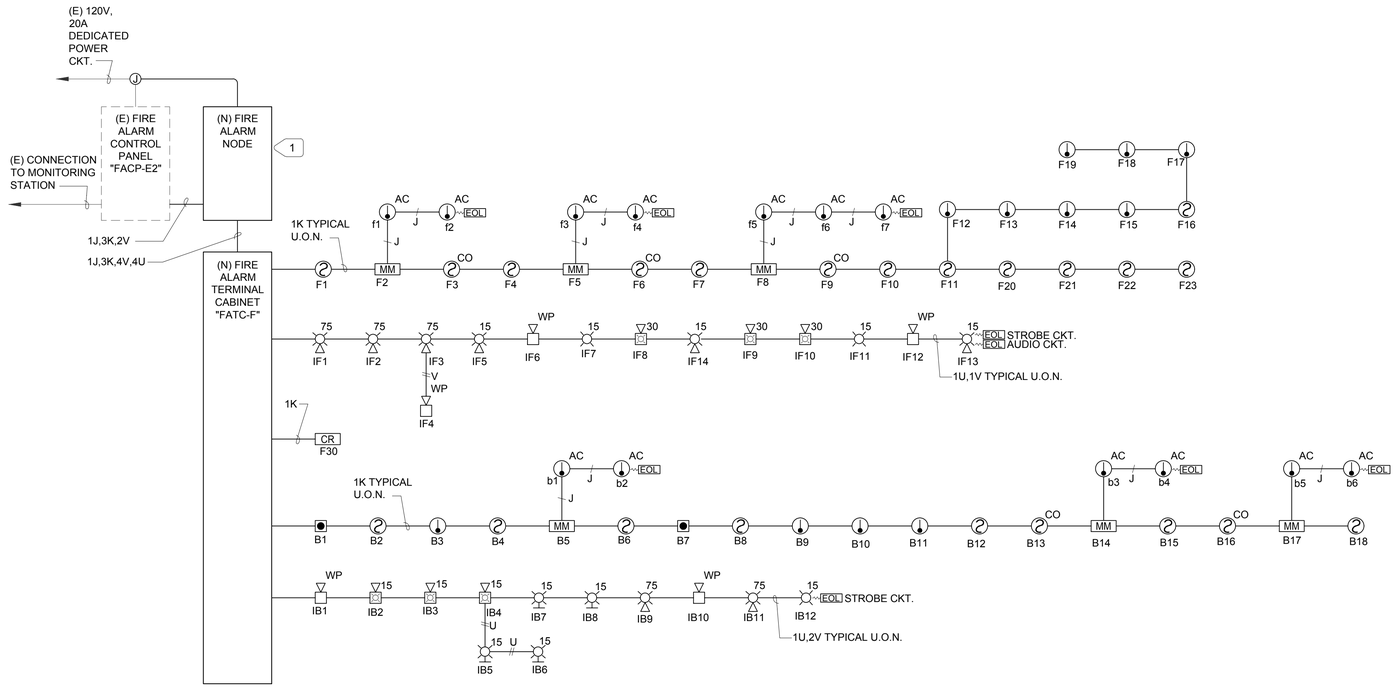
E4.0

__ OF __ SHEETS



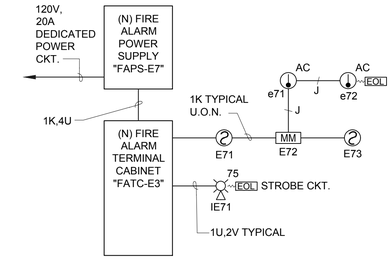
1 E4.1 — FIRE ALARM RISER DIAGRAM

N.T.S. — SITE



2 E4.1 — FIRE ALARM RISER DIAGRAM

N.T.S. — BUILDING F, PARTIAL BUILDING B



3 E4.1 — FIRE ALARM RISER DIAGRAM

N.T.S. — BUILDING E7

NUMBERED NOTES:

1. MOUNT (N) NODE ADJACENT TO (E) FIRE ALARM CONTROL PANEL, AT LOCATION OF REMOVED FIRE ALARM CONTROL PANEL "FACP-E1"(REFER TO DEMOLITION). (N) NODE CONSIST OF 3-CAB7 ENCLOSURE, PS10-4B POWER SUPPLY, SFS1-CPU, TWO (2) 3-SDC1 SIGNATURE DATA CIRCUIT CARD, 3X-NET NETWORK ADAPTER CARD, FOUR (4) 3-ZA40B AMPLIFIERS. EACH SIGNATURE DATA CARD ACCEPT 125 SMOKE/HEAT DETECTORS AND 125 MONITOR/RELAY MODULES. EACH AMPLIFIER IS RATED 40WATT AND HAVE 24VDC, 3.5AMP POWER CKT. FOR VISUAL NOTIFICATION DEVICES. PROVIDE ADDITIONAL ENCLOSURE FOR BATTERY. CONNECT POWER FOR (N) NODE TO (E) DEDICATED POWER CKT.

FIRE ALARM CABLE SCHEDULE

J	NON-ADDRESABLE INITIATION	2#14 THWN
K	DATA	2 CONDUCTORS, 18AWG, - WEST PENN D980
U	NOTIFICATION - STROBE, HORN	2#12 THWN
V	NOTIFICATION - AUDIBLE (SPEAKER)	1 PAIR, 12AWG, SHIELDED, WEST PENN 60994B
W	NON-ADDRESABLE INITIATION - TRUNK	2#10 THWN
X	DATA TRUNK	1 PAIR, 16AWG, SHIELDED, - WEST PENN AQC294
Y	NOTIFICATION - STROBE, HORN TRUNK	2#10 THWN
Z	NOTIFICATION - AUDIBLE (SPEAKER) TRUNK	1 PAIR, 12AWG, SHIELDED, - WEST PENN AQ296

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212
HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT JESSE U. BASTIAN C-29229 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FIRE ALARM
RISER DIAGRAMS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER JESSE U. BASTIAN No. E20229 Exp. 03-31-21 ELECTRICAL STATE OF CALIFORNIA

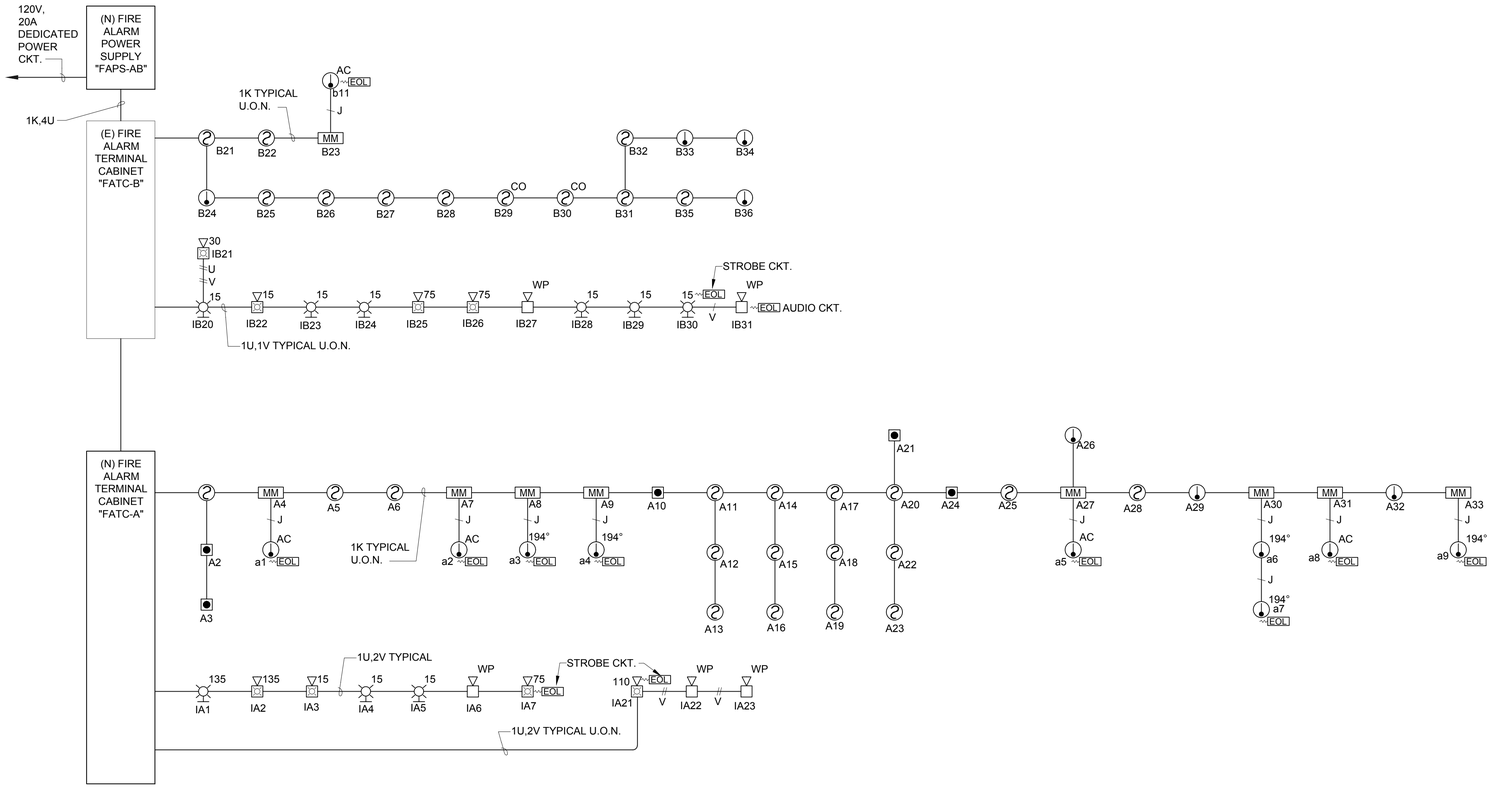
02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E4.1

__ OF __ SHEETS



1 E4.2

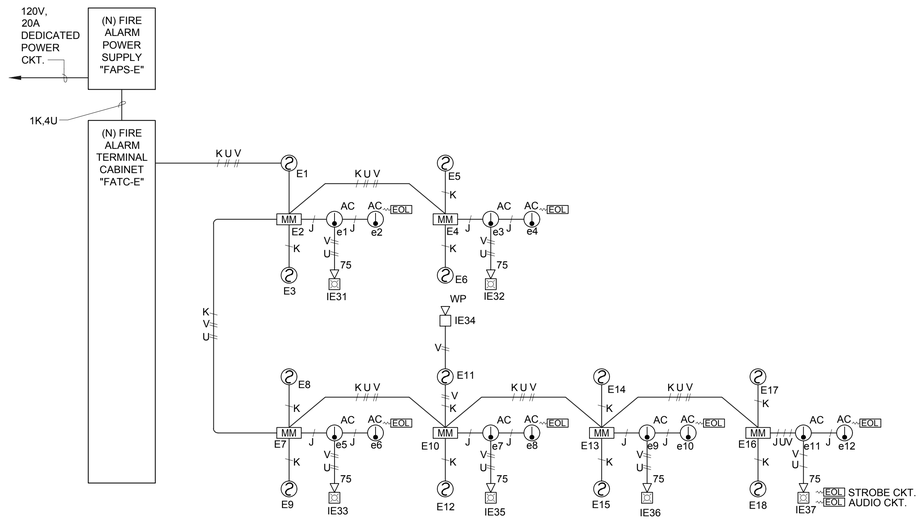
FIRE ALARM RISER DIAGRAM

N.T.S.

BUILDING A, PARTIAL BUILDING B

FIRE ALARM CABLE SCHEDULE

J	NON-ADDRESABLE INITIATION	2#14 THWN
K	DATA	2 CONDUCTORS, 18AWG, - WEST PENN D980
U	NOTIFICATION - STROBE, HORN	2#12 THWN
V	NOTIFICATION - AUDIBLE (SPEAKER)	1 PAIR, 12AWG, SHIELDED, WEST PENN 60994B
W	NON-ADDRESABLE INITIATION - TRUNK	2#10 THWN
X	DATA TRUNK	1 PAIR, 16AWG, SHIELDED, - WEST PENN AQC294
Y	NOTIFICATION - STROBE, HORN TRUNK	2#10 THWN
Z	NOTIFICATION - AUDIBLE (SPEAKER) TRUNK	1 PAIR, 12AWG, SHIELDED, - WEST PENN AQ296



2 E4.2

FIRE ALARM RISER DIAGRAM

N.T.S.

BUILDINGS E1-E6

M. NEILS
ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
JESSE L. HENRY
No. C20229
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

FIRE ALARM RISER DIAGRAMS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

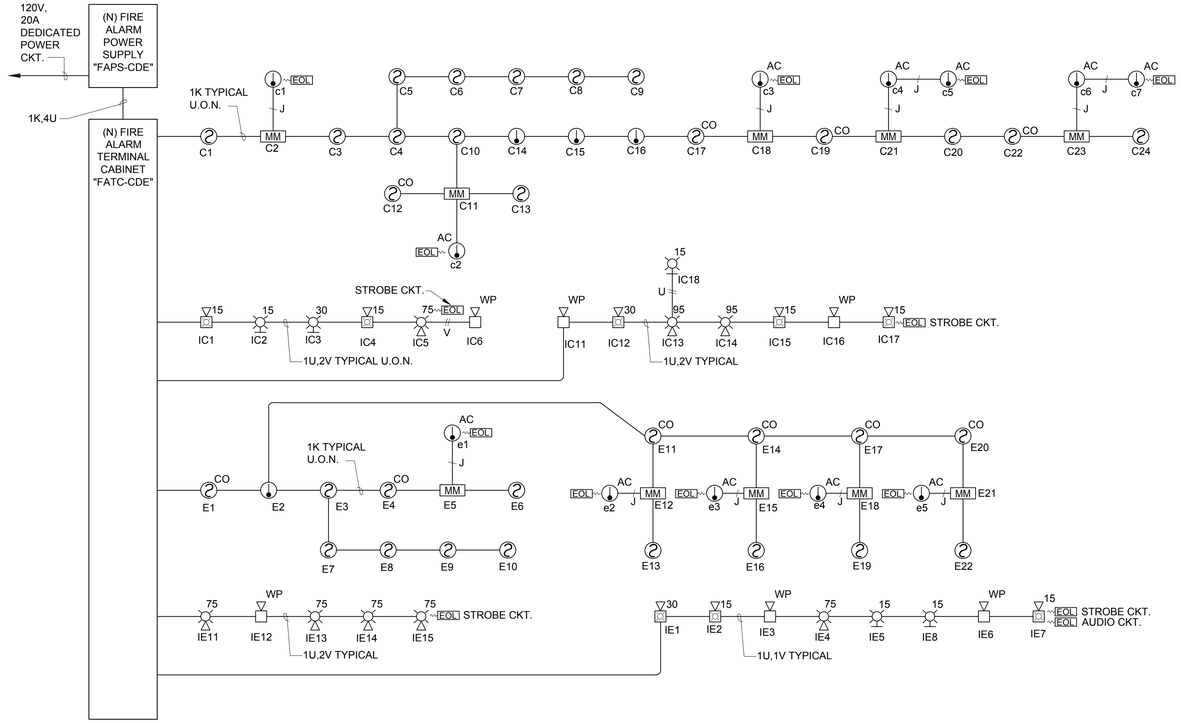
02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E4.2

__ OF __ SHEETS

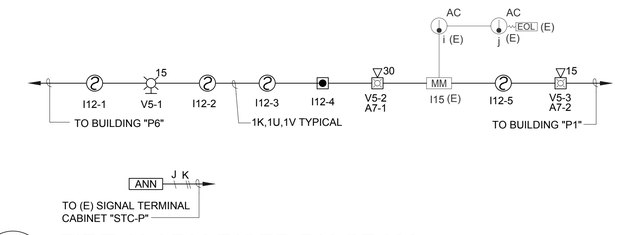


1 E4.3

FIRE ALARM RISER DIAGRAM

N.T.S.

BUILDINGS C, D, E1, E2



2 E4.3

FIRE ALARM RISER DIAGRAM

N.T.S.

BUILDING P3

FIRE ALARM CABLE SCHEDULE		
J	NON-ADDRESABLE INITIATION	2#14 THWN
K	DATA	2 CONDUCTORS, 18AWG, - WEST PENN D980
U	NOTIFICATION - STROBE, HORN	2#12 THWN
V	NOTIFICATION - AUDIBLE (SPEAKER)	1 PAIR, 12AWG, SHIELDED, WEST PENN 60994B
W	NON-ADDRESABLE INITIATION - TRUNK	2#10 THWN
X	DATA TRUNK	1 PAIR, 16AWG, SHIELDED, - WEST PENN AQC294
Y	NOTIFICATION - STROBE, HORN TRUNK	2#10 THWN
Z	NOTIFICATION - AUDIBLE (SPEAKER) TRUNK	1 PAIR, 12AWG, SHIELDED, - WEST PENN AQ296

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN C. HENRY
C-25018
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

FIRE ALARM RISER DIAGRAMS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E4.3

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

BATTERY CALCULATION - ADDED NODE TO EXISTING FACP

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
CPU	1	0.115	0.115 A		0.115	0.115 A
DATA CKT. CARD	2	0.144	0.288 A		0.204	0.408 A
POW. SUPPLY	1	0.088	0.088 A		0.169	0.169 A
STROBES (5) 75cd, (3) 30cd, (13) 15cd	1	0	0.000 A		2.101	2.101 A
3-ZA40A AMPLIFIER	4	0.062	0.248 A		1.12	4.480 A
		TOTAL	0.739 A		TOTAL	7.273 A
STANDBY	24	HOURS X	0.739 A	=	17.736	AH
ALARM	15	MIN X	7.273 A	=	1.818	AH
SPARE	20% OFF	19.55425	AH	=	3.911	AH
			TOTAL	=	23.465	AH
		PROVIDE	BATTERIES	=	48	AH @ 24V

AMPLIFIER ALARM CURRENT LOAD IS SHOWN FOR MAXIMUM OUTPUT - 40WATT

BATTERY CALCULATION - FIRE ALARM POWER SUPPLY FAPS-AB

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
FAPS CPU	1	0.065	0.065 A		0.145	0.145 A
STROBES 15cd	10	0.000	0.000 A		0.061	0.610 A
STROBES 30cd	1	0.000	0.000A		0.105	0.105 A
STROBES 75cd	3	0.000	0.000A		0.189	0.567 A
STROBES 95cd	0	0.000	0.000 A		0.249	0.000 A
STROBES 110cd	1	0.000	0.000 A		0.22	0.220 A
STROBES 135cd	2	0.000	0.000 A		0.3	0.600 A
		TOTAL	0.065 A		TOTAL	2.247 A
STANDBY	24	HOURS X	0.065 A	=	1.560	AH
ALARM	15	MIN X	2.247 A	=	0.562	AH
SPARE	20% OFF	2.122	AH	=	0.424	AH
			TOTAL	=	2.546	AH
			PROVIDED BATTERY	=	7	AH @ 24V

BATTERY CALCULATION - FIRE ALARM POWER SUPPLY FAPS-CDE

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
FAPS CPU	1	0.065	0.065 A		0.145	0.145 A
STROBES 15cd	12	0.000	0.000 A		0.061	0.732 A
STROBES 30cd	4	0.000	0.000A		0.105	0.420 A
STROBES 75cd	2	0.000	0.000A		0.189	0.378 A
STROBES 95cd	4	0.000	0.000 A		0.249	0.996 A
STROBES 110cd	0	0.000	0.000 A		0.22	0.000 A
STROBES 135cd	0	0.000	0.000 A		0.3	0.000 A
		TOTAL	0.065 A		TOTAL	2.671 A
STANDBY	24	HOURS X	0.065 A	=	1.560	AH
ALARM	15	MIN X	2.671 A	=	0.668	AH
SPARE	20% OFF	2.228	AH	=	0.446	AH
			TOTAL	=	2.673	AH
			PROVIDED BATTERY	=	7	AH @ 24V

BATTERY CALCULATION - FIRE ALARM POWER SUPPLY FAPS-E

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
FAPS CPU	1	0.065	0.065 A		0.145	0.145 A
STROBES 15cd	0	0.000	0.000 A		0.061	0.000 A
STROBES 30cd	0	0.000	0.000A		0.105	0.000 A
STROBES 75cd	6	0.000	0.000A		0.189	1.134 A
STROBES 95cd	0	0.000	0.000 A		0.249	0.000 A
STROBES 110cd	0	0.000	0.000 A		0.22	0.000 A
STROBES 135cd	0	0.000	0.000 A		0.3	0.000 A
		TOTAL	0.065 A		TOTAL	1.279 A
STANDBY	24	HOURS X	0.065 A	=	1.560	AH
ALARM	15	MIN X	1.279 A	=	0.320	AH
SPARE	20% OFF	1.880	AH	=	0.376	AH
			TOTAL	=	2.256	AH
			PROVIDED BATTERY	=	7	AH @ 24V

BATTERY CALCULATION - FIRE ALARM POWER SUPPLY FAPS-E7

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
FAPS CPU	1	0.065	0.065 A		0.145	0.145 A
STROBES 15cd	0	0.000	0.000 A		0.061	0.000 A
STROBES 30cd	0	0.000	0.000A		0.105	0.000 A
STROBES 75cd	1	0.000	0.000A		0.189	0.189 A
STROBES 95cd	0	0.000	0.000 A		0.249	0.000 A
STROBES 110cd	0	0.000	0.000 A		0.22	0.000 A
STROBES 135cd	0	0.000	0.000 A		0.3	0.000 A
		TOTAL	0.065 A		TOTAL	0.334 A
STANDBY	24	HOURS X	0.065 A	=	1.560	AH
ALARM	15	MIN X	0.334 A	=	0.084	AH
SPARE	20% OFF	1.644	AH	=	0.329	AH
			TOTAL	=	1.972	AH
			PROVIDED BATTERY	=	7	AH @ 24V

BATTERY CALCULATION - EXISTING FIRE ALARM POWER SUPPLY FAPS-P

DESCRIPTION	QUANTITY	STANDBY CURRENT	SUBTOTAL		ALARM CURRENT	SUBTOTAL
FAPS CPU	1	0.065	0.065 A		0.145	0.145 A
STROBES 15cd (2 EXISTING + 2 NEW)	4	0.000	0.000 A		0.061	0.244 A
STROBES 30cd (1 NEW)	1	0.000	0.000A		0.105	0.105 A
STROBES 75cd (1 REMOVED)	4	0.000	0.000A		0.189	0.756 A
STROBES 95cd	0	0.000	0.000 A		0.249	0.000 A
STROBES 110cd	0	0.000	0.000 A		0.22	0.000 A
STROBES 135cd	0	0.000	0.000 A		0.3	0.000 A
		TOTAL	0.065 A		TOTAL	1.250 A
STANDBY	24	HOURS X	0.065 A	=	1.560	AH
ALARM	15	MIN X	1.250 A	=	0.313	AH
SPARE	20% OFF	1.873	AH	=	0.375	AH
			TOTAL	=	2.247	AH
			EXISTING BATTERY	=	7	AH @ 24V

INSTALLED AS PART OF DSA APPROVED PROJECT #02-117209, DATED 04/11/2019

AUDIO LOSS
SPEAKER CIRCUIT BUILDINGS A AND E1-E6

Audio Wiring Distance

Enter audio voltage (Vrms)	25
Enter wire guage	12
Enter wire resistance (ohms/ft)	0.00198
Enter speaker load (in watts)	13
Enter distance (in feet)	780
dB loss	**-0.3**

ADJUST SPEAKERS TO 1 WATT OUTPUT

AUDIO LOSS
SPEAKER CIRCUIT BUILDING B

Audio Wiring Distance

Enter audio voltage (Vrms)	25
Enter wire guage	12
Enter wire resistance (ohms/ft)	0.00198
Enter speaker load (in watts)	13
Enter distance (in feet)	489
dB loss	**-0.2**

ADJUST SPEAKERS TO 1 WATT OUTPUT

AUDIO LOSS
SPEAKER CIRCUIT BUILDINGS C, D1, D2, E

Audio Wiring Distance

Enter audio voltage (Vrms)	25
Enter wire guage	12
Enter wire resistance (ohms/ft)	0.00198
Enter speaker load (in watts)	24
Enter distance (in feet)	655
dB loss	**-0.4**

ADJUST SPEAKERS TO 1 WATT OUTPUT

AUDIO LOSS
SPEAKER CIRCUIT BUILDING F AND E7

Audio Wiring Distance

Enter audio voltage (Vrms)	25
Enter wire guage	12
Enter wire resistance (ohms/ft)	0.00198
Enter speaker load (in watts)	13
Enter distance (in feet)	570
dB loss	**-0.2**

ADJUST SPEAKERS TO 1 WATT OUTPUT

AUDIO LOSS
EXISTING SPEAKER CIRCUIT A1-A8

Audio Wiring Distance

Enter audio voltage (Vrms)	25
Enter wire guage	12
Enter wire resistance (ohms/ft)	0.00198
Enter speaker load (in watts)	18
Enter distance (in feet)	535
dB loss	**-0.3**

ADJUST SPEAKERS TO 2 WATT OUTPUT

INSTALLED AS PART OF DSA APPROVED PROJECT #02-117209, DATED 04/11/2019

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IA1 - AI7
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-AP	IA17	230	0.00193	0.888	0.984 A	0.874 V

(3)15cd, (1)75cd, (2)135cd = 0.984A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IA21 - IA23
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-AP	IA23	195	0.00193	0.753	0.220 A	0.166 V

(1)110cd = 0.220A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IB1-IB12
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
(N) NODE	IB12	225	0.00193	0.869	0.898 A	0.780 V

(8)15cd, (2)75cd = 0.898A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IB20 - IB31
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-AP	IB31	185	0.00193	0.714	0.898 A	0.641 V

(8)15cd, (2)75cd = 0.898A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IC1-IC5
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-CDE	IC5	160	0.00193	0.618	0.489 A	0.302 V

(2) 15cd, (1) 30cd, (1) 75cd = 0.489A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IC11-IC17
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-CDE	IC17	185	0.00193	0.714	0.798 A	0.570 V

(2) 15cd, (1) 30cd, (2) 95cd = 0.798

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IE1-IE7
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-CDE	IE7	205	0.00193	0.791	0.489 A	0.387 V

(3) 15cd, (1) 30cd, (1) 75cd = 0.489

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IE11-IE15
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-CDE	IE15	225	0.00193	0.869	0.756 A	0.657 V

(4) 75cd = 0.756A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IE31 - IE37
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-E	IE37	240	0.00193	0.926	1.134 A	1.051 V

(6)75cd = 1.134A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IF1-IF13
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
(N) NODE	IF13	195	0.00193	0.753	1.142 A	0.860 V

(4)15cd, (3)30cd, (3)75cd = 1.142A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
VISUAL CIRCUIT IE71
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-E7	IE71	65	0.00193	0.251	0.189 A	0.047 V

(1)75cd = 0.189A

VOLTAGE DROP CALCULATION
LAST DEVICE - WORST CASE SCENARIO
EXISTING VISUAL CIRCUIT "V"
ACCEPTABLE LIMIT: NOT TO EXCEED 2.04V (10%*20.4V)

OHMS = (#14 FT * 3.07/1000 + #12 FT * 1.93/1000+ #10 FT * 1.21/1000) *2

DEVICE	TO DEVICE #	CKT. LENGTH FT	WIRE SIZE. #12	RESISTANCE OF WIRE (OHM) (OHM)	LOAD TOTAL	ACCUM. VOLTAGE DROP
FAPS-P	V7	265	0.00193	1.023	1.105 A	1.130 V

(4) 15cd, (1) 30cd, (4) 75cd = 1.105A

INSTALLED AS PART OF DSA APPROVED PROJECT #02-117209, DATED 04/11/2019

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

FIRE ALARM
CALCULATIONS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E20229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA

02/18/2020

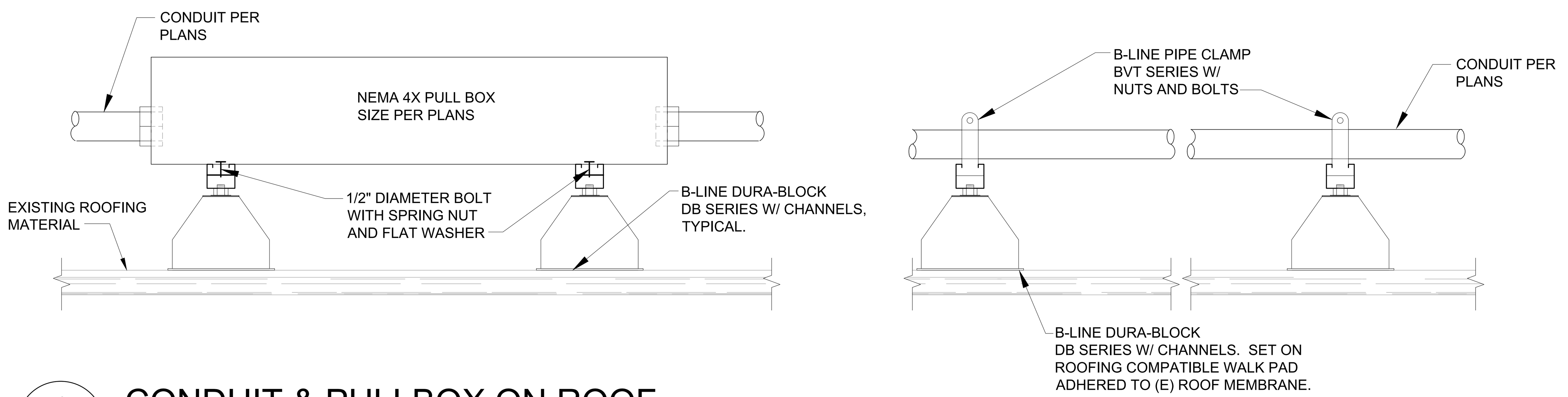
PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

SHEET NO.

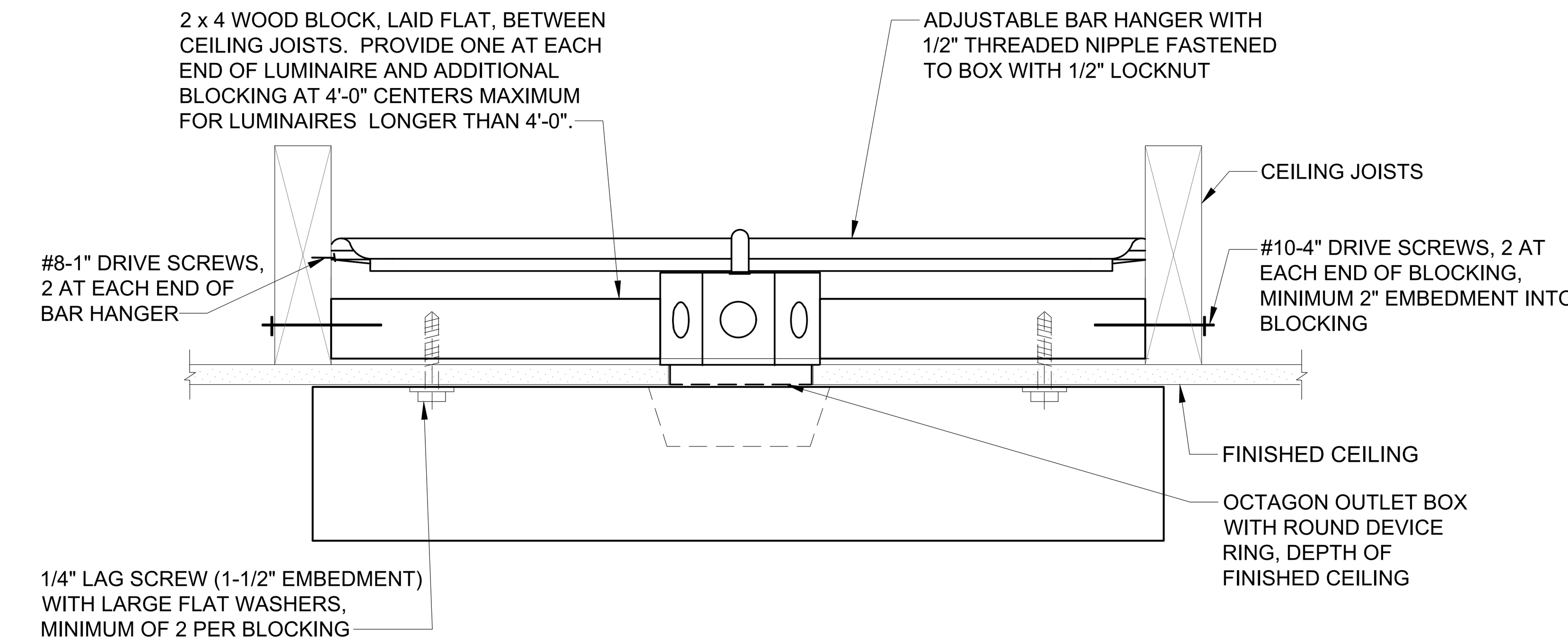
E4.4

__ OF __ SHEETS



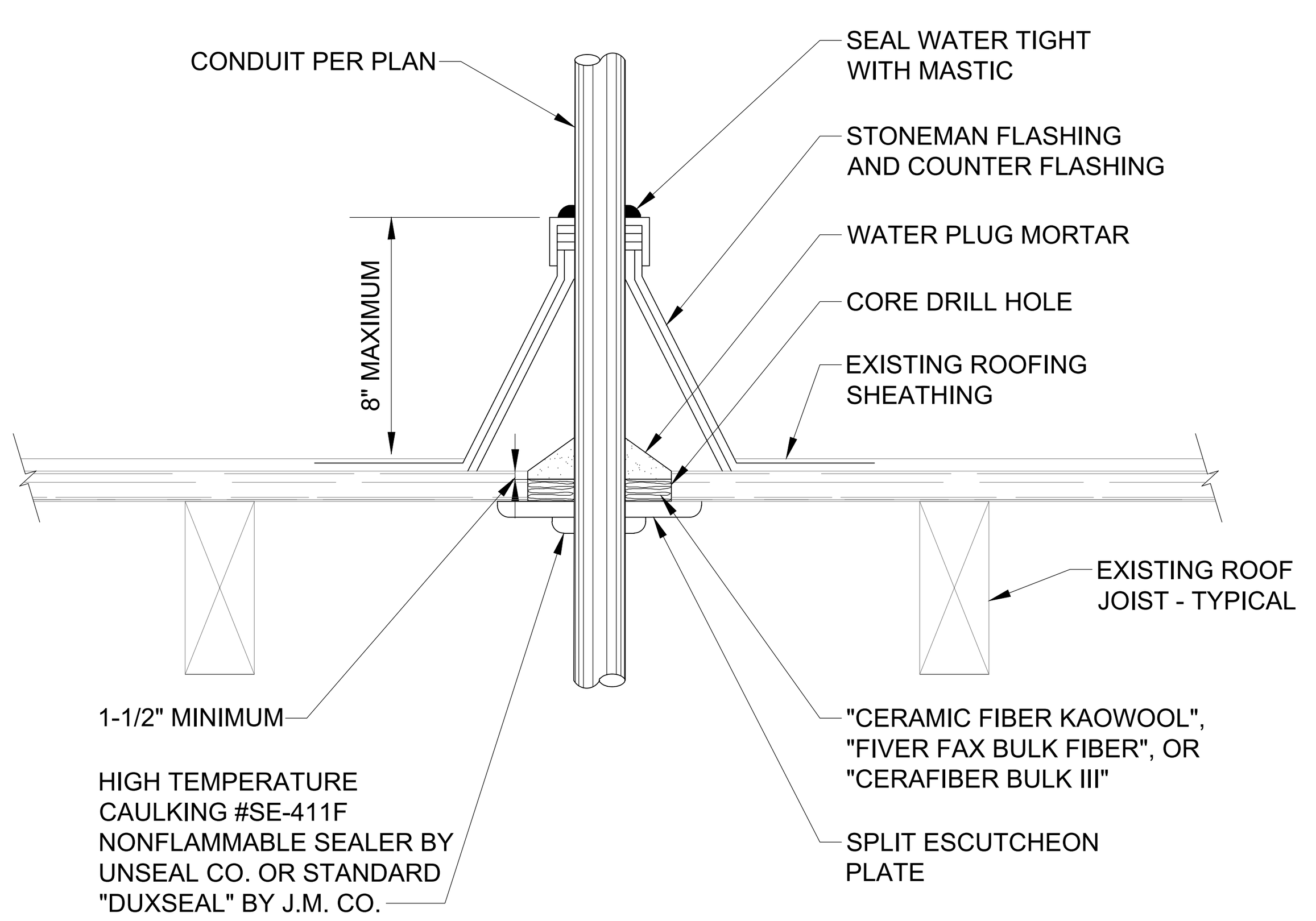
1 E5.0 CONDUIT & PULLBOX ON ROOF

NO SCALE



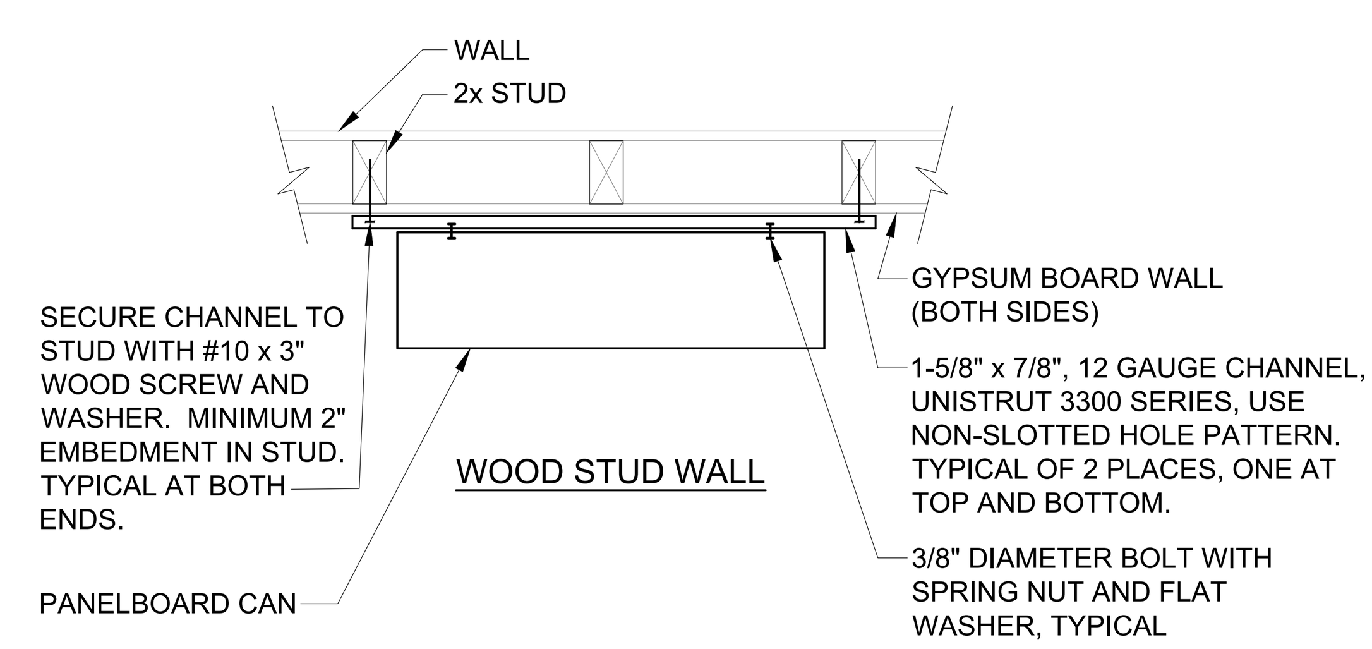
2 E5.0 SURFACE LUMINAIRE MOUNTING DETAIL

NO SCALE



3 E5.0 ROOF CONDUIT PENETRATION DETAIL

NO SCALE



4 E5.0 SURFACE PANELBOARD MOUNTING DETAIL

NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT ... 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

ELECTRICAL DETAILS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER JESSE D. BASTIAN No. E20229 Exp. 03-31-21 ELECTRICAL STATE OF CALIFORNIA

02/18/2020

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 12/11/2019		
DRAWN SG		
CHECKED SG		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

E5.0

__ OF __ SHEETS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400 Fax: (916) 923-4410
PROJECT #: 19275.21

ABBREVIATIONS — EXISTING

NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.

AC	ASPHALTIC CONCRETE
ACC.	ACCESSIBLE
ACU	AIR CONDITIONING UNIT
AD	AREA DRAIN
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
BBALL	BASKETBALL POLE
BCM	BRASS CAP MONUMENT
BFP	BACK FLOW PREVENTER
BL.	BLOCK
BLDG	BUILDING
BOL	BOLLARD
BOV	BLOW-OFF VALVE
BR.	BRICK
B.W.F.	BARBED WIRE FENCE
C	COMMUNICATION
C/L	CENTERLINE
CATV	CABLE TELEVISION
CIP	CAPPED IRON PIPE
C.L.F.	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COL.	COLUMN
CONC.	CONCRETE
COND.	CONDENSATE
CPF	CONTROL POINT FOUND
CPS	CONTROL POINT SET
CS	CONCRETE SURFACE
D	DEPTH
DDC	DOUBLE DETECTOR CHECK VALVE
DF	DRINKING FOUNTAIN
DG	DECOMPOSED GRANITE
DI	DROP INLET
DIA	DIAMETER
DRWY	DRIVEWAY
DS	DOWNSPOUT
DWG	DRAWING
E	ELECTRIC
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
FA	FIRE ALARM
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOWLINE
FO	FIBER OPTIC
FS	FIRE SERVICE
G	GAS
GB	GRADE BREAK
GR	GRATE
GRB	GROUND ROD BOX
GROD	GROUND ROD
GV	GAS VALVE
HB	HOSE BIBB
HBD	HEADER BOARD
HP	HIGH PRESSURE
HR	HANDRAIL
HVE	HIGH VOLTAGE ELECTRIC
HWF	HOG WIRE FENCE
ICP	IRRIGATION CONTROL PANEL
ICV	IRRIGATION CONTROL VALVE
INV	PIPE INVERT ELEVATION
IRR	IRRIGATION
JP	JOINT UTILITY POLE
JT	JOINT TRENCH
LNDG	LANDING
LVE	LOW VOLTAGE ELECTRIC
M	METAL
MH	MANHOLE
MS	MOW STRIP
MSC	METAL STORAGE CONTAINER
NTS	NOT TO SCALE
OH	OVERHEAD
OHANG	OVERHANG
OIP	OPEN IRON PIPE
OSPH	OLD STEEL POST HOLE
P/L	PROPERTY LINE
PA	PLANTER AREA
PB	PARKING BUMPER
PH	POSTHOLE
PIV	POST INDICATOR VALVE
PP	POWER POLE
PRKG	PARKING
PUE	PUBLIC UTILITY EASEMENT
PV	PAVERS
PVC	POLYVINYL CHLORIDE
R	RUBBER
RIM	MANHOLE RIM ELEVATION
ROW	RIGHT OF WAY
RP	REDUCED PRESSURE BACKFLOW PREVENTER
RWALL	RETAINING WALL
RWL	RAIN WATER LEADER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SIG	SIGNAL
SL	STREET LIGHT
SLB	STREET LIGHT BOX
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STL.	STEEL
T	TELEPHONE
TBALL	TETHER BALL POLE
TBM	TEMPORARY BENCHMARK
TC	TOP OF CURB
TOW	TOP OF WALL
TP	TELEPHONE POLE
TRW	TOP OF RETAINING WALL
UG	UNDERGROUND
UNK	UNKNOWN
VBALL	VOLLEYBALL
W	WATER
W/	WITH
W/O	WITHOUT
WD	WOOD
W.I.F.	WROUGHT IRON FENCE
W.R.F.	WOOD RAIL FENCE
XFRMR	TRANSFORMER
XWALK	CROSSWALK

EXISTING TOPOGRAPHY — EXISTING

- PROPERTY LINE
- CENTERLINE
- EASEMENT
- PROPERTY CORNER FOUND AS NOTED
- PROPERTY CORNER NOTHING FOUND OR SET
- TEMPORARY BENCHMARK (SEE TBM LIST FOR INFO)
- SWALE OR DRAINAGE FLOW
- DRAINAGE FLOW
- FENCE (TYPE NOTED)
- TREE (SIZE/TYPE INDICATED)
- SLOPE
- CONTOUR
- CONCRETE SURFACE
- EDGE OF ASPHALT
- EDGE OF BUILDING
- SIGN
- POST OR BOLLARD
- GROUND ELEVATION
- HARD SURFACE ELEVATION

EXISTING UTILITIES

- STORM DRAIN LINE (SIZE + DIRECTION OF FLOW)
- STORM DRAIN LINE (RECORD INFORMATION)
- STORM DRAIN LINE (UNDERGROUND LOCATING)
- STORM DRAIN MANHOLE
- STORM DRAIN CLEANOUT
- DROP INLET
- AREA DRAIN
- RAIN WATER LEADER
- DOWNSPOUT
- SANITARY SEWER LINE (SIZE + DIRECTION OF FLOW)
- SANITARY SEWER LINE (RECORD INFORMATION)
- SANITARY SEWER LINE (UNDERGROUND LOCATING)
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER LINE (SIZE INDICATED)
- WATER LINE (RECORD INFORMATION)
- WATER LINE (UNDERGROUND LOCATING)
- WATER MANHOLE
- WATER VALVE
- WATER METER
- WATER BOX
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- SPRINKLER
- HOSE BIBB
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE (RECORD INFORMATION)
- UNDERGROUND ELECTRIC LINE (UNDERGROUND LOCATING)
- ELECTRIC MANHOLE
- UTILITY POLE (WITH GUY WIRE)
- ELECTRIC METER
- ELECTRIC BOX
- STREET LIGHTING BOX
- LIGHT STANDARD
- SIGNAL LIGHT
- FLOOD LIGHT
- ELECTRICAL OUTLET
- GAS LINE (SIZE INDICATED)
- GAS LINE (RECORD INFORMATION)
- GAS LINE (UNDERGROUND LOCATING)
- GAS MANHOLE
- GAS VALVE
- GAS METER
- TELEPHONE LINE
- TELEPHONE LINE (RECORD INFORMATION)
- TELEPHONE LINE (UNDERGROUND LOCATING)
- STORM DRAIN BOX
- TRAFFIC SIGNAL BOX

ABBREVIATIONS — PROPOSED

NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUB-BASE
BO	BLOW-OFF VALVE
BV	BUTTERFLY VALVE
BW	BACK OF WALK
C/L	CENTERLINE
CB	CATCH BASIN
CL	CLASS
CMP	CORRUGATED METAL PIPE
CATV	CABLE TELEVISION
CO	CLEANOUT
COMM	COMMUNICATION
CONC.	CONCRETE
CONST.	CONSTRUCT
CR	CURB RETURN
CS	CONCRETE SURFACE
DC	DOUBLE CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
DG	DECOMPOSED GRANITE
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
DS	DOWNSPOUT
E	ELECTRIC
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
FS	FIRE SERVICE LINE
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOWLINE
FM	SANITARY SEWER FORCE MAIN
FF	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
G	GAS
GR	GRATE ELEVATION
GRD	GRADE ELEVATION
GV	GATE VALVE
HB	HOSE BIBB
HBD	HEADER BOARD
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INV	PIPE INVERT ELEVATION
JP	JOINT UTILITY POLE
LF	LINEAL FEET
LIP	LIP OF GUTTER
LT	LEFT
MS	MOWSTRIP
NTS	NOT TO SCALE
OH	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PD	PLANTER DRAIN
PIV	POST INDICATOR VALVE
P/L	PROPERTY LINE
PP	POWER POLE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RIM	MANHOLE RIM ELEVATION (SOLID COVER)
RP	REDUCED PRESSURE BACKFLOW PREVENTER
RW	RIGHT OF WAY
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SG	SUBGRADE ELEVATION
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
S/W	SIDEWALK
T	TELEPHONE
TC	TOP OF CURB
TD	TRENCH DRAIN
TDCB	TRENCH DRAIN CATCH BASIN
TP	TELEPHONE POLE
TRW	TOP OF RETAINING WALL
TSW	TOP OF SEAT WALL
TW	TOP OF WALK ELEVATION
U	UTILITY
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VCP	VITRIFIED CLAY PIPE
W	WATER
W/	WITH
W/O	WITHOUT
WV	WATER VALVE

LEGEND — PROPOSED

NOTE: NOT ALL SYMBOLS MAY BE USED ON THESE PLANS.

PROPOSED GRADING & DRAINAGE SYMBOLS:

- 8" SD — STORM DRAIN LINE (SIZE AND FLOW SHOWN)
- STORM DRAIN MANHOLE (SDMH)
- CATCH BASIN (CB)
- DROP INLET (DI)
- AREA DRAIN (AD)
- PLANTER DRAIN (PD) OR FLOOR DRAIN (FD)
- CO — STORM DRAIN CLEANOUT
- 99.99 — ELEVATION
- FF=100.00 — FINISHED FLOOR ELEVATION
- PAD=99.33 — BUILDING PAD ELEVATION
- CONCRETE SIDEWALK
- GRADED DIRECTION FOR DRAINAGE FLOW
- SWALE
- SLOPE
- TREE TO BE REMOVED
- RETAINING WALL

PROPOSED SANITARY SEWER SYMBOLS:

- 6" SS — SANITARY SEWER LINE (SIZE AND FLOW SHOWN)
- SANITARY SEWER MANHOLE (SSMH)
- CO — SEWER CLEANOUT FLUSHER BRANCH

PROPOSED WATER SYMBOLS:

- 8" W — WATER LINE & SIZE
- 8" FS — FIRE LINE & SIZE
- 8" DW — DOMESTIC WATER LINE & SIZE
- 8" RW — RECLAIMED WATER LINE & SIZE
- 8" IRR — IRRIGATION SERVICE LINE & SIZE
- 8" NP — NON POTABLE WATER LINE & SIZE
- 8" SP — FIRE SPRINKLER SERVICE LINE & SIZE
- GATE VALVE
- M — WATER METER
- FH — FIRE HYDRANT ASSEMBLY
- FDC — FIRE DEPARTMENT CONNECTION
- DC — DETECTOR CHECK VALVE
- DDC — DOUBLE DETECTOR CHECK VALVE
- RP — REDUCED PRESSURE BACKFLOW PREVENTER
- BUTTERFLY VALVE
- 1" — AIR RELEASE VALVE + SIZE
- 1" — BLOW-OFF VALVE + SIZE
- PIV — POST INDICATOR VALVE

GENERAL NOTES

1. THE TYPES, LOCATIONS, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF UNDERGROUND SERVICE ALERT (USA) TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING TOLL FREE 1-800-227-2600, OR 811.

811 Know what's below. Call before you dig.

2. WARREN CONSULTING ENGINEERS, INC. (WCE) ASSUMES NO RESPONSIBILITY FOR ERRORS IN PHYSICAL LOCATION OF IMPROVEMENTS, HORIZONTAL OR VERTICAL, IF STAKED BY OTHERS. IN ADDITION, ANY SUCH ERRORS IN PHYSICAL LOCATION MAY AFFECT THE INTENDED DESIGN OF SUCH IMPROVEMENTS AND WCE CANNOT BE HELD RESPONSIBLE FOR SUCH CONDITIONS WHICH ARE A RESULT OF ERRORS IN SURVEYING, OR IMPROPER CONSTRUCTION.

3. IF SUBSURFACE CULTURAL RESOURCES, REMAINS, AND/OR ARTIFACTS ARE UNCOVERED DURING PROJECT CONSTRUCTION, ALL WORK IN THE VICINITY SHALL BE STOPPED UNTIL SUCH ITEMS CAN BE ASSESSED BY AN APPROPRIATE MEMBER OF THE COUNTY ENVIRONMENTAL IMPACT SECTION STAFF.

4. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

5. THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY FOR ALL EXCAVATIONS OF 5 FEET OR MORE IN DEPTH.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY PRE-BID AND PRE-CONSTRUCTION SITE INSPECTION, AND/OR OBSERVATIONS ON THE SITE TO PRE-DETERMINE ALL HIS/HER MEANS AND METHODS NECESSARY TO COMPLETE THE IMPROVEMENTS SHOWN ON THESE PLANS AND PER THE PROJECT SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE, AND INCLUDE IN HIS/HER CONTRACT, ALL MEANS AND METHODS NECESSARY TO PERFORM A COMPLETE AND ACCEPTABLE JOB.

7. WHERE IMPROVEMENTS LIE WITHIN AN EXISTING DEVELOPED AREA, CONTRACTOR SHALL USE CAUTION WHEN ACCESSING THE SITE THROUGH THESE EXISTING IMPROVEMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT ANY SUCH EXISTING IMPROVEMENTS OUTSIDE THE PROJECT BOUNDARY, OR EXISTING IMPROVEMENTS WITHIN THE BOUNDARY WHICH ARE TO REMAIN. PROPER PRECAUTIONS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP DETAILED RECORDS OF MINOR CHANGES OR ADJUSTMENTS MADE DURING CONSTRUCTION (WHICH WERE NOT FORMALLY ISSUED). UPON PROJECT COMPLETION, THESE RECORDS AND/OR INFORMATION SHALL BE PROVIDED TO THE OWNER AND WARREN CONSULTING ENGINEERS, INC. UNLESS AN OFFICIAL "AS-BUILT" SET OF PLANS IS A REQUIREMENT OF THE CONTRACT. IF AS-BUILT PLANS ARE A REQUIREMENT OF THE CONTRACT, REFER TO SPECIFICATIONS FOR AS-BUILT DELIVERABLE REQUIREMENTS.

9. IN VEHICULAR PATHWAYS, EXISTING ASPHALTIC AND/OR CONCRETE SURFACES SHALL BE CUT TO A NEAT AND STRAIGHT LINE, PARALLEL OR PERPENDICULAR TO THE VEHICULAR TRAVELED PATH. THIS IS TYPICALLY THE ROADWAY CENTERLINE, BUT MAY VARY. THAT SAWCUT EDGE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION SO A CLEAN EDGE REMAINS FOR PATCH BACK.. IF EDGE IS DAMAGED, A NEW SAW CUT WILL BE REQUIRED. THE EXPOSED EDGE SHALL BE "TACKED" WITH EMULSION PRIOR TO PAVING.

10. NO BURNING OR BLASTING SHALL BE ALLOWED ONSITE UNLESS SPECIFICALLY ADDRESSED ON PLANS, OR SPECIFICALLY APPROVED AND COORDINATED WITH THE ARCHITECT, ENGINEER, AND LOCAL AGENCY OR OTHER ADMINISTRATIVE AUTHORITY.

11. SUBGRADE AND RESULTING FINISHED GRADE SHALL BE CONSTRUCTED SMOOTH AND UNIFORM BETWEEN SPOT ELEVATIONS, CONTOURS OR OTHER STRUCTURE ELEVATIONS SHOWN ON GRADING OR OTHER PLANS. NO MOUNDS, RUTS, DEPRESSIONS OR OTHER GRADING DEFICIENCIES WILL BE ALLOWED UNLESS SPECIFICALLY SHOWN ON PLANS.

12. ON NEW WATER SYSTEMS, SERVICE LATERALS SHALL BE MADE USING APPROPRIATE "TEE" AND "WYE" FITTINGS. SADDLE TAPS WILL ONLY BE ALLOWED WHEN MAKING CONNECTIONS TO EXISTING WATER MAINS.

13. CURING COMPOUND SHALL BE APPLIED IN A CONTINUOUS SOLID WET FLOWING COAT. ANY "SPOTTY" APPLICATIONS SHALL BE RECOATED IMMEDIATELY. APPLICATION SHALL BE INSPECTED BY PROJECT INSPECTOR DURING APPLICATION.

14. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE ADDITIONAL SCORE OR EXPANSION JOINTS TO PREVENT UNCONTROLLED CRACKING. THOSE ADDITIONAL JOINTS MAY OR MAY NOT BE SPECIFICALLY SHOWN ON PLANS BUT SHALL BE PROVIDED BY THE CONTRACTOR.

15. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE A MINOR ADJUSTMENT OF REBAR WITHIN CONCRETE TO ALLOW FOR SUCH STRUCTURE. THAT REBAR ADJUSTMENT MAY NOT BE SPECIFICALLY SHOWN ON PLANS.

16. NO MORE THAN 1 GALLON OF WATER PER YARD OF CONCRETE CAN BE ADDED TO THE TRUCK AFTER ARRIVAL TO PROJECT SITE. THE ADDITION OF WATER CAN ONLY BE ADDED UNDER THE SUPERVISION OF THE CONCRETE INSPECTOR OR LABORATORY TECHNICIAN.

17. WHEN PUMPING CONCRETE FOR PLACEMENT, ABSOLUTELY NO WATER IS TO BE ADDED TO PUMP HOPPER. ANY WATER ADDED TO HOPPER WILL BE REASON FOR CONCRETE REJECTION AT THE CONTRACTORS EXPENSE.

18. ALL CONTRACTION/CONSTRUCTION JOINTS "CJ" SHALL BE 1/4 THE SLAB THICKNESS DEEP, BUT NO LESS THAN 1" FOR CONTROLLING OF CRACKING. CONTRACTOR SHALL EXERCISE CAUTION WHEN FINAL TROWELING OF CONCRETE SO AS NOT TO FILL IN THESE JOINTS WITH CONCRETE CREAM. ANY CRACKS OUTSIDE OF JOINTS WHICH WERE CONSTRUCTED LESS THAN 1" DEEP, SHALL BE CAUSE FOR CONCRETE SLAB(S) TO BE REMOVED AND REPLACE AT CONTRACTORS EXPENSE.

19. ANY SCREED BOARDS SET WITHIN CONCRETE SLABS SHALL BE AN "OVERHEAD SCREED" SO THERE IS NO INTERFERENCE WITH THE PLACEMENT AND ALIGNMENT OF SLAB REINFORCING.

20. 3-1/2" FELT JOINTS WILL NOT BE ACCEPTED. PROVIDE A FULL 4" FELT JOINT FOR 4" SLAB CONSTRUCTION, AND A 6" FELT JOINT FOR A 6" SLAB SLAB CONSTRUCTION.

21. SHOULD ANY SHRINKAGE CRACKS OCCUR OUTSIDE OF EITHER THE EXPANSION JOINTS OR CRACK CONTROL JOINTS, THEN THE CONCRETE SLAB SHALL BE SAWCUT AT THE NEAREST JOINTS ON EACH SIDE OF THE CRACK AND THE CONCRETE SECTION SHALL BE, REMOVED AND REPLACED. NEW CONCRETE SHALL BE DOWELED INTO EXISTING CONCRETE PER DRAWING DETAIL.

22. ALL AREAS DISTURBED BY GRADING OPERATIONS WHETHER SHOWN ON THE DRAWINGS OR NOT SHALL BE HYDRO SEEDED UNLESS OTHERWISE NOTED. HYDRO SEEDING SHALL CONFORM TO LOCAL CITY/COUNTY STANDARDS.

23. REPAIR OR PATCHING OF GALVANIZED METALS, SUCH AS AFTER WELDING GALVANIZED COMPONENTS, SHALL BE MADE USING A ZINC COMPOSITION "HOT STICK" APPLICATION PER ASTM A 780-01. GALVANIZING PAINTS WILL NOT BE ALLOWED.

GENERAL PAVING SURFACE NOTES:

1. PROVIDE EQUIVALENT OF MEDIUM BROOM FINISH AT SLOPES UP TO 5.99%, TYPICAL. PROVIDE EQUIVALENT OF HEAVY BROOM FINISH AT SLOPES 6% AND GREATER. REFER TO SPECIFICATIONS.
2. ALL NEW PEDESTRIAN WALKWAYS (NON-RAMP) SHALL BE SLOPED NO GREATER THAN 2.0%, AND NO LESS THAN 0.75% IN ANY DIRECTION, UNLESS SPECIFICALLY LABELED OTHERWISE. ALL CONCRETE SHALL MEET THE FOLLOWING SLOPE REQUIREMENTS:
   - NO GREATER THAN 5% SLOPE IN THE DIRECTION OF TRAVEL.
   - NO GREATER THAN 2% SLOPE CROSSING THE DIRECTION OF TRAVEL.
   - NO GREATER THAN 2% SLOPE IN ANY DIRECTION IN COURTYARD OR PLAZA AREAS.

REGISTERED PROFESSIONAL ENGINEER — THOMAS E. FASSBENDER — NO. C48254 — CIVIL — STATE OF CALIFORNIA

02/21/2020

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT — STEPHEN M. HENRY — C-22525 — 12/31/21 RENEWAL DATE — STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

CIVIL NOTES, LEGEND & ABBREVIATIONS

CONSULTANT

WCE

WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

C0.1

OF ___ SHEETS

FILENAME: I:\19-138\CIVIL\DWG\19-138 C0.1.DWG

GRAPHIC SCALE

20' 0 10' 20' 40'

(IN FEET) 1 inch = 20 feet

NORTH

THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED.

SEE SHEET C0.1 FOR LEGEND & ABBREVIATIONS

A.P.N.

BENCHMARK NO. _____ ELEV. 100.00

ASSUMED
SET CHISELED "+" ITEM #1

TBM LIST

NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CPS CHISELED "+"	5000.00	5000.00	100.00
8	CPF BM DISK H2	5277.50	5131.65	102.88
9	CPS CHISELED "+"	5300.86	5072.46	101.30
10	CPS CHISELED "+"	5094.62	5086.36	103.00
11	CPS CHISELED "+"	5283.62	5358.96	102.10
12	CPS CHISELED "+"	5293.50	5587.16	101.79
13	CPS PK+WASHER	5303.76	5301.13	101.16
14	CPS CHISELED "+"	5124.18	5093.77	102.94
15	CPS CHISELED "+"	5198.30	5389.90	101.69
16	CPS CHISELED "+"	4907.77	5343.88	101.72
17	CPS CHISELED "+"	5068.41	5166.57	103.02
18	CPS CHISELED "+"	4946.68	5218.74	101.25
19	CPS CHISELED "+"	5058.74	5299.52	103.11
20	CPS PK+WASHER	5187.68	5290.22	101.87
21	CPS CHISELED "+"	5214.24	5149.04	101.99
22	CPS PK+WASHER	5177.59	5147.10	102.25
23	CPS PICKER	5123.01	5183.03	101.54
24	CPS CHISELED "+"	5121.89	5291.76	103.02
25	CPS CHISELED "+"	5107.84	5203.40	102.88
26	CPS CHISELED "+"	5137.90	5141.21	102.77
27	CPS CHISELED "+"	5091.06	5170.34	103.06

BASIS OF BEARINGS:
ASSUMED

NOTE:
EXISTING UTILITIES BASED ON VISIBLE SURFACE STRUCTURES ONLY.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN C. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

TOPOGRAPHIC SURVEY

REGISTERED PROFESSIONAL ENGINEER
THOMAS E. FASSBENDER
NO. C48254
CIVIL
STATE OF CALIFORNIA
02/21/2020

CONSULTANT

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO.	19-32-047
DATE	11/15/2019
DRAWN	SMN
CHECKED	TF
SCALE	
CADFILE	
UPDATED	

REVISIONS | BY

SHEET NO.

C0.2

OF ___ SHEETS

FILENAME: I: \19-138\CIVIL\DWG\19-138 C0.1.DWG

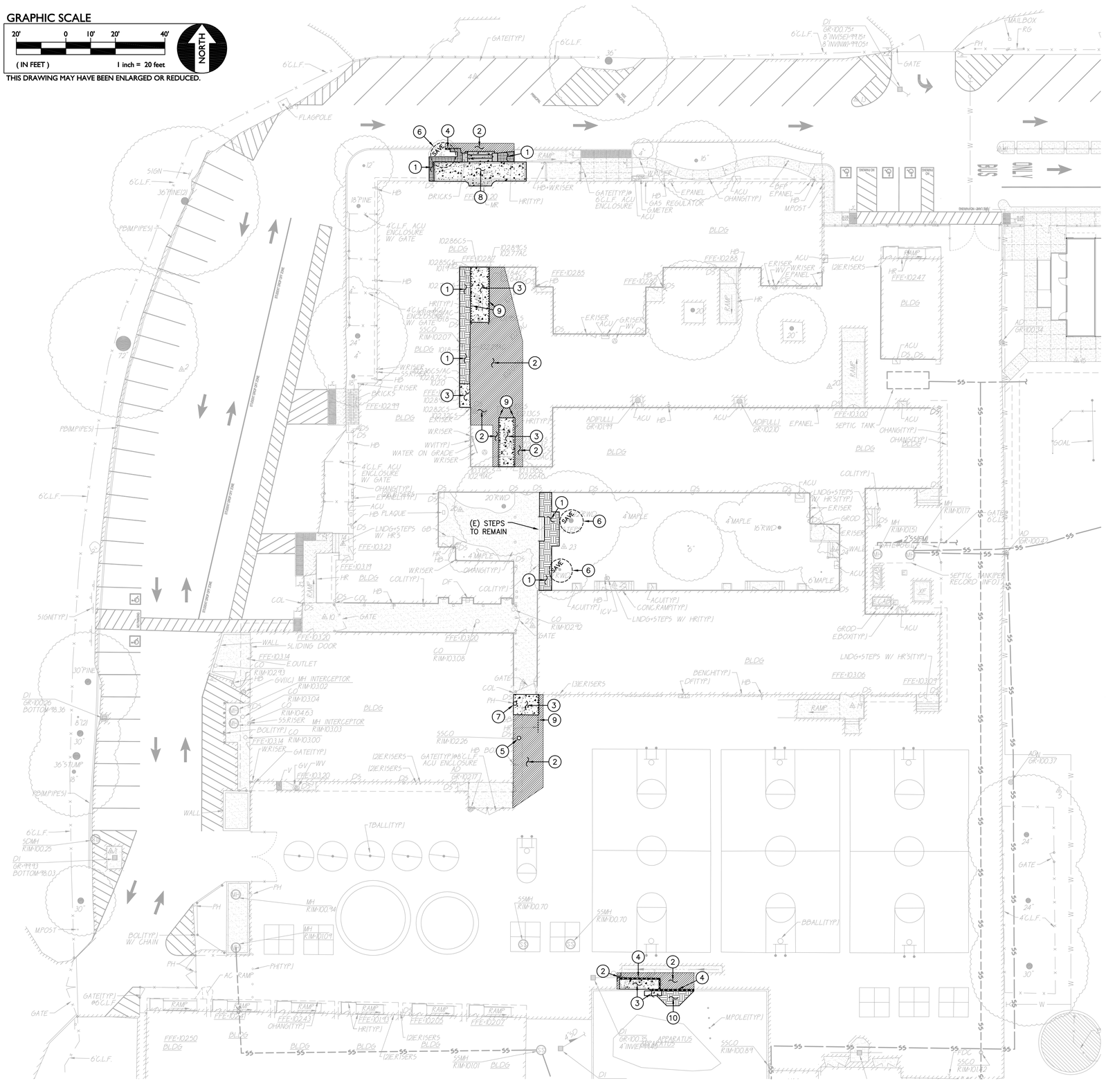
GRAPHIC SCALE

20' 0 10' 20' 40'

(IN FEET) 1 inch = 20 feet

NORTH

THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED.



DEMOLITION GENERAL NOTES

1. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE GEOTECHNICAL INVESTIGATION REPORT OR ARE ENCOUNTERED DURING GRADING OPERATIONS THE GEOTECHNICAL ENGINEER AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
2. NO BURNING OR BLASTING SHALL BE PERMITTED.
3. ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
4. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
5. ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
6. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN IN THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY THE DISTRICT TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK IN ORDER TO VERIFY TO THE GREATEST EXTENT POSSIBLE THE EXISTING UTILITY LINES, CONFLICTS AND PROPOSED UTILITY CONNECTION POINTS.
7. THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ANY DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTEND.
8. EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REINSTALLED AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION..
10. CONTRACTOR SHALL COMPLY WITH CHAPTER 33 OF THE 2014 CFC, "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" AT ALL TIMES DURING CONSTRUCTION.
11. ALL DEMOLITION SHALL BE APPROPRIATELY SUPPORTED AND REINFORCED DURING REMOVAL TO PREVENT INJURY FROM FALLING, PROJECTILE, OR OTHERWISE MOVING DEBRIS OR OTHER DELETERIOUS MATERIAL. ONSITE SAFETY WITHIN THE LIMITS OF WORK IS THE CONTRACTORS SOLE RESPONSIBILITY.
12. SAWCUTS AND SUBSEQUENT PATCH BACK OF CONCRETE WALKS, SHALL BE TO THE EXISTING CONCRETE JOINT BEYOND NEAREST THE LOCATION OF DEMOLITION AS SHOWN. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE, SHOW AND COORDINATE WITH EXISTING JOINTS, HOWEVER IF FIELD CONDITIONS ARE OTHERWISE, IT IS UNDERSTOOD TO REMOVE AND PATCH BACK TO THE NEAREST JOINTS BEYOND DEMOLITION.
13. CONTRACTOR SHALL AVOID DAMAGE TO EXISTING PLANTING AND IRRIGATION ALONG EDGES OF DEMOLITION AND NEW PAVEMENT. CONTRACTOR SHALL REPAIR ANY DAMAGE, TO INCLUDE NEW IRRIGATION LINES, NEW HEADS, NEW BARK/MULCH AND NEW SOD TURF WHERE NECESSARY.

DEMOLITION NOTES

NOTE: NOT ALL NOTES MAY BE USED ON THIS SHEET.

LEGEND	AND/OR (#)	DEMOLITION NOTES
	1.	REMOVE ALL PLANTS, SHRUBS, EXISTING VEGETATION, AND IRRIGATION SYSTEMS. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL SITE CLEARING REQUIREMENTS. SEE GENERAL IRRIGATION NOTE, THIS SHEET.
	2.	SAWCUT AND REMOVE EXISTING ASPHALT PAVING AND BASE ROCK TO ALLOW FOR NEW WORK. SAWCUTS SHALL BE NEAT STRAIGHT LINES. IF EDGES BROKEN DURING CONSTRUCTION, PERFORM NEW SAWCUTS JUST PRIOR TO NEW PAVING.
	3.	REMOVE EXISTING CONCRETE PAVING AND BASE ROCK. WHERE SAWCUTS ARE NECESSARY, THEY SHALL BE A NEAT STRAIGHT LINE. CUT SHALL BE MADE AT NEAREST EXISTING JOINT TO LOCATION SHOWN.
	4.	REMOVE EXISTING CONCRETE CURB / CURB GUTTER.
	5.	REMOVE EXISTING UTILITY BOX AND PROVIDE NEW. NEW BOX SHALL BE SIMILAR IN SIZE, BUT WITH TRAFFIC RATING AND SLIP RESISTANT COVER. REFER TO GRADING AND UTILITY PLANS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
SAVE	6.	EXISTING TREE TO REMAIN AND BE PROTECTED FROM DAMAGE. PROVIDE PROTECTIVE FENCING IF NEEDED.
	7.	REMOVE EXISTING POST HOLE.
	8.	REMOVE EXISTING CURBS, WALLS, STEPS RAILINGS AND BRICK PAVING AS SHOWN TO ALLOW FOR NEW WORK. USE CAUTION AS PAVING IS ATTACHED TO BUILDING WITH REBAR. CAREFULLY REMOVE CONCRETE PAVING AND CUT REBAR FLUSH WITH BUILDING WALL.
	9.	REMOVE EXISTING STEEL HANDRAIL.
	10.	PULL BACK (E) MULCH TO ALLOW FOR NEW CONSTRUCTION. IF PRESENT, REMOVE FILTER FABRIC AND DRAINAGE STONE AND BACKFILL WITH CLASS II AB AS NEEDED TO SUPPORT NEW CONCRETE RAMP ASSEMBLY.

REGISTERED PROFESSIONAL ENGINEER
THOMAS E. FASSBENDER
NO. C48254
CIVIL
STATE OF CALIFORNIA
08/21/2020

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN C. HENRY
C-22525
12/31/21
RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

DEMOLITION PLAN

CONSULTANT

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

C1.1

OF ___ SHEETS

FILENAME:\ \19-138\CIVIL\DWG\19-138 C1.1.DWG

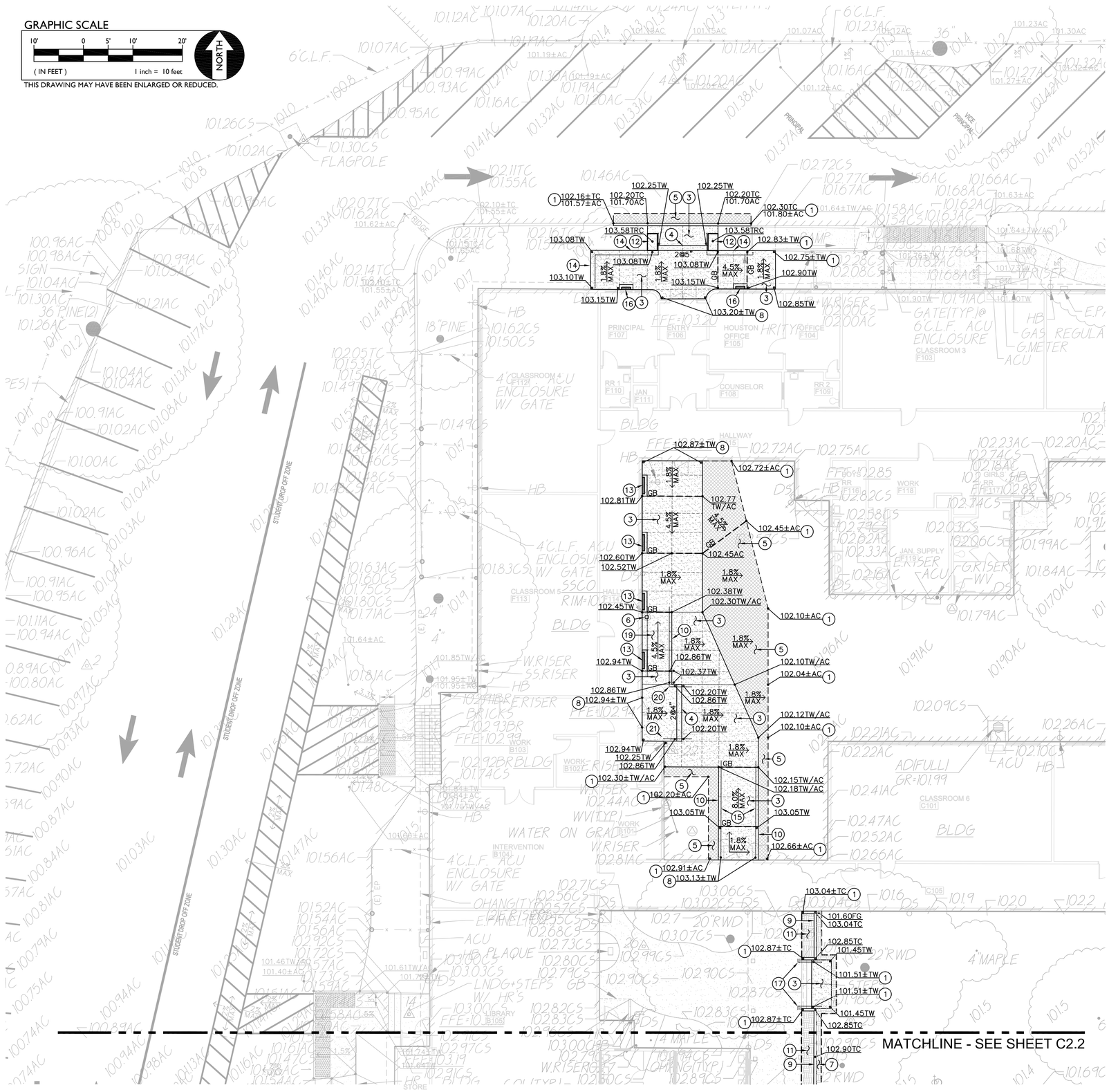
GRAPHIC SCALE

10' 0 5' 10' 20'

(IN FEET) 1 inch = 10 feet

NORTH

THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED.



GRADING NOTES

1. MATCH EXISTING GRADE/ELEVATION. WHEN MATCHING NEW SLABS TO EXISTING, DOWEL SLABS PER THE DETAIL PROVIDED AT 24" O.C.
2. CONSTRUCT CONCRETE CURB PER THE DETAIL PROVIDED. (4 / C3.1)
3. CONSTRUCT CONCRETE SIDEWALK, PLACE 5" PCC WITH #4 REBAR AT 24" O.C.E.W. OVER 4" COMPACTED CLASS II AB, COMPACTED TO 95% SEE SPECIFICATIONS AND TYPICAL DETAILS PROVIDED. (1 / C3.1) (2 / C3.1) (4 / C3.1)
4. CONSTRUCT CONCRETE STEPS WITH STEEL HANDRAILS PER THE DETAIL PROVIDED. SEE PLAN FOR NUMBER AND RISE. (1 / C3.2)
5. PLACE 4.5" TYPE B ASPHALT PAVING OVER 10.5" COMPACTED CLASS II AB ON COMPACTED SUBGRADE, OR MATCH EXISTING AC PAVING SECTION, WHICHEVER IS GREATER.
6. REMOVE EXISTING UTILITY BOX AND PROVIDE NEW CONCRETE BOX OF SAME SIZE AND APPROPRIATE FOR UTILITY AND SET FLUSH WITH PROPOSED FINISHED GRADE.
7. PATCH BACK EXISTING LANDSCAPING TO MATCH EXISTING CONDITIONS. PROVIDE NEW SOD IN LAWN AREAS UNLESS EXISTING SOD CAN BE SALVAGED AND RE-LAIN. REPAIR AND/OR REPLACE SPRINKLER LINES AND HEADS AS NEEDED.
8. CONTRACTOR SET NEW SITE CONCRETE WALK ELEVATION FLUSH WITH EXISTING FLOOR ELEVATION FOR ACCESSIBLE ENTRANCE. CONCRETE MAY BE NO MORE THAN 1/4" BELOW THE FLOOR ELEVATION IN ACCORDANCE WITH 2016 CBC 11B-303.2.
9. CONSTRUCT CONCRETE LANDSCAPE WALL/CURB PER THE DETAIL PROVIDED. (6 / C3.1)
10. CONSTRUCT RAISED CONCRETE EDGE WITH RAILING PER THE DETAIL PROVIDED. (7 / C3.1)
11. IN NEW PLANTER AREA, FILL UP TO 3" BELOW TOP OF CURB ELEVATION WITHIN PLANTER WITH NEW TOPSOIL COMPACTED TO 85% IN ACCORDANCE WITH SECTION 31 00 00. PLACE 3" LAYER SHREDDED CEDAR MULCH.
12. CONSTRUCT RAISED STAIRWAY PILASTER WITH BRICK TOP PER THE DETAIL PROVIDED. (10 / C3.1)
13. CONSTRUCT VENT WELL WITH GRATING AT EXISTING DOUBLE BUILDING VENT PER THE DETAIL PROVIDED. (11 / C3.1)
14. CONSTRUCT RAISED CONCRETE EDGE WITH SET-BACK RAILING PER THE DETAIL PROVIDED. (8 / C3.1)
15. CONSTRUCT ACCESSIBLE RAMP WITH STEEL HANDRAILS PER THE DETAIL PROVIDED. (2 / C3.2)
16. CONSTRUCT VENT WELL GRATING AT EXISTING SINGLE BUILDING VENT PER THE DETAIL PROVIDED. (13 / C3.1)
17. CONSTRUCT STEEL HANDRAILS AT EXISTING STAIRS PER THE DETAIL PROVIDED. (3 / C3.2)
18. CONSTRUCT PLAYGROUND ACCESS RAMP PER THE DETAIL PROVIDED. (14 / C3.1)
19. CONSTRUCT ACCESSIBLE SLOPED WALK WITH STEEL HANDRAILS SIM. TO THE DETAIL PROVIDED BUT WITH RUNNING SLOPE LESS THAN 5%. (2 / C3.2) SIM.
20. CONNECT STAIR RAILING AND RAMP RAILING TOGETHER AS SHOWN.
21. EXTEND RAMP RAILING TO BUILDING EDGE. RAILING END POST TO BE SET TO LEAVE A 2" MINIMUM AND 4" MAXIMUM GAP BETWEEN BUILDING AND POST.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN M. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

GRADING AND PAVING PLAN

CONSULTANT

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

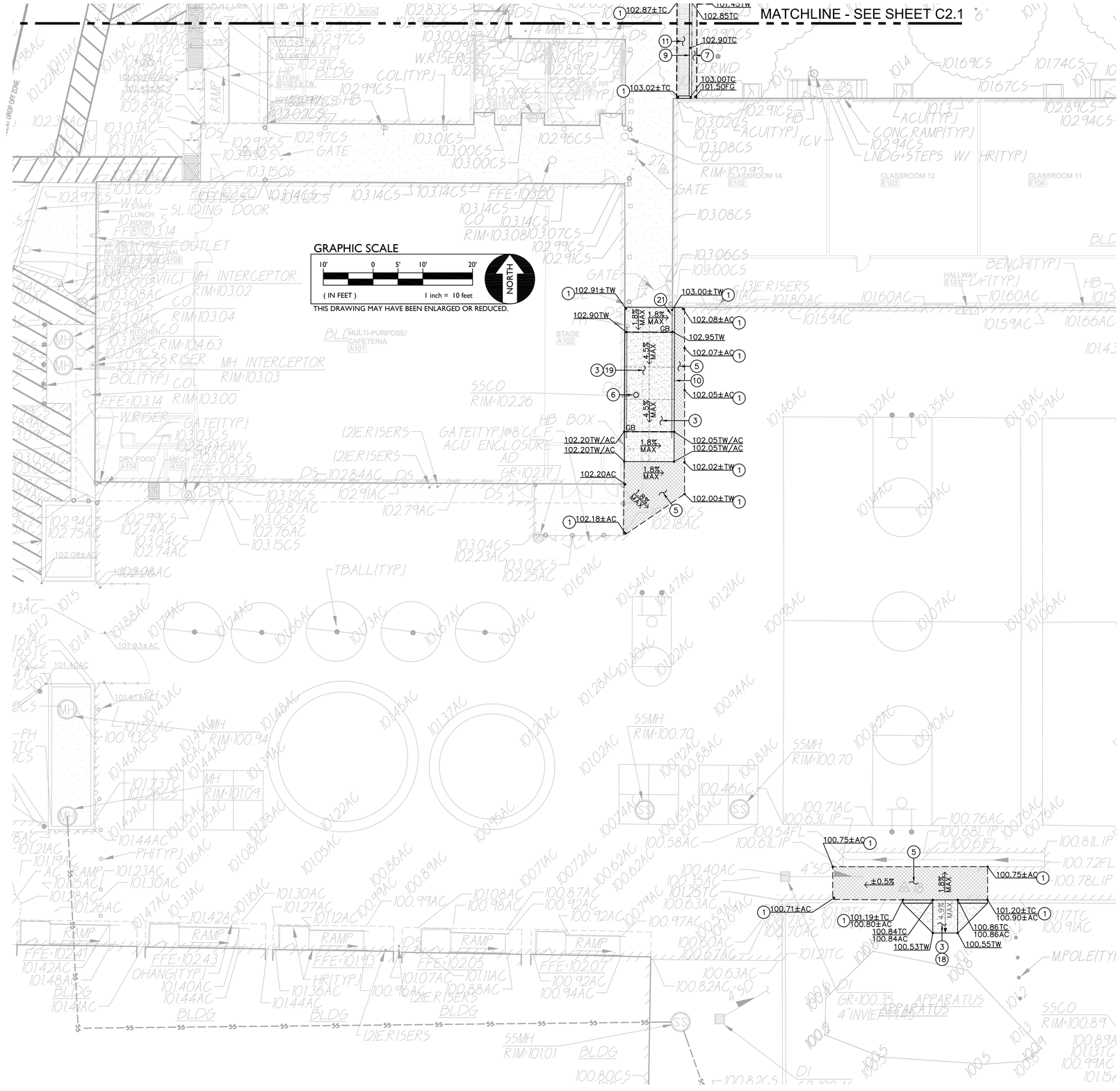
SHEET NO.

C2.1

OF ___ SHEETS

REGISTERED PROFESSIONAL ENGINEER THOMAS E. FASSBENDER NO. C48254 CIVIL STATE OF CALIFORNIA 02/21/2020

FILENAME:\: \19-138\CIVIL\DWG\19-138 C2.1.DWG



GRADING NOTES

1. MATCH EXISTING GRADE/ELEVATION. WHEN MATCHING NEW SLABS TO EXISTING, DOWEL SLABS PER THE DETAIL PROVIDED AT 24" O.C.
2. CONSTRUCT CONCRETE CURB PER THE DETAIL PROVIDED. (4 / C3.1)
3. CONSTRUCT CONCRETE SIDEWALK, PLACE 5" PCC WITH #4 REBAR AT 24" O.C.E.W. OVER 4" COMPACTED CLASS II AB, COMPACTED TO 95%. SEE SPECIFICATIONS AND TYPICAL DETAILS PROVIDED. (1 / C3.1) (2 / C3.1) (4 / C3.1)
4. CONSTRUCT CONCRETE STEPS WITH STEEL HANDRAILS PER THE DETAIL PROVIDED. SEE PLAN FOR NUMBER AND RISE. (1 / C3.2)
5. PLACE 4.5" TYPE B ASPHALT PAVING OVER 10.5" COMPACTED CLASS II AB ON COMPACTED SUBGRADE, OR MATCH EXISTING AC PAVING SECTION, WHICHEVER IS GREATER.
6. REMOVE EXISTING UTILITY BOX AND PROVIDE NEW CONCRETE BOX OF SAME SIZE AND APPROPRIATE FOR UTILITY AND SET FLUSH WITH PROPOSED FINISHED GRADE.
7. PATCH BACK EXISTING LANDSCAPING TO MATCH EXISTING CONDITIONS. PROVIDE NEW SOD IN LAWN AREAS UNLESS EXISTING SOD CAN BE SALVAGED AND RE-LAIN. REPAIR AND/OR REPLACE SPRINKLER LINES AND HEADS AS NEEDED.
8. CONTRACTOR SET NEW SITE CONCRETE WALK ELEVATION FLUSH WITH EXISTING FLOOR ELEVATION FOR ACCESSIBLE ENTRANCE. CONCRETE MAY BE NO MORE THAN 1/4" BELOW THE FLOOR ELEVATION IN ACCORDANCE WITH 2016 CBC 11B-303.2.
9. CONSTRUCT CONCRETE LANDSCAPE WALL/CURB PER THE DETAIL PROVIDED. (6 / C3.1)
10. CONSTRUCT RAISED CONCRETE EDGE WITH RAILING PER THE DETAIL PROVIDED. (7 / C3.1)
11. IN NEW PLANTER AREA, FILL UP TO 3" BELOW TOP OF CURB ELEVATION WITHIN PLANTER WITH NEW TOPSOIL COMPACTED TO 85% IN ACCORDANCE WITH SECTION 31 00 00. PLACE 3" LAYER SHREDDED CEDAR MULCH.
12. CONSTRUCT RAISED STAIRWAY PILASTER WITH BRICK TOP PER THE DETAIL PROVIDED. (10 / C3.1)
13. CONSTRUCT VENT WELL WITH GRATING AT EXISTING DOUBLE BUILDING VENT PER THE DETAIL PROVIDED. (11 / C3.1)
14. CONSTRUCT RAISED CONCRETE EDGE WITH SET-BACK RAILING PER THE DETAIL PROVIDED. (8 / C3.1)
15. CONSTRUCT ACCESSIBLE RAMP WITH STEEL HANDRAILS PER THE DETAIL PROVIDED. (2 / C3.2)
16. CONSTRUCT VENT WELL GRATING AT EXISTING SINGLE BUILDING VENT PER THE DETAIL PROVIDED. (13 / C3.1)
17. CONSTRUCT STEEL HANDRAILS AT EXISTING STAIRS PER THE DETAIL PROVIDED. (3 / C3.2)
18. CONSTRUCT PLAYGROUND ACCESS RAMP PER THE DETAIL PROVIDED. (14 / C3.1)
19. CONSTRUCT ACCESSIBLE SLOPED WALK WITH STEEL HANDRAILS SIM. TO THE DETAIL PROVIDED BUT WITH RUNNING SLOPE LESS THAN 5%. (2 / C3.2) SIM.
20. CONNECT STAIR RAILING AND RAMP RAILING TOGETHER AS SHOWN.
21. EXTEND RAMP RAILING TO BUILDING EDGE. RAILING END POST TO BE SET TO LEAVE A 2" MINIMUM AND 4" MAXIMUM GAP BETWEEN BUILDING AND POST.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

MODERNIZATION HOUSTON SCHOOL

GRADING AND PAVING PLAN

CONSULTANT

WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

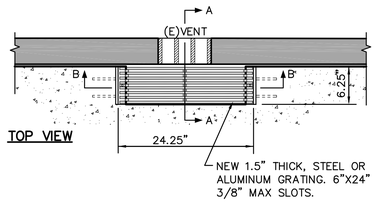
C2.2

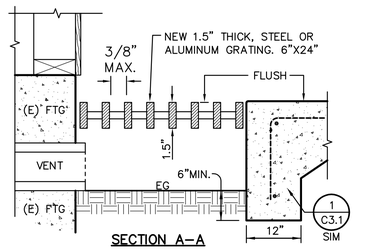
OF ___ SHEETS

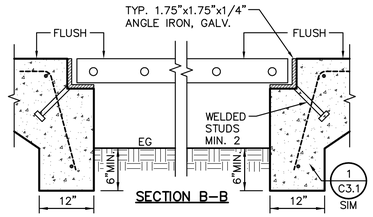
REGISTERED PROFESSIONAL ENGINEER THOMAS E. FASSBENDER NO. C48254 CIVIL STATE OF CALIFORNIA

02/21/2020

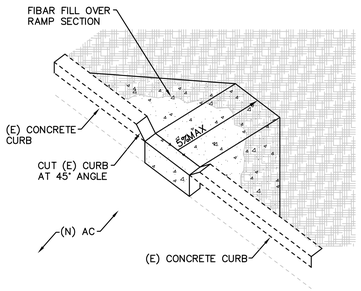
FILENAME:I: \19-138\CIVIL\DWG\19-138 C2.1.DWG

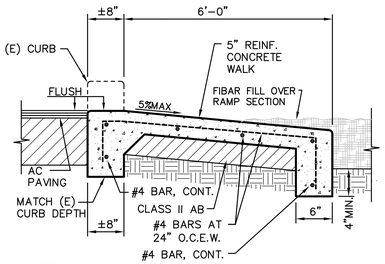




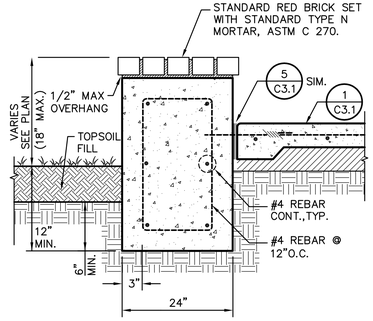


13 C3.1 GRATE DETAIL
SINGLE VENT — NO SCALE

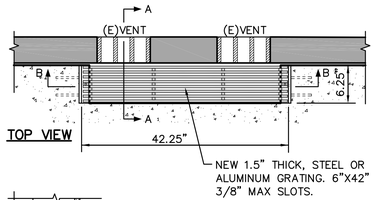


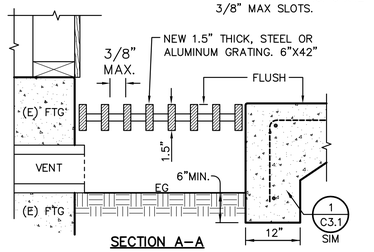


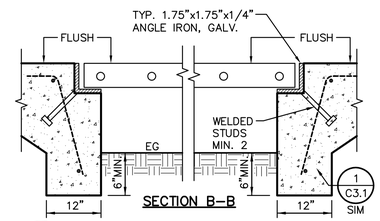
14 C3.1 PLAYGROUND RAMP
NO SCALE



10 C3.1 BRICK TOP PILASTER
NO SCALE

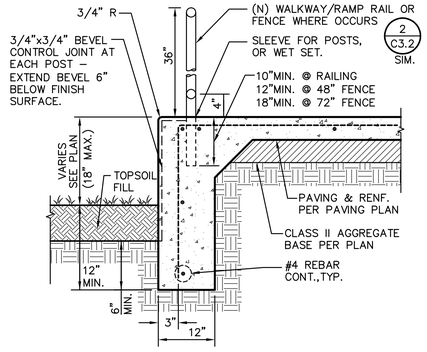


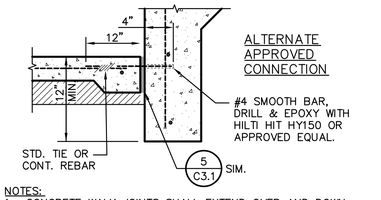




11 C3.1 GRATE DETAIL
DOUBLE VENT — NO SCALE

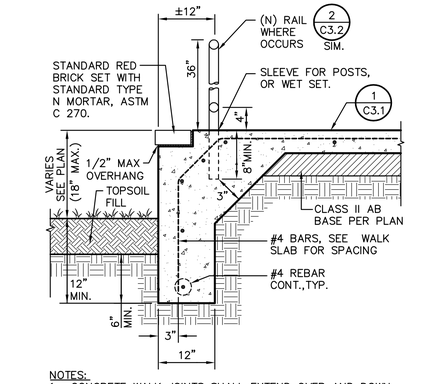
12 C3.1 NOT USED
NO SCALE





NOTES:
1. CONCRETE WALK JOINTS SHALL EXTEND OVER AND DOWN THE FACE OF SLAB EDGE.

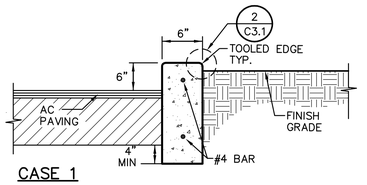
7 C3.1 RETAINING CURB EDGE
TYPE 1 — NO SCALE



NOTES:
1. CONCRETE WALK JOINTS SHALL EXTEND OVER AND DOWN THE FACE OF SLAB EDGE.

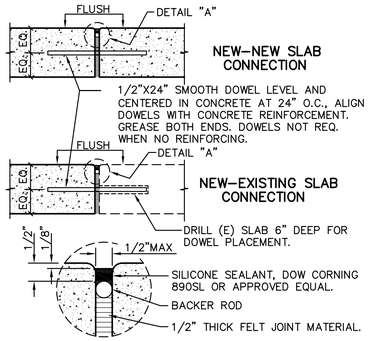
8 C3.1 RETAINING CURB EDGE
TYPE 2 — NO SCALE

9 C3.1 NOT USED
NO SCALE

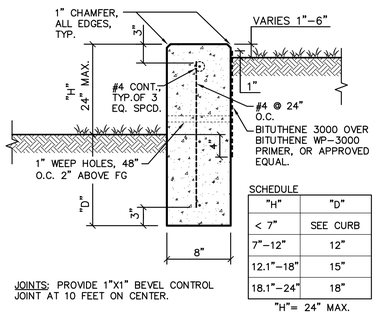


PROVIDE EXPANSION JOINTS AT 20' ON CENTER AND TOOLED CONTROL JOINTS EVERY 10' BETWEEN, OR WHEN ADJOINING CONCRETE WALKS, MATCH WALK JOINTING.

4 C3.1 CONCRETE CURB
NO SCALE



5 C3.1 EXPANSION JOINT
NO SCALE



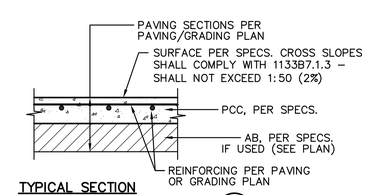
SCHEDULE

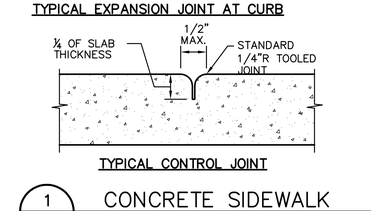
"H"	"D"
< 7"	SEE CURB
7"–12"	12"
12.1"–18"	15"
18.1"–24"	18"

JOINTS: PROVIDE 1"X1" BEVEL CONTROL JOINT AT 10 FEET ON CENTER.

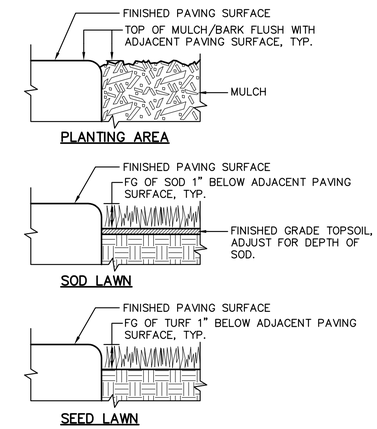
"H"= 24" MAX.

6 C3.1 CONCRETE PLANTER CURB
NO SCALE





1 C3.1 CONCRETE SIDEWALK
NO SCALE



2 C3.1 PAVING EDGE DETAIL
NO SCALE

3 C3.1 NOT USED
NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT
STEPHEN HENRY
C-22525
12/31/21 RENEWAL DATE
STATE OF CALIFORNIA

MODERNIZATION
HOUSTON SCHOOL

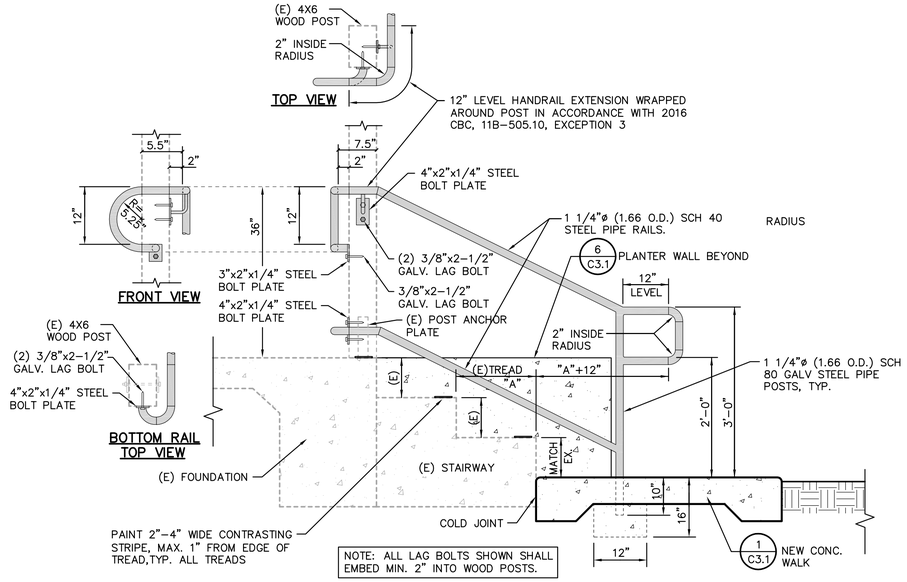
DETAILS

CONSULTANT
WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO. 19-32-047	REVISIONS	BY
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

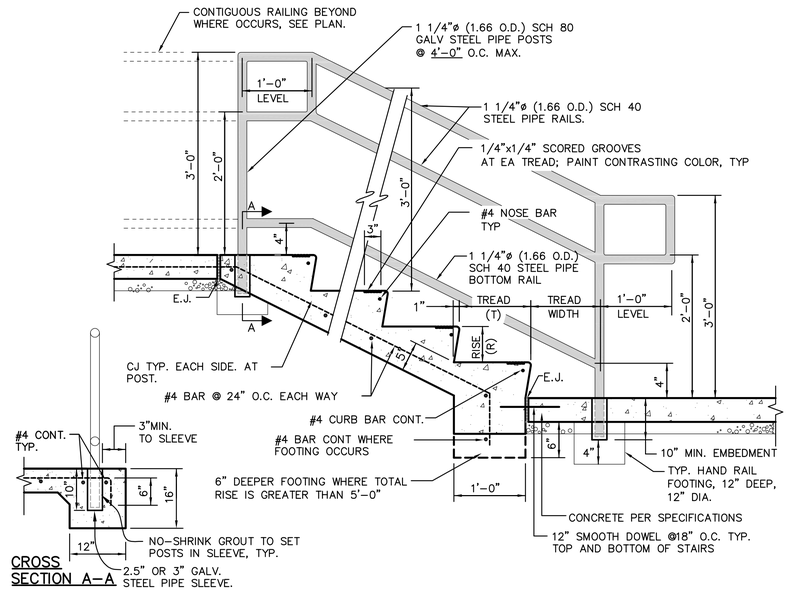
SHEET NO.
C3.1
OF ___ SHEETS

FILENAME: I: \19-138\CIVIL\DWG\19-138 C3.1.DWG



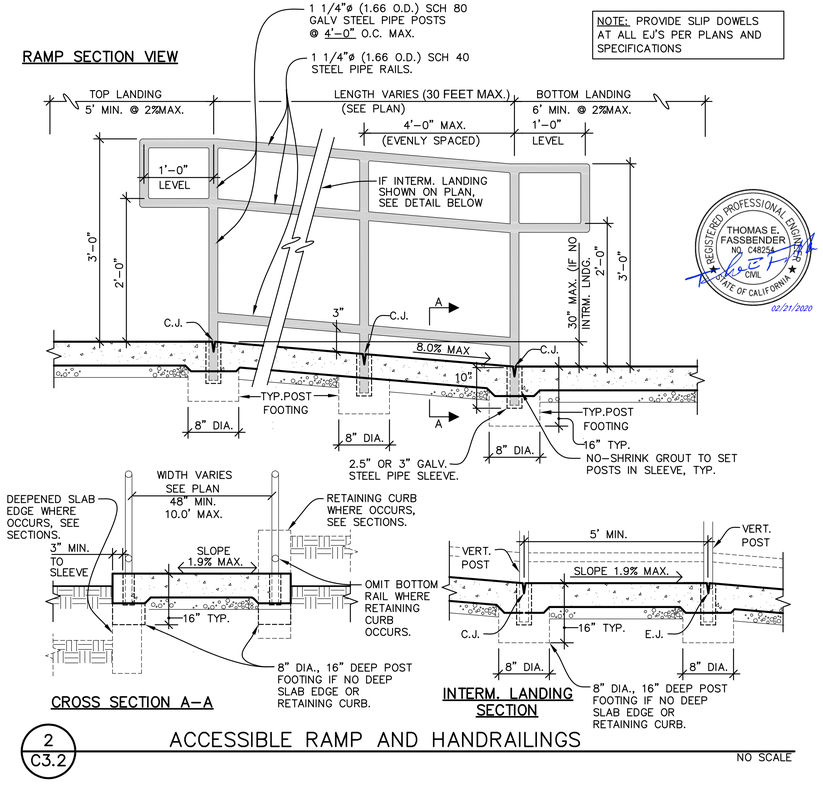
3 / C3.2 CUSTOM STEEL RAILING

NORTH SIDE RAILING DEPICTED, MIRROR CONSTRUCTION FOR SOUTH SIDE RAILING. NO SCALE



1 / C3.2 CONCRETE STAIRS AND RAILINGS

NO SCALE



2 / C3.2 ACCESSIBLE RAMP AND HANDRAILINGS

NO SCALE

FILENAME:I: \19-138\CIVIL\DWG\19-138 C3.1.DWG

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

FILE NO. 39-50 APP NO. 02-117209

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

HENRY+ ASSOCIATES ARCHITECTS

LICENSED ARCHITECT STEPHEN C. HENRY C-22525 12/31/21 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER THOMAS E. FASSBENDER NO. C48254 CIVIL STATE OF CALIFORNIA 02/21/2020

MODERNIZATION HOUSTON SCHOOL

DETAILS

CONSULTANT

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

PROJECT NO.	REVISIONS	BY
19-32-047		
DATE 11/15/2019		
DRAWN SMN		
CHECKED TF		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

C3.2

OF ___ SHEETS

FABRIC CANOPIES
DSA PRE-CHECK

DSA NOTES

1. All work shall conform to the 2016 edition , Title 24, California Code of Regulations
2. Change to the approved drawings and specifications shall be made by addenda or construction change document (CCD) approved by DSA, as required by Section 4-338,Part 1, Tile 24, CCR
3. A "DSA Certified" project inspector employed by the District (owner) and approved by DSA shall provide continuous inspection of the work. The duties of the inspector are defined in Section 4-342, Part 1, Title 24, CCR. Class 2 inspector
4. A DSA accepted testing laboratory directly employed by the District (owner) shall conduct all of the required tests and inspections for the project
5. The intent of these drawings and specifications is that the work of the alteration, rehabilitation or reconstruction is to be in accordance with Title 24, CCR. Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the Contract Documents wherein the finished work will not comply with Title 24, CCR, a construction change document (CCD), or a separate set of plans and specifications, detailing and specifying the required work shall be submitted to and approved by DSA before proceeding with the work (Section 4-317(c), Part 1, Title 24, CCR
6. Grading plans, drainage improvements, road and access requirements and environmental health considerations shall comply with all local ordinances
7. When project is located in a flood zone other than Zone X a letter stamped and signed from a soils engineer is needed to validate the allowable soil values meet the specifications on the PC drawings

CUSTOM CANOPIES INC

Drawing schedule	
S1	Cover sheet
S2	Canopy plan
S3	Roof detail
S4	Footing details
~~S5~~	~~Canopy Det. & T&I guidlines~~

19 Valeroso Street
Rancho Santa Margarita, CA 92688

DESIGN LOADS:

LIVE LOAD = 5 psf (No Snow Load)
ALLOWABLE SOIL PRESSURE = 1500psf (for D+L load),
ALLOWABLE LATERAL = 100psf/ft, 200 per 1806 A.3.4
BASIC WIND SPEED: Ultimate:110 mph (90 mph ASD),
EXPOSURE "C", Kzt = 1, OPEN STRUCTURE
WIND DESIGN: ASCE/SEI 7-10, Directional Proc., Main Frm. Fig 27.4-5 & 27.4-7, Comp. & Clad'g Fig 30.8-2 (Risk Category II)
SEISMIC DESIGN: Equivalent Lateral Force Procedure, Seismic Des. Cat. = E, Ordinary Cantilever Column System, Ie=1.25, Ω=1.25, Site Class D, Ss=2.5, Sds=1.67, Cs=1.33, R=1.25, ρ=1.0, S_1=1.24, Sd1=1.24
V=1.33*W = 1.33*3600= 4788 lbs

BUILDING ANALYSIS DATA: OCCUPANCY GROUP :A3

Max OLF = 7sq/f per person

Max. Occupancy = 171 people

CONSTRUCTIOIN TYPE:V-B

ALLOWABLE AREA: 1200 SF

NOTE:
The location of these canopies adjacent to other buildings is subject to site specific appoval

APPLICABLE CODES AND STANDARDS

2016 CALIF. ADMIN. CODE, TITLE 24 PART 1 CCR

2016 CALIF. BUILDING. CODE, TITLE 24 PART 2 CCR

2016 CALIF. FIRE CODE, TITLE, PART 9, CCR

CANOPY SIZE

Length 40' x width 30' x entry height 16'

Note:
1. Plan max. square feet = 1200
2. Top of posts are 16' max. height above finished grade.
3. Smaller sizes canopy may use the member sizes of the 40x30 hip.
4. This PC is for a single 40x30x16' high canopy. Multiple adjoining canopies are outside the scope of this PC.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

General

CUSTOM CANOPIES INC
19 Valeroso Street
Rancho Santa Margarita, CA 92688

INDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A separate project application for construction is required

FILE NUMBER: CUST-CAN
IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APP. NO: 04 - 116995 INCR : 0
AC DF FLS EA SS VN
DATE 06/27/2018

Drawing title:

COVER SHEET

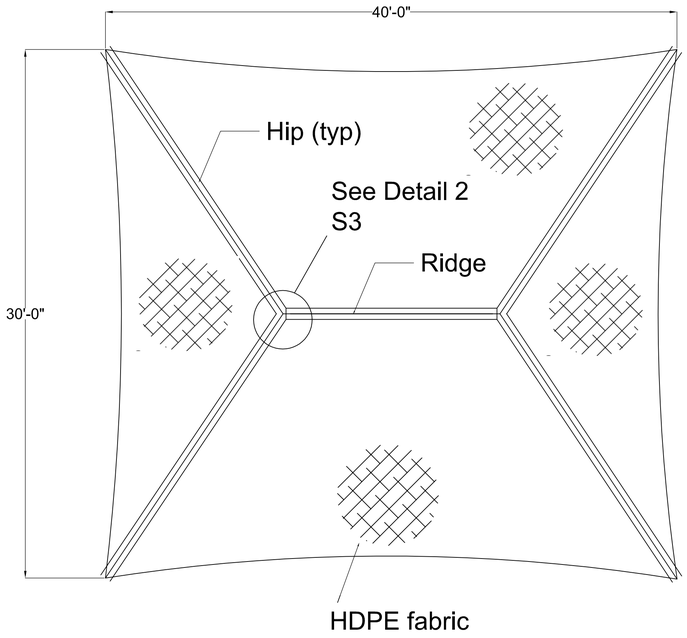
REGISTERED PROFESSIONAL ENGINEER
JAMES L. MITCHELL
S 3081
EXP. 06/30/18
STRUCTURAL
STATE OF CALIFORNIA
06.26.2018

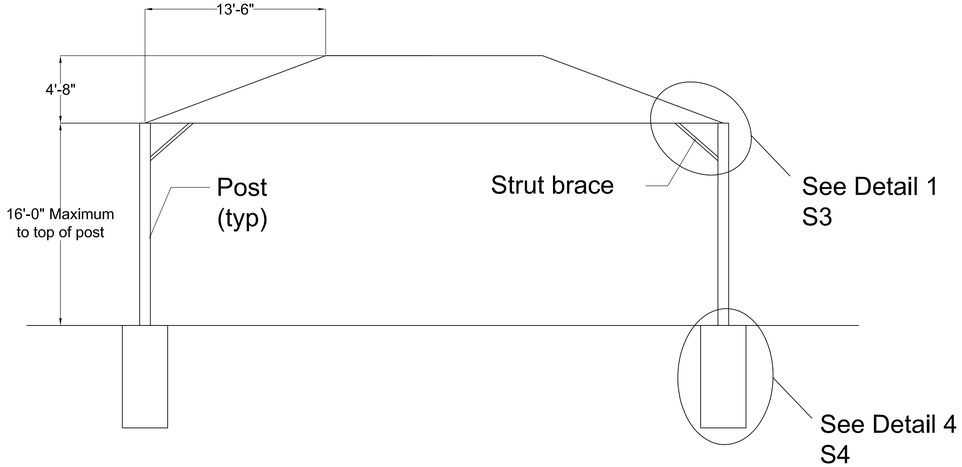
No.	Revision/Issue	Date

Firm Name and Address

Project Name and Address

Project
Date
Scale NTS
Sheet S1





MATERIALS	SCHEDULE
Post	8"Ø Std Pipe (A53 Type E or S)
Hip Beam	6"Ø Std Pipe (A53 Type E or S)
Ridge Beam	6"Ø Std Pipe (A53 Type E or S)
Hip Sleeve	5"Ø Std Pipe (A53 Type E or S)
Strut Brace	2.875" x 0.120 Round Pipe (A500 Gr. B)
Strut Brace Sleeve	2"Ø Std Pipe (A53 Type E or S)

MATERIAL SPECIFICATIONS

A. CONCRETE: F'c = 4500 PSI AT 28 DAYS (SPECIAL INSPECTION REQUIRED), TYPE V CEMENT UNLESS A SITE SPECIFIC GEOTECHNICAL REPORT ALLOWS OTHER
B. REINFORCING STEEL: ASTM A615, GRADE 40 MIN. (GRADE 60 IS ALLOWED)
C. PLATE STEEL SHALL CONFORM TO ASTM A36, Fy = 36ksi.
D. PIPE SECTIONS SHALL CONFORM TO ASTM A53 GRADE B, TYPE E OR S (Fy = 35ksi), AND HSS SECTIONS SHALL CONFORM TO A500, GRADE B (Fy = 42ksi)
E. MACH. BOLTS SHALL BE ASTM A-307 OR SAE GRADE 2 MIN. (LOCK WASHERS REQ.) BOLTS OF GREATER STRENGTH MAY BE USED LIKE ASTM F593C/304 OR F593D/304
F. CABLE STEEL: ASTM A1023, 7x19 CLASS IWRC, 3/8" Ø
MAXIMUM SERVICE CABLE FORCE = 4.60K, BREAKING STRENGTH = 6.540K WITH F.S. = 2.2
G. WELDING ELECTRODES SHALL BE "GMAW / SEMI-AUTOMATIC, GRADE ER70S-6 PER AWS A- 5.18
H. WELDING QUALIFICATION REQUIREMENTS, WORKMANSHIP AND TECHNIQUE OF WELDING ARE TO CONFORM TO THE 2016 C.B.C. SECTION 2204A.1. ALL WELDS SHALL BE INSPECTED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE 2016 C.B.C. CHAPTER 17A, SECTION 1705A.2.5.
I. CABLE CLAMPS SHALL BE FORGED STEEL PER FEDERAL SPEC. FF-C-450 TYPE 1, CLASS 2 INSTALLED WITH THE U-BOLT ON THE CABLE DEAD END (GALVANIZING REQUIRED)
J. BOLT TORQUE: FOR 3/8" Ø CABLE CLIPS = 60 FT-LB.
K. BOLT HOLE DIAMETERS SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER. ALL BOLTS SHALL BE INSTALLED WITH LOCK WASHERS.
L. CORROSION PROTECTION: STEEL TUBE ROOF MEMBERS SHALL BE TRIPLE COATED USING IN-LINE ZINC ELECTROPLATING PER ASTM E-6 AND THEN POWDER COATED WITH A TGIC POLYESTER TOP COAT. STEEL PIPE COLUMNS SHALL BE POWDER COATED WITH A TGIC POLYESTER PRIMER AND TOP COAT. ZINC SPELTER CONFORMS TO ASTM B-6 HIGH GRADE ZINC.
M. FABRIC MATERIAL SHALL BE: COMTEX, EXTRABLOCK, OR SYNTHESIS SA FR FABRIC
THE FABRIC SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE POLYMER.
MIN. WEIGHT = 8.3 OZ/SQ. YD.
MIN. BREAKING STRENGTH PER ASTM D 5034: WARP = 165 lbs, WEFT = 260 lbs
MAXIMUM ELONGATION: WARP 115%, WEFT 76%
MIN. TEAR STRENGTH PER ASTM D 2261: WARP = 26 lbs, WEFT = 26 lbs
FIRE RETARDANT RATING PER CAFM - TITLE 19, (REGISTRATION NO.: ALNET EXTRA BLOCK SHADECLOTH - F94501). THE FABRIC SHALL BE CAPABLE OF MAINTAINING 80% OF ITS TENSILE AND TEARING STRENGTH AFTER EXPOSURE TO A 313 NM LIGHT SOURCE APPLIED FOR 500 HOURS AND WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS PER ASTM G53. THE FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE. SAMPLES OF THE SAME MATERIAL SHALL BE MAINTAINED AT THE PROJECT SITE AND TESTED TO SHOW COMPLIANCE WITH ASTM D 5034 AND D 2261. THE FABRIC SHALL MAINTAIN AT LEAST 50%OF ITS ORIGINAL BREAKING STRENGTH AFTER 5 YEARS OF EXPOSURE TO SUNLIGHT.
N. DEMOLITION AND CONSTRUCTION TO BE DONE IN COMPLIANCE WITH CFC CHAPTER 33 FIRE AND SAFETY

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

General

CUSTOM CANOPIES INC
19 Valeroso Street
Rancho Santa Margarita, CA 92688

INDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A separate project application for construction is required

FILE NUMBER: CUST-CAN
IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APP. NO: 04 - 116995 INCR : 0
AC DF FLS EA SS VN
DATE 06/27/2018

Drawing title:

CANOPY PLANS

REGISTERED PROFESSIONAL ENGINEER
JAMES L. MITCHELL
S3081
EXP. 06/30/18
STRUCTURAL
STATE OF CALIFORNIA
06.26.2018

No.	Revision/Issue	Date

Firm Name and Address

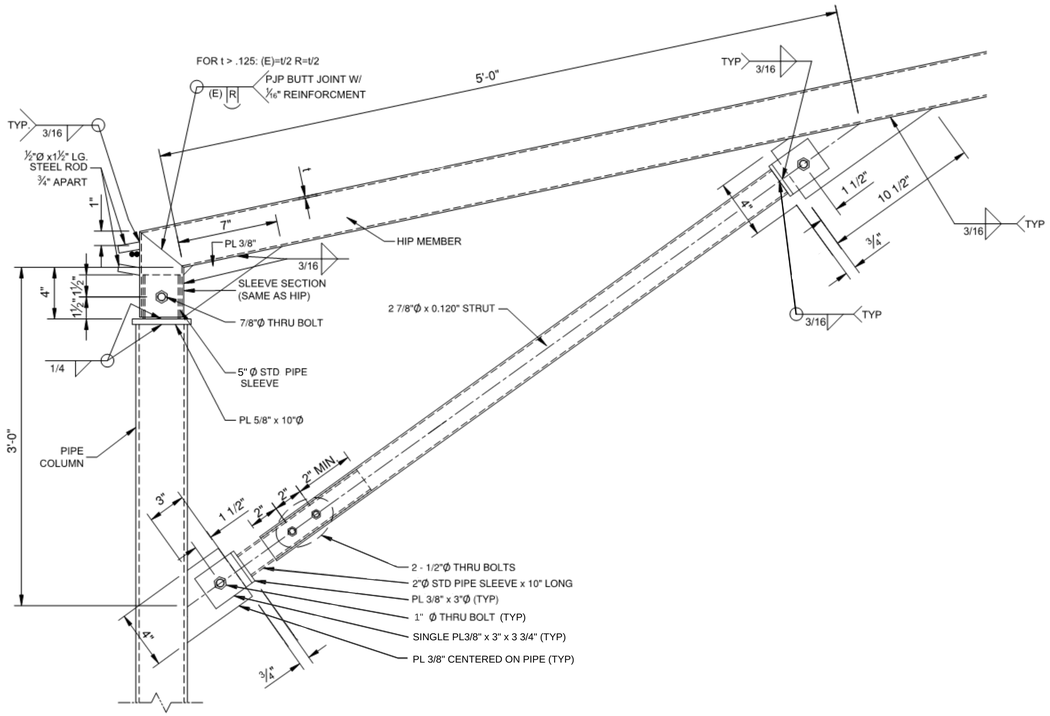
Project Name and Address

Project

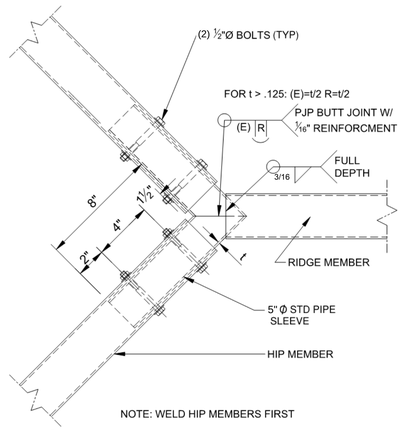
Date

Scale NTS

Sheet S2

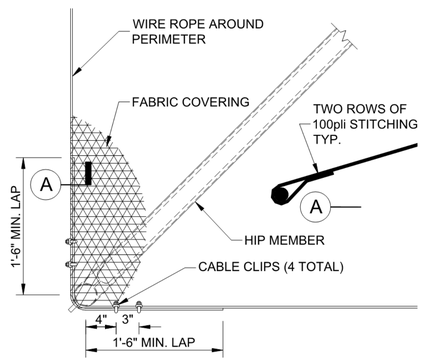


1 TYPICAL EXT. COL. - HIP CONNECTION
SCALE: NTS



NOTE: WELD HIP MEMBERS FIRST

2 TYPICAL HIP - RIDGE CONNECTION
SCALE: NTS



3 TYPICAL CABLE CONNECTION
SCALE: NTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

CUSTOM CANOPIES INC
19 Valeroso Street
Rancho Santa Margarita, CA 92688

INDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A separate project application for construction is required

FILE NUMBER: CUST-CAN
IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APP. NO: 04 - 116995 INCR : 0
AC DF FLS EA SS VN
DATE 06/27/2018

Drawing title:

ROOF DETAILS

REGISTERED PROFESSIONAL ENGINEER
JAMES L. MITCHELL
S 3081
EXP. 06/30/18
STRUCTURAL
STATE OF CALIFORNIA
06.26.2018

No.	Revision/Issue	Date

Firm Name and Address

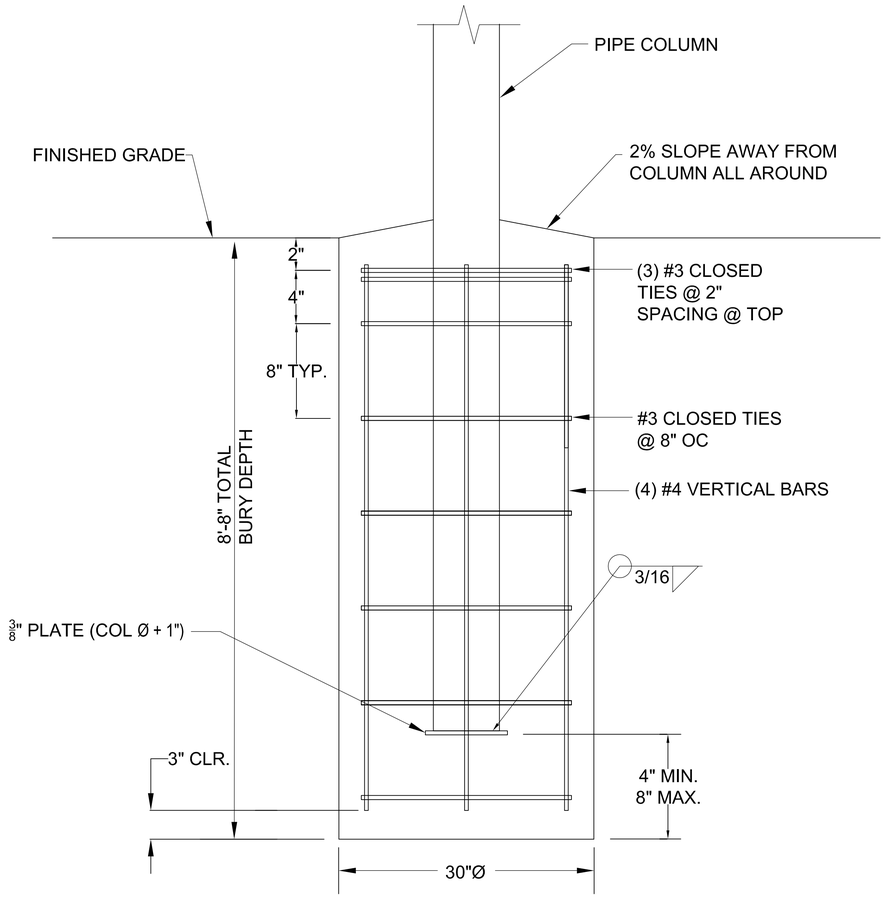
Project Name and Address

Project

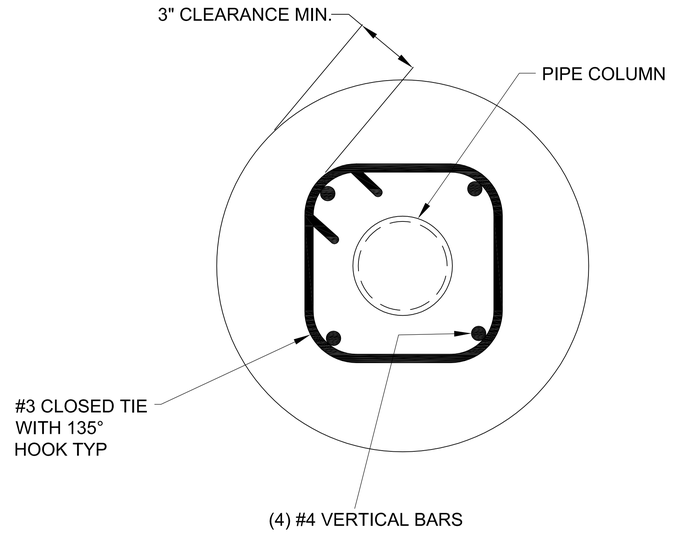
Date

Scale NTS

Sheet S3



TYPICAL NON - CONSTRAINED FOOTING CONDITION



TYPICAL PLAN VIEW OF FOOTING DETAIL

FOUNDATION REACTION TABLE

	X-SHEAR (K)	AXIAL (K)	Z-SHEAR (K)	Mx (K-FT)	Mz (K-FT)
DEAD (SERVICE)	0.19	0.90	0.23	1.71	1.27
ROOF LIVE (SERVICE)	0.30	2.04	0.60	4.73	0.03
X-WIND (SERVICE)	1.89	0.46	1.64	15.98	19.01
Z-WIND (SERVICE)	1.70	0.58	1.38	11.19	17.31
X-SEISMIC (SERVICE)	0.80	0.32	0.26	3.63	7.64
Z-SEISMIC (SERVICE)	0.22	0.37	0.81	7.56	1.73

NOTES
1. REACTIONS INDICATED ABOVE ARE WORST-CASE SERVICE LOAD REACTIONS THAT CAN OCCUR AT THE TOP OF EACH FOOTING/POST BASE @ GRADE LEVEL
2. REACTIONS INDICATED ABOVE, EXCLUDING DEAD AND ROOF LIVE, CAN OCCUR IN ANY DIRECTION (+/-) SIMULTANEOUSLY. DEAD LOAD AND ROOF LIVE LOAD REACTIONS ALWAYS ACT DOWNWARD AND MOMENTS ARE ALWAYS EQUAL AND IN OPPOSING DIRECTIONS RELATIVE TO EACH OTHER

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118048 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2020

General

CUSTOM CANOPIES INC
19 Valeroso Street
Rancho Santa Margarita, CA 92688

INDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
PRE-CHECK (PC) DOCUMENT
CODE: 2016 CBC
A separate project application for construction is required

FILE NUMBER: CUST-CAN
IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APP. NO: 04 - 116995 INCR : 0
AC DF FLS EA SS VN
DATE 06/27/2018

Drawing title:

FOOTING DETAILS

REGISTERED PROFESSIONAL ENGINEER
JAMES L MITCHELL
S 3081
EXP. 06/30/18
STRUCTURAL
STATE OF CALIFORNIA
06.26.2018

No.	Revision/Issue	Date

Firm Name and Address

Project Name and Address

Project

Date

Scale NTS

Sheet S4