

1"=10'

1"=20'

1"=30'

1"=40'

1"=50'

1"=100'

# GROSSMONT UNION HIGH SCHOOL DISTRICT

## HELIX CHARTER HIGH SCHOOL RESTROOM & STORAGE BUILDING

7323 UNIVERSITY AVENUE, LA MESA, CA 91942

DSA APPROVAL  
APRIL 13, 2020

HED PROJECT NO. 2019-05629-000

**HED**  
**HARLEY ELLIS  
DEVEREAUX**

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
www.hed.design

Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

3"=1'-0"

1 1/2"=1'-0"

3/4"=1'-0"

1/4"=1'-0"

1/8"=1'-0"

1/16"=1'-0"

### CODE REFERENCES

**PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2020\***  
2019 California Administrative Code (CAC), Part 1, Title 24 CCR\*  
2019 California Building Code (CBC), Part 2, Title 24 CCR  
(2018 International Building Code, Vol. 1 & 2, and 2016 California amendments)  
2019 California Electrical Code (CEC), Part 3, Title 24 CCR  
(2017 National Electrical Code and 2019 California Amendments)  
2019 California Mechanical Code (CMC), Part 4, Title 24 CCR  
(2018 IAPMO Uniform Mechanical Code and 2019 California amendments)  
2019 California Plumbing Code (CPC), Part 5, Title 24 CCR  
(2018 IAPMO Uniform Plumbing Code and 2019 California amendments)  
2019 California Energy Code (CEC), Part 6, Title 24 CCR  
2019 California Fire Code (CFC), Part 9, Title 24 CCR  
(2018 International Fire Code and 2019 California Amendments)  
2019 California Existing Building Code (CEBC), Part 10, Title 24 CCR  
(2018 International Existing Building Code and 2019 California Amendments)  
2019 California Green Building Standards Code (CALGreen), Part 11, Title 24 CCR  
2019 California Referenced Standards Code, Part 12, Title 24 CCR  
Title 19 CCR, Public Safety, State Fire Marshal Regulations  
2016 ASME A17.1/CSA B44-13 Safety Code for Elevators and Escalators (per 2019 CBC Part 2 Ch 35)  
*Note: Cal/OSHA Elevator Unit enforces CCR Title 8 and uses the 2004 ASME A17.1 by adoption*

**PARTIAL LIST OF APPLICABLE STANDARDS**  
NFPA 13 - Standard for the Installation of Sprinkler Systems (CA amended).....2016 Edition  
NFPA 14 - Standard for the Installation of Standpipe and Hose Systems (CA amended)....2013 Edition  
NFPA 17 - Standard for Dry Chemical Extinguishing Systems.....2016 Edition  
NFPA 17A - Standard for Wet Chemical Extinguishing Systems.....2017 Edition  
NFPA 20 - Standard for the Installation of Stationary Pumps for Fire Protection.....2017 Edition  
NFPA 22 - Standard for Water Tanks for Private Fire Protection.....2013 Edition  
NFPA 24 - Standard for the Installation of Private Fire Service Mains and  
Their Appurtenances (CA amended).....2016 Edition  
NFPA 72 - National Fire Alarm and Signaling Code (CA amended).....2016 Edition  
NFPA 80 - Standard for Fire Doors and Other Opening Protectives.....2016 Edition  
NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems (CA amended).....2015 Edition  
UL 300 - Standard for Fire Testing of Fire Extinguishing Systems for  
Protection of Commercial Cooking Equipment.....2005 (R2010)  
UL 464 - Audible Signaling Devices for Fire Alarm and Signaling Systems,  
Including Accessories.....2003 Edition  
UL 521 - Standard for Heat Detectors for Fire Protective Signaling Systems.....1999 Edition  
UL 1971 - Standard for Signaling Devices for the Hearing Impaired.....2002 (R2010)  
ICC 300 - Standard for Bleachers, Folding and Telescopic Seating, and Grandstands.....2017 Edition

For a complete list of applicable NFPA standards refer to 2016 CBC (SFM) Chapter 35 and California Fire Code Chapter 80.

See California Building Code Chapter 35 for State of California amendments to the NFPA Standards and an overall listing of referenced standards.

\*All parts of the 2019 California Building Code become effective January 1, 2020 except the effective date for the use of the 2019 Building Energy Efficiency Standards (Title 24, Part 1, Chapter 10) is January 8, 2019 and the effective date for the use of the California Administrative Code (Title 24, Part 1, Chapter 4) is January 8, 2019.

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

### PROJECT DESCRIPTION

CONSTRUCTION OF 1 STORAGE & 1 RESTROOM BUILDING.

### PROJECT DIRECTORY



Owner: **GUHSD**  
Contact: Chris Rizzuti  
1100 Murray Drive  
El Cajon, CA 92020  
Tel: (619) 644 - 8151  
Fax: (619) 465 -7478

Structural Engineer:  
Steven Rohy  
**Wiseman+ Rohy Struct. Engineer**  
9915 Mira Mesa Blvd,  
Suite 200  
San Diego, CA 92131  
Tel: (858) 536-5166

Harley Ellis Devereaux  
Architect:  
Thomas Christian

Electrical Engineer:  
Nestor Ignacio  
**IMEG Corp.**  
901 Via Piemonte,  
Suite 400  
Ontario, CA 91764  
Tel: (909) 942-5573

Mechanical Engineer:  
Vincent Vegas  
**MA Engineers**  
5160 Carroll Canyon Road  
Suite 200  
San Diego, CA 92121  
Tel: (858) 200-0030

### SHEET INDEX

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SHEET COUNT: 27

ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY THE SECTION 4-338, PART 1, TITLE 24, CCR.

A "DSA CERTIFIED CLASS 2" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

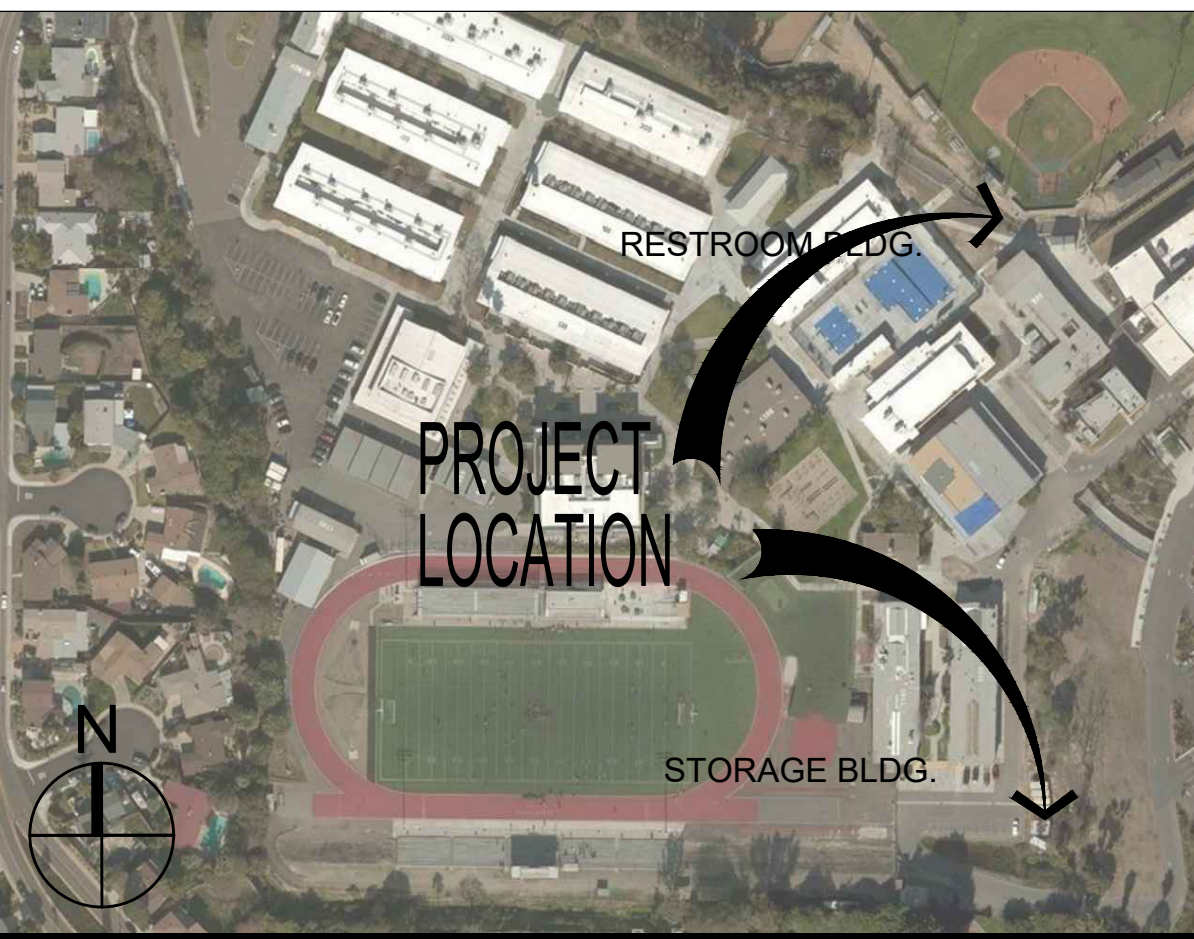
GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

### VICINITY MAP

7323 UNIVERSITY AVENUE, LA MESA, CA 91942



### KEY PLAN



IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 04-119024 INC.  
REVIEWED FOR  
SS ☐ FLS ☐ ACS ☐  
DATE: 05/18/2020



Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date Issue  
10/11/2019 SD  
01/17/2020 50% CD  
02/11/2020 DSA Submittal  
04/13/2020 DSA Approval

**HED**  
**HARLEY ELLIS  
DEVEREAUX**

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
WWW.HED.DESIGN

Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

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Project No. 2019-05629-000  
Drawn NT/RSS  
Checked RSS/EP  
Approved TEC

Title TITLE SHEET

Sheet No. G-001



ABBREVIATIONS

A.B. ANCHOR BOLT	F.O.C. FACE OF CONCRETE	P.S.F. POUNDS PER SQUARE FOOT
ABV. ABOVE	F.O.M. FACE OF MASONRY	P.S.I. POUNDS PER SQUARE INCH
ADD'L. ADDITIONAL	F.O.S. FACE OF STUD	P.T. PRESSURE TREATED
ADJ. ADJACENT	F.O.W. FACE OF WALL	P.T.D.F. PRESSURE TREATED
ALT. ALTERNATE	FRM. FRAME	DOUGLAS FIR
ARCH. ARCHITECT	FRM.G. FRAMING	POST-TENSIONED
ARCH'L. ARCHITECTURAL	F.S. FAR SIDE	PIS. PRE-STRESSED
BLW. BELOW	FT.F. FOOT/FEET	QTY. QUANTITY
B.F. BRACED FRAME	FTD. FIRE-RETARDANT TREATED	RAC. (R) RADIUS
BLDG. BUILDING	FTG. FOOTING	REF. REFERENCE
BLK. BLOCK	HSB. GALVANIZED	REIN. REINFORCEMENT(S)
BLKG. BLOCKING	GA. GAUGE	RECO. REQUIRED
BM. BEAM	GB. GRADE BEAM	M.F. MOMENT FRAME
B.N. BOUNDARY NAILING	GLB. GLUED LAMINATED BEAM	R.O. ROUGH OPENING
B.O.F. BOTTOM OF FOOTING	GRG. GRADE	RO.S. ROUGH SAWN
BR. BRACE	GYPD. GYPSUM WALLBOARD	R.S. RE-SAWN
BRG. BEARING	HD. HOLD DOWN	SCR. SCHEDULE
(B). BOTTOM	HDR. HEADER	SHR. SHEAR
B.TWN. BETWEEN	HGR. HANGER	SM. SIMILAR
C. CAMBERED	HORIZ. HORIZONTAL	SKW. SKEWED
CANT. CANTILEVERED	(H) HORIZONTAL	SPEC. SPECIFICATION(S)
C.F. CUBIC FEET/FOOT	HSB. HIGH STRENGTH BOLT	SQ. SQUARE
C.G. CENTER OF GRAVITY	HSS. HOLLOW STRUCTURAL SECTION	SEL. SELECT STRUCTURAL
C.I.P. CAST IN PLACE	HT. HEIGHT	STD. STANDARD
C.J. CONSTRUCTION JOINT	I.D. INSIDE DIAMETER	STG. STRONG
CLG. CEILING	I.E. INVERT ELEVATION	STOR. STAGGERED
CLR. CLEAR	I.F. INSIDE FACE	STIFF. STIFFENERS
CMU. CONC. MASONRY UNIT	INT. INTERIOR	STR. STIRRUPS
CONC. CONCRETE	JST. JOIST	SUSP. SUSPENDED
CONN. CONNECTION	JT. JOINT	SYMM. SYMMETRICAL
CONSTR. CONSTRUCTION	K. KIP(S)1000	(A) TOP
CONT. CONTINUOUS	LAT. LATERAL	T & B TOP AND BOTTOM
CTSK. COUNTERSINK	L.B. LBS. POUNDS	TEMP. TEMPERATURE
CTR. CENTERED	LDGR. LEDGER	T & G TONGUE AND GROOVE
C.Y. CUBIC YARD	L.F. LINEAL FEET/FOOT	THK. THICKNESS
# PENNY(WALLS)	LONG. LONGITUDINAL	THRD. THREADED
DBL. DOUBLE	LGTH. LENGTH	TEMP. TEMPORARY
D.F. DOUGLAS FIR	LLH. LONG LEG HORIZ.	T.N. TOE NAIL
DA. (D) DIAMETER	LLV. LONG LEG VERT.	T.O.C. TOP OF CONCRETE
DIAG. DIAGONAL	LT.WT. LIGHT WEIGHT	T.O.F. TOP OF FOOTING
DIAPHR. DIAPHRAGM	L.S. LAG SCREW	T.O.P. TOP OF PARAPET
DM. DIMENSION	MAS. MASONRY	T.O.S. TOP OF SHEATHING
DN. DOWN	MATL. MATERIAL	T.O.T. TOP OF STEEL
DP (D) DEEP(DEPTH)	MAX. MAXIMUM	T.O.W. TOP OF WALL
DWG. DRAWING(S)	M.B. MACHINE BOLT	TRANS. TRANSVERSE
DWL. DOWEL(S)	MECH. MECHANICAL	TYP. TYPICAL
E.F. EACH FACE	MEZZ. MEZZANINE	U.O.N. UNLESS OTHERWISE NOTED
E.I. EXPANSION JOINT	MFR. MANUFACTURER	VERT. VERTICAL
ELC. ELECTRICAL	MISC. MISCELLANEOUS	VIF. VERIFY IN FIELD
ELEV. ELEVATOR	MTL. METAL	WID. WIDTH
EMBED. EMBEDMENT	(N) NEW	WI. WITH
E.N. EDGE NAIL	N.B. NUMBER	WO. WOOD
ENG. ENGINEER	N.S. NEAR SIDE	W.F. WORK FLANGE
E.O.D. EDGE OF DECK	N.T.S. NOT TO SCALE	W.F. WORK POINT
E.O.S. EDGE OF SLAB	N.W.T. NORMAL WEIGHT	W.F. WEAKENED PLANE JOINT
EQ. EQUAL	O.C. ON CENTER	W.S. WOOD SCREWS
EQT. EQUIPMENT	O.F. OUTSIDE FACE	WT. WEIGHT
EXP. EXPANSION	O.H. OPPOSITE HAND	WWF. WELDED WIRE FABRIC
EXIST. EXISTING	OPNG. OPENING	X-STG. EXTRA STRONG
(E). EXISTING	ORNT. ORIENTATION	XX-STG. DOUBLE EXTRA STRONG
EXT. EXTERIOR	O.W.J. OPEN WEB JOISTS	YD. YARD
FAB. FABRICATION	O.W.J. OPEN WEB STEEL JOISTS	
FND. FOUNDATION	PAR. (P) PARALLEL	
FIN. FINISHED	PC. PRECAST CONCRETE	
F.F. FINISH FLOOR	PERP. PERPENDICULAR	
FLS. FLANGE	PL. PLATE	
FLR. FLOOR	PLF. PARALAM BEAM	
FLX. FIELD(FACE)NAIL	PLY. PLYWOOD	

WOOD (CBC CHAPTER 23)

- ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (DF) OR LARCH GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WCLUB & WVPA)
- WOOD GRADES:
  - FOR HORIZONTAL MEMBERS:

BEAMS & HEADERS	GRADE #1
ALL OTHERS	GRADE #2
  - FOR VERTICAL MEMBERS:

2 X & LARGER STUDS	GRADE #2
POSTS	GRADE #1
- APA RATED SHEATHING CONFORMING TO APA STANDARD PS-1 SHALL BE USED FOR FLOOR, ROOF, AND WALL SHEATHING IN ACCORDANCE WITH CBC SECTION 2303.1.5, TITLE 24, PART 2, CCR. OSB SHALL NOT BE USED.
- NOTCHING AND BORING OF STUDS AND JOISTS SHALL BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE ENGINEER.
- AS A MINIMUM, ALL NAILING SHALL BE WITH COMMON NAILS, EXCEPT AS NOTED IN CBC TABLE 2304.10.1.
- 100 X 12" COMMON NAILS CAN BE USED FOR ATTACHMENT OF PLYWOOD SHEATHING.
- ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY, WHICH IS IN CONTACT WITH EARTH OR RESTING ON FOUNDATIONS, SHALL BE PRESURE TREATED DOUGLAS FIR. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH ANSHPA M-4.
- BOLTS: ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/32" DIAMETER LARGER THAN NOMINAL BOLT DIAMETERS. BOLTS IN WOOD SHALL NOT BE LESS THAN 7 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER. THREAD PROJECTION SHALL BE 1/16" INCH MINIMUM. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING IN.
- MACHINE BOLT ANCHOR BOLTS SHALL BE PROVIDED WITH FULL BODY DIAMETER AS FOLLOWS:

NOMINAL SIZE	BODY OR SHANK DIAMETER (INCHES)	MAX. (INCHES)	MIN. (INCHES)
1/2	0.500	0.515	0.482
5/8	0.625	0.642	0.605
3/4	0.750	0.768	0.729
7/8	0.875	0.895	0.852
1	1.000	1.022	0.976

  - ADOPTED FROM ANSI B18.2.1.
  - FOR BOLT DIAMETERS NOT INDICATED, REFER TO ASME B18.2.1 AND B18.2.6.
  - THE BODY AND SHANK OF A BOLT IS THE SMOOTH PORTION BETWEEN THE HEAD AND THE THREADS.
- LAG SCREWS: SHALL BE FULL BODY DIAMETER ACCORDING TO ANSI B18.2.1 PRE-DRILL LEAD WITH A BIT SIZE OF 40% TO 70% OF THE SHANK DIAMETER FOR THE THREADED PORTION. CLEARANCE HOLE TO BE THE SAME LENGTH AND DIAMETER AS THE UN-THREADED SHANK. LUBRICATE LAGS AND SCREW INTO PLACE.
- WOOD SCREWS SHALL BE CUT THREAD ACCORDING TO ANSI B18.6.1
- WASHERS: ALL BOLT HEADS, LAG SCREWS AND NUTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS.
- ALL FRAMING ANCHORS, POST CAPS, BASES, HANGERS, STRAPS, ETC., SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY" LATEST CATALOG OR ENGINEER APPROVED EQUAL. SUBMIT LOAD COMPARISONS WITH CATALOG AND ICC REPORTS TO THE ENGINEER FOR APPROVAL.
- TOP PLATES OF ALL WOOD STUD WALLS TO BE 2-X MINIMUM (SAME WIDTH AS STUDS), LAP 48" MINIMUM, WITH NOT LESS THAN 6-16D NAILS AT EACH LAP AND NOT MORE THAN 12" BETWEEN NAILS.
- MOISTURE CONTENT OF WOOD AT TIME OF PLACING SHALL NOT EXCEED 19%.
- OVER DRIVING OF NAILS THROUGH SHEARWALL, ROOF, OR FLOOR SHEATHING IS NOT ALLOWED. NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF SHEATHING.
- MACHINE APPLIED NAILING TO WOOD FRAMING OR PLYWOOD: SUBJECT TO SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND APPROVAL BY THE ENGINEER AND DSA. IF NAIL-HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY AND MACHINE NAILING SHALL BE DISCONTINUED.
- WHERE ADJACENT WALLS ARE SHEATHED, PROVIDE SHEATHING OVER AND UNDER OPENINGS AND REMAINDER OF UNSHEATHED WALLS.
- FASTENERS, NAILS AND CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD & USED TO ATTACH EXTERIOR WALL COVERINGS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-653 HOT DIPPED ZINC COATED GALVANIZED OR SHALL BE STAINLESS STEEL PER REQUIREMENTS OF CBC SECTION 2304.10.5.1.
- WHEN HARDWARE THAT REQUIRE 10d x 1 1/2" NAILS ARE INSTALLED OVER SHEATHING, THE LENGTH OF THE NAILS USED SHALL BE INCREASED BY THE THICKNESS OF THE SHEATHING.

SPECIAL INSPECTIONS & TESTING (CBC CHAPTER 17A)

- SPECIAL INSPECTIONS & TESTING SHALL MEET THE REQUIREMENTS OF CBC CHAPTER 17A TITLE 24, PART 2, CCR.
- PROJECT INSPECTOR OF RECORD: IN ACCORDANCE WITH TITLE 24, PART 1.
- CERTIFIED SPECIAL INSPECTORS SHALL:
  - BE CERTIFIED BY DSA TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.
  - PREPARE REPORTS THAT SHALL BE SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER.
  - OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS.
  - FURNISH INSPECTION REPORTS TO THE ENGINEER AND DSA. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE ENGINEER AND DSA PER CBC SECTION 1704A.2.4.
  - SUBMIT TO THE ENGINEER AND DSA A FINAL VERIFIED REPORT, SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER, STATING THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF CBC TITLE 24, PART 2, CCR.
- SUMMARY OF CONTINUOUS AND PERIODIC INSPECTIONS:
  - SPECIAL INSPECTIONS ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY CBC SECTION 110, TITLE 24, PART 2, CCR. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY DSA. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF DSA IS SUBJECT TO REMOVAL OR EXPOSURE.
  - CONTINUOUS INSPECTION IS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED.
  - IT IS THE RESPONSIBILITY OF THE PROJECT INSPECTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY BEFORE PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
- SEE DSA-103 DOCUMENT FOR LIST OF REQUIRED INSPECTIONS. THIS DOCUMENT SHALL BE CONSIDERED PART OF THE CONSTRUCTION DOCUMENTS.

STRUCTURAL OBSERVATION (CBC CHAPTER 17A)

- DEFINITION: THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY CBC SECTION 110, AND CHAPTER 17A TITLE 24, CCR OR OTHER SECTIONS OF THE CODE.
- IN ACCORDANCE WITH CBC SECTION 1704A.6, TITLE 24, CCR THE ENGINEER REQUIRES OBSERVATION DURING CONSTRUCTION OF THE FOLLOWING:
  - FOUNDATION EXCAVATION AND REINFORCEMENT HOLD-DOWNS
  - FRAMING  
SHEARWALL FRAMING  
NOTCHED BEAMS AND STUDS  
BRAG & CHORD CONNECTIONS  
ALL REVISIONS TO PLANS
- NOTIFICATION: 48 HOURS BEFORE REQUIRED OBSERVATION. DELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERED MATERIALS FOR OBSERVATION.
- THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE DSA A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVERS KNOWLEDGE, HAVE BEEN RESOLVED.

SHOT-PINS/ POWDER DRIVEN FASTENERS

- MATERIALS:  
SHOTPINS..... HILTI 'X-U' (U.O.N.) ICC-ESR-2269  
SHANK DIAMETER..... 0.157 INCHES
- INSTALLATION INTO CONCRETE  
EMBED (IN)..... EDGE MIN (IN)..... SPACING MIN (IN)  
PER DETAIL..... 3..... 4
- INSTALLATION INTO STEEL  
EMBED (IN)..... EDGE MIN (IN)..... SPACING MIN (IN)  
SEE NOTE 1/2
- FASTENERS SHALL BE DRIVEN TO A PENETRATION WHERE THE SHANK PIERCES THROUGH STEEL BASE MATERIAL, UNLESS USING 3/4 INCH OR GREATER STEEL THICKNESS PROVIDE 1/2 INCH PENETRATION.
- QUALIFICATION FOR USE OF ALL POWDER ACTUATED TOOLS SHALL MEET ANSI A10.3 STANDARD AS REQUIRED BY THE MANUFACTURER AND SHALL MEET OSHA REQUIREMENTS.
- WHEN INSTALLING SHOTPINS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE SHOTPIN AND THE REINFORCING BAR.
- FASTENERS ARE TO BE DRIVEN INTO THE CONCRETE AND MASONRY AFTER THE CONCRETE OR MORTAR AND GROUT ATTAIN THEIR SPECIFIED STRENGTH.
- CONCRETE THICKNESS MUST BE A MINIMUM OF 3 TIMES THE EMBEDMENT DEPTH OF THE FASTENER.
- FASTENERS SHALL NOT BE USED FOR ATTACHMENT OF PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED LUMBER.

REINFORCED CONCRETE (CBC CHAPTER 19A)

- CEMENT SHALL CONFORM TO ASTM C150, TYPE II.
- AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 AND SECTION 1903A.6, TITLE 24, PART 2, CCR.
- READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.
- CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF) AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

ELEMENT	STRENGTH	AGG	W/C RATIO (MAX)
FOOTINGS	3000 PSI	1"	50
SLAB ON GRADE	3000 PSI	1"	45
- CONCRETE SHALL BE PROPORTIONED SUCH THAT THE 7 DAY STRENGTHS ARE A MINIMUM OF SEVENTY PERCENT OF THE SPECIFIED 28 DAY STRENGTH FOR ANY CONCRETE CONSTRUCTION REQUIRING SHORING, BRACING OR TO RECEIVE CONSTRUCTION LOADS. ALSO, SLABS ON GRADE SHALL HAVE A COMPRESSION STRENGTH OF 1800 PSI MINIMUM AT 3 DAYS IF SUBJECT TO CONSTRUCTION TRAFFIC.
- ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER AND DSA. ADMIXTURES SHALL COMPLY WITH ASTM C494 & C1017 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED).
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, HOLD-DOWN ANCHORS AND INSERTS SHALL BE WELL SECURED IN POSITION WITH WIRE POSITIONERS PRIOR TO FOUNDATION INSPECTION AND BEFORE PLACING CONCRETE.
- CONCRETE CURING: SEE SPECIFICATIONS.
- NO CONDUIT PLACED IN A CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE THICKNESS OF THE SLAB. NO CONDUIT SHALL BE EMBEDDED IN A SLAB THAT IS LESS THAN 3 1/2" THICK, EXCEPT FOR LOCAL OFFSETS. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE THREE DIAMETERS ON CENTER.
- PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4" CHAMFER.
- REFER TO DRAWINGS OF OTHER DISCIPLINES FOR MOLDS, GROOVES, CLIPS, ORNAMENTS, OR GROUNDS REQUIRED TO BE CAST INTO CONCRETE.
- CONSTRUCTION JOINTS IN ALL FOUNDATIONS, WALLS, SUPPORTED SLABS AND CONCRETE FRAMING BEAMS SHALL NOT BE SPACED FURTHER APART THAN 60 FEET IN LENGTH.
- LOCATION OF ALL CONSTRUCTION, CONTROL, AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO REINFORCEMENT PLACEMENT.
- ALL CONSTRUCTION JOINTS IN WALLS OR OTHER ELEMENTS NOT HAVING PREFORMED KEYS, SHALL BE WIRE BRUSHED, AND ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4 INCH, CLEANED AND MOISTENED IMMEDIATELY PRIOR TO PLACEMENT OF NEW CONCRETE.
- CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
- CONCRETE TESTING SHALL CONFORM TO SECTION 1905A, TITLE 24, PART 2, CCR.

CONCRETE-EPOXY ANCHORED REINFORCEMENT & THREADED RODS

- SPECIAL INSPECTION IS REQUIRED.
- MATERIALS: (ICC ESR 3187)  
EPOXY ADHESIVE..... HILTI..... HIT HY200
- INSTALLATION OF REINFORCEMENT AND THREADED RODS:
  - SHALL BE IN ACCORDANCE WITH ICC ESR 3187.
  - USE CARBIDE-TIPPED DRILL BITS CONFORMING TO ANSI B212.15.
  - CLEAN HOLES OF DUST AND DEBRIS USING OIL-FREE COMPRESSING AIR AND A STEEL WIRE BRUSH FOR STANDARD EQUIPMENT AND ANCHORS.
  - NO CLEANING OF HOLES IS REQUIRED WITH 'HILTI SAFESST' SYSTEM USING HIT-Z OR HIT-Z-R ANCHORS.
- DO NOT INSTALL REINFORCEMENT OR ANCHORS IN CONCRETE THAT IS LESS THAN 21 DAYS OLD.
- ANCHORS SHALL BE TESTED TO TWO TIMES THE ALLOWABLE DESIGN DEMAND. SEE DETAILS FOR TESTING VALUES.
- TESTING AND INSPECTIONS SHALL MEET THE REQUIREMENTS OF CBC SECTION 1910A.5.
- ANCHORS SHALL BE USED ONLY WHERE SPECIFICALLY INDICATED ON PLANS AND DETAILS.

CONCRETE-EXPANSION ANCHORS

- SPECIAL INSPECTION IS REQUIRED.
- MATERIALS: (ICC ESR 1917)  
HILTI ANCHORS..... ICC ESR 1917..... KWIK-BOLT TZ
- INSTALLATION:

ANCHOR DIA	ANCHOR TORQUE	MIN. EMBED	NOMINAL EMBED
3/8"	25 ft-lb	2"	2 5/16"
1/2"	40 ft-lb	3 1/4"	3 5/8"
5/8"	60 ft-lb	4"	4 7/16"
3/4"	110 ft-lb	4 3/4"	5 9/16"

  - SHALL BE IN ACCORDANCE WITH ICC ESR 1917.
  - USE CARBIDE-TIPPED DRILL BITS CONFORMING TO ANSI B212.15-1994. DRILL BIT SIZE IS EQUAL TO ANCHOR DIAMETER.
  - CLEAN HOLES OF DUST AND DEBRIS USING OIL-FREE COMPRESSED AIR AND A STEEL WIRE BRUSH. HOLE DEPTH TO EXCEED EMBEDMENT DEPTH BY TWO ANCHOR DIAMETERS.
  - DO NOT INSTALL ANCHORS IN CONCRETE THAT IS LESS THAN 7 DAYS OLD.
  - PROVIDE STAINLESS STEEL ANCHORS OR MECHANICALLY GALVANIZED ANCHORS (PER ASTM B-695) WHERE ANCHORS ARE USED IN EXTERIOR CONDITIONS.
  - TESTS AND INSPECTIONS SHALL MEET THE REQUIREMENTS OF CBC 1910A.
  - ANCHORS SHALL BE USED ONLY WHERE SPECIFICALLY INDICATED ON PLANS AND DETAILS

GENERAL NOTES

- NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE STANDARD STRUCTURAL NOTES. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE. REFER TO SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE NOTES OR DRAWINGS. THESE NOTES TAKE PRECEDENCE OVER ANY OTHER BOOK SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK, AND THE ENGINEER/ARCHITECT SHALL BE IMMEDIATELY NOTIFIED, IN WRITING, OF ANY DISCREPANCIES. IN NO CASE SHALL DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.
- ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF, AND RESOLVED WITH, THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
- WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN THE AREA TO BE EXCAVATED, BEFORE BEGINNING EXCAVATION.
- NO PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL BE PLACED IN SLABS, BEAMS, OR WALLS, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE (CBC), TITLE 24, PART 2, CCR WITH CALIFORNIA AMENDMENTS.
- THE CONTRACTOR 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. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
- RETAIN A CALIFORNIA REGISTERED CIVIL ENGINEER TO DESIGN ALL TEMPORARY BRACING, SHORING, AND SUPPORT REQUIRED DURING CONSTRUCTION.
- INCLUDE ENGINEERING FEES, ENGINEERING DESIGN TIME AND BUILDING DEPARTMENT APPROVAL TIME IN THE COST OF PROPOSAL. CONTRACTOR SHALL CONTACT ENGINEER FOR FEE AMOUNT. SUBMIT MATERIAL ALTERNATE FOR REVIEW BEFORE CONSTRUCTION.
- STRUCTURAL CAD DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS UNLESS AN AGREEMENT BETWEEN THE STRUCTURAL ENGINEER AND CONTRACTOR HAS BEEN ESTABLISHED ACCORDING TO CASE DOCUMENT 11-1996. CONTACT ENGINEER FOR FEE AMOUNT.
- ALL ADDENDA AND CONSTRUCTION CHANGE DOCUMENT (CCD) SHALL BE SUBMITTED TO DSA FOR APPROVAL.
- ANY REFERENCE TO THE WORDS APPROVED, OR APPROVAL IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR HIS SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR SPECIFIED.
- CONNECTION OF ALL ITEMS SUPPORTED BY THE STRUCTURE ARE THE RESPONSIBILITY OF THE DISCIPLINES WHO ARE MAKING THESE ATTACHMENTS, THESE ATTACHMENTS SHALL BE DESIGNED TO RESIST ALL GRAVITY, WIND, SEISMIC, THERMAL LOADS, ETC. SPRINKLER PIPING SHALL BE SUPPORTED AND BRACED PER APPLICABLE STANDARDS, SUSPENDED CEILING SYSTEMS OF ACOUSTICAL TILE OR LAY-IN PANELS SHALL BE SUPPORTED AND BRACED PER CURRENT CODE REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS.

DESIGN CRITERIA

- VERTICAL LOADS:
  - DEAD LOADS:

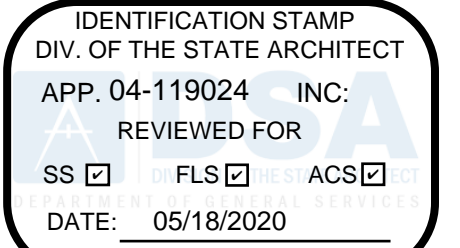
ROOF	12.0 PSF
LIVE LOADS: REDUCIBLE UNLESS NOTED OTHERWISE	20 PSF
  - LATERAL LOADS:
    - WIND: PER ASCE 7-16 (CBC 2019)  
BASIC WIND SPEED-3 SECOND GUST (V3S)..... 96 MPH  
TOPOGRAPHIC FACTOR (Kzt)..... 1.0  
RISK CATEGORY..... II  
EXPOSURE CATEGORY..... C  
ENCLOSURE CLASSIFICATION..... ENCLOSED
    - SEISMIC: PER ASCE 7-16(CBC 2019)  
RISK CATEGORY..... II  
SEISMIC IMPORTANCE FACTOR..... (I)=1.0  
MAPPED SPECTRAL RESPONSE ACCELERATIONS:  
SS= 0.895G  
S1= 0.343G
- SITE CLASS..... D  
SPECTRAL RESPONSE COEFFICIENTS:  
SDS= 0.68g  
SD1= 0.392g  
SEISMIC DESIGN CATEGORY..... D  
RESPONSE MODIFICATION FACTOR..... R=6.5  
SEISMIC FORCE RESISTING SYSTEM..... LIGHT FRAME (WOOD SHEARWALLS)  
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE  
SEISMIC RESPONSE COEFFICIENT  
V=CS\* W +0.110 W (STRENGTH)  
V=CS\* W /1.4 +0.079 W (ASD)  
HORIZONTAL IRREGULARITIES: NONE  
VERTICAL IRREGULARITIES: NONE  
BASE: FINISHED FLOOR

FOUNDATION (CBC CHAPTER 18A)

- THE SOILS REPORT RECOMMENDATIONS SHALL BE COMPLIED WITH BY THE CONTRACTOR.
- SOILS INFORMATION:  
CBC TABLE 1803A.2  
DATED:  
SOIL DESIGN PARAMETERS:  
ALLOWABLE BEARING PRESSURE..... 1500 PSF  
LATERAL BEARING (PASSIVE) PRESSURE..... 100 PCF  
COEFFICIENT OF FRICTION..... 0.35  
MINIMUM CONTINUOUS FOOTING WIDTH..... 15 INCHES  
MINIMUM SPREAD FOOTING WIDTH..... 24 INCHES  
BOTTOM OF FOOTINGS SHALL BE AT LEAST 24 INCHES BELOW LOWEST ADJACENT SOIL GRADE.
- ALL FOUNDATION WORK SHALL BE FOUNDED ON FIRM UNDISTURBED NATURAL SOILS OR APPROVED COMPACTED SOILS.
- ALL SITE SOIL WORK SHALL BE DONE UNDER THE DIRECT OBSERVATION OF THE SOILS ENGINEER AND PER SECTIONS 1803A AND 3304, TITLE 24, PART 2, CCR.
- SPECIAL INSPECTIONS SHALL BE PER SECTION 1705A.6, TITLE 24, PART 2, CCR.
- SOILS ENGINEER SHALL VERIFY IN WRITING TO THE ENGINEER AND DSA (FORM DSA-293) THAT SITE SOIL WORK COMPLES WITH ALL OF THE RECOMMENDATIONS AND CONCLUSIONS OF THE SOILS REPORT.
- THE FINISH EXCAVATION FOR FOUNDATIONS SHALL BE NEAT & TRUE TO LINE.
- FOUNDATION EXCAVATIONS SHALL BE KEPT FREE OF LOOSE MATERIAL AND STANDING WATER AND SHALL BE CHECKED AND APPROVED BY THE SOILS ENGINEER BEFORE THE PLACEMENT OF ANY CONCRETE.
- THE TESTING LAB SHALL SUBMIT COMPACTION REPORTS FOR ALL FILL TO THE ENGINEER AND DSA (FORM DSA-293) BEFORE REQUESTING FOUNDATION INSPECTION. ALL LOOSE SOIL AND FILL DIRT, INCLUDING BACKFILL BEHIND RETAINING WALLS, SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY, OR GREATER AS REQUIRED BY THE SOILS REPORT.
- BACKFILL FOR ALL RETAINING WALLS SHALL BE NON-EXPANSIVE PERVIOUS MATERIAL APPROVED BY THE SOILS ENGINEER AND SHALL NOT BE PLACED UNTIL MASONRY OR CONCRETE RETAINING MEMBERS HAVE BEEN IN PLACE A MINIMUM OF 14 DAYS AND HAVE OBTAINED 75% OF THE DESIGN STRENGTH.
- PROVIDE TEMPORARY SHORING FOR ALL WALLS RETAINING EARTH, PRIOR TO BACKFILLING.
- TEMPORARY SHORING FOR ALL RETAINING WALLS REQUIRING PERMANENT STRUCTURAL SUPPORT AT THE TOP OF THE WALL SHALL REMAIN IN PLACE UNTIL SUCH SUPPORTS ARE INSTALLED, AND IN THE CASE OF CONCRETE SUPPORTS, THE SHORING SHALL REMAIN IN PLACE A MINIMUM OF 7 DAYS AFTER CONCRETE PLACEMENT.
- OVER-EXCAVATION AND COMPACTION REQUIREMENTS PER SOILS REPORT AND SHALL CONFORM TO SECTIONS 1803A AND 3304, TITLE 24, PART 2, CCR.

REINFORCING STEEL

- BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60 DEFORMED BARS.  
BAR REINFORCEMENT THAT IS TO BE WELDED SHALL BE ASTM A706, GRADE 60.
- MINIMUM LAP SPLICES OF REINFORCING BARS SHALL BE AS SPECIFIED IN THE DRAWINGS.
- REINFORCING DETAILING, BENDING, AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
- REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM CONCRETE COVER FOR CAST IN PLACE CONCRETE:
  - CONCRETE DEPOSITED AGAINST EARTH: 3"
  - CONCRETE SURFACE (FORMED) EXPOSED TO EARTH OR WEATHER:  
#6 THROUGH #18 BARS: 2"  
#5 BAR AND SMALLER: 1-1/2"
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, HOLD-DOWN ANCHORS AND INSERTS SHALL BE WELL SECURED IN POSITION WITH WIRE POSITIONERS PRIOR TO FOUNDATION INSPECTION AND BEFORE PLACING CONCRETE OR GROUT.
- FURNISH #3 SPACER TIES AT APPROXIMATELY 2'-6" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING IN PLACE.
- WELDING OF REINFORCING BARS SHALL CONFORM TO THE LATEST EDITION OF AWS D1.4 AND CBC SECTION 1803A.8. EPOXY ELECTRODES SHALL BE USED FOR BAR TO BAR & E70XX ELECTRODES SHALL BE USED FOR REINFORCING TO STRUCTURAL STEEL.
- CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.



Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date	Issue
10/11/2019	SD
01/17/2020	50% CD
02/11/2020	DSA Submittal
04/09/2020	DSA Resubmittal

WISEMAN + ROHY

STRUCTURAL ENGINEERS

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9915 ARIA BLVD. SUITE 200 SAN DIEGO, CA 92131 TEL 619.534.5146 FAX 619.534.5145 WWW.WEENGINEERS.COM



HED

HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

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Approved:

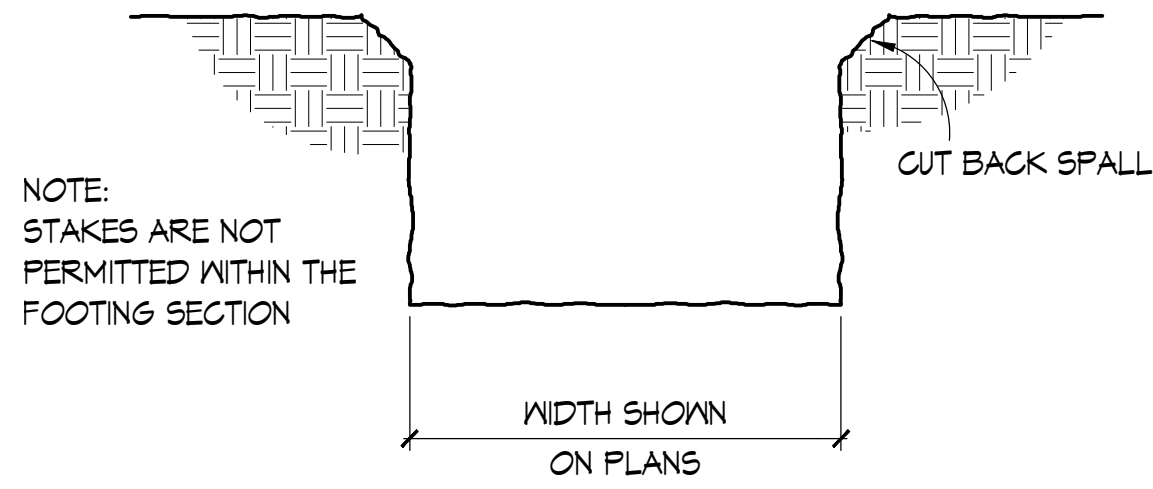
Title  
GENERAL STRUCTURAL  
NOTES

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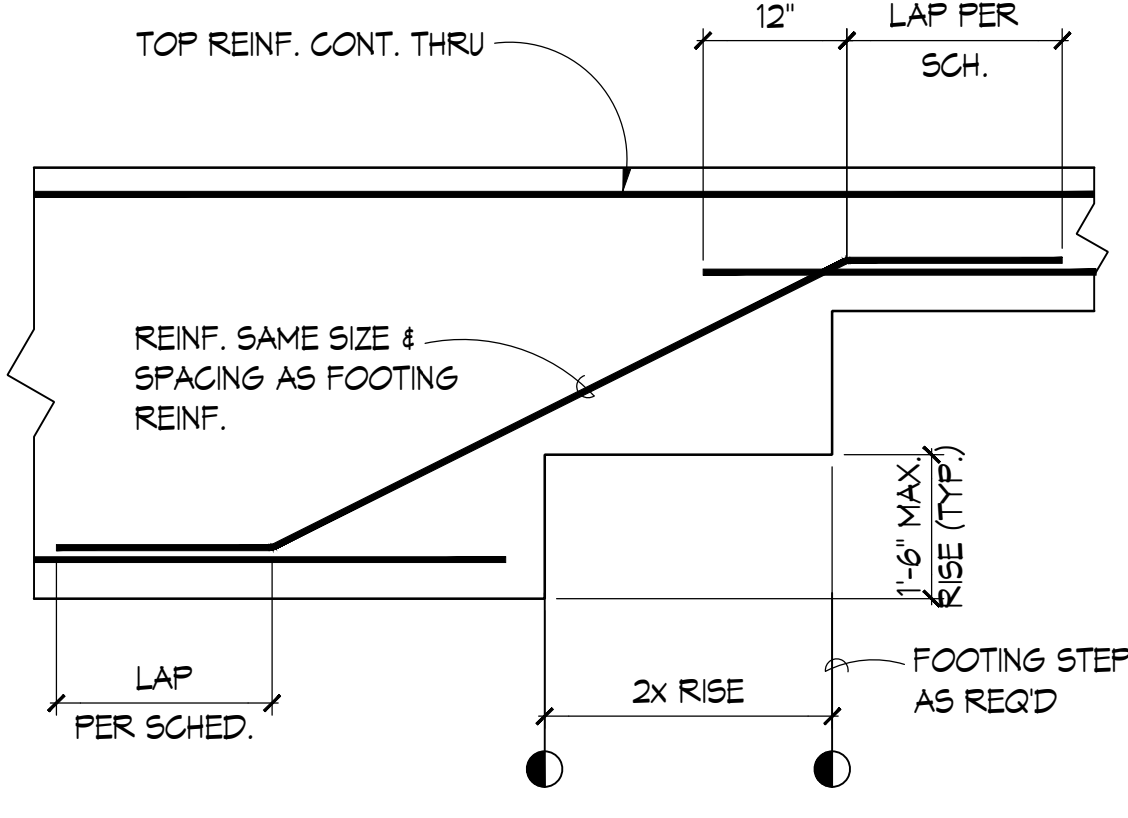


TABLE NO. 2304.10.1 FASTENING		
CONNECTION	FASTENING	
1. JOISTS TO SILL OR GIRDER, TOENAIL		3-8d
2. BRIDGING TO JOIST, TOENAIL EACH END		2-8d
3. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL		2-8d
4. WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST, FACE NAIL		3-8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL		2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL		16d AT 16" O.C.
7. SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS		3-16d PER 16"
8. TOP PLATE TO STUD END NAIL		2-16d
9. STUD TO SOLE PLATE		4-8d, TOENAIL OR 2-16d END NAIL
10. DOUBLE STUDS, FACE NAIL		16d AT 24" O.C.
11. DOUBLE TOP PLATES, TYPICAL FACE NAIL		16d AT 16" O.C. OR 8-16d AT 16" ON
12. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL		3-8d
13. RIM JOIST TO TOP PLATE, TOENAIL		8d AT 6" O.C.
14. TOP PLATES, LIPS AND INTERSECTIONS, FACE NAIL		2-16d
15. CONTINUOUS HEADER, TWO PIECES		16d @ 16" ALONG EACH EDGE
16. CEILING JOISTS TO PLATE, TOENAIL		3-8d
17. CONTINUOUS HEADER TO STUD, TOENAIL		4-8d
18. CEILING JOISTS LAP OVER PARTITIONS, FACE NAIL		3-16d
19. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL		3-16d
20. RAFTER TO PLATE, TOENAIL		3-8d
21. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL		2-8d
22. 1" x 6" SHEATHING OR LESS TO EACH BEARING, FACE NAIL		2-8d
23. WIDER THAN 1" x 6" SHEATHING TO EACH BEARING, FACE NAIL		3-8d
24. BUILT-UP CORNER STUDS		16d AT 24" O.C.

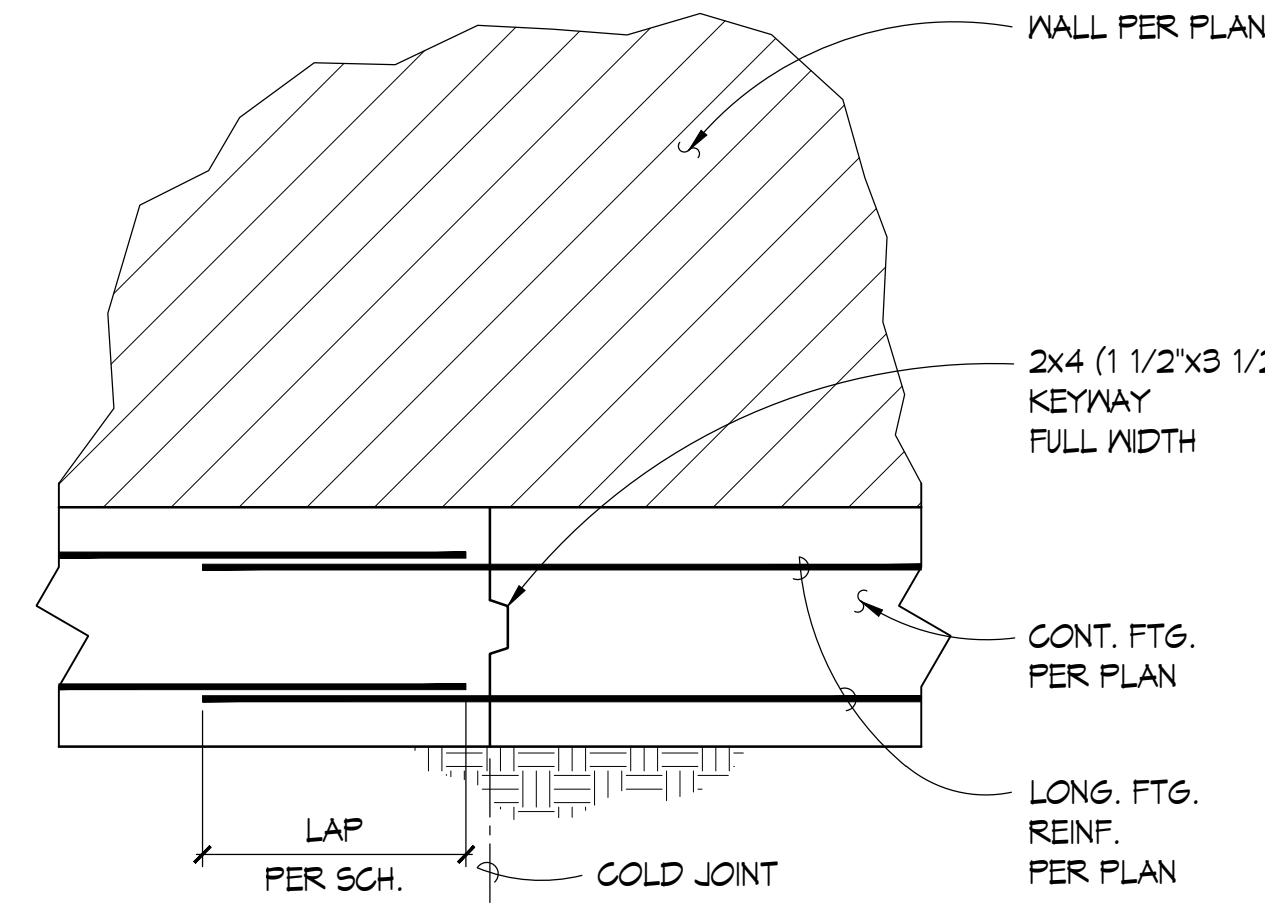
NOTES:  
a. COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.  
b. COMMON NAILS



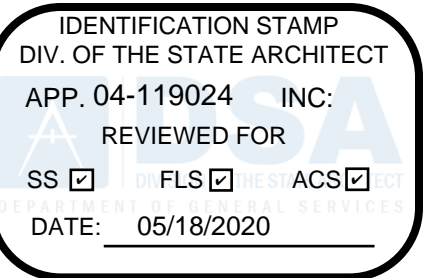
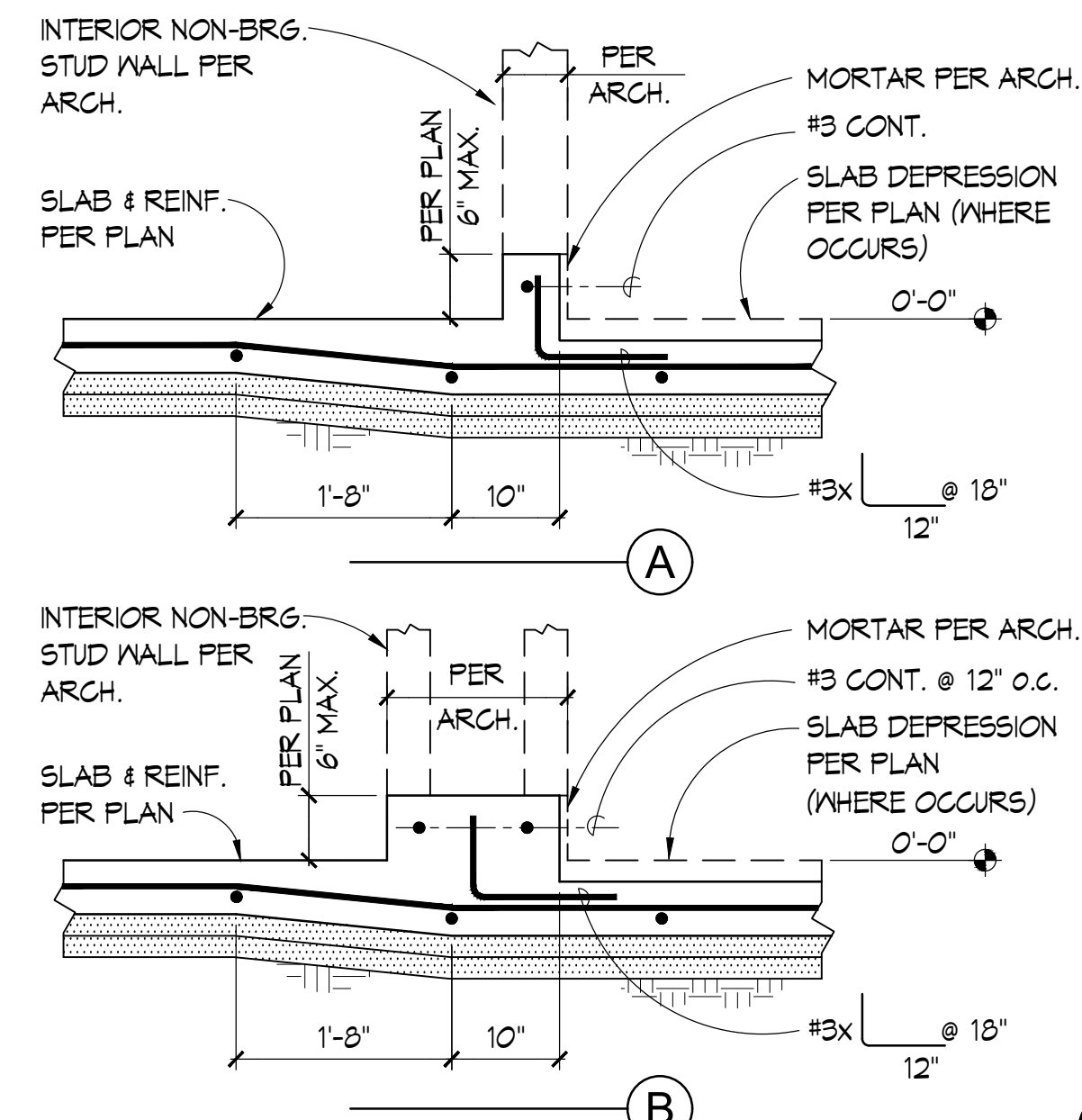
MANDATORY MINIMUM FORMWORK-DSA



TYPICAL FOOTING STEP



TYPICAL PERIMETER FOOTING COLD JOINT DETAIL



Grossmont Union High School District

Helix Charter HS Restroom & Storage Bldgs

La Mesa, CA

Date: 10/11/2019  
Issue: SD  
01/17/2020 50% CD  
02/11/2020 DSA Submittal  
04/09/2020 DSA Resubmittal

WISEMAN + ROHY  
STRUCTURAL ENGINEERS

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HED  
HARLEY ELLIS DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

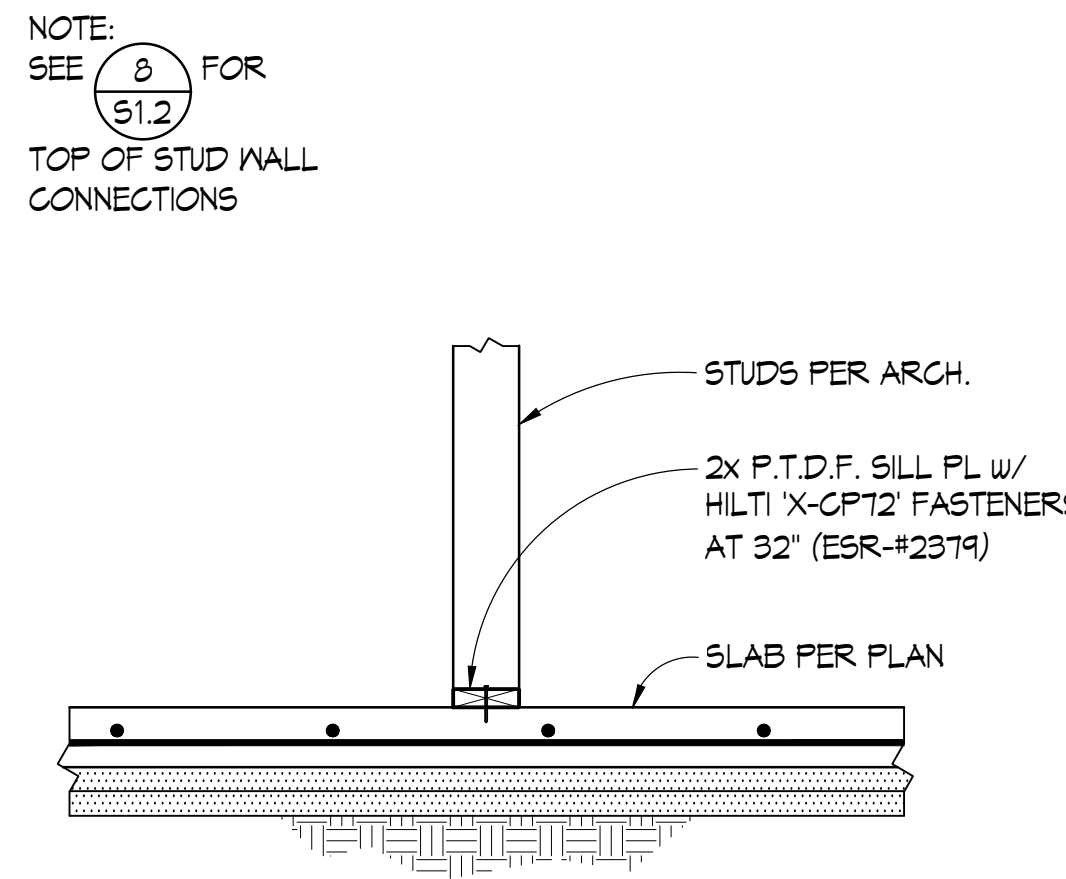
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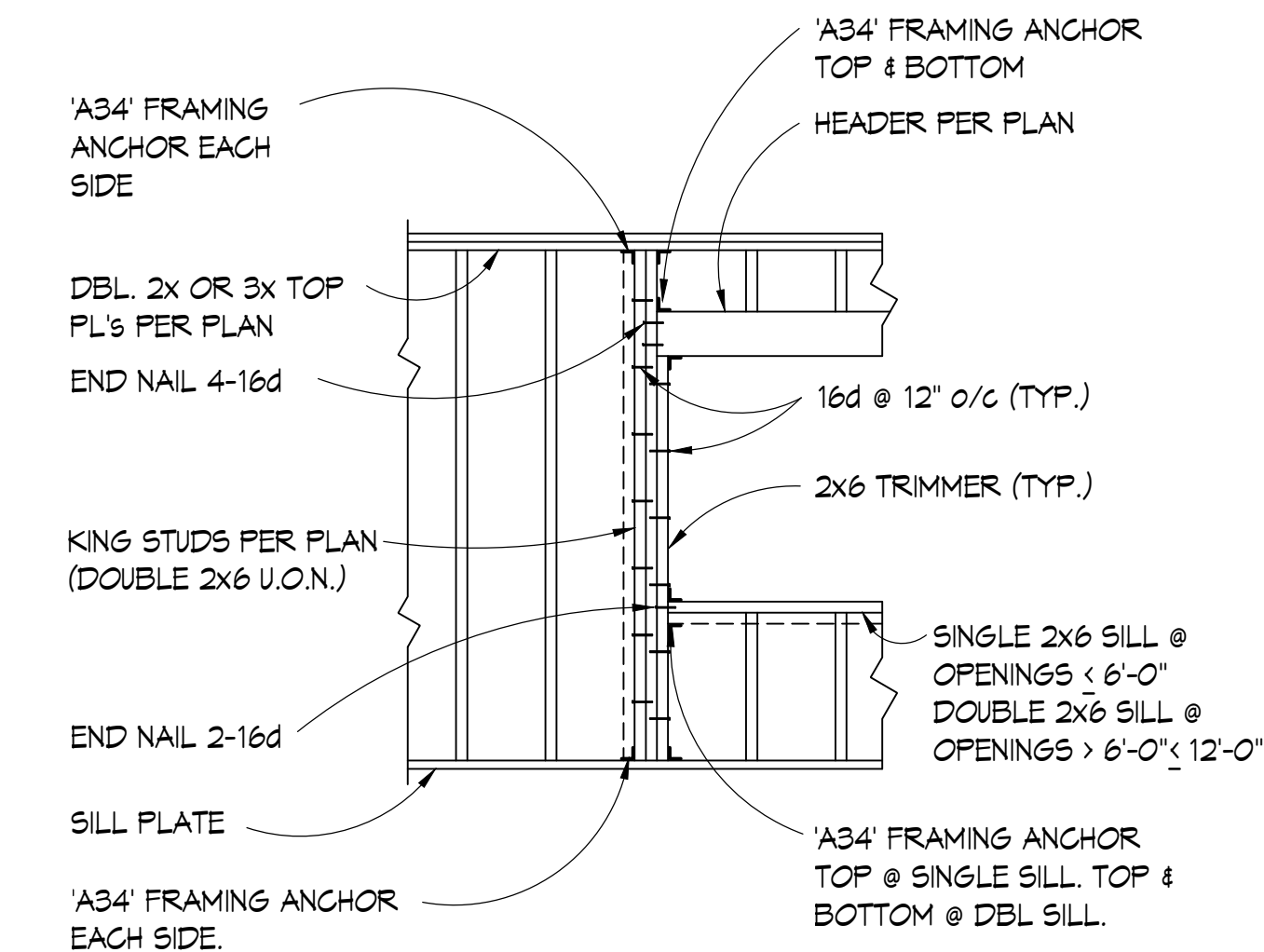
Project No. 19078.00  
Drawn: TE:AM  
Checked: SR  
Approved:

Title: TYPICAL DETAILS

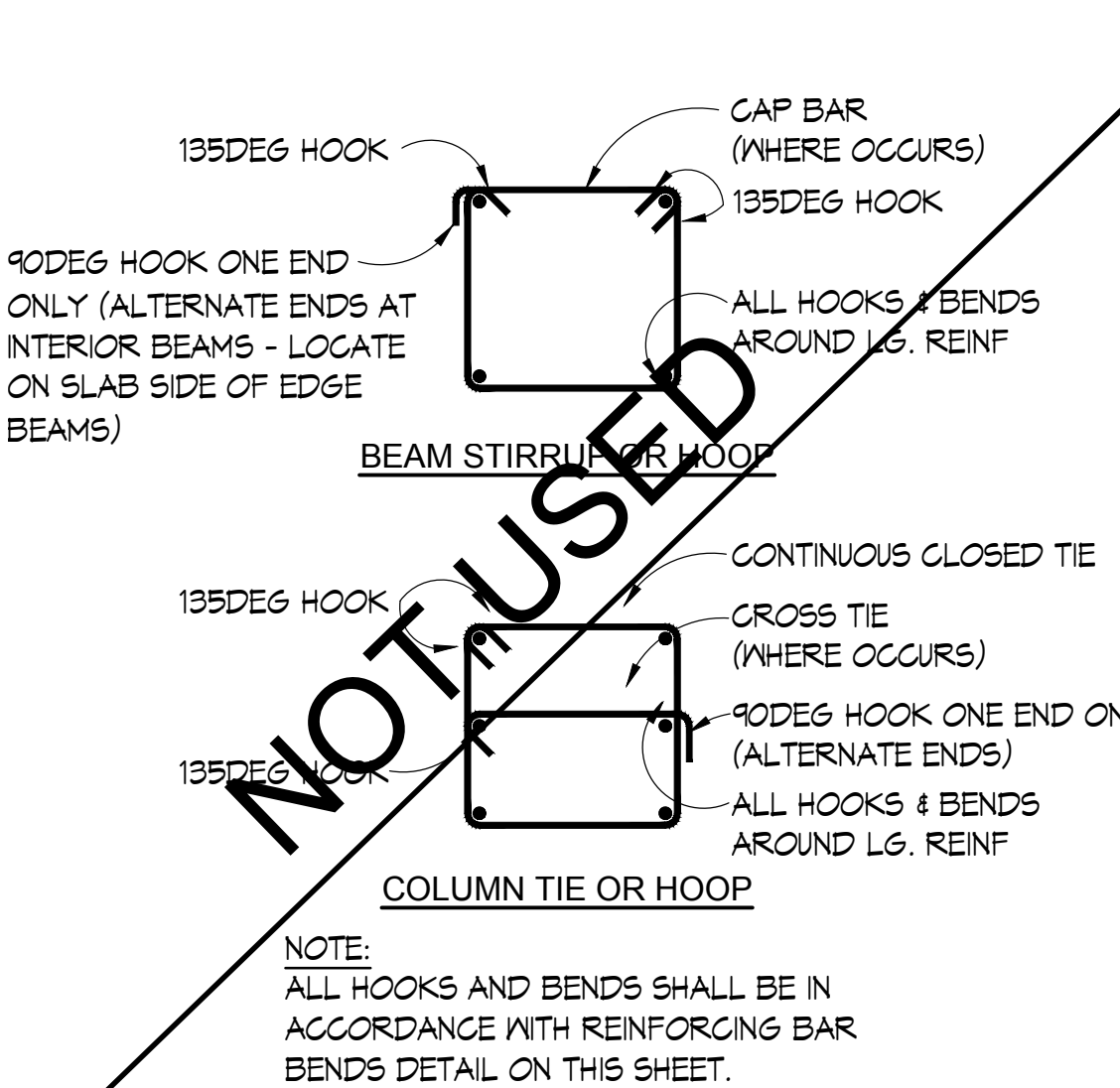
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TYP NON-STRUCTURAL PARTITION ATTACHMENT TO SLAB



EXT./INT. TYPICAL FRAMING @ STUD WALL



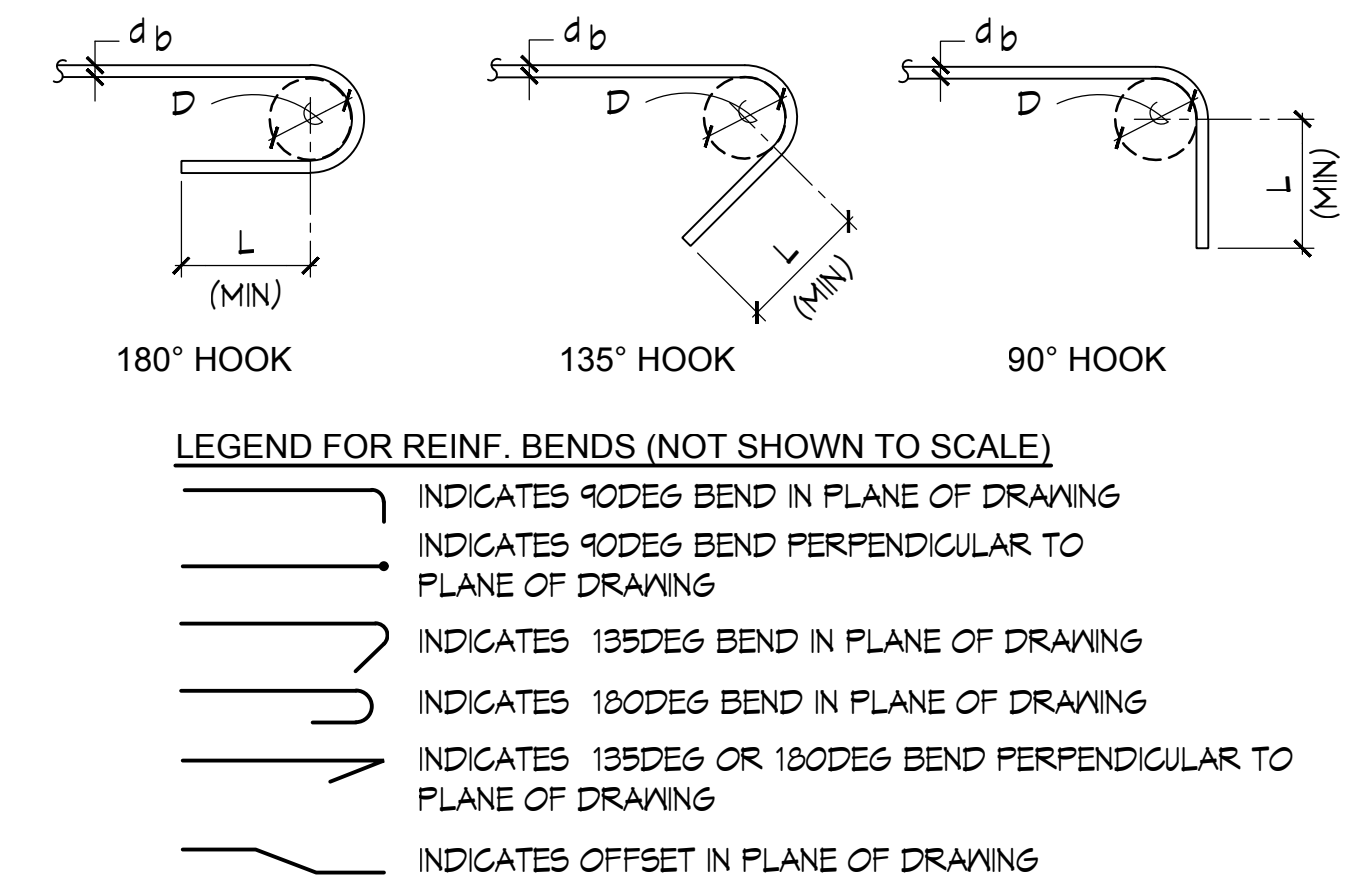
TYP. STIRRUP, TIE, HOOP OR CROSS-TIE

BARS OTHER THAN STIRRUPS, TIES, HOOPS & CROSS-TIES				
BAR SIZE	"D"	180DEG "L"	135DEG "L"	90DEG "L"
#3	2 1/4	2 1/2	-	4 1/2
#4	3	2 1/2	-	6
#5	3 3/4	2 1/2	-	7 1/2
#6	4 1/2	3	-	9
#7	5 1/4	3 1/2	-	10 1/2
#8	6	4	-	12
#9	9 1/2	4 1/2	-	13 1/2
#10	10 3/4	5 1/4	-	15 1/4
#11	12	5 3/4	-	17
#14	18 1/4	7	-	21
#18	24	9	-	27

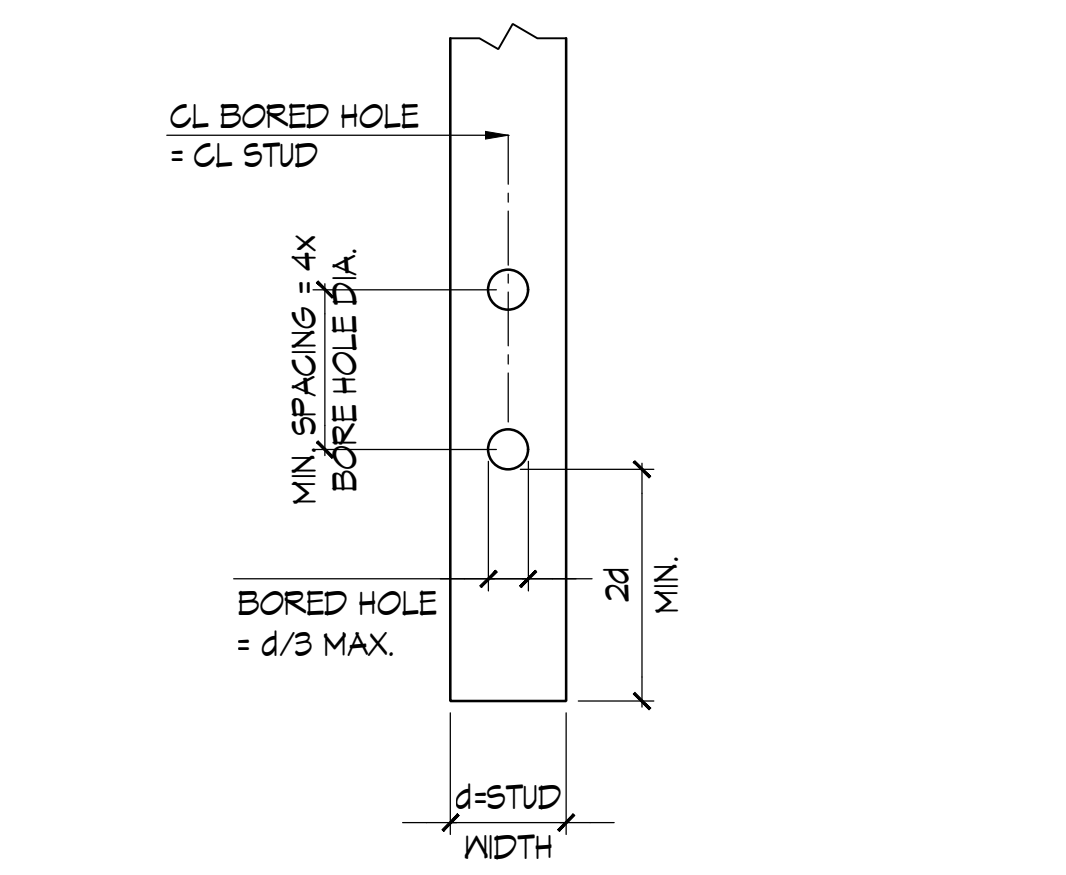
STIRRUPS, TIES, HOOPS & CROSS-TIES				
BAR SIZE	"D"	180DEG "L"	135DEG "L"	90DEG "L"
#3	1 1/2	-	4	4
#4	2	-	4	4
#5	2 1/2	-	4	4
#6	4 1/2	-	4 1/2	9
#7	5 1/4	-	5 1/4	10 1/2
#8	6	-	6	12

(1) USE 3/4" IN CONG. BLK. CONSTRUCTION

NOTE: ALL DIMENSIONS GIVEN ARE IN INCHES.

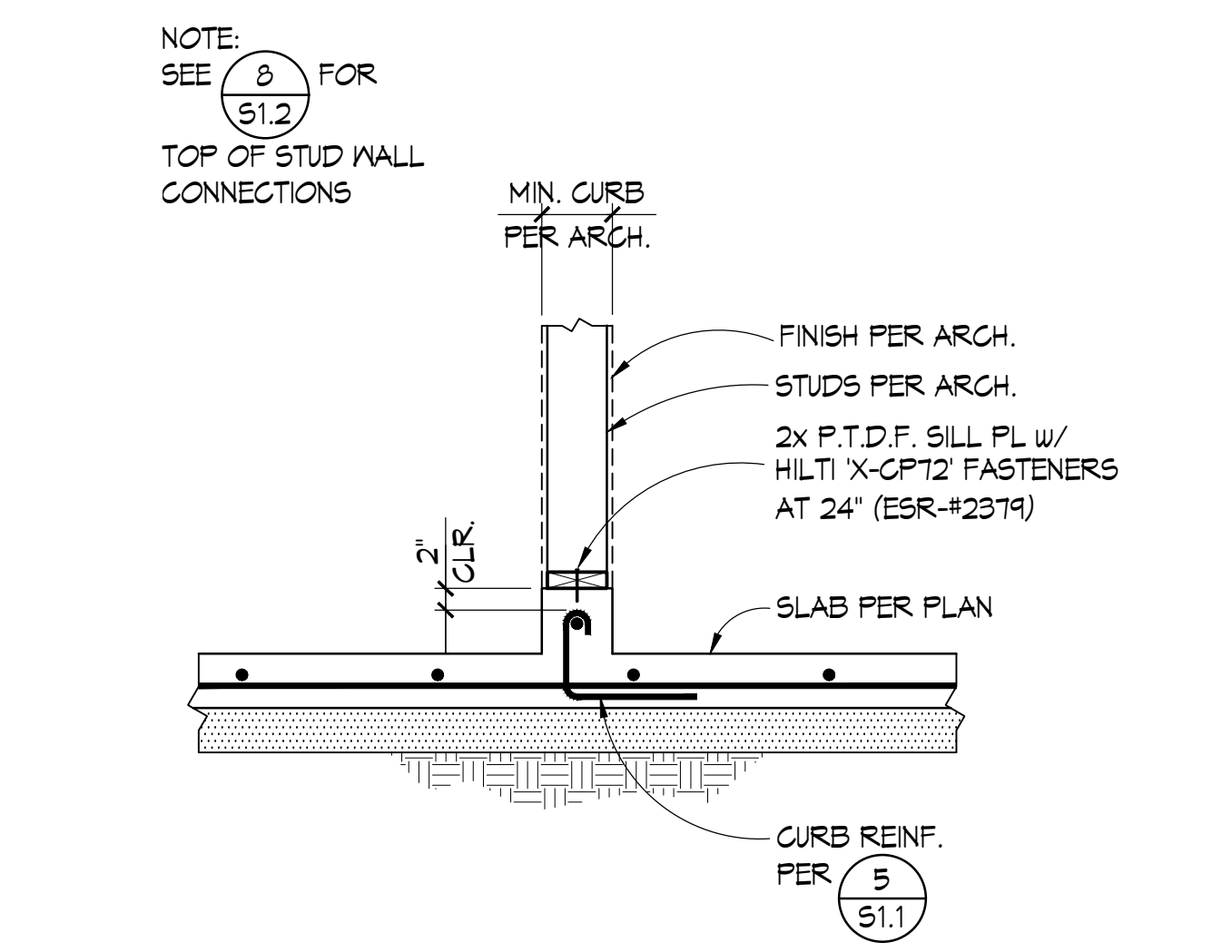


REINFORCING BAR BENDS & HOOKS

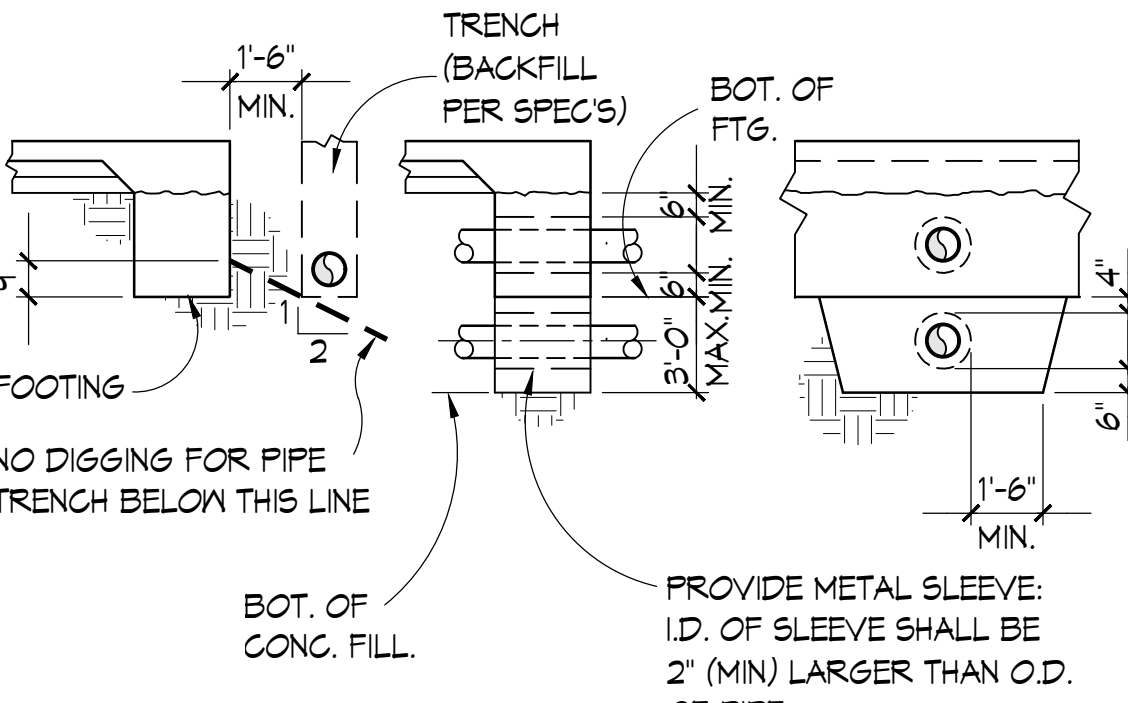


BORING OF WOOD STUDS

NOTE:  
1. LARGER HOLES MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

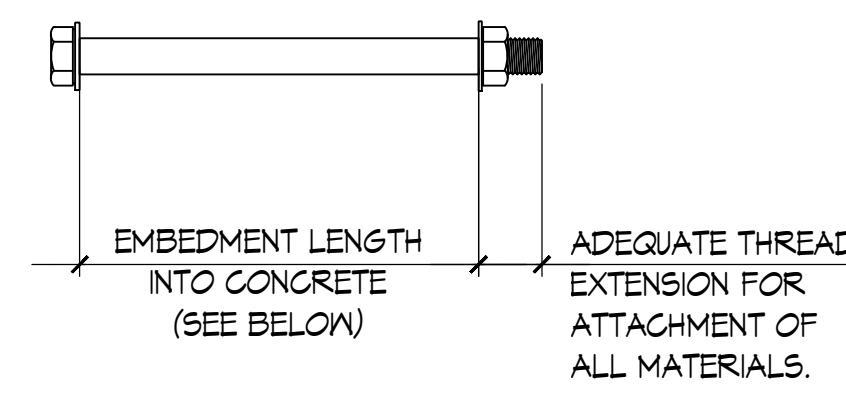


TYP NON-STRUCTURAL PARTITION ATTACHMENT TO CURB



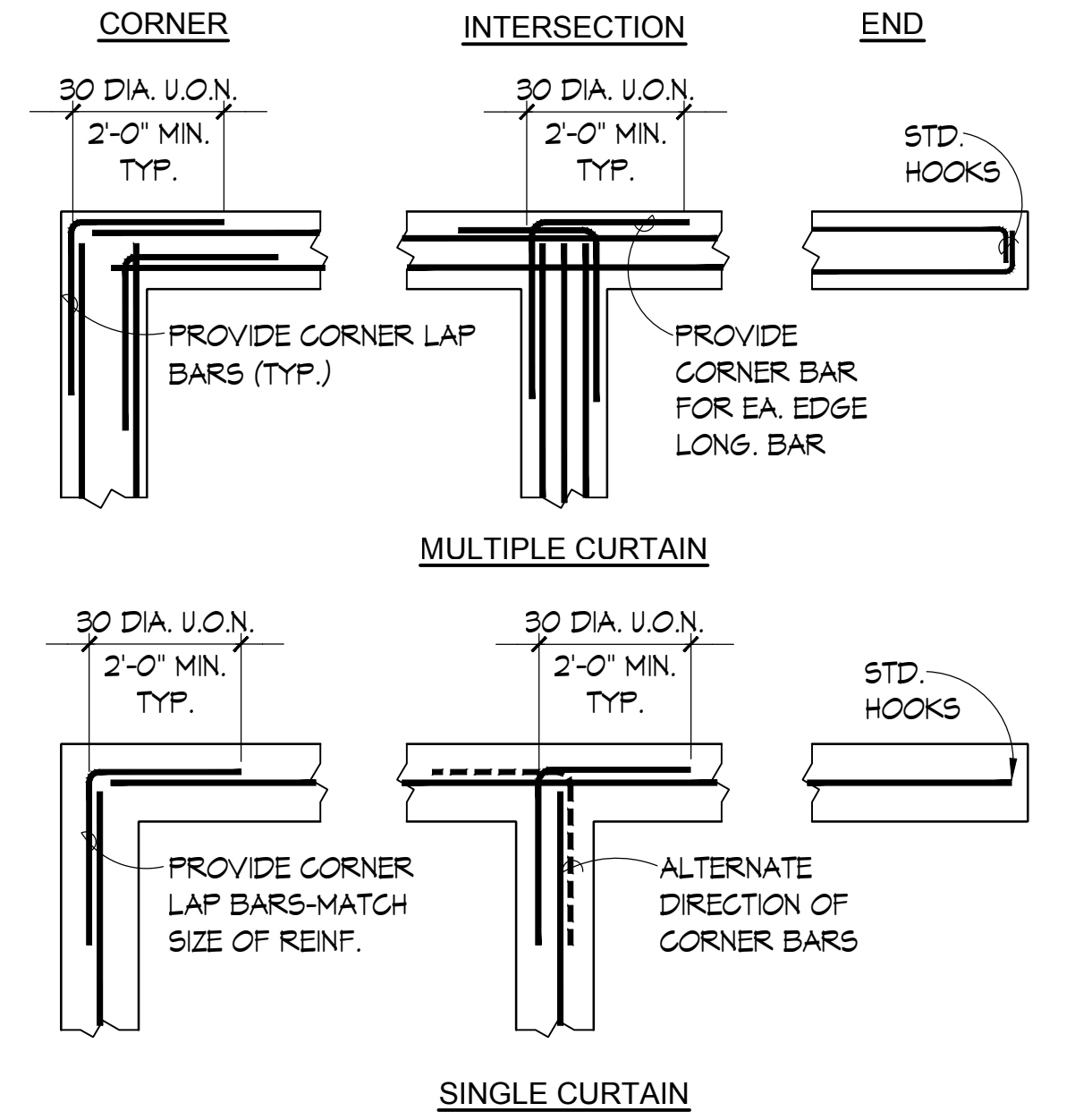
TYP. FOOTING AT PIPE OR CONDUIT

NOTE:  
1. WHERE BOTTOM OF FILL IS MORE THAN 3'-0" BELOW BOTTOM OF FOOTING, STEP FOOTING DOWN PER TYPICAL FOOTING STEP DETAIL  
2. PLACE CONCRETE FILL AROUND SLEEVES BEFORE POURING FOOTING PADS. FILL SHALL BE SAME WIDTH AS FOOTING AND FULL WIDTH OF PIPE TRENCH.  
3. NO PIPES SHALL BE PLACED IN FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS

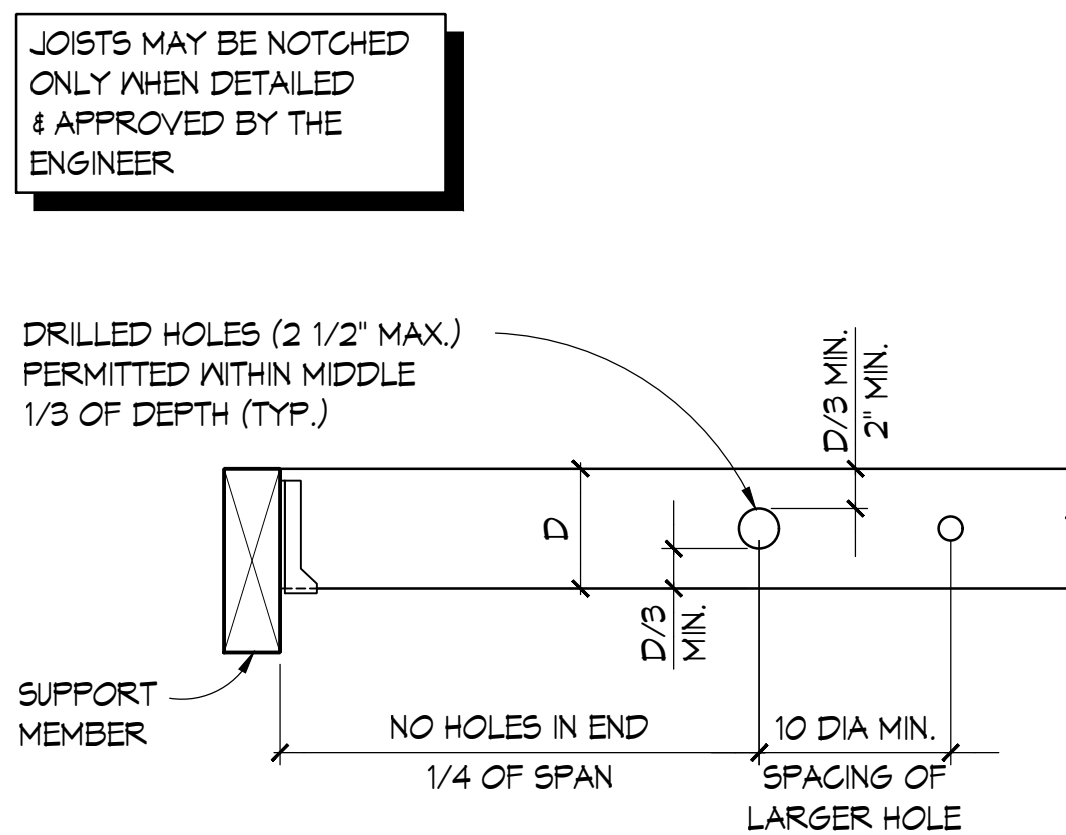


BOLT DIA. "D"	MINIMUM EMBEDMENT U.O.N. HORIZONTAL ANCHOR BOLTS	MINIMUM EMBEDMENT U.O.N. VERTICAL ANCHOR BOLTS
1/2"	5"	7"
5/8"	5"	7"
3/4"	6"	7"
1"	7"	8"
1 1/8"	9"	10"

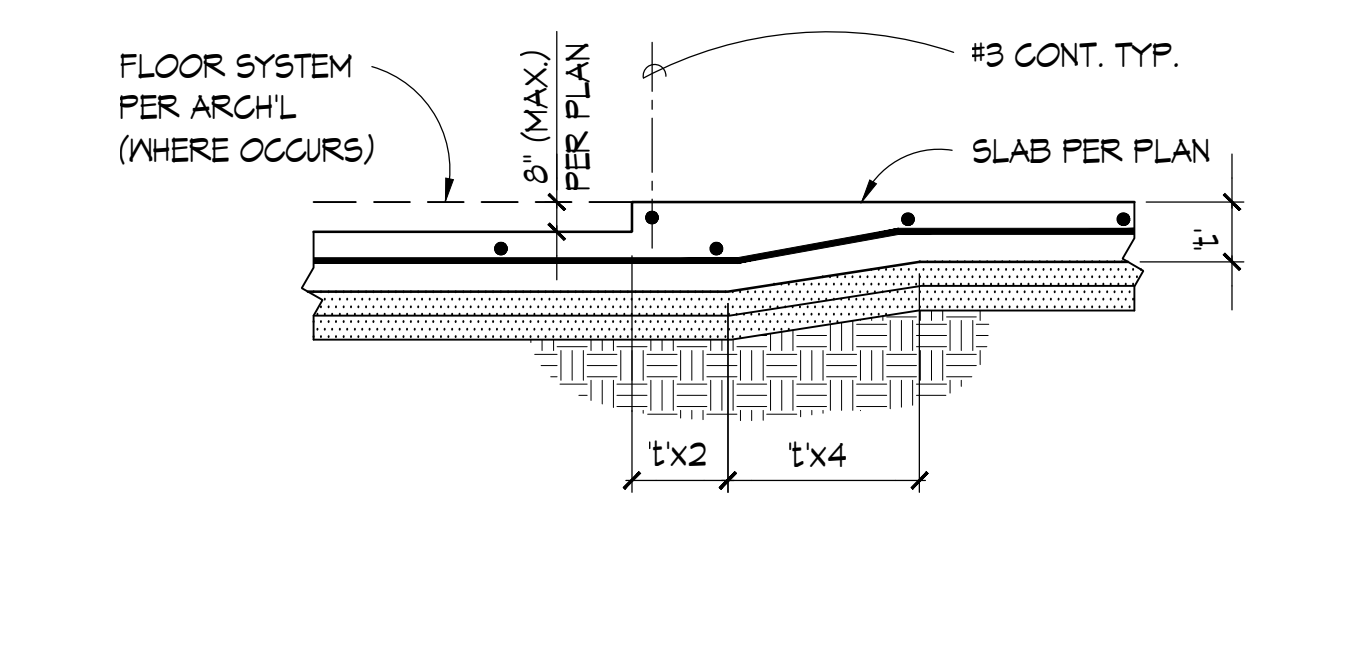
TYP. CONC. ANCHOR BOLT EMBEDMENTS



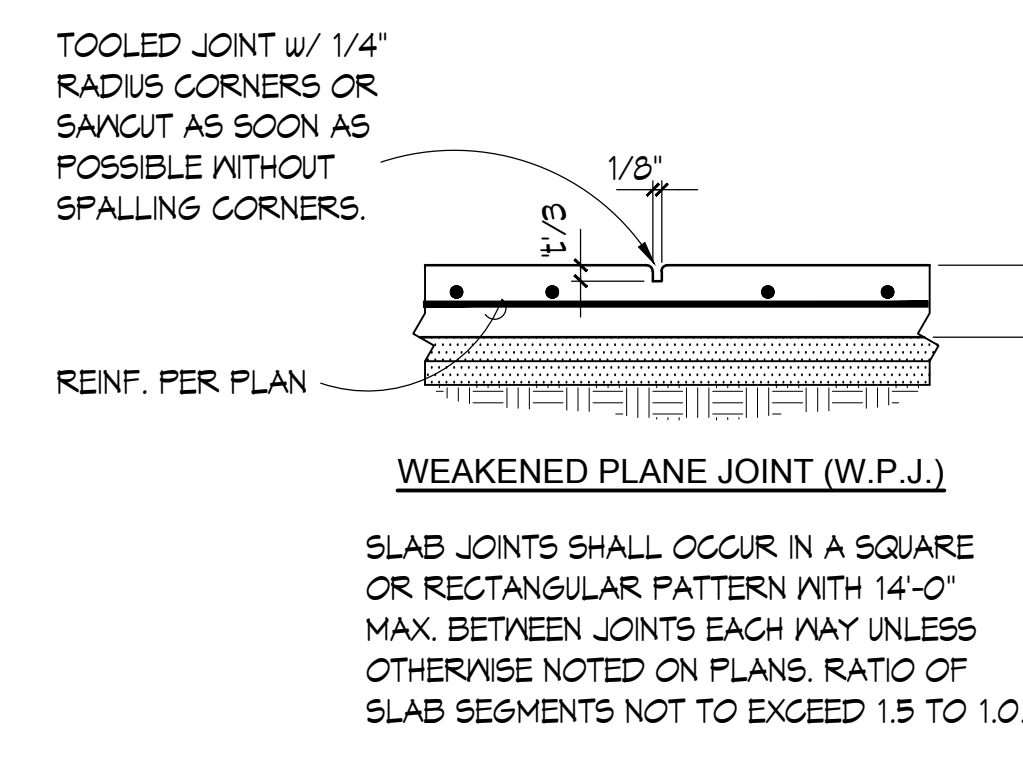
TYP. CONCRETE FTG. INTERSECTIONS



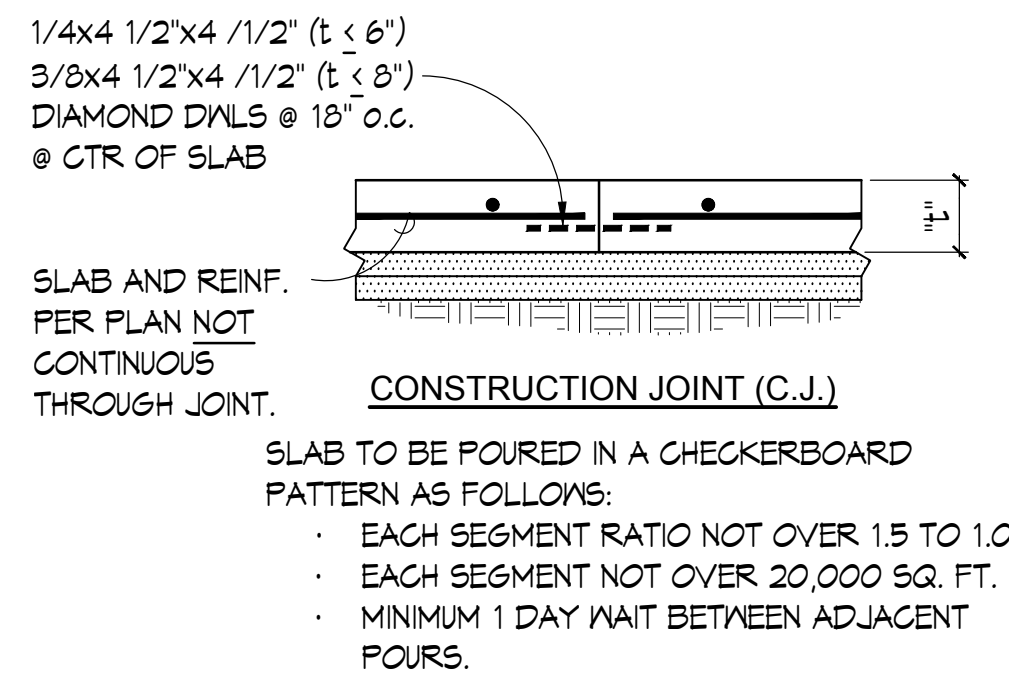
BORING AND NOTCHING OF SAWN LUMBER BEAMS & JOISTS



TYP. DEPRESSION IN SLAB-ON-GRADE



SLAB-ON-GRADE JOINTS & POUR PROCEDURE



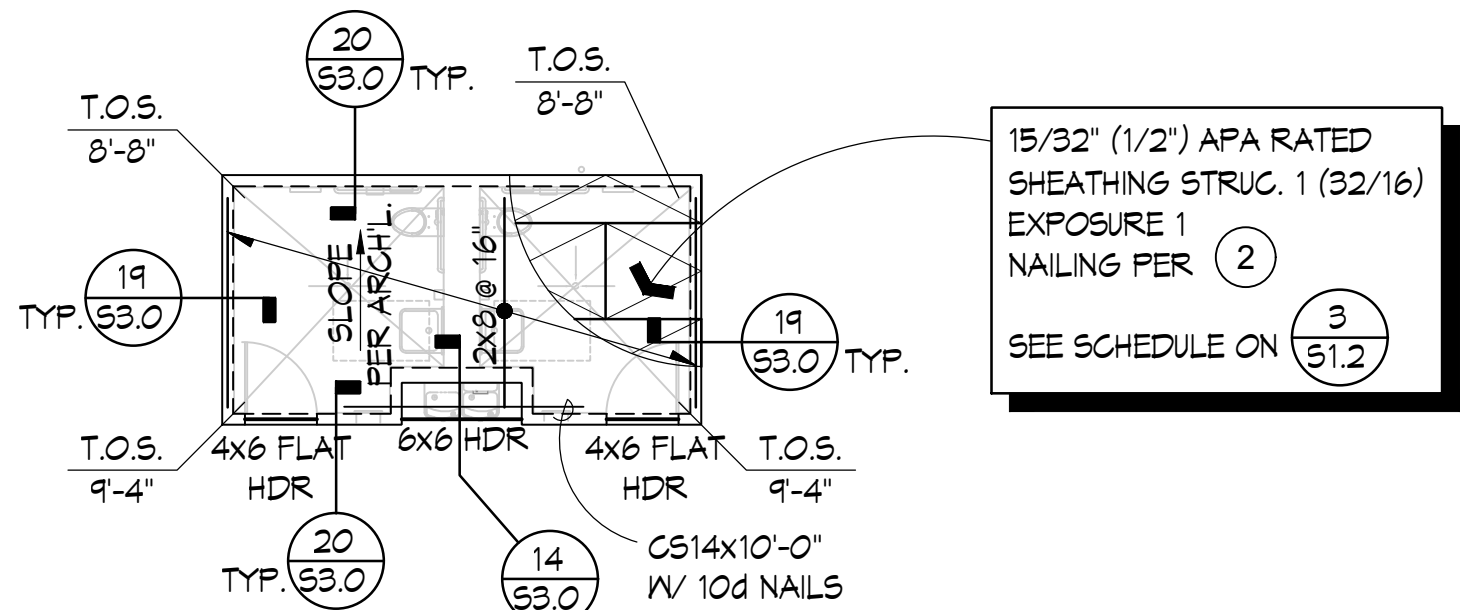
REBAR LAP SCHEDULE (CONCRETE)				
BAR SIZE	FC=3000 PSI		FC=4000 PSI	
	TOP BARS (N.)	OTHER BARS (N.)	TOP BARS (N.)	OTHER BARS (N.)
#3	28	22	24	19
#4	31	24	32	25
#5	41	36	40	31
#6	56	43	48	37
#8	81	63	70	54
#9	93	72	80	62
#10	105	81	91	70
#11	118	91	102	79
#14	151	101	113	87

NOTES:  
1. LAP SPlice LENGTHS FOR GRADE 60 REINFORCING BAR.  
2. LAP SPlice LENGTHS FOR NORMAL WEIGHT CONCRETE  
3. LAP SPlice LENGTHS FOR CLASS B LAPS = 1.3 l<sub>d</sub>.  
4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.  
5. LAP SPlice LENGTHS ARE BASED ON THE TYPE OF STRUCTURAL ELEMENT AS FOLLOWS:  
BEAMS OR COLUMNS: COVER AT LEAST 1.0d<sub>b</sub> AND CENTER TO CENTER SPACING AT LEAST 2.0d<sub>b</sub>.  
ALL OTHERS: COVER AT LEAST 1.0d<sub>b</sub> AND CENTER TO CENTER SPACING AT LEAST 3.0d<sub>b</sub>.

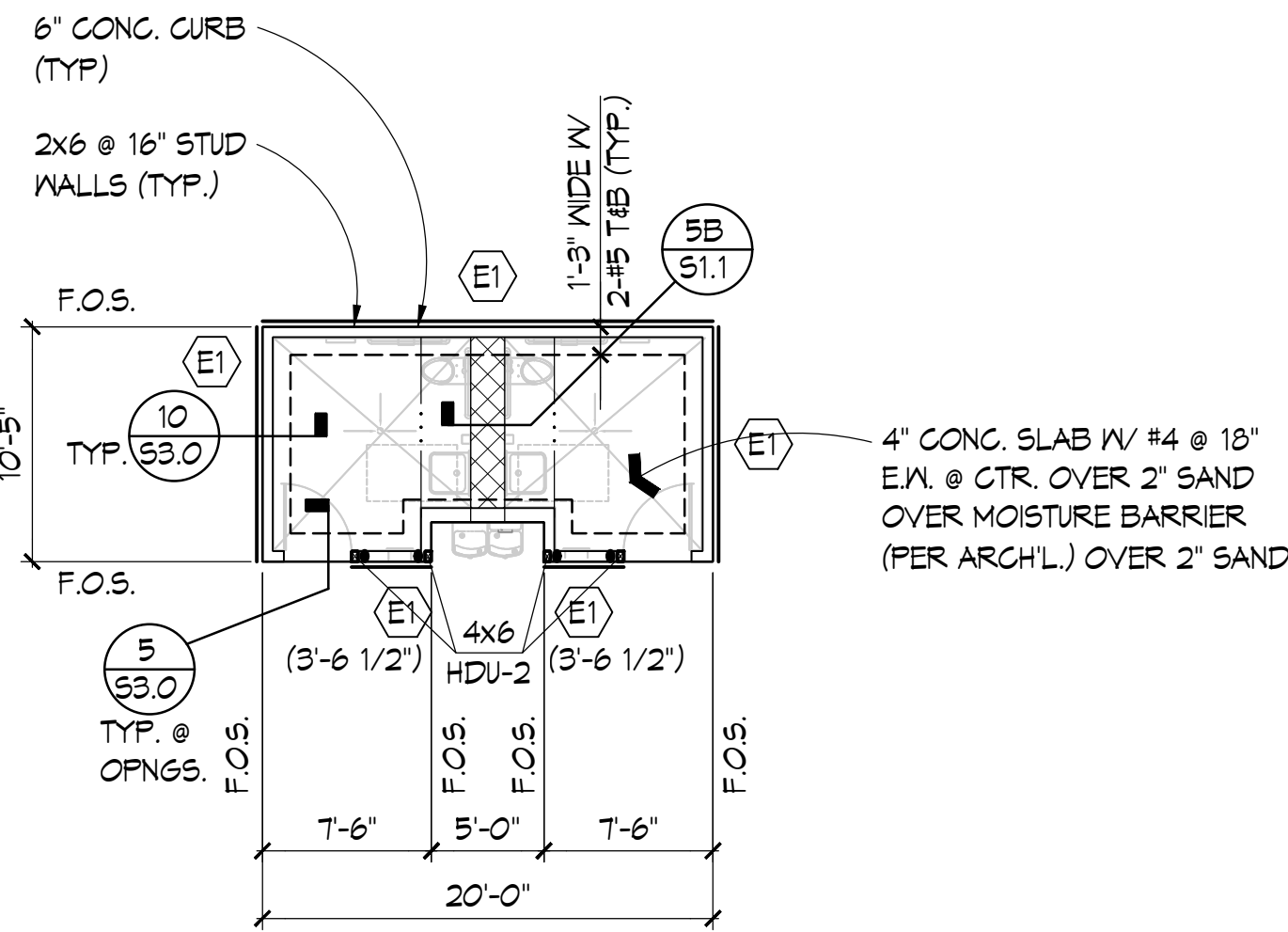






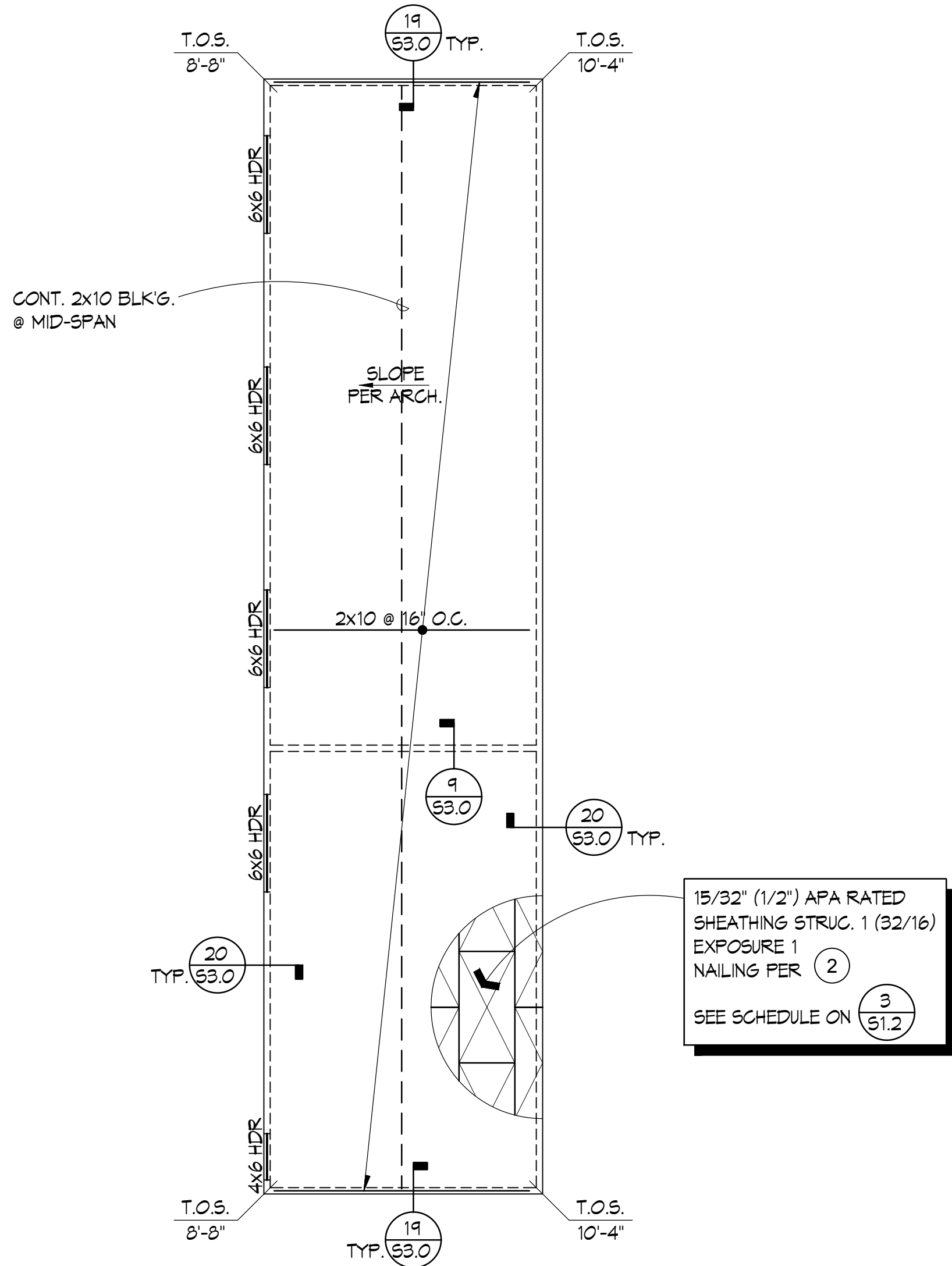


**ROOF FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

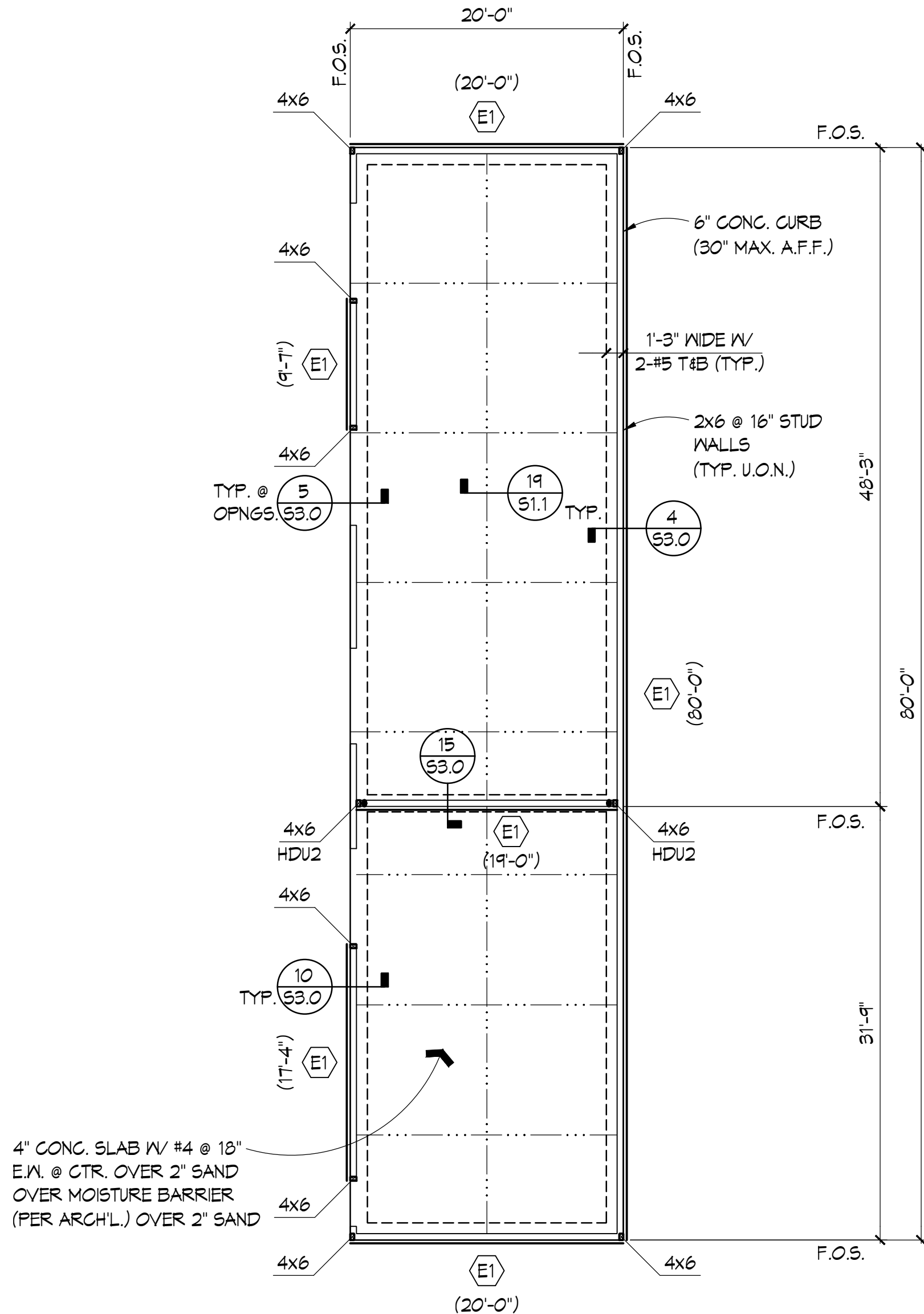


**FOUNDATION PLAN**  
SCALE: 1/8" = 1'-0"

**RESTROOM BUILDING**



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



**FOUNDATION PLAN**  
SCALE: 1/8" = 1'-0"

**STORAGE BUILDING**

**ROOF FRAMING NOTES**

- SEE GENERAL NOTES AND TYPICAL DETAILS ON SHEET S1.0-S1.2. THESE NOTES AND DETAILS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY REFERENCED OR NOT.
- CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES WITH THE STRUCTURAL REQUIREMENTS INDICATED. REFER TO CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- FOR SIZE AND LOCATION OF ROOF OPENINGS FOR STAIRS AND ELEVATORS, REFER TO ARCHITECTURAL DRAWINGS.
- FOR TOP OF SHEATHING AND TOP OF PARAPET ELEVATIONS NOT NOTED, REFER TO ARCHITECTURAL DRAWINGS.
- FOR DIMENSIONS, EXTENT, AND NATURE OF ALL WALLS, REFER TO ARCHITECTURAL DRAWINGS.
- NOMINAL ROOF LINE VARIES. SEE PLAN FOR SPOT ELEVATIONS. STRUCTURAL WALLS BELOW ARE INDICATED BY DASHED LINES. FRAMING MEMBERS AT THIS LEVEL ARE SHOWN BY SOLID LINES.
- SIZE AND LOCATION OF ALL MECHANICAL EQUIPMENT TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
- WHEN HARDWARE THAT REQUIRE 10dX1 1/2" NAILS ARE INSTALLED OVER SHEATHING, THE LENGTH OF NAILS USED SHALL BE INCREASED BY THE THICKNESS OF THE SHEATHING.

**ROOF FRAMING LEGEND**

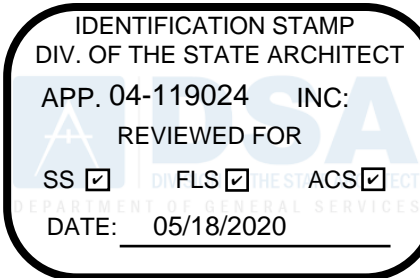
- HEADER MEMBER. INSTALL MEMBER AT HEAD OF OPENING IN WALL BELOW. SEE DETAIL (1) S1.1
- BEAM MEMBER INSTALLED DIRECTLY BELOW SHEATHING, U.O.N.
- APPROXIMATE SIZE, LOCATION, AND ASSUMED MAXIMUM HEIGHT OF MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION OF EQUIPMENT WITH MECHANICAL DRAWINGS. HEIGHT INDICATED SHALL NOT BE EXCEEDED NOR UNIT RELOCATED WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.
- TOP OF SHEATHING ELEVATION AT THE LOCATION SHOWN.
- REQUIRED DBL. TOP PLATE SPLICE PER DETAIL (20) S1.2. THE MARKED SPLICE SHALL APPLY FOR THE FULL LENGTH OF THE WALL WHERE INDICATED.
- INDICATES STRAP TO BE INSTALLED ON TOP OF MEMBERS.
- INDICATES STRAP TO BE INSTALLED ON SIDE OF MEMBERS.
- FRAMING MEMBER BEARING ON TOP OF SUPPORT.
- FRAMING MEMBER INSTALLED FLUSH (IN HANGER) AT ITS SUPPORT.

**FOUNDATION PLAN NOTES**

- SEE GENERAL NOTES AND TYPICAL DETAILS ON SHEETS S1.1-S1.2. THESE NOTES AND DETAILS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY REFERENCED OR NOT.
- CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES WITH THE STRUCTURAL REQUIREMENTS INDICATED. REFER TO CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- SLAB-ON-GRADE CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO PLACEMENT OF CONCRETE.
- FOR NATURE AND EXTENT OF DRAINS, SUMPS, EXTERIOR HARDSCAPE, ETC., REFER TO OTHER DRAWINGS.
- FOR SIZE AND LOCATION OF DEPRESSED SLABS, CURBS, ELEVATOR PITS, AND SLAB OPENINGS, REFER TO ARCHITECTURAL DRAWINGS.
- FOR ITEMS EMBEDDED INTO CONCRETE SLABS AND WALLS, REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- ANCHOR BOLTS, INCLUDING HOLDOWN ANCHORS, SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.
- STRUCTURAL WALLS ARE WALLS THAT RESIST GRAVITY, WIND, AND/OR SEISMIC LOADS. ALL EXTERIOR WOOD FRAME WALLS ARE STRUCTURAL WALLS. THE STRUCTURAL DRAWINGS ARE STRUCTURAL WALLS. REFER TO ARCHITECTURAL PLANS FOR LOCATION AND EXTENT OF PARTITION WALLS.
- ALL WOOD FRAME STRUCTURAL WALLS ARE 2x6 @ 16" O.C. STUD WALLS, UNLESS OTHERWISE NOTED ON PLANS, DETAILS, OR SHEARWALL SCHEDULE.
- FOR DIMENSIONS, EXTENT, AND NATURE OF ALL WALLS, REFER TO ARCHITECTURAL DRAWINGS.
- ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH PAD FOOTINGS OR OTHER CONTINUOUS FOOTINGS.
- LAPS OF FOOTING REINFORCEMENT SHALL CONFORM TO (20) S1.1.
- ALL EXTERIOR WALL SURFACES SHALL HAVE SHEATHING WHERE SHEARWALL SHEATHING IS NOT INDICATED. MATCH SHEARWALL SHEATHING THICKNESS.
- EDGE OF SLAB SHALL BE FLUSH WITH EXTERIOR FACE OF SHEATHING. (U.O.N.).

**FOUNDATION LEGEND**

- WOOD POST SIZE. MARK IS INDICATED AT THE BASE OF THE POST.
- SIMPSON HOLDOWN ANCHOR SIZE AT THIS LEVEL PER DETAIL (16) S1.2. HOLDOWN SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
- TOP OF FOOTING ELEVATION AT THE LOCATION SHOWN.
- APPROXIMATE LOCATION OF STEP IN FOOTING PER DETAIL (3) S1.1. DARK SIDE INDICATES LOWER ELEVATION OF FOOTING. (X) INDICATES DEPTH OF STEP.
- SHEARWALL PER SCHEDULE (5) S1.2. SEE DETAILS ON SHEET S1.3 FOR TYP. SHEARWALL ASSEMBLY. (X) INDICATES MINIMUM SHEARWALL LENGTH FROM EDGE TO EDGE OF PLYWOOD.
- AN AREA WHERE TOP OF (SLAB/CONCRETE TOPPING/SHEATHING) ELEVATION IS OTHER THAN TYPICAL.
- STEP IN SURFACE OF SLAB/CONCRETE TOPPING/SHEATHING) REFER TO ARCHITECTURAL DRAWINGS FOR DEPTH OF STEP.
- SLAB-ON-GRADE JOINT PER DETAIL (19) S1.1



Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date	Issue
10/11/2019	SD
01/17/2020	50% CD
02/11/2020	DSA Submittal
04/09/2020	DSA Resubmittal



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9915 ARIA MESIA BLVD.  
SUITE 200  
SAN DIEGO, CA 92131  
TEL 619.534.5146  
FAX 619.534.5145  
WWW.WISEMENROHY.COM



**HED**  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA  
  
(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com  
  
Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

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Project No. 19078.00  
Drawn TEAM  
Checked SR  
Approved

Title  
FOUNDATION & ROOF  
FRAMING PLANS

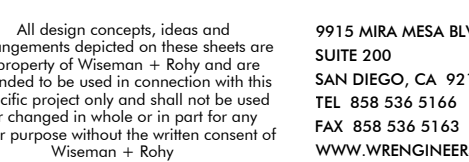
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Helix Charter HS  
Restroom & Storage  
Bldgs

Date	Issue
10/11/2019	SD
01/17/2020	50% CD
02/11/2020	DSA Submittal
04/09/2020	DSA Resubmittal



225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

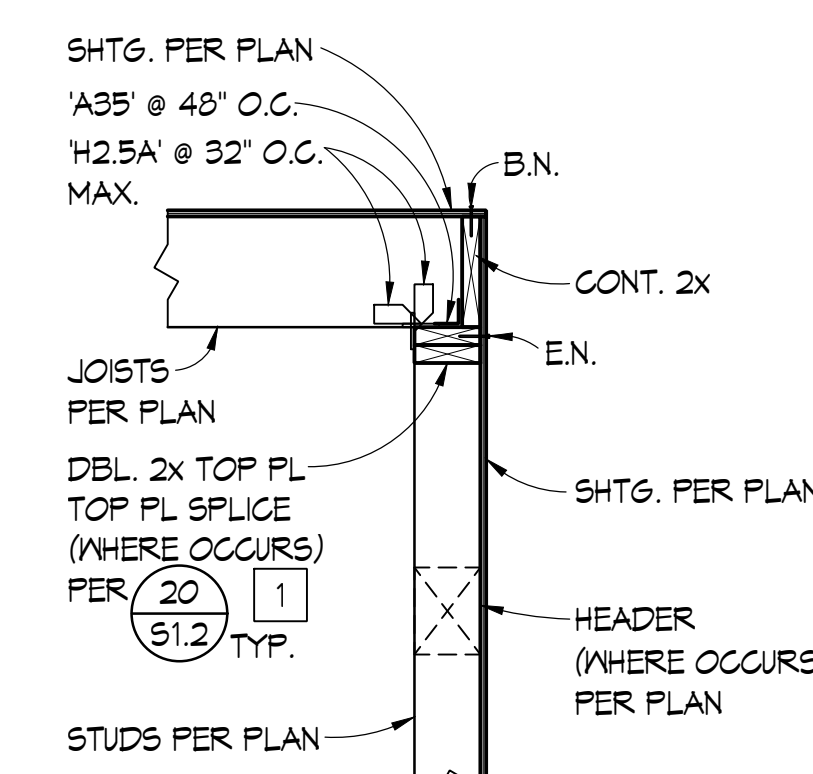
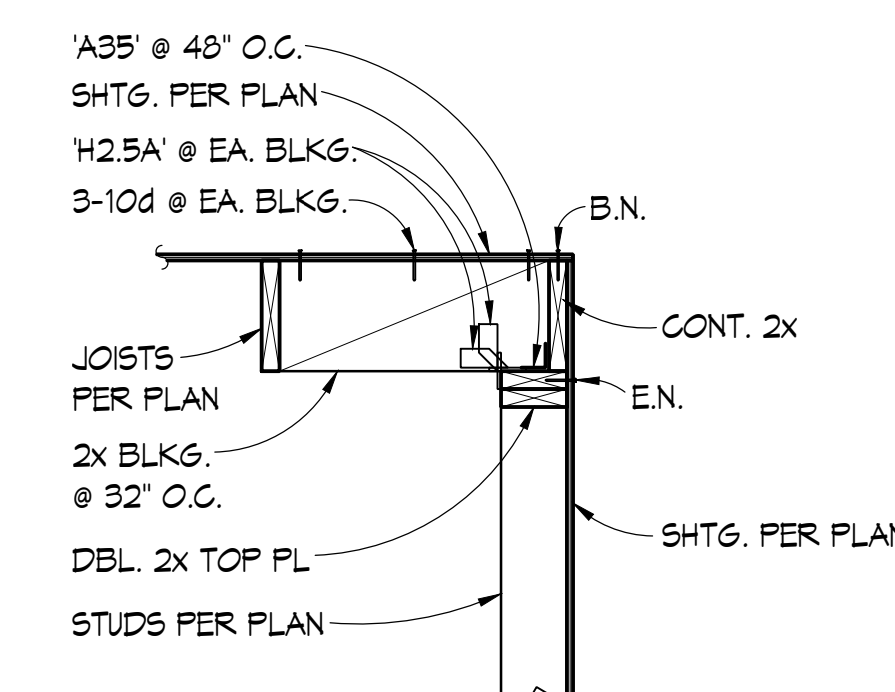
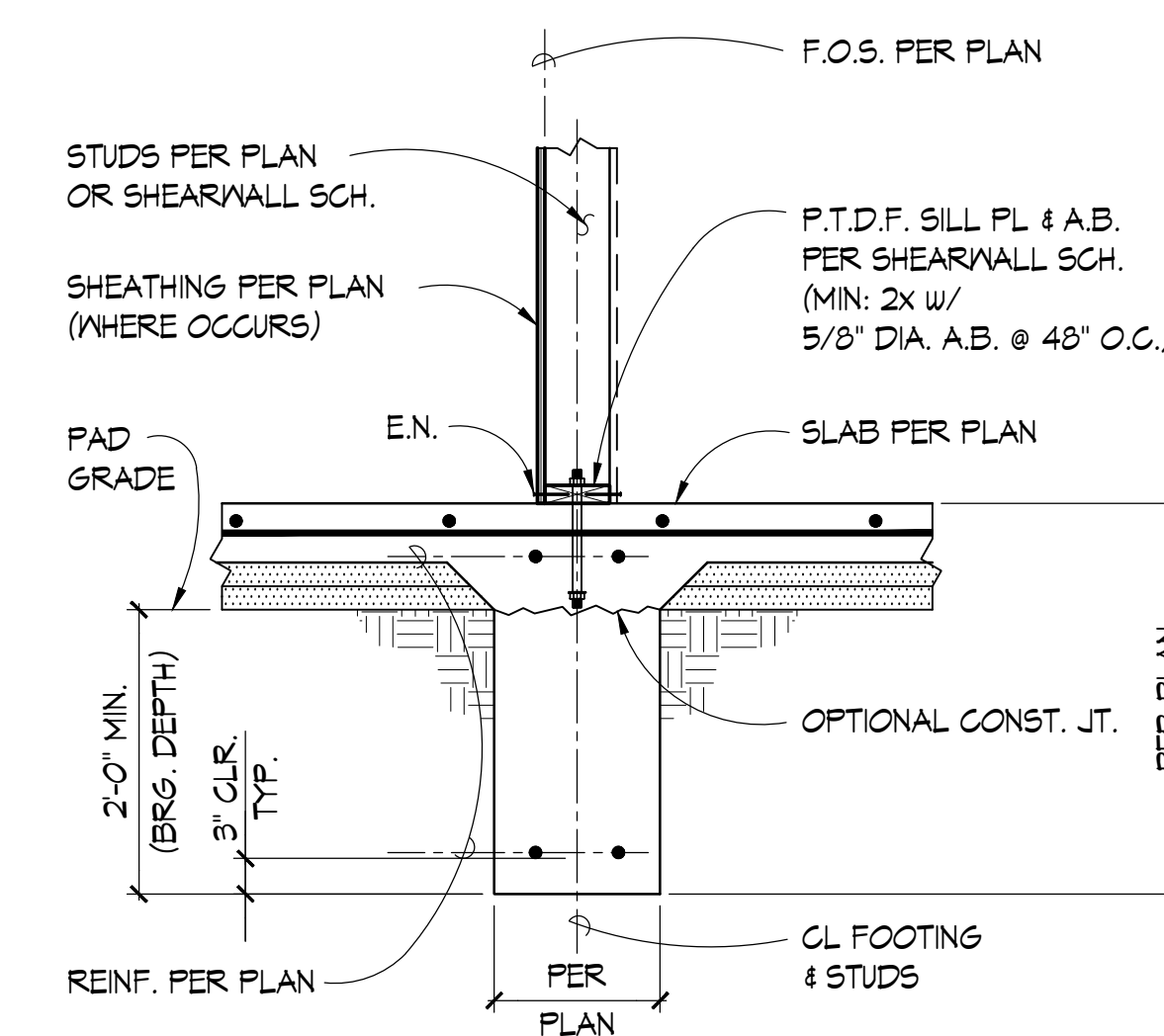
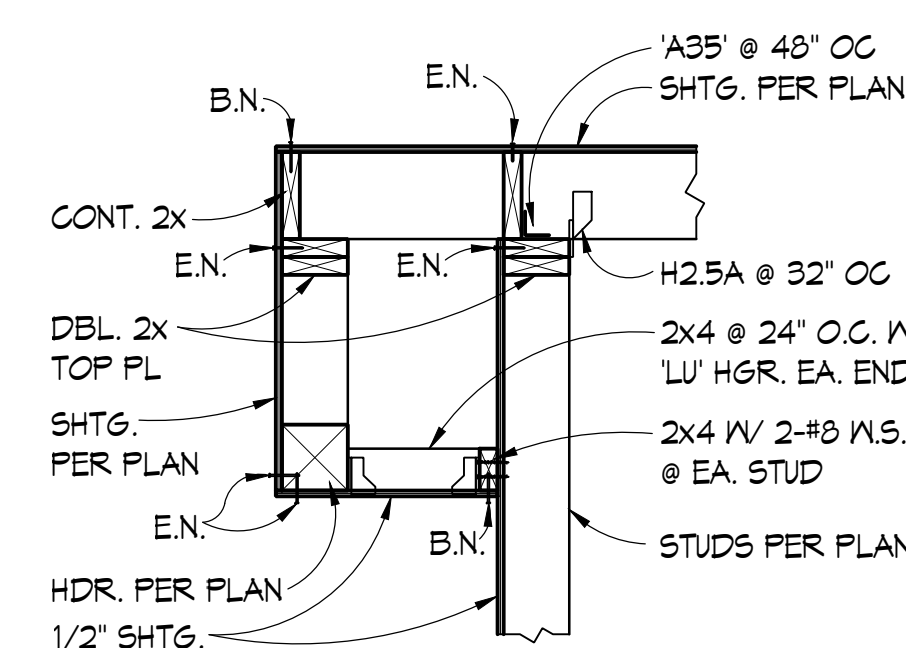
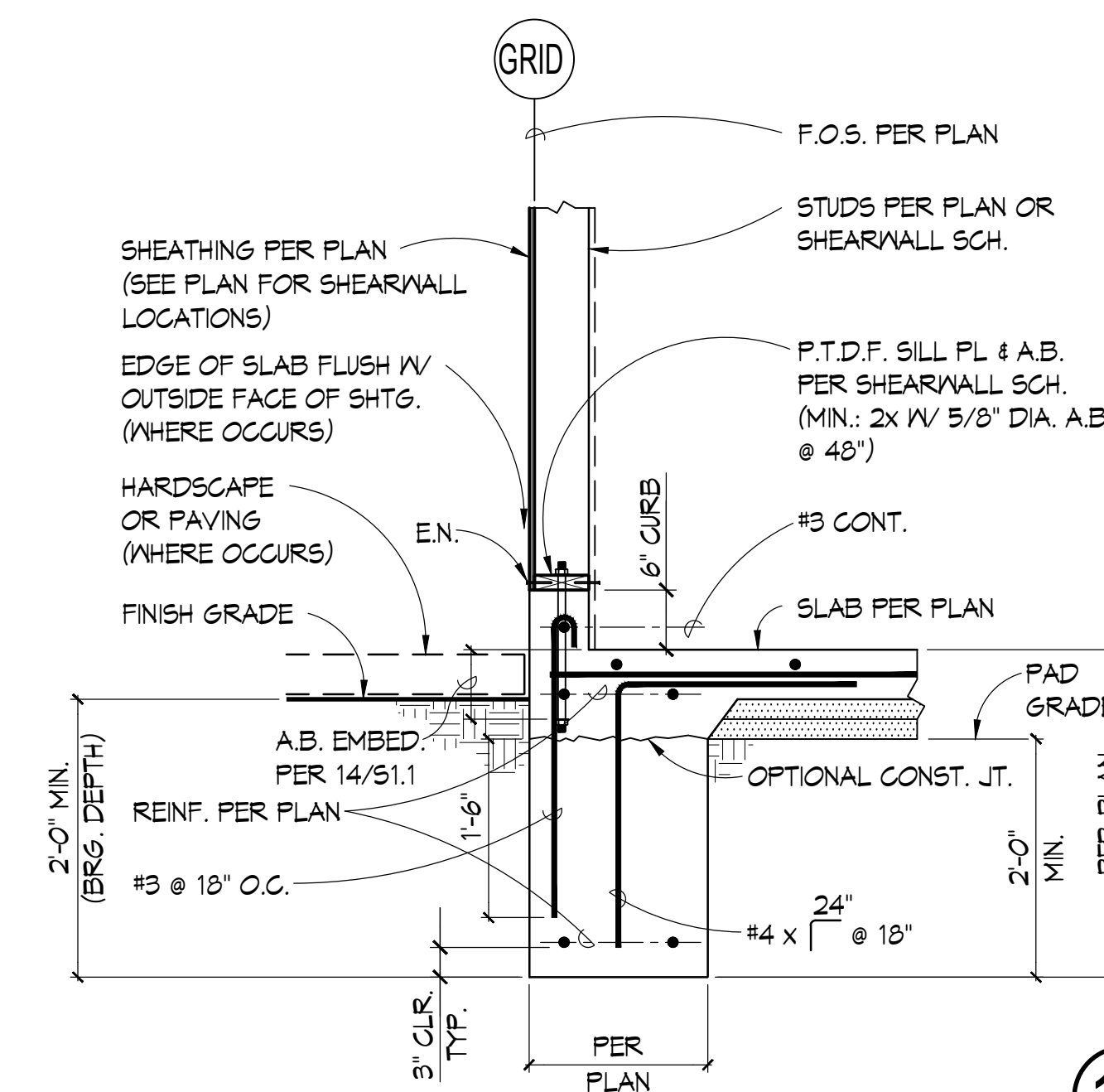
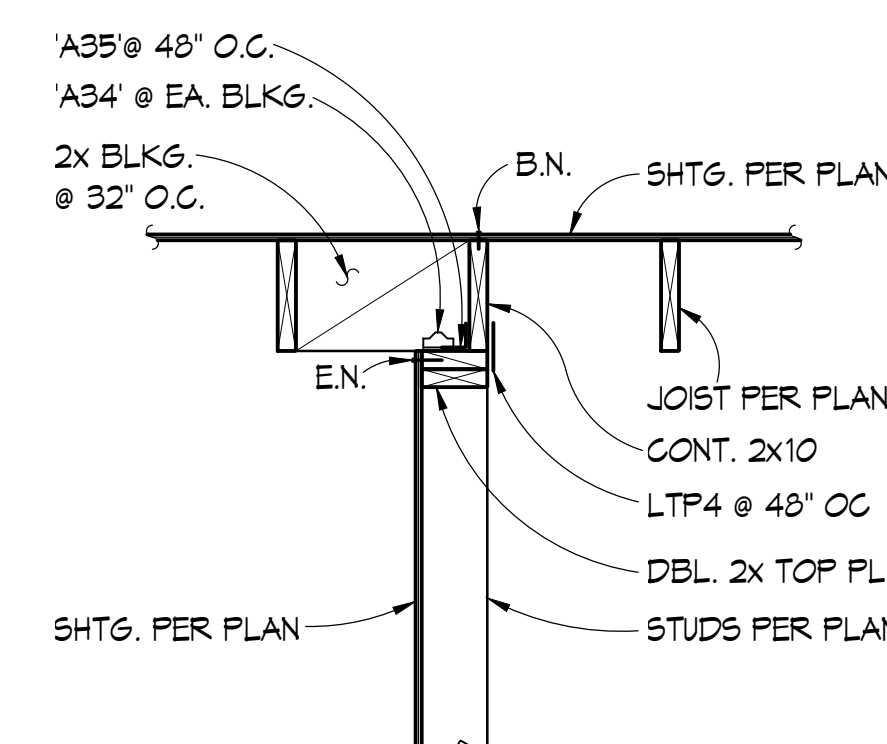
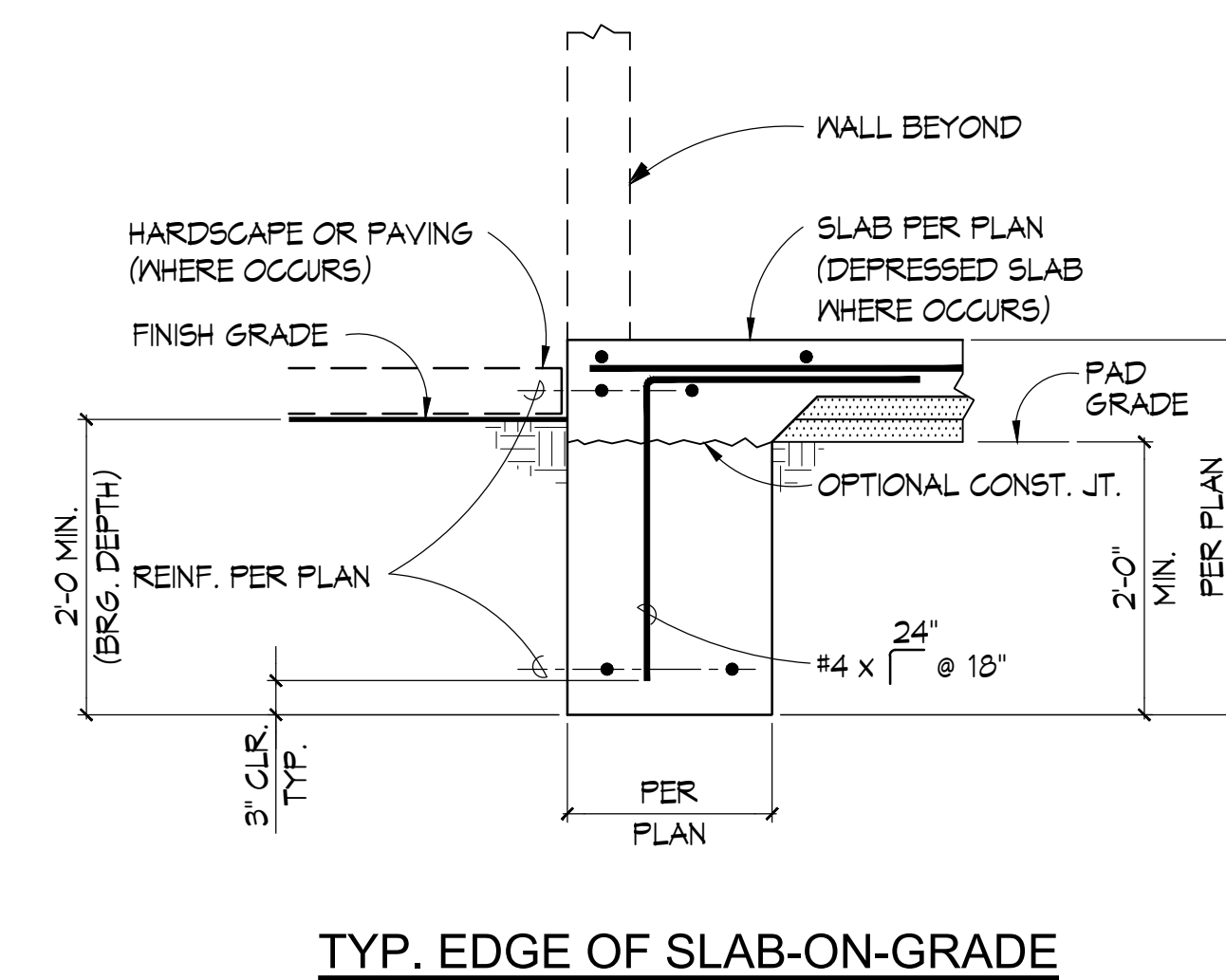
(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

Planning  
Architecture  
Engineering  
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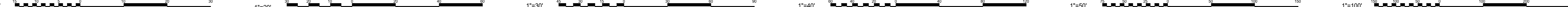
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Project No.	19078.00
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Checked	SR
Approved	

Title  
DETAILS

Sheet No. **S3.0**

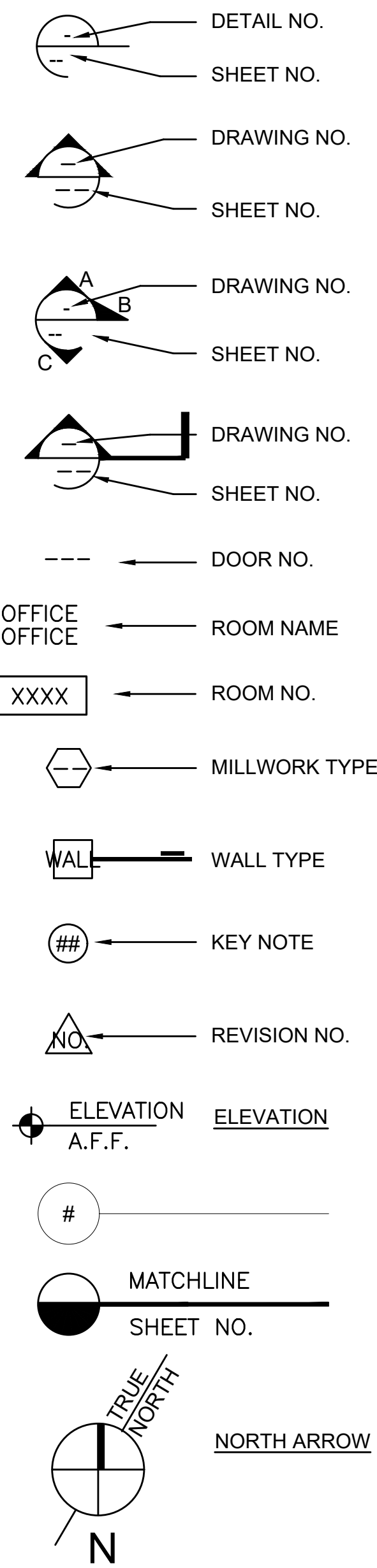




ABBREVIATIONS

A# xxx	DIVISION OF STATE ARCHITECT APPLICATION NUMBER	LAV.	LAVATORY
A.C.	ASPHALT CONCRETE	LB.	POUND
A/C	AIR CONDITIONING(ED)	L.F.	LINEAR FOOT (FEET)
ACC.	ACCESSIBLE	LVR.	LOUVER
A.D.	AREA DRAIN	LT.WT.	LIGHTWEIGHT
A/E	ARCHITECT/ENGINEER		
A.F.F.	ABOVE FINISH(ED) FLOOR	MAS.	MASONRY
A.F.S.	ABOVE FINISH(ED) SURFACE	MATL.	MATERIAL
ALUM.	ALUMINUM	MAX.	MAXIMUM
ALT.	ALTERNATE	M.B.	MACHINE BOLT
AMT.	AMOUNT	MECH.	MECHANIC(AL)
ANOD.	ANODIZE(D)	MEMBR.	MEMBRANE
APPROX.	APPROXIMATE(LY)	MFR.	MANUFACTURER
ARCH.	ARCHITECT(S)	MIN.	MINIMUM
ASPH.	ASPHALT	MISC.	MISCELLANEOUS
AV	AUDIO/VISUAL	MT.(D.)(G.)	MOUNT(ED)(ING)
		MTL.	METAL
BD.	BOARD(S)		
BIT.	BITUMINOUS	(N)	NEW
BLDG.	BUILDING	N/A	NOT APPLICABLE
BLK.(G.)	BLOCK(ING)	N.I.C.	NOT-IN-CONTRACT
BU.(R.)	BUILT-UP (ROOFING)	NO.	NUMBER
		N.R.C.	NOISE REDUCTION COEFFICIENT
		N.T.S.	NOT-TO-SCALE
C.B.	CATCH BASIN	O.C.	ON-CENTER
C.F.	CUBIC FOOT (FEET)	O.D.	OUTSIDE DIAMETER
C.J.	CONTROL JOINT	O.H.	OPPOSITE HAND
C.L.	CENTERLINE	OPNG.	OPENING
CLG.	CEILING	OPP.	OPPOSITE
CL.L.	CONTRACT LIMIT LINE		
CLR.	CLEAR(ANCE)	PAV.(MT.)	PAVING, PAVEMENT
C.M.U.	CONCRETE MASONRY UNIT(S)	PC	POWDER COATED
C.O.	CLEAN OUT	P.H.	PANIC HARDWARE
COL.	COLUMN	P.I.P.	PROTECT IN PLACE
CONC.	CONCRETE	PL.	PLATE
CONST.	CONSTRUCTION	P.LAM.	PLASTIC LAMINATE
CONT.	CONTINUOUS	PLAS.	PLASTER, PLASTIC
CONTR.	CONTRACTOR	PLBG.	PLUMBING
CORR.	CORRIDOR, CORRUGATE(D)	PLYWD.	PLYWOOD
C.T.	CERAMIC TILE	PNT.	PAINT
CTR.	COUNTER	PREFAB.	PREFABRICATE(D)
		PREFIN.	PREFINISH(ED)
D.	DRAIN	P.S.F.	POUNDS PER SQUARE FOOT
(D)	DEMOLISH	P.S.I.	POUNDS PER SQUARE INCH
DEMO.	DEMOLISH (DEMOLITION)	PTD.	PAINTED
D.F.	DRINKING CUNTAIN	PVMT.	PAVEMENT
DIA.	DIAMETER		
DIM.	DIMENSION	QUAL.	QUALITY
DISP.	DISPENSER, DISPOSAL	QUAN.	QUANTITY
DN.	DOWN		
DR.	DOOR	(R)	REFINISH
D.S.	DOWNSPOUT	R.B.	RUBBER BASE
DSA	DIVISION OF STATE ARCHITECT	R.C.P.	REINFORCED CONCRETE PIPE
DTL.	DRAIN TILE	R.D.	ROOF DRAIN
DRWG.	DRAWING	REF.	REFERENCE
		REFRIG.	REFRIGERATOR
(E)	EXISTING	REG.	REGISTER
EA.	EACH	REQ'D.	REQUIRED
EJ.	EXPANSION JOINT	RET.	RETAINING
ELEV.	ELEVATION (GRADE)	R.L.	ROOF LEADER, RAIN LEADER
ELEC.	ELECTRIC(AL)	RM.	ROOM
ELEV.	ELEVATION, ELEVATOR	RT.	RIGHT
EMER.	EMERGENCY		
EQUIP.	EQUIPMENT	S.C.	SOLID CORE
E.W.C.	ELECTRIC WATER COOLER	SCHED.	SCHEDULE
EXH.	EXHAUST	S.D.	SOAP DISPENSER;
EXIST.	EXISTING	S.D.	STORM DRAIN
EXTG.	EXISTING	S.F.	SQUARE FOOT (FEET)
EXT.	EXTERIOR	SHT.	SHEET
EXP.	EXPAND(SION), EXPOSED	SHTG.	SHEATHING
		S.M.S.	SHEET METAL SCREW
F.A.	FIRE ALARM	SPEC.	SPECIFICATION
F.D.	FIRE DAMPER, FLOOR DRAIN	S.T.C.	SOUND TRANSMISSION CLASS
F.E.	FIRE EXTINGUISHER	STD.	STANDARD
F.E.C.	FIRE EXTINGUISHER CABINET	STOR.	STORAGE
F.F.	FINISHED FLOOR	STRUCT.	STRUCTURAL
F.H.	FIRE HOSE	SUSP.	SUSPENDED
F.H.C.	FIRE HOSE CABINET		
F.H.R.	FIRE HOSE RACK	T.	TREAD, TILE, TOILET
F.HYD.	FIRE HYDRANT	TEL.	TELEPHONE
F.SP.	FIRE STANDPIPE	TEMP.	TEMPORARY
FIN.	FINISH(ED)	T.O.	TOP OF
FLASH.	FLASHING	T.O.C.	TOP-OF-CURB
FL.	FLOOR	T.O.CONC.	TOP-OF-CONCRETE
FND.	FOUNDATION	T.O.M.	TOP-OF-MASONRY
F.O.C.	FACE OF CONCRETE	T.O.P.	TOP-OF-PARAPET
F.O.F.	FACE OF FINISH	T.O.R.	TOP-OF-ROOF
F.O.M.	FACE OF MASONRY	T.O.S.	TOP-OF-SLAB
F.O.S.	FACE OF STUDS	T.O.ST.	TOP OF STEEL
F.O.S.H.	FACE OF SHEATHING	T.O.W.	TOP-OF-WALL
F.S.	FINISH SURFACE	TR.	TRENCH
FT.	FOOT, FEET	T.S.	TUBE STEEL
FTG.	FOOTING	TYP.	TYPICAL
GA.	GAUGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
G.C.	GENERAL CONTRACTOR		
GL.	GLASS,GLAZING	V.B.	VAPOR BARRIER,
GR.	GRADE	V.C.T.	VINYL BASE
GRD.	GUARD	V.C.T.	VINYL COMPOSITION TILE
G.W.B.	GYPNUM WALL BOARD	VERT.	VERTICAL
GYP.	GYPNUM	VEST.	VESTIBULE
		V.I.F.	VERIFY IN FIELD
H.B.	HOSE BIBB	V.T.	VINYL TILE
H.C.	HOLLOW CORE		
H.D.	HEAD	W.(W/O)	WITH (WITHOUT)
HDWD	HARDWOOD	W.C.	WATER CLOSET
HDWR.	HARDWARE	WD.	WOOD
H.M.	HOLLOW METAL	WD.	WOOD SCREW
HORIZ.	HORIZONTAL	W.W.F.	WELDED WIRE FABRIC
HT.	HEIGHT	W.W.M.	WELDED WIRE MESH
HVAC	HTG., VENTILATION & A/C		
HYD	HYDRANT		
I.D.	INSIDE DIAMETER		
INSUL.	INSULATION		
INT.	INTERIOR		
INV.	INVERT		
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY	STEEL SHAPES	
		C	CHANNEL
J.B.	JUNCTION BOX	HP	HP SHAPES
JT.	JOINT	L	ANGLE
		M	M SHAPES
K.D.	KNOCK DOWN	MC	MISCELLANEOUS CHANNEL
KIT.	KITCHEN, KITCHENETTE	S	S SHAPES
K.O.(P.)	KNOCK OUT (PANEL)	TS	STRUCTURAL TUBE
		W	WIDE FLANGE

SYMBOLS AND LEGENDS

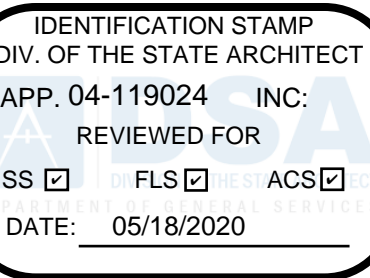


GENERAL NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH CURRENT APPLICABLE CODES, ORDINANCES, REGULATIONS AND STATUTES.
- THE PROJECT SPECIFICATIONS, BOUND SEPARATELY, ARE A PART OF THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR THE COORDINATION OF THE WORK OF THE PROJECT WITH EXISTING CONDITIONS AND DIMENSIONS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY CONDITION REQUIRING CLARIFICATION OR MODIFICATION PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- PLAN DIMENSIONS ARE TO THE FOLLOWING REFERENCES UNLESS SPECIFICALLY NOTED OTHERWISE IN THE DRAWINGS:
  - COLUMN LINE / STRUCTURAL GRID
  - EXTERIOR FACE OF STUDS (FOS) OF EXTERIOR STUD WALLS, OR,
  - (FOS) OF INTERIOR STUD WALLS UNLESS NOTED OTHERWISE
  - FACE OF MASONRY (FOM)
  - FACE OF CONCRETE (FOC)
  - FACE OF FINISH (FOF) OF EXISTING FINISH MATERIALS
- ANY WORK OR MATERIAL NOT DIRECTLY NOTED IN THE CONTRACT DOCUMENTS, BUT NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE INTENT OF THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS, IS IMPLIED. SUCH WORK OR MATERIAL SHALL BE INCLUDED AS IF SPECIFICALLY NOTED OR DESCRIBED IN THE CONTRACT DOCUMENTS.
- ALL MATTERS AND DECISIONS REGARDING COLOR, TEXTURE, DESIGN AND INTERPRETATION OF THE CONTRACT DOCUMENTS SHALL BE REFERRED TO HARLEY ELLIS DEVEREAUX ARCHITECTS & ENGINEERS.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DETAILS. ANY DISCREPANCIES OR CONFLICTS WITHIN THE DRAWINGS OR BETWEEN THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- ALL CONSTRUCTION DOCUMENTS FOR THIS PROJECT COMPLEMENT EACH OTHER, AND WHAT IS SHOWN OR SPECIFIED BY ONE SHALL BE BINDING AS IF SHOWN OR SPECIFIED BY ALL. ANY WORK REFERRED TO ON ANY CONSTRUCTION DOCUMENT SHALL BE PROVIDED AS THOUGH IT WERE SHOWN OR SPECIFIED IN ALL RELATED DOCUMENTS, INCLUDING SPECIFICATIONS.
- REMOVE AND DISPOSE OF, ON A DAILY BASIS, ALL RUBBISH AND WASTE MATERIAL GENERATED BY THE CONTRACTOR AND ALL SUBCONTRACTORS AND TRADES. RUBBISH AND WASTE MATERIALS SHALL NOT ACCUMULATE IN THE BUILDING(S) OR ON THE SITE. DISPOSE OF RUBBISH AND WASTE MATERIALS IN ACCORDANCE WITH ALL APPLICABLE ORDINANCES AND REGULATIONS.
- PROVIDE AND INSTALL ALL NECESSARY BACKING, BLOCKING, FRAMING, HANGERS OR OTHER SUPPORT REQUIRED FOR THE INSTALLATION OF FIXTURES, EQUIPMENT, CABINETS, FURNISHINGS, AND ALL OTHER ITEMS REQUIRING THE SAME. COORDINATE THE SIZE, LOCATION AND INSTALLATION OF BACKING, BLOCKING, FRAMING, HANGERS AND OTHER SUPPORT AMONG THE RESPECTIVE SUBCONTRACTORS AND TRADES.
- ALL MATERIALS AND FINISHES SHALL BE INSTALLED OR APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- TRENCHES OR EXCAVATIONS 5 FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND REQUIRE SEPARATE PERMIT(S). OBTAIN SUCH PERMIT(S) AS REQUIRED.
- EXCAVATIONS OR DIGGING REQUIRES INFORMING A REGIONAL NOTIFICATION CENTER. CONTACT A REPRESENTATIVE OF UNDERGROUND SERVICE ALERT ("DIG ALERT") AT (800) 227-2600 A MINIMUM OF TWO (2) DAYS IN ADVANCE OF STARTING ANY EXCAVATION OR DIGGING.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES, WHERE SHOWN ON THE DRAWINGS, ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER, THE ARCHITECT OR THEIR REPRESENTATIVES. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES, AND NOTIFY THE APPLICABLE UTILITY COMPANY(IES) BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE REPAIR, AT OWN COST, OF ANY AND ALL DAMAGES TO EXISTING UNDERGROUND UTILITIES OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE SUCH UNDERGROUND UTILITIES.
- TRESPASSING ON ANY ADJOINING PROPERTIES IS PROHIBITED. MATERIALS SHALL NOT BE STORED ON ANY ADJOINING PROPERTY.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR USE OF PUBLIC PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN REQUIRED PERMITS FOR AND PROVIDE PEDESTRIAN PROTECTION AS REQUIRED BY THE APPROPRIATE GOVERNING AGENCY(IES). DO NOT STORE MATERIALS ON PUBLIC PROPERTY WITHOUT REQUIRED PERMIT(S).
- PROVIDE TEMPORARY CONSTRUCTION FENCE(S), GATE(S), BARRICADES, OR OTHER PROTECTIVE MEASURES AS REQUIRED BY THE APPROPRIATE GOVERNING AGENCY(IES) AND AS OTHERWISE REQUIRED TO PROTECT THE PUBLIC AND AVOID UNAUTHORIZED ENTRY TO THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR REMOVAL OF PAVEMENT, EXCAVATION, AND REPAIR OF PAVEMENT ON PUBLIC PROPERTY REQUIRED FOR CONNECTIONS TO UTILITIES, CONSTRUCTION OF NEW DRIVEWAYS, CURBS, GUTTERS, ETC. AND/OR LANDSCAPING.
- THE CONTRACTOR SHALL PRIOR TO STARTING CONSTRUCTION, MEET WITH REPRESENTATIVES OF THE APPROPRIATE GOVERNING AGENCY(IES) TO INSPECT AND DOCUMENT EXISTING WORK ON PUBLIC PROPERTY (I.E. CURBS, GUTTERS, SIDEWALKS, TREES AND LANDSCAPING, ETC.). DAMAGE TO EXISTING WORK ON PUBLIC PROPERTY CAUSED BY CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT SHALL BE REPAIRED AT THE CONTRACTOR'S COST, AND TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY(IES), PRIOR TO COMPLETION OF THIS PROJECT.
- ALL ROOF PENETRATIONS SHALL EXTEND 8" MINIMUM ABOVE THE ROOF SURFACE.
- NO MOTOR VEHICLES ARE TO BE STORED IN THE BUILDING(S) DURING CONSTRUCTION.
- FIRE DEPARTMENT VEHICLE ACCESS SHALL BE PROVIDED AND MAINTAINED SERVICEABLE TO BUILDINGS ON THE SITE AND THROUGHOUT ALL OF THE SITE DURING THE ENTIRE TIME OF CONSTRUCTION.
- ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. PROJECT INSPECTOR SHALL HAVE MIN. CLASS 2.
- SEE C.F.C. CHAPTER 33 FOR FIRE SAFETY DURING CONSTRUCTION.
- PROTECT IN PLACE ALL (E) LANDSCAPING THROUGHOUT THE DURATION OF CONSTRUCTION.
- THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO MODIFY THE FACILITY FOR ACCESSIBILITY IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS THAT DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS SUCH THAT THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CCD DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA-ACS BEFORE PROCEEDING WITH WORK.
- AN INSPECTOR WHO IS SPECIALLY QUALIFIED IN PLUMBING AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- ALL WORK SHOWN IS ASSUMED TO BE NEW WORK UNLESS NOTED AS EXISTING (E)
- LABEL ALL PLUMBING, AND ELECTRICAL EQUIPMENT PER SIGNAGE SCHEDULE WITHIN SHOP DRAWINGS.
- PAINT ALL EXPOSED PLUMBING LINES
- PROVIDE WALL AND PARTITION FRAMING (IRRESPECTIVE OF STUD WIDTH SHOWN) NECESSARY TO ACCOMMODATE ALL CONCEALED AND RECESSED ITEMS (INCLUDING MEP, F.E. CABS, TOWEL DISPENSER, ETC.) WHERE RECESSED OR CONCEALED ITEM EXCEEDS THE STUD SIZE SHOWN ON THE DWGS., NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL BUILDING SYSTEMS (INCLUDING PLUMBING, ELECTRICAL, SITE UTILITIES, AND ARCHITECTURAL INTERIOR & EXTERIOR FINISHES) SHALL BE BID & INSTALLED COMPLETE AND FUNCTIONAL FOR THEIR PURPOSE.
- VOID
- ALL SHUT-OFF VALVES AND EQUIPMENT WHICH REQUIRE SERVICING SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. IF ACCESS PANELS THROUGH GYPSUM BOARD CEILINGS OR WALLS ARE NEEDED BUT ARE NOT SHOWN ON THE ARCHITECTURAL DRAWINGS THE CONTRACTOR SHALL REQUEST NEW LOCATIONS PRIOR TO THE COMPLETION OF HIS SHOP DRAWINGS AND COORDINATION DRAWINGS. CONSTRUCTION SHALL ACCOMMODATE THE NEW LOCATIONS PER THE SHOP DRAWINGS AT NO ADDITIONAL COST.
- ALL PLUMBING, AND ELECTRICAL SHOP DRAWINGS SHALL BE DRAWN USING AUTOCAD
- POWER OUTLETS, LIGHT SWITCHES, AND OTHER ELECTRICAL DEVICES SHALL NOT BE LOCATED BEHIND CASEWORK OR OPEN DOORS. IF ANY INSTANCES OF THIS TYPE OCCUR THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION IN ORDER FOR ALTERNATE LOCATIONS TO BE DESIGNATED.
- ALL PIPING, CONDUIT, ELECTRICAL JUNCTION BOXES, SHALL BE RUN CONCEALED EXCEPT ABOVE CEILINGS OR IN MECHANICAL OR ELECTRICAL ROOMS. ALL ELECTRICAL AND COMMUNICATION CONTROL DEVICES SHALL BE RECESSED EXCEPT IN ELECTRICAL OR MECHANICAL ROOMS.
- IF CONFLICTS ARISE WITHIN THE CONSTRUCTION DOCUMENTS AND WRITTEN CLARIFICATION CAN NOT BE PROVIDED PRIOR TO BIDDING, THE CONTRACTOR SHALL BID THE HIGHER COST OPTION.
- CONTRACTOR OPERATIONS SHALL NOT BLOCK, HINDER, IMPEDE OR OTHERWISE INHIBIT THE USE OF REQUIRED EXITS AT ANY TIME. CONTRACTOR SHALL MAINTAIN UNOBSTRUCTED ACCESS TO FIRE EXTINGUISHERS, FIRE HYDRANTS, TEMPORARY FIRE PROTECTION FACILITIES, STAIRWAYS AND OTHER ACCESS ROUTES FOR FIRE-FIGHTING EQUIPMENT AND/OR PERSONNEL.

DEMOLITION AND REPAIR GENERAL NOTES

- CONTRACTOR SHALL PROVIDE ALL DEMOLITION NECESSARY TO ACCOMPLISH ALL NEW CONSTRUCTION
- COORDINATE NEW OPENINGS IN EXISTING WALLS, FLOORS, CEILINGS AND ROOFS FOR PIPES AND CONDUITS WITH MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL DRAWINGS.
- REMOVAL OF ALL DEBRIS SHALL BE DONE CAREFULLY. CONDUCT DEBRIS REMOVAL TO INSURE MINIMUM INTERFERENCE WITH ROADS, WALKS AND OTHER OCCUPIED FACILITIES.
- EXECUTE WORK BY METHODS THAT AVOID DAMAGE TO EXISTING ADJACENT WORK TO REMAIN AND WHICH WILL PROVIDE PROPER SURFACES TO RECEIVE PATCHING AND FINISHING.
- BEFORE PROCEEDING, THE CONTRACTOR SHALL VERIFY THAT THE REMOVAL OF EXISTING BUILDING COMPONENTS DOES NOT REQUIRE SHORING AND/OR BRACING. WHERE DEMOLITION WORK NECESSITATES THE PROVISION OF SHORING AND/OR BRACING THE CONTRACTOR SHALL PROVIDE SUCH.
- WHERE INDICATED ON PLANS, REMOVE ALL CONSTRUCTION AND EQUIPMENT TO OBTAIN A CLEAN SURFACE FOR NEW CONSTRUCTION.
- DEMOLITION WORK YET TO BE DISCOVERED IN THE AREA OF NEW WORK SHALL BE A PART OF THIS CONTRACT. WORK DISCOVERED IN THE FIELD SHALL BE COORDINATED WITH THE ARCHITECT BEFORE PROCEEDING.
- CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE DISTRICT, THE ARCHITECT AND, AS APPLICABLE, THE CONSTRUCTION MANAGER TO WALK THE JOB AND VERIFY ANY ITEMS TO BE SALVAGED FOR DISTRICT. CONTRACTOR SHALL SECURE ITEMS TO BE RETAINED BY DISTRICT IN A SAFE, DRY PLACE ON SITE.
- IN ADDITION TO DEMOLITION SHOWN, CUT, MOVE OR REMOVE ITEMS AS NECESSARY TO PROVIDE ACCESS OR TO ALLOW ALTERATIONS AND NEW WORK TO PROCEED, INCLUDE SUCH ITEMS AS:
  - REMOVAL OF ABANDONED ITEMS SUCH AS PIPING, CONDUIT AND WIRING.
  - REMOVAL OF UNSUITABLE OR EXTRANEEOUS MATERIALS NOT MARKED FOR SALVAGE, SUCH AS ABANDONED FURNISHINGS AND EQUIPMENT AND DEBRIS SUCH AS ROTTED WOOD, RUSTED METALS AND DETERIORATED CONCRETE.
  - CLEANING OF SURFACES, AND REMOVAL OF SURFACE FINISHES AS NEEDED TO INSTALL NEW WORK AND FINISHES.
- PATCH, REPAIR AND REFINISH EXISTING ITEMS TO REMAIN TO THE CONDITION INDICATED IN DRAWINGS OR SPECIFICATIONS.
- DISCOVERIES OF CONSTRUCTION, FURNISHINGS, FIXTURES, EQUIPMENT AND ARTICLES HAVING VALUE SHALL REMAIN IN THE POSSESSION OF THE DISTRICT:
  - PROMPTLY NOTIFY CONSTRUCTION MANAGER.
  - PROTECT DISCOVERY FROM DAMAGE FROM ELEMENTS OR WORK.
  - CONSTRUCTION MANAGER SHALL PROMPTLY TRANSMIT DISTRICT'S DECISION FOR DISPOSITION OF DISCOVERY.
  - CONTRACTOR SHALL SECURE ITEMS TO BE RETAINED BY DISTRICT IN A SAFE, DRY PLACE ON SITE, OR SHALL DISPOSE OF ITEMS WHICH DISTRICT RELEASES.
- PRODUCTS FOR PATCHING, EXTENDING, AND MATCHING:
  - PROVIDE SAME PRODUCT OR TYPES OF CONSTRUCTION AS THAT IN EXISTING STRUCTURE, AS NEEDED, TO PATCH, EXTEND OR MATCH EXISTING WORK.
  - GENERALLY, CONTRACT DOCUMENTS WILL NOT DEFINE PRODUCTS OR STANDARDS OR WORKMANSHIP PRESENT IN EXISTING CONSTRUCTION. CONTRACTOR SHALL DETERMINE PRODUCTS BY INSPECTION AND ANY NECESSARY TESTING, AND WORKMANSHIP BY USE OF THE EXISTING AS A SAMPLE OF COMPARISON.
- PRESENCE OF AN EXISTING PRODUCT, FINISH, OR TYPE OF CONSTRUCTION TO REMAIN, REQUIRES THAT PATCHING, EXTENDING OR MATCHING SHALL BE PERFORMED AS NECESSARY TO MAKE WORK COMPLETE AND CONSISTENT TO THE STANDARD OF QUALITY OF THE EXISTING MATERIAL.
- PATCH AND EXTEND EXISTING WORK USING SKILLED CRAFTS PERSONS WHO ARE CAPABLE OF MATCHING EXISTING QUALITY OF WORKMANSHIP. QUALITY OF PATCHED OR EXTENDED WORK SHALL NOT BE LESS THAN THAT SPECIFIED FOR NEW WORK.
- WHERE PARTITIONS ARE REMOVED, PATCH FLOORS, WALLS, AND CEILINGS, WITH FINISH MATERIALS TO MATCH EXISTING. SURFACES SHALL BE FLUSH WITH EXISTING, UNLESS OTHERWISE INDICATED.
- WHERE REMOVAL OF PARTITIONS RESULTS IN ADJACENT SPACES BECOMING ONE, REWORK FLOORS AND CEILINGS TO PROVIDE SMOOTH PLANES WITHOUT BREAKS, STEPS OR BULKHEADS.
  - WHERE AN EXTREME CHANGE OF PLANE OF TWO INCHES OR MORE OCCURS (ONE HALF AN INCH OR MORE AT FLOORS), REQUEST INSTRUCTIONS FROM ARCHITECT AS TO METHOD OF MAKING TRANSITION. DO NOT PROCEED UNTIL MATTER HAS BEEN RESOLVED BY THE ARCHITECT.
- TRIM AND REFINISH EXISTING DOORS AS NECESSARY TO CLEAR NEW FLOOR FINISHES. FINISHED CONSTRUCTION SHALL COMPLY WITH EXISTING FIRE RATING REQUIREMENTS.
- PATCH OR REPLACE ANY PORTION OF AN EXISTING FINISHED SURFACE WHICH IS FOUND TO BE DAMAGED, LIFTED, DISCOLORED, OR SHOWS OTHER IMPERFECTIONS, WITH MATCHING MATERIAL.
  - PROVIDE ADEQUATE SUPPORT OF SUBSTRATE PRIOR TO PATCHING THE FINISH.
  - REFINISH PATCHED PORTIONS OF PAINTED OR COATED SURFACES IN A MANNER TO PRODUCE UNIFORM COLOR AND TEXTURE OVER ENTIRE SURFACE.
  - WHEN EXISTING SURFACE FINISH CANNOT BE MATCHED, REFINISH ENTIRE SURFACE TO NEAREST INTERSECTIONS.
- WHEN NEW WORK ABUTS OR FINISHES FLUSH WITH EXISTING WORK, MAKE A SMOOTH TRANSITION. PATCH WORK SHALL MATCH EXISTING ADJACENT WORK IN TEXTURE AND APPEARANCE SUCH THAT THE PATCH OR TRANSITION IS NOT NOTICEABLE AT A DISTANCE OF FIVE FEET.
  - WHEN FINISHED SURFACES ARE CUT IN SUCH A WAY THAT A SMOOTH TRANSITION WITH NEW WORK IS NOT POSSIBLE, TERMINATE EXISTING SURFACE IN NEAT MANNER ALONG A STRAIGHT LINE AT A NATURAL LINE OF DIVISION AND PROVIDE TRIM APPROPRIATE TO FINISHED SURFACE.
- ALL ADJACENT WORK DAMAGED DUE TO DEMOLITION OR NEW CONSTRUCTION SHALL BE PROMPTLY REPAIRED AS PART OF THIS CONTRACT AT NO ADDITIONAL COST TO DISTRICT. ADEQUATE PROTECTION BARRICADES & PARTITIONS SHALL BE INSTALLED TO PROTECT ALL FINISHES THAT WILL NOT BE REWORKED IN ORDER TO DISTURB AS LITTLE AS POSSIBLE THE CONTINUOUS OPERATION OF THE EXISTING BUILDING AND TO COMPLY WITH LOCAL BUILDING DEPARTMENT REQUIREMENTS.
- DO NOT CLOSE, BLOCK OR OTHERWISE OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNMENT REGULATIONS.
- DO NOT USE CUTTING TORCHES FOR REMOVAL UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS INTERIOR OF DUCTS AND PIPE SPACES, VERIFY CONDITION OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN APPROPRIATE PORTABLE FIRE SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.
- MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
- DO NOT INTERRUPT UTILITIES SERVING OTHER FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL REMOVE EXISTING PAPER TOWEL DISPENSERS, TOILET PAPER DISPENSERS AND SOAP DISPENSERS FROM EXISTING TOILET ROOMS AND DELIVER THEM TO THE SCHOOL DISTRICT.
- PROTECTION MEASURES SHALL BE IN EFFECT PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLETELY ISOLATE CONSTRUCTION WORK FROM ADJACENT IN-SERVICE AREAS OF THE BUILDING.
- UTILITY SHUT-DOWN MUST BE COORDINATED WITH OWNER A MINIMUM OF 48 HOURS IN ADVANCE.
- THE LOCATION AND ACTIVE/INACTIVE STATUS OF ALL EXISTING UTILITIES IN THE IMMEDIATE AREA OF THE WORK MUST BE VERIFIED PRIOR TO ANY CUTTING OPERATIONS.
- DEBRIS FROM DEMOLITION SHALL BE COLLECTED AND REMOVED AT THE BEGINNING OF THE FOLLOWING WORK DAY. ROUTING OF ANY DEBRIS THROUGH ANY PORTION OF THE EXISTING BUILDING SHALL BE DONE UNDER STRICT OBSERVATION OF THE PROJECT INSPECTOR. ONLY THOSE ROUTES AND TIMES DESIGNATED SHALL BE ALLOWED.
- ALL FLOOR, WALL, OR CEILING OPENINGS ABANDONED AND NOT REUSED WILL BE CLOSED IN AND PATCHED TO PROVIDE THE SAME STRUCTURAL CAPACITY, SEPARATION AND MATERIAL CONFIGURATION AND FINISH AS THE ADJACENT SURFACES.
- WHERE PLUMBING ITEMS ARE INDICATED TO BE ABANDONED, THEY SHALL BE CAPPED AND SEALED WITHIN WALLS, ABOVE CEILING OR BELOW FLOOR SLAB.
- WHERE REMOVAL OF CONCRETE SLABS IS INDICATED ON PLANS, THE SOIL BELOW SHALL BE REMOVED ALSO TO ACCOMMODATE THE THICKNESS OF NEW SLABS WHERE INDICATED OR SOIL BROUGHT IN TO RAISE SLAB AS NEEDED.
- CONSTRUCTION PROVISIONING MUST BE ACCOMPLISHED ONLY VIA THE INGRESS/EGRESS ROUTES DESIGNED BY OWNER AND AT TIMES SPECIFICALLY ALLOWED.
- REMOVE AND DISPOSE OF ALL (E) VENT, EXHAUST, CAPS, UTILITIES AND THEIR (E) FLASHING ON (E) ROOFS WHICH ARE SCHEDULED FOR DEMOLITION. PROVIDE FRAMING, BLOCKING AND PLYWOOD AS REQUIRED AND PATCH AND REPAIR ROOFING PER THE SPECIFICATIONS
- WHERE REMOVAL OF PLYWOOD AT SHEARWALLS IS NEEDED, AT LEAST 2'-0" OF THE (E) PLYWOOD MUST BE KEPT IN PLACE AT TOP AND BOTTOM OF WALL. PLYWOOD BEING PLACED BACK ON WALL TO MATCH (E) NAILING PATTERN AND SPACING PER STRUCTURAL DRAWINGS AND SCHEDULES.
- JACK-HAMMERING SHALL BE ALLOWED DURING SCHOOL AFTER-HOURS ONLY.
- REMOVAL AND REPLACEMENT OF INTERIOR SHEATHING AT EXTERIOR WALLS IS REQUIRED UNLESS OTHERWISE NOTED. SEE STRUCTURAL FOR LOCATION AND SCHEDULE.
- EXISTING GUTTERS WHICH REMAIN SHALL BE WATER TESTED FOR LEAKS. WHERE LEAKS OCCUR, GUTTER SEAMS SHALL BE RE-CAULKED, RE-SOLDERED, OR RE-WELDED BASED ON THE EXISTING CONSTRUCTION, WHERE LEAKAGE CANNOT BE STOPPED THROUGH RE-SEALING OF THE JOINTS, THE DEFECTIVE PORTION OF THE GUTTER SHALL BE REMOVED AND REPLACED. ALL NEW WORK SHALL CONFORM TO SMACNA STANDARDS. IF ANY GUTTERS NEED TO BE REPLACED, THEY SHOULD BE INSTALLED AND GALVANIZED IN A MANNER WHICH MATCHES THE EXISTING ADJACENT GUTTERS.



Grossmont Union High School District

Helix Charter HS Restroom & Storage Bldgs

La Mesa, CA

Date	Issue
10/11/2019	SD
01/17/2020	50% CD
02/11/2020	DSA Submittal
04/13/2020	DSA Approval

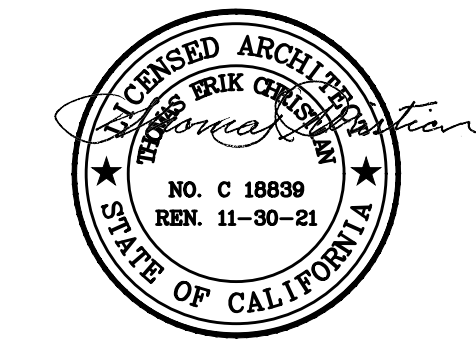
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(tel) (619) 398.3800 (fax) (619) 398.3855 WWW.HED.DESIGN

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Title NOTES, ABBREVIATIONS & SYMBOLS

Sheet No. A-100

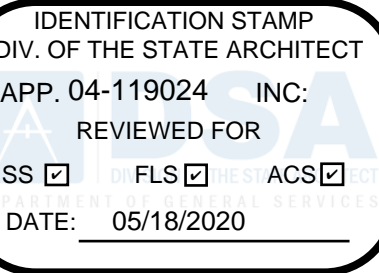
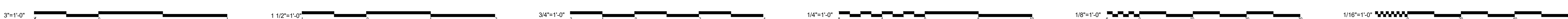
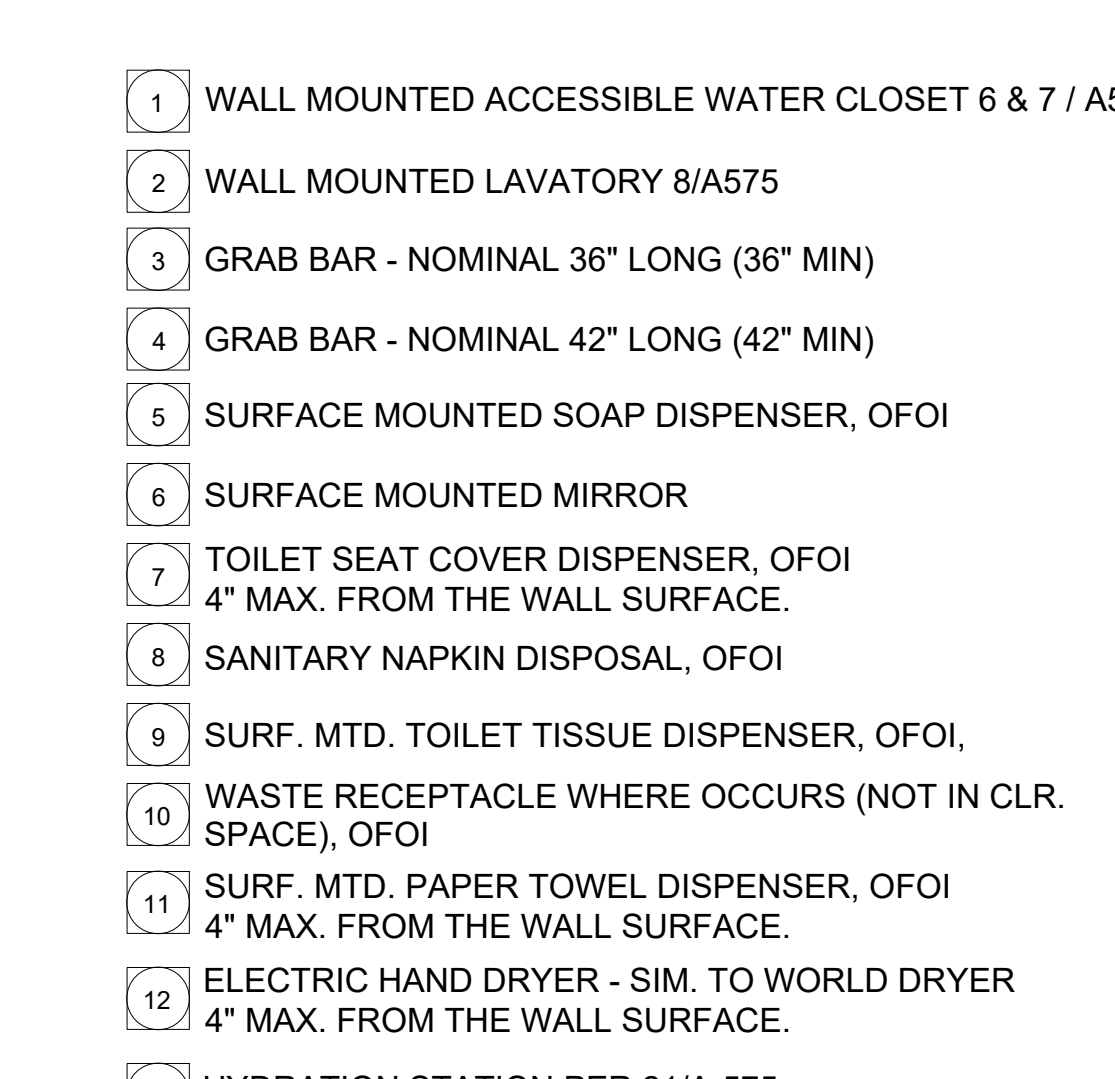
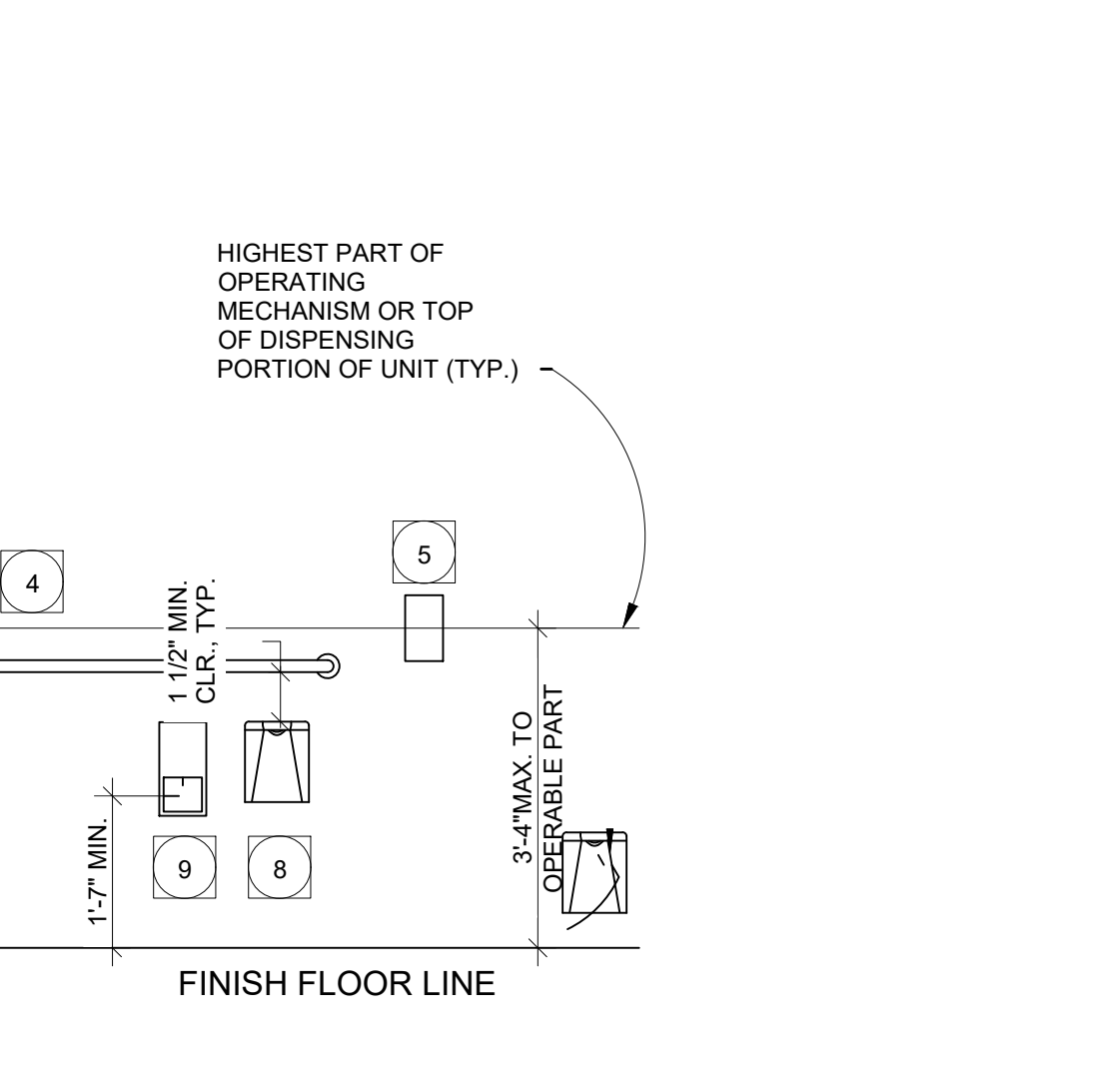
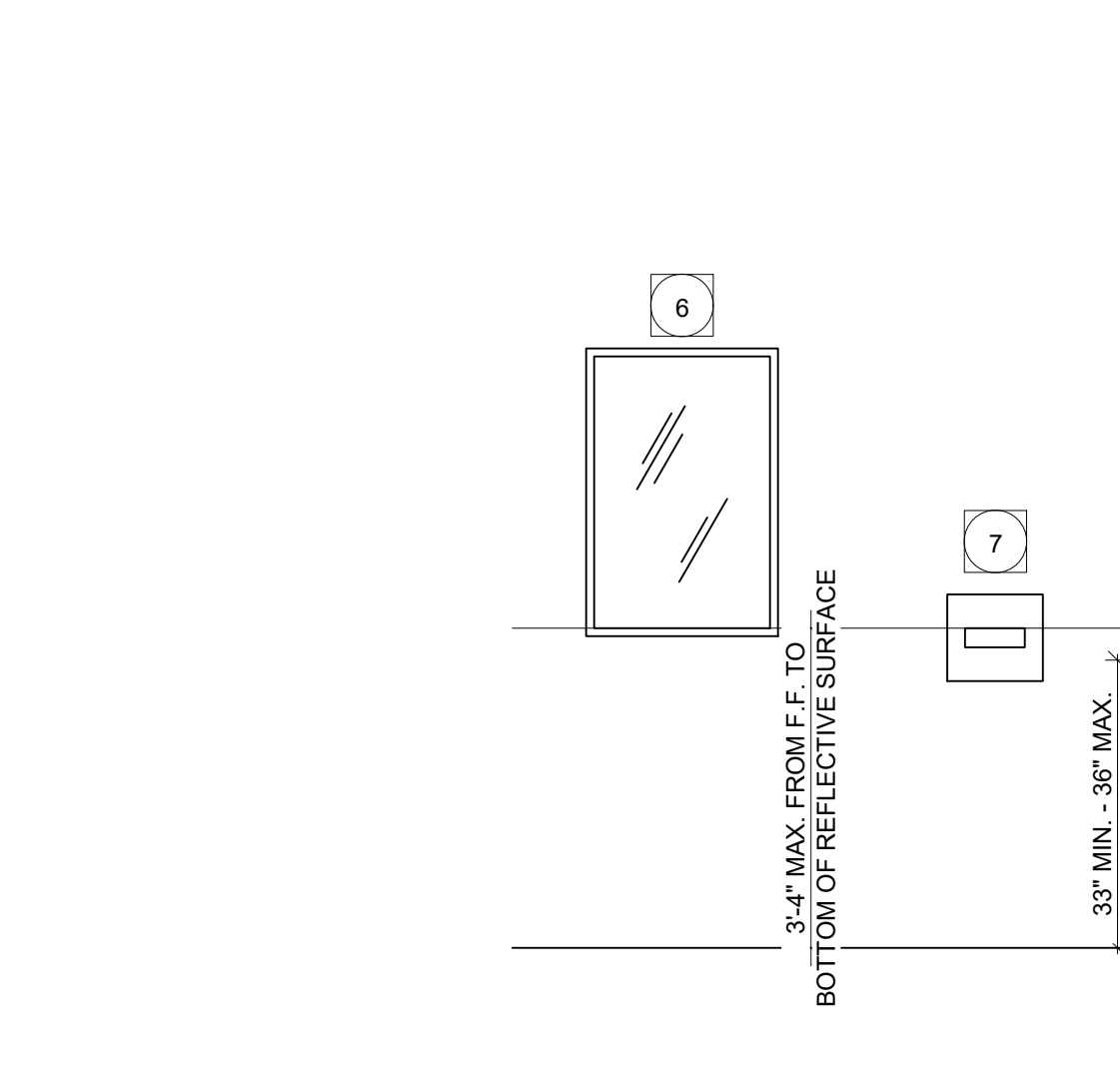
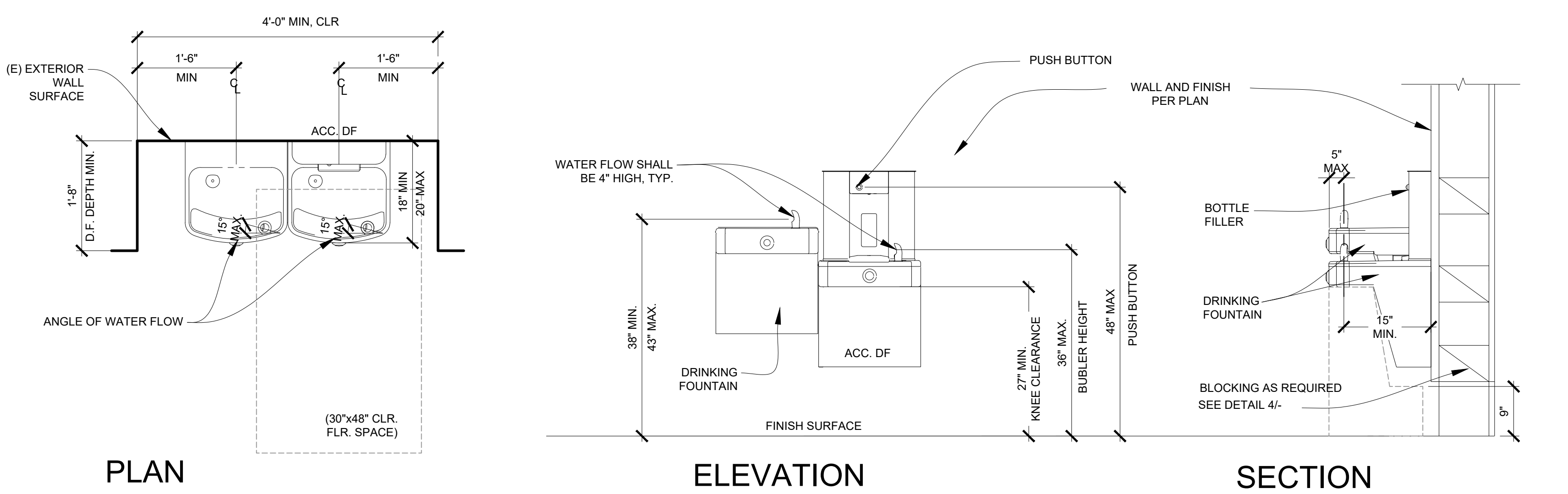
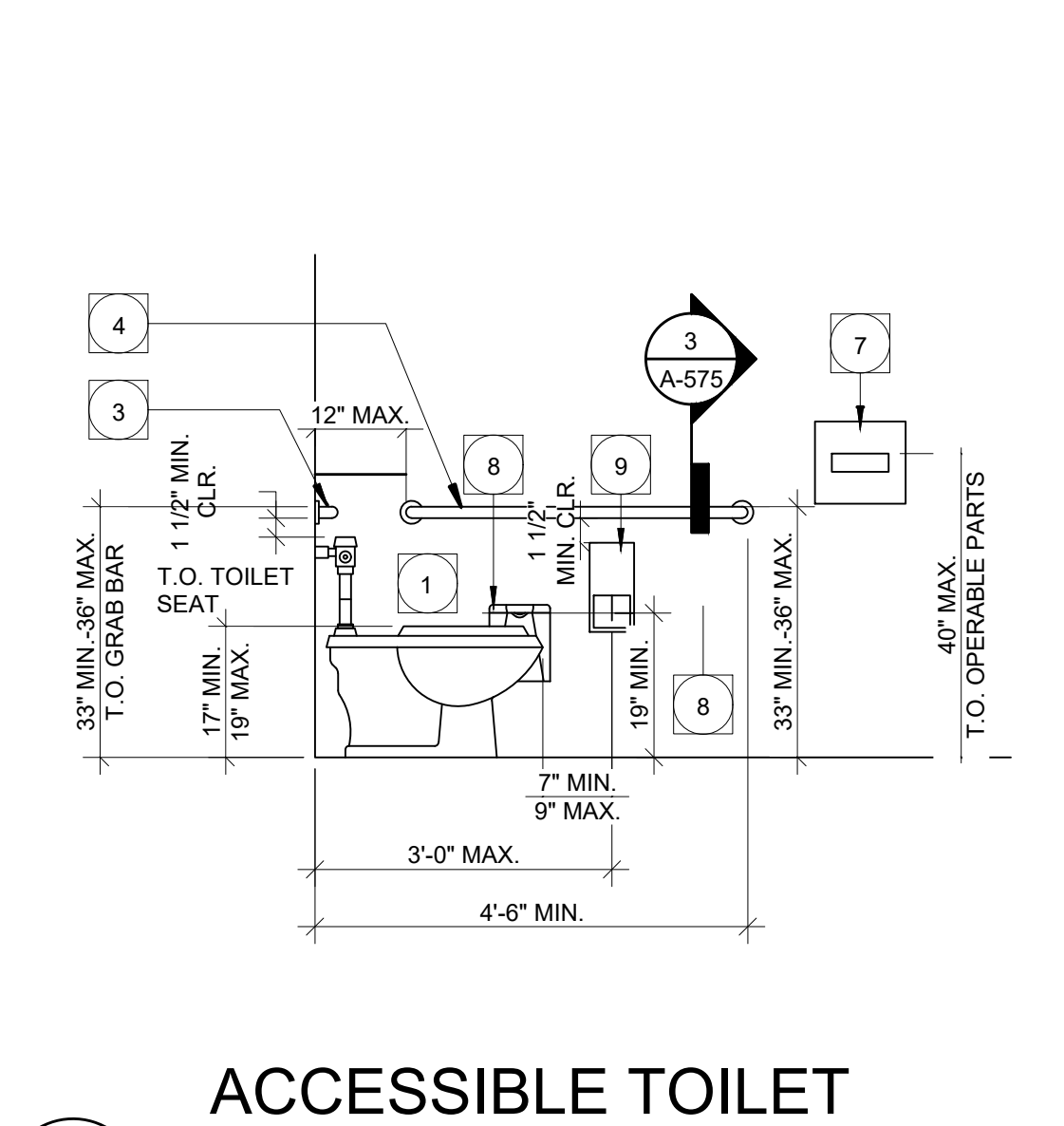
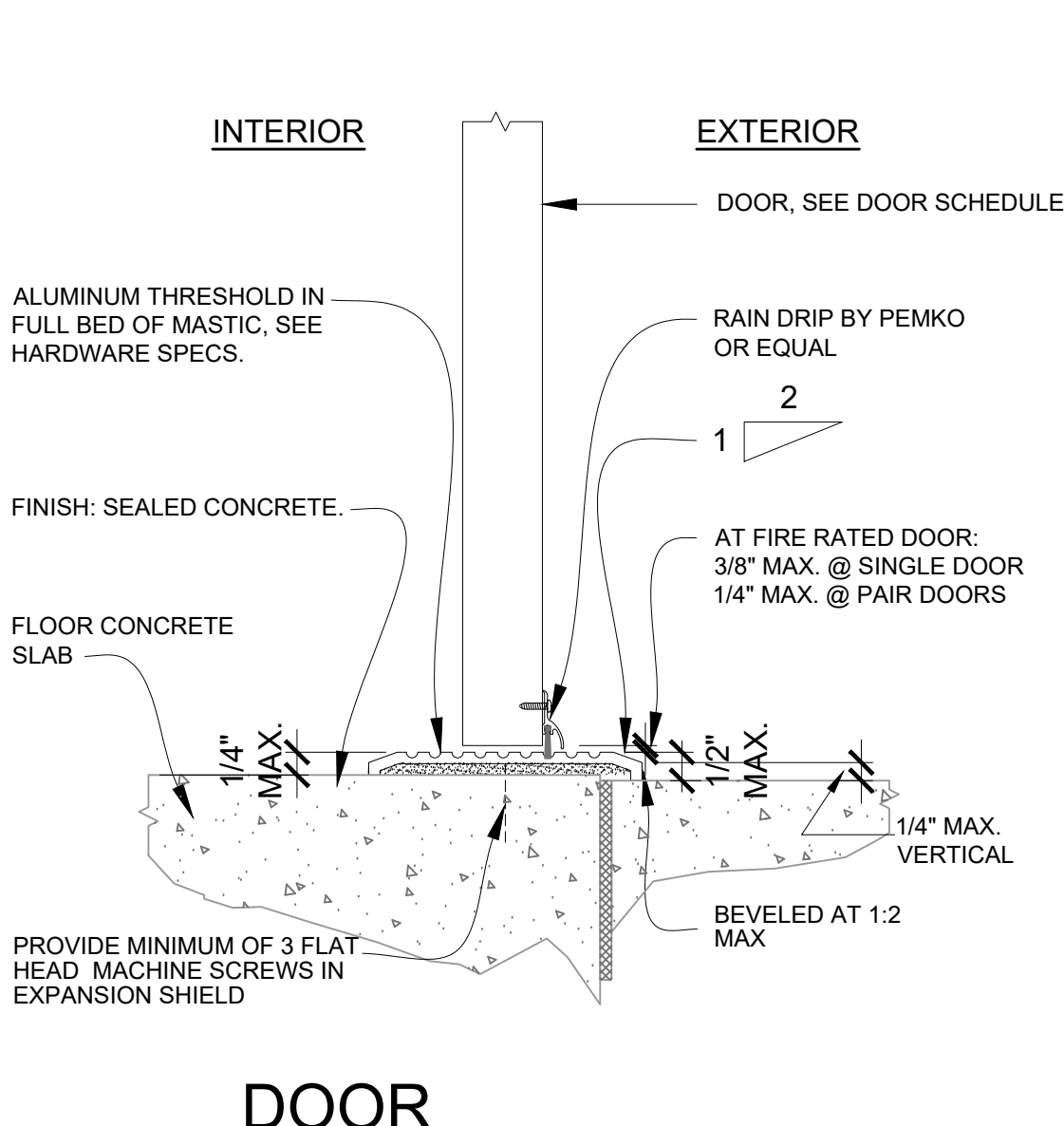
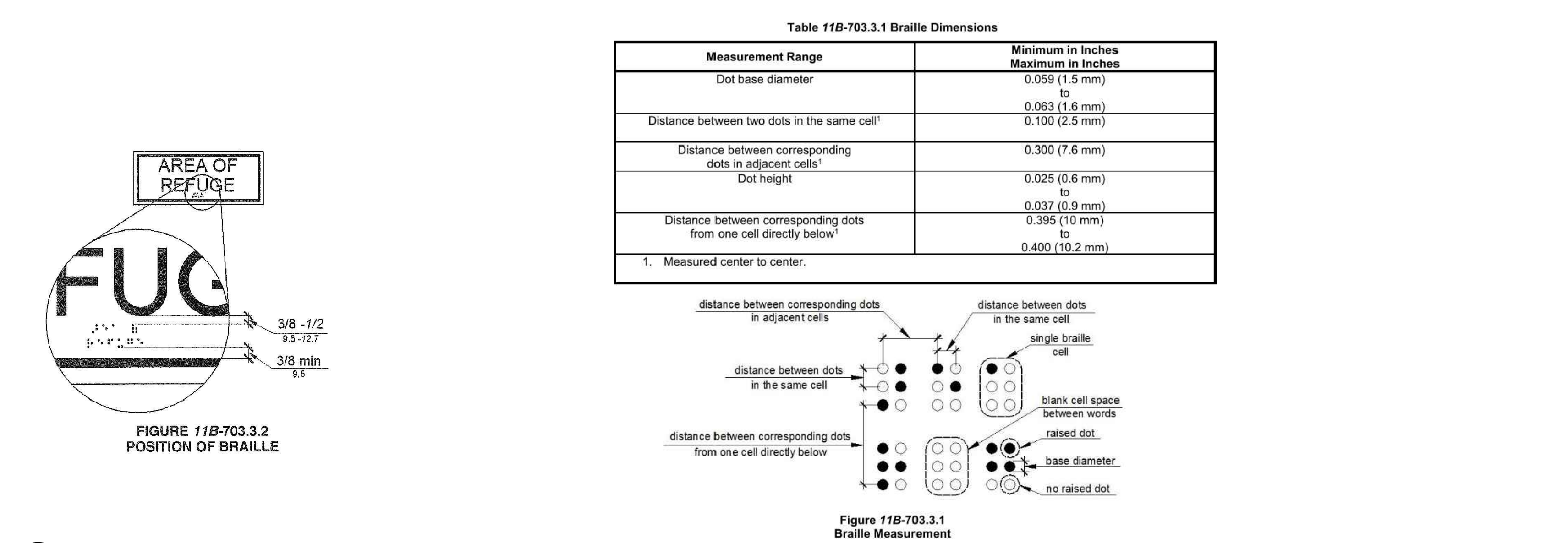
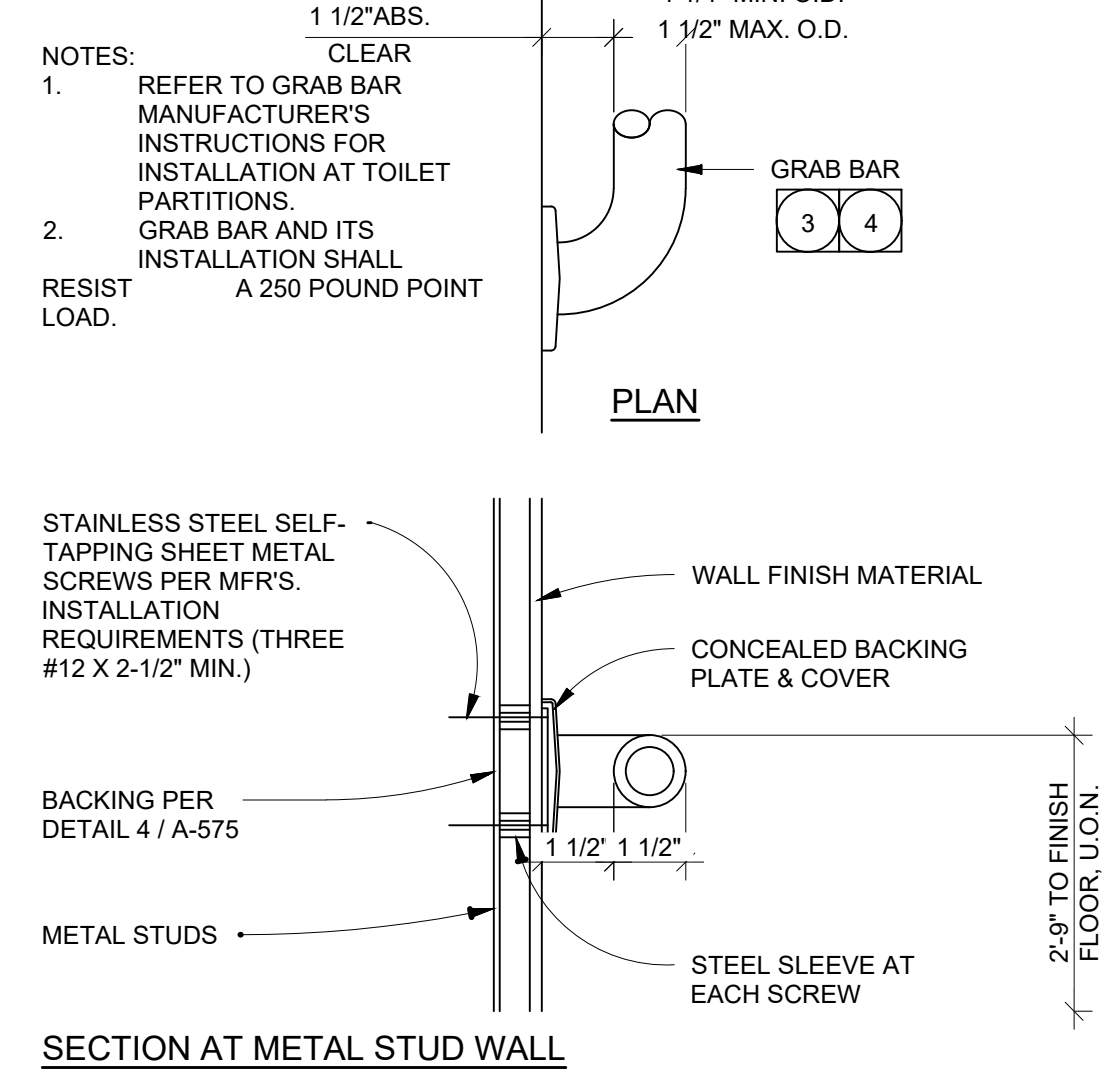
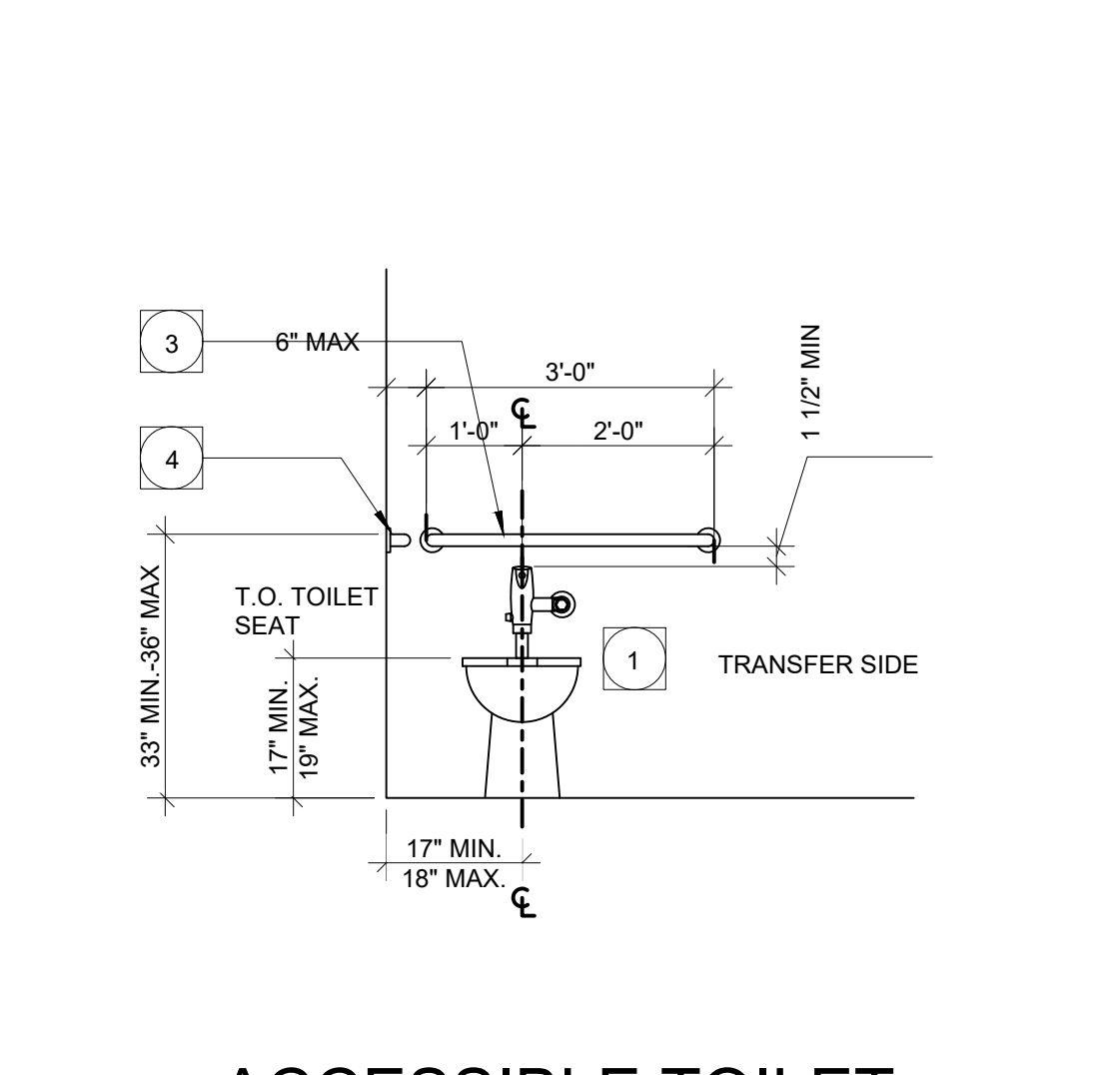
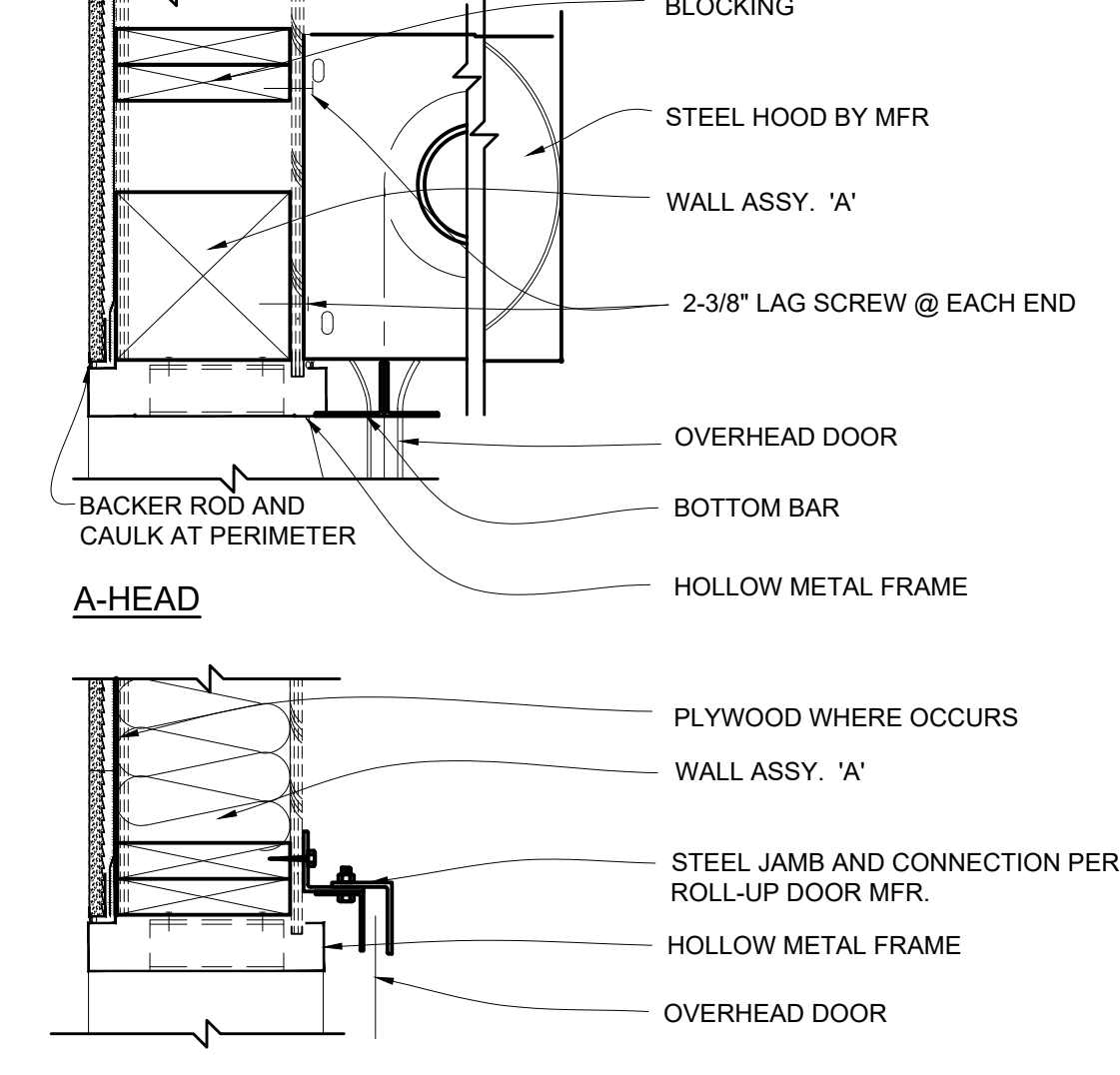
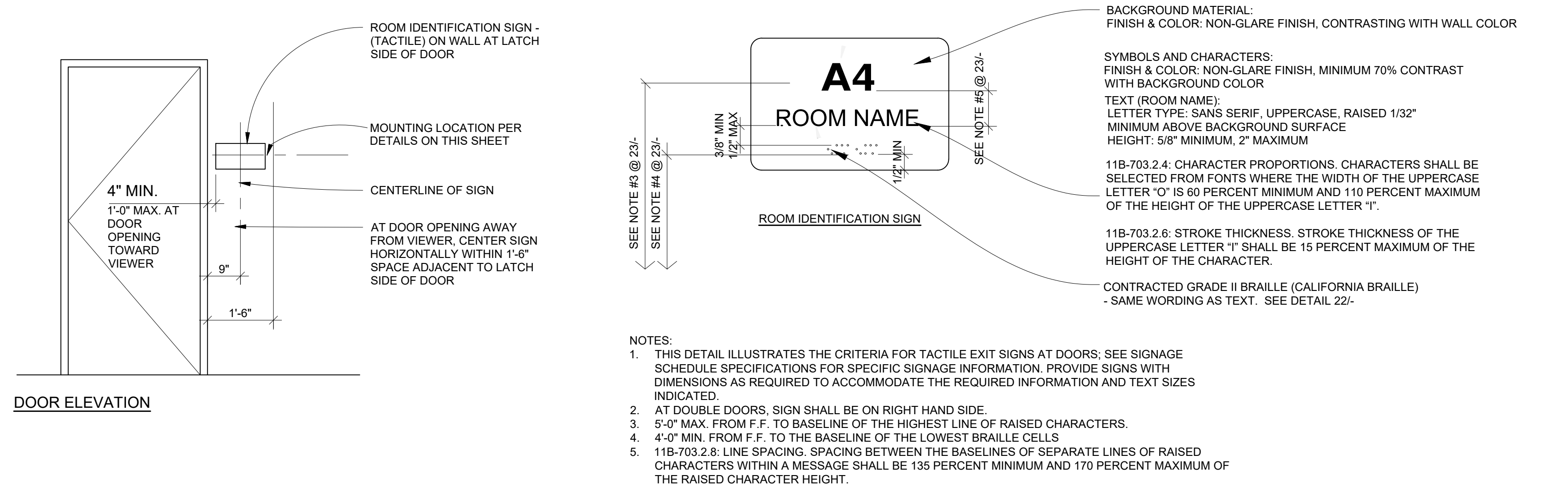
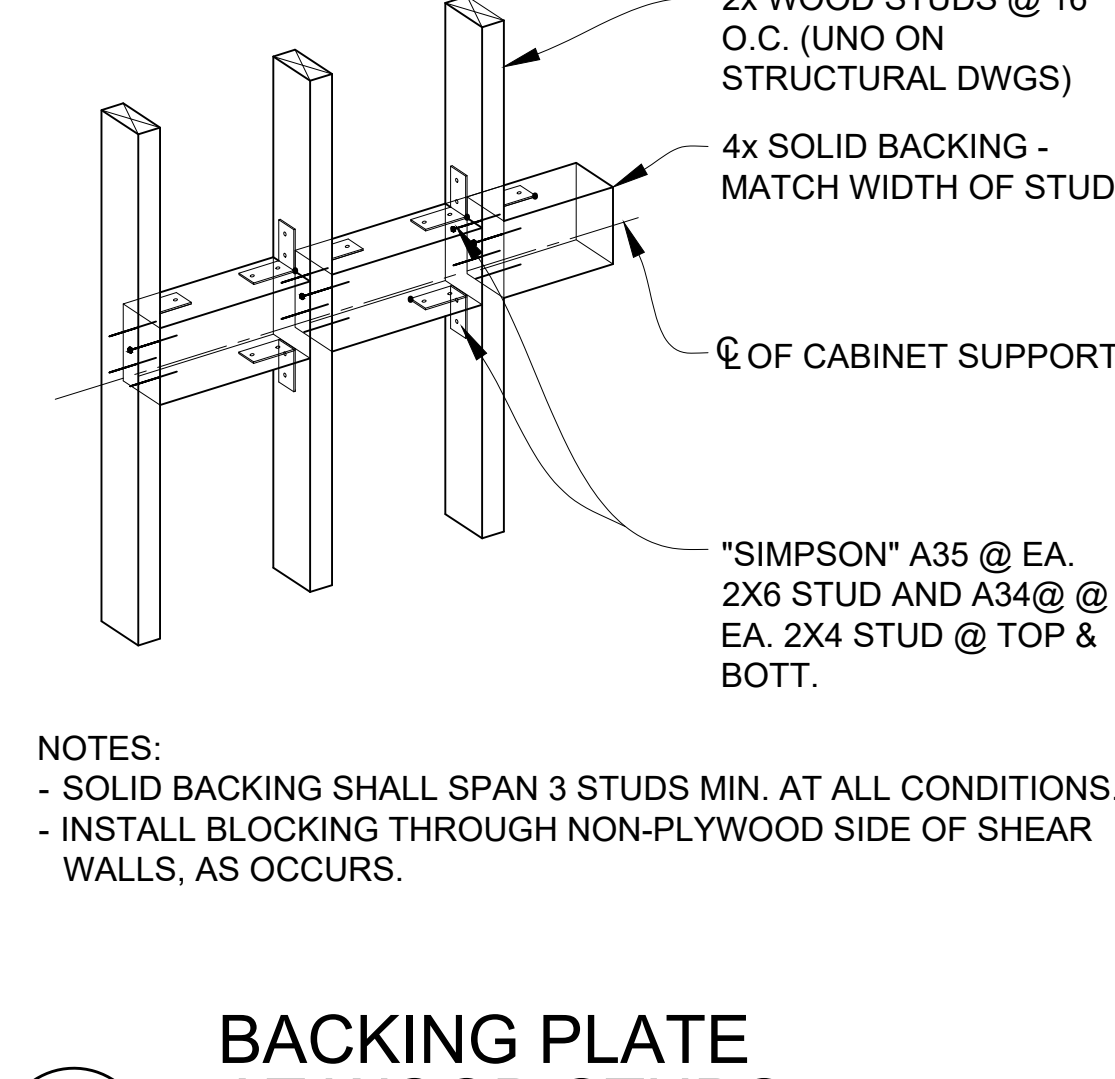
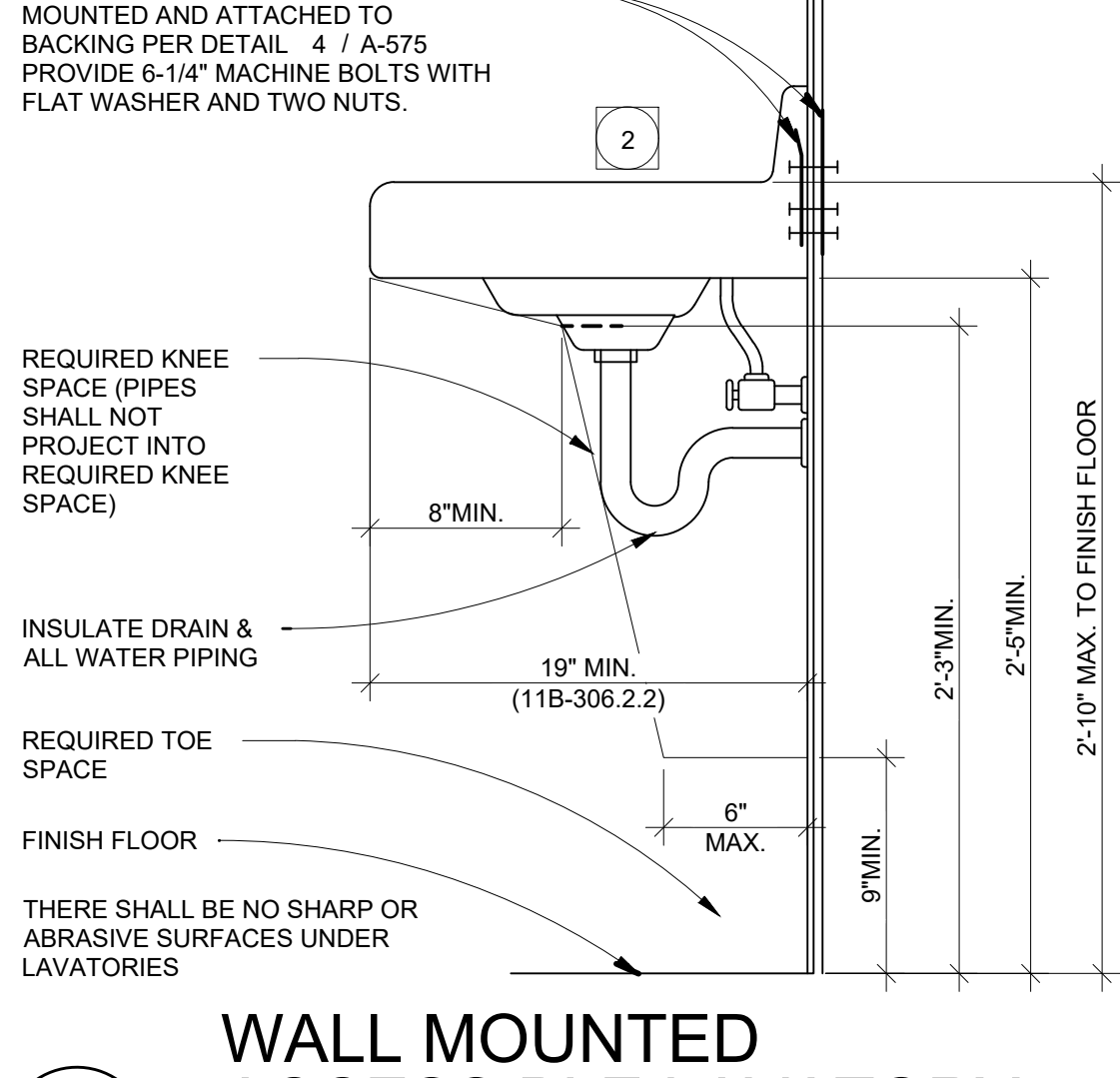
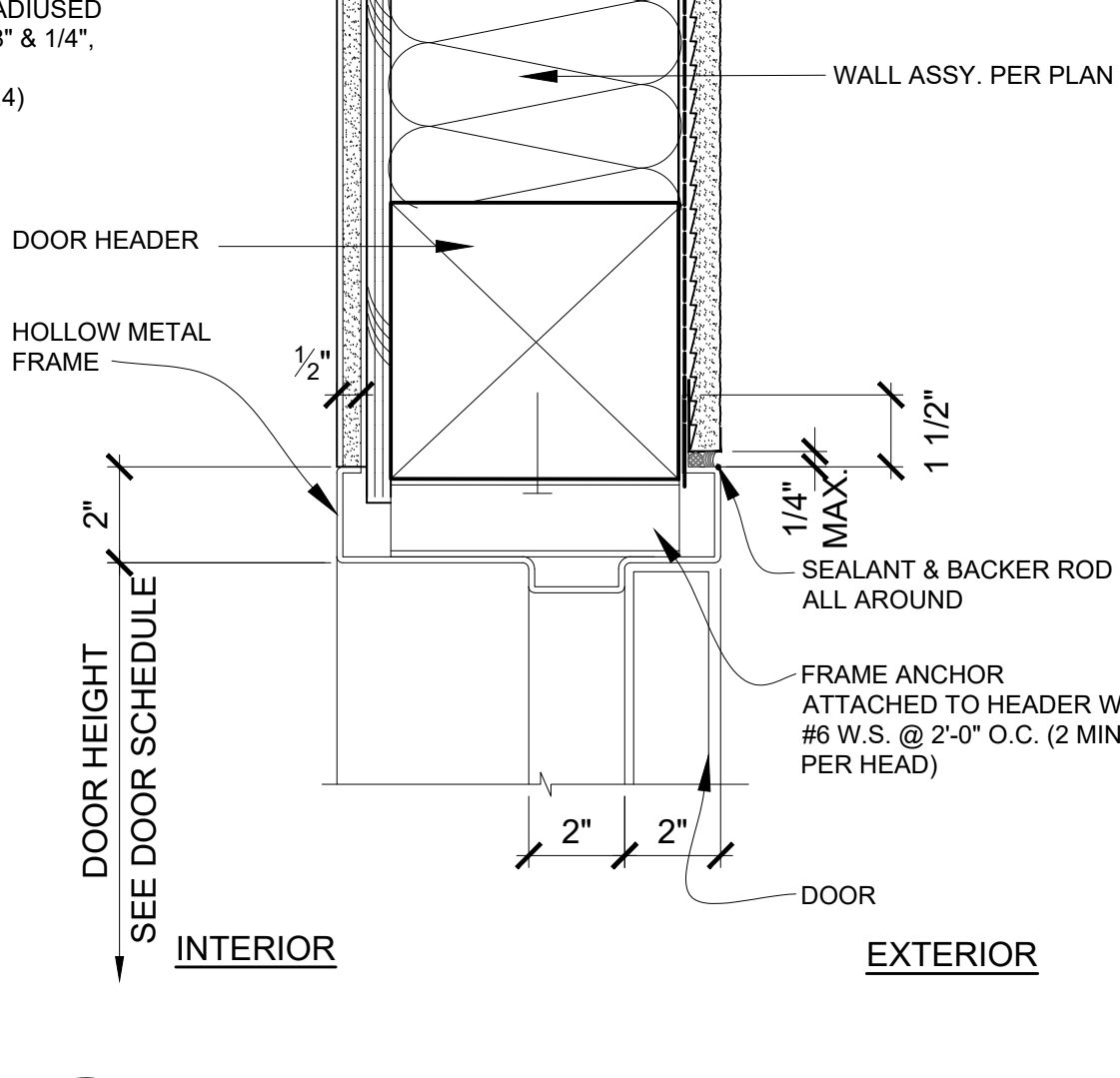
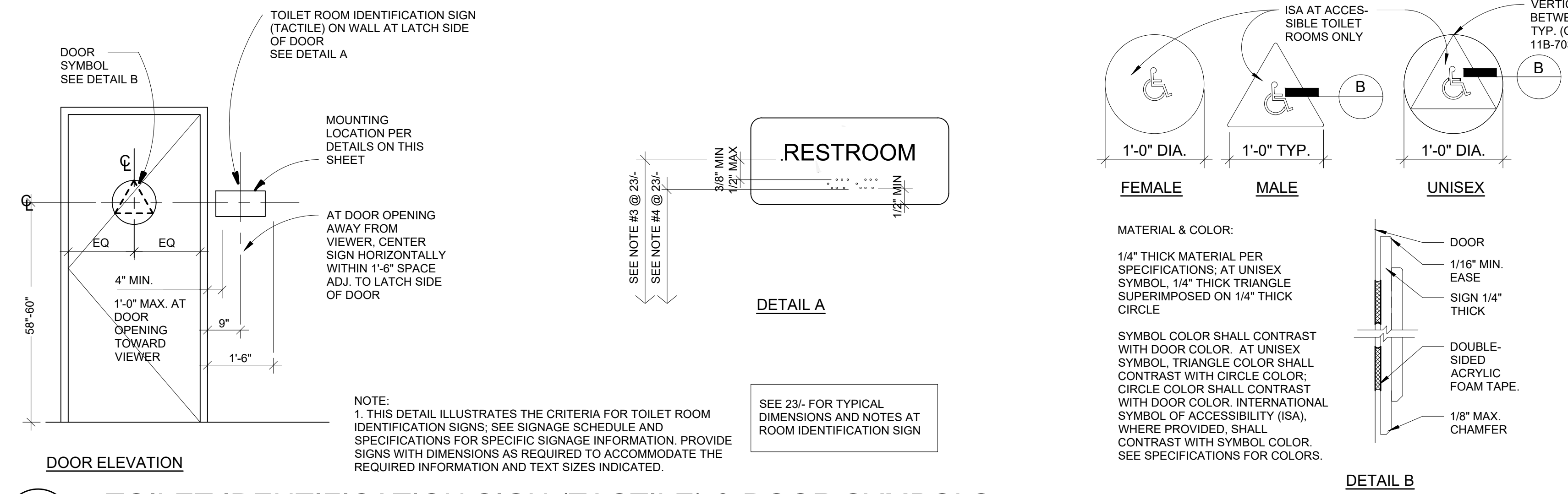
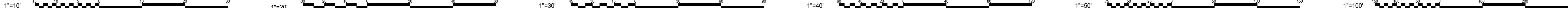












Grossmont Union High School District

Helix Charter HS Restroom & Storage Bldgs

La Mesa, CA

Date 10/11/2019 Issue SD 01/17/2020 50% CD 02/11/2020 DSA Submittal 04/13/2020 DSA Approval



225 Broadway Suite 1300 San Diego, California 92101 | USA

(tel) (619) 398.3800 (fax) (619) 398.3855 WWW.HED.DESIGN

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Title DETAILS

Sheet No. A-575





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DATE: 05/18/2020



Grossmont Union  
High School District

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Restroom & Storage  
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HED  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
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Title MECHANICAL &  
PLUMBING  
LEGEND &  
SCHEDULES

Sheet No. MP-001

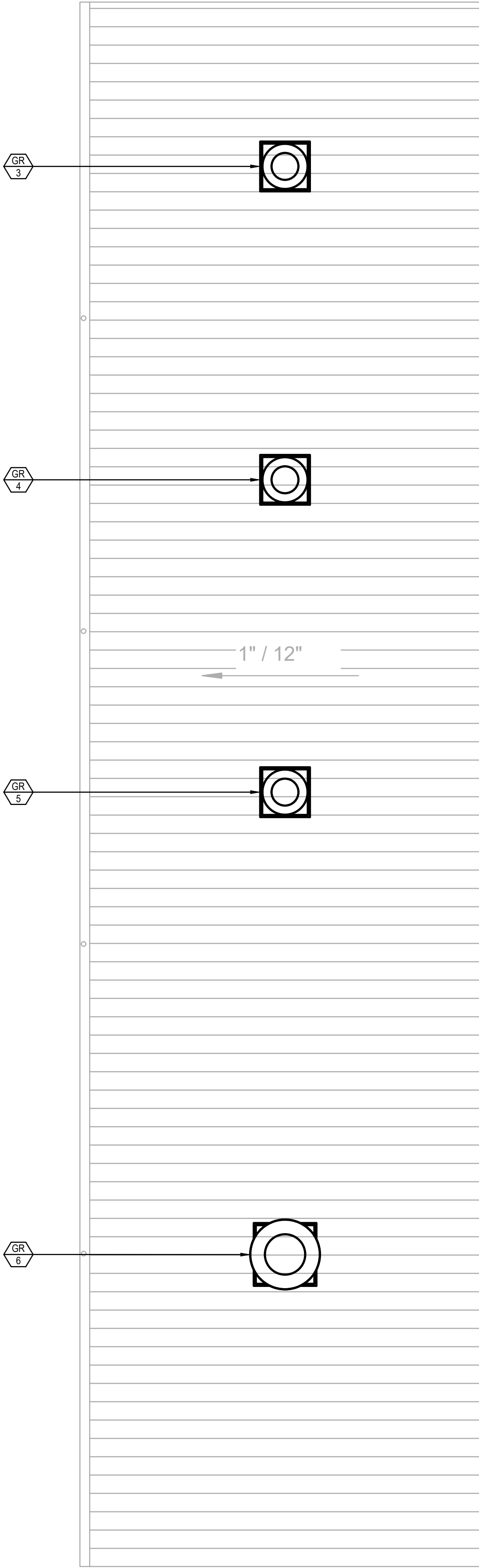
PLUMBING LEGEND AND ABBREVIATIONS					
SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION		ABV	ABOVE
	PW	WASTE OR SEWER BELOW SLAB PUMPED SANITARY WASTE		A/C	ABOVE CEILING
		WASTE OR SEWER ABOVE SLAB		A.F.F.	ABOVE FINISH FLOOR
	V	SANITARY VENT		A.F.G.	ABOVE FINISH GRADE
	CW	COLD WATER		A/G	ABOVE GRADE
	HW	HOT WATER		A.P.	ACCESS PANEL
	HWR	HOT WATER RETURN		B/F	BELOW FLOOR
	G	LOW PRESSURE NATURAL GAS		B/G	BELOW GRADE
	MPG	MEDIUM PRESSURE NATURAL GAS		CFH	CUBIC FEET PER HOUR
	FD	FOUNDATION DRAIN		DWGS	DRAWINGS
	PD	PUMPED FOUNDATION DRAIN		EA	EACH
	SD	STORM DRAIN		EXIST.	EXISTING
	SOV	SHUT OFF VALVE		(E)	EXISTING
	BLV	BALANCING VALVE		FT.	FEET OR FOOT
	PRV	PRESSURE REDUCING VALVE		FDC	FIRE DEPARTMENT CONNECTION
	FS	FLOOR SINK		F	FIRE RISER
	FD	FLOOR DRAIN		FLR	FLOOR
	FCO	FLOOR CLEAN-OUT		G.P.F.	GALLONS PER FLUSH
	WCO	WALL CLEAN-OUT		G.P.H.	GALLONS PER HOUR
	GOO	GRADE CLEAN-OUT		G.P.M.	GALLONS PER MINUTE
	DN	DOWN OR DROP		I.E.	INVERT ELEVATION
	UP	RISE OR RISER		KG	KILOGRAMS
	HB	HOSE BIBB		KPa	KILOPASCALS
		VALVE ON RISE OR DROP		L.P.F.	LITERS PER FLUSH
	U	UNION		L/S	LITERS PER SECOND
	RV	TEMPERATURE & PRESSURE RELIEF VALVE		MSA	MEDIUM PRESSURE GAS METER
	F	FIRE SPRINKLER PIPING		mm	MILLIMETER
	CD	CONDENSATE DRAIN PIPING		NTS	NOT TO SCALE
	FDC	FIRE DEPARTMENT CONNECTION		ORD	OVERFLOW ROOF DRAIN
	CP	CIRCULATING PUMP		LB	POUNDS
	CV	CHECK VALVE		PSI	POUNDS PER SQUARE INCH
	TP	TRAP PRIMER		RD	ROOF DRAIN
	WHA	WATER HAMMER ARRESTOR			SET ASSEMBLY
	REG	GAS REGULATOR W/SHUT-OFF VALVE		SF	SQUARE FEET
				T.D.H.	TOTAL DEVELOPED HEAD
				V.T.R.	VENT THROUGH ROOF
				W.C.	WATER COLUMN
				WHA	WATER HAMMER ARRESTOR

PLUMBING FIXTURE SCHEDULE							
SYMBOL	FIXTURE	ROUGH-IN					REMARKS
		HW	CW	W	TRAP	V	
	WATER CLOSET ACCESSIBLE	--	1"	4"	INT.	2"	WALL MOUNTED, FLUSH VALVE 1.28 GPF, ACCESSIBLE. KOHLER K-4325 FIXTURE, SLOAN 111-1.28 FV
	LAVATORY ACCESSIBLE	--	1/2"	2"	2"	1 1/2"	METERING FAUCET 0.50 GPM, ACCESSIBLE. KOHLER K-2007 FIXTURE, CHICAGO 333-E2805-66SPSHAB FAUCET
	FLOOR DRAIN	--	--	3"	3"	2"	CAST IRON BODY, NICKEL BRONZE GRATE. GRATE OPENING SHALL BE LIMITED TO 1/4".
	DRINKING FOUNTAIN ACCESSIBLE	--	1/2"	2"	2"	1 1/2"	BI-LEVEL WITH BOTTLE FILLER. MURDOCK A1724005-UBL-VR-BF1S.
	TRAP PRIMER	--	1/2"	--	--	--	PROVIDE WITH ACCESS PANEL
	WATER HAMMER ARRESTOR	--	SEE 2/MP-501	--	--	--	PROVIDE WITH ACCESS PANEL
	HOSE BIB	--	3/4"	--	--	--	WALL BOX WITH LOCKING COVER

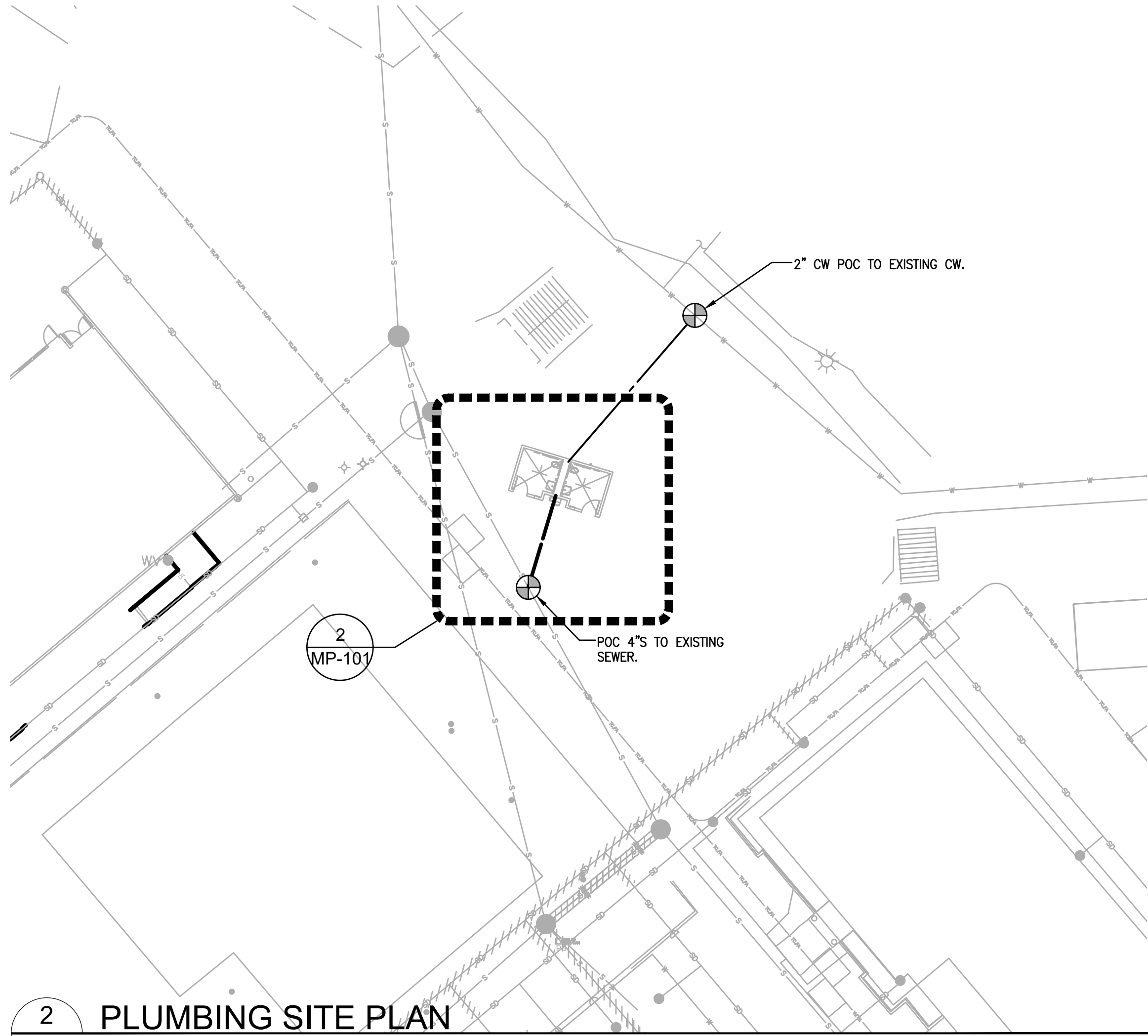
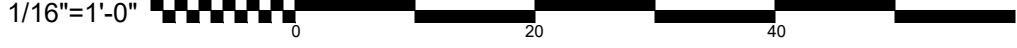
GRAVITY RELIEF SCHEDULE						
SYMBOL	DESCRIPTION	AREA SERVED	CFM	ESP	MAX OPER WEIGHT (LBS)	REMARKS
	COOK 12 PR	RESTROOM 105	--	--	30	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
	COOK 12 PR	RESTROOM 106	--	--	30	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
	COOK 16 PR	CUSTODIAL 104	--	--	35	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
	COOK 16 PR	ATHLETICS 103	--	--	35	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
	COOK 16 PR	PERFORMING ARTS 102	--	--	35	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
	COOK 24 PR	BAND 101	--	--	105	① PROVIDE WITH ROOF CURB AND BIRDSCREEN
① SEE DETAIL 4/MP-501.						



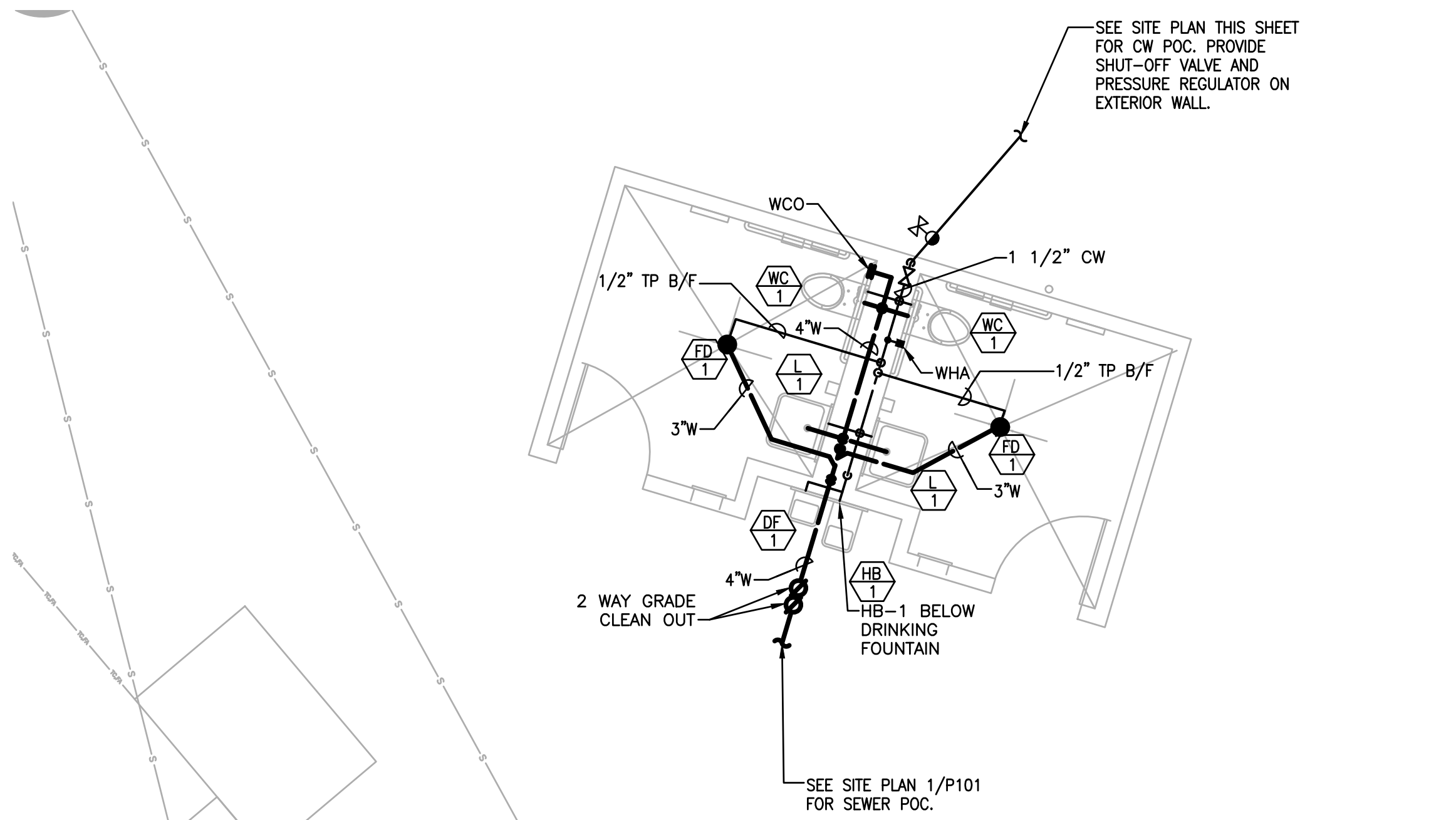




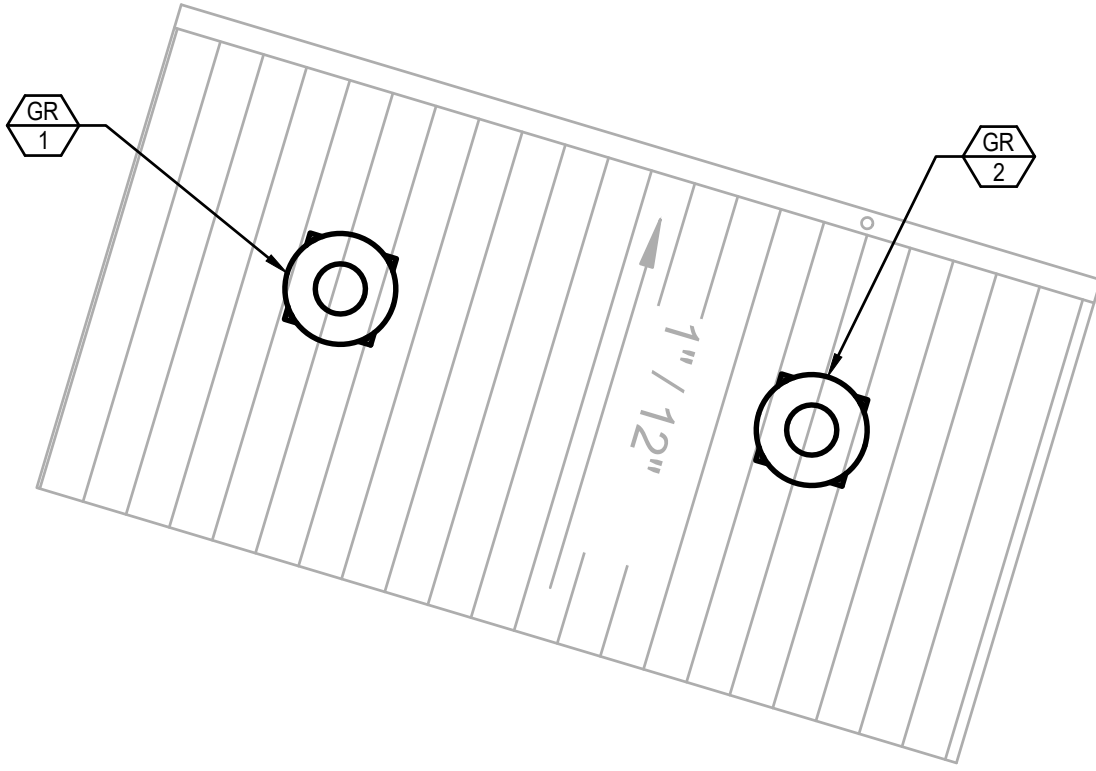
4 ENLARGED MECHANICAL ROOF PLAN - STORAGE BUILDING  
MP-101 SCALE: 1/4" = 1'-0"



2 PLUMBING SITE PLAN  
MP-101 SCALE: 1" = 20'-0"



2 ENLARGED PLUMBING FLOOR PLAN - RESTROOM BUILDING  
MP-101 SCALE: 1/4" = 1'-0"



3 ENLARGED MECHANICAL ROOF PLAN - RESTROOM BUILDING  
MP-101 SCALE: 1/4" = 1'-0"

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 04-119024 INC.  
REVIEWED FOR  
SS ☒ FLS ☒ ACS ☒  
DATE: 05/18/2020



Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date Issue  
10/11/2019 SD  
01/17/2020 50% CD  
02/11/2020 DSA Submittal  
04/06/2020 DSA Approval



HED  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
WWW.HED.DESIGN

Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

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Project No. 2019-05629-000  
Drawn DR  
Checked RH  
Approved RC

Title MECHANICAL &  
PLUMBING  
PLANS

Sheet No. MP-101



1"=10'



1"=20'



1"=30'



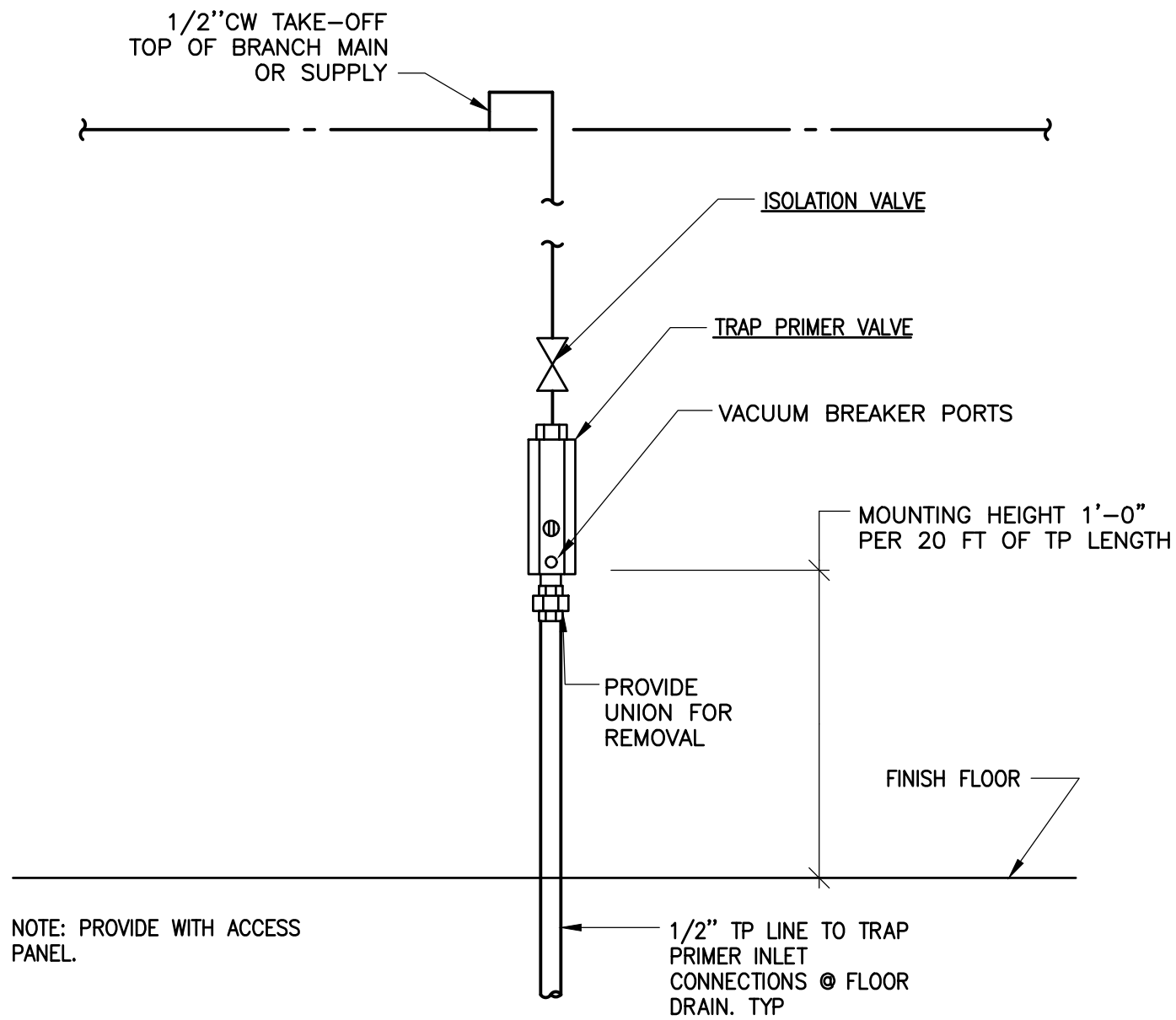
1"=40'



1"=50'



1"=100'

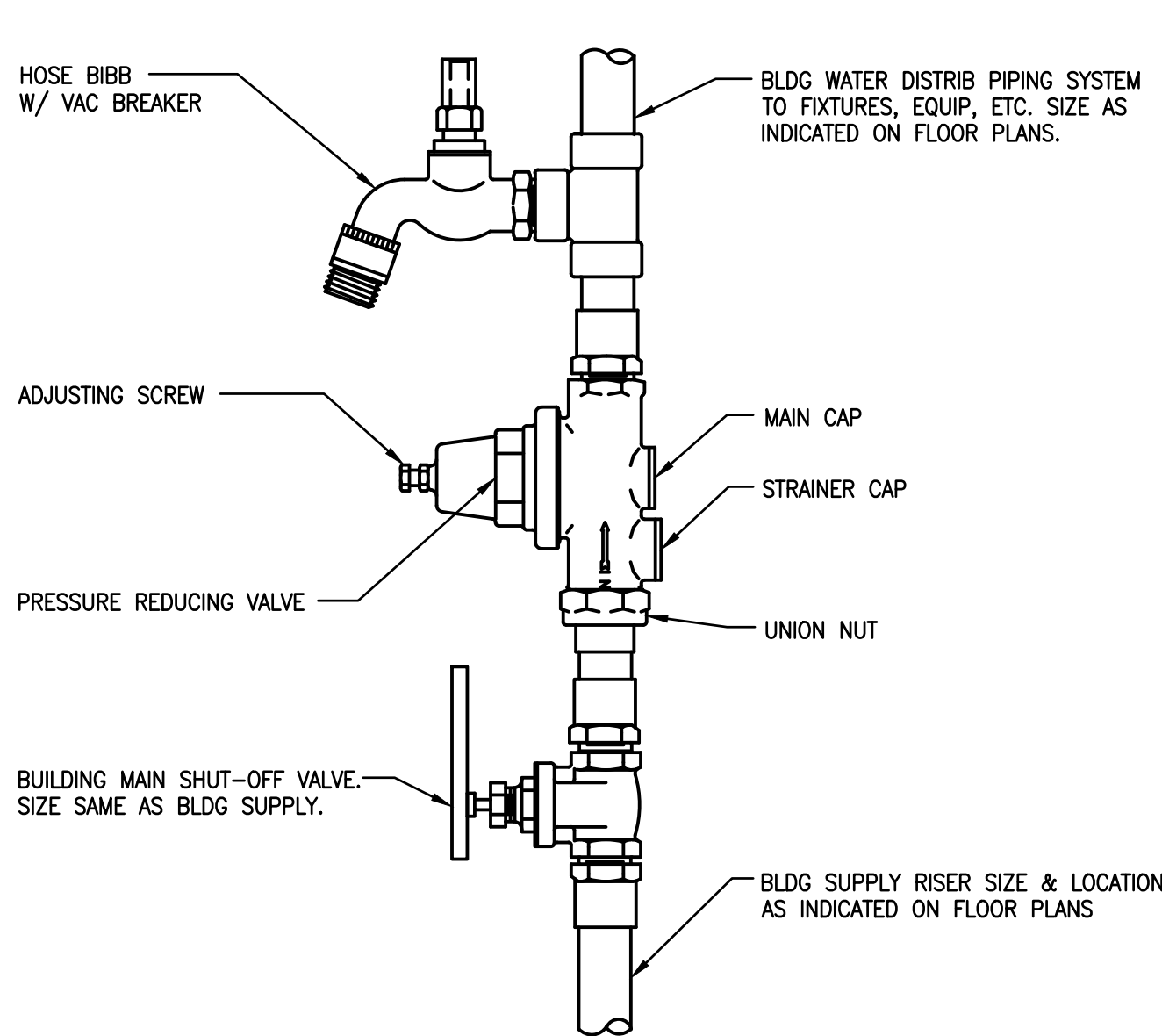


TRAP PRIMER ASSEMBLY

NO SCALE

3

MP-501

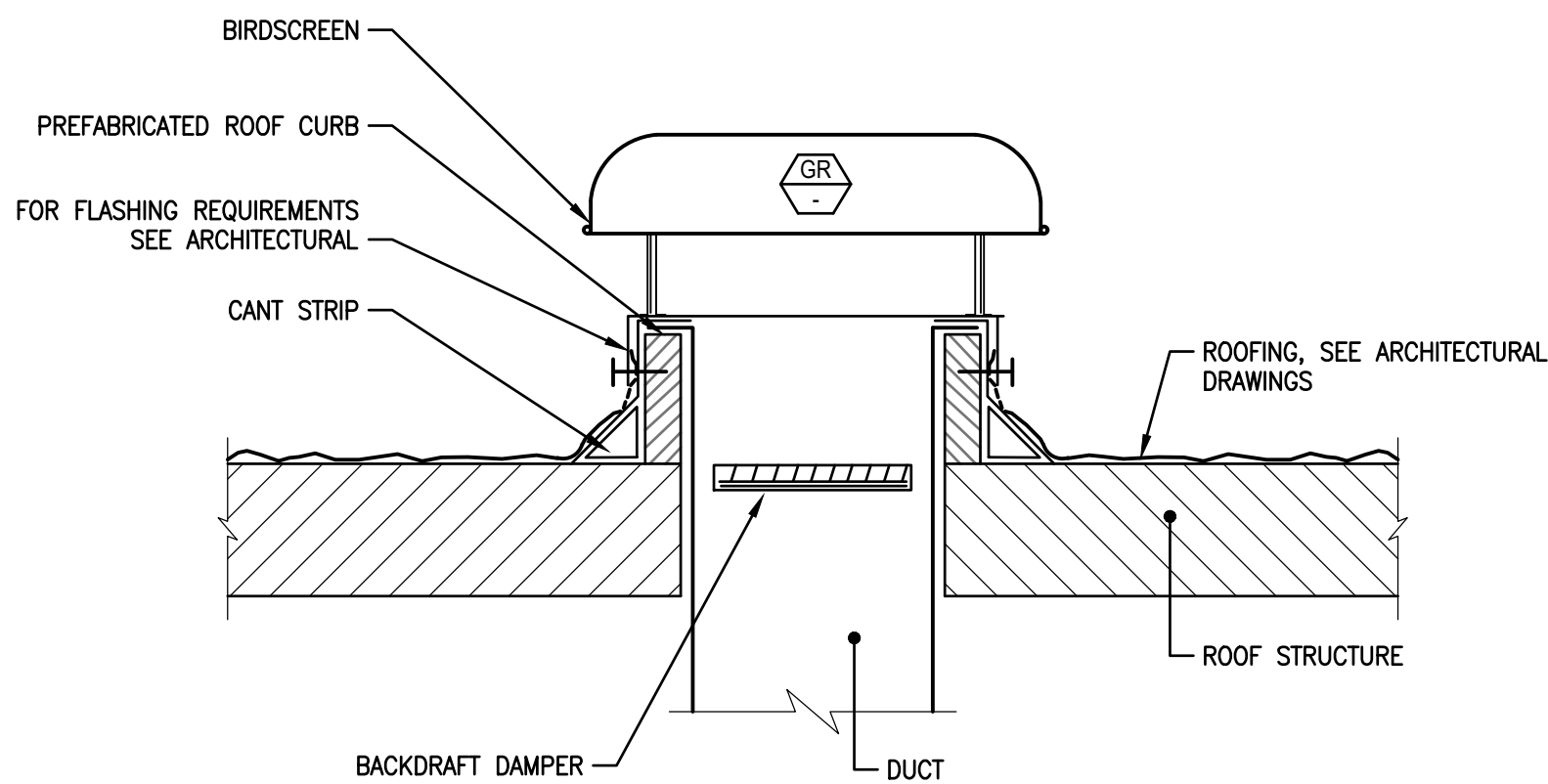


BUILDING MAIN WATER SHUT-OFF VALVE ASSEMBLY DETAIL

NO SCALE

1

MP-501



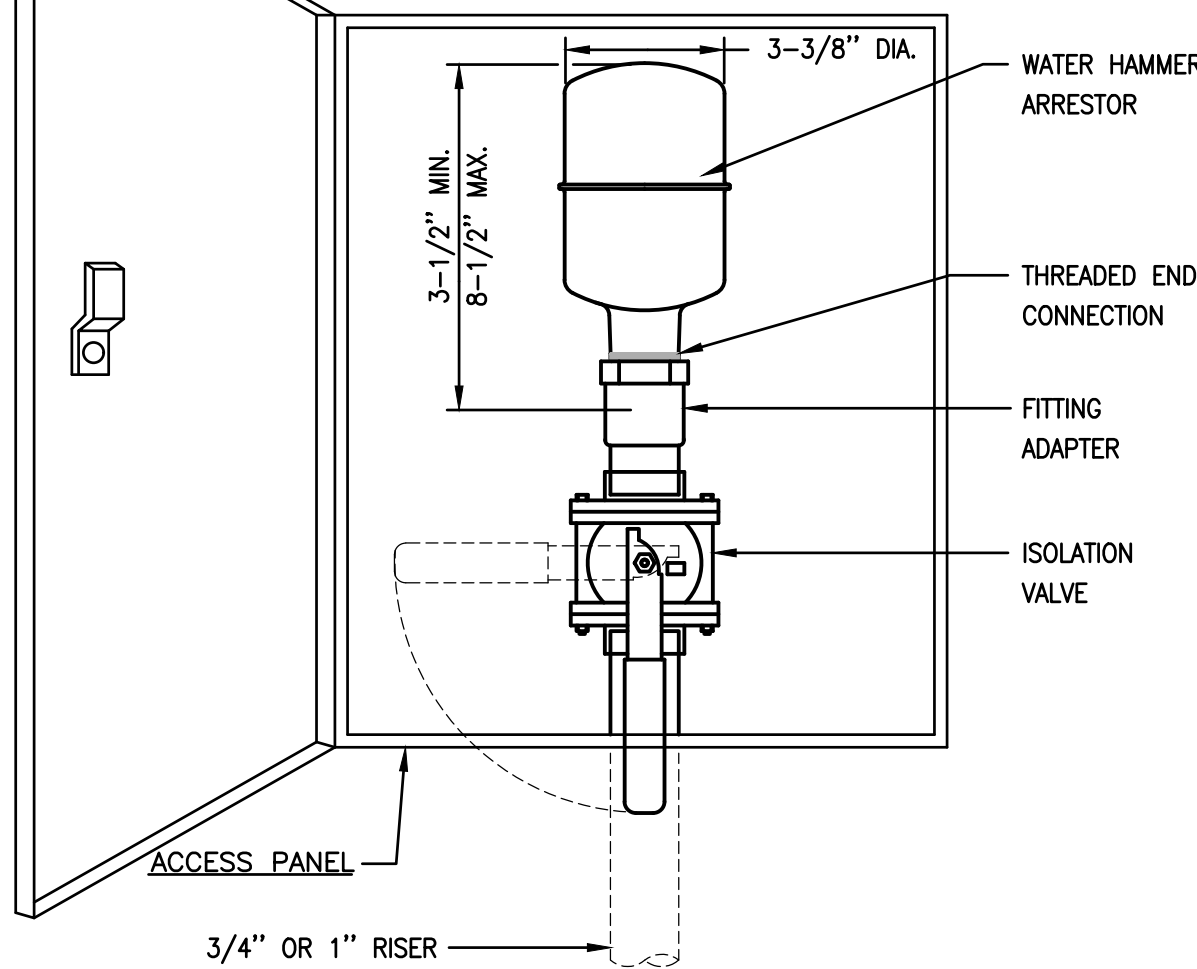
ROOF MOUNTED GRAVITY RELIEF FAN DETAIL

NO SCALE

4

MP-501

WATER HAMMER ARRESTOR SCHEDULE						
P.D.I. SIZE	"A"	"B"	"C"	"D"	"E"	"F"
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330
CONNECTION SIZE	3/4"	3/4"	1"	1"	1"	1"



NOTE: INSTALLATION SHALL COMPLY  
W/P.D.I. STANDARD WH201. UNITS  
NOT SIZED ON PLAN SHALL BE  
SIZED PER SCHEDULE ABOVE

WATER HAMMER ARRESTOR ASSEMBLY DETAIL

NO SCALE

2

MP-501

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5160 Carrol Canyon Rd, Suite 200  
San Diego, California 92121  
858 200-0030 858 200-0037  
www.mae-engineers.com

HED  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
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Project No. 2019-05629-000  
Drawn DR  
Checked RH  
Approved RC

Title MECHANICAL &  
PLUMBING  
DETAILS

Sheet No. MP-501

3"=1'-0"



1 1/2"=1'-0"



3/4"=1'-0"



1/4"=1'-0"



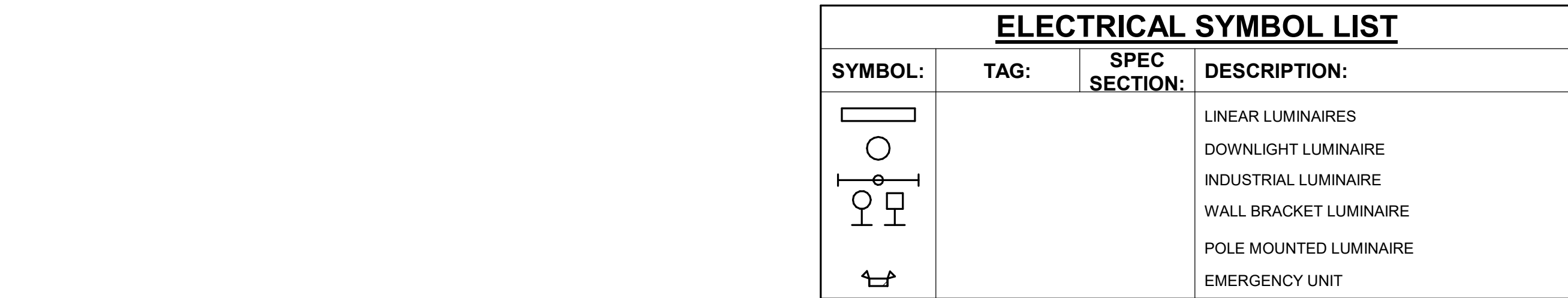
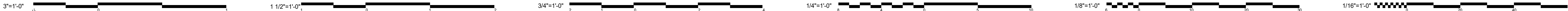
1/8"=1'-0"









1/16"=1'-0"







<b><u>ELECTRICAL SYMBOL LIST</u></b>		
<b>SYMBOL:</b>	<b>TAG:</b>	<b>SPEC SECTION:</b>
		LINEAR LUMINAIRES
		DOWNLIGHT LUMINAIRE
		INDUSTRIAL LUMINAIRE
		WALL BRACKET LUMINAIRE
		POLE MOUNTED LUMINAIRE
		EMERGENCY UNIT

<b><u>ELECTRICAL ABBREVIATION KEY</u></b>	
<b>ABBR:</b>	<b>DESCRIPTION:</b>
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
SV	SOLENOID VALVE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

[illegible]

ELECTRICAL SHEET INDEX	
EG-01	ELECTRICAL COVERSHEET
EG-02	GENERAL NOTES
EG-03	TITLE 24 - INTERIOR
EG-04	TITLE 24 - EXTERIOR
EG-21	SINGLE LINE DIAGRAM
ES-01	OVERALL SITE PLAN
ES-02	PARTIAL - ENLARGED SITE PLAN
ES-03	PARTIAL - ENLARGED SITE PLAN
EP-01	ENLARGED RESTROOM PLANS
EP-02	ENLARGED STORAGE BUILDING PLANS
ES-01	DETAILS
EG-01	F.A. SCHEDULES, CALCS & NOTES
EG-02	FIRE ALARM DETAILS
EG-03	FIRE ALARM DETAILS
GRAND TOTAL: 14	





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C:\Revit Local Files\E18\_19004125.00\_Helix Charter H.S. New Restrooms-Storage\_C\_John.H.Combs.rvt

<div>1"=10'<div>1"=10'1"=20'1"=30'1"=40'1"=50'1"=60'1"=70'1"=80'1"=90'1"=100'150'200'</div></div>		<div>GENERAL NOTES</div>		<div>DEMOLITION NOTES</div>	
<div><div>SCHOOL EQUIPMENT ANCHORAGE NOTES</div><div><div><div><div>1. EQUIPMENT ANCHORAGE NOTE:</div><div>ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.<div><div>1. ALL PERMANENT EQUIPMENT AND COMPONENTS.</div><div>2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.</div><div>3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.</div></div><div>THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.<div><div>A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.</div><div>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.</div></div><div>FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.</div></div><div><div>2. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:</div><div>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.</div><div>THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.</div><div>MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E)<div><div><div>MP □ MD □ PP □ E □</div><div>OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.</div></div><div><div>MP □ MD □ PP □</div><div>OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL, (OPM #) <u>        </u>.</div></div><div><div>MP □ MD □ PP □</div><div>OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL <u>        </u> AND CONNECTION LEVEL <u>        </u> FOR THE PROJECT AND CONDITIONS</div></div></div></div></div></div></div></div></div></div>		<div><div>3. ALL ELECTRICAL PREFABRICATED EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT ALL PORTIONS, ELEMENTS, SUB-ASSEMBLIES AND/OR PARTS OF SAID EQUIPMENT, AND THE EQUIPMENT AS A WHOLE INCLUDING ITS ATTACHMENTS, WILL RESIST A LOAD WHICH EXCEEDS THE FORCE LEVEL USED TO RESTRAIN AND ANCHOR THE EQUIPMENT TO THE SUPPORTING STRUCTURE.</div><div>4. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:<div><div>AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)</div><div>INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)</div><div>NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)</div><div>AMERICAN STANDARD ASSOCIATION (ASA)</div><div>NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)</div><div>AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)</div><div>CALIFORNIA ELECTRICAL CODE (CEC) - 2019 EDITION</div><div>CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)</div><div>INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)</div><div>ALL LOCAL CODES HAVING JURISDICTION.</div></div><div>WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.</div><div>5. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.</div><div>6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.</div><div>7. ALL UTILITY WORK (POWER, TELEPHONE, CABLE TELEVISION) SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.</div><div>8. ALL ITEMS SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, CONCRETE PADS, TRANSFORMERS, RISERS, MANHOLES, PULL BOXES, AND PROTECTIVE COVERING FROM SERVICE LOCATION SHALL BE PROVIDED AND INSTALLED, AND SHALL BE VERIFIED WITH THE SERVING UTILITY COMPANY. THE CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY COMPANY, AND SHALL PAY ALL CHARGES LEVIED BY THE SERVING UTILITY COMPANY FOR HIS SERVICE EXCEPT THE FIRST BILLING DEPOSIT. WHERE THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE, THE DOCUMENTS SHALL GOVERN.</div><div>9. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.</div><div>10. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.</div><div>11. THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION FOR THE CONTRACTOR TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER. FAILURE TO KEEP RECORD DRAWINGS UP-TO-DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS.</div><div>12. IN SOME INSTANCES, IT MAY BE NECESSARY TO DEFER WORK IN CERTAIN AREAS AND LOCATIONS UNTIL SUCH TIME AS EXISTING FACILITIES CAN BE TEMPORARILY OR PERMANENTLY REARRANGED BY THE OWNER BUILDING AUTHORITY. THEREFORE, WHENEVER IT BECOMES NECESSARY FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS CONTRACT IN EXISTING AREAS IN WHICH THE OWNER'S WORK IS BEING PERFORMED, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND THE OWNER RELATIVE TO THIS REQUIREMENT AND SHALL FOLLOW CLOSELY THE DIRECTIVE ISSUED BY THE ARCHITECT INsofar AS TIME AND PROCEDURE ARE CONCERNED. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PREMIUM TIME TO WHICH HE MAY BE SUBJECTED FOR PERFORMING WORK IN SUCH PROCEDURE AND AT SUCH TIMES AS MAY BE NECESSARY TO CAUSE THE LEAST INTERFERENCE WITH THE OPERATIONS OF THE OWNER.</div><div>13. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID.</div><div>14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS OR SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION OR WHERE SAID FEEDERS OR SYSTEMS REQUIRE EMERGENCY STANDBY POWER.</div><div>15. SHOP DRAWINGS SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, AND MANUFACTURER'S BROCHURES. SHOP DRAWINGS SHALL BE SUBMITTED FOR ITEMS LISTED IN SPECIFICATIONS. PARTIAL, INCOMPLETE, OR UNBOUND SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.</div><div>16. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM (TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE).</div><div>17. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.</div><div>18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH THE MECHANICAL, FIRE PROTECTION AND PLUMBING DRAWINGS FOR DUCTS, LINES AND EQUIPMENT.</div><div>19. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.</div><div>20. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM. ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.</div><div>21. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE ARCHITECT AND REVIEWED AND APPROVED BY DSA. PERFORM CORING, SAW CUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. NO STRUCTURAL MEMBER, FLOOR OR WALL SHALL BE CUT, NOTCHED OR BORED UNLESS SPECIFICALLY DETAILED ON THE APPROVED PLANS OR REVIEWED AND APPROVED BY THE ARCHITECT OF RECORD AND DSA PRIOR TO BEGINNING SUCH WORK. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.</div><div>22. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.</div><div>23. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.</div><div>24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.</div><div>25. WHENEVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT DEVICES, CIRCUIT BREAKERS, GROUND FAULT PROTECTION SYSTEMS, ETC. (ALL MATERIALS), ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.</div><div>26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.</div><div>27. UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED MATERIAL SECURELY INSTALLED.</div><div>STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILINGS, OR AREA SEPARATION UNLESS THEY:<div><div>OCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER. IN THIS CASE, ONLY ONE OUTLET BOX NEED TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.</div><div>OCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA. IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL.</div></div><div>STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.</div><div>FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS 3M CONTRACTOR PRODUCTS MINNEAPOLIS, MN 3M TEST REPORT NO. 1167 DATED AUGUST 21, 1987 FSP FIRESTOP PUTTY PADS HEV-DUTY NELSON PRODUCTS TULSA, OK FLAMESAFES FSP 1077 FIRESTOP PADS INTERNATIONAL PROTECTIVE COATINGS OAKHURST, NJ</div><div>STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.</div></div><div>UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD OF FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8" INCH. IN SMOKE WALLS OR PARTITIONS, THE 1/8" INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.</div><div>28. REFER TO SINGLE LINE DIAGRAM AND FEEDER SCHEDULES FOR CONDUIT AND CONDUCTOR SIZE TO PANELS, TRANSFORMERS, MECHANICAL AND PLUMBING EQUIPMENT, ETC. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.</div><div>29. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.</div><div>30. THE NUMERALS SHOWN AT TOP OF LIGHT FIXTURE IDENTIFICATION SYMBOLS INDICATING THE NUMBER OF LIGHT FIXTURES REQUIRED SHALL NOT BE USED BY THE CONTRACTOR FOR HIS QUANTITY TAKE-OFF AT BIDDING, NOR FOR DETERMINATION OF HOW MANY FIXTURES WILL BE INSTALLED. THE CONTRACTOR SHALL INSTALL A LIGHT FIXTURE WHEREVER A FIXTURE OUTLET IS SHOWN ON THE DRAWINGS.</div><div>31. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL DEVICES AT THE FOLLOWING HEIGHTS:<div><div>WALL SWITCH <u>        </u> 4'-0" SET VERTICALLY TO TOP OF DEVICE</div><div>CONVENIENCE RECEPTACLE <u>        </u> 1'-3" SET VERTICALLY TO BOTTOM OF DEVICE</div><div>TELEPHONE/DATA OUTLETS <u>        </u> 1'-3" SET VERTICALLY TO BOTTOM OF DEVICE</div><div>OUTLETS AT COUNTERS <u>        </u> 6" ABOVE COUNTERS</div></div><div>REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE OR BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS, HOWEVER, LOCATIONS SHALL BE AS INDICATED ON ARCHITECTURAL ELEVATIONS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK. INSTALLATIONS. REFERENCE ARCHITECTURAL DETAILS FOR METHOD OF ROUTING CONDUIT WITHIN CASEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC. OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF SPLASH, CABINET, ETC.</div><div>MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.</div></div><div>32. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER SECTIONS. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL ITEMS OR FEATURES.</div><div>33. CONTRACTOR SHALL CROSS REFERENCE SINGLE-LINE AND RISER DIAGRAMS WITH SITE AND FLOOR PLANS FOR ALL SYSTEMS.</div><div>34. RUN ALL UNDERGROUND CONDUITS MINIMUM 24" BELOW GRADE WITHOUT CONCRETE ENCASEMENT. USE PVC SCH 40 CONDUIT.</div></div></div>			

<div>1"=10'<div>1"=10'1"=20'1"=30'1"=40'1"=50'1"=60'1"=70'1"=80'1"=90'1"=100'150'200'</div></div>		<div>APPLICABLE CODES AND STANDARDS</div>	
		<div><div><div>• 2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1</div><div>• 2019 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2018 INTERNATIONAL BUILDING CODE (IBC) W/ 2019 CALIFORNIA AMENDMENTS)</div><div>• 2019 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2017 OTHER STATE ELECTRICAL CODE (NEC) W/ 2019 CALIFORNIA AMENDMENTS)</div><div>• 2019 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6</div><div>• 2019 CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2018 INTERNATIONAL FIRE CODE (IFC) W/ 2019 CALIFORNIA AMENDMENTS)</div><div>• 2019 CALIFORNIA EXISTING BUILDING CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 10 (2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC))</div><div>• 2019 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12</div><div>• AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO STATE</div><div>• CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19</div><div>• 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN), PART II, TITLE 24 C.C.R.</div><div>• 2019 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE</div></div></div>	

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 04-119024 INC.  
REVIEWED FOR  
SS □ FLS □ ACS □  
DATE: 05/18/2020

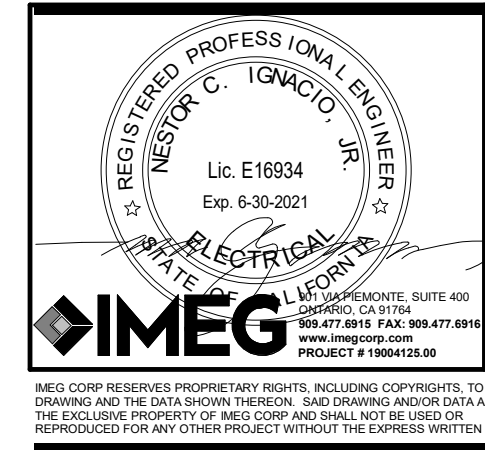


Grossmont Union High School District

Helix Charter HS Restroom & Storage Bldgs

La Mesa, CA

Date Issued  
10/11/2019



HED  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA  
  
(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com  
  
Planning  
Architecture  
Engineering  
Interior Architecture  
Landscape Architecture  
Construction Services

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Project No. 2019-05629-000  
Drawn  
Checked  
Approved

Title GENERAL  
NOTES

Sheet No. EG-02



STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

Project Name: Helix Charter HS Restroom & Storage Bldgs

Project Address: 7323 University Ave

Report Page: (Page 7 of 7)

Date Prepared: 4/13/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Nestor C. Ignacio

Company: IMEG

Address: 901 VIA PIEMONTE SUITE 400

City/State/Zip: ONTARIO, CA 91764

Responsible Person's Declaration Statement

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Nestor C. Ignacio

Company: IMEG

Address: 901 VIA PIEMONTE SUITE 400

City/State/Zip: ONTARIO CA 91764

Responsible Designer Signature: [Signature]

Date Signed: 2020-04-13

License: E16934

Phone: 909-477-6915

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.0.001 Schema Version: rev 20190401

Registration Provider: Energysoft

Report Generated: 2020-04-13 10:46:08

STATE OF CALIFORNIA

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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
Restroom #1	Restrooms	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>
Restroom #2	Restrooms	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>
Custodial 104	All Other Space Types	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>
Athletics 103	All Other Space Types	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>
Performing Arts 102	All Other Space Types	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>
Band 101	All Other Space Types	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	<input type="checkbox"/>	<input type="checkbox"/>

\*NOTES: Controls with a \* require a note in the space below explaining how compliance is achieved.  
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2.

13

Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment Area Category PAF
Restrooms	Restrooms	0.65	150	97.5	No
All Others (Storage Rooms)	All Other Space Types	0.4	1,487	594.8	No
TOTALS:		1,637	692.3	See Tables I, or P for detail	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

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Registration Provider: Energysoft

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Project Address: 7323 University Ave

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I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Restrooms	Restrooms	0.65	150	97.5	No	No
All Others (Storage Rooms)	All Other Space Types	0.4	1,487	594.8	No	No
TOTALS:		1,637	692.3	See Tables I, or P for detail		

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

Registration Number:

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R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at [https://www.energy.ca.gov/title24/2019standards/2019\\_compliance\\_documents/Nonresidential\\_Documents/NRCC/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/)

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-LTI-01-E - Must be submitted for all buildings.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room or a theater to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF)	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Report Version: 2019.0.001 Schema Version: rev 20190401

Registration Provider: Energysoft

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STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

Project Name: Helix Charter HS Restroom & Storage Bldgs

Project Address: 7323 University Ave

Report Page: (Page 2 of 7)

Date Prepared: 4/13/2020

A. GENERAL INFORMATION

01 Project Location (city)	La Mesa	04 Total Conditioned Floor Area (ft²)	1,637
02 Climate Zone	7	05 Total Unconditioned Floor Area (ft²)	0
03 Occupancy Types Within Project (select all that apply):	06 # of Stories (Habitable Above Grade)		
<input type="checkbox"/> Office	<input type="checkbox"/> Retail	<input type="checkbox"/> Warehouse	<input type="checkbox"/> Hotel/Motel
<input type="checkbox"/> Parking Garage	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Relocatable	<input type="checkbox"/> Healthcare
			<input checked="" type="checkbox"/> Other (Write in) See Table I

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work:	Conditioned Spaces	Unconditioned Spaces		
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
<input checked="" type="checkbox"/> New Lighting System	Area Category Method	1637	Area Category Method	0
<input type="checkbox"/> New Lighting System - Parking Garage				
Total Area of Work (ft²)	1637	0		

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)					Adjusted Lighting Power per §140.6(a) (Watts)			Compliance Results	
	01	02	03	04	05	06	07	08	09	
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	Total Allowed (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits §140.6(a)2 (+)	Total Adjusted (Watts) *Includes Adjustments		
(See Table I)	(See Table I)	(See Table J)	(See Table K)	=	692.3	≥	369.2	0	=	369.2
Conditioned	692.3	0		=	692.3	≥	369.2	0	=	369.2
Unconditioned				=		≥			=	
Controls Compliance (See Table H for Details)										COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)										

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change	Watts per luminaire?	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)3	Design Watts	Field Inspector
1	Fallsafe - 1x4 LED (Type 1)	No	No	23.6	Mfr. Spec	2	No	47.2	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

Report Version: 2019.0.001 Schema Version: rev 20190401

Registration Provider: Energysoft

Report Generated: 2020-04-13 10:46:08

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

Project Name: Helix Charter HS Restroom & Storage Bldgs

Project Address: 7323 University Ave

Report Page: (Page 3 of 7)

Date Prepared: 4/13/2020

F. INDOOR LIGHTING FIXTURE SCHEDULE

2	Metalux 1x4 LED (Type 2)	No	No	32.2	Mfr. Spec	10	No	322	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Total Designed Watts: CONDITIONED SPACES 369.2									

\*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

\*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces. When a control having a \* is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls

01	02	03
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector
		Pass Fail
Not Required <= 10,000 SF	See Area/Space Level Controls	<input type="checkbox"/> <input type="checkbox"/>

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

Report Version: 2019.0.001 Schema Version: rev 20190401

Registration Provider: Energysoft

Report Generated: 2020-04-13 10:46:08

Grossmont Union High School District

Helix Charter HS Restroom & Storage Bldgs

La Mesa, CA

Date 10/11/2019 Issue SD

HED HARLEY ELLIS DEVEREAUX

225 Broadway Suite 1300 San Diego, California 92101 | USA

(tel) (619) 398.3800 (fax) (619) 398.3855 harleyellisdevereaux.com

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Project No. 2019-05629-000 Drawn Checked Approved

title TITLE 24 - INTERIOR

Sheet No. EG-03



STATE OF CALIFORNIA <b>Outdoor Lighting</b> NRC-LFO-4		CALIFORNIA ENERGY COMMISSION NRC-LO-14	
<b>CERTIFICATE OF COMPLIANCE</b>		<b>(Page 7 of 7)</b>	
Project Name: Helix Charter HS Restroom & Storage Bldg		Report Page:	
Project Address: 7823 University Ave		Date Prepared: 4/13/2020	

<b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b> <b>I certify that this Certificate of Compliance documentation is accurate and complete.</b>	
Documentation Author Name: Nestor C. Ignacio Company: IMEG Address: 901 VIA PIEMONTE SUITE 400 City/State/Cp: ONTARIO, CA 91764	Documentation Author Signature:  Signature Date: 2020-04-13 CEAC/HERS Certification Identification (if applicable): Phone: 909-477-6915

<b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b> I certify the following under penalty of perjury, under the laws of the State of California:	
<ol style="list-style-type: none"> <li>1. The information provided on this Certificate of Compliance is true and correct.</li> <li>2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)</li> <li>3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 5 of the California Code of Regulations.</li> <li>4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.</li> <li>5. I understand that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and, made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included on the documentation the builder provides to the building owner or occupancy.</li> </ol>	
Responsible Designer Name: NESTOR C. IGNACIO Company: IMEG Address: 901 VIA PIEMONTE SUITE 400 City/State/Cp: ONTARIO CA 91764	Responsible Designer Signature:  Date Signed: 2020-04-13 License: C10934 Phone: 909-477-6915

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
<b>Outdoor Lighting</b>			
NRCC-LTO-E			
<b>CERTIFICATE OF COMPLIANCE</b>			
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldgs	<b>Report Page:</b>	NRCC-LTO-E
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>	(Page 4 of 7) 4/13/2020

**H. OUTDOOR LIGHTING CONTROLS**

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

Mandatory Controls				
01	02	03	04	05
Area Description	Shut-Off §130.2(c)(1)	Auto-Schedule §130.2(c)(2)	Motion Sensor §130.2(c)(3)	Field Inspector
				Pass
				Fail

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

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA			
<b>Outdoor Lighting</b>			
NRCC-LTO-E		CALIFORNIA ENERGY COMMISSION	
<b>CERTIFICATE OF COMPLIANCE</b>		<b>NRCC-LTO-E</b>	
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldg	<b>Report Page:</b>	(Page 5 of 7)
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>	4/13/2024

<b>LIGHTING POWER ALLOWANCE (per §140.7)</b> <i>This table includes areas using allowance calculations per §140.7, General Hardscape Allowance is per Table 140.7.4, while "Use it or lose it" Allowances are per Table 140.7.8. Indicate which allowances are being used to open sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.</i>										
		<input checked="" type="checkbox"/> General Hardscape Allowance Table I (below)				01 "Use it or lose it" Allowance (select all that apply) (select all that apply)				
		<input type="checkbox"/> Per Application Table J		<input type="checkbox"/> Sales Frontage Table K		<input type="checkbox"/> Ornamental Table L		<input type="checkbox"/> Per Specific Area Table M		
Calculated General Hardscape Lighting Power Allowance per Table 140.7.4 (LZ 0, 1 & 4) This section does not apply to this project.										
Calculated General Hardscape Lighting Power Allowance per Table 140.7.4 (LZ 2 & 3)										
02	03	04		05	06	07		08	9	10
Area Description	Surface Type	Area Wattage Allowance (AWA)			Area Wattage Allowance (AWA)			Linear Allowance (Watts)	Total General AWA + LWA (Watts)	
		Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Area Allowance (Watts)			
Pedestrian Hardscape	Asphalt	1180	0.03	29.5	371	0.4	92.75	122.25		
<b>Initial Wattage Allowance for Entire Site (Watts):</b>									350	
<b>Total General Hardscape Allowance (Watts):</b>									472.25	

<p><b>J. LIGHTING ALLOWANCE: PER APPLICATION</b></p> <p>This section does not apply to this project.</p>
<p><b>K. LIGHTING ALLOWANCE: SALES FRONTAGE</b></p> <p>This section does not apply to this project.</p>
<p><b>L. LIGHTING ALLOWANCE: ORNAMENTAL</b></p> <p>This section does not apply to this project.</p>
<p><b>M. LIGHTING ALLOWANCE: PER SPECIFIC AREA</b></p> <p>This section does not apply to this project.</p>

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA			
<b>Outdoor Lighting</b>			
NRCC-LTO-E		CALIFORNIA ENERGY COMMISSION	
<b>CERTIFICATE OF COMPLIANCE</b>		<b>NRCC-LTO-E</b>	
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldg	<b>Report Page:</b>	<b>(Page 6 of 7)</b>
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>	4/13/2020

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)				
This section does not apply to this project.				
O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION				
<p>Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E.</p> <p>Additional Remarks: These documents must be provided to the building inspection during construction and can be found online at <a href="https://www.energy.ca.gov/title24/2019Standards/2019_compliance_documents/Nonresidential_Documents/NRC/">https://www.energy.ca.gov/title24/2019Standards/2019_compliance_documents/Nonresidential_Documents/NRC/</a></p>				
Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input type="radio"/>	NRC1-LT-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input type="radio"/>	NRC1-LT-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE				
<p>Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E.</p> <p>Additional Remarks: These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <a href="http://www.energy.ca.gov/title24/attcp/providers.html">http://www.energy.ca.gov/title24/attcp/providers.html</a></p>				
Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input type="radio"/>	NRCA-LT-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
<b>Outdoor Lighting</b>			
NRCC-LTD-E			
<b>CERTIFICATE OF COMPLIANCE</b>		<b>NRCC-LTD-E</b>	
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldg	<b>Report Page:</b>	(Page 1 of 7)
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>	4/13/2022

<b>A. GENERAL INFORMATION</b>			
01 Project Location (city)	La Mesa	04 Total Illuminated Hardscape Area (ft <sup>2</sup> )	1180
02 Climate Zone	7		
03 Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):			
<input type="checkbox"/> LZ-0: Very Low - Undeveloped Parkland	<input type="checkbox"/> LZ-2: Moderate - Rural Areas	<input type="checkbox"/> LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
<input type="checkbox"/> LZ-1: Low - Developed Parkland	<input checked="" type="checkbox"/> LZ-3: Moderately High - Urban Areas		

<b>B. PROJECT SCOPE</b>	
This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)(2), for alterations.	
<b>My Project Consists of:</b>	
01	02
<input checked="" type="checkbox"/> New Lighting System	Must Comply with Allowances from §140.7
<input type="checkbox"/> Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? <input type="radio"/> Yes <input type="radio"/> No
03	04
% of Existing Luminaires Being Altered <sup>1</sup>	Sum Total of Luminaires Being Added or Altered
<input type="checkbox"/> < 10% <input type="checkbox"/> >= 10% and < 50% <input type="checkbox"/> >= 50%	05 Calculation Method

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

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

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
<b>Outdoor Lighting</b>			
NRCC-LTO-E			
<b>CERTIFICATE OF COMPLIANCE</b>			
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldgs	<b>Report Page:</b>	NRCC-LTO-E-4
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>	(Page 2 of 7) 4/13/2020

**C. COMPLIANCE RESULTS**

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

Calculations of Total Allowed Lighting Power (Watts) §140.7, or §141.0(b)(2)										Compliance Results					
01	02		03	04	05	06	07	08	09						
General Hardscape Allowance (§140.7(a))	+	Per Application (See Table J)	+	Sales Frontage (See Table K)	+	Ornamental (§140.7(b)(2) (See Table L)	OR	Per Specific Area (§140.7(d)) (See Table M)	OR	Existing Power Factor (See Table N)	=	Total Allowed (Watts)	≥	Total Actual (Watts)	07 must be >= 08
472.25	+		+		+		OR		OR		=	472.25	≥	102	COMPLIES
Cutoff Compliance (See Table G for Details)															
Controls Compliance (See Table H for Details)															
COMPLIES															

<b>D. EXCEPTIONAL CONDITIONS</b>
<i>This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.</i>
<b>E. ADDITIONAL REMARKS</b>
<i>This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.</i>

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

STATE OF CALIFORNIA <b>Outdoor Lighting</b> NRCC-ITO-E		CALIFORNIA ENERGY COMMISSION
<b>CERTIFICATE OF COMPLIANCE</b>		<b>NRCC-ITO-E</b>
<b>Project Name:</b>	Helix Charter HS Restroom & Storage Bldg	<b>Report Page:</b>
<b>Project Address:</b>	7323 University Ave	<b>Date Prepared:</b>
		4/13/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE										
For new or altered lighting systems demonstrating compliance with §140.2, all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For the existing lighting systems using the Existing Power method per §141.0(b)(2), only new luminaires being installed and replaced luminaires being installed as part of the project scope are included (i.e. existing luminaires remaining or existing luminaires being moved are not included).										
<b>Designated Wattage:</b>										
01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire <sup>1</sup>	How is Wattage determined	Total number luminaires <sup>2</sup>	Luminaire Status <sup>3</sup>	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumens output §130.2(b)(1)	Field Inspector	
3	Rayon - Wall Mounted LED (Type 3)	<input type="checkbox"/> Linear	17	Mfr. Spec	6	New	<input type="checkbox"/>	102	NA < 6200 lumens	<input type="checkbox"/> <input type="checkbox"/>
<b>Total Design Watts:</b>								102		

<sup>1</sup> NOTES: Selections with a \* require a note in the space below explaining how compliance is achieved.  
 EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)  
<sup>2</sup> EX: Luminaire being installed as part of the project scope

\* NOTES: Selections with a \* require a note in the space below explaining how compliance is achieved.

<sup>1</sup> CE Luminaires is lighting a starter. EXCEPTION 2 to §310.2(a).

<sup>2</sup> NOTES: Authority having jurisdiction may ask for Luminaires cut sheets to confirm wattage used for compliance per §310.0(c).

<sup>3</sup> For new luminaires, wattage should be indicated as W/ft instead of Watts/Luminaires. Total linear feet should be indicated in column 05 instead of number of luminaires.

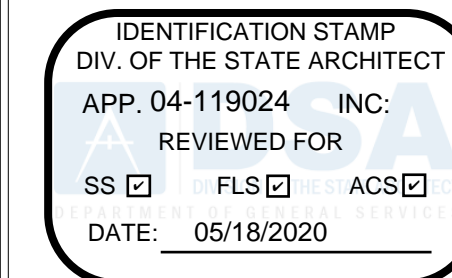
<sup>4</sup> Select "New" for new luminaires in a new outbuilding lighting project, or add/old luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.

<sup>5</sup> Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §310.2(b).

**G. CUTOFF REQUIREMENTS (BUG)**

This section does not apply to this project.

Registration Number:	Registration Date/Time:	Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-13 10:46:09

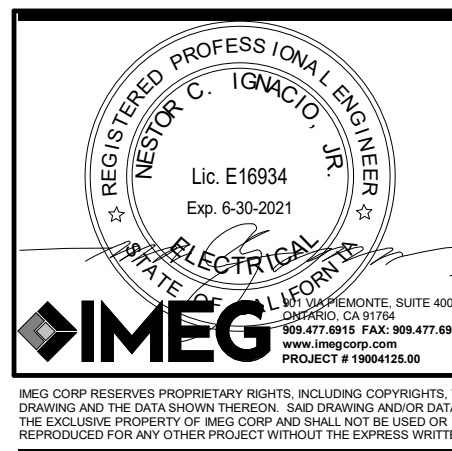


Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date	Issue
10/11/2019	SD



**HED**  
HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

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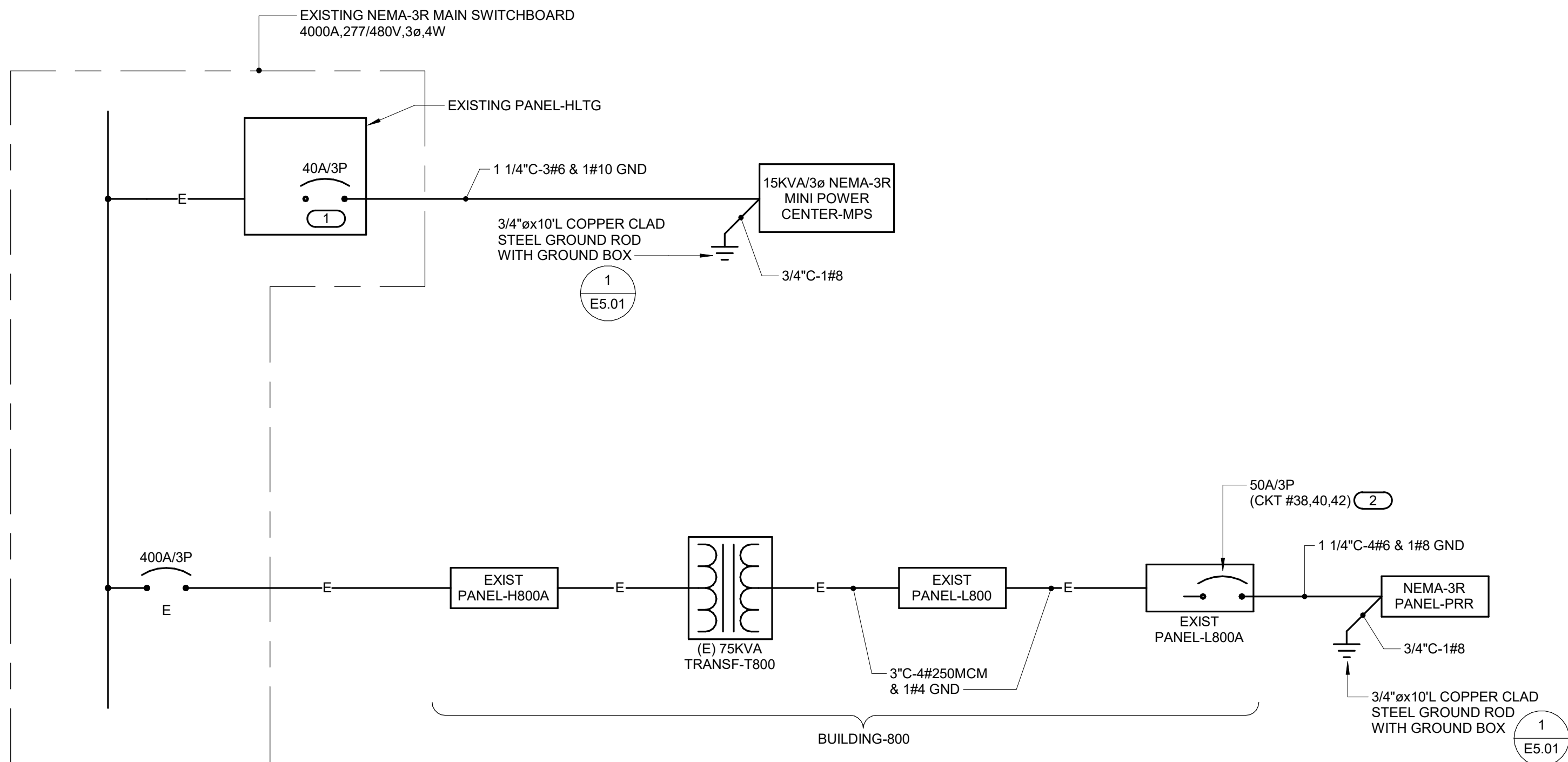
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Title TITLE 24 -  
EXTERIOR

Sheet No. EG-04





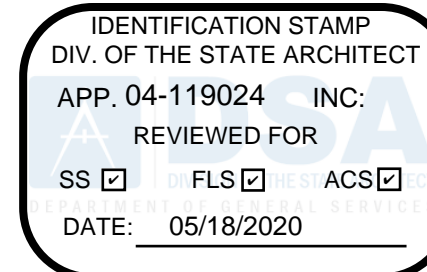
## 1 PARTIAL SINGLE LINE DIAGRAM

[illegible]

MOUNTING: SURFACE				PANEL-MPS (NEMA-3R)																LOCATION: EXTERIOR						
VOLTAGE: 120/208V 3Ø,4W				65,000 AIC SYM																100 AMP BUS			60A/3P MCB			
N O T E	DESCRIPTION	VOLT-AMPERES			L I N E T E R	P H A S E	M O D E L	P R O T E C T I O N	C B R K E R	C B R K E R	C B R K E R	C B R K E R	M O D E L	P R O T E C T I O N	L I N E T E R	VOLT-AMPERES			DESCRIPTION	N O T E						
		ØA	ØB	ØC												ØA	ØB	ØC								
	LIGHTS	322			10	1	1	20	1	2	20	1	3	51					EXT LIGHTS							
	RECEPTS		720			4	1	20	3	4	20	1					720		RECEPTS							
	RECEPTS			720		4	1	20	5	6	20	1							RECEPTS							
	RECEPTS	540			3	1	20	7	8	20	1	3	540						EXT RECEPTS							
	SPARE					1	20	9	10	20	1								SPARE							
	SPARE					1	20	11	12	20	1								SPARE							
	SPARE					1	20	13	14	20	1								SPARE							
	SPARE					1	20	15	16	20	1								SPARE							
	SPARE					1	20	17	18	20	1								SPARE							
	SPARE					1	20	19	20	20	1								SPARE							
	SPARE					1	20	21	22	20	1								SPARE							
	SPARE					1	20	23	24	20	1								SPARE							
	SPARE					1	20	25	26	20	1								SPARE							
	SPARE					1	20	27	28	20	1								SPARE							
	SPARE					1	20	29	30	20	1								SPARE							
	SPARE					1	20	31	32	20	1															
						1	20	33	34	20	1															
						1	20	35	36	20	1															
						1	20	37	38	20	1															
						1	20	39	40	20	1															
						1	20	41	42	20	1															
	SUBTOTAL	862	720	720																						
	CONTINUOUS LOAD, 373 VA X 1.25 = 467 VA																13 LIGHTING OUTLETS				591	720	540	SUBTOTAL		
	+ OTHER LOAD = 3780 VA																21 CONVENIENCE OUTLETS				1453	1440	1260	VA PER PHASE		
	TOTAL LOAD = 4247 VA																				4.2 KVA				TOTAL CONNECTED LOAD	
	3Ø CURRENT = 12 AMPS																								NOTES	
	HIGH Ø = 13 AMPS																									

## KEY NOTES

- 1 PROVIDE 40A/3P MATCHING BREAKER IN PANEL-HLTG.
- 2 PROVIDE 50A/3P MATCHING BREAKER IN PANEL-H800A AT CKT #38,40,42.

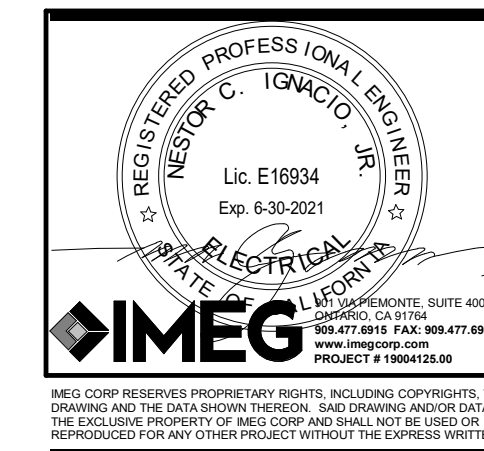


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HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harlevellisdevereaux.com

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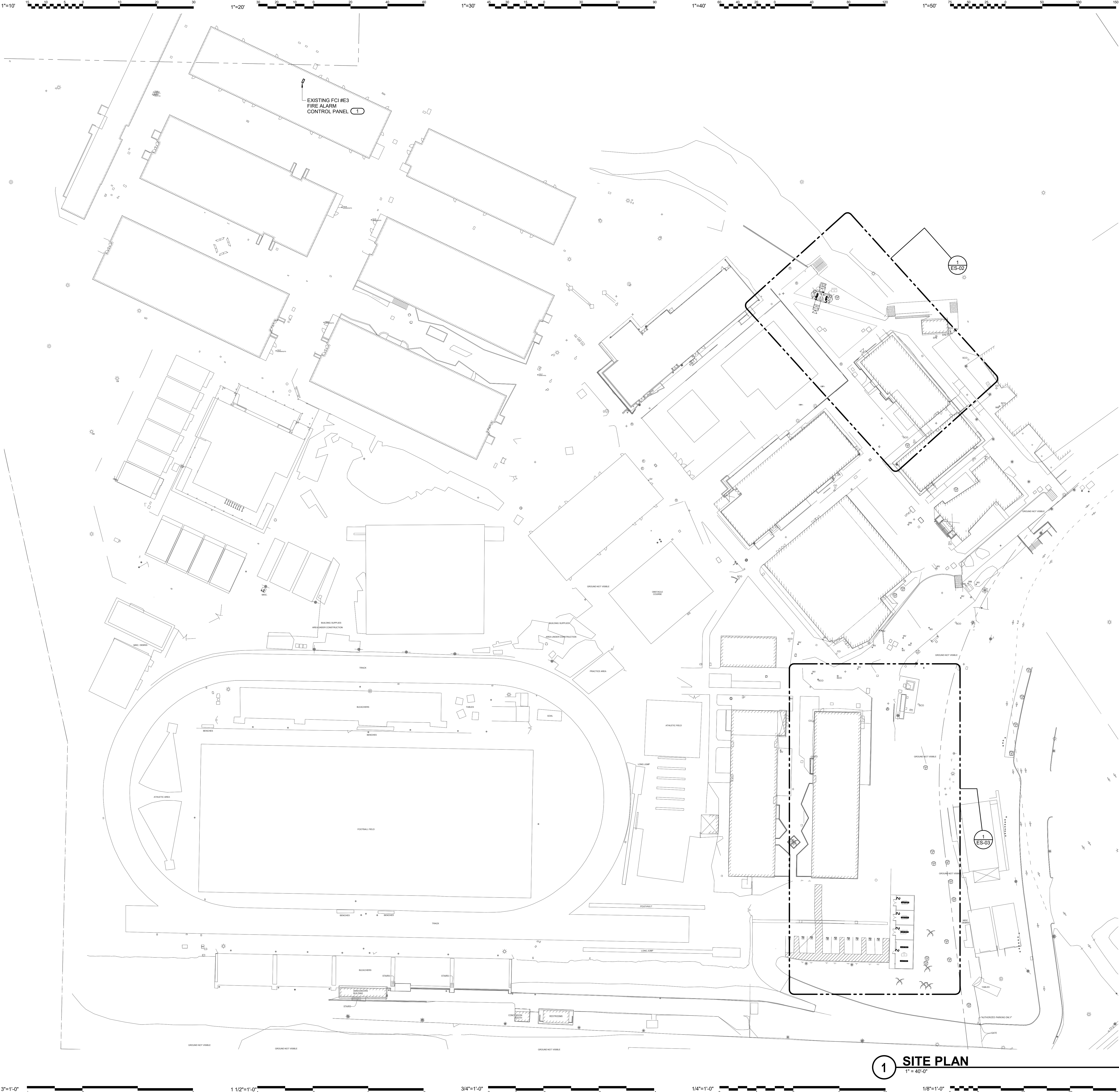
Title SINGLE LINE  
DIAGRAM

Sheet No. EG-21



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4/13/2020 11:49:29 AM



## KEY NOTES

- 1 RE-PROGRAM EXISTING FIRE ALARM CONTROL PANEL TO ADD NEW DEVICES.

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 04-119024 INC.  
REVIEWED FOR  
SS ☒ FLS ☒ ACS ☒  
DATE: 05/18/2020



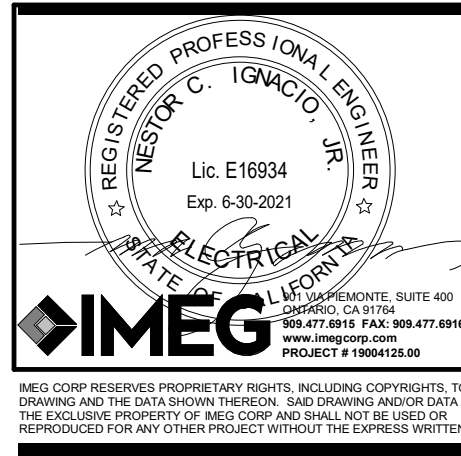
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San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
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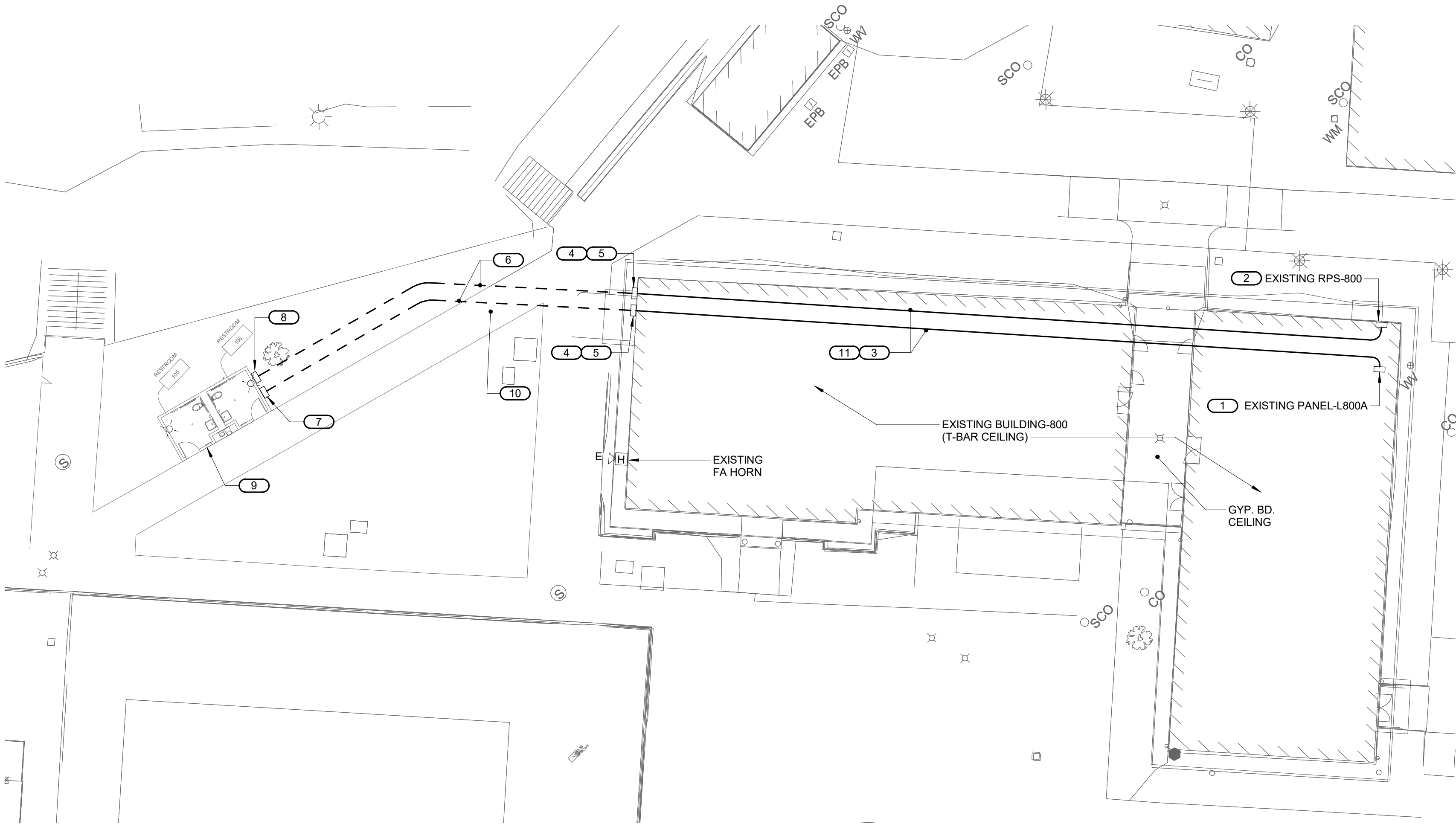
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Title OVERALL SITE  
PLAN

Sheet No. ES-01





**1 PARTIAL SITE PLAN - RESTROOM BUILDING**  
1/16" = 1'-0"



## KEY NOTES

- 1 PROVIDE MATCHING 50A/3P BREAKER AT CIRCUIT #38.40.42. EXISTING PANEL MANUFACTURED BY EATON. CAP SPARE CONDUIT ABOVE PANEL AT CEILING.
- 2 TERMINATE FIRE ALARM WIRING TO EXISTIN RPS-800. CAP SPARE CONDUIT AT CEILING.
- 3 RUN CONDUIT IN CEILING SPACE.  
1. 1 1/4"C-4#6 & 1#6 GND AND 1"C.O. SPARE (POWER).  
2. 1"C- WITH DD.N AND 1"C.O. SPARE (FIRE ALARM).
- 4 PROVIDE 12"x12"x4" NEMA-3R PULLBOX IN WALL ABOVE T-BAR CEILING LINE. SEAL CONDUIT PENETRATION THRU WALL.
- 5 PROVIDE 12 GA. SHEET METAL COVER OVER CONDUITS. PROVIDE P1000 UNISTRUT FRAME EVERY 4'-0" O.C. TO MOUNT METAL COVER. PAINT COVER AND UNISTRUT TO MATCH WALL FINISH.
- 6 CONDUIT RUN UNDERGROUND.  
1. 1 1/4"C-4#6 & 1#6 GND AND 1"C.O. SPARE (POWER).  
2. 1"C- WITH DD.N AND 1"C.O. SPARE (FIRE ALARM).
- 7 PROVIDE NEMA-3R WALL MOUNTED PANEL-PRR. CAP SPARE CONDUIT BELOW PANEL. RUN 3/4"C-1#6 GND TO 3/4"ex10" STEEL GROUND ROD.
- 8 PROVIDE NEMA-3R 12"x12"x4" PULLBOX FOR FIRE ALARM. CAP SPARE CONDUIT BELOW PULLBOX.
- 9 REFER TO SHEET EP-01 FOR WORK.
- 10 REMOVE CONCRETE WALKWAY BETWEEN TWO CONTROL JOINTS TO RUN NEW CONDUITS AND PROVIDE NEW CONCRETE WALKWAY.
- 11 FIRE SEAL CONDUIT PENETRATION THRU FIRE RATED WALL. CUT/PATCH/REPAIR/REPLACE CEILING AS REQUIRED.

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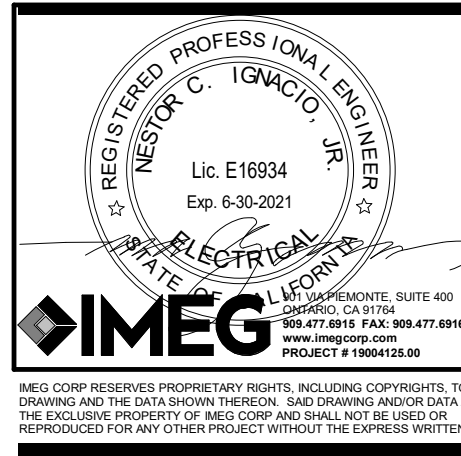
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HARLEY ELLIS  
DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

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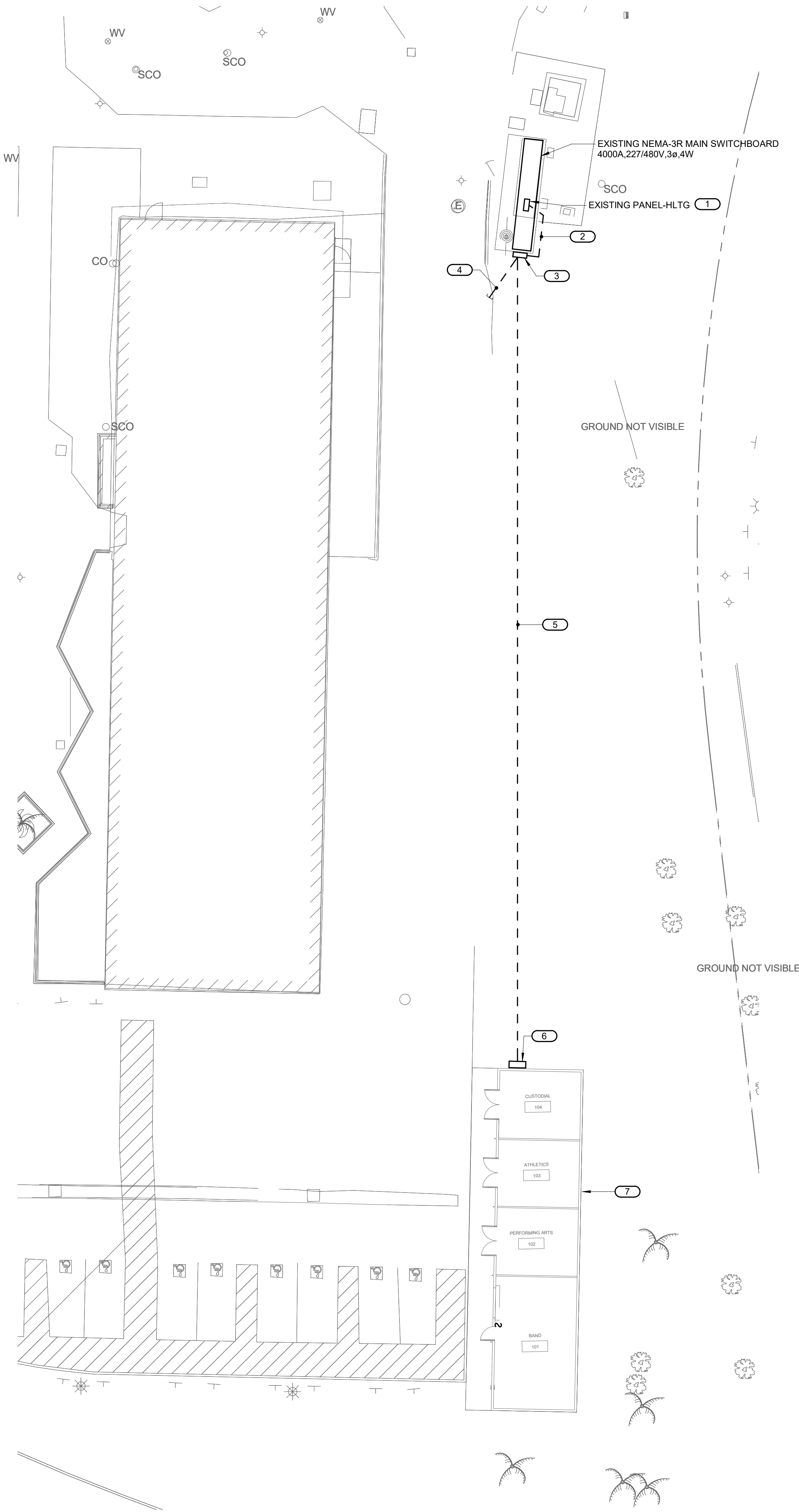
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Title **PARTIAL -  
ENLARGED SITE  
PLAN**

Sheet No. **ES-02**





1 PARTIAL SITE PLAN - STORAGE BUILDING  
1/16" = 1'-0"

### KEY NOTES

- 1 PROVIDE 40A/3P MATCHING BREAKER AT CIRCUIT #38,40,42.
- 2 RUN 1 1/4"C-3#6 & 1#10 GND AND 1 1/4"C.O. SPARE EXPOSED ON EXISTING SWITCHBOARD.
- 3 PROVIDE 12"x12"x4" NEMA-3R PULLBOX ON SIDE OF SWITCHBOARD.
- 4 CAP 1 1/4"C.O. FOR FUTURE.
- 5 1 1/4"C-3#6 & 1#10 GND CONDUIT RUN UNDERGROUND.
- 6 PROVIDE NEMA-3R 15KVA 480V-120/208V,3# 4W MINI-POWER CENTER-MPS ON WALL. RUN 3/4"C-1#6 GND TO 3/4"x10'L STEEL GROUND ROD (SQUARE D #4#2B-1ST2F5GK OR EQUAL).
- 7 REFER TO EP-02 FOR WORK.

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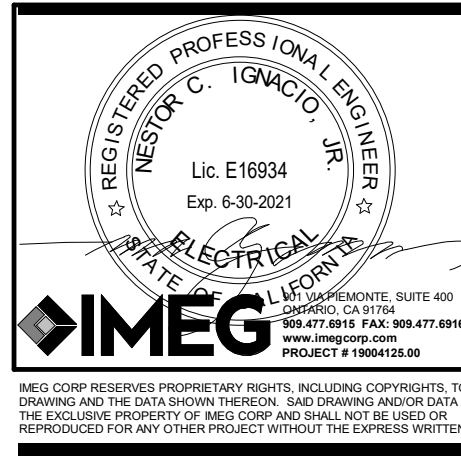
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DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
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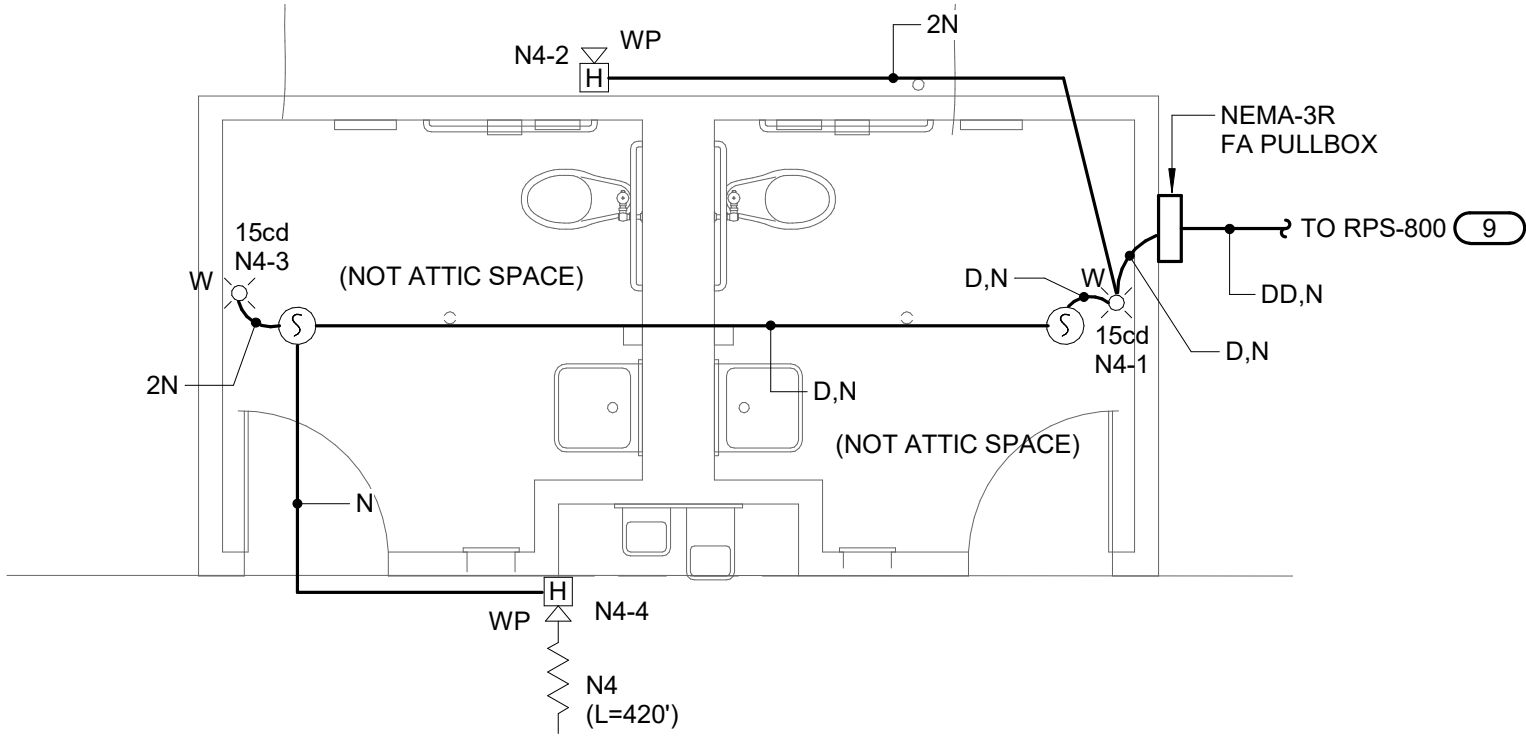
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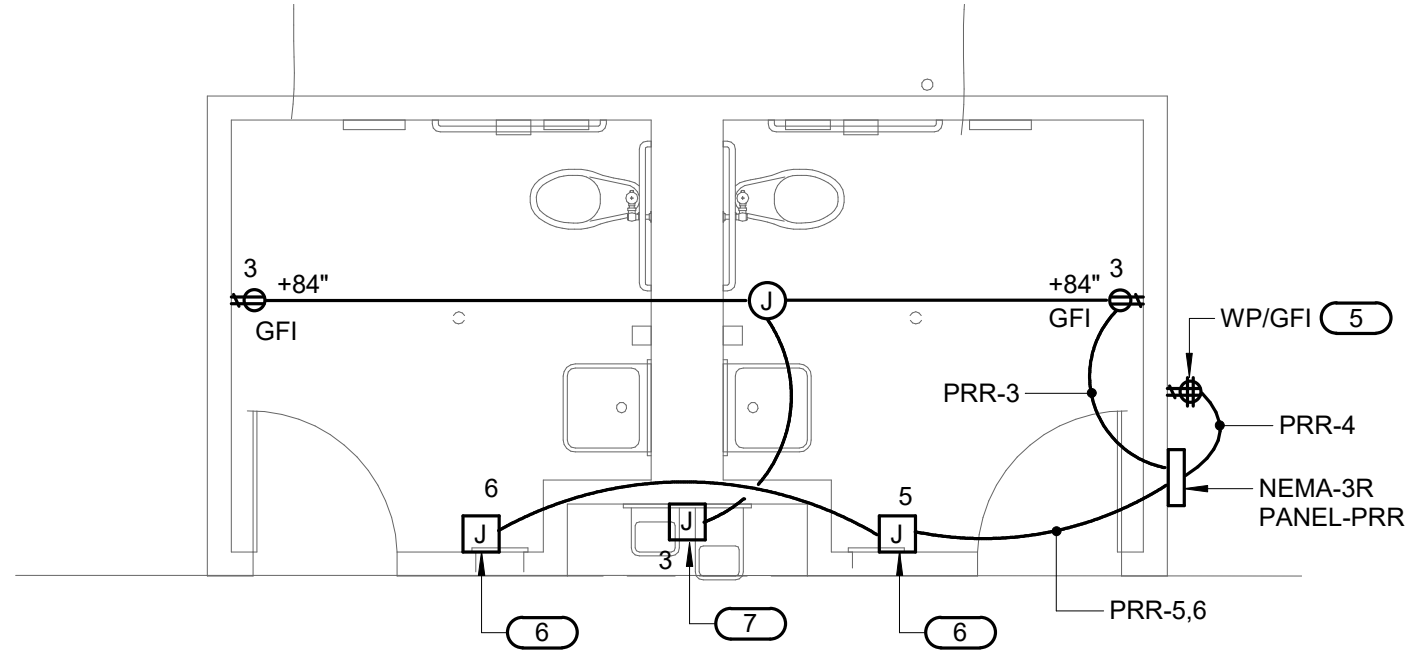
Title PARTIAL -  
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PLAN

Sheet No. ES-03

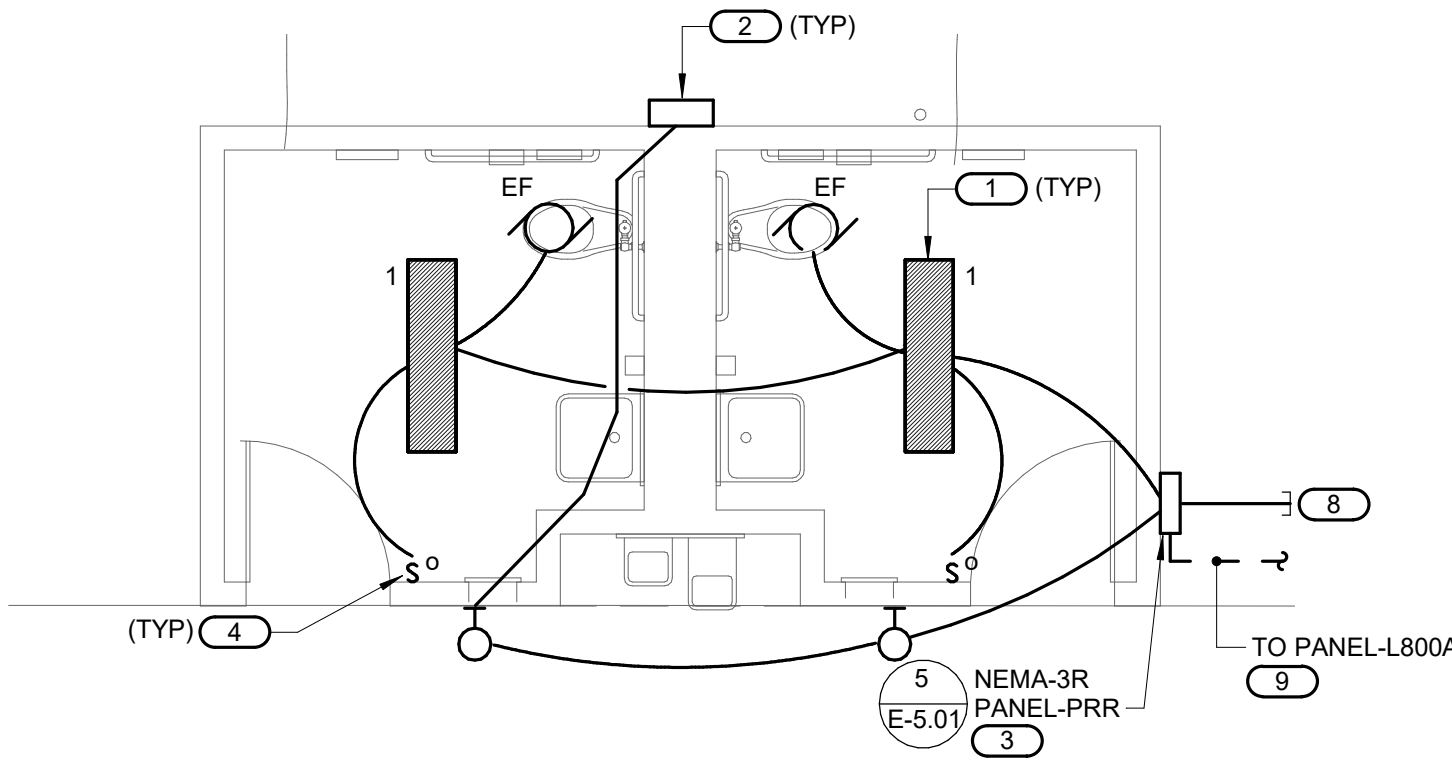




3 ENLARGED - FIRE ALARM PLAN RESTROOM  
1/4" = 1'-0"



2 ENLARGED - POWER PLAN RESTROOM  
1/4" = 1'-0"

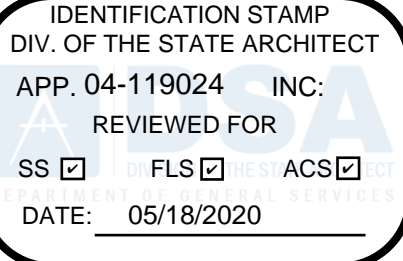


1 ENLARGED - LIGHTING PLAN RESTROOM  
1/4" = 1'-0"



## KEY NOTES

- 1 SURFACE MOUNTED VANDEL RESISTANT 4' LED FIXTURE WITH BUILT-IN OCCUPANCY SENSOR. FAILSAFE #HVSLE-4-LD4-1-LQ-40-UNV-0-EDC-1-OS1-VRSO. (INPUT WATTS= 23.6W).
- 2 WALL MOUNTED LED FIXTURE AT +9'-0". RAYON #T617LED-E-17-JN112-40-BLACK (INPUT WATTS= 17W).
- 3 PROVIDE TIMECLOCK IN TOP CONTROL COMPARTMENT OF PANEL. INTERMATIC # ET2705C OR EQUAL.
- 4 WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR GREENGATE #ONW-D-1001-MV-LV.
- 5 WP/GFI RECEPTACLE WITH STAINLESS STEEL LOCKABLE COVER.
- 6 JUNCTION BOX AT +42" FOR HAND DRYER.
- 7 WP JUNCTION BOX FOR POWER TO DRINKING FOUNTAIN.
- 8 STUB-OUT AND CAP (3) 1"CO FROM PANEL FOR FURTURE.
- 9 REFER TO SITE PLAN ES-02 FOR CONTINUATION.



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DEVEREAUX

225 Broadway  
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92101 | USA

(tel) (619) 398.3800  
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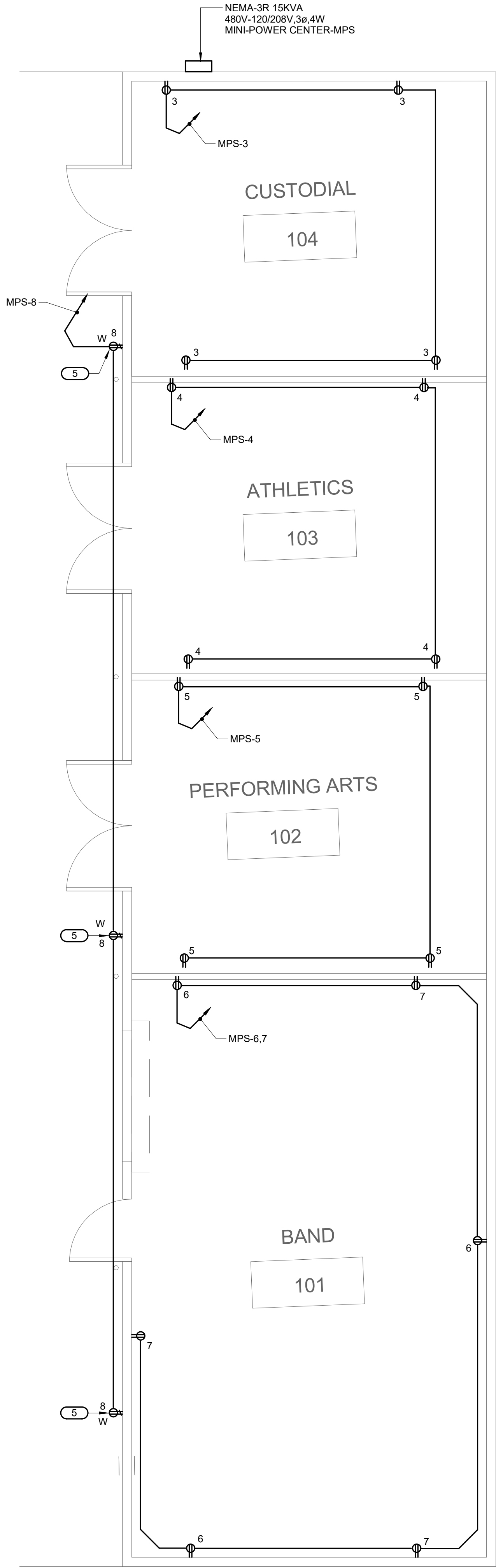
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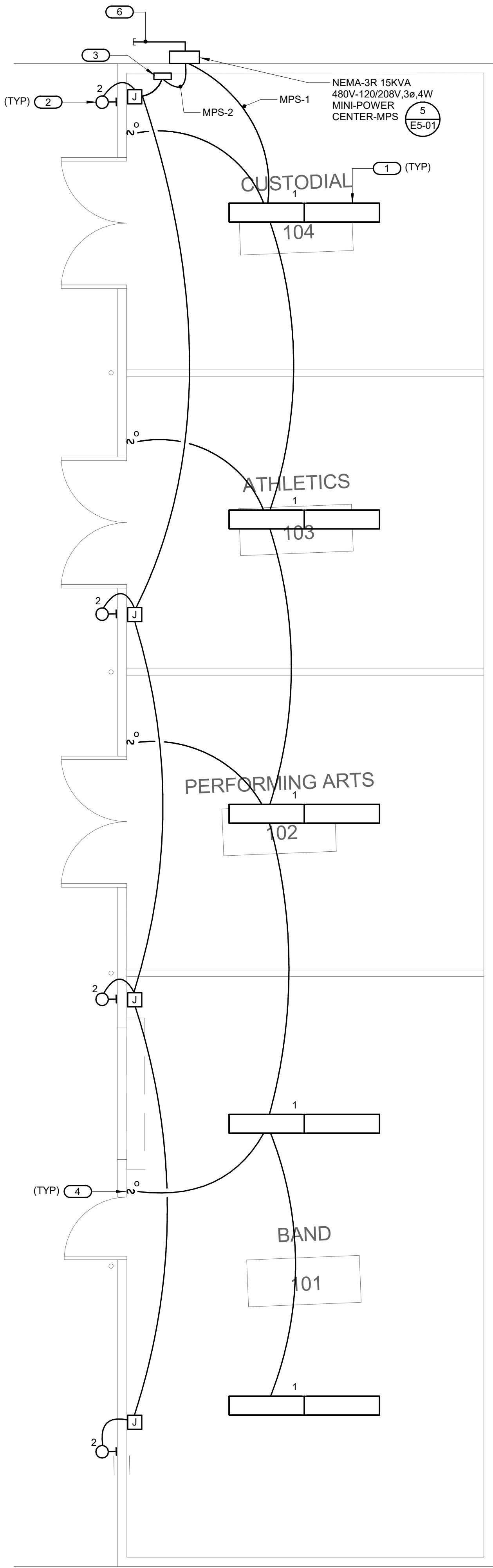
Title ENLARGED  
RESTROOM  
PLANS

Sheet No. EP-01





2 ENLARGED - POWER STORAGE BUILDING  
1/4" = 1'-0"



1 ENLARGED - LIGHTING STORAGE BUILDING  
1/4" = 1'-0"



## KEY NOTES

- 1 SURFACE MOUNTED 4' LONG LED LIGHT FIXTURE. METALUX #4WNLED-LD4-40SL-F-UNV-L840-CD1-U OR EQUAL (INPUT WATTS= 32.2W).
- 2 WALL MOUNTED LED FIXTURE AT +8'-0". RAYON #T617LED-E-17-JN112-4D-BLACK (INPUT WATTS= 17W).
- 3 WALL MOUNTED ATTRONOMATIC TIME CLOCK. INTERMATIC # ET2705C.
- 4 WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR . GREENGATE # ONW-D-1001-MV-LV.
- 5 WPI/GFI RECEPTACLE WITH STAINLESS STEEL LOCKABLE COVER.
- 6 STUB-OUT AND CAP (4) 1"CO (FOR FUTURE).

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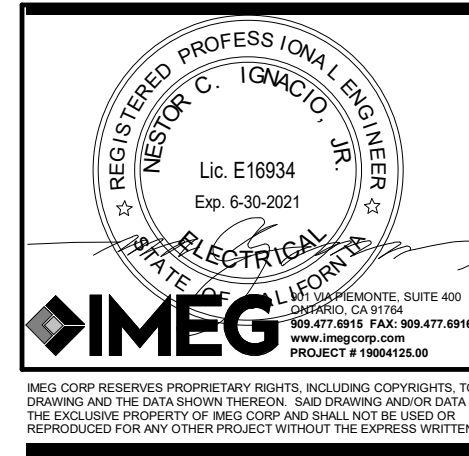
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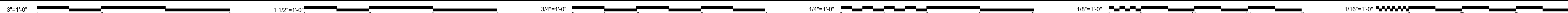
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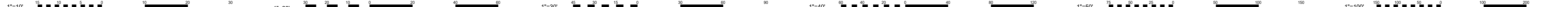
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Sheet No. E5-01





## FIRE ALARM WIRE DESIGNATION CHART

SYMBOL	DESCRIPTION	NUMBER OF CONDUCTORS	SIZE	TYPE
N	NOTIFICATION APPLIANCE CIRCUIT	TWO	#12	THHN/THWN
NN	NOTIFICATION APPLIANCE CIRCUIT BELOW GRADE	TWO	#10	THHN/THWN
D	SIGNALING LINE CIRCUIT (SLC) - ABOVE GRADE	TWISTED PAIR	#14	WEST PENN #AQ225
DD	SIGNALING LINE CIRCUIT (SLC) - BELOW GRADE	TWISTED PAIR	#14	WEST PENN #D991
P	24 POWER	TWO	2#12	THHN/THWN

NOTE: 1. SYMBOL INDICATES QTY & I.D. OF CIRCUIT. I.E. 2N2, INDICATES (2) 2#12 CI CABLE FOR N CIRCUIT 2.  
2. ALL CONDUIT USED FOR FIRE ALARM SHALL BE 3/4" MINIMUM ABOVE GRADE AND 1" MINIMUM  
BELOW GRADE UNLESS NOTED OTHERWISE.  
3. ALL WIRING USED IN UNDERGROUND CONDUITS SHALL BE LISTED FOR WET AREA APPLICATION, IN  
ACCORDANCE WITH CEC 760.

FIRE ALARM SYSTEM IS ADDRESSABLE. NAC DEVICES ARE 2-WIRE DEVICES. ALL NAC CIRCUITS ARE SYNCHRONIZED.

THE CONTRACTOR SHALL PROVIDE FIRE WATCH DURING DURATION OF FIRE ALARM SYSTEM SHUT-DOWN.

## SEQUENCE OF OPERATION

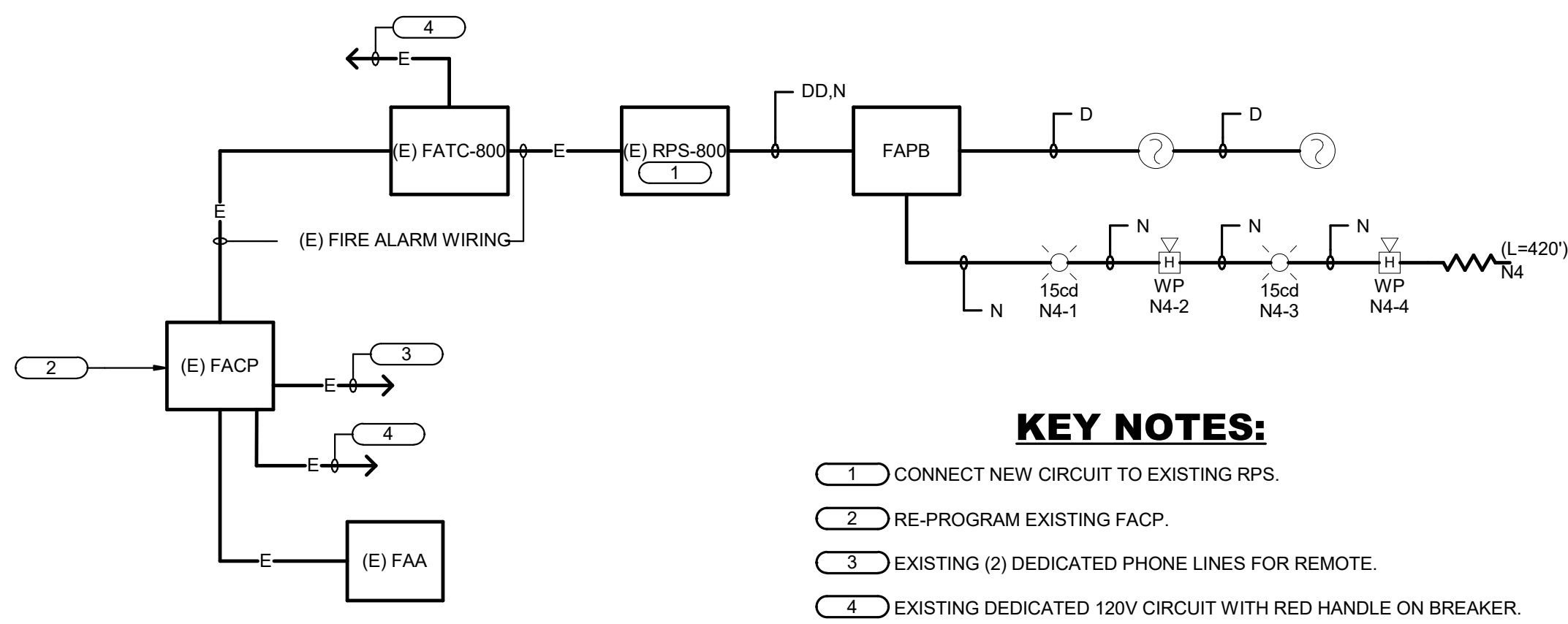
	BUILDING POWER FAILURE	AREA SMOKE DETECTOR	ATTIC HEAT DETECTOR	OPEN SHORT OR GROUND	MANUAL PULL STATION
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM, SUPERVISION & TROUBLE)	YES	YES	YES	YES	YES
SOUND CONTROL PANEL TROUBLE BUZZER	YES	ON WIRING FAULT	ON WIRING FAULT	YES	ON WIRING FAULT
ACTIVATE EMERGENCY VOICE EVACUATION SPEAKERS (UNTIL SILENCE)	NO	YES	YES	NO	YES
ACTIVATE VISUAL ALARM SIGNALS (UNTIL RESET)	NO	YES	YES	NO	YES
REPORT TO CENTRAL STATION	YES	YES	YES	NO	YES
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL	YES	YES	YES	YES	YES
CLOSE FIRE SMOKE DAMPER	NO	YES	NO	NO	YES

**FIRE ALARM NOTES (CONTINUED)**

- THE DISTRICT SHALL RETAIN RECORD DRAWINGS ON THE PREMISES FOR A MINIMUM OF 3 YEARS, IN A DEDICATED FIRE ALARM RECORD DOCUMENT CABINET IN ACCORDANCE WITH NFPA 72, 7.7.2.
- EVERY NEW FIRE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
  - THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED, "SYSTEM RECORD DOCUMENTS".
  - ALL RECORDED AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
  - CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
  - WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.
- SYSTEM DOCUMENTS AS APPLICABLE:
- RECORD DRAWINGS/AS-BUILTS
  - EQUIPMENT CUT SHEETS & CA SFM LISTINGS
  - ALTERNATIVE MEANS AND METHODS
  - PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
  - SYSTEM RECORDED OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
  - EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
  - EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
  - SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2.2)

## FIRE ALARM NOTES

1. THIS IS A COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL PER 2016 CFC 907.2.2 AND 2013 CBC 907.2.3.
2. THE NEW FIRE ALARM SYSTEM INSTALLATION IS CONFIGURED TO A FULLY AUTOMATIC SYSTEM, AS IS THE EXISTING INSTALLATION.
3. THE FIRE ALARM SYSTEM INDICATED ON THESE DRAWINGS IS APPROVED BY CALIFORNIA STATE FIRE MARSHAL AND SHALL BE INSTALLED AS DESCRIBED ON THESE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS . ANY CHANGES TO THESE PLANS, I.E. DESIGN OR RELIANCE ON ANY OTHER CODES/DEVICES SHALL BE RESUBMITTED TO THE STATE FIRE MARSHAL FOR APPROVAL.  
INSTALLATION OF FIRE ALARM SYSTEM MAY START AFTER TIG RECEIVES THESE APPROVED DRAWINGS. A.O.R. SHALL STAMP AND SIGN ALL DRAWINGS.
4. ALL WIRING AND INITIATING DEVICES SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (F/A PANEL) TO SUPERVISE ALL CIRCUITS AND INITIATING DEVICES.
5. WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND FOR OUT.
6. ALL WIRING TO BE IN CONDUIT.
7. ALL TERMINATIONS IN JUNCTION BOXES, PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS. DO NOT USE WIRE NUTS FOR SPlicing. DO NOT USE ANY OTHER TYPE OF CONNECTION.
8. ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUM.  
CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS BUT SHALL NOT BE SMALLER THAN 3/4 INCH.
9. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
10. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY.  
CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
11. CONDUIT AND JUNCTION BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
12. THE SYSTEM SHALL CONFORM TO TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
13. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF, AND IN A MANNER ACCEPTABLE TO, THE ENFORCING AGENCY.
14. THE CONTRACTOR SHALL REPROGRAM AND CERTIFY ADDRESSABLE FIRE ALARM CONTROL PANEL TO ACCOMMODATE ADDITIONAL DEVICES.
15. FIRE ALARM SYSTEM SHALL BE INSTALLED BY FACTORY AUTHORIZED REPRESENTATIVE.
16. CONDUCTOR LENGTHS AND DEVICE QUANTITIES ARE SHOWN SOLELY FOR CALCULATION PURPOSES ONLY, AND SHALL NOT BE USED FOR BID TAKE-OFF.
17. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY DSAs. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE AUTHORITY HAVING JURISDICTION.
18. PENETRATIONS OF PIPES, CONDUITS, ETC. IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TEST ASSEMBLY ACCEPTABLE TO DSAs.
19. ALL FIRE ALARM AND COMMUNICATIONS WIRES AND CABLES SHALL BE ONE CONTINUOUS LENGTH FROM A BUILDING TERMINAL CABINET TO ANOTHER BUILDING TERMINAL CABINET OR JUNCTION BOX. ABSOLUTELY NO SUBGRADE SPLICES WILL BE PERMITTED! PROVIDE TERMINAL BLOCKS WITH MOUNTING IN TERMINAL CABINETS ONLY AS REQUIRED.
20. EVERY ALARM SIGNALING DEVICE INSTALLED SHALL BE OF THE SAME BASIC TYPE (BELLS, HORNS, CHIMES, SPEAKERS, ETC.) AS ALL OTHER SIGNALING DEVICES IN THE FACILITY. (EXCEPT IN REMOTE LOCATIONS, CONDUCTORS USED FOR DIRECT BURIAL APPLICATIONS SHALL BE OF A TYPE LISTED FOR SUCH USE (PER 2016 CEC ARTICLE 310).
21. THE FIRE ALARM DEVICE SUPPLIER SHALL FURNISH ALL CONDUIT MOUNT ENCLOSURES FOR PULLSTATIONS AND SKIRTS FOR ALL VISUAL AND AUDIO VISUAL DEVICES TO CONGEAL 45 BACK BOXES.
22. AFTER THE SYSTEM IS COMPLETED, ALL ADDRESSABLE DEVICES SHALL BE PROGRAMMED TO THE FACILITY ADDRESS OF THE ACTUAL BUILDING ROOM NUMBER. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE SCHOOL DISTRICT TO OBTAIN CURRENT ROOM NUMBER INFORMATION.
23. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING & LOCKING DEVICE AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL".
24. PROVIDE CALIFORNIA TEMPORAL-THREE TONE DISTINCTIVE FIRE ALARM SOUND. (2016 CFC 907.2.1.3 & 2016 NFA 72 SEC. 18.4.2.1.)
25. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 DBA ABOVE THE NOISE AMBIENT. (2016 NFA 72 SEC. 18.4.2.1.) OCCUPABLE AREAS (2016 NFA 72 SEC. 18.4.3.1) (i.e. CLASSROOM AVERAGE AMBIENT ROOM NOISE IS45DBA PLUS 15DBA EXCEED = 60DBA MINIMUM ALARM TONE REQUIRED)
26. STROBES SHALL FLASH AT A RATE NOT EXCEEDING TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH EVERY SECOND.  
(2016 NFA 72 SEC. 18.5.3.1)
27. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE PRESENT FOR THE FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
28. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATION ACCEPTANCE TEST. (2016 NFA 72 SEC. 7.5.6 & 2016 CFC 901.6.2)
29. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND SIGNAL STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
30. THE INSTALLING CONTRACTOR SHALL PROVIDE A STATEMENT OF COMPLIANCE ALONG WITH THE REQUEST FOR ACCEPTANCE TESTING PER 2016 NFA 72.
31. OCCUPANCY OF THE BUILDINGS IS PROHIBITED UNTIL THE FIRE ALARM SYSTEM IS COMPLETED, TESTED, AND APPROVED PER 2016 NFA 72.
32. SMOKE DETECTORS SHALL BE TESTED PER THE METHOD SHOWN IN 2016 CFC.
33. REAKEANCE TESTING SHALL BE PERFORMED AS REQUIRED BY 2016 NFA 72.
34. ALL BACKUP BATTERIES FOR FIRE ALARM SYSTEM EQUIPMENT SHALL BE VISUALLY CHECKED FOR DATE OF INSTALLATION, ALL BATTERIES OVER 5 YEARS OLD SHALL BE REPLACED WITHIN THE TERM OF THE CONTRACT.
35. FIRE ALARM SYSTEMS SHALL BE SUPERVISED BY AN APPROVED UL LISTED CENTRAL ST. REMOTE STATION (JUXF) MONITORING COMPANY (JUSF) (2016 CFC 907.2.3.3, 907.6.3.1)
36. A SINGLE FAULT ON A PATHWAY CONNECTED TO THE ADDRESSABLE DEVICES SHALL NOT CAUSE THE LOSS OF MORE THAN 50 ADDRESSABLE DEVICES (2016 NFA 72 SECTION 23)













### KEY NOTES:

- 1 CONNECT NEW CIRCUIT TO EXISTING RPS.
- 2 RE-PROGRAM EXISTING FACP.
- 3 EXISTING (2) DEDICATED PHONE LINES FOR REMOTE.
- 4 EXISTING DEDICATED 120V CIRCUIT WITH RED HANDLE ON BREAKER

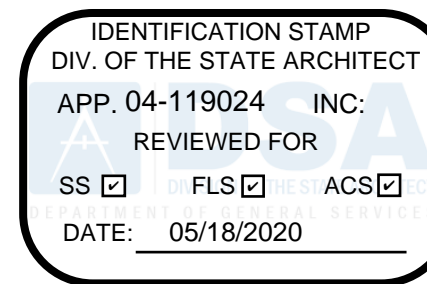
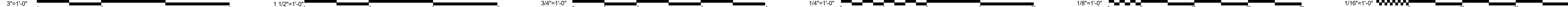
### BATTERY CALCULATION FOR FIRE ALARM CONTROL PANEL

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## FIRE ALARM SYMBOL LIST

SYMBOL	MFG.	PART NO.	DESCRIPTION	REMARKS	CSFM LISTING NO.
		WESTPENN	FIRE ALARM CONDUIT RUN, 3/4" MIN. UNLESS INDICATED OTHERWISE IN THE DWGS. REFER TO DWGS. & SPECS. REQUIRED WIRING.		
			END OF LINE RESISTOR "EOLR"		
	GAMEWELL FCI	E3 SERIES	EXISTING FIRE ALARM CONTROL PANEL WITH DIGITAL ALARM COMMUNICATOR TRANSMITTER, AND 26 AMP BATTERY WITH CHARGER.		7165-1703-0125
	GAMEWELL FCI	N	EXISTING FIRE ALARM REMOTE ANNUNCIATOR.		7165-1703-0176
	GAMEWELL FCI	ASD-PLP/F B210-4P	SMOKE DETECTOR - PHOTOELECTRIC ADDRESSABLE BASE		7272-1703-0121 7500-1653-0109
	GAMEWELL FCI	AMA-2F AND 4F	MONITOR MODULE		7300-1703-0102
	WP SYSTEM SENSOR	HKPSA-WBB	WEATHERPROOF HORN WITH HORN RATING AS SHOWN	MOUNT AT +90° A.F.F.	7135-1653-0189
	150d W SYSTEM SENSOR	GR	WALL MOUNTED STROBE WITH CANDELA RATING AS SHOWN		7125-1653-0186
	GAMEWELL FCI	SPS-9	(E) REMOTE POWER SUPPLY		7300-1703-0167
	GAMEWELL FCI	ATD-LP/F B210-4P	HEAT DETECTOR ADDRESSABLE BASE		7272-1703-0118 7500-1653-0109

### STROBE SIGNAL CIRCUIT SCHEDULE

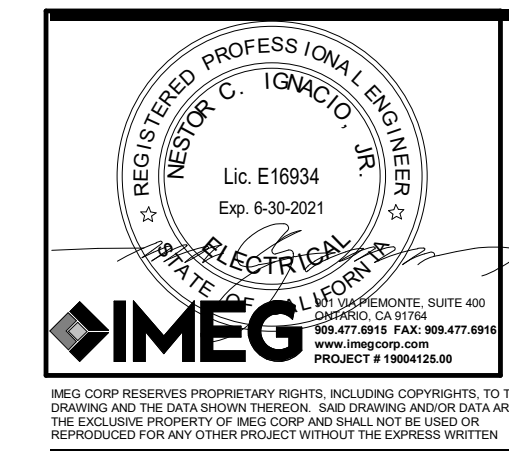
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Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
harleyellisdevereaux.com

Planning  
Architecture  
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Landscape Architecture  
Construction Services

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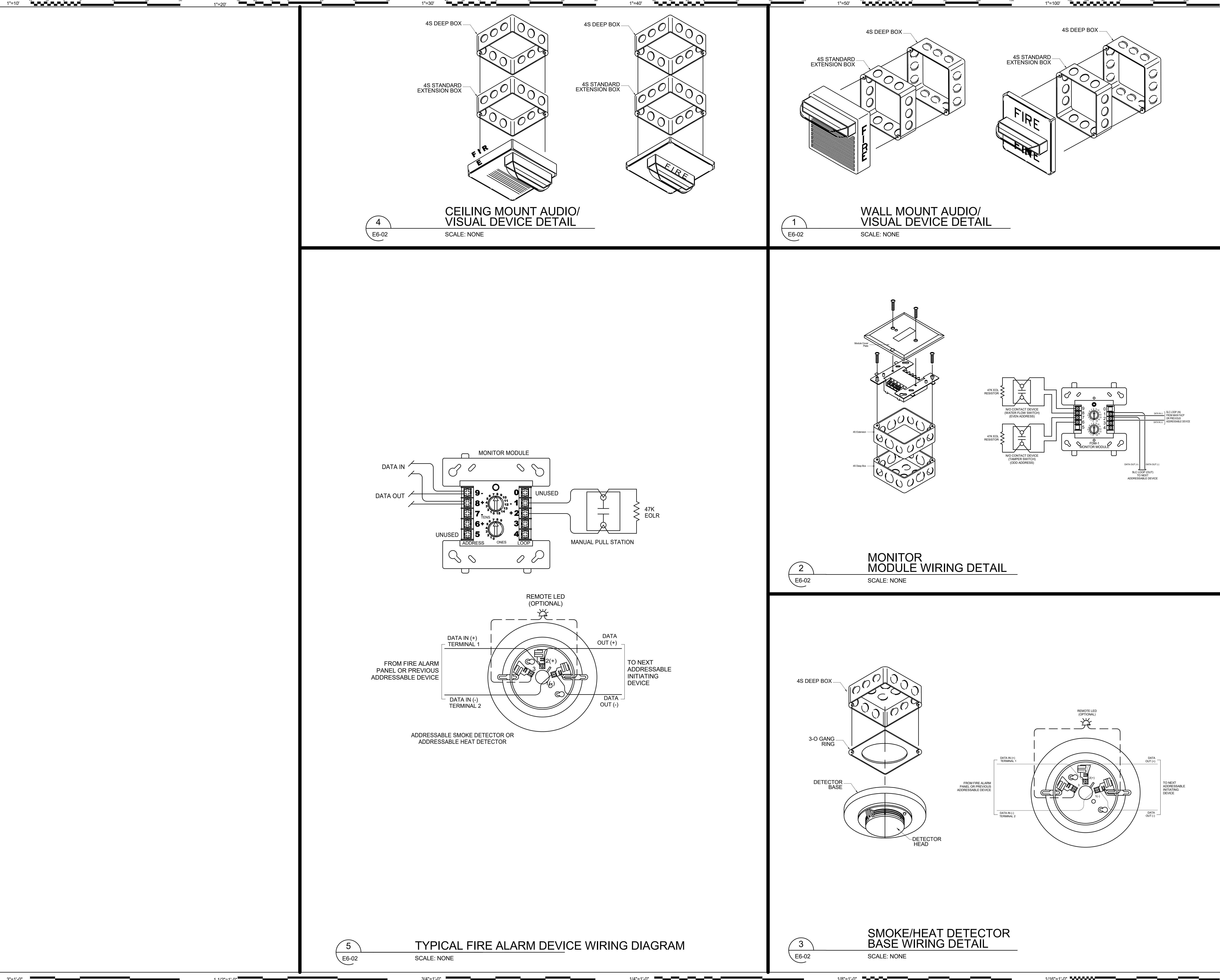
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**SCHEDULES,**  
**CALCS & NOTES**

Sheet No. E6-01



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IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 04-119024 INC.  
REVIEWED FOR  
SS ☒ FLS ☒ ACS ☒  
DATE: 05/18/2020



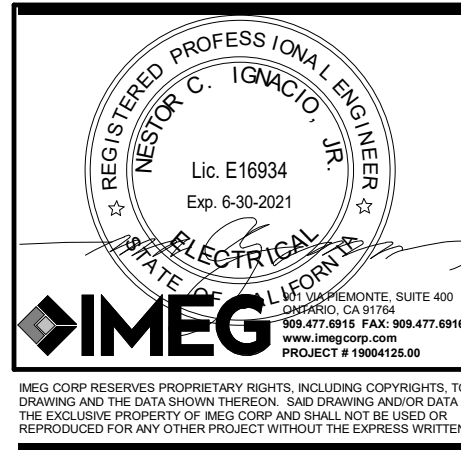
Grossmont Union  
High School District

Helix Charter HS  
Restroom & Storage  
Bldgs

La Mesa, CA

Date  
10/11/2019

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SD



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DEVEREAUX

225 Broadway  
Suite 1300  
San Diego, California  
92101 | USA

(tel) (619) 398.3800  
(fax) (619) 398.3855  
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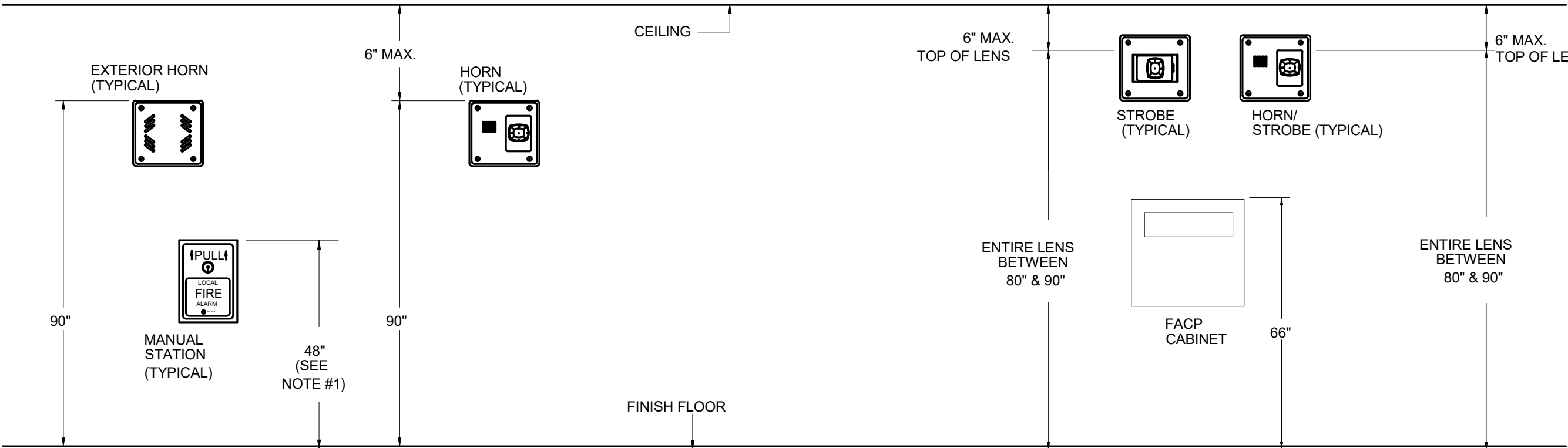
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Title FIRE ALARM  
DETAILS

Sheet No. E6-02

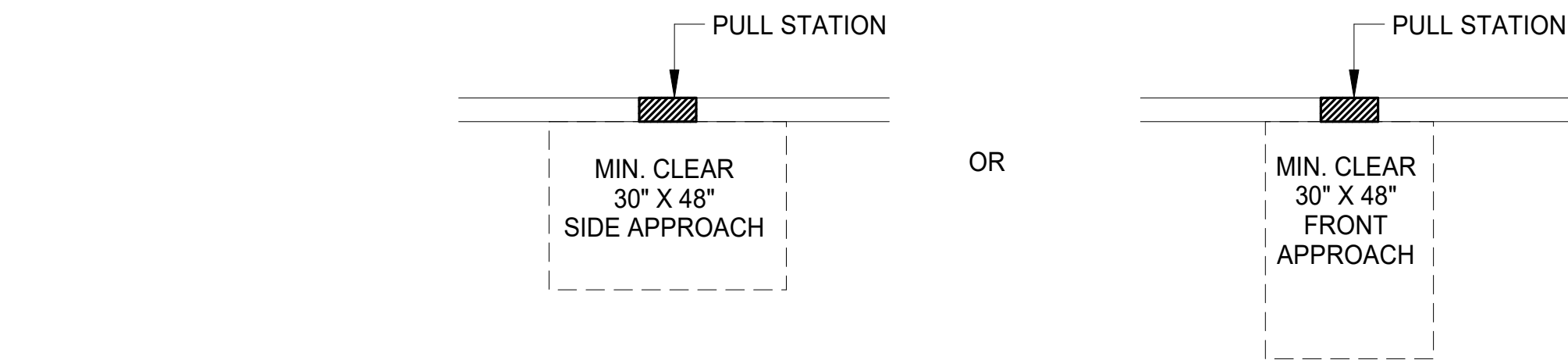




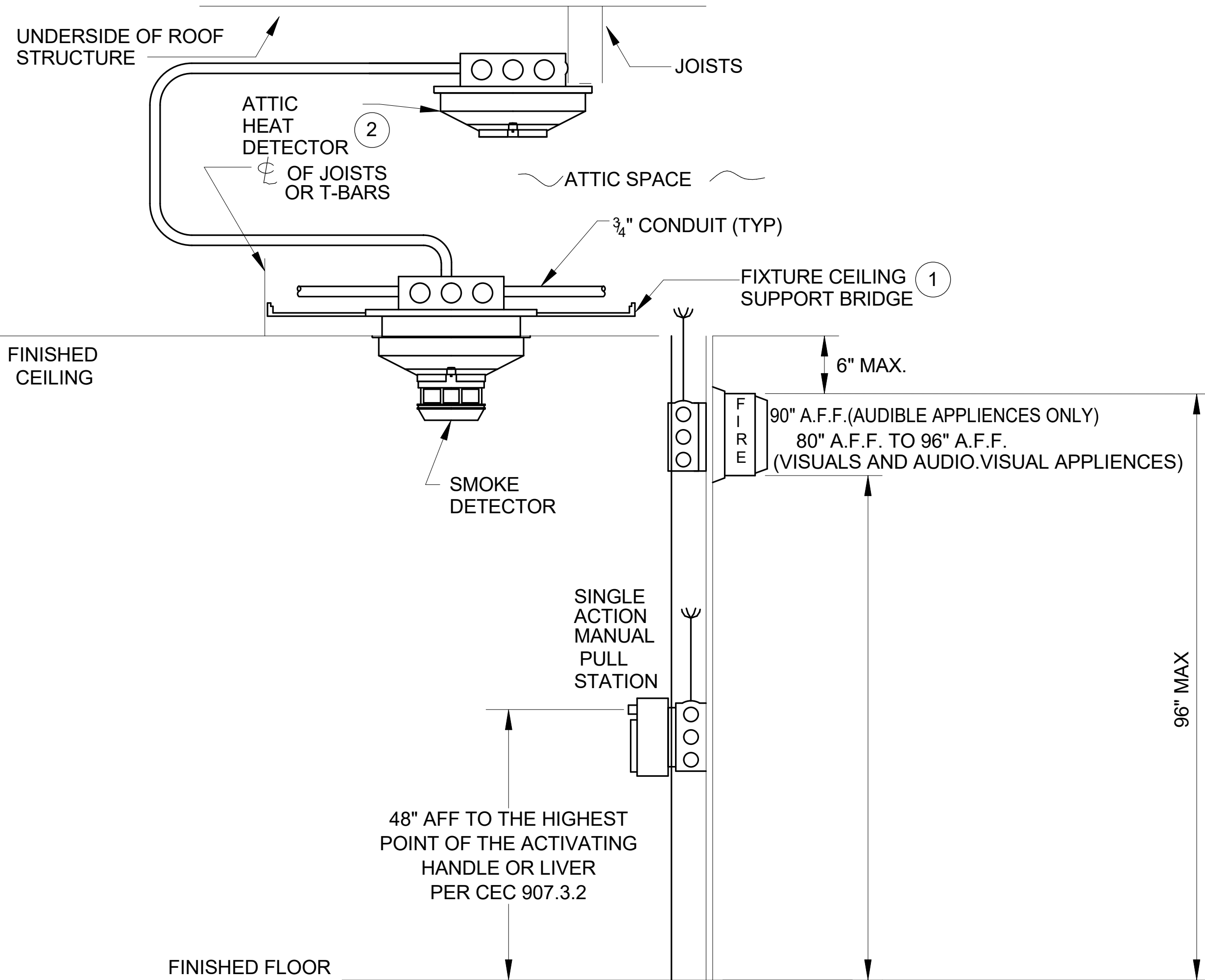
NOTES:

1. MANUAL STATION SHALL BE INSTALLED AT 48" AFF TO THE HIGHEST POINT OF THE ACTIVATING HANDLE OR LEVER PER CEC 907.3.2.
2. EXTERIOR HORN SHALL BE WALL MOUNTED A MINIMUM OF 90" ABOVE THE FLOOR. MEASUREMENTS ARE TO BE TAKEN FROM THE HIGHEST PORTION OF THE HORN.
3. FACP CABINET SHALL BE LOCATED 66" ABOVE THE SURFACE OF THE FINISHED FLOOR.
4. COORDINATE ALL WALL AND CEILING MOUNTED DEVICES LOCATION WITH ARCHITECT/CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO AVOID ANY CONFLICT WITH OTHER EQUIPMENTS PRIOR TO INSTALLATION. ADJUST DEVICE LOCATION PER FIELD CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE TO RELOCATE DEVICES AND RELATED INSTALLATION INCLUDING ALL COST ASSOCIATED WITH.

3 TYP FIRE ALARM DETAIL  
E6-03 SCALE: NONE



1 CLEAR SPACE REQUIREMENTS AT FIRE ALARM PULL STATIONS  
E6-03 SCALE: NONE



NOTES:

- 1 DEPENDING ON CEILING TYPE AND CONSTRUCTION.
- 2 ADJACENT HEAT DETECTOR LOCATION AND REMOVE INSULATION AROUND HEAT DETECTOR FOR CLEARANCE.

2 TYP FIRE ALARM DETAIL  
E6-03 SCALE: NONE

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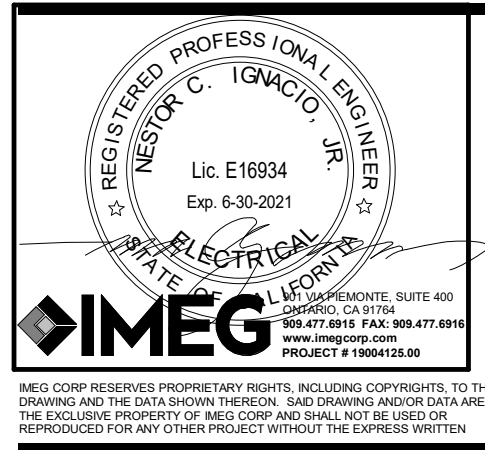


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HED  
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DEVEREAUX

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92101 | USA

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(fax) (619) 398.3855  
harleyellisdevereaux.com

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Title FIRE ALARM  
DETAILS

Sheet No. E6-03