SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

Abbreviations:

&	And	F.R.P.	Fiberglass Reinforced Plastic	P.D.F.	Power Driven Fastener
∠	Angle			PT.	Paint
@	At	F.V.	Field Verify	PR.	Pair
℄	Centerline	FIN.	Finish	PTN./PART.	Partition
°	Degree	F.F.E.	Finish Floor Elevation	PEN.	Penetration
PREP./⊥	Perpendicular	F.G.	Finish Grade	PERF.	Perforated
℄	Property Line	F.A.	Fire Alarm	P.LAM.	Plastic Laminate
		F.E.	Fire Extinguisher	PL.	Plate
A.F.F.	Above Finish Floor	F.E.C.	Fire Extinguisher Cabinet	P.V.	Plumbing Vent
ACOUS.	Acoustical	FLASH.	Flashing	PLYWD.	Plywood
ADJ.	Adjustable	F.H.M.B.	Flat Head Machine Bolt	LBS./#	Pound
AGGR.	Aggregate	F.H.M.S.	Flat Head Machine Screw	PRE-FAB.	Prefabricated
A.B.	Aggregate Base	F.H.W.S.	Flat Head Wood Screw	P.M.F.	Pressed Metal Frame
ALUM./AL.	Aluminum	FL./FLR.	Floor	P.T./P.T.D.F	Pressure Treated
AD	Area Drain	F.D.	Floor Drain		Douglas Fir
A.C.	Asphalt Concrete	FT.	Foot/Feet		
A.V.	Audio Visual	FTG.	Footing	R	Radius/Riser
AUTO.	Automatic	FND.	Foundation	R.W.L.	Rain Water Leader
		FURR.	Furring	RDWD.	Redwood
BM.	Beam			REF.	Refrigerator
BLK	Block	GALV.	Galvanized	REINF.	Reinforced
BLKG.	Blocking	G.I.	Galvanized Iron	REQ'D	Required
BD	Board	G.S.M.	Galvanized Sheet Metal	RET.	Return
BOT.	Bottom	G.W.H.	Gas Water Heater	R.D.	Roof Drain
BLDG.	Building	GA.	Gauge	RM.	Room
		GLU LAM./G.L.B.	Glue Laminated (Beam)	R.O.	Rough Opening
CAB.	Cabinet	G.B.	Grab Bar	R.H.W.S.	Round Head Wood Screw
CATV	Cable T.V.	GR.	Grade	R.B.	Rubber Base
C.I.	Cast Iron	GYP.	Gypsum		
C.B.	Catch Basin	GYP.BD.	Gypsum Wallboard	SECT.	Section
CLKG.	Caulking			S.SK.	Service Sink
CLG.	Ceiling	HDWR.	Hardware	SHT.	Sheet
CNTR./CTR.	Center	HDWD.	Hardwood	S.M.	Sheet Metal
CER.	Ceramic	HDR.	Header	S.M.S.	Sheet Metal Screw
C.L.	Chain Link	HVAC	Heating/Ventilating Air Conditioning	S.V.	Sheet Vinyl
CB	Chalkboard			SHR./SHWR.	Shower
C.R.	Classroom	H./HT.	Height	SIM.	Similar
CLR.	Clear	H.M.	Hollow Metal	S.C.	Solid Core
C.W.	Cold Water	HOR./ HORIZ.	Horizontal	S.	South
COL.	Column	H.B.	Hose Bib	Spec.	Specification
CONC.	Concrete	HR.	Hour (Fire Rating)	SQ.	Square
C.M.U.	Concrete Masonry Unit			SST./S.S.	Stainless Steel
CONN.	Connection	IN.	Inch	STD./STND.	Standard
CONST.	Construction	INFO.	Information	STL.	Steel
C.J.	Construction Joint/ Control Joint	I.D.	Inside Diameter	STOR.	Storage
		INSUL.	Insulation	S.D.	Storm Drain
CONT.	Continous	INT.	Interior	S.D.S.T.	Self-Drilling Self-Tapping
CONTR.	Contractor	INV.	Invert	S.F.	Square Feet
CORR.	Corridor			STRUCT.	Structural
C.M.P.	Corrugated Metal Pipe	JAN.	Janitor	SUSP.	Suspended
C.Y.	Cubic Yard	JT.	Joint	SYM.	Symbol
CUST.	Custodian	JST.	Joist		
				TB.	Tackboard
D.	Deep/Depth	KP.	Kickplate	TEL./TELE.	Telephone
DET./ DTL.	Detail	KIT.	Kitchen	T.V.	Television
DIAG.	Diagonal			T.CLR.	Tempered Clear
DIA./ Ø	Diameter	LAM.	Laminate	T.L.T.	Tempered Low Transmission
DIM.	Dimension	LAV.	Lavatory	THK.	Thick
DIM.PT.	Dimension Point	LT.WT.	Light Weight	THRES.	Threshold
D.A.	Disable Accessible	L.F.	Lineal Feet	THRU.	Through
DW.	Dishwasher			T./TLT.	Toilet
DR.	Door	M.B.	Machine Bolt	T&G	Tongue & Groove
DBL.	Double	MH.	Manhole	T.O.	Top of
DN.	Down	MFR.	Manufacturer	T.O.C.	Top of Curb
DS.	Downspout	M.O.	Masonry Opening	T.O.P.	Top of Pavement
D.I.	Drain Inlet	MAT'L.	Material	T.O.W.	Top of Wall/Top of Walk
DWG.	Drawing	MAX.	Maximum	T.S.	Tube Steel
D.F.	Drinking Fountain	MECH.	Mechanical	TYP.	Typical
		MEMB.	Membrane		
EA.	Each	MTL.	Metal	U.O.N.	Unless Otherwise Noted
E.	East	MEZZ.	Mezzanine		
ELEC.	Electrical	MIN.	Minimum	VERT.	Vertical
E.W.C.	Electric Water Cooler	MISC.	Miscellaneous	V.G.D.F.	Vertical Grain Douglas Fir
E.W.H.	Electric Water Heater	M.P.	Multipurpose	V.W.C.	Vinyl Wall Covering
EL./ELEV.	Elevation				
EMER.	Emergency	(N)	New	WSCT.	Wainscot
ENCL.	Enclosure	NOM.	Nominal	W.C.	Water Closet
EQ.	Equal	N.	North	W.H.	Water Heater
E.F.	Exhaust Fan	N.I.C.	Not in Contract	WT.	Weight
(E)/EXIST.	Existing	N.T.S.	Not to Scale	W.W.M.	Welded Wire Mesh
EXP.	Expansion	NO./#	Number	W.	West/Width
E.J.	Expansion Joint			WDW	Window
EXT.	Exterior	O.F.O.I.	Owner Furnish, Owner Installed	W.G.	Wire Glass
				W/	With
F.O.C.	Face of Concrete/Curb	O.F.C.I.	Owner Furnish, Contractor Installed	W/O	Without
F.O.F.	Face of Finish			WD.	Wood
F.O.S.	Face of Studs	O.C.	On Center		
FB.	Fiberboard	OPP.	Opposite	YD.	Yard
F.R.L.	Fiberglass Reinforced Laminate	O.H.	Opposite Hand	Y.D.	Yard Drain
		O.D.	Outside Diameter		
		O.H.W.S.	Oval Head Wood Screw		
		O/	Over		
		OA.	Overall		

Symbol Legend:

SHEET NUMBERING SYSTEM
A2.6.3 — Discipline Designation; Drawing Type Designation; Sheet Sequence Beyond Zero; Building Unit Designation

ROOM NAME and NUMBERING REFERENCE
ROOM NAME / A102 — Room Number; Building Designation

KEYNOTE REFERENCE
(All items indicated with a keynote are new)
3.025

SHEET NOTE REFERENCE
SN.01

DEMOLITION NOTE REFERENCE
DN. 01

DETAIL REFERENCE
1 / A101 — Detail Number; Sheet Number

BUILDING SECTION REFERENCE
1 / A101 — Section Number; Sheet Number

WALL SECTION REFERENCE
1 / A101 — Section Number; Sheet Number

STRUCTURAL GRID IDENTIFIER
(center of framing)
AX — Grid Designation; Building Unit Designation

STRUCTURAL GRID IDENTIFIER
(face of framing, concrete or CMU)
AX — Grid Designation; Building Unit Designation

CENTERLINE

WORK POINT CONTROL

REVISION
1 — Revision Number

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

EXTERIOR ELEVATION REFERENCE
1 / A101 — Elevation Number; Sheet Number

SPECIAL ELEVATION REFERENCE
1 / A101

Architect:

Rainforth Grau Architects
2101 Capitol Avenue, Suite 100
Sacramento, CA 95816
916.368.7990

Contact: VIPUL SAFI

Owner:

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
5737 47TH AVENUE
SACRAMENTO, CA 95824
916.643.7400

Contact: MIKE TAXARA

Consultants:

CIVIL ENGINEER:
WARREN CONSULTING ENGINEERS
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762
916.985.1870
ATTN: ANTHONY TASSANO

ELECTRICAL ENGINEER:
PETERS ENGINEERING
7750 COLLEGE TOWN DRIVE, SUITE 101
SACRAMENTO, CA 95826
916.447.2841
ATTN: GINO ROMANO

Project Information:

SITE LOCATION
7525 Candlewood Way
Sacramento, CA 95822

Project Scope:

INSTALLATION OF (1) 30' X 64' PC SHADE STRUCTURE AND RELATED CONCRETE PAD. UPGRADES TO ACCESSIBLE PATH OF TRAVEL, PARKING AND RESTROOMS. RELATED SITE AND ELECTRICAL WORK.

SCHEDULE OF ALTERNATES:

ALTERNATE NO. 1: CRACK REPAIR, SEAL COAT AND RESTRIPING
A. The contractor is responsible for determining the the extent of crack repair at (e) hardcourt. Place 2 coats of seal coat on existing paving. Seal coat to be provided over entirety of (e) hardcourt. The contractor is responsible for verifying (e) striping condition and verifying exact layout to be restriped with District.

FIRE SAFETY: THE CONTRACTOR SHALL COMPLY WITH CFC CH 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

Sheet Index

GENERAL
A0.1 COVER SHEET
A0.2 TYPICAL MOUNTING HEIGHTS AND DETAILS
A0.7 LOCAL FIRE AUTHORITY SITE PLAN

CIVIL
C0.1 CIVIL GENERAL NOTES AND ABBREVIATIONS
C1.1 DEMOLITION PLAN
C2.1 GRADING AND PAVING PLAN
C3.1 DETAILS AND SECTIONS

ARCHITECTURAL
A1.1.0 SITE PLAN AND CODE INFORMATION
A1.1.1 PARTIAL SITE PLANS AND DETAILS
A2.1.1 TOILET ROOM DEMOLITION AND IMPROVEMENT PLANS AND INTERIOR ELEVATIONS

ELECTRICAL
E0.1 SYMBOLS, NOTES
E1.1 SITE PLAN - ELECTRICAL
E2.1 ONE LINE DIAGRAM
E3.1 DETAILS

TOTAL SHEET COUNT: 14

Applicable Codes:

CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS:

TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24, CCR, PART 1, 2019 CALIFORNIA ADMINISTRATIVE CODE
TITLE 24, CCR, PART 2, 2019 CALIFORNIA BUILDING CODE, VOL. 1 & 2
TITLE 24, CCR, PART 3, 2019 CALIFORNIA ELECTRICAL CODE
TITLE 24, CCR, PART 4, 2019 CALIFORNIA MECHANICAL CODE
TITLE 24, CCR, PART 5, 2019 CALIFORNIA PLUMBING CODE
TITLE 24, CCR, PART 6, 2019 CALIFORNIA ENERGY CODE
TITLE 24, CCR, PART 9, 2019 CALIFORNIA FIRE CODE
TITLE 24, CCR, PART 10, 2019 CALIFORNIA EXISTING BUILDING CODE
TITLE 24, CCR, PART 11, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
TITLE 24, CCR, PART 12, 2019 CALIFORNIA REFERENCED STANDARDS CODE

NFPA 13, 2016 EDITION, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDMENTS)
NFPA 72, 2016 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDMENTS)

UL 464, 2003 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES

UL 521, 7TH EDITION, 1999 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

THE CONTRACTOR SHALL KEEP TITLE 24, CCR, PARTS 1-5 ON THE BUILDING SITE AT ALL TIMES.

DSA Procedures:

1. ADDENDA MUST BE STAMPED AND SIGNED BY THE ARCHITECT OF RECORD AND APPROVED BY DSA IN ACCORDANCE WITH CCR TITLE 24, PART 1.
2. THE CONTRACTOR SHALL BE FAMILIAR WITH, AND PERFORM THE DUTIES IN ACCORDANCE WITH DSA PROCEDURE 13-01, CONSTRUCTION OVERSIGHT PROCESS.
3. CHANGES TO THE STRUCTURAL ACCESSIBILITY, OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN LET SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN TITLE 24, PART 1, 4-338 AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN ACCORDANCE WITH DSA IR A-6.
4. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO THE APPROVED PLANS AND / OR SPECIFICATIONS. THEY ARE TO BE TREATED AS CONSTRUCTION CHANGE DOCUMENTS AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH TITLE 24, PART 1, 4-338 AND DSA IR A-6.
5. THE CLASS 2 PROJECT INSPECTOR MUST BE EMPLOYED BY THE OWNER AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND DSA IN ACCORDANCE WITH TITLE 24, PART 1, 4-341.
6. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBD IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, A CHANGE CONSTRUCTION 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 THE REPAIR WORK.
7. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA.
8. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
9. 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 SEPARATED 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).
10. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

Deferred Approval:

- PC SHADE STRUCTURE

Statement of General Conformance

THE FOLLOWING DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

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

SIGNATURE — DATE: 3/29/22

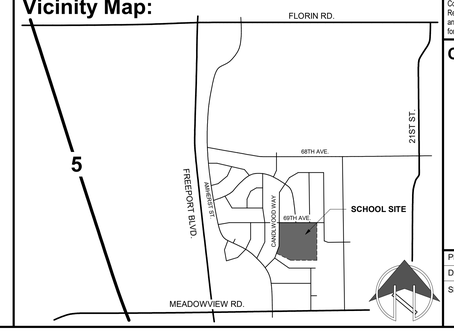
ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE
Jeffrey Grau
PRINT NAME

C-14648 — LICENSE NUMBER
05/31/23 — EXPIRATION DATE

LIST COMPLETELY, ITEMS REVIEWED AND ACCEPTED:

CIVIL, ELECTRICAL

Vicinity Map:



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119974 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

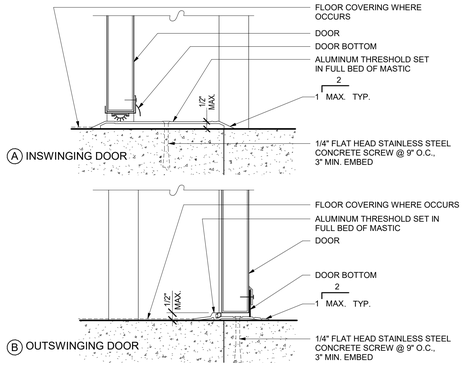
LICENSED ARCHITECT — JEFFREY ALAN GRAU — C-14648 — 5/31/23 RENEWAL DATE — STATE OF CALIFORNIA

SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

△ Revision

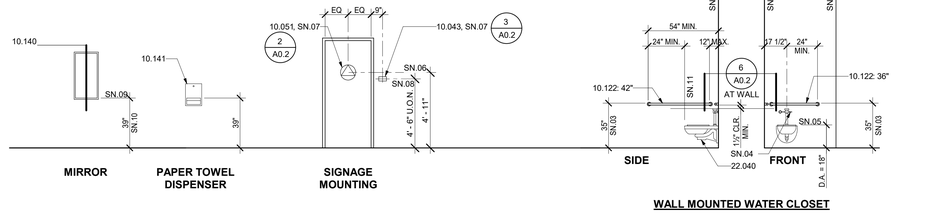
COVER SHEET

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET
A0.1

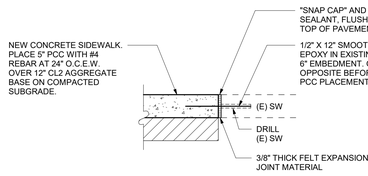


9 EXTERIOR DOOR THRESHOLD
3" = 1'-0"

08030

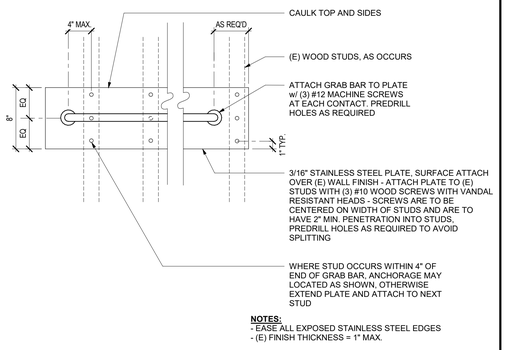


5 TYPICAL MOUNTING HEIGHTS AND DETAILS
1/4" = 1'-0"



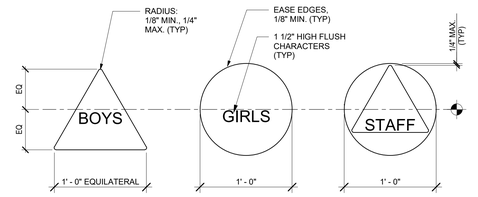
CONNECTION TO (E) CONCRETE

10 CONNECTION TO (E) CONCRETE
NOT TO SCALE



NOTES:
- EASE ALL EXPOSED STAINLESS STEEL EDGES
- (E) FINISH THICKNESS = 1" MAX.

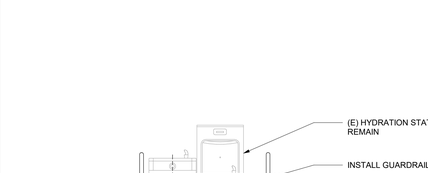
6 GRAB BAR - STAINLESS STEEL PLATE
1 1/2" = 1'-0"



NOTE:

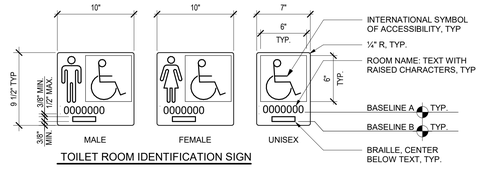
1. TEXT ON DOOR SYMBOL TO BE AS INDICATED ON DRAWINGS

2 TOILET ROOM DOOR SYMBOLS
1 1/2" = 1'-0"

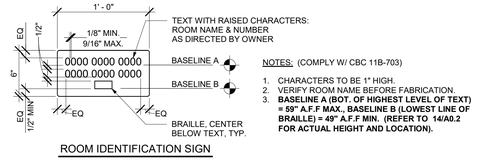


ELEVATION

7 (E) HYDRATION STATION
1/2" = 1'-0"



TOILET ROOM IDENTIFICATION SIGN



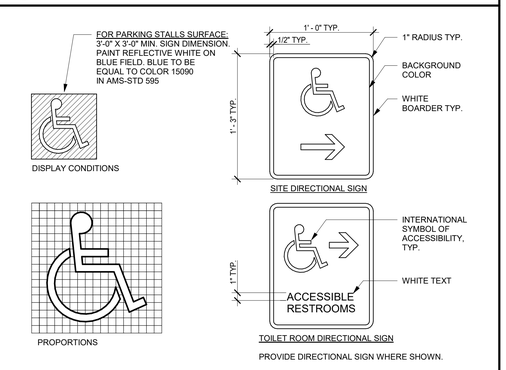
ROOM IDENTIFICATION SIGN

NOTES: (COMPLY W/ CBC 11B-703)

1. CHARACTERS TO BE 1" HIGH.
2. VERIFY ROOM NAME BEFORE FABRICATION.
3. **BASELINE A (BOT. OF HIGHEST LEVEL OF TEXT) = 59" A.F.F MAX., BASELINE B (LOWEST LINE OF BRAILLE) = 49" A.F.F MIN. (REFER TO 14/A0.2 FOR ACTUAL HEIGHT AND LOCATION).**

3 IDENTIFICATION SIGNS
1 1/2" = 1'-0"

8 HYDRATION STATION GUARDRAIL
1" = 1'-0"



4 SYMBOL OF ACCESSIBILITY
NOT TO SCALE

GENERAL NOTES

1. TYPICAL MOUNTING HEIGHTS AND DETAILS APPLY TO ENTIRE PROJECT, WHETHER REFERENCED OR NOT, UNLESS OTHERWISE NOTED.
2. ALL DISABLED ACCESSIBLE DIMENSIONS, ARE MAXIMUM DIMENSIONS UNLESS OTHERWISE NOTED.
3. HEIGHTS ARE MEASURED FROM FINISH FLOOR, UNLESS OTHERWISE NOTED.

SHEET NOTES

SN.01	TO FACE OF FINISH
SN.02	FACE OF OBJECTS OR WALLS
SN.03	TOP OF GRAB BAR
SN.04	AT ACCESSIBLE WATER CLOSETS, FLUSH CONTROL HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET ENCLOSURE
SN.05	TOP OF SEAT
SN.06	CENTERLINE OF SYMBOL
SN.07	PROVIDE AT ALL TOILET ROOM DOORS
SN.08	CENTERLINE OF SIGN.
SN.09	BOTTOM EDGE OF REFLECTIVE SURFACE
SN.10	34" MAX. IF MIRROR IS NOT MOUNTED OVER A LAV. OR COUNTER; TOP OF MIRROR 74" MIN. FOR HIGH SCHOOL & ADULTS.
SN.11	FRONT EDGE OF WATER CLOSET.

KEYNOTES

10.043	SIGNAGE: TOILET ROOM IDENTIFICATION
10.051	SIGNAGE: TOILET ROOM DOOR SYMBOL
10.122	TOILET ACCESSORY: GRAB BAR
10.140	TOILET ACCESSORY: MIRROR
10.141	TOILET ACCESSORY: PAPER TOWEL DISPENSER
22.040	WATER CLOSET

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rga + A studio of HMC Architects

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/23
RENEWAL DATE
STATE OF CALIFORNIA

SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

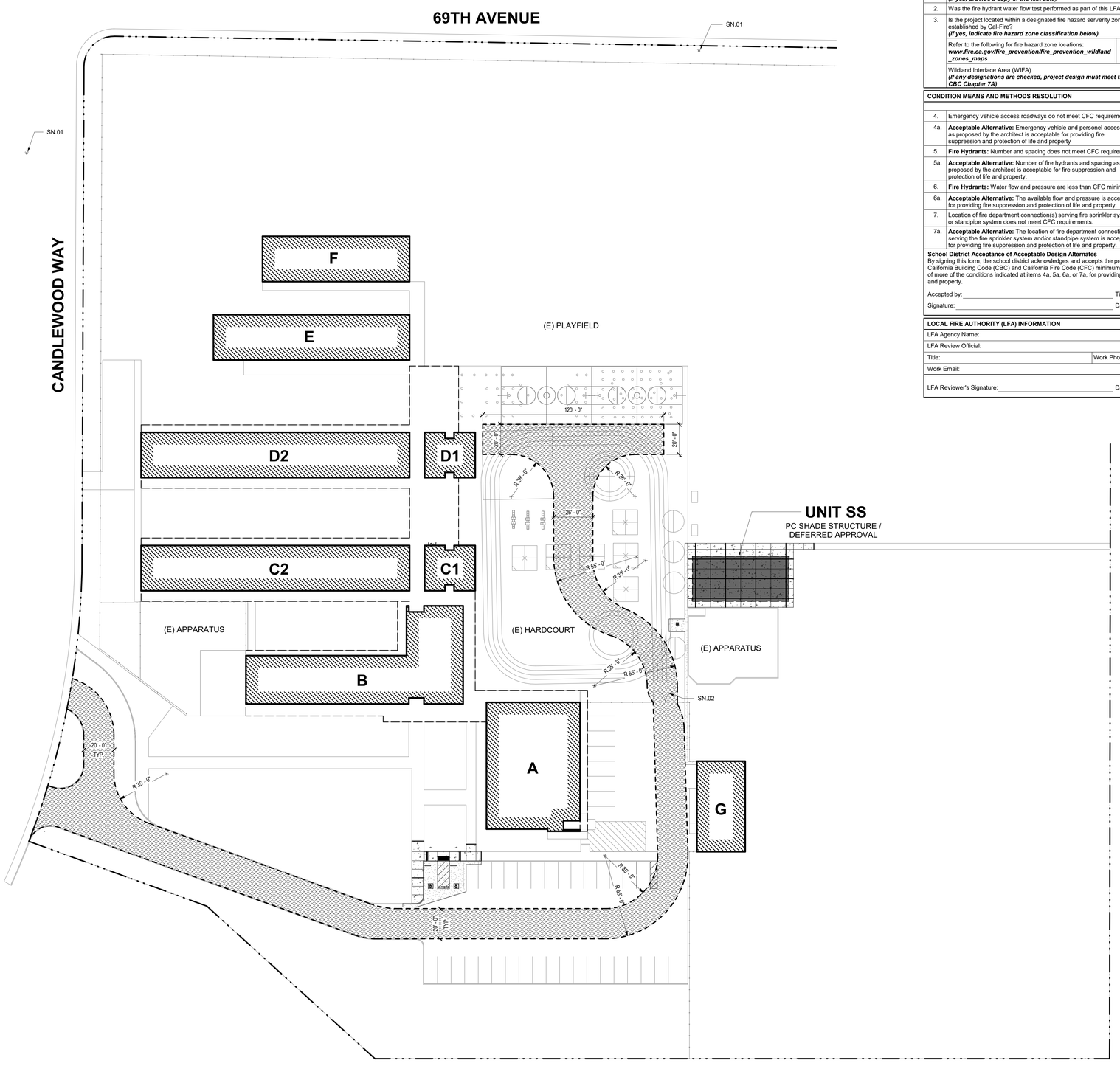
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

Revision

TYPICAL MOUNTING HEIGHTS AND DETAILS

PROJECT NO.	21-1504.06
DATE:	3/1/22
SHEET	A0.2

C:\Users\mark.lau\Documents\1504.06_John D Sloat_Central_mark.lau.rvt



1 LOCAL FIRE AUTHORITY SITE PLAN
1" = 30'-0"

DSA-810 FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

PROJECT INFORMATION

School District:	SACRAMENTO UNIFIED SCHOOL DISTRICT	
Project name / school:	ALICE BIRNEY K-8 SHADE STRUCTURE	
Project address:	6251 13TH STREET, SACRAMENTO, CA 95831	

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

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements	■	■	☒	■
4a.	**Acceptable Alternative:** Emergency vehicle and personel access as proposed by the architect is acceptable for providing fire suppression and protection of life and property	☐	☐	■	■
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements	■	■	☒	■
5a.	**Acceptable Alternative:** Number of fire hydrants and spacing as proposed by the 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 Alternative:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.	☐	☐	■	■
7.	Location of fire department connection(s) serving fire sprinkler system or standpipe system does not meet CFC requirements.	■	■	☒	■
7a.	**Acceptable Alternative:** 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.	☐	☐	■	■

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 of 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: _____ Title: _____

Signature: _____ Date: _____

LOCAL FIRE AUTHORITY (LFA) INFORMATION

LFA Agency Name:

LFA Review Official:

Title: | Work Phone:

Work Email:

LFA Reviewer's Signature: _____ Date: _____

LEGEND

- PROPERTY LINE
- UNIT DESIGNATION / SHADE STRUCTURE
- UNIT DESIGNATION / EXISTING BUILDINGS
- CONCRETE WALK / PAVING
- ASPHALT CONCRETE PAVING
- (E) EMERGENCY ACCESS LANE
- (E) CHAIN LINK FENCE
- (E) FIRE HYDRANT (NTS)
- DRAIN INLET

SHEET NOTES

SN.01 (E) FIRE HYDRANT
SN.02 (E) PR. 8' - 0" WIDE GATES WITH KNOX LOCK BOX

BUILDING DESIGNATIONS

UNIT A - MULTIPURPOSE
UNIT B - ADMINISTRATION

UNITS C1-C2 - CLASSROOMS AND TOILET ROOMS

UNITS D1-D2 - CLASSROOMS AND TOILET ROOMS

UNIT E - CLASSROOMS
UNIT F - CLASSROOMS
UNIT G - CLASSROOM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119974 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/23
RENEWAL DATE
STATE OF CALIFORNIA

SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

△ Revision

LOCAL FIRE AUTHORITY SITE PLAN

SEE OTHER SHEETS FOR CONSTRUCTION

THIS PLAN INCLUDES INFORMATION FOR LOCAL FIRE AUTHORITY APPROVAL ONLY. REFER TO OTHER SHEETS FOR SITE CONSTRUCTION DETAILS.

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET **A0.7**

C:\Users\mark.kuo\Documents\1504.06_John D Sloat_Central_mark.kuo.rvt

EXISTING TOPOGRAPHY

= 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

TBM LIST

NUMBER	DESCRIPTION	NORTHING	EASTING	ELEV
1	CPS CHISELED "+"	9983.38	10002.02	15.76
2	CPS CHISELED "+"	10312.70	10047.77	16.41
3	CPS PK+WASHER	10185.01	10202.41	16.37
4	CPS CHISELED "+"	9921.93	9880.18	15.33
5	CPS CHISELED "+"	10025.15	9638.88	16.13
6	CPS CHISELED "+"	10150.20	9913.92	16.57
7	CPS CHISELED "+"	10189.90	9875.98	16.63
8	CPS CHISELED "+"	10280.42	9876.46	16.65
9	CPS CHISELED "+"	10262.68	9692.14	16.58
10	CPS CHISELED "+"	10351.57	9833.57	18.85
11	CPF CL MON SAC CITY	10543.07	9936.25	15.84
12	CPF CHISELED "+"	10522.85	9937.04	15.20

A.P.N.	048-0168-001

BENCHMARK NO. G2907 **ELEV.** 15.84

C/L MON AT 69TH AVE. AND CARELLA DR., CITY OF SACRAMENTO DATUM, GPS POINT ID G2907

CIVIL ABBREVIATIONS AND LEGEND

ABBREVIATIONS

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
TR	TOP OF RAMP ELEVATION
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

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

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 ARCHITECT 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 REPLACED WITH NEW BOX/COVER AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
10. EXISTING UTILITY STRUCTURES AND PIPING NOT SHOWN ON DEMOLITION PLAN TO BE REMOVED SHALL REMAIN AND BE PROTECTED.

UTILITY VERIFICATION NOTE

PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.

IRRIGATION DEMOLITION NOTE

WITHIN LANDSCAPE AREAS TO BE DEMOLISHED THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ENGINEER FOR DIRECTION.

GENERAL NOTES:

811 Know what's below. Call before you dig.

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.
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.

CIVIL SHEET INDEX

C0.1 CIVIL GENERAL NOTES AND ABBREVIATIONS
C1.1 DEMOLITION PLAN
C2.1 GRADING AND PAVING PLAN
C3.1 DETAILS AND SECTIONS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119974 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

REGISTERED PROFESSIONAL ENGINEER
ANTHONY J TASSANO
NO. C74696
CIVIL
STATE OF CALIFORNIA

WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

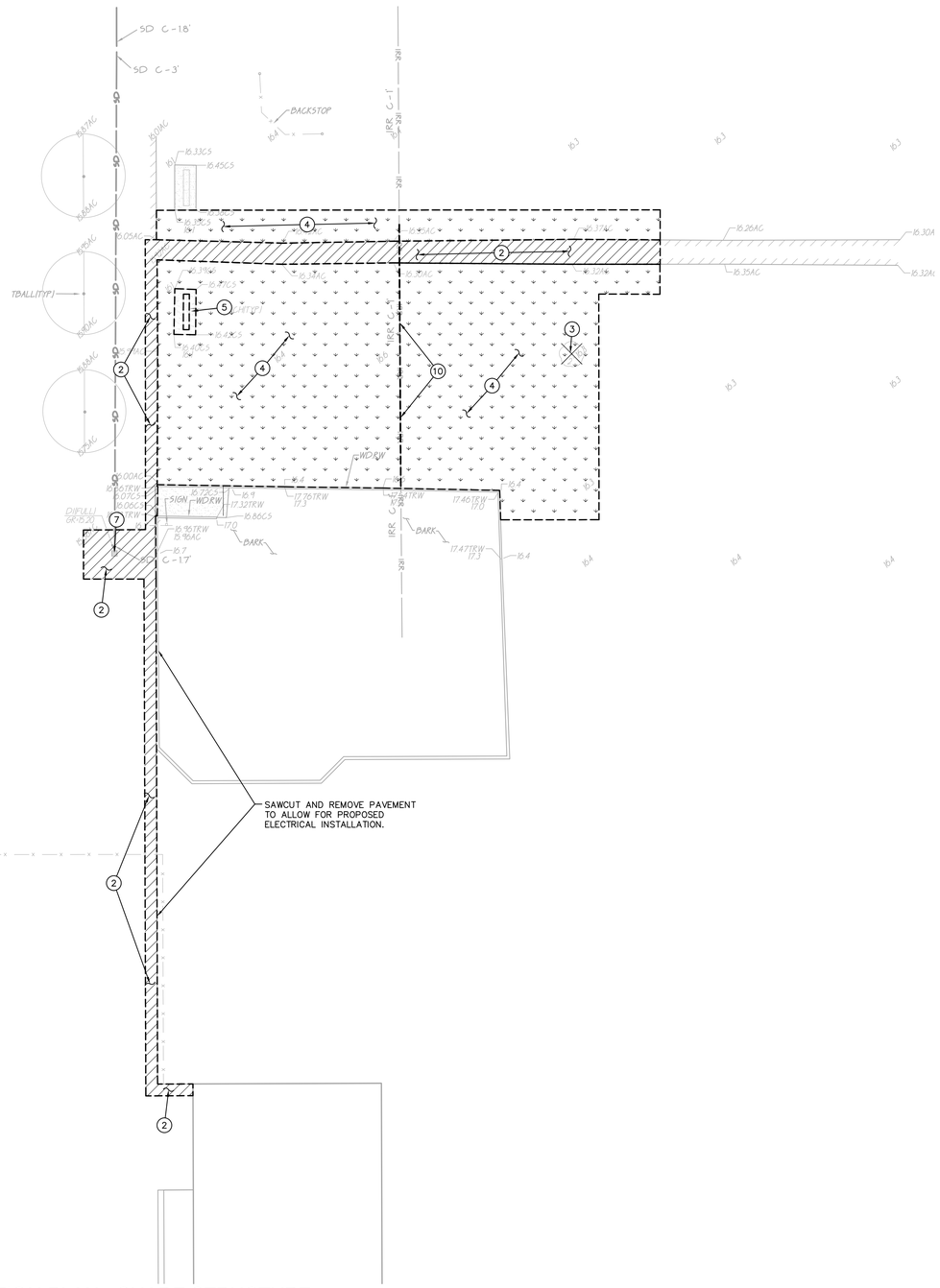
SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

CIVIL GENERAL NOTES AND ABBREVIATIONS

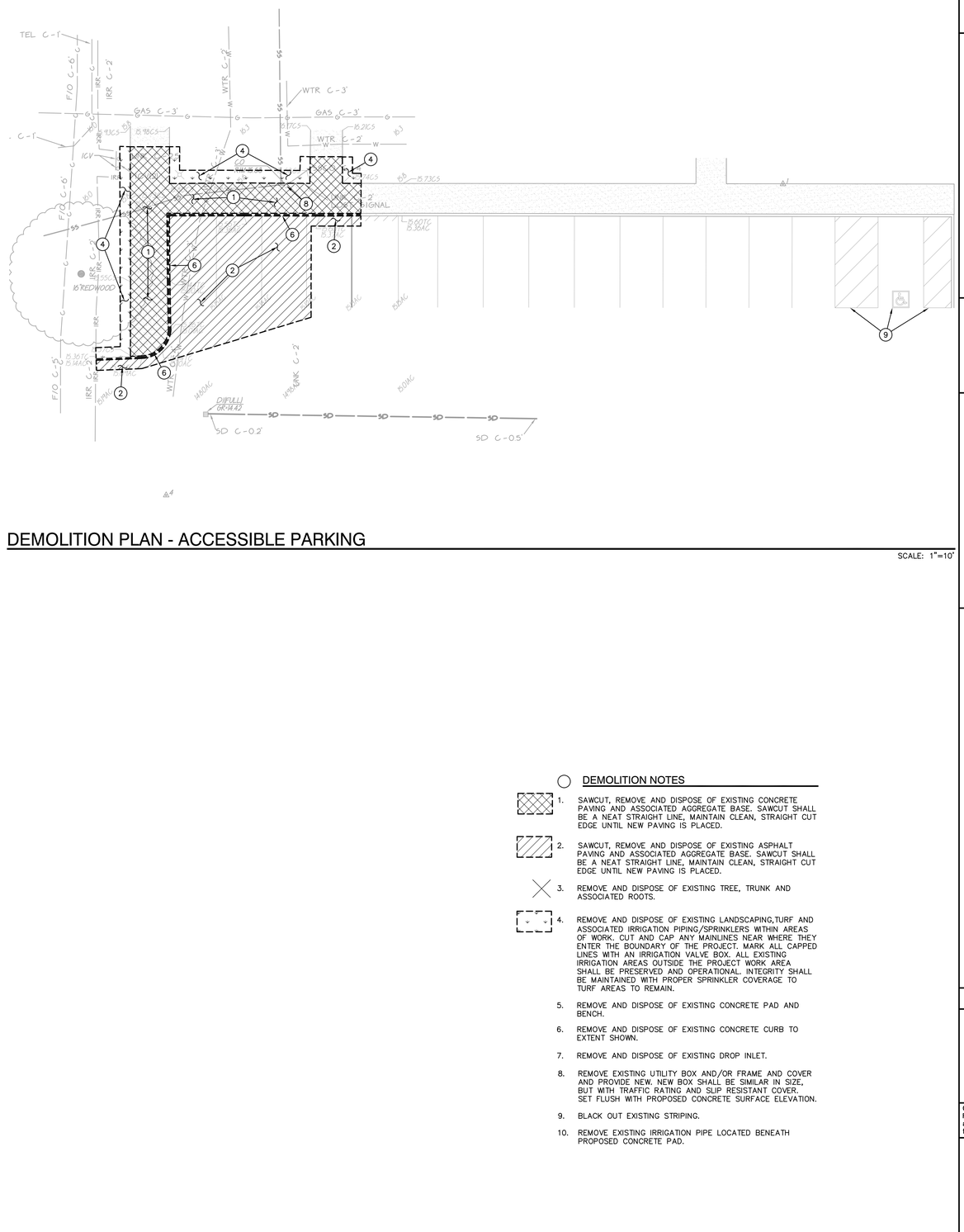
PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET C0.1

FILENAME:I:\22-034\CIVIL\JOHN SLOAT\DWG\22-034-C01SLOAT.DWG



DEMOLITION PLAN - SHADE STRUCTURE

SCALE: 1"=10'



DEMOLITION PLAN - ACCESSIBLE PARKING

SCALE: 1"=10'

DEMOLITION NOTES

1. SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE PAVING AND ASSOCIATED AGGREGATE BASE. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED.
2. SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PAVING AND ASSOCIATED AGGREGATE BASE. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED.
3. REMOVE AND DISPOSE OF EXISTING TREE, TRUNK AND ASSOCIATED ROOTS.
4. REMOVE AND DISPOSE OF EXISTING LANDSCAPING,TURF AND ASSOCIATED IRRIGATION PIPING/SPRINKLERS WITHIN AREAS OF WORK. CUT AND CAP ANY MAINLINES NEAR WHERE THEY ENTER THE BOUNDARY OF THE PROJECT. MARK ALL CAPPED LINES WITH AN IRRIGATION VALVE BOX. ALL EXISTING IRRIGATION AREAS OUTSIDE THE PROJECT WORK AREA SHALL BE PRESERVED AND OPERATIONAL. INTEGRITY SHALL BE MAINTAINED WITH PROPER SPRINKLER COVERAGE TO TURF AREAS TO REMAIN.
5. REMOVE AND DISPOSE OF EXISTING CONCRETE PAD AND BENCH.
6. REMOVE AND DISPOSE OF EXISTING CONCRETE CURB TO EXTENT SHOWN.
7. REMOVE AND DISPOSE OF EXISTING DROP INLET.
8. REMOVE EXISTING UTILITY BOX AND/OR FRAME AND COVER AND PROVIDE NEW. NEW BOX SHALL BE SIMILAR IN SIZE, BUT WITH TRAFFIC RATING AND SLIP RESISTANT COVER. SET FLUSH WITH PROPOSED CONCRETE SURFACE ELEVATION.
9. BLACK OUT EXISTING STRIPING.
10. REMOVE EXISTING IRRIGATION PIPE LOCATED BENEATH PROPOSED CONCRETE PAD.

GRAPHIC SCALE

10' 0 5' 10' 20'

(IN FEET) 1 inch = 10 feet

NORTH

THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119974 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

REGISTERED PROFESSIONAL ENGINEER
ANTHONY J. TASSANO
NO. C74696
STATE OF CALIFORNIA

WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
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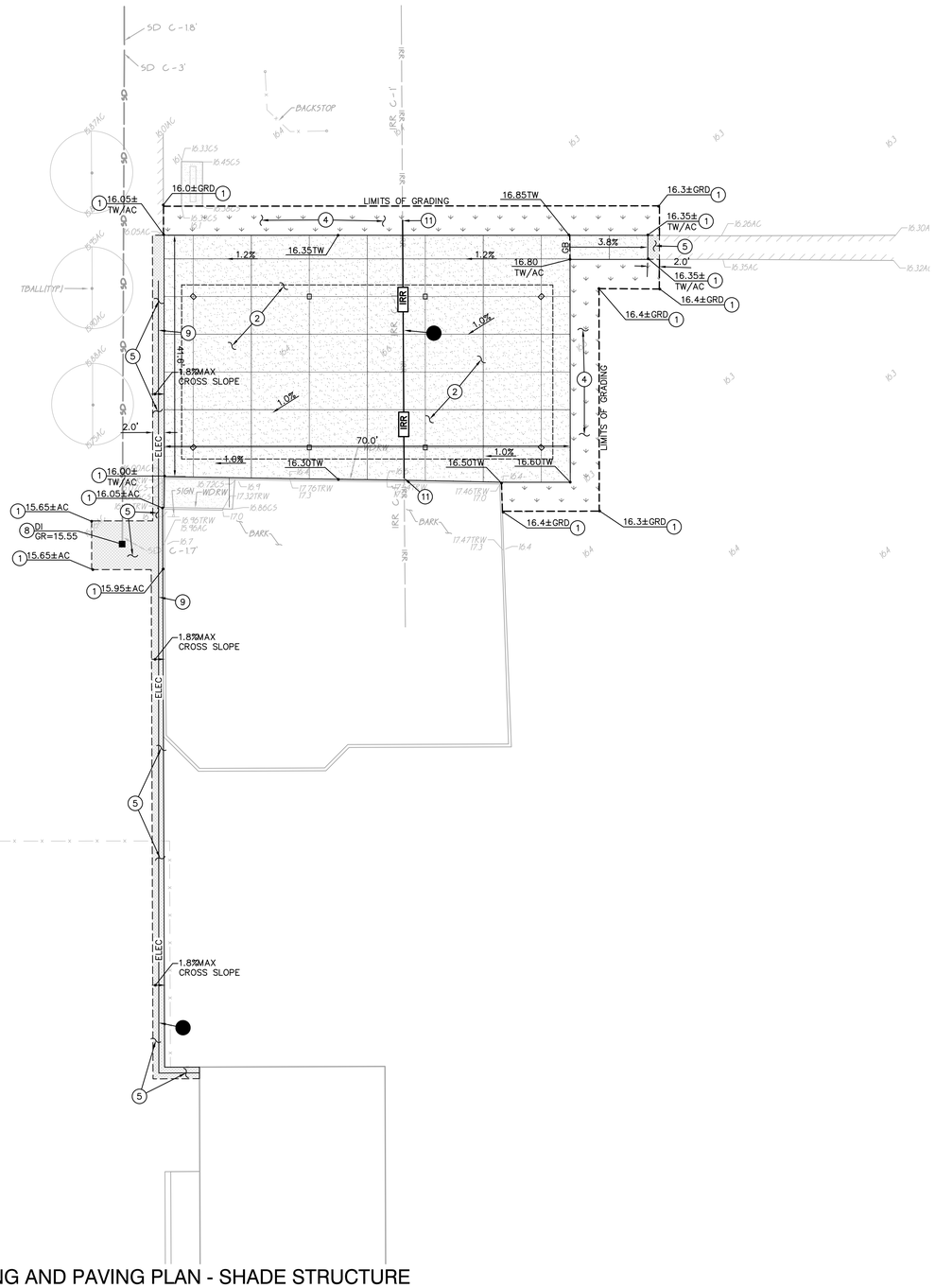
SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

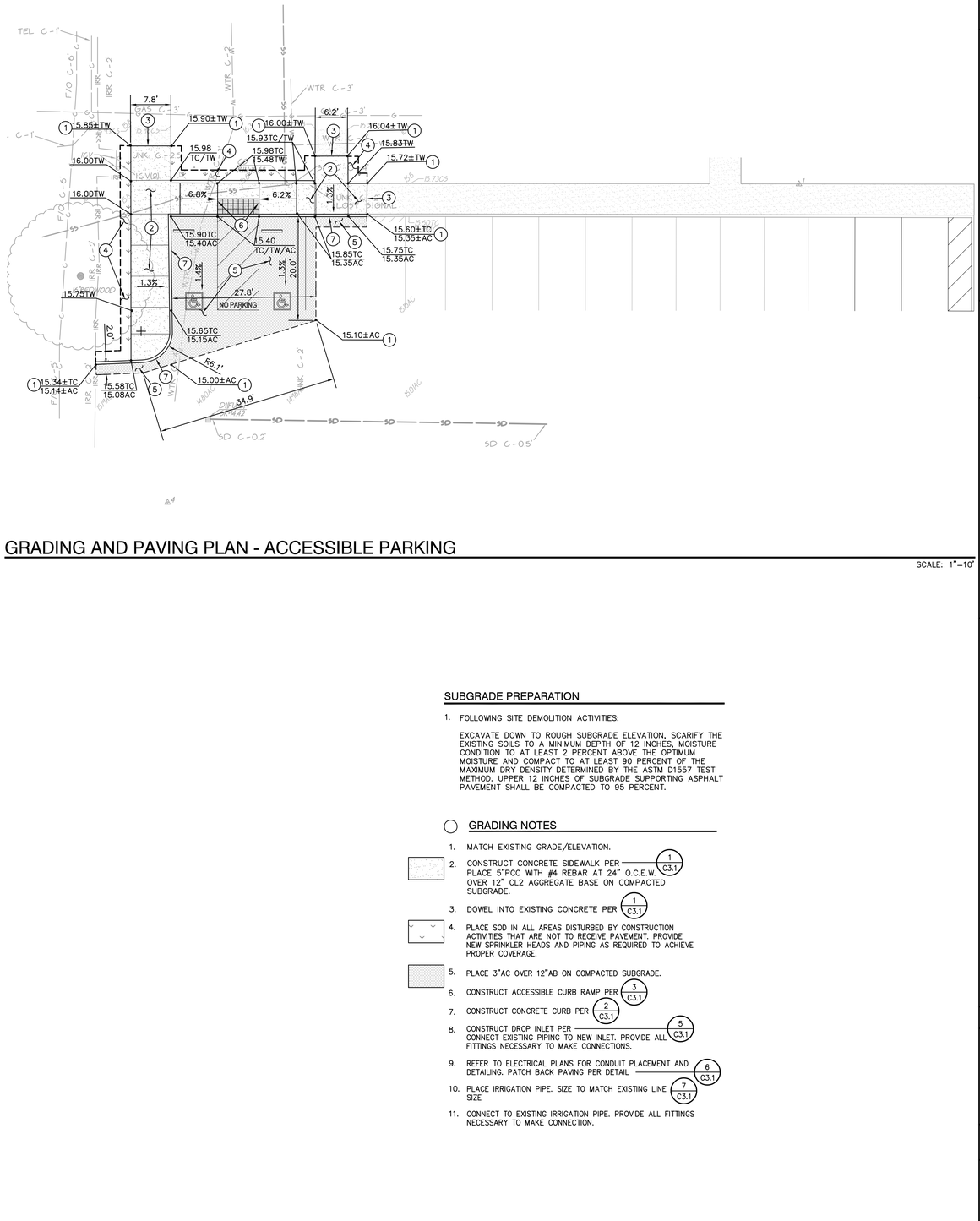
DEMOLITION PLAN

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET C1.1



GRADING AND PAVING PLAN - SHADE STRUCTURE

SCALE: 1"=10'



GRADING AND PAVING PLAN - ACCESSIBLE PARKING

SCALE: 1"=10'

SUBGRADE PREPARATION

1. FOLLOWING SITE DEMOLITION ACTIVITIES:

   EXCAVATE DOWN TO ROUGH SUBGRADE ELEVATION, SCARIFY THE EXISTING SOILS TO A MINIMUM DEPTH OF 12 INCHES, MOISTURE CONDITION TO AT LEAST 2 PERCENT ABOVE THE OPTIMUM MOISTURE AND COMPACT TO AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D1557 TEST METHOD. UPPER 12 INCHES OF SUBGRADE SUPPORTING ASPHALT PAVEMENT SHALL BE COMPACTED TO 95 PERCENT.

GRADING NOTES

1. MATCH EXISTING GRADE/ELEVATION.
2. CONSTRUCT CONCRETE SIDEWALK PER PLACE 5"PCC WITH #4 REBAR AT 24" O.C.E.W. OVER 12" CL2 AGGREGATE BASE ON COMPACTED SUBGRADE. (1 / C3.1)
3. DOWEL INTO EXISTING CONCRETE PER (1 / C3.1)
4. PLACE SOD IN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT ARE NOT TO RECEIVE PAVEMENT. PROVIDE NEW SPRINKLER HEADS AND PIPING AS REQUIRED TO ACHIEVE PROPER COVERAGE.
5. PLACE 3"AC OVER 12"AB ON COMPACTED SUBGRADE.
6. CONSTRUCT ACCESSIBLE CURB RAMP PER (3 / C3.1)
7. CONSTRUCT CONCRETE CURB PER (2 / C3.1)
8. CONSTRUCT DROP INLET PER (5 / C3.1) CONNECT EXISTING PIPING TO NEW INLET. PROVIDE ALL FITTINGS NECESSARY TO MAKE CONNECTIONS.
9. REFER TO ELECTRICAL PLANS FOR CONDUIT PLACEMENT AND DETAILING. PATCH BACK PAVING PER DETAIL (6 / C3.1)
10. PLACE IRRIGATION PIPE. SIZE TO MATCH EXISTING LINE SIZE (7 / C3.1)
11. CONNECT TO EXISTING IRRIGATION PIPE. PROVIDE ALL FITTINGS NECESSARY TO MAKE CONNECTION.

GRAPHIC SCALE

10' 0 5' 10' 20'

(IN FEET) 1 inch = 10 feet

NORTH

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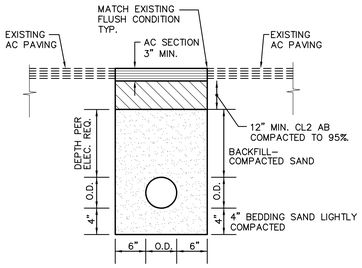
SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

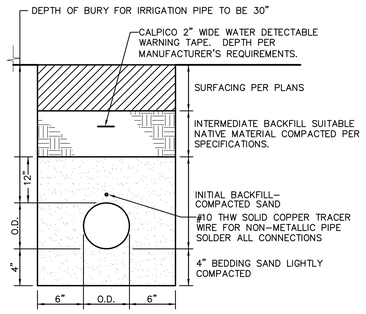
GRADING AND PAVING PLAN

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET C2.1



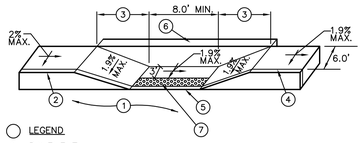
6 C3.1 ASPHALT PATCH AT TRENCH

NO SCALE



7 C3.1 WATER TRENCH

NO SCALE



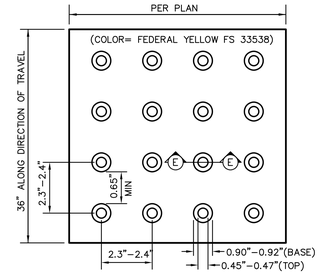
LEGEND

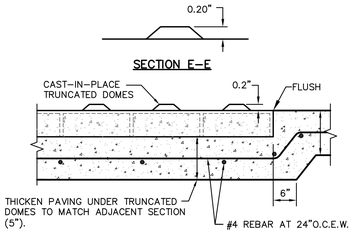
1. PAVEMENT.
2. TOP FACE OF CURB, STANDARD 6" HIGH.
3. 8.3% (1:12) MAXIMUM SLOPE, 2% MAX CROSS SLOPE.
4. SCORE MARK, 6" BACK OF CURB.
5. TRANSITION SHALL BE FLUSH AND FREE OF ABRUPT CHANGE PER CALIFORNIA BUILDING CODE, TITLE 24, SECTION 11B–406.5.8.
6. 6" WIDE RETAINING CURB, HEIGHT TO BE DETERMINED BY PROJECTED BACK OF WALK GRADE AT EACH END OF CURB RETURN AND BACK OF LANDING SURFACE.
7. PLACE 36" WIDE PREFABRICATED CAST IN PLACE DETECTABLE WARNING TILE BY ARMOR–TILE OR APPROVED EQUAL. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND THE SIDEWALK LESS 2 INCHES MAXIMUM ON EACH SIDE PER 11B–705.1.2.2.

4 C3.1

3 C3.1 ACCESSIBLE CURB RAMP

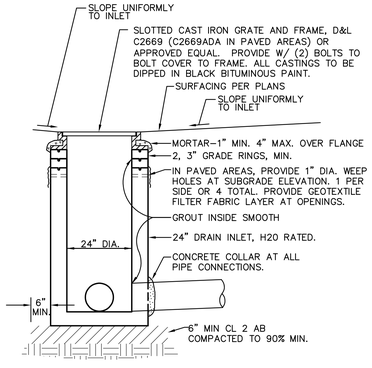
NO SCALE





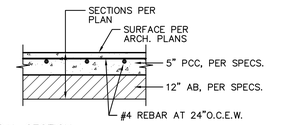
4 C3.1 TRUNCATED DOMES

NO SCALE

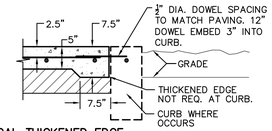


5 C3.1 DROP INLET

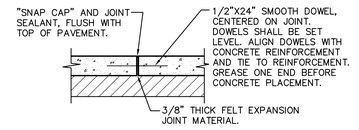
NO SCALE

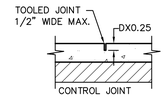


TYPICAL SECTION

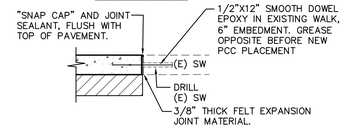


TYPICAL THICKENED EDGE





TYPICAL JOINTS



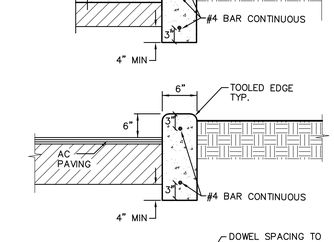
CONNECTION TO (E) CONCRETE

NOTES:

1. PROVIDE FELT EXPANSION JOINTS AT 20 FEET O.C. MIN.
2. PROVIDE CONTROL JOINTS AT 10 FEET O.C. MIN.
3. EXPANSION OR CONTROL JOINTS SHALL NOT EXCEED 1/2" IN SURFACE WIDTH.

1 C3.1 CONCRETE SIDEWALK

NO SCALE



NOTES:

1. PROVIDE FELT EXPANSION JOINTS (E.J.) AT 60 FEET O.C. MAXIMUM PROVIDE CONTROL JOINTS AT 10 FEET O.C. MAXIMUM, EXCEPT WHEN PLACING ADJACENT TO CONCRETE WALKS THE EXPANSION JOINTS SHALL ALIGN WITH THE EXPANSION JOINTS SHOWN FOR THE CONCRETE WALKS.
2. AT E.J. USE 1/2"X24" SMOOTH DOWELS, ALIGN WITH REBAR, GREASE 1/2 THE LENGTH BEFORE CONCRETE PLACEMENT.

2 C3.1 CONCRETE CURB

NO SCALE

IDENTIFICATION STAMP
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SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

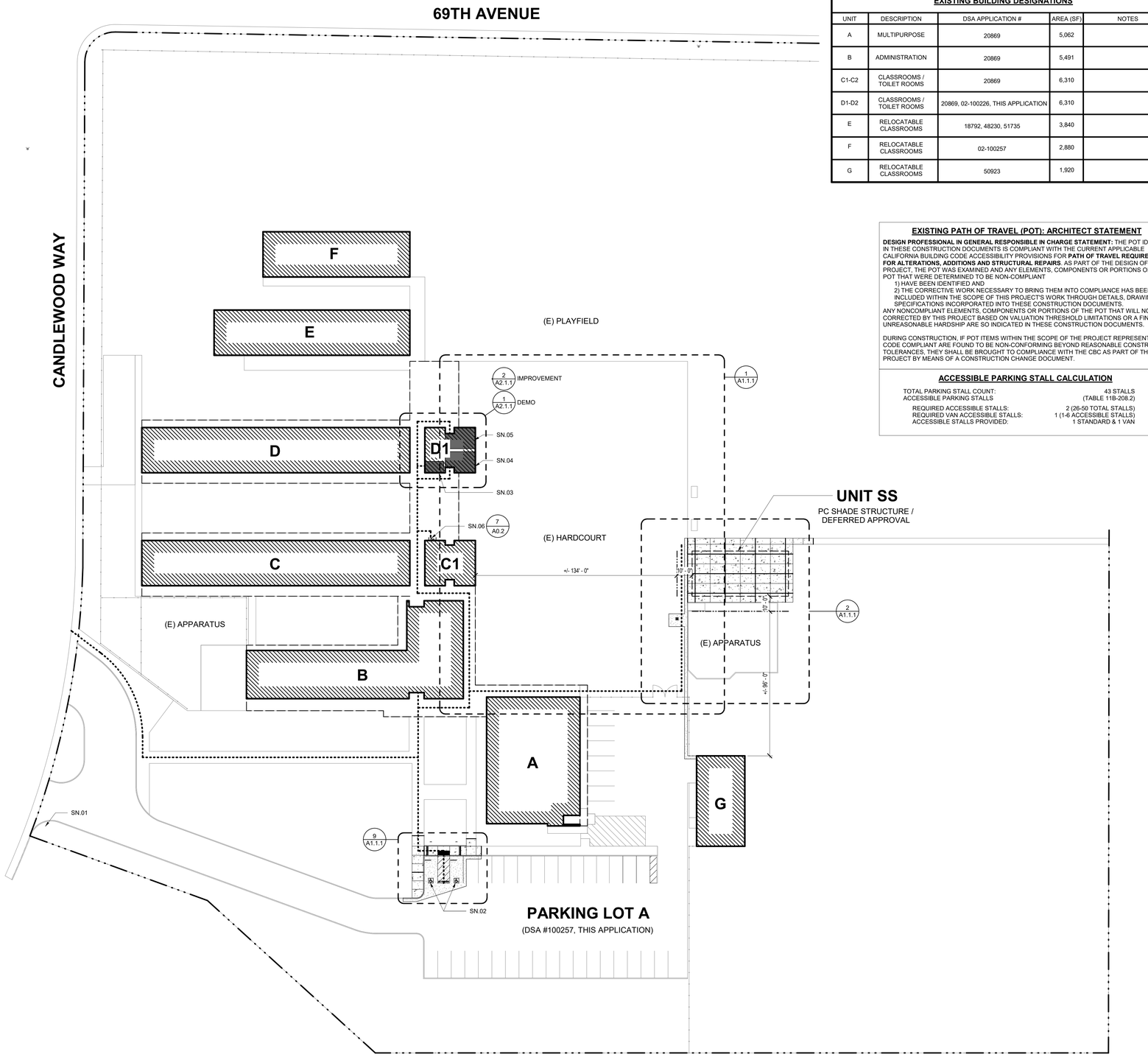
SACRAMENTO, CA

DETAILS AND SECTIONS

PROJECT NO. 21-1504.06

DATE: 3/1/22

SHEET C3.1



1 SITE PLAN
1" = 30'-0"

PROPOSED SHADE STRUCTURE

UNIT	DESCRIPTION	OCCUPANCY	CONSTRUCTION TYPE	ALLOWABLE AREA (TABLE 506.2)	ACTUAL AREA	OCCUPANCY CALCULATION
SS	SHADE STRUCTURE	A-3	V-B NON-SPRINKLERED	6,000 S.F.	1,920 S.F.	1,920 S.F. / 15 NET = 128 OCC.

EXISTING BUILDING DESIGNATIONS

UNIT	DESCRIPTION	DSA APPLICATION #	AREA (SF)	NOTES
A	MULTIPURPOSE	20869	5,062	
B	ADMINISTRATION	20869	5,491	
C1-C2	CLASSROOMS / TOILET ROOMS	20869	6,310	
D1-D2	CLASSROOMS / TOILET ROOMS	20869, 02-100226, THIS APPLICATION	6,310	
E	RELOCATABLE CLASSROOMS	18792, 48230, 51735	3,840	
F	RELOCATABLE CLASSROOMS	02-100257	2,880	
G	RELOCATABLE CLASSROOMS	50923	1,920	

EXISTING PATH OF TRAVEL (POT): ARCHITECT STATEMENT

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE IN CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS**. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NON-COMPLIANT

1) HAVE BEEN IDENTIFIED AND
2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS.

ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION 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 NON-CONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT TO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

ACCESSIBLE PARKING STALL CALCULATION

TOTAL PARKING STALL COUNT:	43 STALLS
ACCESSIBLE PARKING STALLS	(TABLE 11B-208.2)
REQUIRED ACCESSIBLE STALLS:	2 (26-50 TOTAL STALLS)
REQUIRED VAN ACCESSIBLE STALLS:	1 (1-6 ACCESSIBLE STALLS)
ACCESSIBLE STALLS PROVIDED:	1 STANDARD & 1 VAN

LEGEND

- PROPERTY LINE
- ASSUMED PROPERTY LINE
- UNIT DESIGNATION — PC SHADE STRUCTURE / DEFERRED APPROVAL
- UNIT DESIGNATION — EXISTING BUILDINGS
- EXPANSION JOINT
- CONCRETE WALK / PAVING
- CONTROL JOINT
- ASPHALT CONCRETE PAVING
- ACCESSIBLE PATH OF TRAVEL

1. SITE WALKWAYS SHALL PROVIDE A BARRIER-FREE P.O.T. ABRUPT CHANGES IN LEVEL ALONG ANY P.O.T. ARE ALLOWED UP TO 1/2". ONLY ABRUPT CHANGES IN ELEVATION UP TO 1/4" ARE ALLOWED TO HAVE A VERTICAL TRANSITION. ABRUPT CHANGES IN ELEVATION BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1-UNIT VERTICAL TO 2-UNITS HORIZONTAL.
2. WALKWAYS SHALL BE FREE OF GRATINGS WHEREVER POSSIBLE. GRATING WHICH OCCUR WITHIN THE P.O.T. SHALL HAVE OPENINGS WHICH DO NOT EXCEED 1/2" IN THE DIRECTION OF TRAVEL PER CBC SECTION 11B-302.3.
3. AN ABRUPT DROP-OFF CHANGE IN ELEVATION AT THE EDGE OF ANY WALK INTO AN ADJACENT PLANTER SHALL NOT EXCEED 4".
4. SLOPES IN THE DIRECTION OF THE P.O.T. GREATER THAN 1-UNIT VERTICAL TO 20-UNITS HORIZONTAL SHALL BE CONSIDERED A RAMP AND WILL REQUIRE HANDRAILS ON BOTH SIDES PER CBC SECTION 11B-505 SLOPES IN THE DIRECTION OF THE P.O.T. ALONG WALKWAYS SHALL NOT EXCEED 5%. CROSS SLOPES IN THE P.O.T. ALONG WALKWAYS SHALL NOT EXCEED 2%.
5. ALL WALKWAYS WITHIN THE P.O.T. SHALL BE A MINIMUM OF 48" IN WIDTH. SURFACES WITH A SLOPE OF 5% OR LESS SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT PROVIDED BY A LIGHT BROOM FINISH. SURFACES WITH A SLOPE OF MORE THAN 5% SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT PROVIDED BY A MEDIUM BROOM FINISH.
6. OBJECTS PROTRUDING INTO THE P.O.T. SHALL NOT REDUCE THE CLEAR WIDTH OR MANEUVERING SPACE WITHIN THE P.O.T. PER CBC SECTION 11B-307.
7. PASSING SPACES (11B-403.5.3) OF 60" X 60" MIN. ARE LOCATED NOT MORE THAN 200' APART. WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE 60" IN LENGTH LEVEL RESTING 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 FREE OF PROTRUDING OBJECTS (11B-307) GREATER THAN 4" PROJECTION FROM WALL ABOVE 27" AND LESS THAN 80". OBJECTS PROTRUDING INTO THE P.O.T SHALL NOT REDUCE THE CLEAR WIDTH OR MANEUVERING SPACE REQUIRED FOR ACCESSIBLE ROUTES (11B-307.5).

SHEET NOTES

SN.01 (E) PARKING LOT ENTRANCE SIGN PER DSA #02-102126
SN.02 ACCESSIBLE PARKING STALLS PER THIS APPLICATION
SN.03 (E) ACCESSIBLE STAFF TOILET ROOM UPGRADED PER THIS APPLICATION
SN.04 (E) ACCESSIBLE GIRL'S TOILET ROOM UPGRADED PER THIS APPLICATION
SN.05 (E) ACCESSIBLE BOY'S TOILET ROOM UPGRADED PER THIS APPLICATION
SN.06 (E) ACCESSIBLE DRINKING FOUNTAIN UPGRADED PER THIS APPLICATION

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SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/23
RENEWAL DATE
STATE OF CALIFORNIA

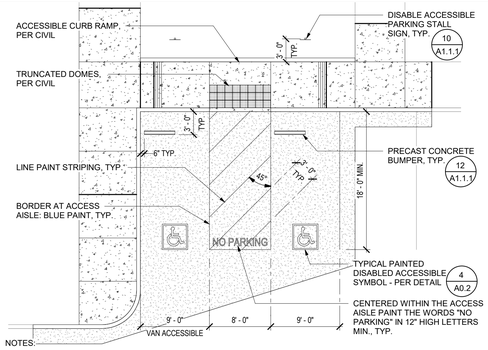
SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

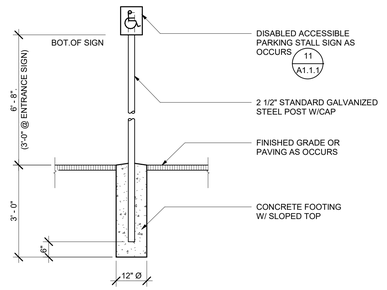
△ Revision

SITE PLAN AND CODE INFORMATION

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET
A1.1.0

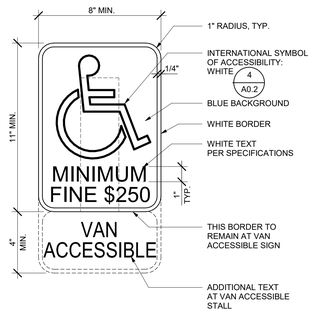


9 ENLARGED SITE PLAN - PARKING
1/8" = 1'-0"



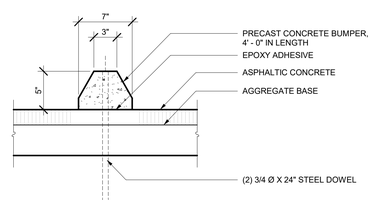
10 METAL SIGNS
1/2" = 1'-0"

10100



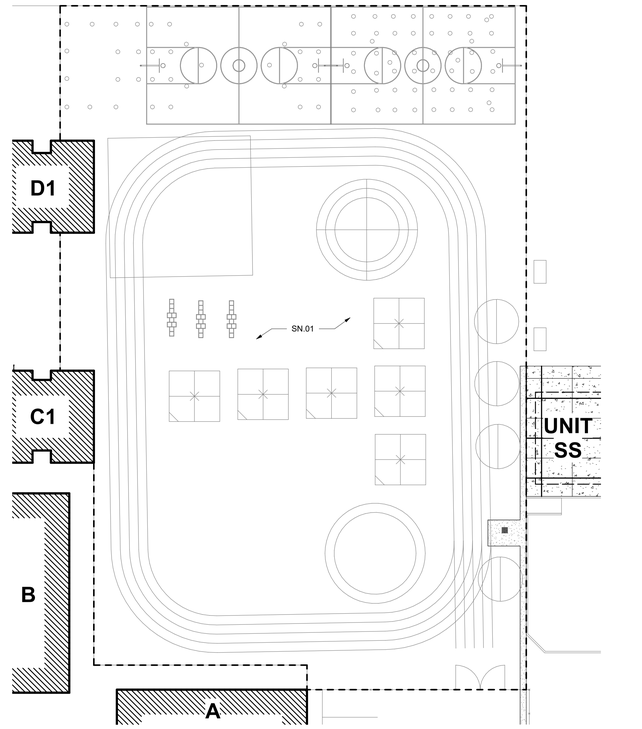
DISABLED ACCESSIBLE PARKING STALL

11 PARKING SIGNAGE
3" = 1'-0"

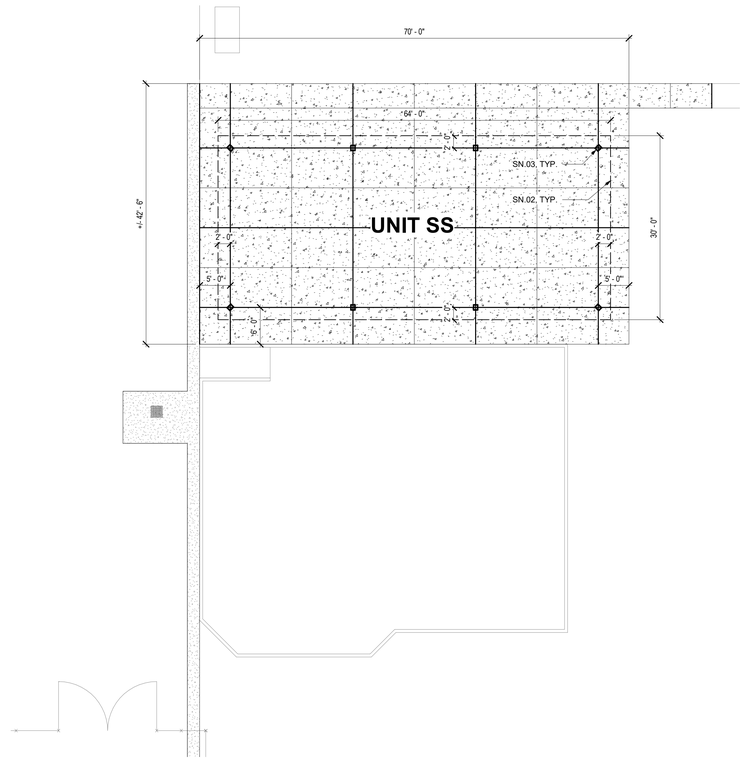


12 PRECAST CONCRETE BUMPER
1 1/2" = 1'-0"

32100



1 ENLARGED SITE PLAN - HARDCOURT STRIPING
1" = 20'-0"



2 ENLARGED SITE PLAN - SHADE STRUCTURE
1" = 10'-0"

LEGEND

- PROPERTY LINE
- ASSUMED PROPERTY LINE
- UNIT DESIGNATION — PC SHADE STRUCTURE / DEFERRED APPROVAL
- UNIT DESIGNATION — EXISTING BUILDINGS
- EXPANSION JOINT
- CONCRETE WALK / PAVING
- CONTROL JOINT
- ASPHALT CONCRETE PAVING

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXTENT OF CRACK REPAIR AT (E) HARDCOURT.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING (E) STRIPING CONDITIONS AND VERIFYING EXACT LAYOUT TO BE RESTRIPED WITH DISTRICT.

SHEET NOTES

SN.01 ALTERNATE 1: (E) HARDCOURT SHALL RECEIVE CRACK REPAIRS AND 2 COATS OF SEAL COAT. (E) STRIPING IS TO BE RESTRIPED OVER SEAL COAT. EXTENTS SHOWN DASHED
SN.02 ROOF OVERHANG ABOVE, PER PC SHADE STRUCTURE / DEFERRED APPROVAL. CONTRACTOR IS RESPONSIBLE FOR FIELD CUTTING METAL ROOF PANELS FOR INSTALLATION.
SN.03 HSS COLUMN AND FOOTING, PER PC SHADE STRUCTURE / DEFERRED APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119974 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/30/2022

rga + A studio of HMC Architects

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/23
RENEWAL DATE
STATE OF CALIFORNIA

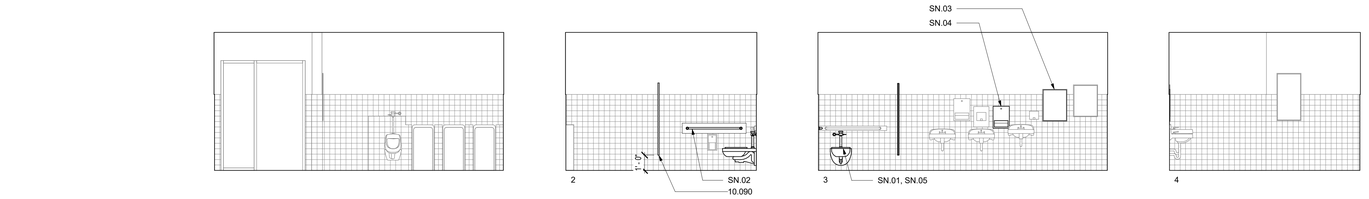
SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

△ Revision

PARTIAL SITE PLANS AND DETAILS

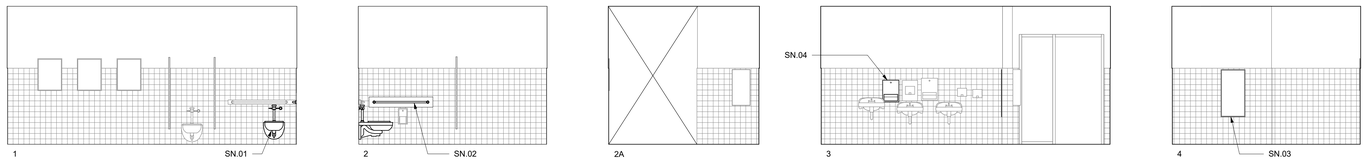
PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET
A1.1.1



D101 - BOYS

1/4" = 1'-0"

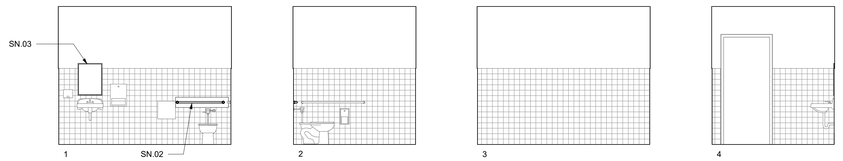
ADULT HEIGHT



D102 - GIRLS

1/4" = 1'-0"

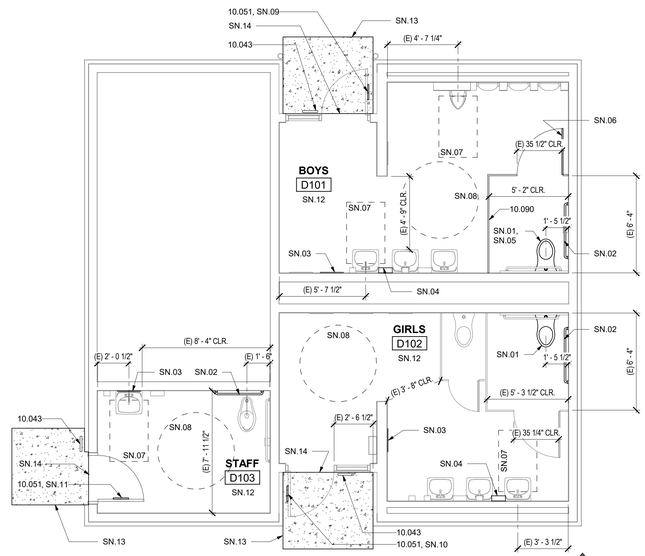
ADULT HEIGHT



D103 - STAFF

1/4" = 1'-0"

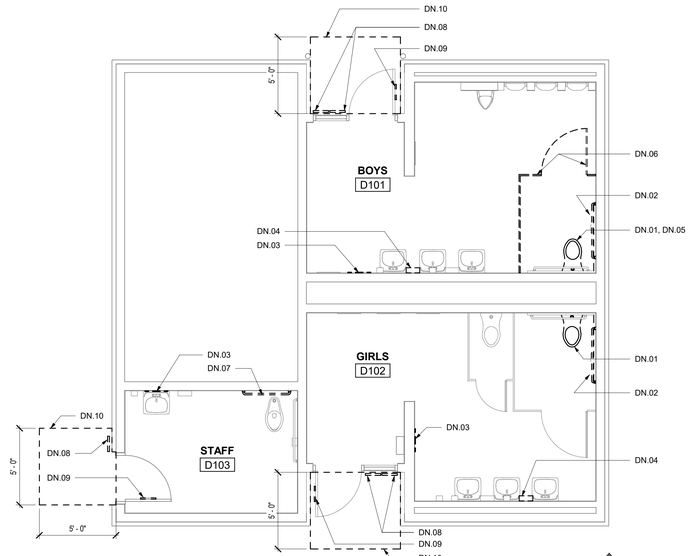
ADULT HEIGHT



2 TOILET ROOMS - IMPROVEMENT

1/4" = 1'-0"

ADULT HEIGHT



1 TOILET ROOMS - DEMOLITION

1/4" = 1'-0"

LEGEND

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ELEVATIONS AND ROOM FINISHES.

GENERAL NOTES

1. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBITY, REFER TO SHEET A0.2
2. PROTECT ALL ADJACENT SURFACES, ITEMS AND FINISHES NOT NOTED TO BE DEMOLISHED.
3. EQUIPMENT/FIXTURES NOTED AS "SALVAGED FOR REINSTALLATION" WILL BE REMOVED AND STORED BY THE CONTRACTOR PRIOR TO START OF DEMOLITION. THESE EQUIPMENT/FIXTURES SHALL BE REINSTALLED BY THE CONTRACTOR UNDER THIS CONTRACT.
4. REMOVE ALL ITEMS SCHEDULED TO BE REMOVED, INCLUDING MOUNTING HARDWARE.
5. DEMO AND REPAIR WALL FINISH AS NECESSARY TO PERFORM FIXTURE AND EQUIPMENT WORK AS NOTED. ADJACENT FINISHES TO BE VERIFIED BY CONTRACTOR.

DEMOLITION NOTES

DN.01 REMOVE (E) WALL-MOUNTED WATER CLOSET AND SALVAGE FOR REINSTALLATION
DN.02 REMOVE (E) SIDE WALL GRAB BAR AND SALVAGE FOR REINSTALLATION. REMOVE (E) 2X4 CLEAT.
DN.03 REMOVE (E) MIRROR AND SALVAGE FOR REINSTALLATION
DN.04 REMOVE (E) PAPER TOWEL DISPENSER AND SALVAGE FOR REINSTALLATION
DN.05 REMOVE (E) FLUSH VALVE AT (E) TOILET
DN.06 REMOVE (E) TOILET PARTITION. SALVAGE (E) TOILET PARTITION DOOR FOR REINSTALLATION
DN.07 REMOVE (E) BACK WALL GRAB BAR AND SALVAGE FOR REINSTALLATION.
DN.08 REMOVE (E) TOILET ROOM I.D. SIGN
DN.09 REMOVE (E) TOILET ROOM DOOR SYMBOL
DN.10 REMOVE (E) SECTION OF CONCRETE SLAB

SHEET NOTES

SN.01 REINSTALL (E) SALVAGED WALL-MOUNTED WATER CLOSET TO COMPLY WITH A0.2. ADJUST (E) WATER CARRIER AS REQUIRED FOR RECONNECTION TO WATER CLOSET. RECONNECT TO (E) WATER LINE, WASTE LINE AND VENT.
SN.02 REINSTALL (E) SALVAGED GRAB BAR TO COMPLY WITH A0.2
SN.03 REINSTALL (E) SALVAGED MIRROR TO COMPLY WITH A0.2
SN.04 REINSTALL (E) SALVAGED PAPER TOWEL DISPENSER TO COMPLY WITH A0.2
SN.05 PROVIDE NEW FLUSH VALVE AT SALVAGED WALL-MOUNTED WATER CLOSET TO COMPLY WITH A0.2
SN.06 REINSTALL (E) SALVAGED TOILET PARITION DOOR
SN.07 30" X 48" CLEAR SPACE
SN.08 60" DIA. TURNING CIRCLE
SN.09 SIGN TO READ "BOYS"
SN.10 SIGN TO READ "GIRLS"
SN.11 SIGN TO READ "STAFF"
SN.12 WRAP ALL EXPOSED PIPES WITH INSULATION
SN.13 INSTALL NEW CONCRETE WITH 2% MAX. SLOPE IN ALL DIRECTIONS. EDGES TO HAVE HAVE A FLUSH TRANSITION TO (E) SLAB. SEE 10/A0.2
SN.14 INSTALL DOOR THRESHOLD PER 9/A0.2

KEYNOTES

10.043 SIGNAGE: TOILET ROOM IDENTIFICATION
10.051 SIGNAGE: TOILET ROOM DOOR SYMBOL
10.090 COMPOSITE TOILET COMPARTMENT

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TOILET ROOM DEMOLITION AND IMPROVEMENT PLANS AND INTERIOR ELEVATIONS

UNIT D1

PROJECT NO. **21-1504.06**
DATE: **3/1/22**
SHEET **A2.1.1**

ABBREVIATION LIST

@	AT
A	AMPERE
AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
AER	ARC ENERGY REDUCTION
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AT	AMP TRIP SETTING
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BD	BOARD
BFC	BELOW FINISHED CEILING
BRKR	BREAKER
BLDG	BUILDING
BPS	BOOSTER POWER SUPPLY
C	CONDUIT
C/B	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CIRC	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY, WITH PULL LINE
CONT	CONTINUOUS
CU	COPPER
CWP	METALLIC COLD WATER PIPE
(D)	DEMOLISH
DC	DIRECT CURRENT
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
(E)	EXISTING
E/W	EACH WITH
EA	EACH
EL	EVENING LIGHT
ELEC	ELECTRIC
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE DEVICE
EQUIP	EQUIPMENT
(ER)	EXISTING RELOCATED
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRIC WATER HEATER
(F)	FUTURE
FACP	FIRE ALARM CONTROL PANEL
FAEP	FIRE ALARM EXTENDER PANEL
FATC	FIRE ALARM TERMINAL CABINET
FBO	FURNISHED BY OTHERS
FLUOR	FLUORESCENT
FT	FOOT
GA	GAUGE
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GLZ	GENERAL LIGHTING ZONE
GND	GROUND
GP	METALLIC GAS PIPE
GYP	GYPSUM
HID	HIGH INTENSITY DISCHARGE
HP	HORSE POWER
HT	HEIGHT
HZ	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
IN	INCH
ISC	SHORT CIRCUIT CURRENT (RMS SYMMETRICAL)
ISO	ISOLATED
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILO VOLT AMP
KW	KILOWATT
LC	LIGHTING CONTROL PANEL
LV	LOW VOLTAGE
MCM	THOUSAND CIRCULAR MILLS
MECH	MECHANICAL
MDP	MAIN DISTRIBUTION PANEL
MH	METAL HALIDE
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MPOE	MAIN POINT OF ENTRY
MSB	MAIN SWITCHBOARD
(N)	NEW
NIC	NOT IN CONTRACT
NIES	NOT IN ELECTRICAL SECTION OF THESE PLANS & SPECS.
NL	NIGHT LIGHT
NO, #	NUMBER
NTS	NOT TO SCALE
OC.	ON CENTER
OFCI	OWNER FURNISHED, CONTRTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	POLE
PB	PULL BOX
PFB	PROVISION FOR FUTURE BREAKER W/ MOUNTING HARDWARE
PDZ	PRIMARY DAYLIT ZONE
PFCT	PROVISION FOR FUTURE CURRENT TRANSFORMER
PH, Ø	PHASE
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE CONDUIT
(R)	RELOCATE / RELOCATED
REQ'D	REQUIRED
RM	ROOM
RMC	RIGID METAL CONDUIT
(RR)	REMOVE AND REPLACE
SDZ	SECONDARY DAYLIT ZONE
SKZ	SKYLIGHT DAYLIT ZONE
SPEC	SPECIFICATION
STC	SIGNAL TERMINAL CABINET
SQ	SQUARE
SW	SWITCH
TEL	TELEPHONE
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLTS
WP	WEATHERPROOF
WT	WEIGHT
W	WATT
W/	WITH
XFMR	TRANSFORMER
&	AND

GENERAL NOTES

1. PLANS ARE NOT FOR CONSTRUCTION UNTIL APPROVED BY THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL NOT ORDER ANY MATERIALS OR INSTALL ANY EQUIPMENT, PIPING, ETC. UNTIL PLANS ARE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
2. ALL WORK SHALL BE DONE AT SUCH TIME AND IN SUCH MANNER AS PRESCRIBED BY THE SCHOOL'S REPRESENTATIVE.
3. PROTECT EXISTING EQUIPMENT AND FURNISHINGS FROM ANY DAMAGE DUE TO DUST, MOISTURE OR CONTACT WITH WORK CREW OR MATERIALS.
4. THE SCHOOL SHALL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY POWER SHUTDOWN OF EXISTING PANELS OR SERVICE. SCHEDULE OF SHUTDOWNS SHALL BE AT CONVENIENCE OF THE SCHOOL. THE SCHOOL MAY, AT THEIR OPTION, HAVE A REPRESENTATIVE PRESENT DURING SHUTDOWN. ALL WORK REQUIRING SHUTDOWNS OF EXISTING PANELS OR SERVICE SHALL BE DONE BETWEEN 12:00 AM MIDNIGHT AND 6:00AM WEEKDAYS OR ON SATURDAY AND SUNDAY. REQUIRED SHUTDOWNS SHALL BE KEPT TO A MINIMUM.
5. ADEQUATELY STRAP AND SUPPORT ALL CONDUIT WORK PER CEC. IN GENERAL, SUPPORT ALL CONDUIT WITHIN THREE FEET (3') OF OUTLET BOX, CABINET OR PANEL AND MAXIMUM TEN FEET (10') ON CENTER THEREAFTER.
6. CORE BORE SHALL BE 1" DIAMETER LARGER THAN EACH CONDUIT. SPACE CONDUIT HOLES 3" APART. SEAL AROUND CONDUIT WITH NON-SHRINK, NON-METALLIC GROUT.
7. ALL CONDUCTORS INSTALLED IN PANELBOARDS SHALL BE TRAINED, LACED, AND INSTALLED WITH PHASE TAPE ON ALL CONDUCTORS.
8. LABEL DEVICES (I.E. RECEPTACLES, ETC.) ON EACH COVER PLATE IDENTIFYING CIRCUIT AND PANEL DEVICE IS CONNECTED TO.
9. CLEAN ALL EXTERIOR AND INTERIOR SURFACES OF PANELS AND ALL MATERIAL AND METAL SHAVINGS FROM PANEL AND CABINET INTERIORS. ALL OPENINGS SHALL BE SEALED AND APPLY TOUCH-UP SPRAY PAINT WHERE NEEDED.
10. FIELD COORDINATE DEVICE LOCATIONS PRIOR TO ROUGH-IN.
11. CONTRACTOR WILL PROVIDE WARNING LABELS NOTING THE POTENTIAL FOR ELECTRIC ARC FLASH HAZARDS PER CEC 110.16. PROVIDE LABELS ON EQUIPMENT SUCH AS SWITCHBOARDS, SWITCHGEAR, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, MOTOR CONTROL CENTERS, MOTOR STARTER / CONTACTOR PANELS, DISCONNECTS, ETC.. PROVIDE WARNING LABELS BY BRADY, MODEL NO. 101517, OR EQUAL, ON ALL EQUIPMENT.
12. INSTALLATION SHALL COMPLY WITH CEC 210.4 – EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES. THEREFORE ANY CIRCUIT SHARING A COMMON NEUTRAL SHALL BE CAPABLE OF SIMULTANEOUS DISCONNECT OR DEDICATED NEUTRALS SHALL BE INSTALLED.
13. SUPPORT ENCLOSURES, BOXES AND CONDUIT INSTALLATIONS PER CEC 314.23 (A) THROUGH (H).
14. SEAL CONDUIT OPENINGS THROUGH WALLS AND CEILINGS. INSTALL ESCUTCHEON PLATES AT BUILDING INTERIOR. WHERE EQUIPMENT IS INSTALLED ON THE EXTERIOR WALL, STUB CONDUITS THROUGH WALL AND SEAL CONDUIT OPENINGS, THEN INSTALL EXTERIOR EQUIPMENT. ALSO, SEAL AROUND THE PERIMETER EDGE OF THE EQUIPMENT ENCLOSURE BETWEEN THE ENCLOSURE AND BUILDING.
15. CONDUITS INSTALLED ON ROOF AND BUILDING EXTERIOR SHALL BE RIGID GALV. STEEL (HEAVY WALL) WITH THREADED FITTINGS. CONDUIT AND WALL TO BE PAINTED OUT TO MATCH EXTERIOR FINISH.
16. SPLICES AND TERMINALS SHALL BE COMPRESSION TYPE OF SEAMLESS PURE COPPER, TIN PLATED, LONG BARREL (TERMINALS WITH TWO-HOLE PAD AND INSPECTION WINDOW WITH NEMA DRILLING), AS MANUFACTURED BY BURNDY TYPE YS, YAZ-2N OR EQUAL. CLEAN ALL SURFACES AND INSTALL WITH OXIDE INHIBITING COMPOUND, BURNDY PENETROX-E OR EQUAL. APPLY COMPOUND BETWEEN BUS AND LUG PAD AND BETWEEN CONDUCTOR AND LUG BARREL. INSTALL COMPRESSION CONNECTORS WITH 360° CIRCUMFERENTIAL COMPRESSION DYE, BURNDY HYPRESS OR EQUAL. THE INDENTER OR OTHER TYPE TOOLS WILL NOT BE ACCEPTABLE.
17. INSTALL MECHANICALLY FASTENED PHENOLIC NAMEPLATE WITH WHITE LETTERING ON BLACK BACKGROUND ON ALL EQUIPMENT, INCLUDING PULL BOXES, WITH DESCRIPTION INDICATED ON DRAWINGS. NAMEPLATES SHALL READ EXACTLY AS DESCRIBED ON THE DRAWINGS. IN GENERAL NAMEPLATE LETTERING SIZE SHALL BE 3/16" HIGH FOR ALL NAMEPLATES SERVING FEEDER AND BRANCH CIRCUIT BREAKERS. ON MAIN SERVICE PANEL, DISTRIBUTION PANELS AND ALL OTHER NAMEPLATES LETTERING SHALL BE 1/4" HIGH.
    17.1. ALL SWITCHBOARDS, SWITCHGEAR, PANELBOARDS, VFD'S, MOTORS, JUNCTION BOXES, PULL BOXES, DISCONNECT SWITCHES, ETC., SHALL BE MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER ORIGINATES PER CEC 408.4, FIELD IDENTIFICATION REQUIRED, (B) SOURCE OF SUPPLY.
18. COORDINATE EQUIPMENT LOCATIONS, CONTROL AND POWER WIRING REQUIREMENTS AND CONNECT POINTS WITH ALL APPLICABLE DISCIPLINES.
19. PROVIDE AND INSTALL FUSES PER UNIT NAMEPLATE DATA ON THE EQUIPMENT PROVIDED.
20. A LAMINATED COPY OF THE FINAL RECORD ONE LINE DIAGRAM SHALL BE PLACED IN ELEC ROOM.
21. PROVIDE WIRING DEVICES AND COVER PLATES IN COLOR(S) SELECTED BY ARCHITECT. THE COLOR OF THE WIRING DEVICE AND COVER PLATE SHALL BE THE SAME UNLESS SPECIFICALLY NOTED OTHERWISE.
22. RECEPTACLE WEATHERPROOF COVERS SHALL BE LISTED "EXTRA DUTY", LOCKABLE, METAL, IN-USE TYPE.
23. REINSTALL EXISTING ELECTRICAL INSTALLATIONS DISTURBED. CERTAIN EXISTING ELECTRICAL INSTALLATIONS MAY BE LOCATED IN WALLS, CEILINGS OR FLOORS THAT ARE TO BE REMOVED AND ARE ESSENTIAL FOR THE OPERATION OF OTHER REMAINING INSTALLATIONS. WHERE THIS CONDITIONS OCCURS, PROVIDE A NEW EXTENSION OF ORIGINAL CIRCUITS, RACEWAYS, EQUIPMENT AND OUTLETS TO RETAIN SERVICE CONTINUITY. INSTALLATIONS SHALL BE CONCEALED IN FINISHED AREAS.
24. FOR ROOF PENETRATIONS, REFER TO ARCHITECTURAL PLANS FOR INSTALLATION REQUIREMENTS.
25. FOR WALL PENETRATION INSTALLATIONS, REFER TO ARCHITECTURAL PLANS FOR REQUIREMENTS.
26. PROVIDE "LOCK-ON" DEVICE FOR ALL CIRCUIT BREAKERS ON EMERGENCY DEDICATED CIRCUITS.
27. DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC. CONTRACTOR SHALL ACCEPT RESPONSIBILITY IN FAMILIARIZING THEMSELVES WITH ARCHITECTURAL AND STRUCTURAL CONDITIONS ALONG WITH INHERENT SPACE LIMITATIONS. WITH THAT UNDERSTANDING SHALL PROVIDE ALL ITEMS OF LABOR, MATERIALS AND TOOLS REQUIRED TO PROVIDE A COMPLETE INSTALLATION.
28. MAINTAIN A MINIMUM OF 12" SEPARATION BETWEEN ANY CONDUIT AND (E) UTILITY CONDUIT.
29. FOR INTERSECTING TRENCHED CONDUIT, MAINTAIN OR EXCEED THE MINIMUM CONDUIT DEPTH REQUIREMENTS.

MEP COMPONENT ANCHORAGE NOTE

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

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVEABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/20 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVEABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

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

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2019 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

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

SYMBOLS LIST

- FUSED DISCONNECT SWITCH
- DUPLEX CONVENIENCE OUTLET
- DOUBLE DUPLEX CONVENIENCE OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER DOUBLE DUPLEX OUTLET
- SPECIAL OUTLET TO MATCH CAP PROVIDED WITH MACHINE
- FLUSH FLOOR BOX OR "POKE-THRU" UNIT EQUIPPED WITH FLUSH OR PEDESTAL DUPLEX RECEPTACLE AND VOICE/DATA OUTLETS AS NOTED, OR REFER TO SCHEDULE ON DRAWINGS.
- PLUGMOLD/WIREMOLD RECEPTACLE SYSTEM
- TRANSFORMER
- JUNCTION BOX, SIZE AS REQUIRED BY CODE
- FLEX CONNECTION TO FIXTURE
- PANELBOARD, RECESSED MOUNTED
- PANELBOARD, SURFACE MOUNTED
- MAIN SWITCHBOARD
- TERMINAL CABINET, RECESSED MOUNTED
- TERMINAL CABINET, SURFACE MOUNTED
- HOMERUN TO PANELBOARD OR RESPECTIVE TERMINAL
- CONDUIT RUN CONCEALED IN CEILING OR WALL, SEE SYMBOLS LIST NOTES
- CONDUIT RUN UNDERGROUND OR UNDER FLOOR
- EM EMERGENCY SYSTEM CONDUIT AND WIRES
- INSULATED GREEN GROUND CONDUCTOR
- INSULATED ISOLATED GROUND CONDUCTOR, GREEN WITH TRACER STRIPE
- CONDUIT RISER
- EXISTING EQUIPMENT, LIGHTING, DEVICES, CONDUIT, WIRING, ETC., ARE SHOWN LIGHT. NEW OR RELOCATED EQUIPMENT, LIGHTING, DEVICES, CONDUIT, WIRING, ETC., ARE SHOWN DARK.
- EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED
- WIREMOLD SURFACE RACEWAY(S) WITH OUTLETS AS SHOWN OR NOTED, SEE SURFACE RACEWAY SCHEDULE
- 1 / 1 SYMBOLS REFERRING TO KEYED NOTES ON SAME SHEET
- AA / E1 MECHANICAL EQUIPMENT BY OTHERS, CONNECTED BY ELECTRICAL CONTRACTOR
- A / E1 DETAIL DESIGNATION, "A" SIGNIFIES DETAIL, "E-1" SIGNIFIES SHEET NUMBER
- (1)1-1/2"C INDICATES SIZE OF CONDUIT = ONE AND ONE HALF INCH CONDUIT
- NUMBER WITHIN PARENTHESIS INDICATES QUANTITY OF CONDUITS

SYMBOLS LIST NOTES:

1. MOUNT SWITCH BOXES AT +48" TO TOP OF BOX UNLESS OTHERWISE NOTED.
2. MOUNT OUTLET BOXES AT +15" TO BOTTOM OF BOX UNLESS OTHERWISE NOTED.
3. "A" ADJACENT TO OUTLET INDICATES OUTLET BOX TO BE MOUNTED ABOVE COUNTER. COORDINATE WITH COUNTER HEIGHT AND DEPTH PRIOR TO ROUGH IN. MOUNT OUTLET ABOVE COUNTERS AT:
   3.1. +46" MAX TO TOP OF BOX WHERE BOX IS INSTALLED OVER BASE CABINET.
   3.2. +44" MAX TO TOP OF BOX WITH OPEN COUNTERS WITH FORWARD APPROACH.
4. OUTLET BOXES SHALL BE:
   4.1. WALL MOUNTED – 4" SQ. x 2-1/8" DEEP MINIMUM
   4.2. CEILING MOUNTED – 4" SQ. OR 4" OCT. x 2-1/8" DEEP MINIMUM
5. OUTLET BOXES REQUIRING 1-1/4", 1-1/2" OR 2" CONDUITS SHALL BE 4-11/16" x 3-1/4" DEEP MINIMUM.
6. FLUSH MOUNTED OUTLET BOXES SHALL UTILIZE TRIM RINGS. COORDINATE TRIM RING DEPTH WITH WALL FINISH PRIOR TO ROUGH-IN.
7. NO CROSSBARS ON CONDUIT RUN INDICATES MINIMUM 1" CONDUIT, TWO #10 CU CONDUCTORS PLUS 1#10 CU GND. CROSSBARS INDICATE NUMBER OF #10 CU CONDUCTORS IN CONDUIT. CONDUCTOR SIZES OTHER THAN #10 NOTED ON DRAWINGS. INCREASE CONDUIT SIZE AS REQUIRED TO ACCOMMODATE C.E.C. WIRE FILL REQUIREMENTS. INCLUDE ADDITIONAL BOND WIRE IN ALL PVC AND FLEXIBLE CONDUIT. LONG CROSSBAR INDICATES NEUTRAL CONDUCTOR, SHORT CROSSBARS INDICATE PHASE CONDUCTORS.
8. INCREASE BRANCH CIRCUIT CU CONDUCTOR SIZES AS REQUIRED BY THE 120V BRANCH CIRCUIT VOLT DROP CONDUCTOR LENGTH CHART BELOW. USE CONDUCTOR LENGTHS AS FIELD MEASURED, BASED UPON MEASURED FIELD ROUTING LENGTHS. INCREASE MINIMUM CONDUIT SIZE AS REQUIRED TO ACCOMMODATE A MAXIMUM 40% CONDUCTOR FILL OF THE BRANCH CIRCUIT CONDUCTORS. WHERE NECESSARY, PROVIDE A JUNCTION BOX AT ACCESSIBLE CEILING SPACE TO CONVERT THE LAST 15 FEET OF CONDUCTORS TO #10 AWG TO ACCOMMODATE TERMINATION OF CONDUCTORS AT WIRING DEVICES, LIGHTING FIXTURES, CIRCUIT BREAKER, ETC.
9. INSTALL CU GROUND CONDUCTOR IN ALL BRANCH CIRCUITS FOR LIGHT FIXTURES AND POWER DEVICES.

120V BRANCH CIRCUIT VOLT DROP CONDUCTOR LENGTH CHART

LOAD IN VOLT AMPERES	LENGTH OF CONDUCTOR WIRE SIZE IN (GAUGE)				
	#12	#10	#8	#6	#4
1200VA	74	121	183	284	434
1560VA	57	93	141	218	334
1800VA	49	81	122	189	289
1920VA	46	76	115	178	271
2340VA	X	62	94	146	223
2880VA	X	51	76	118	181
3000VA	X	48	73	114	174
3900VA	X	X	56	87	134
4800VA	X	X	46	71	108

NOTES
1. THIS CHART IS FOR COPPER CONDUCTORS ONLY.
2. THIS CHART ASSUMES AN 80% POWER FACTOR AND STEEL RACEWAYS.
3. 2019 CALIFORNIA ENERGY CODE, 130.5(c) ALLOWS A MAXIMUM COMBINED VOLTAGE DROP OF 5%. THIS CHART ASSUMES A MAXIMUM DROP OF 3% FOR FEEDERS. THIS CHART PROVIDES THE MAXIMUM LENGTH OF CONDUCTORS FOR LESS THAN 2% VOLTAGE DROP ON A BRANCH CIRCUIT AT GIVEN VA LOAD.
4. USE WIRE SIZE FROM THIS CHART UNLESS LARGER CONDUCTOR SIZES ARE NOTED ON THE DRAWINGS.
5. FOR VA VALUES NOT SHOWN USE NEXT HIGHEST VALUE FROM THE CHART

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REGISTERED PROFESSIONAL ENGINEER — 17247 Exp. 6/30/22 — ELECTRICAL — STATE OF CALIFORNIA

PLOT DATE: 3/29/2022

SHADE STRUCTURE AT JOHN D. SLOAT ELEMENTARY SCHOOL

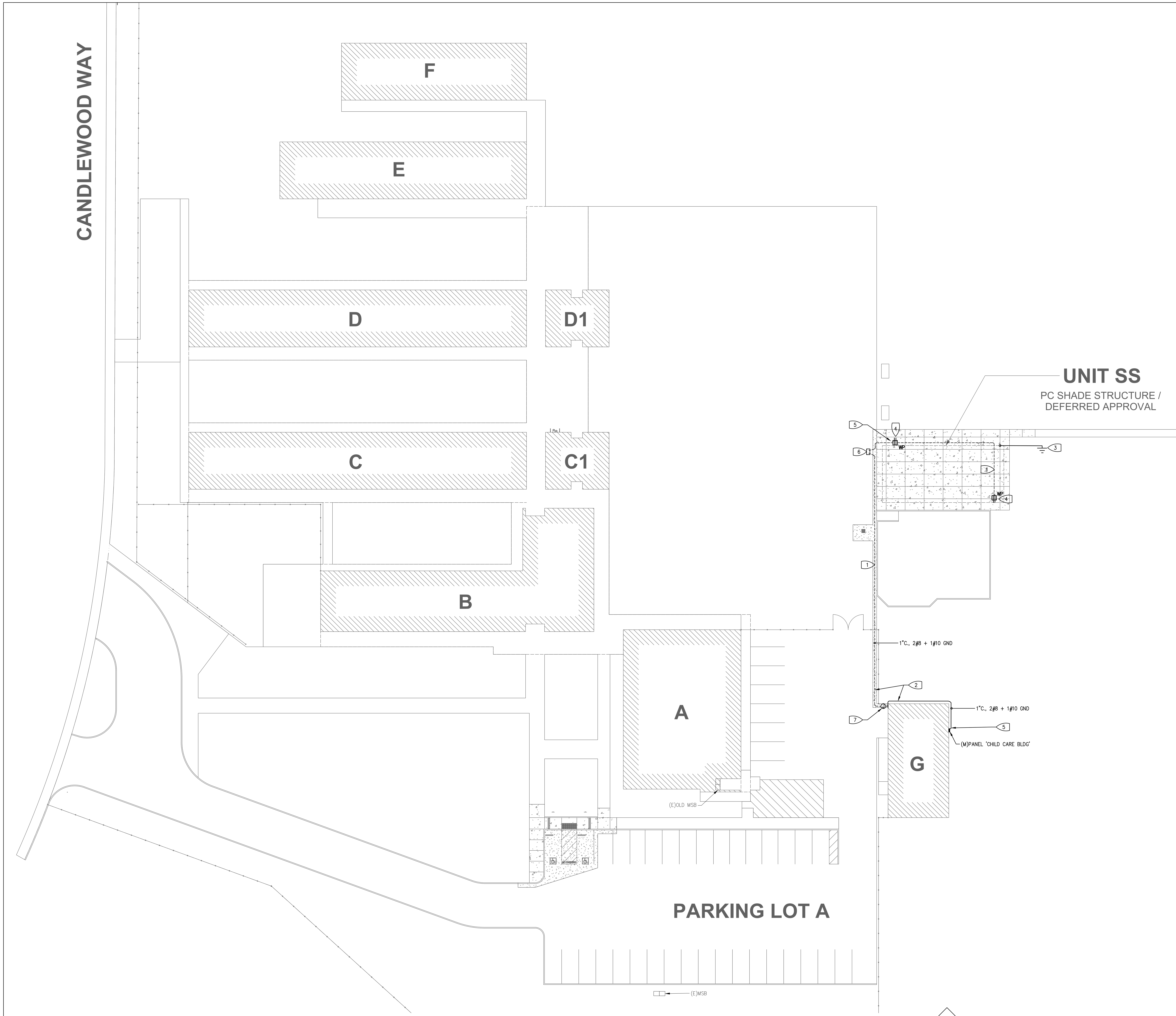
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

SACRAMENTO, CA

△ Revision

SYMBOLS, NOTES

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET
E0.1



1 SITE PLAN - ELECTRICAL
SCALE: 1"=20'

SHEET NOTES:

1. ALL EXISTING EQUIPMENT, DEVICES, CONDUIT AND WIRING, ETC., SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DRAWINGS AND LIMITED SITE SURVEYS, AND SHOWN FOR CLARITY ONLY.
2. SEE ONE LINE DIAGRAM AND PANEL SCHEDULE ON SHEET **E2.1** FOR REFERENCE.

KEYED NOTES:

1. PROVIDE TRENCH FOR 24 INCH MINIMUM COVER. LOCATE AND PROTECT (E) UTILITIES, I.E. IRRIGATION, SEWER, DRAINAGE PIPES, ETC. SAW CUT AND PATCH BACK (E) ASPHALT. PROVIDE SAND TO COVER CONDUIT TO SIX(6) INCHES, THEN ADD TRACER TAPE. COMPLETE BACKFILL TO GRADE WITH NATIVE SOIL. COMPACT IN SIX(6) LIFTS. FINISH TO MATCH EXISTING. SEE DETAIL **3/E3.1**.
2. RUN CONDUIT HIGH ON WALL TO WRAP AROUND BUILDING, DROP DOWN TO BELOW ASPHALT, AND TRENCH TO SHADE LOCATION, RUNNING CONDUIT TO INTERCEPT THE CHRISTY BOX ALONG THE WAY. PAINT EXPOSED CONDUIT TO MATCH (E) FINISH.
3. PROVIDE AT MINIMUM TWO(2) GROUND RODS, EACH 5/8" BY TEN(10) FEET LONG, CU, AT LEAST TEN(10) FEET APART. BOND TO METAL OF SHADE STRUCTURE. SEE DETAIL **5/E3.1**.
4. LOCKABLE, WEATHERPROOF RECEPTACLE TO HAVE A TWO-GANG BACK BOX WITH 1" THREADED PORT(S). MOUNT RECEPTACLES 36" ABOVE GRADE UNLESS SPECIFIED OTHERWISE. SEE DETAIL **4/E3.1**.
5. AT THE PANEL, SPLICE THE #10 CONDUCTORS FROM THE NEW BREAKER TO #8 CONDUCTORS FOR THE RUN TO THE SHADE STRUCTURE. AT THE FIRST SHADE STRUCTURE RECEPTACLE, SPLICE THE #8 CONDUCTORS TO #10 CONDUCTORS AND CONNECT TO DEVICE.
6. PROVIDE CHRISTY B1324 PULL BOX WITHIN FIVE(5) FT OF SHADE STRUCTURE. CHRISTY BOX TO HAVE HOLD DOWN BOLTS AND BE LABELED FOR POWER. SEE DETAIL **2/E3.1**.
7. PROVIDE J-BOX HIGH ON WALL.

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SACRAMENTO, CA

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SITE PLAN - ELECTRICAL

PROJECT NO.	21-1504.06
DATE:	3/1/22
SHEET	E1.1

SHEET NOTES:

1. ALL EXISTING EQUIPMENT, DEVICES, CONDUIT AND WIRING, ETC., SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DRAWINGS AND LIMITED SITE SURVEYS, AND SHOWN FOR CLARITY ONLY.

KEYED NOTES:

1. MODIFIED PANEL SERVES EQUIPMENT BEING ADDED IN THIS PROJECT. SEE PANEL SCHEDULE ON THIS SHEET FOR REFERENCE.
2. ONLY A-PHASE AND B-PHASE OF THIS THREE-POLE BREAKER IS USED. SERVES A SINGLE-PHASE PANEL.

MODIFIED

PANEL: CHILD CARE	MANF: SQUARE-D TYPE: QO LOAD CTR	MAIN: BUSS: FEEDER RATING:	200/2 200 AMP 100 AMP	SERVICE: 120 /208 VOLT 1 Ø, 3W	MOUNTING: SURFACE	ENCLOSURE: WIDTH: 15" DEPTH: 4.5"	10K 100%	AIC NEUT.

AØ	BØ	DIRECTORY	BRKR	CKT		CKT	BRKR	DIRECTORY	AØ	BØ
		N.L.	20/1	1	•	2	90/2	NORTH UNIT		
		N.L.	20/1	3	•	4	-	"		
		N.L.	20/1	5	•	6	50/2	HEAT PUMP		
		N.L.	20/1	7	•	8	-	"		
		N.L.	20/1	9	•	10	20/1	N.L.		
		N.L.	20/1	11	•	12	20/1	N.L.		
		N.L.	20/1	13	•	14	20/2	N.L.		
		N.L.	20/1	15	•	16	-	"		
		N.L.	20/1	17	•	18	20/1	SMALL SHACK - WATER HEATER		
	360	***RECEPTS - SHADE STRUCT. [5]***	***20/1***	19	•	20	20/1	N.L.		

	NEW LOAD		DEMAND READINGS	PEAK DEMAND @ 125% + (N) LOAD		TOTAL DEMAND
	TOTAL PANEL VA	AMPS	AMPS @125%	AMPS	VA	LOAD
AØ =	0 VA	0.0	48.4	60.5	7260 VA	13425 VA
BØ =	360 VA	3.0	38.7	48.4	51.4 A 6165 VA	60.5 AMPS

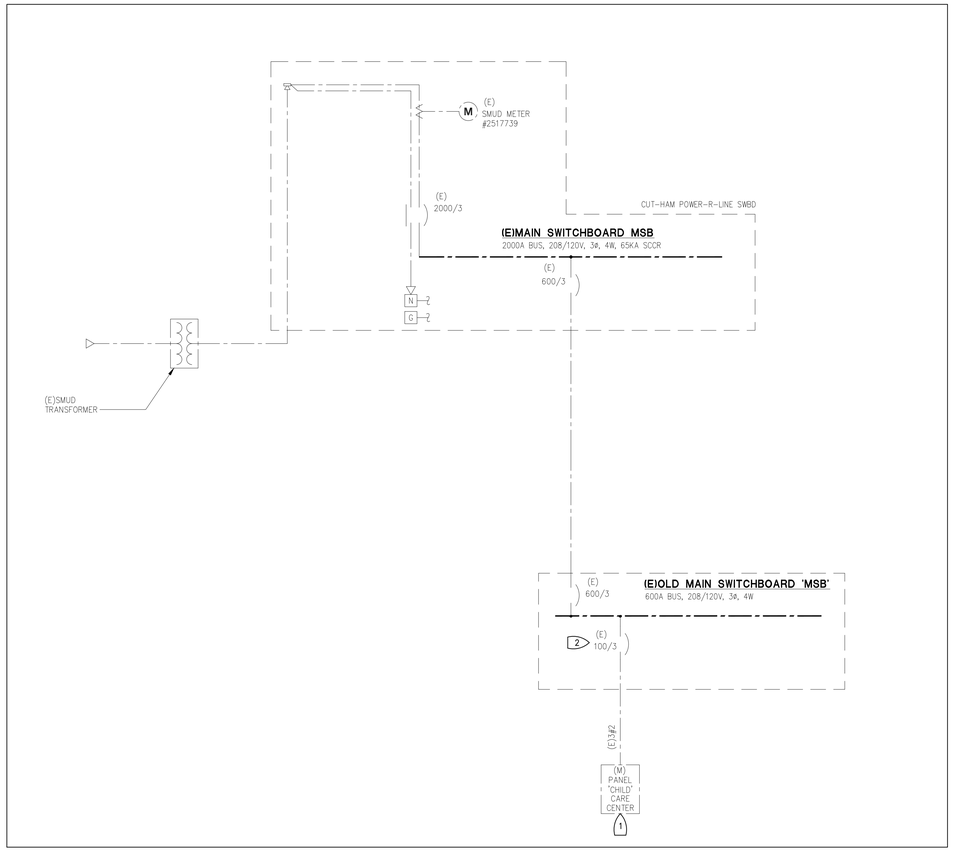
NOTES:
1. FEEDER CONDUCTORS CONSIST OF 3#2 CU
2. BRANCH BREAKERS ARE SQUARE-D TYPE BA
3. PROVIDE TYPE-WRITTEN PANEL DIRECTORY
4. ALL NEW BREAKERS TO MATCH EXISTING TYPES
5. PROVIDE NEW 20 AMP, SINGLE-POLE BREAKER.

Voltage Drop Calculations Copper

Job Name: John D. Sloat Elementary School - Shade Structure — Job #: 22.010
Date: 2/22/2022

VOLTAGE: 120 PHASE: 1 POWER FACTOR: 80% CONDUIT: Steel

FEEDER NUMBER	AMPS AT LOAD	KVA TOTAL	VOLTS AT LOAD	DISTANCE FEET	DISTANCE TOTAL	WIRES/ PHASE	LOAD/ WIRE	WIRE SIZE	WIRE FACTOR	VOLTS DROP	PERCENT VOLT DROP
RECEPT-1	3	0.4	119.06	236	236	1	3.00	8	1326	0.94	0.78%
RECEPT-2	2	0.2	118.86	66	302	1	1.50	10	1995	1.14	0.95%



1 ONE LINE DIAGRAM

SCALE: NONE

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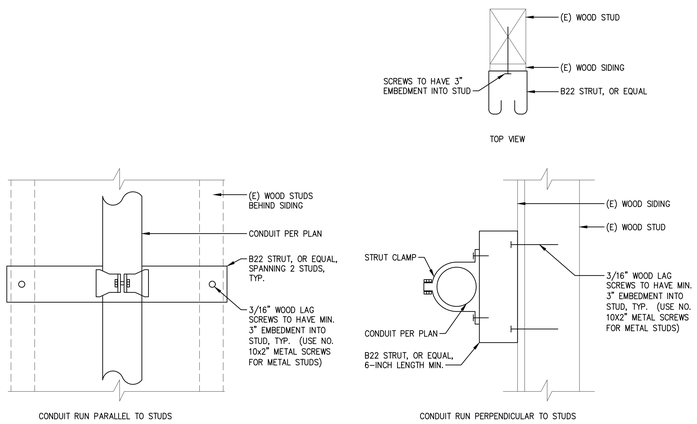
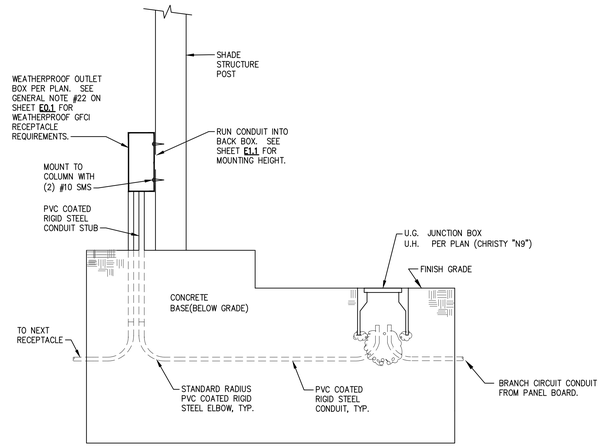
ONE LINE DIAGRAM

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET **E2.1**

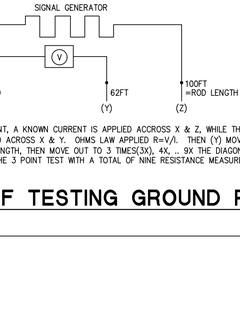


NOTES:
1. CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING TEN(10) FEET AND NOT MORE THAN THREE(3) FEET FROM THE OUTLET AND AT ANY POINT WHERE IT CHANGES DIRECTION.
2. PERFORATED STRAP AND PLUMBER'S TAPE SHALL NOT BE PERMITTED.
3. MAXIMUM CONDUIT AND CONDUCTOR WEIGHT IS 1.83LBS PER LINEAR FOOT.

7 CONDUIT MOUNTING DETAIL - STUD WALLS
SCALE: NONE

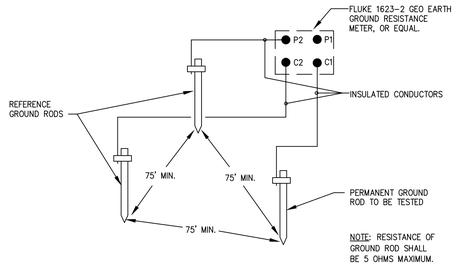


4 CONDUIT STUB IN POST DETAIL
SCALE: NONE



NOTES:
1. ALL GROUNDING CONNECTIONS SHALL BE IN CONFORMANCE WITH N.E.C. ARTICLE 250.
2. FOR ALL ADDITIONAL REQUIREMENTS REFER TO SPEC SECTIONS 26 05 26.

TYPICAL STEEL COLUMN & REBAR GROUNDING DETAIL
5
SCALE: NONE



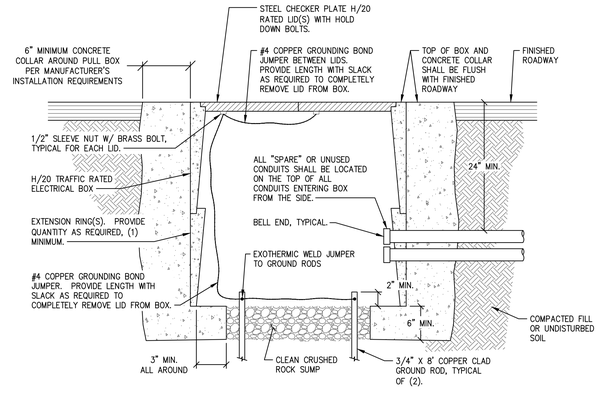
FALL OF POTENTIAL TEST METHOD
NOTES:
1. POWER EQUIPMENT OR SYSTEMS WITH CAPACITY OF 500KVA OR LESS: 10 OHMS.
2. POWER EQUIPMENT OR SYSTEMS WITH CAPACITY OF 500 TO 1000KVA: 5 OHMS.
3. POWER EQUIPMENT OR SYSTEMS WITH CAPACITY GREATER THAN 1000KVA: 3 OHMS.
4. POWER DISTRIBUTION UNITS OR PANELBOARDS SERVING ELECTRONIC I.T. EQUIPMENT: 3 OHMS.
5. MAN-HOLE GROUNDS: 10 OHMS.

FALL OF POTENTIAL 3-POINT TEST:
GROUND RING, I.E. 10 BY 10 RING, 14' DIAGONAL LENGTH ISOLATION FROM UTILITY NEUTRAL PROBE Z IS DRIVEN A DISTANCE OF 10 TIMES DIAGONAL LENGTH OF THE GROUNDING ROD SYSTEM (ROD X). A SECOND PROBE (Y) IS PLACED IN LINE AT A DISTANCE FROM ROD X EQUAL TO THE DIAGONAL LENGTH OF THE GROUNDING SYSTEM.

AT THIS POINT, A KNOWN CURRENT IS APPLIED ACCROSS X & Z, WHILE THE RESULTING VOLTAGE IS MEASURED ACROSS X & Y. OHMS LAW APPLIED R=V/I. THEN (Y) MOVED TO 2 TIMES THE DIAGONAL LENGTH, THEN MOVE OUT TO 3 TIMES(3X), 4X, .. 9X THE DIAGONAL LENGTH TO COMPLETE THE 3 POINT TEST WITH A TOTAL OF NINE RESISTANCE MEASUREMENTS.

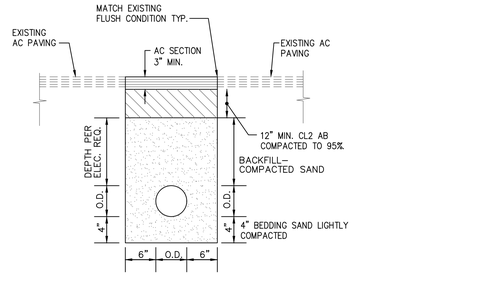
6 METHOD OF TESTING GROUND RODS DETAIL
SCALE: NONE

1 DETAIL REMOVED
SCALE: NONE



NOTES:
1. PROVIDE H/20 TRAFFIC RATED BOXES IN ALL LOCATIONS WITH VEHICLE TRAFFIC
2. CONTRACTOR SHALL PROVIDE THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR H/20 TRAFFIC RATING REQUIREMENTS AS PART OF THE SUBMITTALS.

2 TYPICAL H/20 TRAFFIC RATED PULL BOX
SCALE: NONE



3 TYPICAL TRENCH DETAIL
SCALE: NONE

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SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
SACRAMENTO, CA

Revision

DETAILS

PROJECT NO. 21-1504.06
DATE: 3/1/22
SHEET
E3.1

DESIGN CRITERIA

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD	20 PSF
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME)	5 PSF MAX
ROOF PANEL DEAD LOAD	M=1.1 PSF, G = 1.2 PSF, S = 1.3 PSF
COLLATERAL DEAD LOAD	M = 3.9 PSF, G = 3.8 PSF, S =3.7 PSF
ROOF SNOW LOAD	
GROUND SNOW LOAD, P_g	20 PSF
RISK CATEGORY	II
ROOF SNOW LOAD: SLOPED, P_s	20 PSF
SITE APPLICATION DSA REVIEWER SHALL VERIFY THE STRUCTURE BE LOCATED AT LEAST 20 FEET FROM ADJACENT STRUCTURE	
SNOW LOAD SLOPE FACTOR, C_s	1.0
SNOW EXPOSURE FACTOR, C_e	1.0
SNOW LOAD IMPORTANCE FACTOR, I_s	1.0
THERMAL FACTOR, C_t	1.2
WIND DESIGN	
BASIC WIND SPEED (3 SECOND GUST), V_{ult}	100 MPH
RISK CATEGORY	II
EXPOSURE CATEGORY	C
FACTORS: K_z, K_{zt}, K_d	0.85, 1, 0.85
$q_h = 0.00256\ K_z\ K_{zt}\ K_d\ V^2$ FOR ALL EAVE HEIGHTS (8', 10' & 12')	18.50 PSF
C_{NW} PER ASCE FIGURE 27.4-5 ROOF ANGLE 18.43 - CLEAR / OBSTRUCTED	CASE A (1.1 / -1.2) CASE B (0.01 / -0.69)
C_{NL} PER ASCE FIGURE 27.4-5 ROOF ANGLE 18.43 - CLEAR / OBSTRUCTED	CASE A (-0.17 / -1.09) CASE B (-0.96 / -1.65)
C_N PER ASCE FIGURE 27.4-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED	CASE A (-0.6 / -0.9) CASE B (-0.5 / -0.5)
COMPONENTS & CLADDING - C_N (PRESSURE/SUCTION) CLEAR / OBSTRUCTED	ZONE 3 - (2.29 / -2.11) / (1.0 / -3.0)
	ZONE 2 - (1.77 / -1.63) / (0.8 / -2.3)
	ZONE 1 - (1.15 / -1.05) / (0.5 / -1.5)
SEISMIC DESIGN	
LATERAL FORCE RESISTING SYSTEM	STEEL - ORDINARY CANTILEVER COLUMN
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
SESIMIC IMORTANCE FACTOR, Ie	1.0
SEISMIC SITE CLASS	D
MCE_R SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S_S	2.60
MCE_R SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S_1	0.90
SHORT PERIOD SITE COEFFICIENT, F_a	1.20
LONG PERIOD COEFFICIENT, F_v	1.70
FUNDAMENTAL PERIOD OF THE STRUCTURE, T	0.152 s
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S_{DS}	2.08
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S_{DS} - USED TO DETERMINE Cs (WITH CAP PER ASCE-7 12.8.1.3)	2.08 * 0.70 = 1.456
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-s PERIODS, S_{D1}	1.02
SEISMIC DESIGN CATEGORY	E
RESPONSE MODIFICATION FACTOR, R	1.25
OVERSTRENGTH FACTOR, Ω	1.25
REDUNDANCY FACTOR, ρ	1.0
HORIZONTAL OR VERTICAL IRREGULARITIES	NONE
SEISMIC RESPONSE COEFFICIENT, Cs (20' WIDE, 30' WIDE, 40' WIDE)	1.16,
DESIGN BASE SHEAR, V (20' WIDE, 30' WIDE, 40' WIDE)	12.73 PSF, 13.41 PSF, 14.65 PSF
ALLOWABLE SOIL BEARING FOR FOUNDATIONS	VARIES - SEE FOUNDATION CHARTS
FLOOD DESIGN - DESIGN IS ASSUMED TO NOT BE IN FLOOD HAZARD AREA	
IF PROJECT IS LOCATED IN A FLOOD ZONE OTHERTHAN ZONE X, A LETTER STAMPED & SIGNED FROM A SOILS ENGINEER IS REQUIRED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED.	

STRUCTURAL SEPARATION
ALL DEFLECTIONS SHOWN ALSO INCLUDE THE P-DELTA ROTATION PER IR PC-7

DEFLECTIONS ARE FOR (1) STRUCTURE
SOIL CLASSES PER CBC TABLE 1806A.2

MAXIMUM DRIFT δ_{max} SIDE COLUMNS		Soil Class 5	Soil Class 4	Soil Class 3
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.40	2.55	2.65
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.25	2.35	2.45
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.20	2.25	2.20
MINIMUM SEPARATION ($\delta_m = C_d\ \delta_{max}$) C_d = 1.25				
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	3.00	3.19	3.31
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.81	2.94	3.06
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.75	2.81	2.75
MAXIMUM DRIFT δ_{max} CORNER COLUMNS		Soil Class 5	Soil Class 4	Soil Class 3
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.20	2.30	2.40
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.30	2.45	2.50
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.40	2.55	2.65
MINIMUM SEPARATION ($\delta_m = C_d\ \delta_{max}$) C_d = 1.25				
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.75	2.88	3.00
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.88	3.06	3.13
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	3.00	3.19	3.31
MAXIMUM DRIFT δ_{max} END COLUMNS		Soil Class 5	Soil Class 4	Soil Class 3
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	1.60	1.70	1.75
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.00	2.45	2.25
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.50	2.30	2.80
MINIMUM SEPARATION ($\delta_m = C_d\ \delta_{max}$) C_d = 1.25				
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.00	2.13	2.19
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	2.50	3.06	2.81
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT)	(INCHES)	3.13	2.88	3.50

ARCHITECTURAL REQUIREMENTS

DESCRIPTION	DESIGN VAULES
TYPE OF CONSTRUCTION	II-B
OCCUPANCY CLASSIFICATION	A-3
NUMBER OF STORIES	1
FIRE SPRINKLER SYSTEM	NOT BY ICON/WEIGHT NOT INCLUDED IN DESIGN

RELATED BUILDING CODES AND STANDARDS

TITLE 24 CODES:

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC).................(PART 1, TITLE 24, CCR)
2019 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1, AND 2.(PART 2, TITLE 24, CCR)
2019 CALIFORNIA ELECTRICAL CODE...................................(PART 3, TITLE 24, CCR)
2019 CALIFORNIA MECHANICAL CODE (CMC).......................(PART 4, TITLE 24, CCR)
2019 CALIFORNIA PLUMBING CODE (CPC)...........................(PART 5, TITLE 24, CCR)
2019 CALIFORNIA ENERGY CODE...(PART 6, TITLE 24, CCR)
2019 CALIFORNIA FIRE CODE (CFC) ....(PART 9, TITLE 24, CCR)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE......(PART 11, TITLE 24, CCR)
2019 CALIFORNIA REFERENCE STANDARDS CODE.............(PART 12, TITLE 24, CCR)

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:
2019 CBC, CHAPTER 35
2019 CFC, CHAPTER 80

SCOPE OF WORK NARRATIVE

THESE DRAWINGS ILLUSTRATE THE FABRICATION AND INSTALLATION REQUIREMENTS FOR A FREE-STANDING PREFABRICATED STEEL SHADE STRUCTURE. THE ENTIRE STRUCTURAL SYSTEM IS COMPRISED OF HOLLOW STRUCTURAL STEEL MEMBERS SUPPORTED BY CONCRETE FOUNDATIONS. THE FLEXIBILITY INCLUDED HEREIN ALLOWS THE STRUCTURE TO COMPLY WITH A WIDE VARIETY OF PROJECT SITES AND LOADING REQUIREMENTS.

GENERAL:

1. GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE THEY MAY CONFLICT WITH DETAILS AND NOTES ON OTHER SHEETS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER FOR THIS PROJECT.
2. WORK SHALL CONFORM TO THE REQUIREMENTS, AS AMENDED TO DATE, OF THE LATEST ADOPTED EDITION OF THE CBC, C.A.C. TITLE 24, AND ALL OTHER LOCAL, STATE AND FEDERAL REGULATIONS.
3. OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS, ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO, BRACING, TEMPORARY SUPPORTS, AND SHORING. OBSERVATION VISIT TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONSTRUCTION AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, ARE FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONSTRUCTION.
6. ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
7. CONFORM TO APPLICABLE CAL/OSHA CONSTRUCTION SAFETY REGULATIONS FOR ALL WORK PERFORMED DURING CONSTRUCTION. JOB SITE SAFETY IS STRICTLY THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE ARCHITECT/ENGINEER OR OWNER.
8. THE ENGINEER AND THEIR CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
9. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR IF A CHANGE IN THE SCOPE OF WORK IS PROPOSED, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
10. THE SCHOOL DISTRICT INSPECTOR ON RECORD SHALL INSPECT AND APPROVE THE ERECTED FRAME PRIOR TO ROOF INSTALLATION.
11. SEE REQUIREMENTS FOR LOCATION IN ANY FIRE HAZARD SEVERITY ZONE FOR WILDLAND URBAN INTERFACE AREAS (WUI) AS SPECIFIED IN THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE. PROVIDE PROTECTION AND DETAILS OF ALL AREAS COMPLYING WITH THE WUI REQUIREMENTS.
12. LOCATING THIS STRUCTURE CLOSER THAN 20 FEET TO OTHER STRUCTURES MAY AFFECT THE ALLOWABLE AREA FOR THE EXISTING CONSTRUCTION PER THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE.
13. VIEWS AND DETAILS ARE NOT DRAWN TO SCALE (UNLESS NOTED OTHERWISE). DO NOT SCALE THESE DRAWINGS.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUE OF STEEL CONSTRUCTION (AISC) SPECIFICATION MANUAL REFERENCED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
2. PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 KSI, GRADE B OR A501 UNLESS NOTED OTHERWISE.
3. STRUCTURAL TUBING (HSS SHAPES) SHALL CONFORM TO ASTM A-500, GRADE B (OR C), Fy = 46 KSI (MIN).
4. IF MATERIAL AVAILABILITY IS LIMITED, MEMBER THICKNESS CAN BE INCREASED BEYOND WHAT IS SHOWN IN THESE DRAWINGS (MAXIMUM INCREASE OF 1/8").
5. ALL CHANNELS, ANGLES, AND MISC. STEEL SHALL CONFORM TO ASTM A-36, Fy = 36 KSI.
6. ALL PLATE STEEL SHALL CONFORM TO ASTM A-572, Fy= 50 KSI.
7. ALL COLD FORM STEEL SHALL CONFORM TO ASTM A-653, CS = TYPE B, Fy = 50 KSI.
8. STRUCTURAL STEEL AND DECK SHALL BE IDENTIFIED FOR CONFORMITY PER CBC 2202A.1.
9. ALL ROOF DECKS SHALL HAVE KYNAR 500 METAL COATING.
10. ALL ROOF DECKS SHALL CONFORM TO ASTM A-792, Fy = 50 KSI.

INSTRUCTIONS FOR ARCHITECTS SUBMITTING THESE PRE-CHECKED DRAWING TO DSA:

BEFORE SUBMITTING THESE PRE-CHECKED DRAWINGS FOR YOUR PROJECT, FOLLOW THE STEPS BELOW TO PROPERLY DEFINE THE APPROVED OPTIONS:

STEP 1: SELECT FRAME DIMENSIONS FOR YOUR PROJECT
-GABLE STRUCTURES UP TO 20' WIDE USE THE "RG 20" BASE FRAME
-GABLE STRUCTURES UP TO 30' WIDE USE THE "RG 30" BASE FRAME
-GABLE STRUCTURES UP TO 40' WIDE USE THE "RG 40" BASE FRAME
-MAXIMUM WIDTH IS 40' (SEE "ARCHITECTURAL VIEWS" SHEET FOR REFERENCE)
-THE 24', 44', 64', 84' AND 104' LENGTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST COMMON (20' BAYS ARE THE MOST ECONOMICAL)
-FRAME LENGTHS ASSUME 2' OVERHANGS (UNO BY ARCHITECT - 2' MAX DIMENSION)

STEP 2: SELECT ROOF DECK FOR YOUR PROJECT
-"M" REPRESENTS McELROY METAL "MULTI-RIB" ROOF PANEL
-"G" REPRESENTS McELROY METAL "MEGA-RIB" ROOF PANEL
-"S" REPRESENTS McELROY METAL "MEDALLION-LOK" 16" STANDING SEAM ROOF PANEL

STEP 3: IDENTIFY THE Ss ACCELERATION (g) FOR YOUR PROJECT
-Ss VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
-Ss VALUE DEPENDS ON THE PROJECTS GEOGRAPHICAL LOCATION (VALUES RANGE FROM 0.00 TO 3.73)

STEP 4: IDENTIFY THE Ss REGION FOR YOUR PROJECT
-THE REGIONS ARE DEPENDANT ON THE Ss VALUE DETERMINED IN STEP 3
-THE Ss REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED ON THE FRAME (SEE TABLE TO RIGHT)

STEP 5: IDENTIFY THE ROOF DEAD LOAD FOR YOUR PROJECT
-THE ROOF DECK DEAD LOAD WILL ALWAYS BE INCLUDED
-THE COLLATERAL LOAD REPRESENTS ADDITIONAL LOAD THAT CAN BE SUPPORTED BY THE FRAME
-BE SURE THE TOTAL ROOF DEAD LOAD FOR YOUR PROJECT IS LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4 FOR YOUR Ss VALUE
-Sds VALUE USED IN CALCULATION IS THE CAPPED Sds (SEE DESIGN CRITERIA)

STEP 6: IDENTIFY THE FOUNDATION REQUIREMENTS FOR YOUR PROJECT
-IDENTIFY SOIL CLASS FOR PROJECT SITE PER SITE SPECIFIC SOIL CONDITIONS
-USE THIS TO SELECT CORRECT FOUNDATION SIZE ON FOUNDATION SHEET

STEP 7: SELECT MISCELLANEOUS OPTIONS FOR YOUR PROJECT
-MAXIMUM CLEAR HEIGHT IS 12'-0"; (SEE "ARCHITECTURAL VIEWS" SHEET FOR REFERENCE)
-MARK UP PC DRAWINGS WITH SIZE AND LOCATION OF CUTOUTS BEFORE SUBMITTING TO DSA

STEP 8: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT
-REFERENCE THE BASE FRAME (STEP 1) AND THE ROOF PANEL TYPE (STEP 2)
-IDENTIFY THE APPLICABLE SHEET INDEX

STEP 9: INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITTAL
-INCLUDE 'MISC DESIGN OPTIONS' SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

1. PER TITLE 24, PART 1, SECTION 4-316(e) OF THE CALIFORNIA CODE OF REGULATIONS, THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
2. FOR THE SITE SPECIFIC PROJECT, J. R. MILLER & ASSOCIATES IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
3. FOR THE SITE SPECIFIC PROJECT, J.R. MILLER & ASSOCIATES' RESPONSIBILITY IS LIMITED TO THE PREPARATION OF THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC ONLY.
4. STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM J.R. MILLER & ASSOCIATES' RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
5. ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF OF THE VERIFIED REPORT FOR COMPLETED WORK.
6. J.R. MILLER & ASSOCIATES WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC WHICH ARISE DURING PLAN REVIEW AND CONSTRUCTION.

WELDING:

1. ALL WELDING SHALL COMPLY WITH AWS D1.1 SPECIFICATIONS AND SHALL BE DONE BY AWS QUALIFIED WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED AS REQUIRED BY DSA.
2. ALL WELDING SHALL BE DONE BY GAS METAL ARC PROCESS WITH E70XX ELECTRODES. FLUX CORE ARC WELD SHALL CONFORM TO CHARPY NOTCH TOUGHNESS RATING OF 20 ft-lb @ (0° F).
3. ALL WELDING SHALL BE DONE IN THE SHOP WITH REQUIRED INSPECTION, PRE-APPROVED BY DSA, TO ENSURE PROPER MATERIAL ID AND WELDING.
4. WELD FILLER METAL MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION OF COMPLIANCE WITH CODE AND SPECIFICATIONS.

BOLTING:

1. ALL BOLTS SHOWN ON THESE DRAWINGS ARE ASTM F3125 GRADE A325 HIGH STRENGTH BOLTS (UNO), WITH THE NUTS CONFORMING TO ASTM A-563.
2. HIGH STRENGTH BOLTS SHALL BE VERIFIED AND INSPECTED PER CBC 1705A2.1.
3. BEFORE ERECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS - INCLUDING THE HARDWARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING SOME OF THE BOLTS AND NUTS MAY BE REQUIRED.
4. HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F-436.
5. THE BOLTING INSTALLATION REQUIREMENTS OUTLINED BELOW ARE CRITICAL TO THE STRUCTURE'S DESIGN AND PERFORMANCE. THE INSTALLER IS REQUIRED TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD PRIOR TO THE ERECTION OF THE FRAME. ALL BOLTS SHALL BE INSTALLED AND INSPECTED PER THE APPLICABLE VERSION OF AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", CBC 1705A.2.1; AISC 341-16 J7; AISC 360-16 N5.6.
   A)PRETENSIONED JOINTS MUST BE INSTALLED AND INSPECTED TO MEET ONE OF THE FOLLOWING REQUIREMENTS:
   1. TURN-OF-NUT PRETENSIONING
   2. CALIBRATED WRENCH PRETENSIONING
   3. DIRECT-TENSION-INDICATOR PRETENSIONING (CONTRACTOR RESPONSIBLE FOR PURCHASE OF REQUIRED WASHERS)

FOUNDATIONS:

1. ALLOWABLE SOIL PRESSURES ASSUME CLASS 5 SOIL CLASSIFICATION PER CBC TABLE 1806A, UNLESS NOTED OTHERWISE.
2. PER CBC SECTION 1803A.2, GEOTECHNICAL REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONESOR SIESMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS. ALLOWABLE FOUNDATION AND LATERAL SOIL PRESSURE VALUES MAY BE DETERMINED FROM TABLE 1806A.2.
3. FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D-1557 OR AS RECOMMENDED BY THE GEO-TECH ENGINEER. FLOODING NOT PERMITTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, ETC. NECESSARY TO SUPPORT CUT AND/OR FILL BANKS DURING EXCAVATION, AND FORMING AND PLACEMENT OF CONCRETE.
5. MINIMUM SETBACK FROM TOE OF SLOPE ON AN ASCENDING SLOPE SHALL BE 15 FEET AND MINIMUM SETBACK FROM TOE OF SLOPE ON A DESCENDING SLOPE SHALL BE 40 FEET
6. PER CBC SECTION 1803A.6, GEOHAZARD REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONESOR SIESMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS.
7. GEOHAZRD REPORTS ARE TO COMPLY WITH DSA IR A-4 PER IR-7 SECTION 1.8
8. SITE SPECIFIC GEOTECHNICAL REPORT IS REQUIRED AT THE TIME OF SITE APPLICATION IS USING OTHER THAN CLASS 5 SOIL, PER DSA IR PC-7
9. LATERAL BEARING HAS BEEN INCREASED PER CBC 1806A.3.4 & HAS BEEN DESIGNED FOR P-DELTA EFFECTS

CONCRETE:

1. MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)

STRENGTH Pc (28 DAYS)	W/C RATIO (NON-AIR ENTRAINED)	W/C RATIO (AIR ENTRAINED)	SLUMP (±1")	UNIT WEIGHT (NORMAL WEIGHT)
4500 PSI	0.44	0.35	3"	150 PCF

2. CONCRETE MIX DESIGN PARAMETERS ARE GOOD FOR EXPOSURE CATEGORIES F0, F1 & F2. THE AIR ENTRAINMENT FOR THESE CATEGORIES SHALL BE AS FOLLOWS: F0-0, F1-4.5, F2-6
3. AGGREGATES SHALL CONFORM TO THE ASTM C-33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.005. MAX AGGREGATE SIZE = 1".
4. CEMENT SHALL CONFORM TO ASTM C-150 (TYPE V) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
5. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
6. CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET.
7. CONCRETE DURABILITY SHALL BE PER CBC 1904A.1 & ACI 318-14 CHAPTER 19.
8. CONCRETE SHALL BE TESTED PER CBC 1903A, TABLE 1705A.3. AND ACI 318-14 SECTION 26.12.

STEP 10: IDENTIFY PROJECT NAME AND SCHOOL DISTRICT

PROJECT NAME:	SCHOOL DISTRICT:

STEP 1	FRAME DIMENSIONS					
		SUGGESTED				OTHER
	FRAME WIDTH	[ ] 20'	[X] 30'	[ ] 40'		[ ] (40' MAX)
	FRAME LENGTH	[ ] 44'	[X] 64'	[ ] 84'	[ ] 104'	[ ] (NO MAX)

STEP 2	ROOF PANEL	
	ROOF PANEL TYPE	[X] M [ ] G [ ] S

STEP 3	PROJECT SITE - Ss ACCELERATION (g)
	0.642

STEP 4	Ss REGION			
			Ss REGIONS	MAX DEAD LOAD
	DESCRIPTION	X	0 < Ss <= 2.14	5 PSF
			2.14 < Ss <= 2.50	5 PSF
			2.50 < Ss <= 2.75	5 PSF
			2.75 < Ss <= 3.00	4 PSF
			Ss > 3.73 MAX	3 PSF

STEP 5	TOTAL ROOF DEAD LOAD		
		DEAD LOAD	EXAMPLES
	ROOF DECK	1.1 PSF	M=1.1PSF; G=1.2PSF ;S=1.3PSF (SEE STEP 2)
	COLLATERAL	0 PSF	LIGHTING, ETC
	TOTAL	1.1 PSF	ADD ROOF DECK AND COLLATERAL LOADS (MAX 5 PSF)

CONSTRUCTION NOTES

1. A DSA-CERTIFIED CLASS 3 PROJECT INSPECTOR IS REQUIRED FOR THIS PROJECT.
2. CHANGES 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, TITLE 24, CCR.
3. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK, THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
5. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS ARE THAT ALL 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

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE DEFORMED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615, AS FOLLOWS:
   GR 60: (#4 BARS AND LARGER)
   GR 40: (#3 BARS)
2. DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES."
3. MIN. COVER FOR CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
   A. CAST AGAINST EARTH ....3"
   B. CAST AGAINST FORM BELOW GRADE ....2"
   C. FORMED SLABS (#11 BAR & SMALLER)........................3/4"
   D. SLABS ON GRADE (FROM TOP OF SLAB).....................1"
4. BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE MADE COLD.
5. REINFORCING SHALL BE LAP SPLICED PER ACI 318-14 SECTION 25.5.
6. PRIOR TO PLACING OF CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
7. WELDING OF REINFORCING IS NOT ALLOWED.
8. REINFORCING STEEL SHALL BE INSPECTED PER CBC 1705A.3.

POWDER-COAT FINISH SYSTEM:

ALL BUILDINGS THAT HAVE A POWDER-COATED FINISH SHALL MEET THE FOLLOWING SPECIFICATIONS:
1. THE STEEL FRAME SHALL BE SHOT-BLASTED TO A NEAR WHITE CONDITION PER SSPC-10 SPECIFICATIONS.
2. THE STEEL SHALL BE WASHED IN A ZINC PHOSPHATE IN AN MINIMUM EIGHT STAGE ELECTRO DEPOSITION PRE-TREATEMENT PROCESS.
3. IMMEDIATELY FOLLOWING PRE-TREATMENT THE STEEL SHALL BE TOTALLY IMMERSED IN A LIQUID EPOXY PRIMER(E-COAT) AND COATED TO A UNIFORM THICKNESS OF A MINIMUM OF 0.7 TO 0.9 MILS. THE E-COATING SHALL PROVIDE A MINIMUM OF 1000 HOURS OF SALT SPRAY CORROSION PROTECTION TO THE STEEL.
4. THE STEEL SHALL THEN HAVE A TGIC POLYESTER COLOR COAT APPLIED OVER THE E-COATED SURFACE.
5. THE COLOR COAT SHALL THEN HAVE A CLEAR TGIC COATING APPLIED TO SEAL IN THE COLOR COAT AND RESIST ULTRAVIOLET LIGHT, TO HELP PREVENT FADING.
6. THE FINISH THICKNESS OF THESE THREE APPLICATIONS SHALL BE A MINIMUM OF 8 TO 12 MILS.
7. ALL CARBON STEEL MEMBERS (COLUMNS, BEAMS, PLATES, ETC.) NOT POWDER-COATED SHALL BE PAINTED WITH PRIME COAT PER THE "AISC CODE OF STANDARD PRACTICE" AND THE "AISC SPECIFICATION SECTION M3"(UNLESS NOTED OTHERWISE).

ABBREVIATIONS:

ACI	AMERICAN CONCRETE INSTITUTE	MPH	MILES PER HOUR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	M	MULTI-RIB ROOF PANEL (MCELROY)
ASM	ASSEMBLY (INTERNAL REFERENCE)	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MAT'LS	NO	NUMBER
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
CBC	CALIFORNIA BUILDING CODE	OSHA	OCCUPATIONAL HEALTH AND SAFETY ADMIN
CJP	COMPLETE JOINT PENETRATION	PCF	POUNDS PER CUBIC FOOT
CLR	CLEAR	PJ	PRETENSIONED JOINT
DEG	DEGREE	PLCS	PLACES
DIA	DIAMETER	PLT	PLATE
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DSA	DIVISION OF THE STATE ARCHITECT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	QTY	QUANTITY
FT	FEET	REF	REFERENCE
GA	GAGE	SQ	SQUARE
IN	INCHES	SS	STANDING SEAM ROOF PANEL (MCELROY)
KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	W/	WITH

STEP 6	FOUNDATION REQUIREMENTS		
	SOIL CLASS 5 (BEARING)-1500 PSF [X]	SOIL CLASS 4 (BEARING)-2000 PSF [ ]	SOIL CLASS 3 (BEARING)-3000 PSF [ ]
	SOIL CLASS 5 (LATERAL BEARING)-100 PSF	SOIL CLASS 4 (LATERAL BEARING)-150 PSF	SOIL CLASS 3 (LATERAL BEARING)-200 PSF

STEP 7	MISCELLANEOUS		
		DESIGN OPTIONS	
	CLEAR HEIGHT	[ ] 8' [X] 10' [ ] 12'	[ ] ' (12' MAX)
	ELECTRICAL CUTOUTS	[X] YES	[ ] NO
	GUTTERS	[X] YES	[ ] NO

STEP 8	SHEET INDEX									
	BASE FRAME	RG 20			RG 30			RG 40		
	ROOF PANEL TYPE	M	G	S	M	G	S	M	G	S
	SELECT ONE	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[ ]	[ ]	[ ]
	GENERAL NOTES	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0
	DSA 103 EXAMPLE	LS1.1	LS1.1	LS1.1	LS1.1	LS1.1	LS1.1	LS1.1	LS1.1	LS1.1
	FOUNDATION PLAN	LS2.0	LS2.0	LS2.0	LS3.0	LS3.0	LS3.0	LS4.0	LS4.0	LS4.0
	FRAMING PLAN	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.1	LS4.1	LS4.1
	FRAME CONNECTION DETAILS	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.2	LS4.2	LS4.2
	ROOFING LAYOUT & DETAILS	LS2.2	LS2.3	LS2.4	LS3.2	LS3.3	LS3.4	LS4.3	LS4.4	LS4.5
	MISC DESIGN OPTIONS	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

ICON STD	RH/DSA-PC
DRAWN BY	ANGEL
DATE	4/2/2021
REV	
REV DATE	

JRMA
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REGISTERED PROFESSIONAL ENGINEER MICHAEL D. LOCK S4092 STRUCTURAL STATE OF CALIFORNIA
07/29/2021

GENERAL INFO

ICON Shelter Systems Inc
DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM

1455 LINCOLN AVE
HOLLAND MI, 49423
616.396.0919
800.748.0985
616.396.0944 FX

PRE-CHECK (PC) DOCUMENT
Code: 2019 CBC
A separate project application for construction is required.

LS1.0

PRINTED ON :

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

2019 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2019 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required	**GE –** Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
Periodic – Indicates that a periodic special inspection is required	**LOR –** Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.
Test – Indicates that a test is required	**PI –** Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.
	SI – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

	7. CAST-IN-PLACE CONCRE			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
Material Verification and Testing:				
☑	a. Verify use of required design mix.	**Periodic**	**SI**	**Table 1705A.3 Item 5, 1910A.1.**
☑	b. Identify, sample, and test reinforcing steel.	**Test**	**LOR**	**1910A.2**; ACI 318-14 Section 26.6.1.2; DSA IR 17-10. (See Appendix for exemptions.)
☑	c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Test**	**LOR**	**Table 1705A.3 Item 6**; ACI 318-14 Sections 26.5 & 26.12.
☑	d. Test concrete (F.).	**Test**	**LOR**	**1905A.1.15**; ACI 318-14 Section 26.12.
Inspection:				
☐	e. Batch plant inspection:	**See Notes**	**SI**	Default of '**Continuous**' per **1705A.3.3.** If approved by DSA, batch plant inspection may be reduced to '**Periodic**' subject to requirements in Section **1705A.3.3.1**, or eliminated per **1705A.3.3.2.** (See Appendix for exemptions.)
☐	f. Welding of reinforcing steel.	Provide special inspection per STEEL, Category 19.1(d) & (e) and/or 19.2(g) & (h) below.		

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

Geotechnical Reports: Project has a geotechnical report, or CDs indicate soils special inspection is required by GE

	1. GENERAL:	Table 1705A.6		
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	**Periodic**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)

	2. SOIL COMPACTION AND FILL:	Table 1705A.6		
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	a. Perform classification and testing of fill materials.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
☐	b. Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

	17. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPO			
Material Verification and Testing:				
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Verify identification of all materials and: • Mill certificates indicate material properties that compl with requirements. • Material sizes, types and grades comply wit requirements.	Periodic	*	Table **1705A.2.1 Item 3a–3c**, 2202A.1; AISI S100-16 Section A3.1 & A3.2, AISI S240-15 Section A3 & A5, AISI S220-15 Sections A4 & A6. * By special inspector or qualified technician when performed off-site.
☑	b. Test unidentified materials	Test	**LOR**	**2202A.1.**
☑	c. Examine seam welds of HSS shapes	Periodic	**SI**	DSA IR 17-3.
Inspection:				
☑	d. Verify and document steel fabrication per DSA-approved construction documents.	Periodic	**SI**	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).

	18. HIGH-STRENGTH BOLTS: RCSC 2			
Material Verification and Testing of High-Strength Bolts, Nuts and Washers:				
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	Periodic	**SI**	**Table 1705A.2.1 Items 1a & 1b, 2202A.1**; AISC 360-16 Section A3.3, J3.1, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

☐	c. Compaction testing.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)

	4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):	Table 1705A.8		
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
☐	b. Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
☐	c. Confirm adequate end strata bearing capacity.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
☑	d. Concrete piers.	Provide tests and inspections per CONCRETE section below.		

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

☑	b. Test high-strength bolts, nuts and washers.	**Test**	**LOR**	**Table 1705A.2.1 Item 1c, 2213A.1**; RCSC 2014 Section 7.2; DSA IR 17-8.
Inspection of High-Strength Bolt Installation:				
☐	c. Bearing-type ("snug tight") connections.	**Periodic**	**SI**	**Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2**; AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
☑	d. Pretensioned and slip-critical connections.	"	**SI**	**Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A** 2; AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9. " "Continuous" or "Periodic" depends on the tightening method used.

	19. WELDI			1705A.2.5, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3 (See Appendix for exemptions.)
Verification of Materials, Equipment, Welders, etc.:				
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**Periodic**	**SI**	DSA IR 17-3.
☑	b. Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	DSA IR 17-3.
☑	c. Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
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	5. RETAINING WALLS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	a. Placement, compaction and inspection of backfill.	**Continuous**	**GE***	**1705A.6.1.** * By geotechnical engineer or his or her qualified representative. (See Section 2 above).

☐	b. Placement of soil reinforcement and/or drainage devices.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative See DSA IR 16-3.
☐	c. Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative See DSA IR 16-3.
☐	d. Concrete retaining walls.	Provide tests and inspections per CONCRETE section below.		
☐	e. Masonry retaining walls.	Provide tests and inspections per MASONRY section below.		

	6. OTHER SOIL			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	a. Soil Improvements	**Test**	**GE***	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS for final acceptance. * By geotechnical engineer or his or her qualified representative
☐	b. Inspection of Soil Improvements	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative
☐	c.			

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

	19.1 SHOP WELDING:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	**SI**	**Table 1705A.2.1 Items 5a.1–4**; AISC 360–16 (and AISC 341–16 as applicable); DSA IR 17-3.
☑	b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6**; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☐	c. Inspect welding of stairs and railing systems.	**Periodic**	**SI**	**1705A.2.1**; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
☐	d. Verification of reinforcing steel weldability other than ASTM A706.	**Periodic**	**SI**	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	e. Inspect welding of reinforcing steel.	**Continuous**	**SI**	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8**; AWS D1.4; DSA IR 17-3.

	23. ANCHOR BOLTS AND ANCHOR RODS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Anchor Bolts and Anchor Rods	**Test**	**LOR**	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
☐	b. Threaded rod not used for foundation anchorage.	**Test**	**LOR**	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

	23. ANCHOR BOLTS AND ANCHOR RODS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	a. Anchor Bolts and Anchor Rods	**Test**	**LOR**	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
☐	b. Threaded rod not used for foundation anchorage.	**Test**	**LOR**	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

Name of Architect or Engineer in general responsible charge:

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer: Date:

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

Application Number: 04-000000 | **School Name:** ICON Shelter Systems | **School District:** PC Submittal
DSA File Number: | **Increment Number:** | **Date Created:** 2021-07-14 05:50:33

1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293
2. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291
3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

ICON STD	RH/DSA–PC
DRAWN BY	ANGEL
DATE	4/2/2021
REV	
REV DATE	

JRMA
ARCHITECTS ENGINEERS
2700 SATURN ST BREA, CA 92821
T. 714.524.1870 | F. 714.524.1875
WWW.JRMA.COM

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. SHORT — STRUCTURAL — STATE OF CALIFORNIA

07/29/2021

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

DSA 103

ICON Shelter Systems Inc
DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM

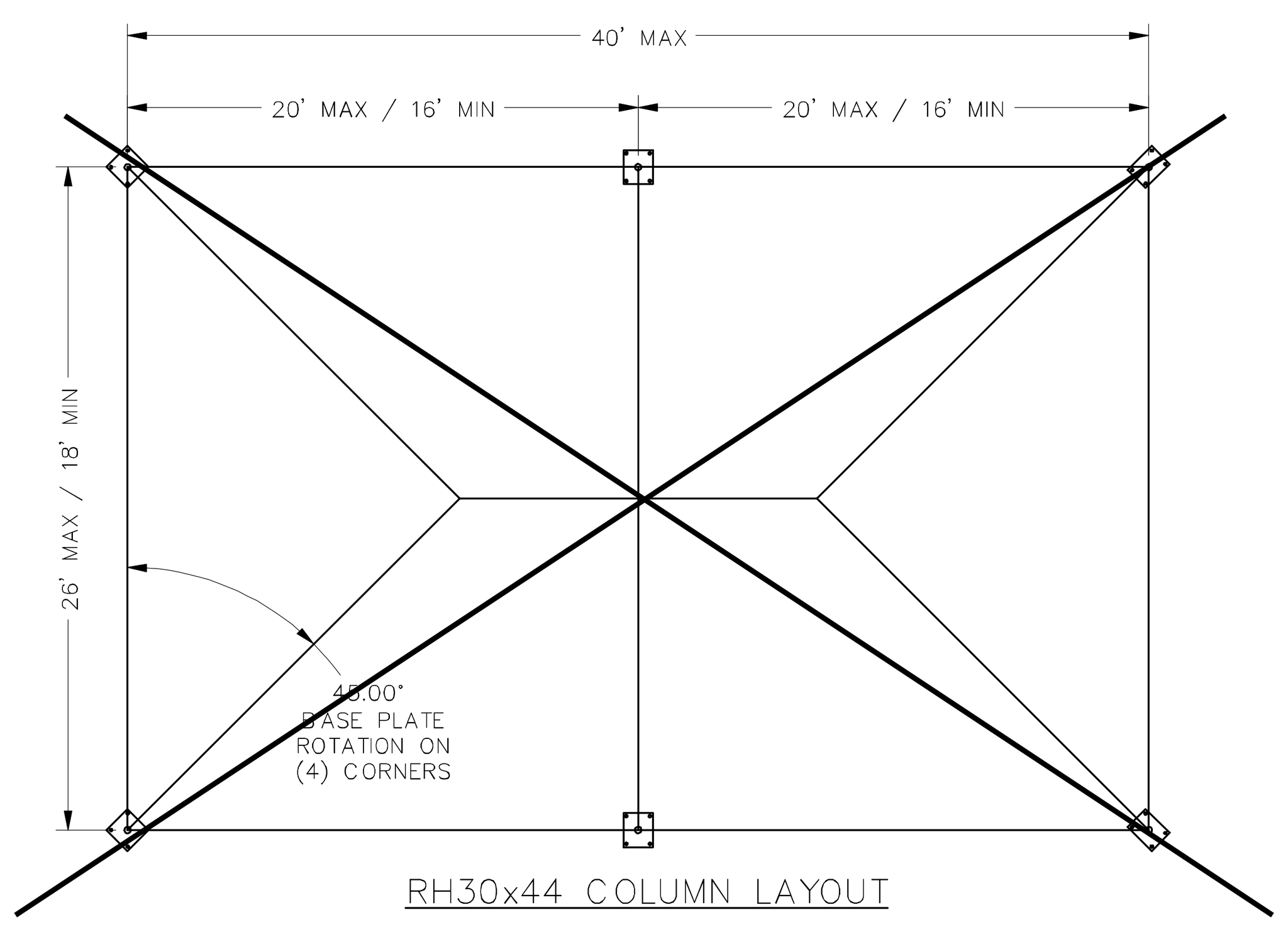
1455 LINCOLN AVE
HOLLAND MI, 49423

616.396.0919
800.748.0985
616.396.0944 FX

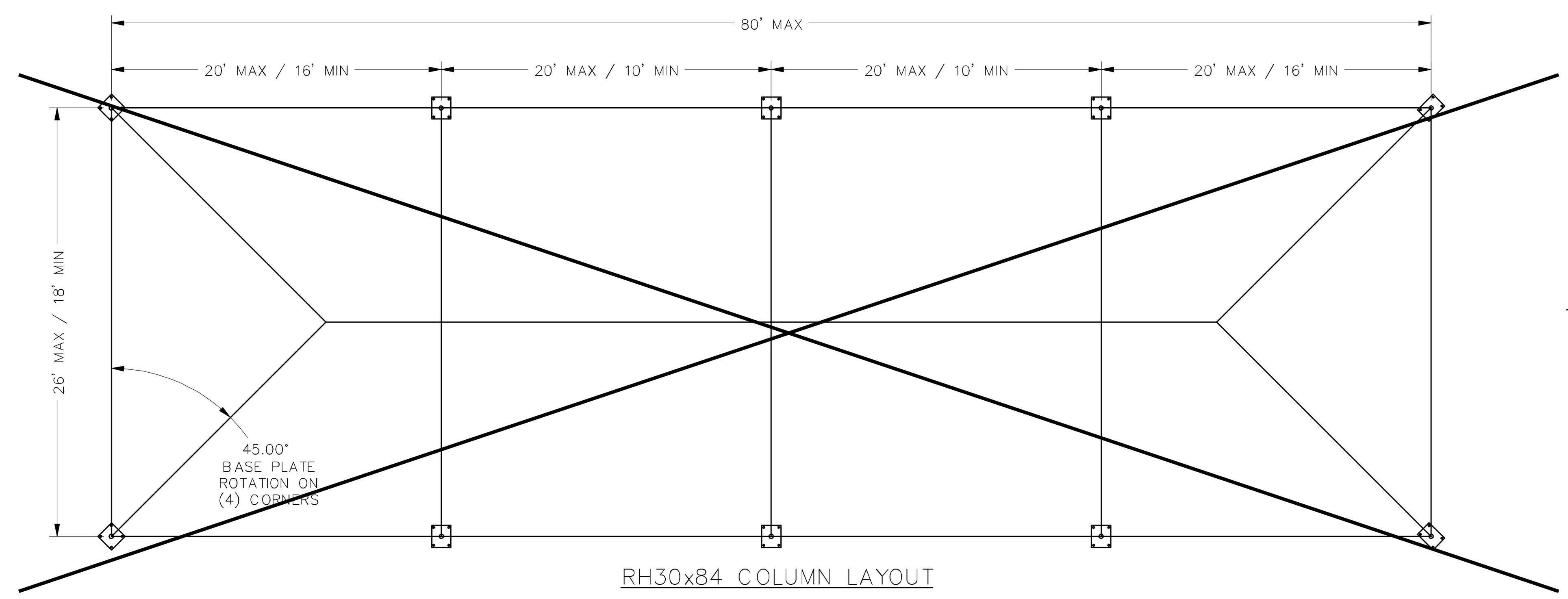
LS1.1

PRE-CHECK (PC) DOCUMENT
Code: 2019 CBC
A separate project application for construction is required.

PRINTED ON :



RH30x44 COLUMN LAYOUT
(2 BAYS)

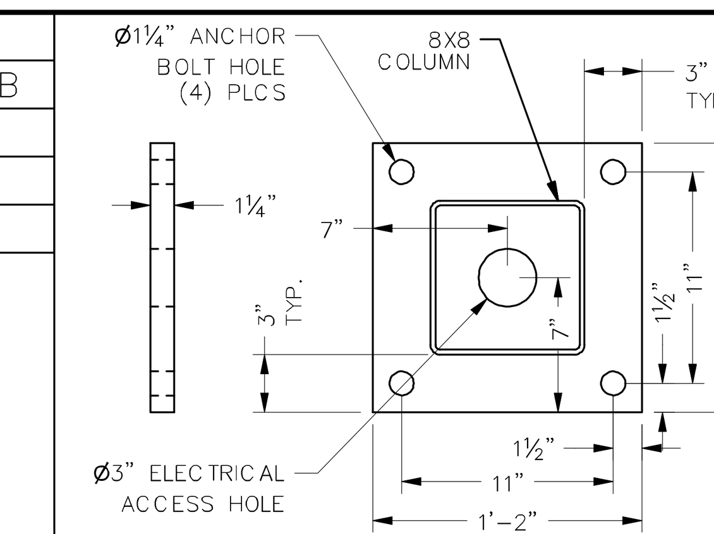


RH30x84 COLUMN LAYOUT
(4 BAYS)

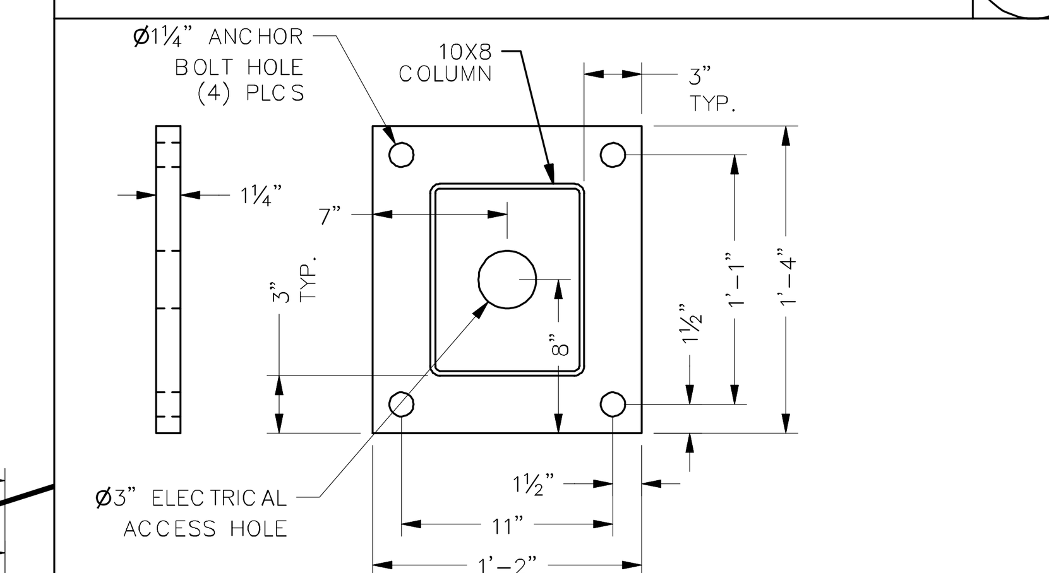
	DETAIL A	DETAIL B
BASE PLATE LOCATION		
8'	BP1	BP2
10'	BP1	BP2
12'	BP2	BP3

NOTES:
COLUMN SIZE AND LOCATION WILL VARY DEPENDING ON MODEL TYPE ORDERED, PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL FOR CORRECT PLACEMENT AND SIZE.

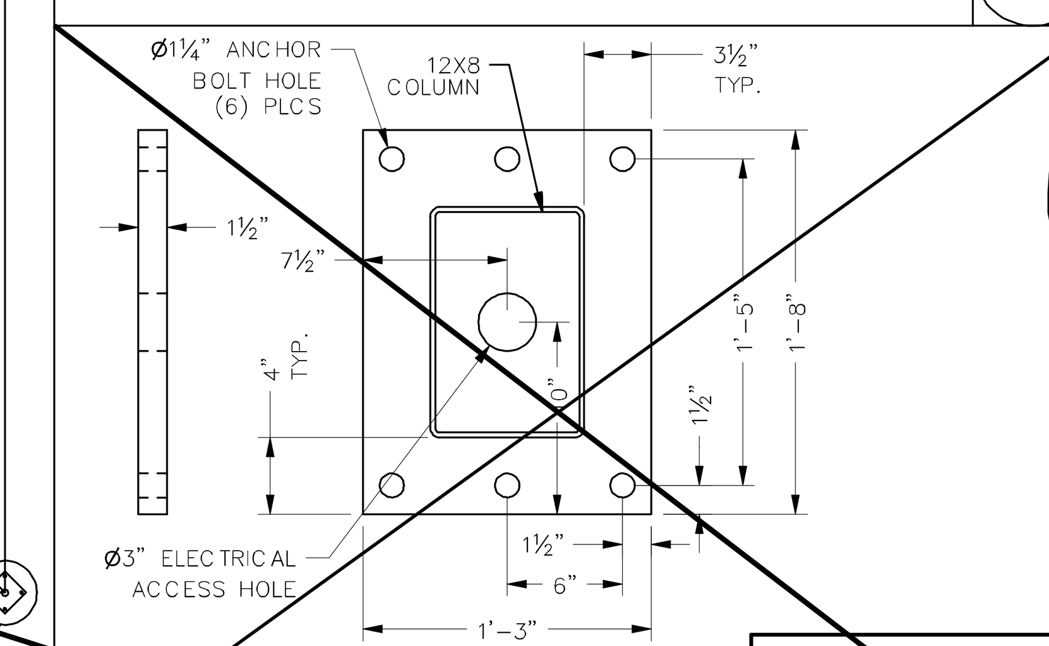
WHERE CONCRETE SLAB SPECIFIED PORTLAND CEMENT CONCRETE PAVING SHALL HAVE A MEDIUM SALTED (MEDIUM BROOM) FINISH ON ALL SURFACES SLOPED LESS THAN 6% AND SLIP RESISTANT (HEAVY BROOM FINISH) ON ALL SURFACES SLOPED GREATER THAN 6% CBC SECTION 1133B.7.1



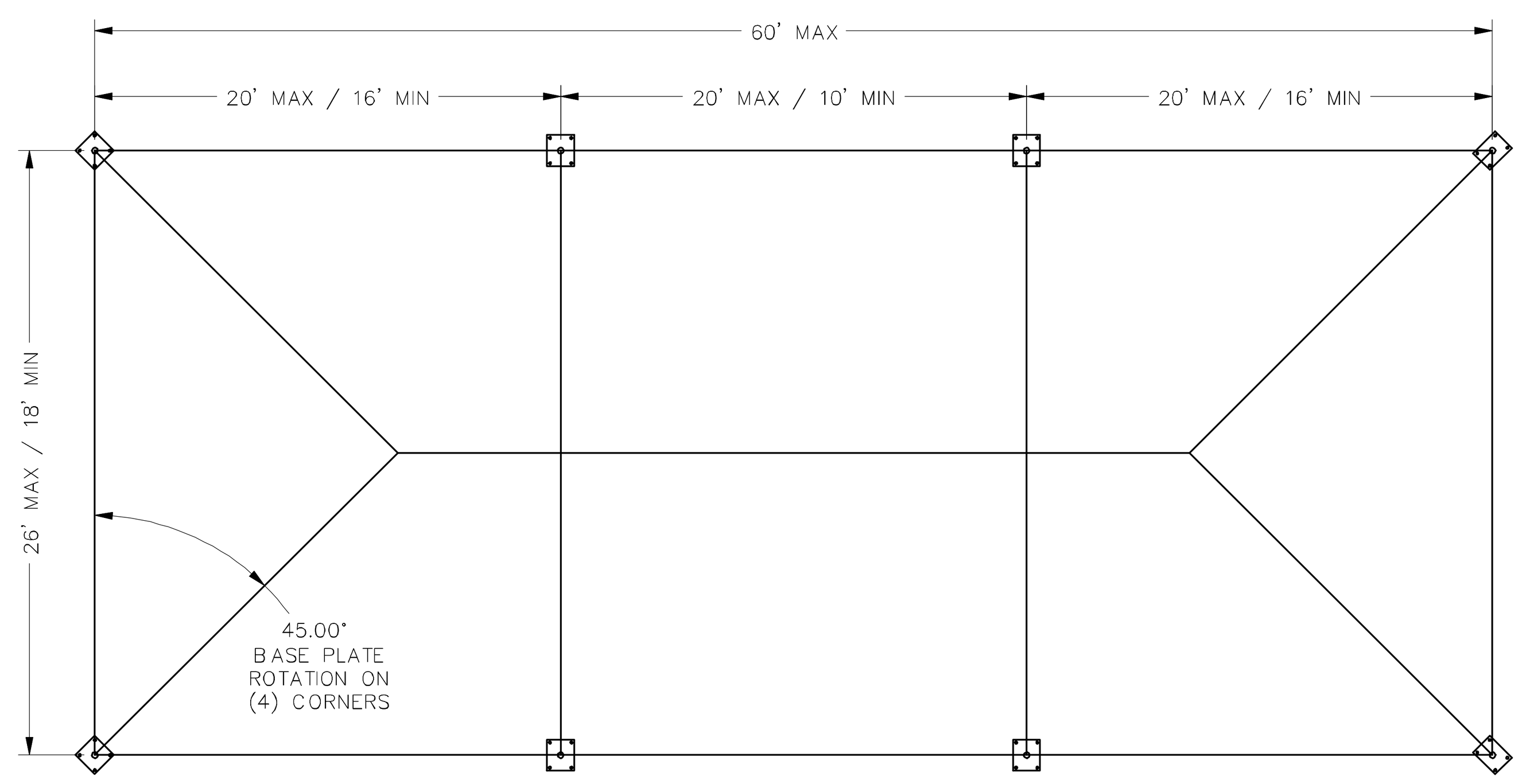
8X8 COLUMN
BASE PLATE DETAIL
BP1



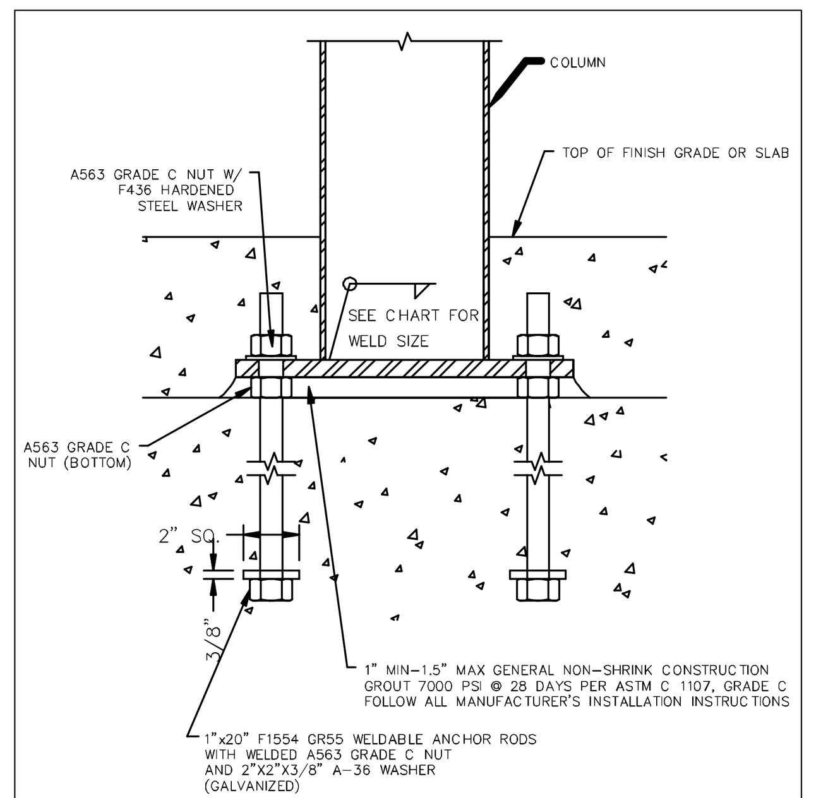
10X8 COLUMN
BASE PLATE DETAIL
BP2



12X8 COLUMN
BASE PLATE DETAIL
BP3



RH30x64 COLUMN LAYOUT
(3 BAYS)



COLUMN
TOP OF FINISH GRADE OR SLAB
A563 GRADE C NUT W/ F436 HARDENED STEEL WASHER
SEE CHART FOR WELD SIZE
A563 GRADE C NUT (BOTTOM)
2" SQ.
3/8"
1" MIN–1.5" MAX GENERAL NON–SHRINK CONSTRUCTION GROUT 7000 PSI @ 28 DAYS PER ASTM C 1107, GRADE C FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS
1"x20" F1554 GR55 WELDABLE ANCHOR RODS WITH WELDED A563 GRADE C NUT AND 2"X2"X3/8" A–36 WASHER (GALVANIZED)

NOTES:

COLUMN BASE PLATES ARE TO HAVE DOUBLE NUTS. PLACE ONE NUT UNDER THE PLATE AND ONE NUT ON TOP WITH A WASHER UNDER THE NUT.

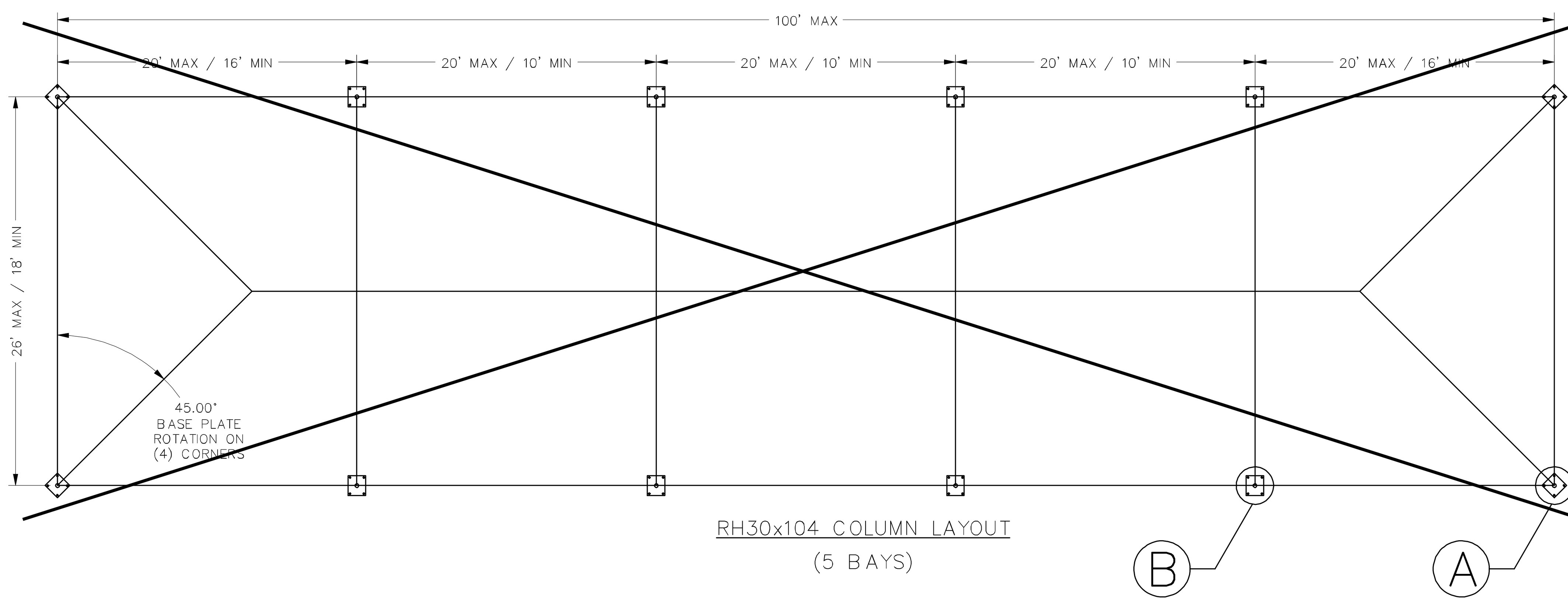
THE BOTTOM NUT CAN BE USED AS A LEVELING NUT.

AFTER COLUMN IS SET AND LEVELED AND THE NUTS HAVE BEEN TIGHTENED THE COLUMN MUST HAVE NON–SHRINK GROUT PLACED UNDER THE BASE PLATE BEFORE COVERING THE BASE WITH CONCRETE.

REFER TO FOOTING DETAIL FOR ROD/NUT LOCATIONS AND SIZE.

FOUNDATION ANCHORS ARE TO BE UNTORQUED.

COLUMN BASE CONNECTION DETAIL — SCALE: N.T.S. — C1



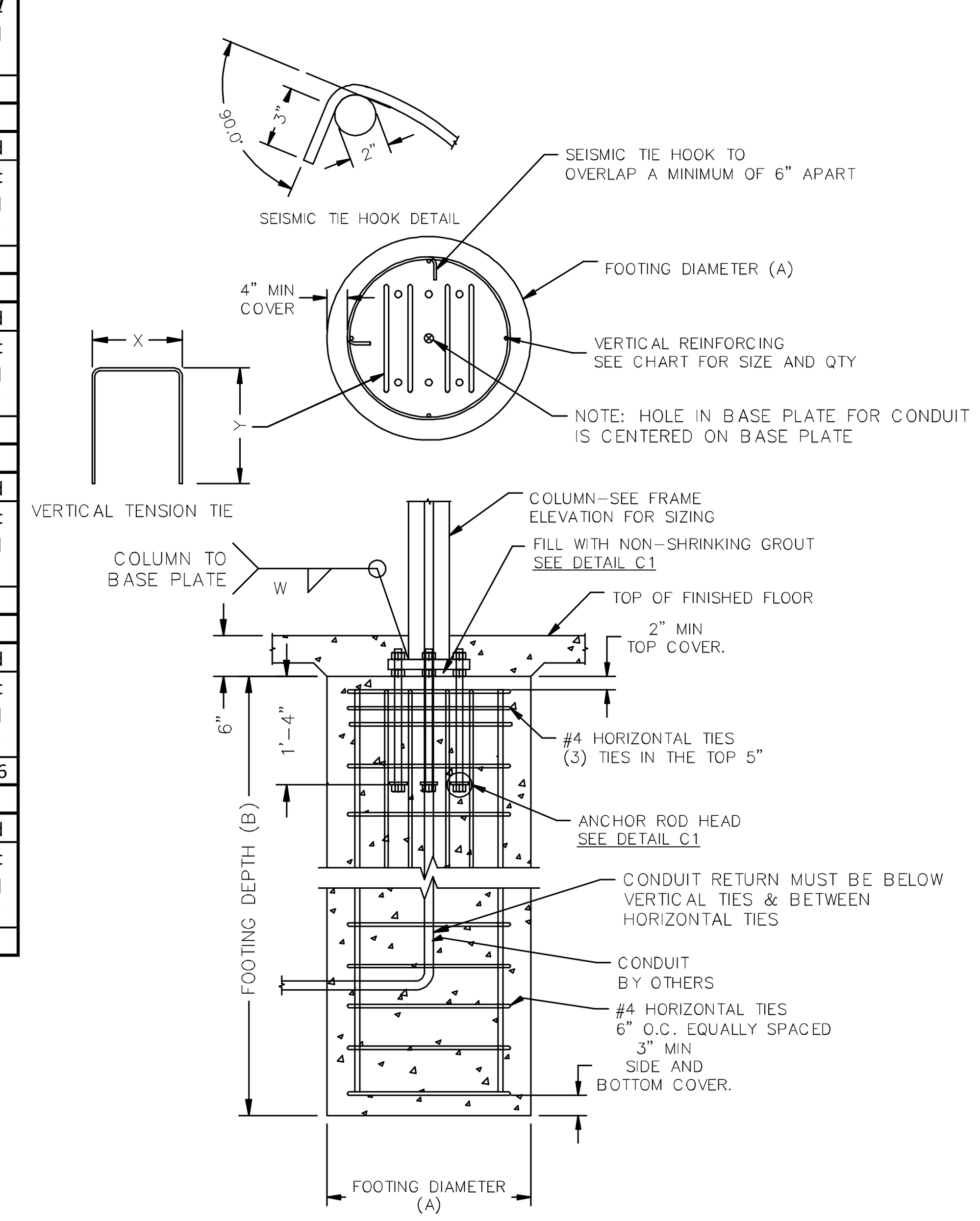
RH30x104 COLUMN LAYOUT
(5 BAYS)

30' WIDE RECTANGULAR HIP

RH30 - PIER

Soil Class 5 - 1500 psf Bearing; Soil Class 4 - 2000 psf Bearing; Soil Class 3 - 3000 psf Bearing; Rebar Dimensions / Weld

	SC5 Dia (A) (in)	SC5 Depth (B) (in)	SC5 Vertical Rebar Qty	SC5 Rebar Size	SC4 Dia (A) (in)	SC4 Depth (B) (in)	SC4 Vertical Rebar Qty	SC4 Rebar Size	SC3 Dia (A) (in)	SC3 Depth (B) (in)	SC3 Vertical Rebar Qty	SC3 Rebar Size	X (in)	Y (in)	Rebar Size	Fillet Weld "W"
8' height - Corner Columns	24	114	6	6	24	98	6	6	24	88	6	6	14	40	5	1/4
8' height - Side Columns	36	144	12	6	30	132	8	6	30	118	8	6	16	40	5	1/4
10' height - Corner Columns	24	120	6	6	24	102	6	6	24	92	6	6	14	40	5	1/4
10' height - Side Columns	36	136	12	6	30	124	8	6	30	112	8	6	16	40	5	1/4
12' height - Corner Columns	30	132	8	6	30	112	8	6	30	102	8	6	16	40	5	5/16
12' height - Side Columns	36	140	12	6	36	120	12	6	36	108	12	6	20	40	5	1/4



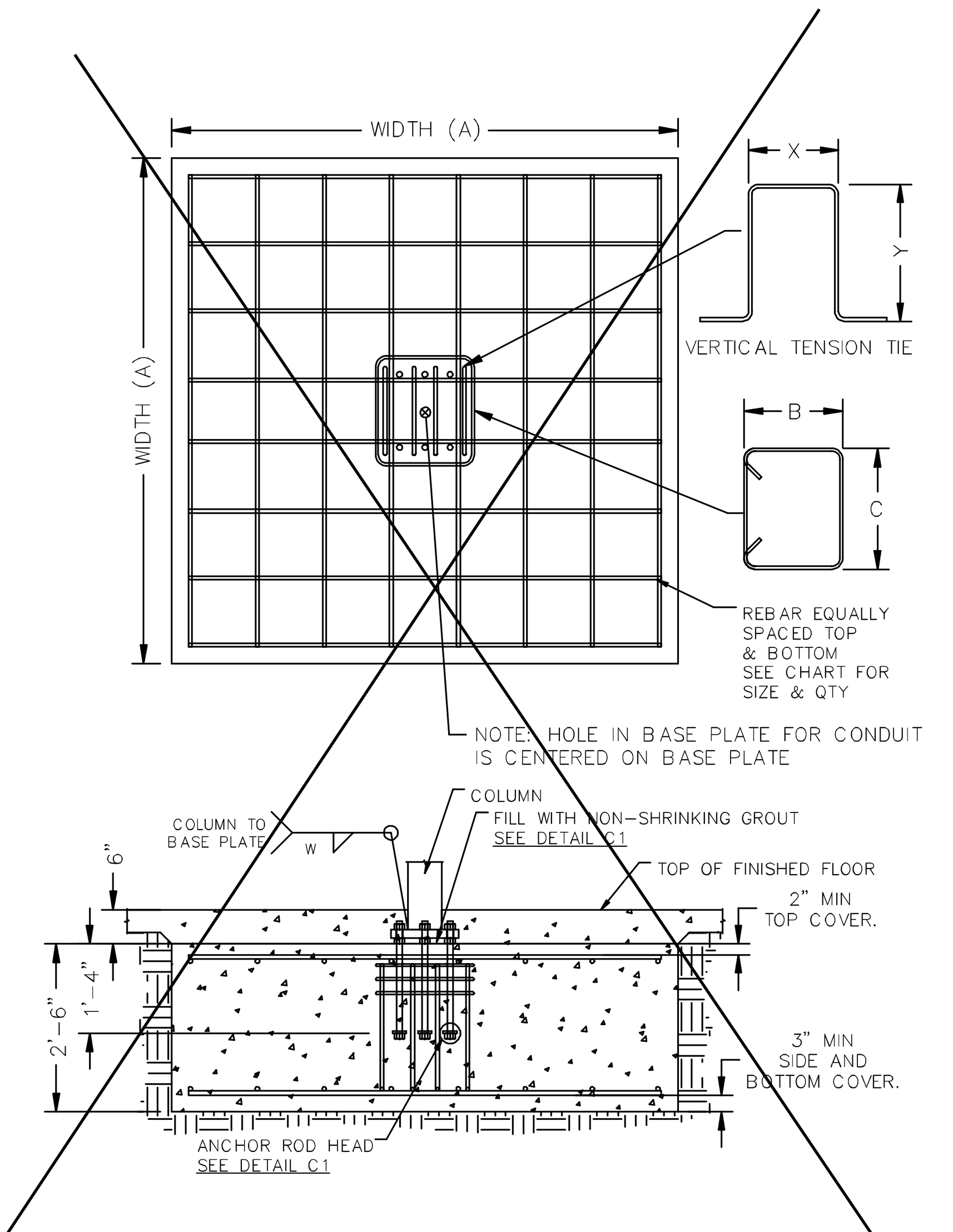
SEISMIC TIE HOOK DETAIL
SEISMIC TIE HOOK TO OVERLAP A MINIMUM OF 6" APART
FOOTING DIAMETER (A)
4" MIN COVER
VERTICAL REINFORCING SEE CHART FOR SIZE AND QTY
NOTE: HOLE IN BASE PLATE FOR CONDUIT IS CENTERED ON BASE PLATE
VERTICAL TENSION TIE
COLUMN TO BASE PLATE
COLUMN–SEE FRAME ELEVATION FOR SIZING
FILL WITH NON–SHRINKING GROUT SEE DETAIL C1
TOP OF FINISHED FLOOR
2" MIN TOP COVER.
#4 HORIZONTAL TIES (3) TIES IN THE TOP 5"
ANCHOR ROD HEAD SEE DETAIL C1
CONDUIT RETURN MUST BE BELOW VERTICAL TIES & BETWEEN HORIZONTAL TIES
CONDUIT BY OTHERS
#4 HORIZONTAL TIES 6" O.C. EQUALLY SPACED
3" MIN SIDE AND BOTTOM COVER.
FOOTING DEPTH (B)
FOOTING DIAMETER (A)

SEE DETAILS BP1, BP2 OR BP3 FOR ANCHOR BOLT PATTERNS
BP1 & BP2 ARE (4) BOLT PATTERN WHILE B3 IS A (6) BOLT

RH30 - SPREAD

Soil Class 5 - 1500 psf Bearing; Soil Class 4 - 2000 psf Bearing; Soil Class 3 - 3000 psf Bearing; Rebar Dimensions / Weld

	SC5 Size (A) (in)	SC5 Depth (in)	SC5 T&B Rebar Qty	SC5 Rebar Size	SC4 Size (A) (in)	SC4 Depth (in)	SC4 T&B Rebar Qty	SC4 Rebar Size	SC3 Size (A) (in)	SC3 Depth (in)	SC3 T&B Rebar Qty	SC3 Rebar Size	X (in)	Y (in)	B (in)	C (in)	Rebar Size	Fillet Weld "W"
8' height - Corner Columns	60	30	4	6	56	30	4	6	54	30	4	6	14	20	15.9	17.3	5	1/4
8' height - Side Columns	80	30	5	6	72	30	5	6	68	30	5	6	16	20	15.6	19.3	5	1/4
10' height - Corner Columns	66	30	5	6	60	30	4	6	57	30	4	6	14	20	15.9	17.3	5	1/4
10' height - Side Columns	81	30	5	6	72	30	5	6	69	30	5	6	16	20	15.6	19.3	5	1/4
12' height - Corner Columns	78	30	5	6	72	30	5	6	72	30	5	6	16	20	15.6	19.3	5	5/16
12' height - Side Columns	84	30	6	6	75	30	5	6	75	30	5	6	20	20	16.6	21.3	5	1/4



WIDTH (A)
VERTICAL TENSION TIE
REBAR EQUALLY SPACED TOP & BOTTOM SEE CHART FOR SIZE & QTY
NOTE: HOLE IN BASE PLATE FOR CONDUIT IS CENTERED ON BASE PLATE
COLUMN
FILL WITH NON–SHRINKING GROUT SEE DETAIL C1
TOP OF FINISHED FLOOR
2" MIN TOP COVER.
3" MIN SIDE AND BOTTOM COVER.
ANCHOR ROD HEAD SEE DETAIL C1

SEE DETAILS BP1, BP2 OR BP3 FOR ANCHOR BOLT PATTERNS
BP1 & BP2 ARE (4) BOLT PATTERN WHILE B3 IS A (6) BOLT

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DATE	4/2/2021
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REV DATE	

JRMA ARCHITECTS ENGINEERS
2700 SATURN ST I BREA, CA 92821
T. 714.524.1870 I F. 714.524.1875
WWW.JRMA.COM
REGISTERED PROFESSIONAL ENGINEER MICHAEL D. LOCK S4092 STRUCTURAL STATE OF CALIFORNIA
07/29/2021

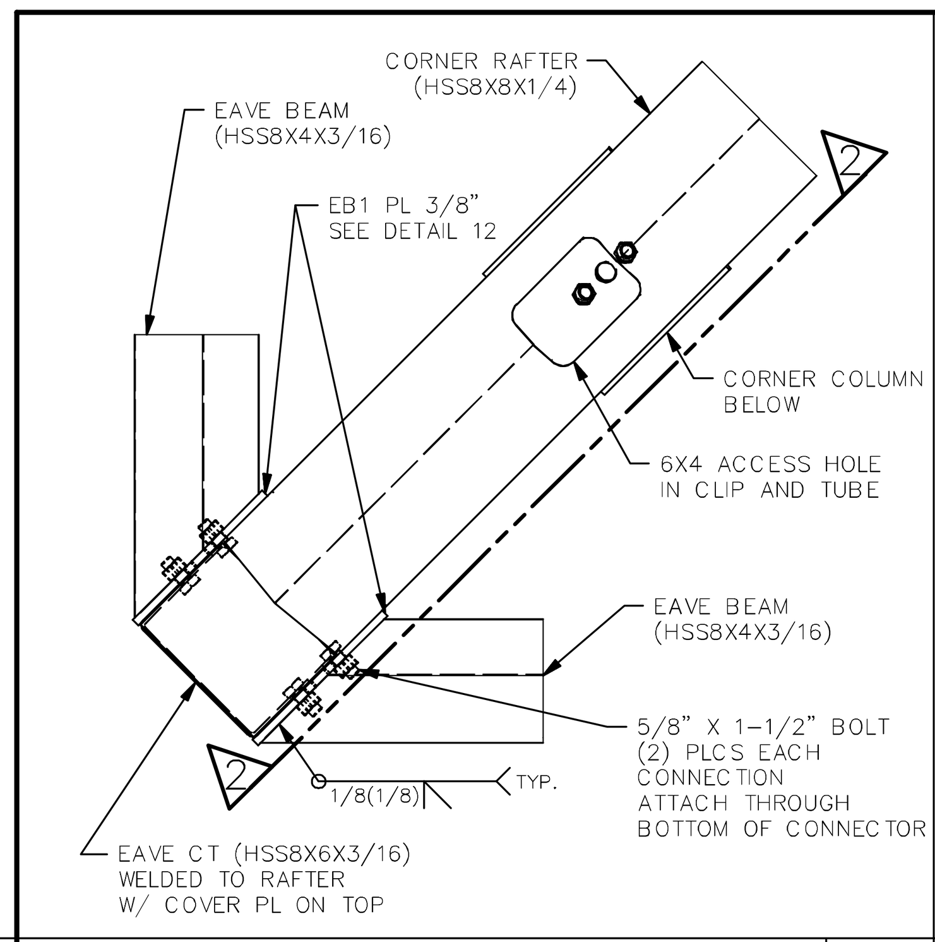
APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

30' WIDE RECTANGULAR HIP FOUNDATION PLAN

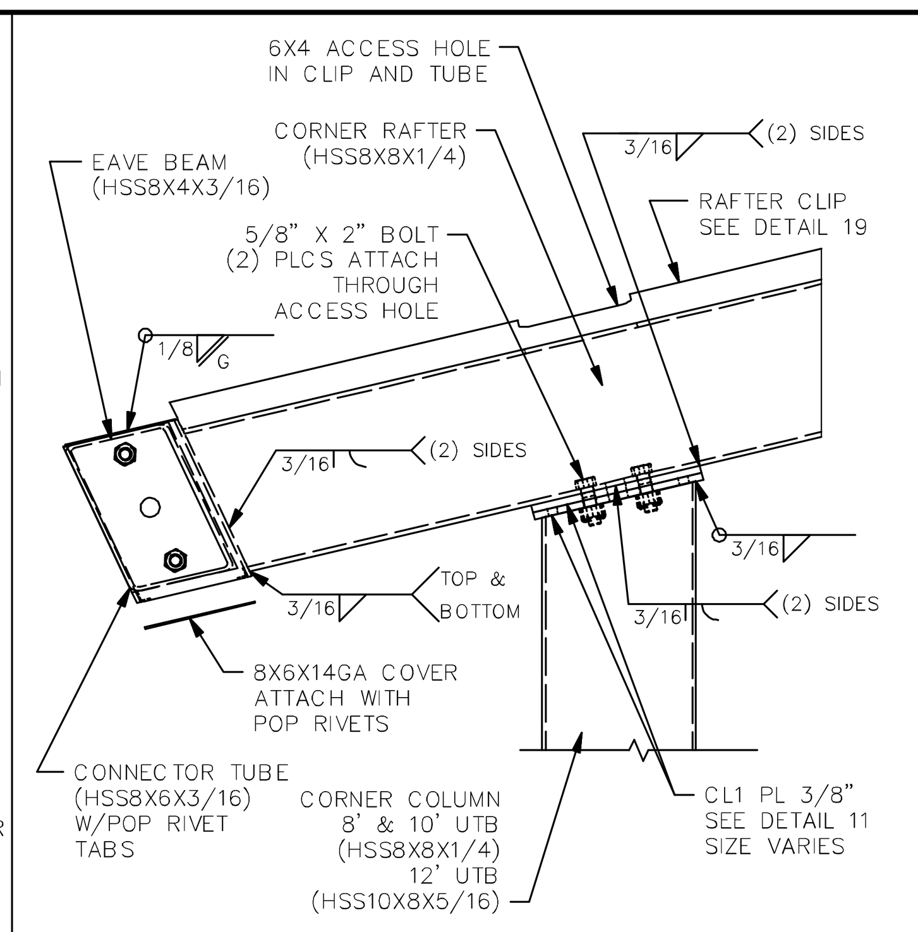
ICON Shelter Systems Inc
DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM
1455 LINCOLN AVE
HOLLAND MI, 49423
616.396.0919
800.748.0985
616.396.0944 FX

PRE-CHECK (PC) DOCUMENT
Code: 2019 CBC
A separate project application for construction is required.

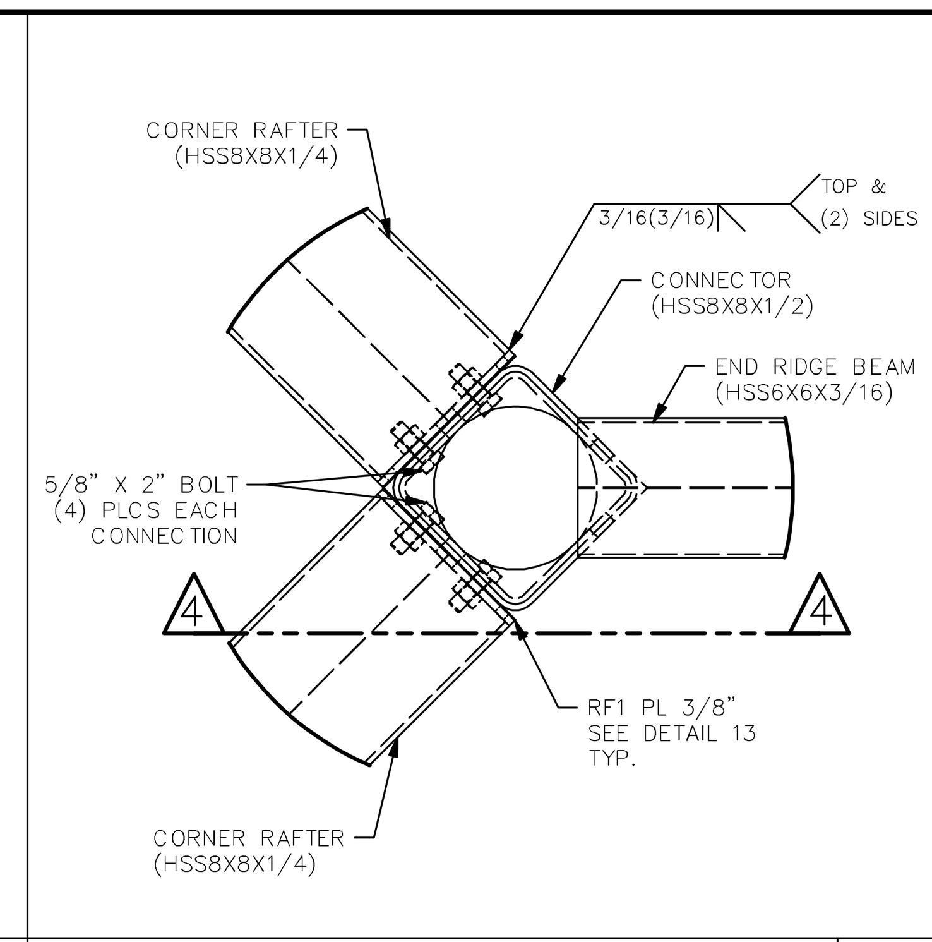
LS3.0



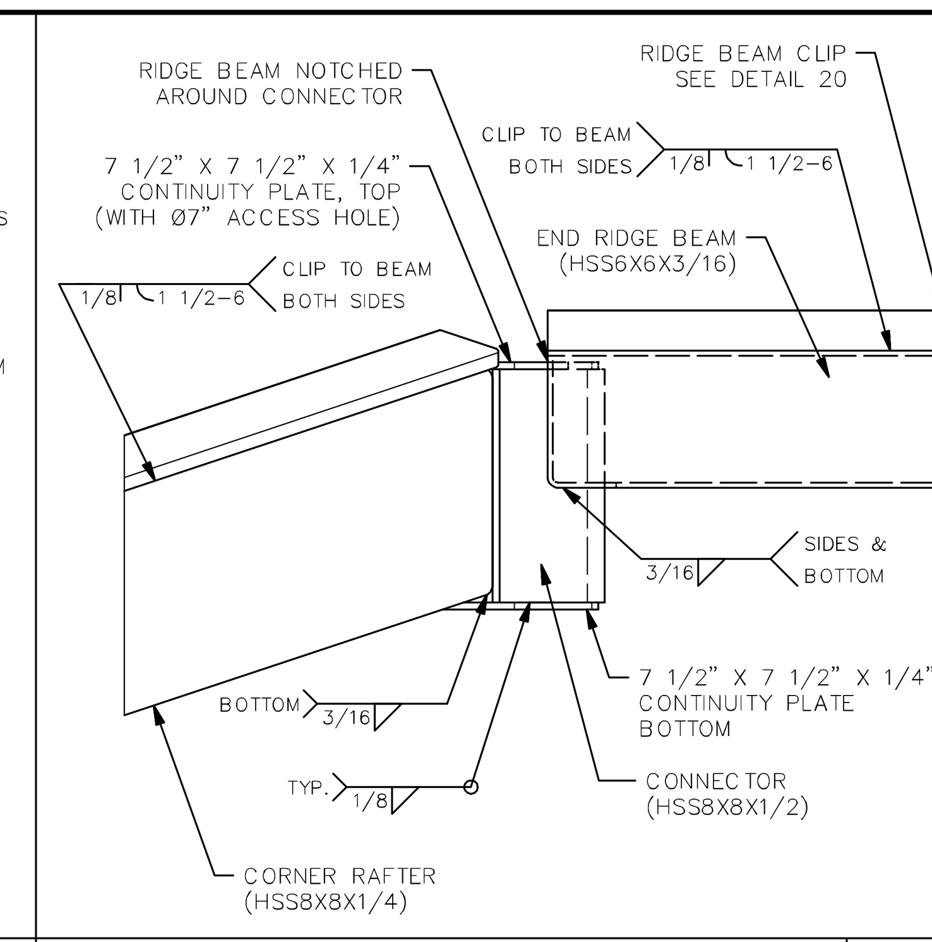
PLAN – EAVE BEAMS & CORNER RAFTER CONNECTIONS @ CORNER COLUMN 1



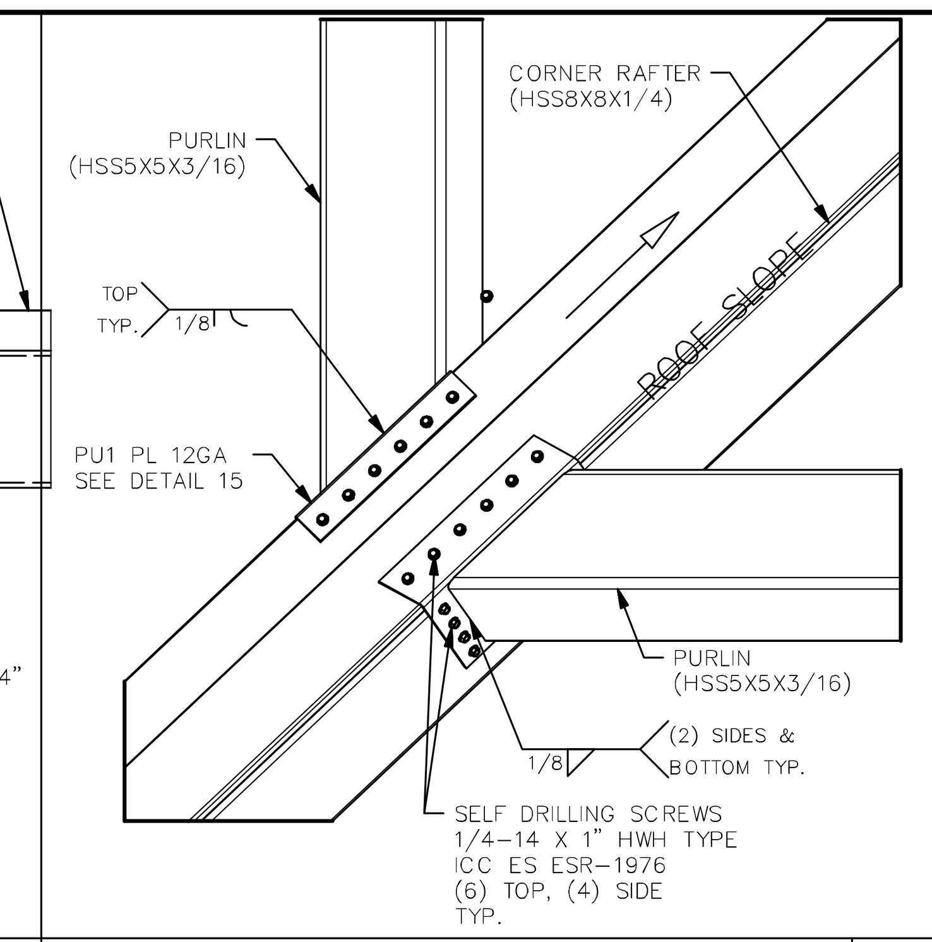
VIEW – EAVE BEAMS & CORNER RAFTER CONNECTIONS @ CORNER COLUMN 2



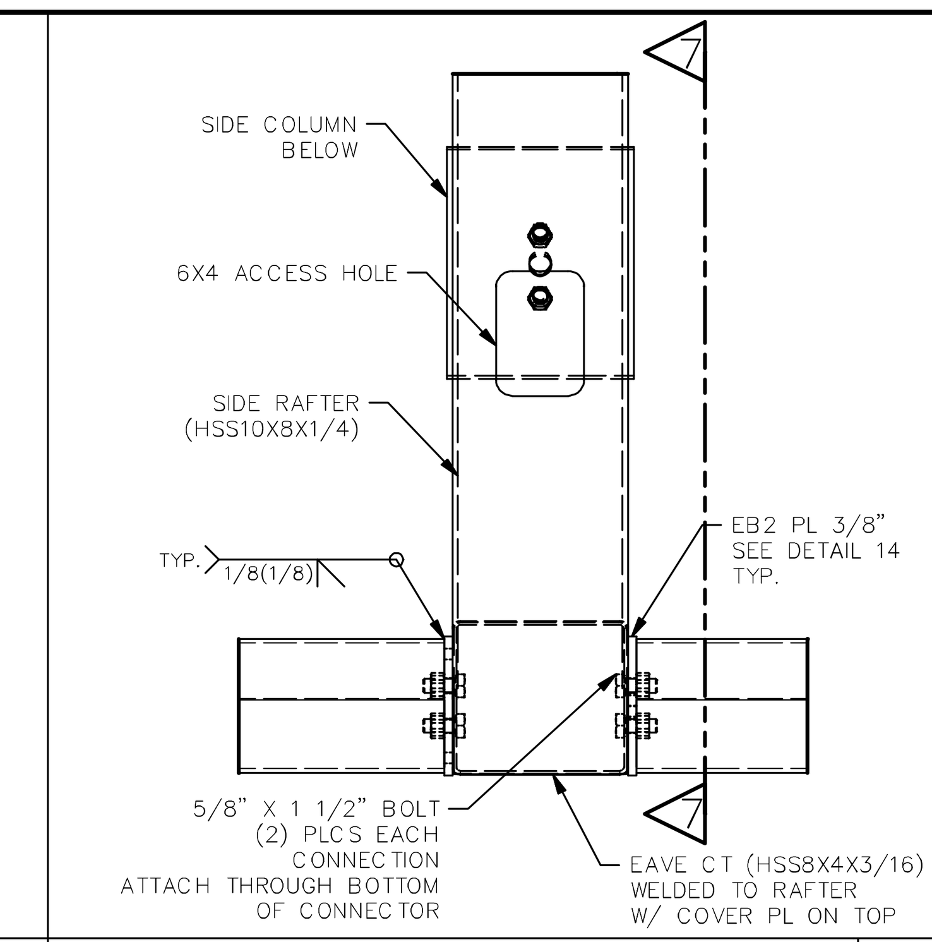
PLAN – CORNER RAFTERS CONNECTIONS @ END RIDGE BEAM 3



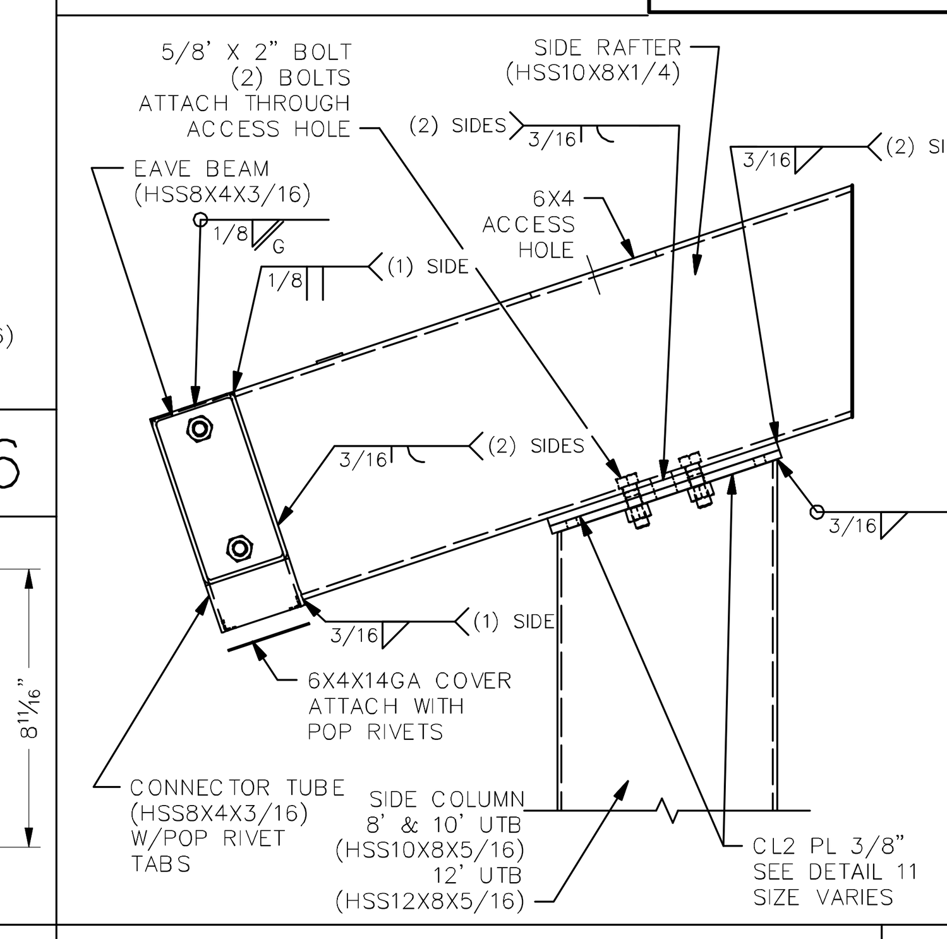
VIEW – CORNER RAFTERS CONNECTIONS @ END RIDGE BEAM 4



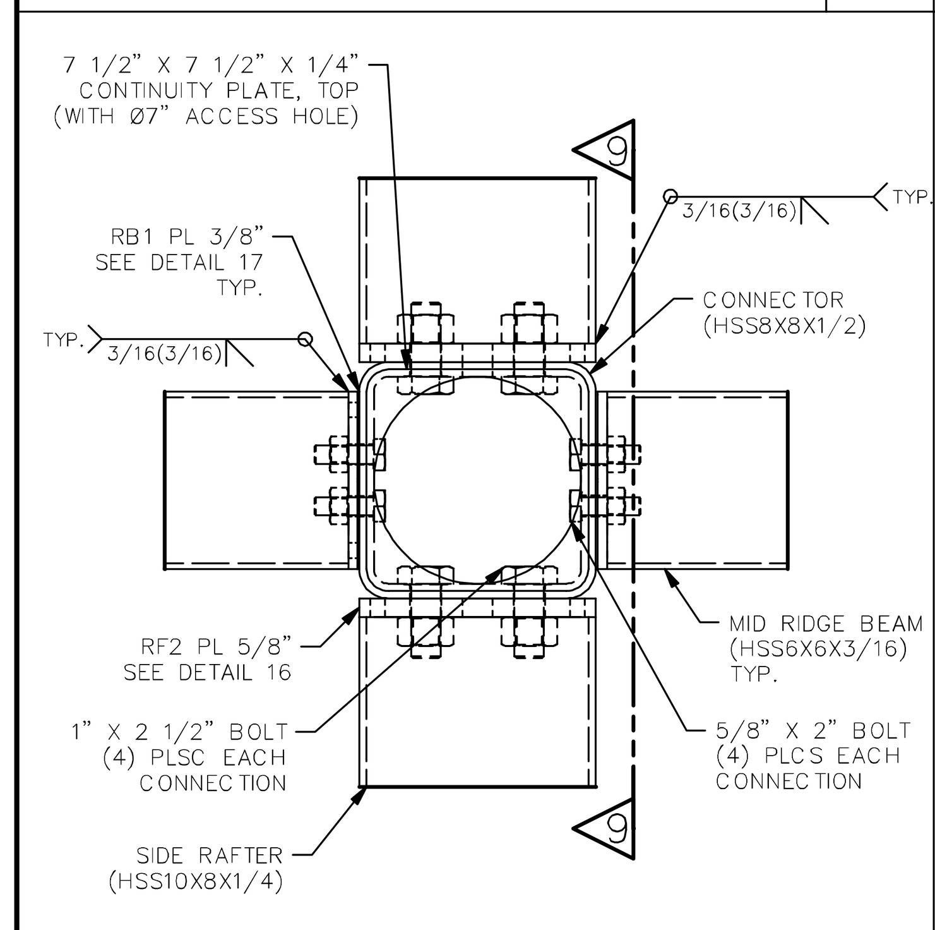
ISOMETRIC – PURLIN CONNECTIONS @ CORNER RAFTER 5



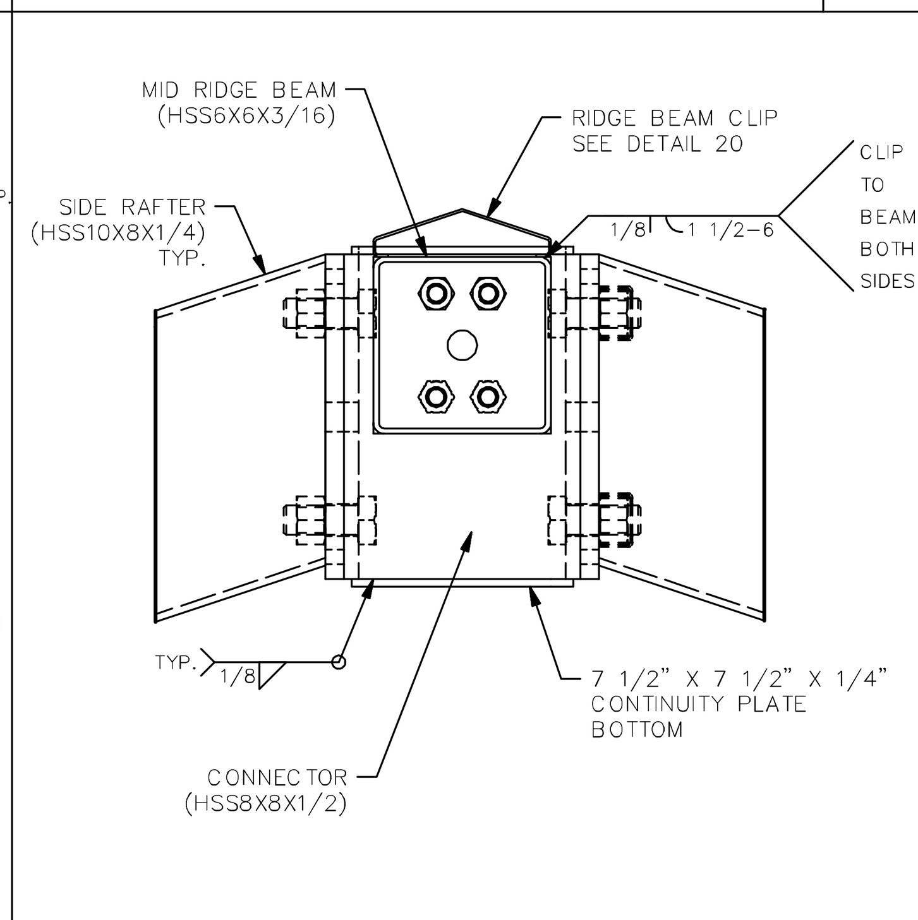
PLAN – EAVE BEAM & SIDE RAFTER CONNECTION @ SIDE COLUMN 6



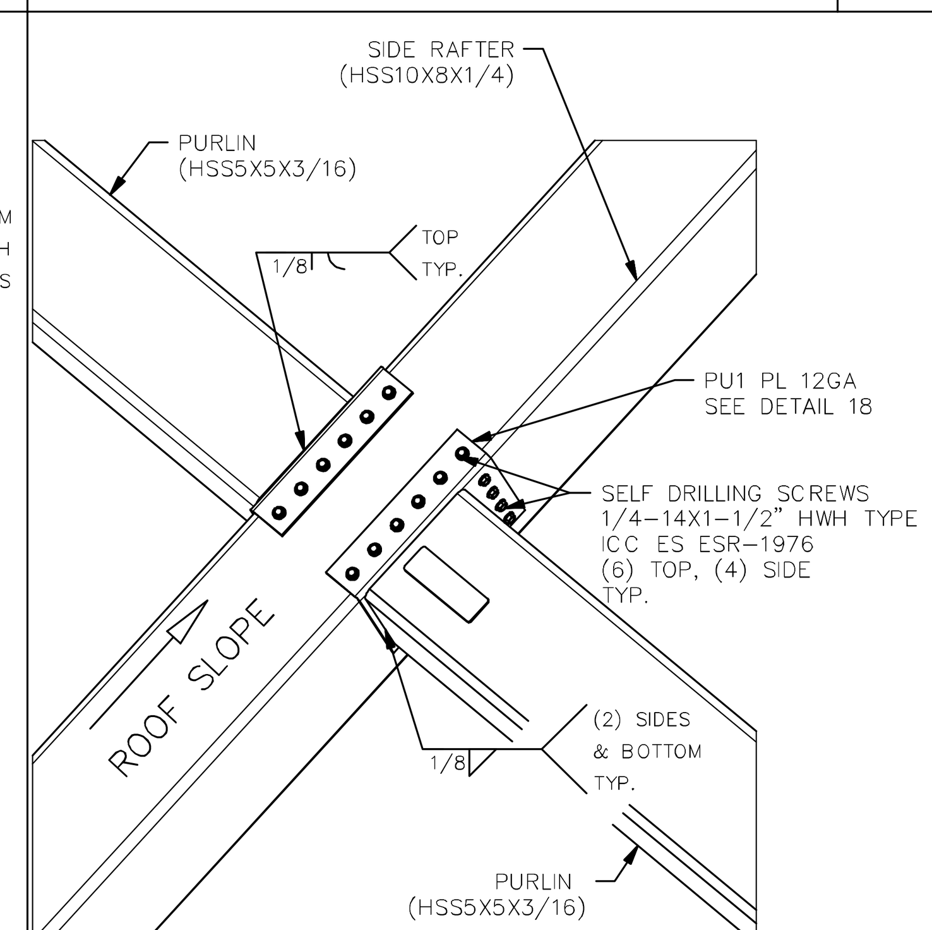
VIEW – EAVE BEAM & SIDE RAFTER CONNECTION @ SIDE COLUMN 7



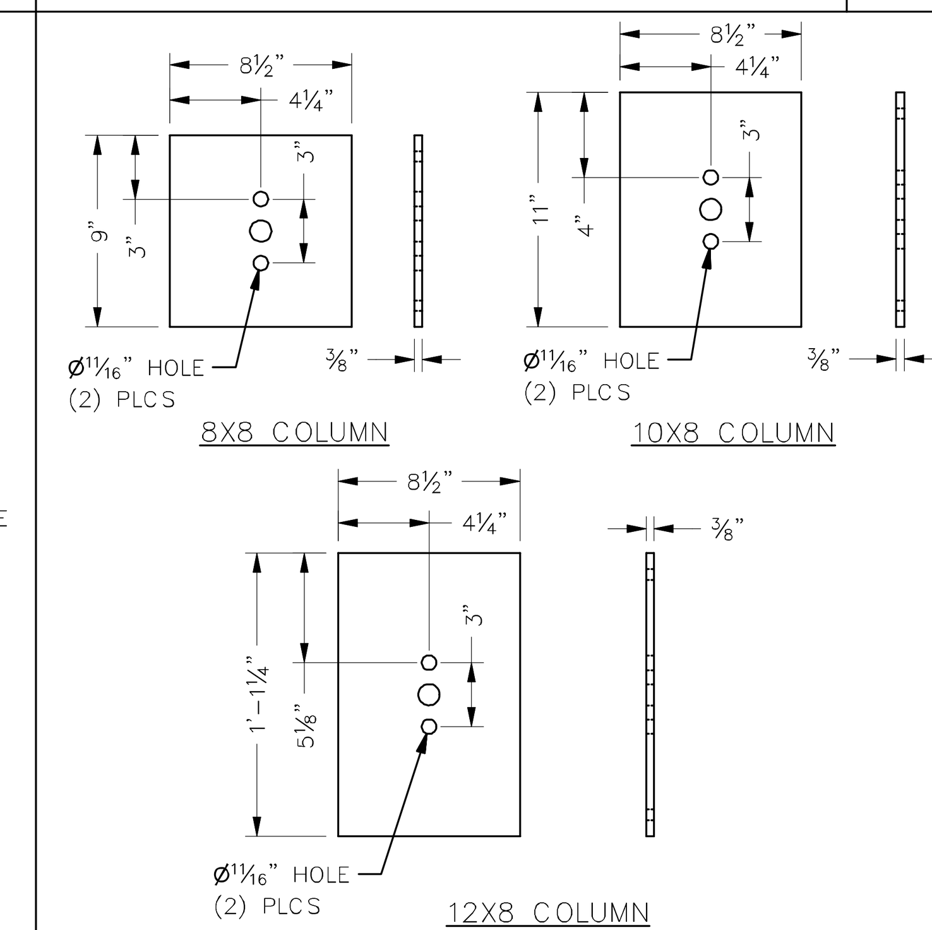
PLAN – SIDE RAFTERS & RIDGE BEAM CONNECTIONS @ CONNECTOR 8



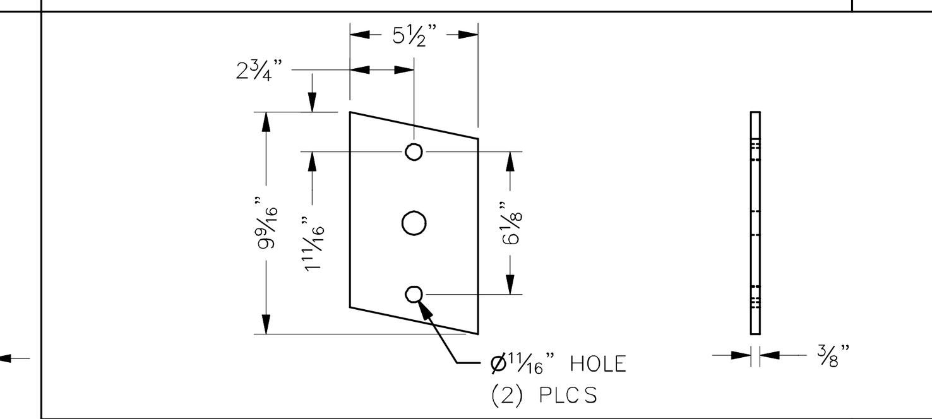
VIEW – SIDE RAFTERS & RIDGE BEAM CONNECTIONS @ CONNECTOR 9

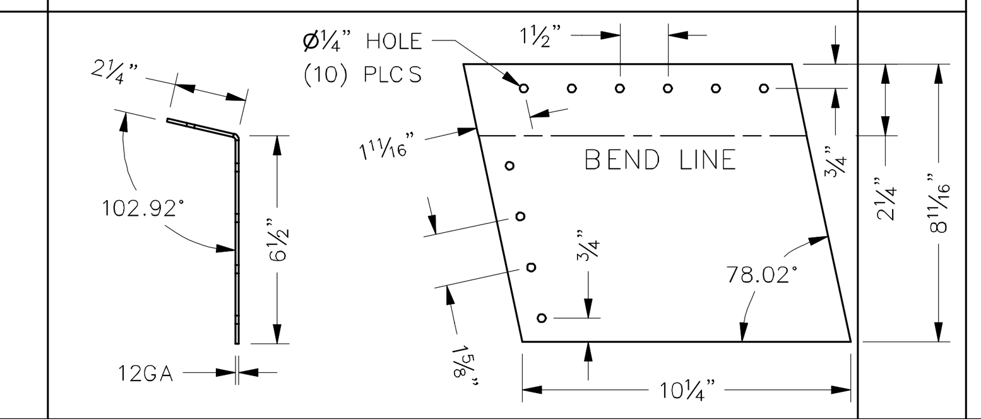


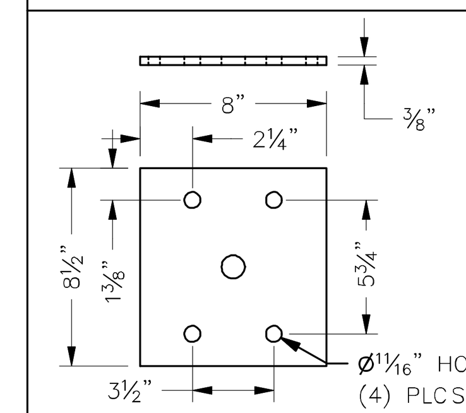
ISOMETRIC – PURLIN CONNECTIONS @ SIDE RAFTER 10

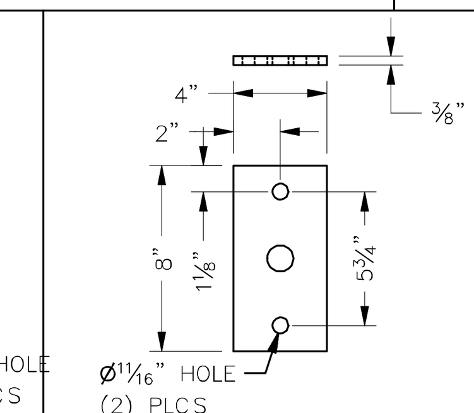


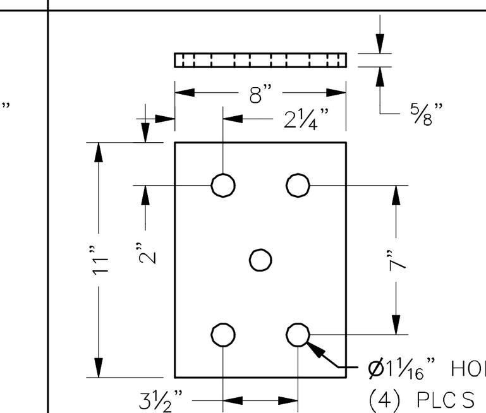
COLUMN TO RAFTER PLATE DETAIL 11

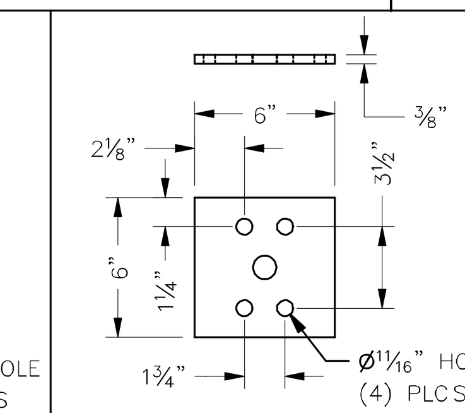

CORNER EAVE BEAM PLATE DETAIL 12

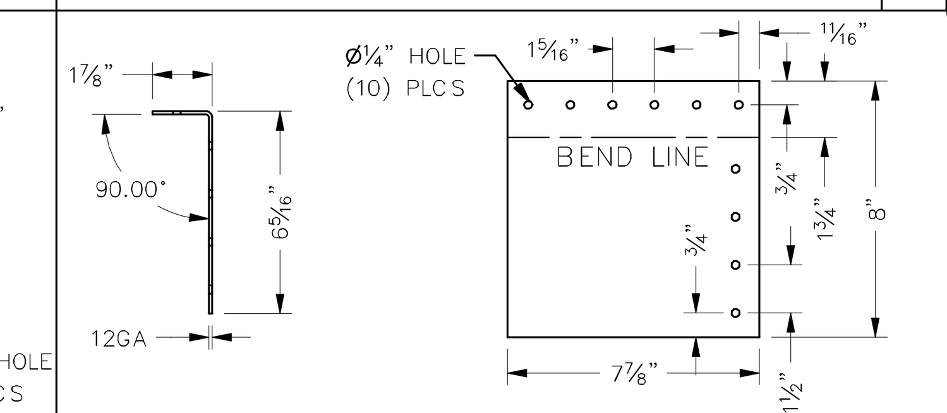

CORNER PURLIN PLATE DETAIL 15

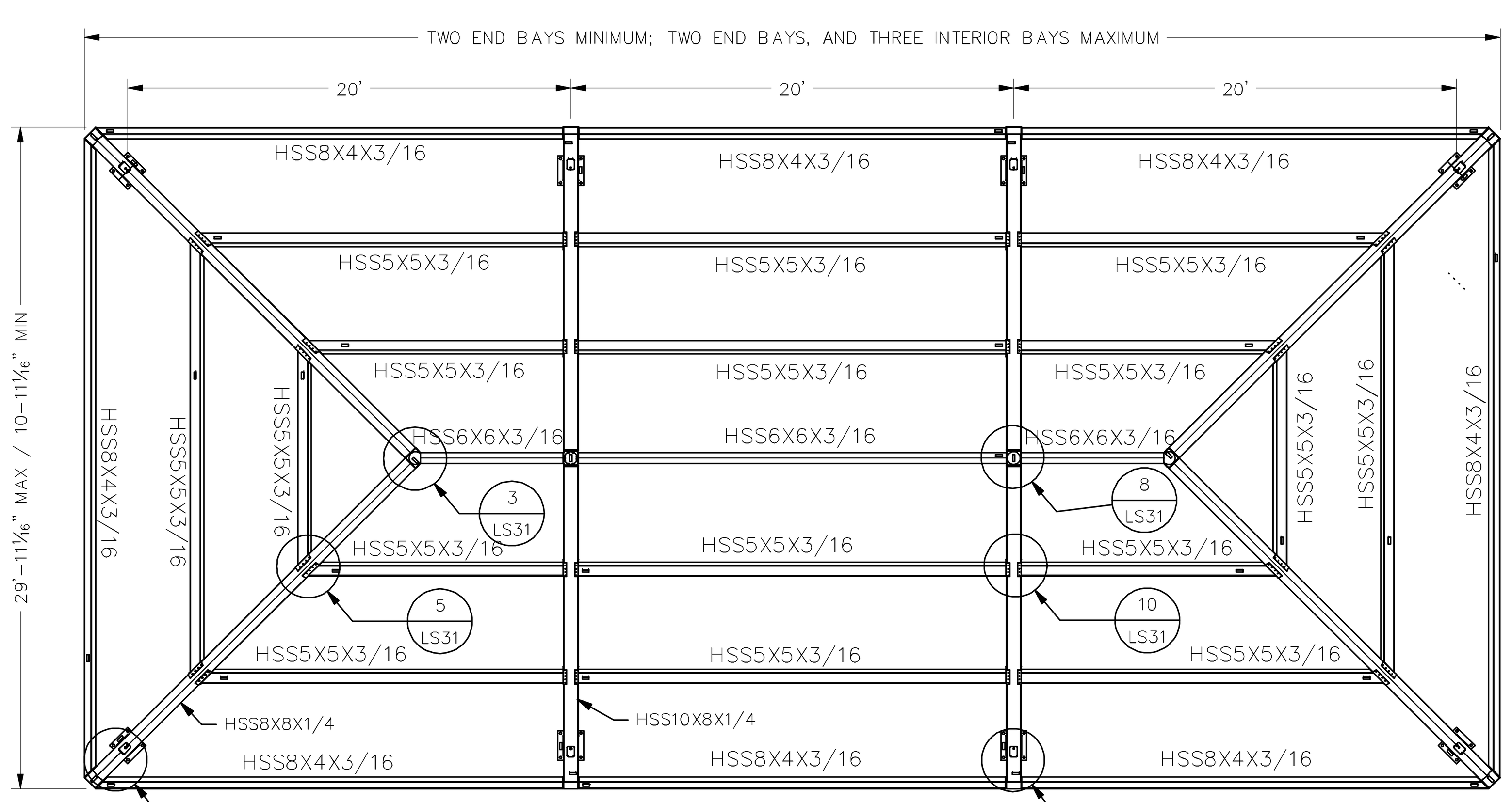

CORNER RAFTER PLATE DETAIL 13


SIDE EAVE BEAM PLATE DETAIL 14


SIDE RAFTER PLATE DETAIL 16


RIDGE BEAM PLATE DETAIL 17


SIDE PURLIN PLATE DETAIL 18



PLAN VIEW

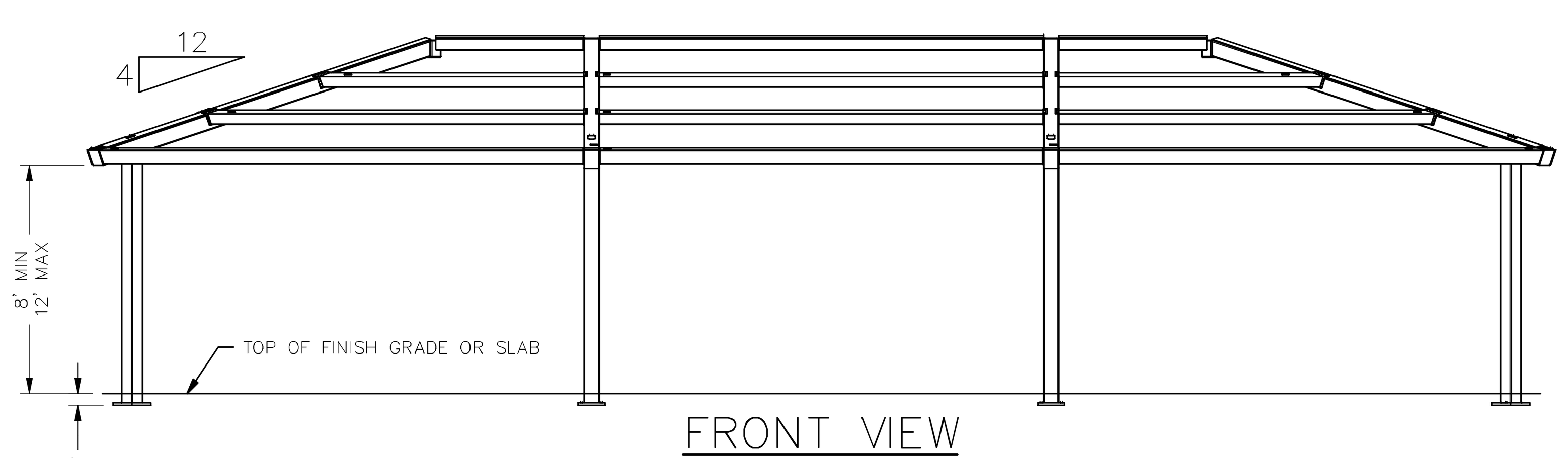
*NOTE:
QUANTITIES WILL VARY DEPENDING ON SHELTER SIZE ORDERED, PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL.

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	4		CORNER COLUMN	**SEE NOTE BELOW		353 lbmass
2	*		SIDE COLUMN	**SEE NOTE BELOW		399 lbmass
3	2		LH SIDE EAVE BEAM	HSS8X4X3/16		311 lbmass
4	2		RH SIDE EAVE BEAM	HSS8X4X3/16		311 lbmass
5	2		END EAVE BEAM	HSS8X4X3/16		422 lbmass
6	*		SIDE EAVE BEAM	HSS8X4X3/16		287 lbmass
7	4		CORNER RAFTER	HSS8X8X1/4		607 lbmass
8	*		SIDE RAFTER	HSS10X8X1/4		474 lbmass
9	2		END RIDGE BEAM	HSS6X6X3/16		149 lbmass
10	*		MID RIDGE BEAM	HSS6X6X3/16		329 lbmass
11	*		CONNECTOR	HSS8X8X1/2		48 lbmass
12	2		LH SIDE PURLIN 1	HSS5X5X3/16		238 lbmass
13	2		RH SIDE PURLIN 1	HSS5X5X3/16		238 lbmass
14	2		END PURLIN 1	HSS5X5X3/16		278 lbmass
15	2		LH SIDE PURLIN 2	HSS5X5X3/16		167 lbmass
16	2		RH SIDE PURLIN 2	HSS5X5X3/16		167 lbmass
17	2		END PURLIN 2	HSS5X5X3/16		137 lbmass
18	*		MID PURLIN	HSS5X5X3/16		284 lbmass

**NOTE:
MATERIAL WILL VARY DEPENDING ON SHELTER SIZE ORDERED.

- [ ] CORNER COLUMN 8' UTB – (HSS8X8X1/4)
- [ ] SIDE COLUMN 8' UTB – (HSS10X8X5/16)
- [x] CORNER COLUMN 10' UTB – (HSS8X8X1/4)
- [x] SIDE COLUMN 10' UTB – (HSS10X8X5/16)
- [ ] CORNER COLUMN 12' UTB – (HSS10X8X5/16)
- [ ] SIDE COLUMN 12' UTB – (HSS12X8X5/16)

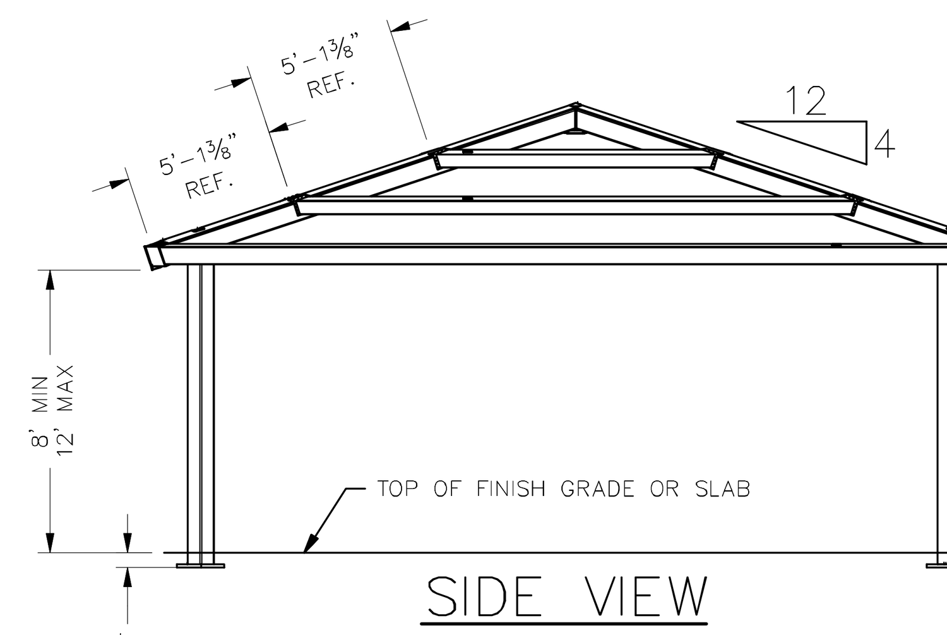
MODEL DESIGNATION	
~~RH30X44~~	~~2 BAY~~
RH30X64	3 BAY
~~RH30X84~~	~~4 BAY~~
~~RH30X104~~	~~5 BAY~~



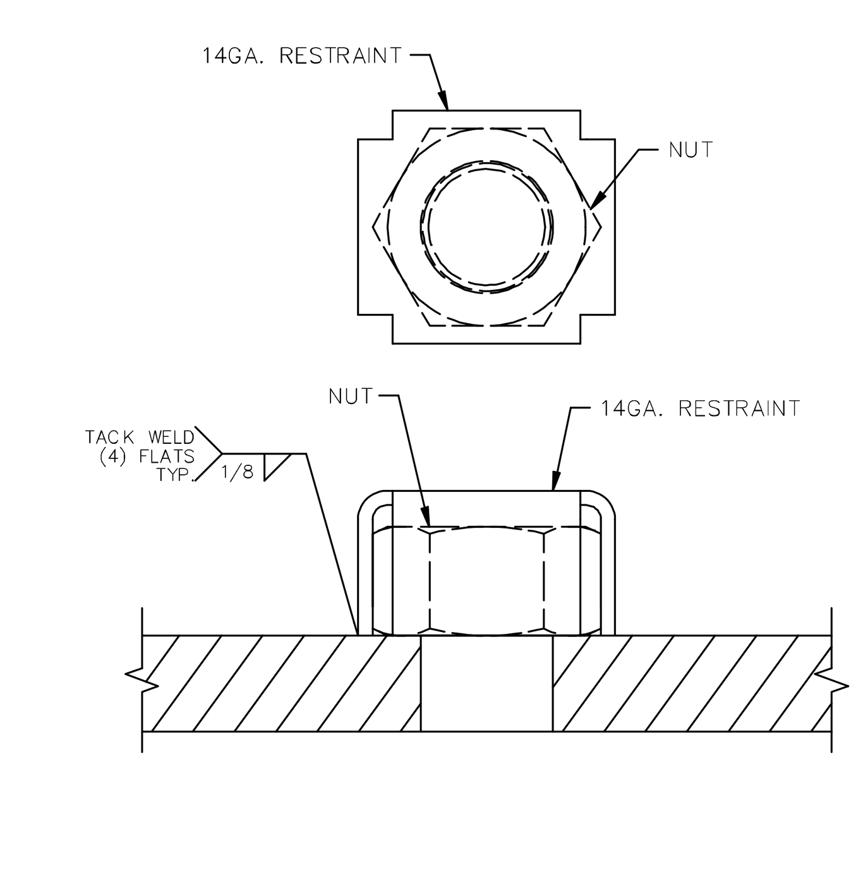
FRONT VIEW

96" MIN IF USED OVER ACCESSIBLE PARKING OR ACCESS AISLES

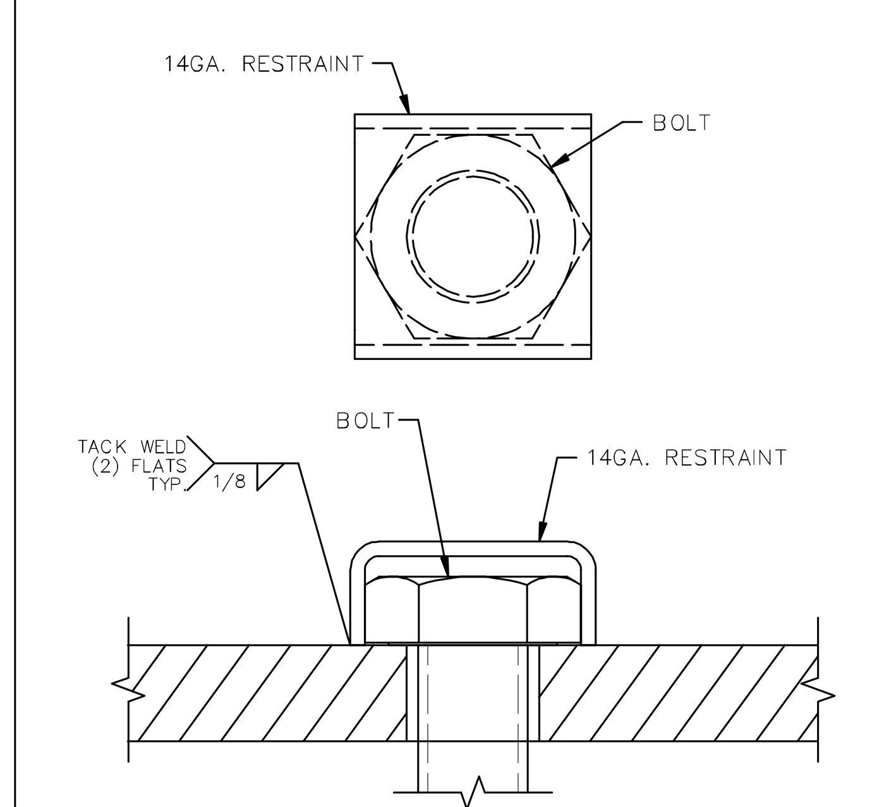
114" MIN IF LOCATED OVER ACCESSIBLE PASSENGER LOADING ZONES



SIDE VIEW

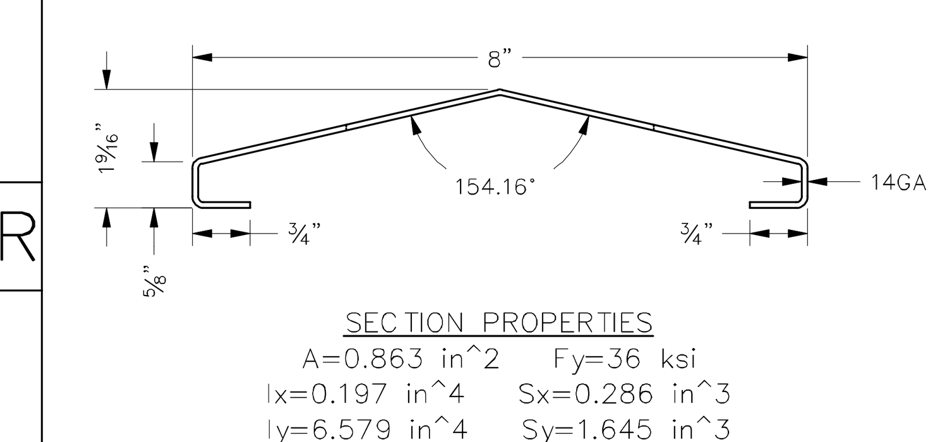


TYPICAL NUT RESTRAINING SYSTEM NR



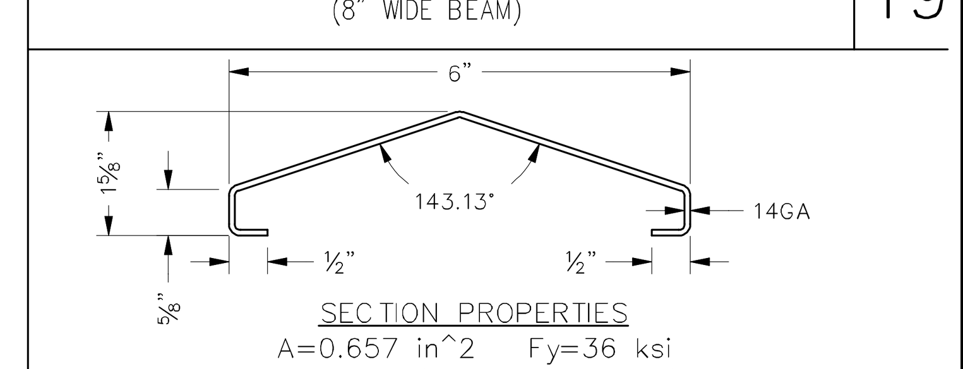
ALL BOLTS ARE ASTM F3125 GR A325 HIGH STRENGTH BOLTS PER SHEET LS1.0

TYPICAL BOLT RESTRAINING SYSTEM BR



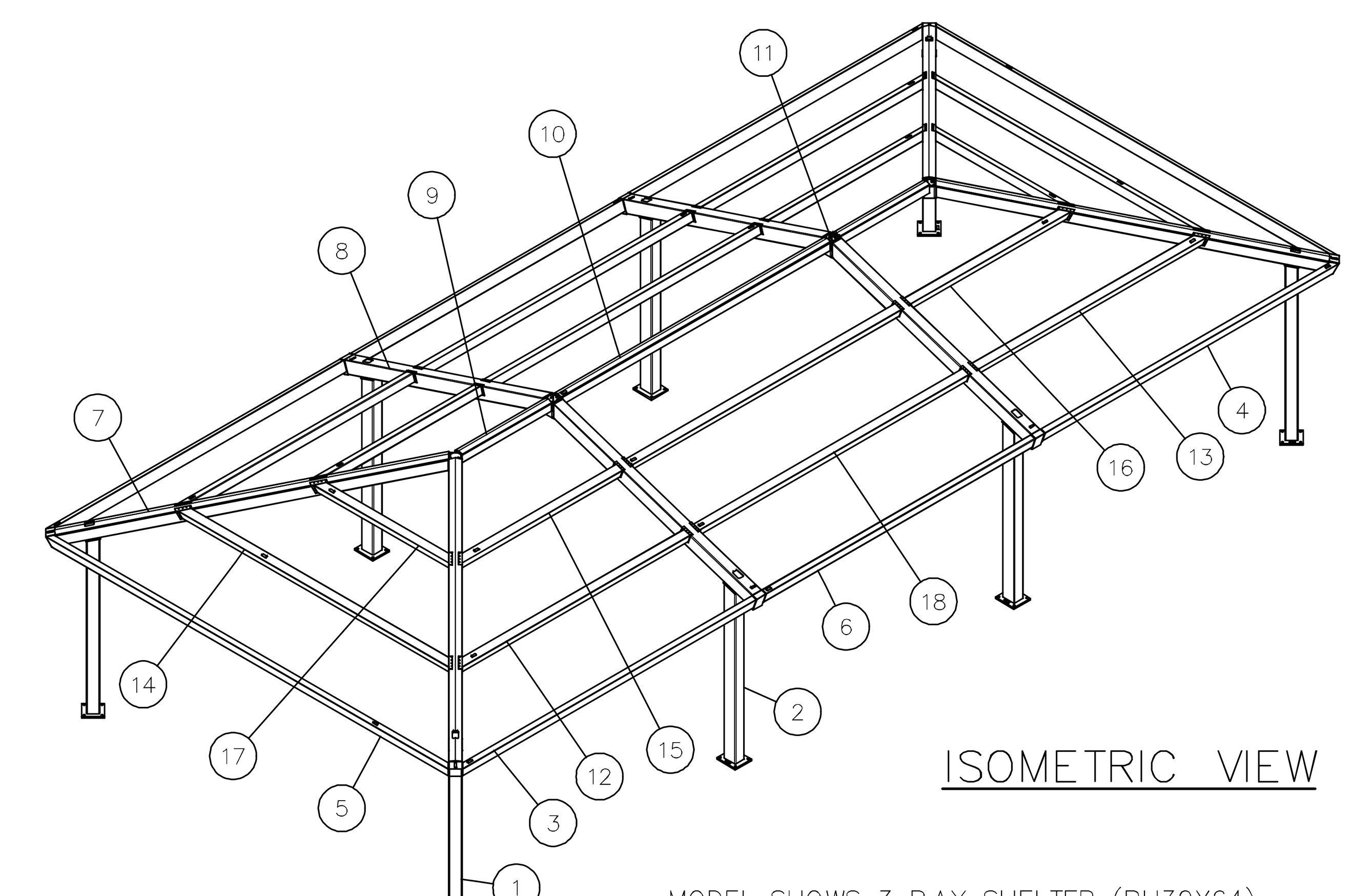
SECTION PROPERTIES
A=0.863 in^2 Fy=36 ksi
Ix=0.197 in^4 Sx=0.286 in^3
Iy=6.579 in^4 Sy=1.645 in^3

CORNER RAFTER CLIP (8" WIDE BEAM) 19



SECTION PROPERTIES
A=0.657 in^2 Fy=36 ksi
Ix=0.087 in^4 Sx=0.03 in^3
Iy=2.92 in^4 Sy=0.97 in^3

RIDGE BEAM CLIP (6" WIDE BEAM) 20


ISOMETRIC VIEW

MODEL SHOWS 3 BAY SHELTER (RH30X64)
PLEASE REFER TO ANCHOR BOLT LAYOUT SHEET FOR
CORRECT COLUMN PLACEMENT BASED ON SIZE ORDERED

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JRMA ARCHITECTS ENGINEERS
2700 SATURN ST BREA, CA 92821
T. 714.524.1870 F. 714.524.1875
WWW.JRMA.COM

REGISTERED PROFESSIONAL ENGINEER MICHAEL D. ... STRUCTURAL STATE OF CALIFORNIA 07/29/2021

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

30' WIDE RECTANGULAR HIP FRAMING & CONNECTION DETAILS

ICON Shelter Systems Inc
DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM

1455 LINCOLN AVE
HOLLAND MI, 49423
616.396.0919
800.748.0985
616.396.0944 FX

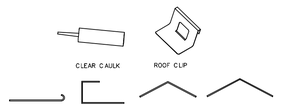
PRE-CHECK (PC) DOCUMENT
Code: 2019 CBC
A separate project application for construction is required.

LS3.1

30' WIDE RECTANGULAR HIP

S:\Engineering\Inventor\DSA 2019\PC 2019 RG DSA\New folder\30 FOOT\DSA RG40-P4.iam

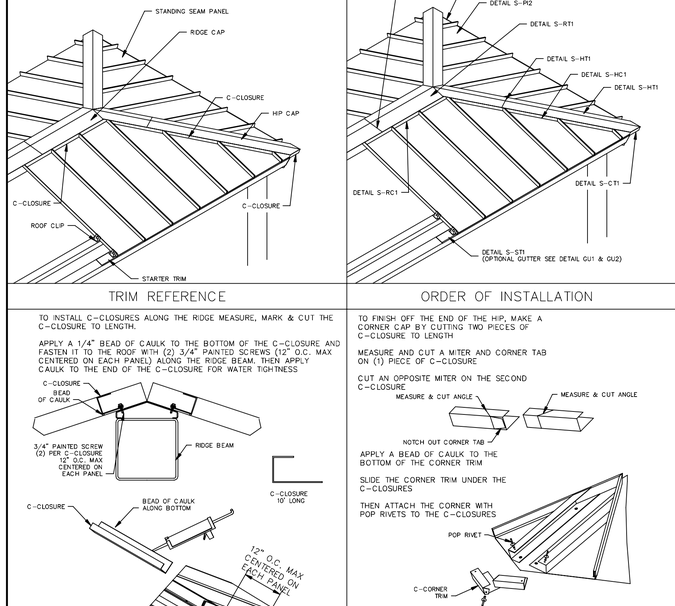
PRINTED ON :



THESE DETAILS ASSUME THAT ALL COMPONENTS OF THIS ROOF SYSTEM WILL BE INSTALLED PLUMB AND SQUARE. CAULK AND TRIM SHOULD ALSO BE INSTALLED TO INSURE WATER TIGHTNESS

READ ALL DETAILS IN THIS INSTALLATION MANUAL BEFORE STARTING

S-ST1 STARTER TRIM
S-CP1 ROOF PANEL PREPARATION
S-PI1 FIRST ROOF PANEL
S-PI2 SECOND ROOF PANEL
S-HC1 C-CLOSURE @ HIP
S-RC1 C-CLOSURE @ RIDGE
S-CT1 CORNER TRIM
S-HT1 HIP CAP
S-RT1 RIDGE CAP



TRIM REFERENCE

TO INSTALL C-CLOSURES ALONG THE RIDGE MEASURE, MARK & CUT THE C-CLOSURE TO LENGTH.

APPLY A 1/4" BEAD OF CAULK TO THE BOTTOM OF THE C-CLOSURE AND FASTEN IT TO THE ROOF WITH (2) 3/4" PAINTED SCREWS (12" O.C. MAX CENTERED ON EACH PANEL) ALONG THE RIDGE BEAM. THEN APPLY CAULK TO THE END OF THE C-CLOSURE FOR WATER TIGHTNESS

ORDER OF INSTALLATION

TO FINISH OFF THE END OF THE HIP, MAKE A CORNER CAP BY CUTTING TWO PIECES OF C-CLOSURE TO LENGTH

MEASURE AND CUT A MITER AND CORNER TAB ON (1) PIECE OF C-CLOSURE

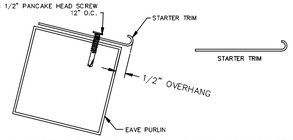
CUT AN OPPOSITE MITER ON THE SECOND C-CLOSURE

APPLY A BEAD OF CAULK TO THE BOTTOM OF THE CORNER TRIM

SLIDE THE CORNER TRIM UNDER THE C-CLOSURES

THEN ATTACH THE CORNER WITH POP RIVETS TO THE C-CLOSURES

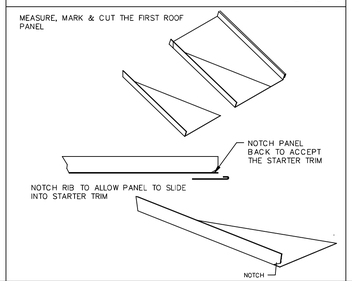
INSTALL STARTER TRIM OVERHANGING THE EDGE OF THE EAVE PURLIN 1/2". ATTACH STARTER TRIM WITH 1 1/2" PANCAKE HEAD SCREWS 12" O.C.



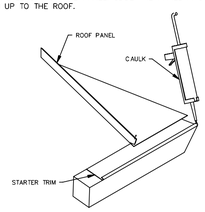
NOTE: SEE DETAILS GU1 AND GU2 IF INSTALLING OPTIONAL GUTTER SYSTEM

STARTER INSTALLATION S-ST1

MEASURE, MARK & CUT THE FIRST ROOF PANEL

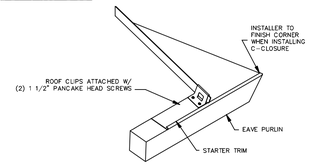


AFTER THE ROOF PANEL HAS BEEN CUT TO SIZE (IF NECESSARY) AND NOTCHED, TEST FIT THE PANEL. THEN APPLY A BEAD OF CAULK THE APPROXIMATE LENGTH OF THE PANEL. SLIDE THE PANEL INTO PLACE, AND SQUARE IT UP TO THE ROOF.

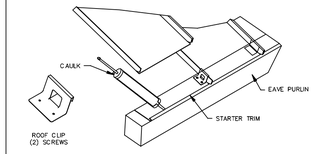


WITH THE ROOF PANEL IN PLACE AND SQUARE, INSTALL THE ROOF CLIPS WITH (2) 1 1/2" PANCAKE HEAD SCREWS.

ROOF CLIPS ARE INSTALLED AT EVERY CROSS MEMBER



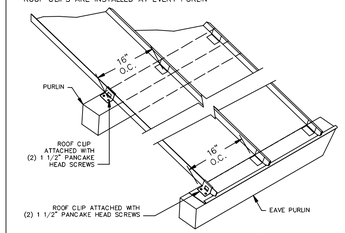
AFTER THE SECOND ROOF PANEL HAS BEEN CUT TO LENGTH (IF NECESSARY) AND NOTCHED, TEST FIT PANEL. THEN APPLY A BEAD OF CAULK INSIDE THE STARTER TRIM. SLIDE THE SECOND ROOF PANEL IN PLACE AND SNAP IT OVER THE BATTEN OF THE FIRST PANEL



WITH THE SECOND ROOF PANEL IN PLACE AND SQUARE, INSTALL THE ROOF CLIPS WITH (2) 1 1/2" PANCAKE HEAD SCREWS.

REPEAT THIS STEP UNTIL ALL ROOF PANELS ARE INSTALLED

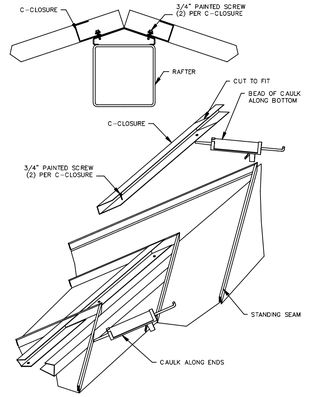
ROOF CLIPS ARE INSTALLED AT EVERY PURLIN



ROOF CLIPS ARE INSTALLED AT EVERY PURLIN

TO INSTALL C-CLOSURES ALONG THE HIP, MARK & CUT THE C-CLOSURE TO LENGTH

APPLY A BEAD OF CAULK TO THE BOTTOM OF THE C-CLOSURE AND FASTEN IT TO THE ROOF WITH (2) 3/4" PAINTED SCREWS ALONG THE RAFTER. THEN APPLY CAULK TO THE END OF THE C-CLOSURE FOR WATER TIGHTNESS



ROOF NOTES

ATTENTION INSTALLERS:
METAL SHAVINGS LEFT ON ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH!

DRILLING OR INSTALLING ROOF FASTENERS WILL CAUSE METAL SHAVINGS. THESE SHAVINGS MUST BE CAREFULLY REMOVED AT THE END OF EACH DAY BY EITHER SWEEPING OR BRUSHING THE INSTALLED ROOF.

INSTALLED CORRECTLY	INSTALLED TOO TIGHT	INSTALLED TOO LOOSE
THE SEALING MATERIAL SLIGHTLY VISIBLE AROUND THE METAL WASHER	THE SEALING MATERIAL IS DEFORMED BEYOND THE EDGE OF THE METAL WASHER	THE SEALING MATERIAL IS NOT VISIBLE AROUND THE EDGE OF THE METAL WASHER

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE METAL ROOFING SYSTEM. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. CHANGES TO THE DETAILS MAY BE REQUIRED DUE TO FIELD CONDITIONS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK.

THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED.

SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK.

THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSPERSON AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.

ICON STD	RH/DSA-PC
DRAWN BY	ANGEL
DATE	4/2/2021
REV	
REV DATE	

JRMA
ARCHITECTS ENGINEERS
2700 SATURN ST BREA, CA 92821
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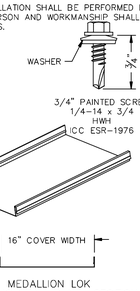
WWW.JRMA.COM

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. SHORT — STRUCTURAL — STATE OF CALIFORNIA

07/29/2021



MEDALLION LOK
STANDING SEAM PANEL SECTION
24 ga. Fy = 50 ksi Fu = 65 ksi
ICC ESL-1082

SECTION PROPERTIES
(PER FT. OF WIDTH)

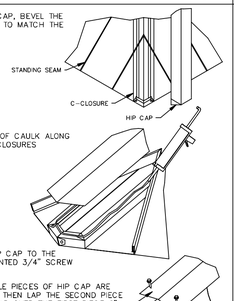
TOP IN COMPRESSION
Ix=0.086 in^4
Se=0.0561 in^3
Ma=1.68 in-kips

BOTTOM IN COMPRESSION
Ix=0.040 in^4
Se=0.0479 in^3
Ma=1.248 in-kips

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

FIELD CUTTING ROOF PANELS S-CP1

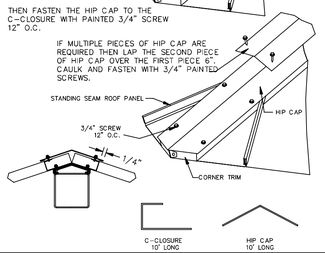
TO INSTALL THE HIP CAP, BEVEL THE END OF THE HIP CAP TO MATCH THE ANGLE OF THE ROOF



NEXT APPLY A BEAD OF CAULK ALONG THE TOP OF THE C-CLOSURES

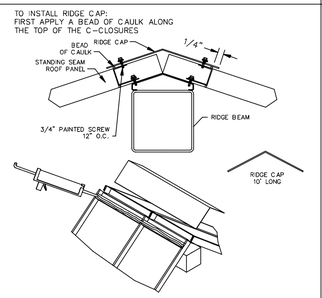
THEN FASTEN THE HIP CAP TO THE C-CLOSURE WITH PAINTED 3/4" SCREW 12" O.C.

IF MULTIPLE PIECES OF HIP CAP ARE REQUIRED THEN LAP THE SECOND PIECE OF HIP CAP OVER THE FIRST PIECE 6". CAULK AND FASTEN WITH 3/4" PAINTED SCREWS.



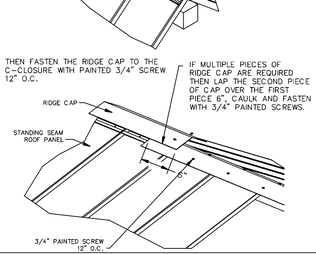
INSTALLATION OF FIRST ROOF PANEL S-PI1

TO INSTALL RIDGE CAP:
FIRST APPLY A BEAD OF CAULK ALONG THE TOP OF THE C-CLOSURES

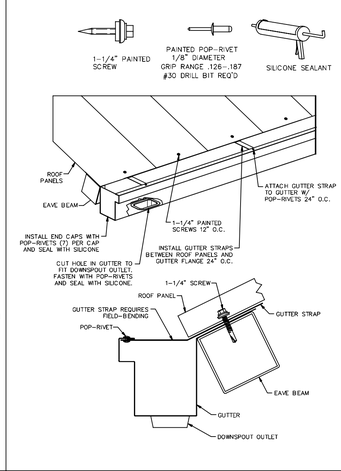


THEN FASTEN THE RIDGE CAP TO THE C-CLOSURE WITH PAINTED 3/4" SCREW 12" O.C.

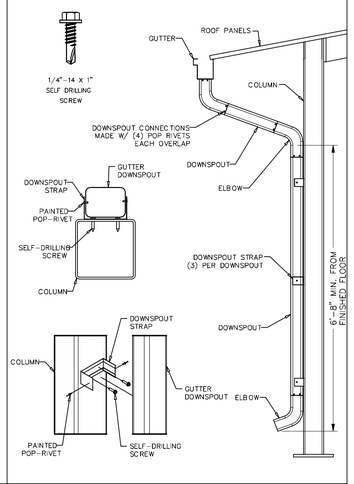
IF MULTIPLE PIECES OF RIDGE CAP ARE REQUIRED THEN LAP THE SECOND PIECE OF CAP OVER THE FIRST PIECE 6", CAULK AND FASTEN WITH 3/4" PAINTED SCREWS.



INSTALLATION OF SECOND ROOF PANEL S-PI2



INSTALLATION OF HIP C-CLOSURE S-HC1



INSTALLATION OF C-CLOSURE @ RIDGE S-RC1

INSTALLATION OF CORNER TRIM S-CT1

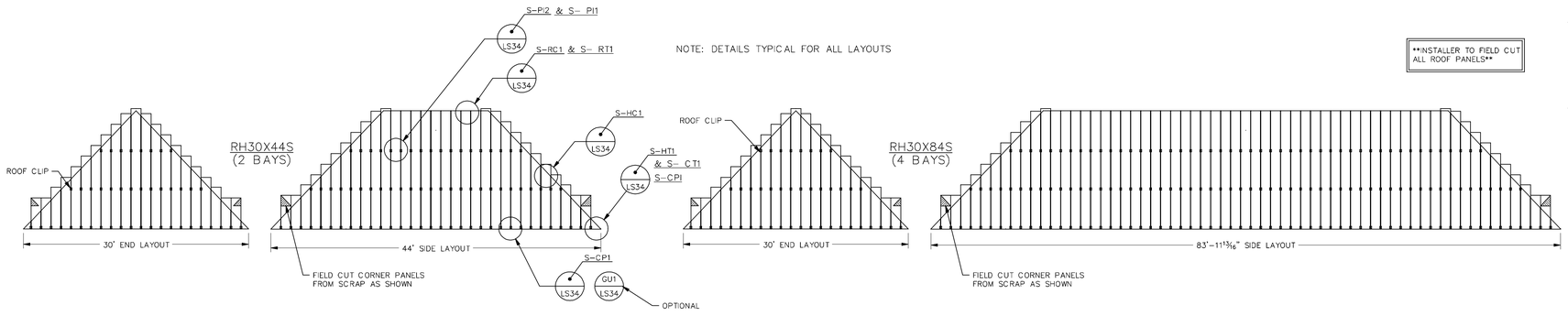
INSTALLATION OF HIP CAP S-HT1

INSTALLATION OF RIDGE CAP S-RT1

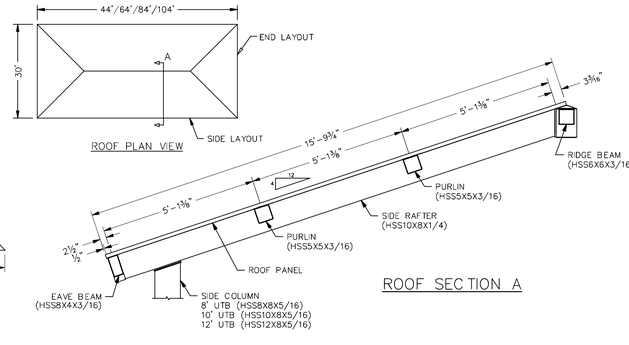
OPTIONAL GUTTER INSTALLATION STANDING SEAM ROOF GU1

OPTIONAL GUTTER SECTION STANDING SEAM ROOF GU2

30' WIDE RECTANGULAR HIP STANDING SEAM ROOFING



INSTALLER TO FIELD CUT ALL ROOF PANELS



ROOF SECTION A

30' WIDE RECTANGULAR HIP STANDING SEAM ROOFING PLAN

ICON Shelter Systems Inc
DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM

1455 LINCOLN AVE
HOLLAND MI, 49423

616.396.0919
800.748.0985
616.396.0944 FX

PRE-CHECK (PC) DOCUMENT
Code: 2019 CBC
A separate project application for construction is required.

LS3.4

S:\Engineering\Inventor\DSA 2019\PC 2019 RH DSA\ROOFS\30 FOOT\30 FOOT END SS.dwg

PRINTED ON :

ELECTRICAL INFORMATION - RECTANGULAR HIP

ICON'S STANDARD ELECTRICAL IS DESIGNED TO ACCOMMODATE Ø1/2" CONDUIT WITH A Ø3" INLET HOLE ON THE BOTTOM OF EACH COLUMN.
THE CONDUIT PATHWAY RUNS THROUGH THE COLUMN, RAFTER, AND RIDGE BEAM THROUGH ALL BOLTED CONNECTIONS AS SHOWN.
IF YOU HAVE SPECIAL ELECTRICAL REQUIREMENTS, PLEASE OUTLINE ANY CHANGES BELOW AS DESCRIBED.

PLEASE NOTE: DESIGN LIMITATIONS ON HOLE/CUTOUT SIZES MAY APPLY.
ICON WILL REACH OUT TO DISCUSS ANY SUCH LIMITATIONS AS NEEDED.

NOTE: ICON SHELTER FRAME IS NOT UL LISTED TO ACT AS A CONDUIT FOR ELECTRICAL WIRING. CONSULT LOCAL BUILDING CODES WHEN PLANNING YOUR ELECTRICAL SYSTEM.

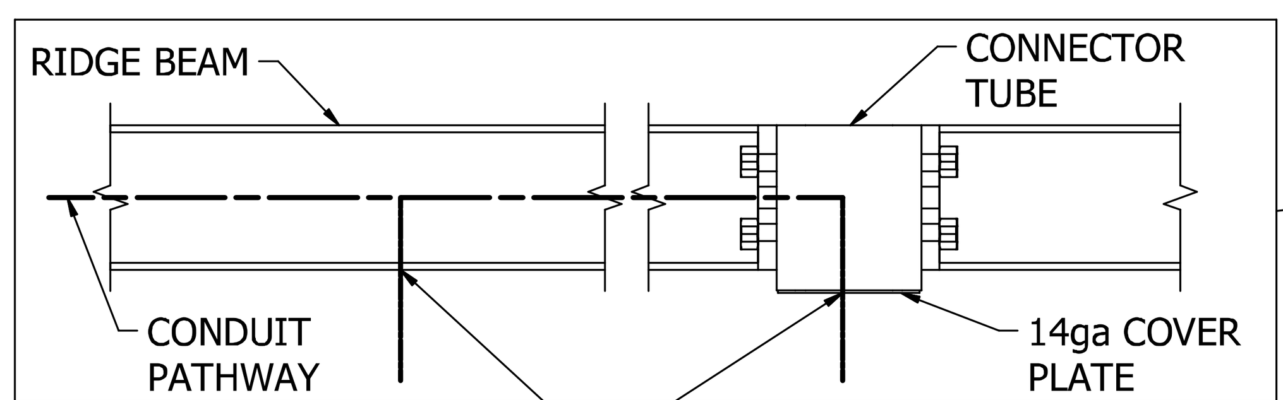
PRELIMINARY: NOT FOR CONSTRUCTION

STEPS:

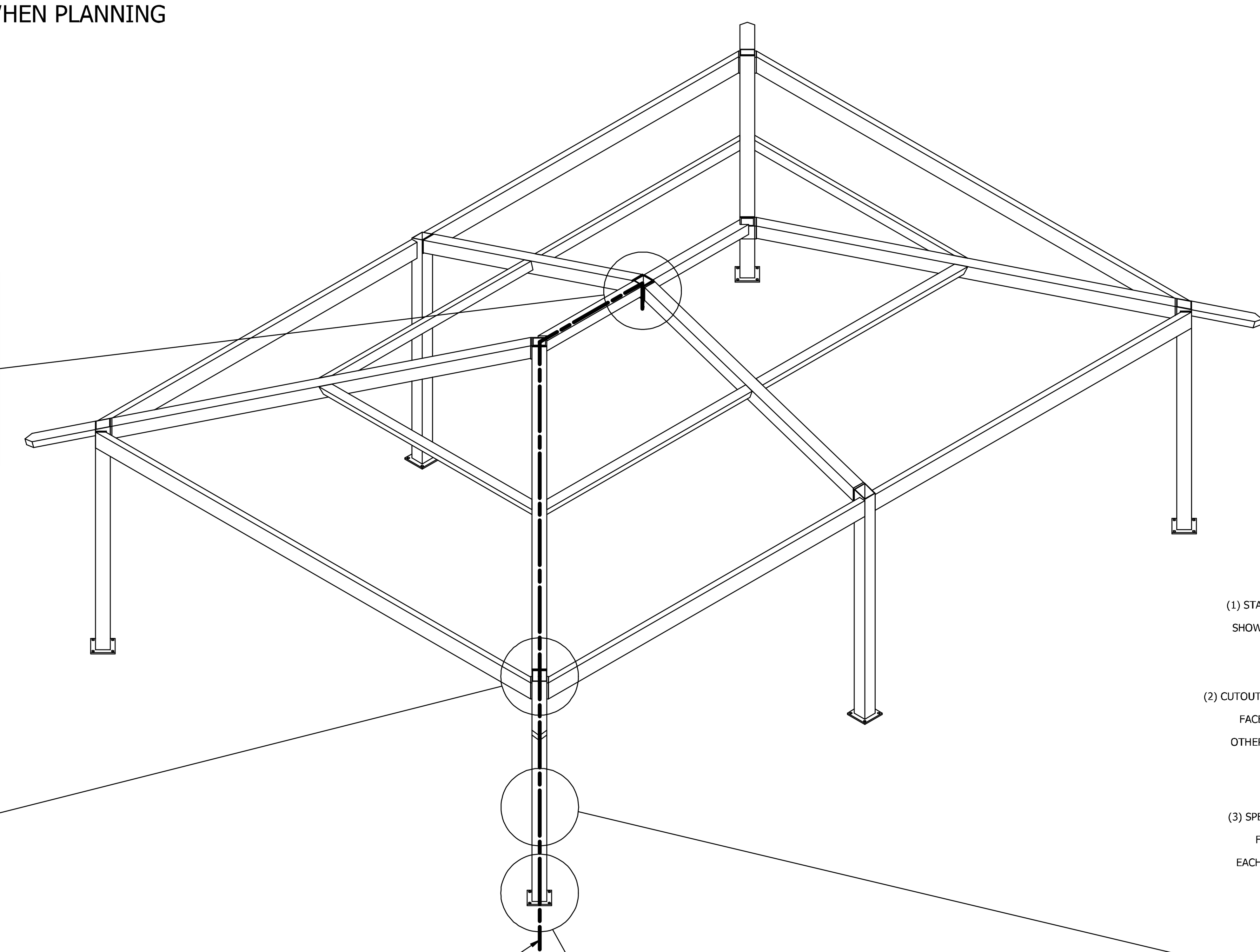
1. CONDUIT HOLE SIZE (DETAIL A)
2. ELECTRICAL EXIT HOLES (DETAIL B)
3. ELECTRICAL ACCESS & COVER PLATES (DETAIL C)
4. ELECTRICAL CONDUIT PATHWAY (DETAIL D)

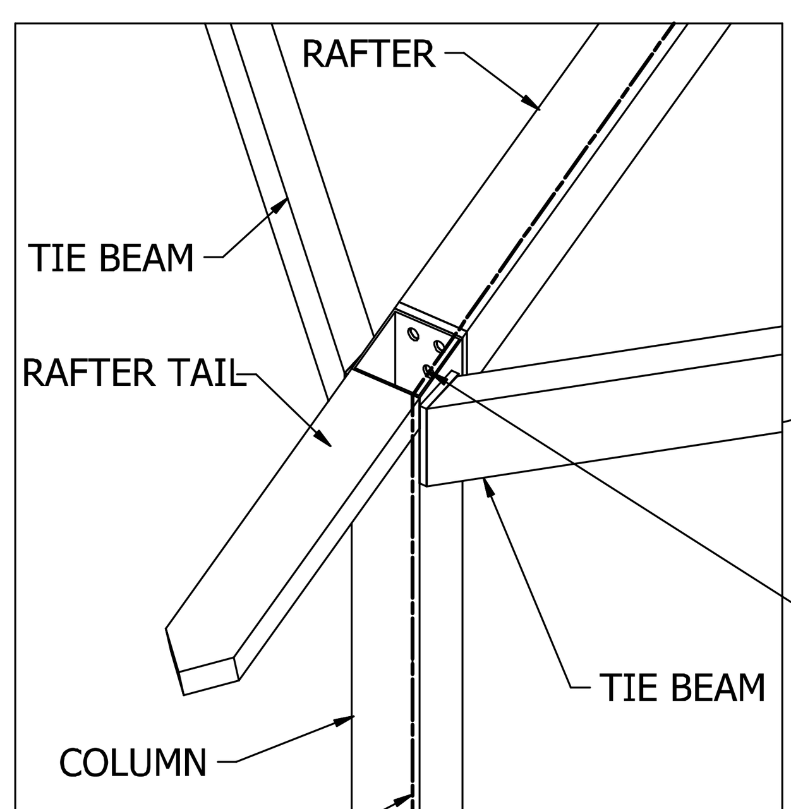
OPTIONAL EXIT HOLES

IF REQUIRED, EXIT HOLES FOR LIGHTING, ETC. CAN BE PLACED IN THE RIDGE BEAM AND/OR CONNECTOR TUBE WITH 14ga COVER PLATE AS SHOWN (CHARGES APPLY)
USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED EXIT HOLE LOCATIONS AND SIZE.



DETAIL B



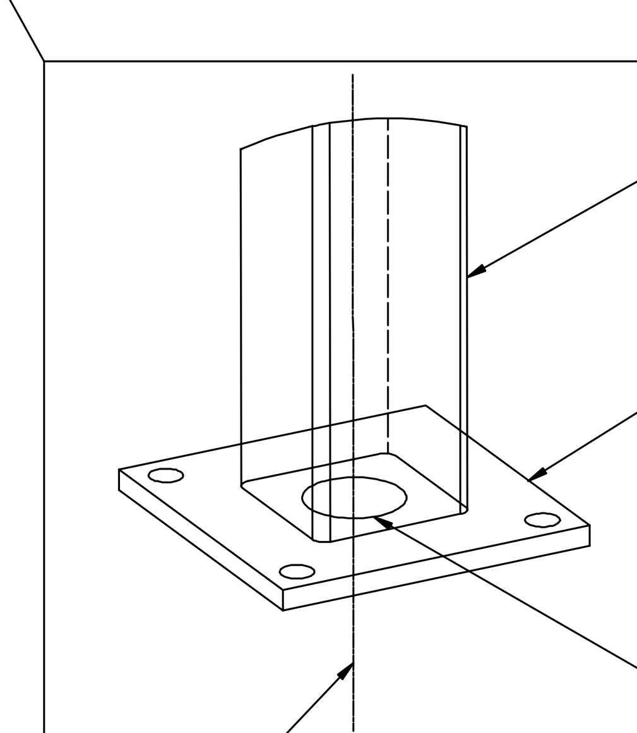


DETAIL A

ICON PROVIDES A MINIMUM OF (1) 3/4" HOLE AT EACH CONNECTION FOR 1/2" CONDUIT.
IF APPLICABLE, PLEASE SPECIFY REQUIRED CONDUIT SIZE: (CHARGES APPLY)

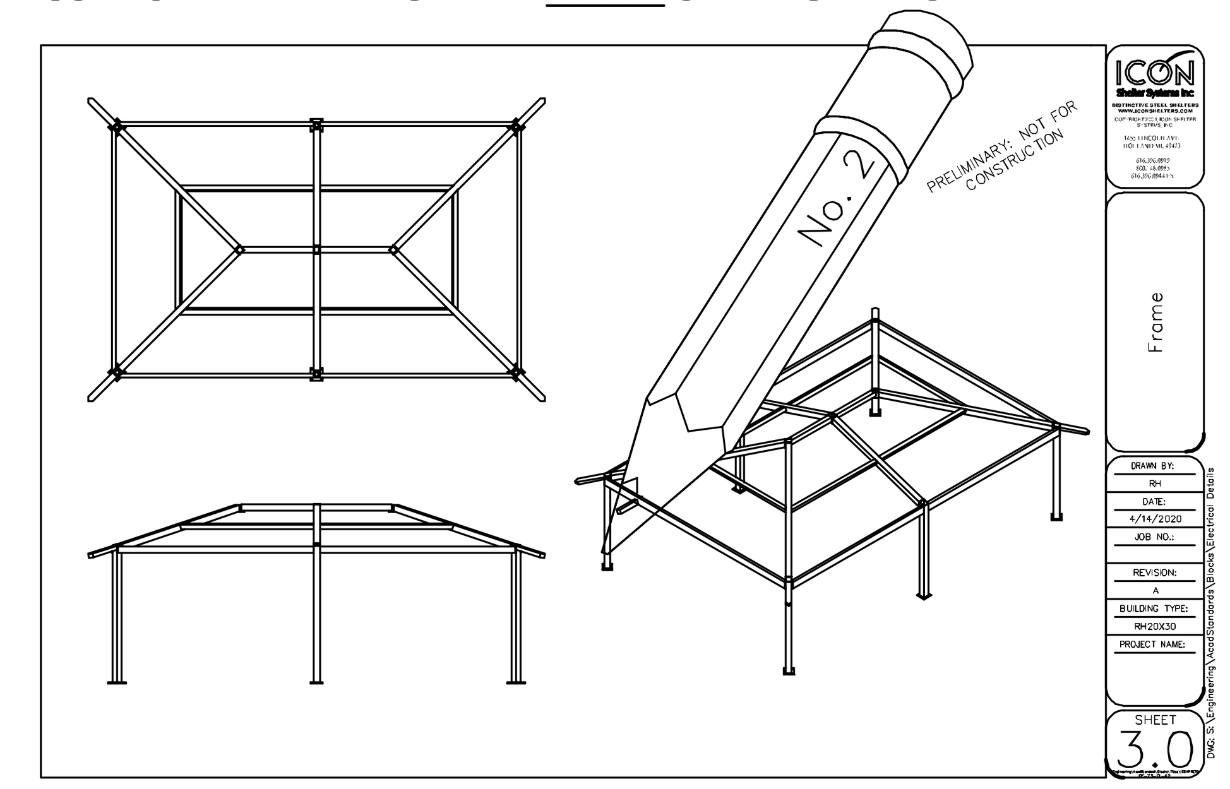
- ☐ 3/4" CONDUIT (1" HOLES)
- ☒ 1" CONDUIT (1 1/4" HOLES)
- ☐ OTHER (PLEASE SPECIFY ____________

CONDUIT PATHWAY PROVIDED FOR EACH COLUMN.



BASE DETAIL

IF REQUIRED, PLEASE DRAW THE NECESSARY ELECTRICAL CONDUIT PATHWAY ON THE FRAME SHEET OF THIS PRELIMINARY.



DETAIL D

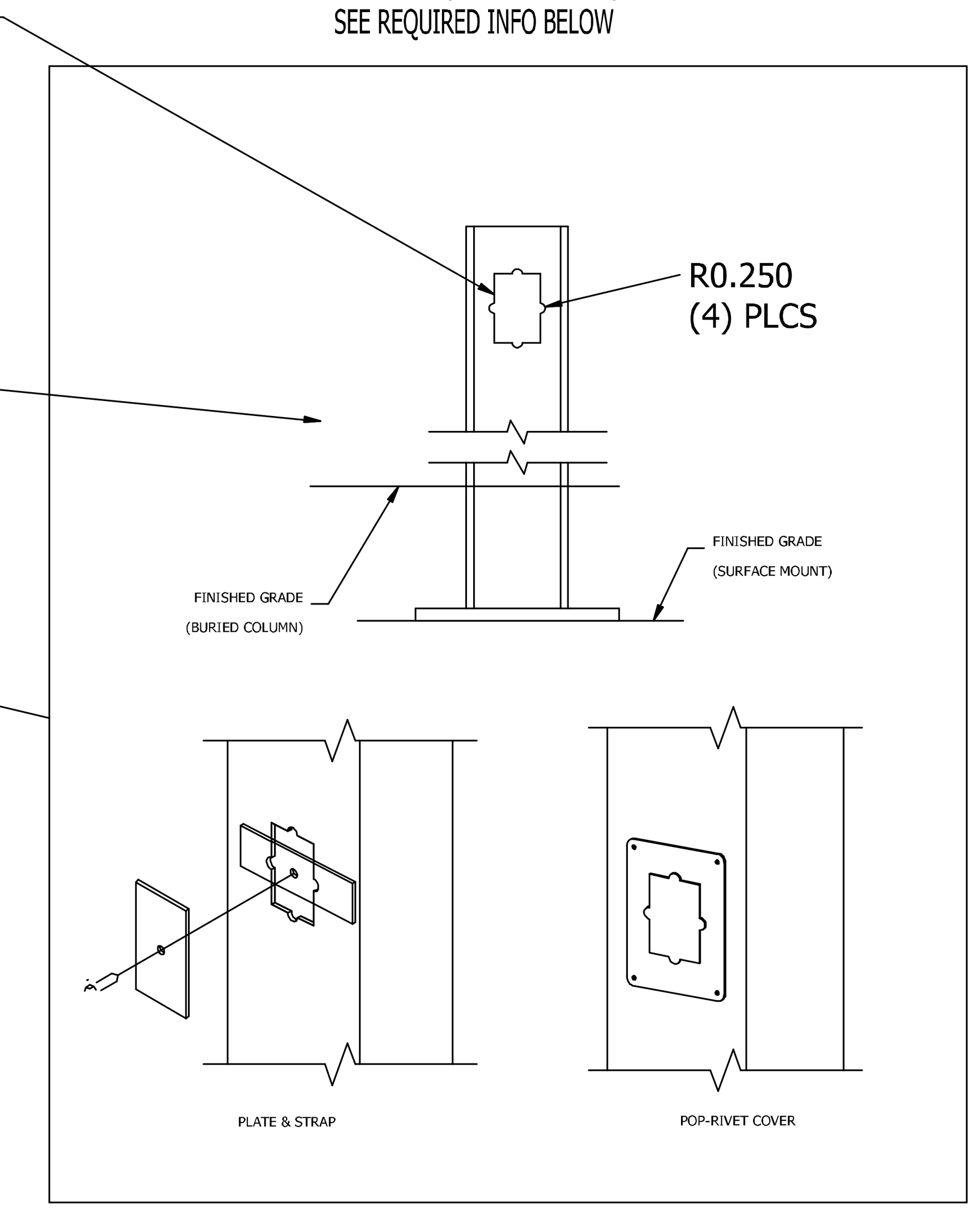
OPTIONAL CUTOUTS

USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED CUTOUT LOCATIONS (CHARGES APPLY)
SEE REQUIRED INFO BELOW

(1) STANDARD CUTOUT SIZE SHOWN. SPECIFY IF OTHER SIZE REQUIRED.

(2) CUTOUTS WILL BE ON INSIDE FACE OF COLUMN UNLESS OTHERWISE INDICATED ON FRAME SHEET.

(3) SPECIFY HEIGHT ABOVE FINISHED GRADE FOR EACH CUTOUT AS SHOWN



DETAIL C

(4) COVER PLATES PROVIDED UPON REQUEST (CHARGES APPLY)
PLEASE SPECIFY TYPE AND QUANTITY REQUIRED:

- ☐ PLATE & STRAP
- ☐ POP-RIVET COVER PLATE

HOW MANY REQUIRED?________

NOTE: BUILDING DEPICTED ON THIS SHEET FOR ILLUSTRATION PURPOSES ONLY. ACTUAL LAYOUT AND FRAME MEMBER QUANTITIES VARY BY DESIGN. PLEASE REFER TO ELEVATION AND FRAME SHEETS IN THIS PRELIMINARY FOR ORDER-SPECIFIC CONFIGURATION.

ICON STD	RH/DSA-PC
DRAWN BY	ANGEL
DATE	4/2/2021
REV	
REV DATE	

JRMA ARCHITECTS ENGINEERS
2700 SATURN ST I BREA, CA 92821
T. 714.524.1870 I F. 714.524.1875
WWW.JRMA.COM

REGISTERED PROFESSIONAL ENGINEER MICHAEL D. LOCK S4092 STRUCTURAL STATE OF CALIFORNIA
07/29/2021

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120013 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 08/06/2021

ELECTRICAL ACCESS

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