

Exhibit NO. 1

# City of Carson Community Center Folding Wall Panels Project No. 1632 (City Approval No. BL2108160002)

SHEET INDEX (39 SHEETS)

ARCHITECTURE (7 SHEETS)	
G001	COVER SHEET
D101	OVERALL DEMOLITION PLAN
D102	PARTIAL DEMOLITION PLAN
A101	OVERALL FLOOR PLAN
A102	PARTIAL FLOOR PLAN
A103	ENLARGED DEMOLITION & FLOOR PLANS AND SECTIONS
A104	DETAILS
STRUCTURAL (7 SHEETS)	
S001	GENERAL NOTES
S002	GENERAL MATERIAL NOTES
S201	ROOF FRAMING PLAN
S401	ENLARGED PLANS
S501	STRUCTURAL DETAILS
S502	TYPICAL STRUCTURAL STEEL DETAILS
S503	TYPICAL COLD-FORMED STEEL DETAILS
ELECTRICAL (19 SHEETS)	
E100	LIGHTING DEMO PLAN
E101	ELECTRICAL POWER & DATA FLOOR PLAN
E201	LIGHTING PLAN
E202	THEATRICAL LIGHTING PLAN
E203	ENLARGED CONTROL BOOTH & ELECTRICAL ROOM PLAN
E501	LIGHTING FIXTURE & STAGE LIGHTING CONTROL NOTES
E502	LIGHTING FIXTURE SCHEDULE
E503	STAGE LIGHTING CONTROLS SCHEDULE
E601	STAGE PLUGBOX & DATABOX DETAILS
E602	STAGE LIGHTING RISER DIAGRAM
AV0.0	AV SYMBOLS-NOTES AND LEGENDS
AV0.1	AV SYSTEM EQUIPMENT LIST
AV1.1	AV LAYOUT PLAN VIEW
AV3.1	AV REFLECTED CEILING PLAN AND ELEVATION
AV4.1	AV ELEVATIONS
AV6.1	AV SYSTEM CONDUIT RISER DIAGRAM
AV7.1	AV SYSTEM ONE LINE DIAGRAM
AV8.1	AV SYSTEM DETAILS
AV8.2	AV SYSTEM DETAILS - 2

ARCHITECT



1775 HANCOCK ST, SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX



CONSULTANT

City of Carson  
Community Center

City of Carson  
Community Center  
Folding Wall Panels

PROJECT NO.: 21011  
R.S. A.P.  
FILE NAME  
DATE: 06-01-2021 DRAWN  
CHECKED  
REVISIONS R1-07-27-2021 SHEET NO.  
G001 OF SHEETS

ABBREVIATIONS

∠	ANGLE	HORIZ.	HORIZONTAL
<	CENTER LINE	HR.	HOUR
~	DIAMETER	HR.	HVAC.
>	PLATE OR PROPERTY LINE	IN.	INCH
&	AND	INCL.	INSULATION
@	AT OR ABOUT	INT.	INTERIOR
~	FOOT		
-	INCH OR REPEAT	JST.	JOIST
#	POUND OR NUMBER		
A.B.	ANCHOR BOLT	LAV.	LAVATORY
A/C	AIR CONDITIONING	LT.	LIGHT
AC.	ACOUSTICAL		
ADJ.	ADJUSTABLE/ADJACENT	M.	MEN
A.F.F.	ABOVE FINISH FLOOR	MATL.	MATERIAL
ALUM.	ALUMINUM	MAX.	MAXIMUM
AC.T.	ACOUSTICAL TILE	MTL.	METAL
BD.	BOARD	MFR.	MANUFACTURER
Bldr.	BUILDING	MIN.	MINIMUM/MINUTE
BA.	BEAM	MISC.	MISCELLANEOUS
BOT.	BOTTOM		
C.B.C.	CALIFORNIA BUILDING CODE	(N)	NEW
C.J.	CLG. JOIST OR CONTROL JT.	N.J.C.	NOT IN CONTRACT
CLG.	CEILING	N.T.S.	NOT TO SCALE
CLR.	CLEAR	O.A.R.	OWNER AUTHORIZED REPRESENTATIVE
COL.	COLUMN	O.C.	ON CENTER
CONC.	CONCRETE	OFF.	OFFICE
CONN.	CONNECTION	OPNG.	OPENING
CONSTR.	CONSTRUCTION		
CONT.	CONTINUOUS	PLAS.	PLASTER
CORR.	CORRIDOR	PLUMB.	PLUMBING
C.T.	CERAMIC TILE	FLWD.	PLYWOOD
DEPT.	DEPARTMENT	R.	RISER/RADIUS
D.F.	DRINKING FOUNTAIN	R.A.	RETURN AIR
DM.	DIMENSION	R.C.P.	REINFORCED CLAY PIPE
DN.	DOWN	REF.	REFERENCE
DR.	DOOR	REQ.	REQUIRED
DWG.	DRAWING	RM.	ROOM
		R.O.	ROUGH OPENING
(E)	EXISTING	S.C.	SOLID CORE
EA.	EACH	SCHED.	SCHEDULE
E.G.	EXISTING GRADE	S.F.	SQUARE FOOT
ELEC.	ELECTRICAL	SH.	SHEET
ELEV.	ELEVATION	SHFT.	SHEDTING
EQ.	EQUAL	SIM.	SIMILAR
EQUIP.	EQUIPMENT	SPEC.	SPECIFICATION
EXST.	EXISTING	SQ.	SQUARE
EXT.	EXTERIOR	STD.	STANDARD
		STR.	STRUCTURAL
		SUSP.	SUSPENDED
F.A.	FIRE ALARM	T.	TREAD/TEMPERED
F.E.C.	FIRE EXTINGUISHER CABINET	TIP.	TYPICAL
F.F.	FINISH FLOOR/FACTORY FINISH	THK.	THICK
FIN.	FINISH GRADE/FIXED GLASS		
FL.	FLOOR	U.L.	UNDERWRITER'S LAB
FLOR.	FLUORESCENT	URN.	URNAL
F.O.F.	FACE OF FINISH		
F.O.S.	FACE OF STUDS	V.C.I.	VINYL COMPOSITION TILE
F.S.	FULL SIZE/FINISH SURFACE	VERT.	VERTICAL
FT.	FOOT OR FEET		
GA.	GAUGE/GAGE	W.	WEST/WOMEN
GL.	GALVANIZED IRON	W/	WITH
GL.	GLASS	W.C.	WATER CLOSET
GYP. BD.	GYP. BOARD	WD.	WOOD
		WH.	WATER HEATER
H.C.	HOLLOW CORE	W/O	WITHOUT
H.M.	HOLLOW METAL	WP.	WATERPROOF
HDWR.	HARDWARE		

GENERAL NOTES

- WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING, CONSTRUCTION OR FINISHING SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OR IN THE ABSENCE OF SAME SHALL BE TREATED ACCORDING TO STANDARD PROCEDURES AS APPROVED BY THE ARCHITECT OR ACCORDING TO MANUFACTURER STANDARDS.
- FLOOR, OR WALL OPENINGS AS REQUIRED FOR PLUMBING, MECHANICAL, ELECTRICAL OR SIMILAR WORK SHALL BE VERIFIED FROM SHOP DRAWINGS, EQUIPMENT DATA ETC.
- VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE.
- MINOR ITEMS USED IN THE CONSTRUCTION OF THIS PROJECT MAY BE INDICATED ON THE DRAWINGS BUT NOT NECESSARILY IN THE SPECIFICATIONS. SUCH MINOR ITEMS ARE GENERALLY REFERENCED TO A MANUFACTURER INCLUDING A MODEL NUMBER, WHERE APPLICABLE. HOWEVER, ALL SUCH MINOR ITEMS SHALL BE GOVERNED BY ALL ASPECTS OF THE SPECIFICATIONS AS IF WRITTEN THEREIN.
- THE CONTRACTOR SHALL MAKE ALL EFFORTS NOT TO DISTURB THE OPERATION OF THE EXISTING PREMISES INCLUDING ACCESS THERETO, PROVIDE ALL REQUIRED CONSTRUCTION FENCING, BARRICADES, WARNING SIGNS AND LIGHTS, PROTECT AGAINST ANY POTENTIAL FLOOD HAZARDS AND SHALL EXERCISE ANY AND ALL REQUIRED SAFETY MEASURES TO PROTECT AND RENDER SAFE THE PREMISES TO ALL OCCUPANTS.
- CONTRACTOR SHALL ALSO ABIDE BY CHAPTER 44 OF THE UNIFORM BUILDING CODE PROTECTION OF PEDESTRIANS DURING CONSTRUCTION OR DEMOLITION
- WHERE EXISTING FEATURES HAVE TO BE DISTURBED TO EXECUTE THE WORK SHOWN ON ANY OF THE DRAWINGS OR CALLED FOR IN SPECIFICATIONS INCLUDING BUT NOT NECESSARILY LIMITED TO THE REMOVAL OF CONCRETE FLOOR SLABS, ELEMENTS OF WALL AND CEILING SECTIONS, FLOOR, WALL AND CEILING FINISHES AND ELEMENTS OF ROOFING, SUCH FEATURES MUST BE REPLACED TO MATCH EXISTING CONDITIONS, SURFACES AND FINISHES. WHILE FINISHES SUCH AS CARPET MAY BE REMOVED AND REPLACED AFTER WORK IS COMPLETE, FINISHES THAT CANNOT BE REPLACED IN THIS MANNER MUST BE REPLACED WITH NEW MATERIALS MATCHING EXISTING AS CLOSE AS POSSIBLE.
- WHERE EXECUTING THE WORK SHOWN ON ANY OF THESE DRAWINGS OR CALLED FOR IN SPECIFICATIONS REQUIRES PENETRATION OF EXTERIOR WALLS OR ROOFS, SUCH WORK SHALL BE FLASHED, SEALED OR OTHERWISE MADE TIGHT AGAINST THE ENTRANCE OF AIR OR WATER.
- WHERE ANY OF THE DRAWINGS REQUIRES THE REMOVAL OF FEATURES PENETRATING FLOOR, WALL, CEILING OR ROOF SURFACES, OPENINGS LEFT BY REMOVAL OF SUCH FEATURES SHALL BE REPAIRED AND FINISHED TO MATCH ADJACENT SURFACES & FINISHES.
- CONTRACTOR MUST EXERCISE CAUTION WHEN REMOVING OR OTHERWISE DISTURBING EXISTING STRUCTURAL OR LOAD BEARING ELEMENTS. FEATURES AFFECTED BY THE REMOVAL OF SUCH ELEMENTS MUST BE PROPERLY SHORED AND BRACED TO PREVENT CRACKING OF EXISTING PLASTER SURFACES, FASTENINGS MUST BE BY MEANS OF SCREWS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE BY HIM TO THE PREMISES OR OTHERWISE, AND SHALL REPAIR SAME AT HIS OWN EXPENSE. NOTE THAT HEAVY EQUIPMENT DRIVEN OVER ASPHALTIC CONCRETE PAVEMENT IN THE PARKING LOT MAY CAUSE DAMAGE TO SUCH PAVEMENT.
- WHERE EXISTING PLASTER WALLS ARE REPAIRED, ADDED TO OR OTHERWISE MODIFIED SUCH CHANGES SHALL BE MADE WITH MATERIALS AND FINISHES TO MATCH EXISTING CONDITIONS.
- WORK REQUIRED SHALL INCLUDE BUT NOT BE NECESSARILY LIMITED TO WORK CALLED FOR BY NOTES ON BUILDING FLOOR PLANS.

APPLICABLE CODES

APPLICABLE CODES AS OF JANUARY 1, 2020

PARTIAL LIST OF APPLICABLE CODES

2019	CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.	
2019	CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.	
2015	INTERNATIONAL BUILDING CODE VOL. 1 - 2 AND 2016 CA. AMENDMENTS)	
2019	CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.	
2019	(2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)	
2019	CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.	
2019	CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.	
2019	(2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)	
2019	CALIFORNIA GREEN BUILDING STANDARDS CODE PART 11, TITLE 24 C.C.R.	
2019	CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.	
2019	TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS	
2013	ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS	

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17a	WET CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2017 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE	2019 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2018 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	2016 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS-2014 CBC (SFM) CHAPTER 35, SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

PROJECT DATA

OWNER  
CITY OF CARSON  
801 EAST CARSON ST.  
CARSON, CA. 90745  
CONTACT: GILBERT MARQUEZ  
(310) 952-1750 X 1813 (OFFICE)  
EMAIL: gmarquez@carson.ca.us

FIRE DEPARTMENT NOTES

- TO SCHEDULE A FIRE INSPECTION, CONTACT THE CITY OF CARSON FIRE DEPARTMENT AT (310) 816-8100
- PROJECT SHALL COMPLY WITH CALIFORNIA FIRE CODE CHAPTER 33, "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION".
- IMPAIRMENTS TO FIRE PROTECTION SYSTEMS WILL BE COORDINATED IN ACCORDANCE WITH CCFD FIRE PREVENTION DIVISION FIRE WATCH POLICY.
- PRIOR APPROVAL IS NEEDED FROM FIRE CODE OFFICIAL PRIOR TO ANY SECURITY DEVICES AND EGRESS LOCKS PURSUANT TO CFC, SECTION 1031.2.1.
- COMPLIANCE WITH CFC, SECTION 1031.6 FINISHES, FURNISHINGS AND DECORATIONS, IN ITS ENTIRETY.

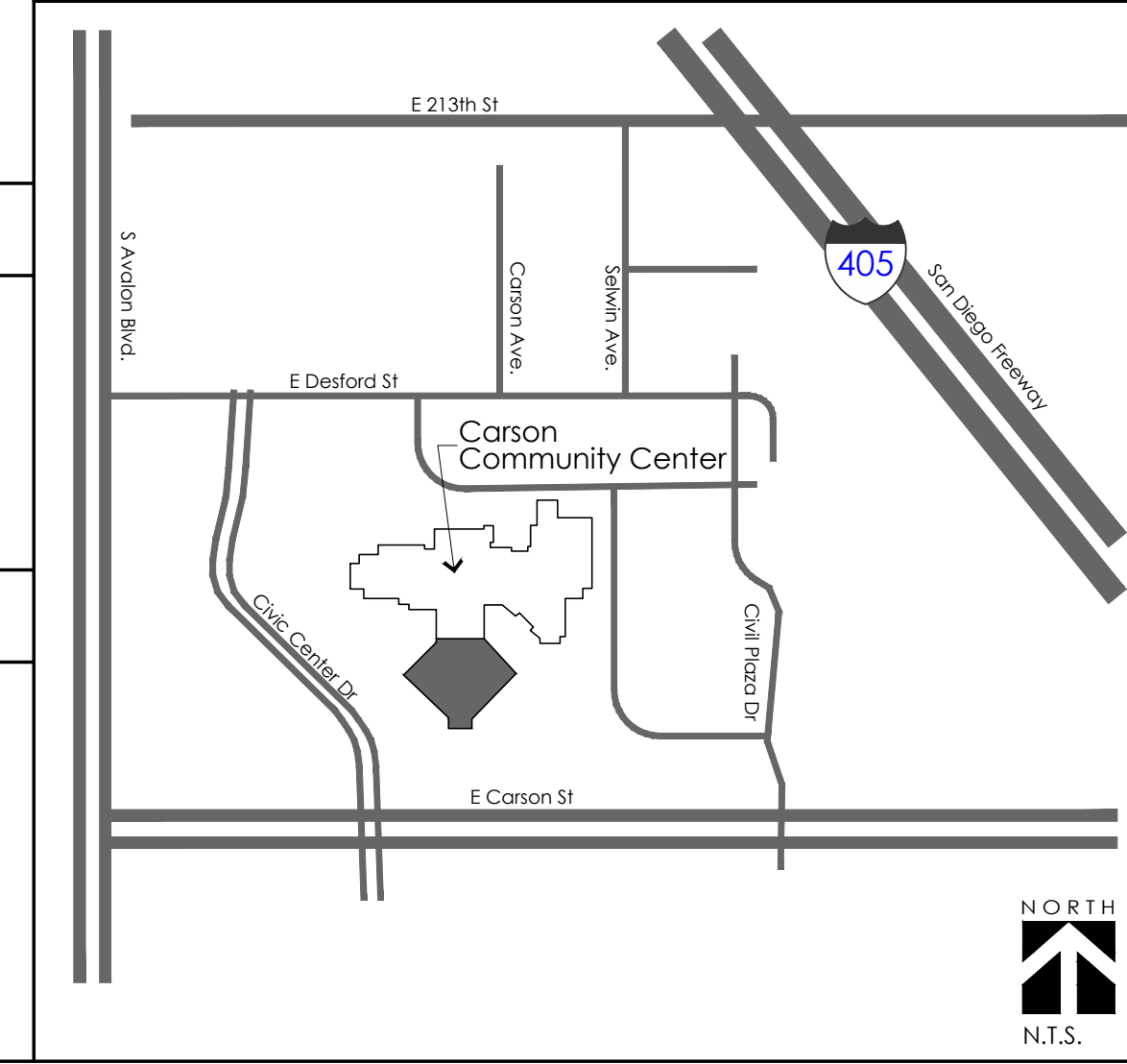
DESIGN TEAM

ARCHITECTURE AND PLANNING	HUF COR - (DISTRIBUTOR)
WESTBERG + WHITE, INC. 1775 HANCOCK ST., SUITE 120 SAN DIEGO, CA. 92110 (619) 542-1188 (OFFICE); (619) 542-1663 (FAX) CONTACT: MARIO BALDERAS EMAIL: mbalderas@warch.com	L2 SPECIALTIES, INC. 3613 W. MACARTHUR BLVD., SUITE 611 SANTA ANA, CA 92704 CONTACT: JERRY RIVERA EMAIL: info@L2specialties.com
STRUCTURAL	ELECTRICAL
MIYAMOTO 5151 SHOREHAM PLACE, SUITE 280 SAN DIEGO, CA. 92122 (858) 457-3001 CONTACT: JAMES CHAN EMAIL: jchen@miyamotointernational.com	TK1 SC 11870 PIERCE ST., SUITE 160 RIVERSIDE, CA. 92505 (951) 299-4160 CONTACT: BILL VOLER EMAIL: bvoler@tk1sc.com

SCOPE OF WORK

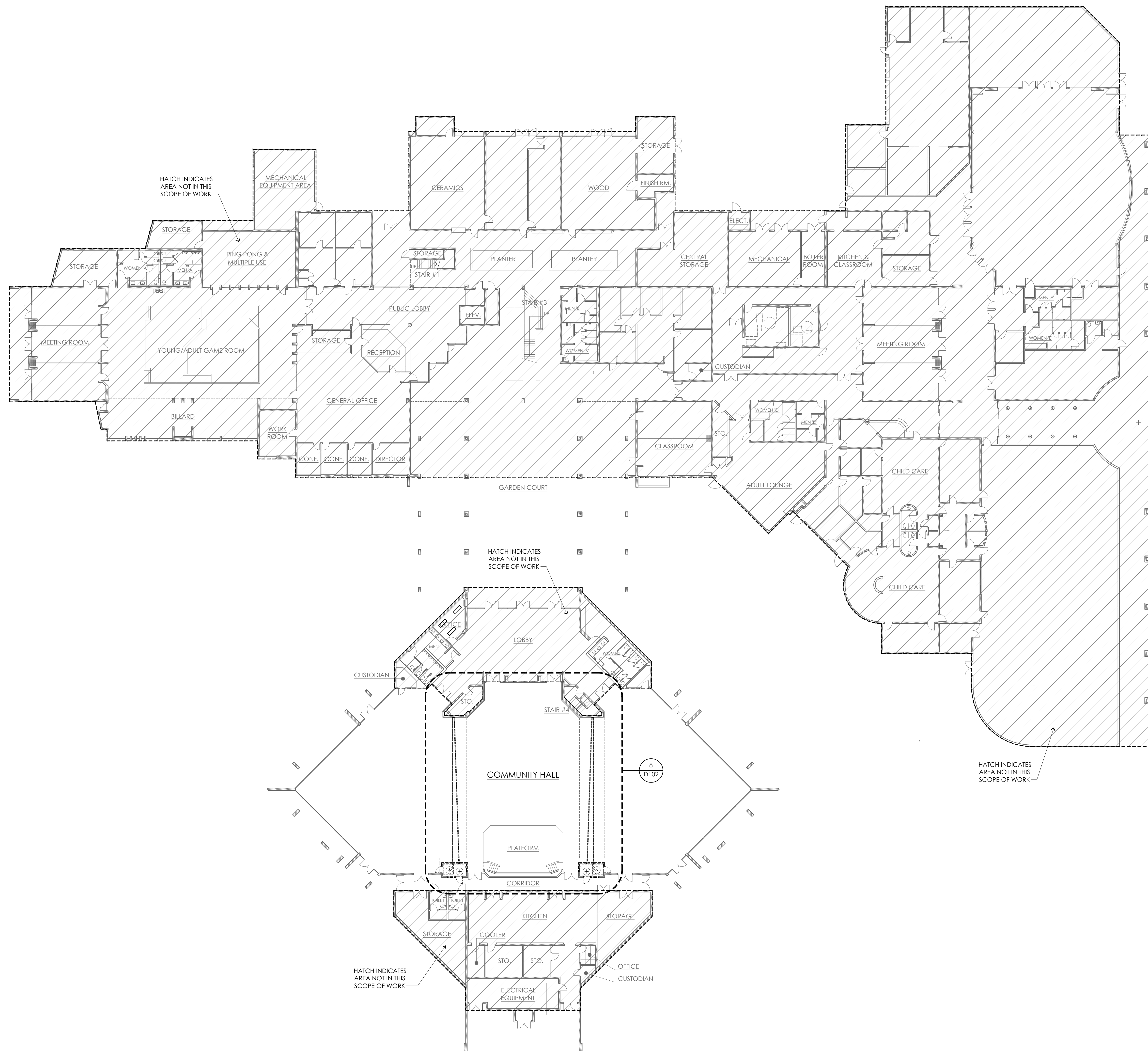
ADDITION OF TWO NEW ELECTRICAL FOLDING WALL PANEL SYSTEM AT COMMUNITY HALL AREA, REINFORCING OF THE EXISTING STRUCTURE TO SUPPORT THE NEW FOLDING WALL PANEL SYSTEM, DEMOLITION OF TWO EXISTING STORAGE TO CONVERT THEM INTO A NEW PANEL DOOR CLOSET.

VICINITY MAP



BID SET





OVERALL DEMOLITION PLAN



1" = 20'-0"

ARCHITECT  
**westbergwhite**  
 architecture  
 1775 HANCOCK ST, SUITE 120  
 SAN DIEGO, CA 92110  
 619.542.1188 619.542.1663 FAX



CONSULTANT

City of Carson  
 Community Center

801 East Carson st, Carson, CA, 90745

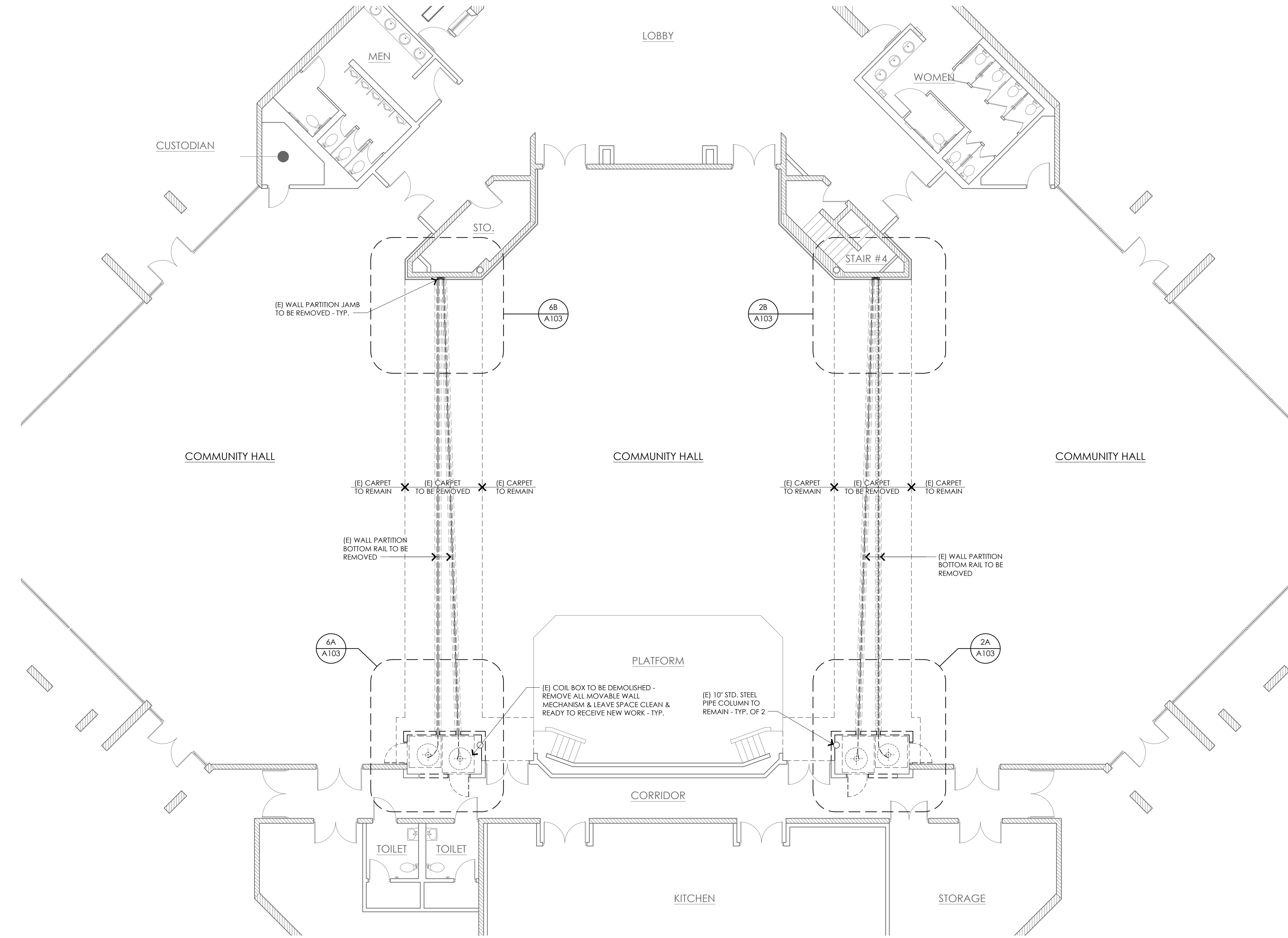
OVERALL DEMOLITION PLAN

City of Carson  
 Community Center  
 Folding Wall Panels

801 East Carson st, Carson, CA, 90745

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 06-01-2021	DRAWN CHECKED
REVISIONS	SHEET NO.
	D101
	OF SHEETS

BID SET



**DEMOLITION GENERAL NOTES**

1. IN ADDITION TO OTHER DEMOLITION NOTES AND REFERENCES, REMOVE AND DISPOSE OF NON-STRUCTURAL WALLS AND OTHER ITEMS SHOWN ONLY BY DASHED LINEWORK, UNLESS NOTED OTHERWISE.
2. IN ADDITION TO WORK INDICATED, DEMOLITION SHALL INCLUDE ALL (NON-STRUCTURAL) INCIDENTAL, EXCEPT FOR THE DEMOLITION OF STRUCTURAL WALLS WORK THAT IS REQUIRED FOR THE COMPLETE INSTALLATION OF NEW CONSTRUCTION.
3. FOR THE COMPLETE EXTENT OF DEMOLITION WORK, SEE ALL DOCUMENTS OF ALL DISCIPLINES.
4. COORDINATE AND PROVIDE DEMOLITION OF NON-STRUCTURAL WALLS AND OTHER ITEMS FOR THE INSTALLATION OF ALL NEW WORK SHOWN ON ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS.
5. UNSUITABLE MATERIALS, ROTTED WOOD, RUSTED METALS, AND DETERIORATED MASONRY AND CONCRETE SHALL BE REMOVED FROM SITE.
6. WHERE ITEMS ARE REMOVED, PATCH AND REPAIR EXISTING SURFACES TO RECEIVE NEW WORK.

**DEMOLITION NOTES**

1. EXISTING MOVABLE WALL PARTITION TO BE REMOVED FOR THE INSTALLATION OF NEW FOLDING PANEL PARTITION.
2. REMOVE PORTION OF EXISTING CEILING AND/OR SOFFIT(S) AS NECESSARY FOR THE REMOVAL OF EXISTING WALL PARTITION MECHANISM AND PREPARE AREA TO RECEIVE NEW WORK.
3. REMOVE EXISTING WALL PARTITION ASSEMBLY BOTTOM RAIL AND PREPARE AREA TO RECEIVE NEW WORK.
4. REMOVE EXISTING WALL PARTITION ASSEMBLY JAMB AND PREPARE THE SURFACE TO RECEIVE NEW WORK.
5. PATCH AND REPAIR TO MATCH ADJACENT SURFACE ALL CEILING & WALL SCRATCHES, DAMAGED CAUSED DURING DEMOLITION WORK.

**WALL LEGEND**

- REMOVE EXISTING NON-STRUCTURAL (U.N.O.) METAL STUD WALL ASSEMBLY
- ▨ EXISTING MASONRY UNIT WALL TO REMAIN
- ▬ EXISTING METAL STUD WALL WITH INTERIOR GYP BOARD AND/OR ACOUSTIC PANEL TO REMAIN



**PARTIAL DEMOLITION PLAN**

1/8" = 1'-0"

8

ARCHITECT

1775 HANCOCK ST, SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX

CONSULTANT

**City of Carson  
Community Center**

801 East Carson st., Carson, CA. 90745

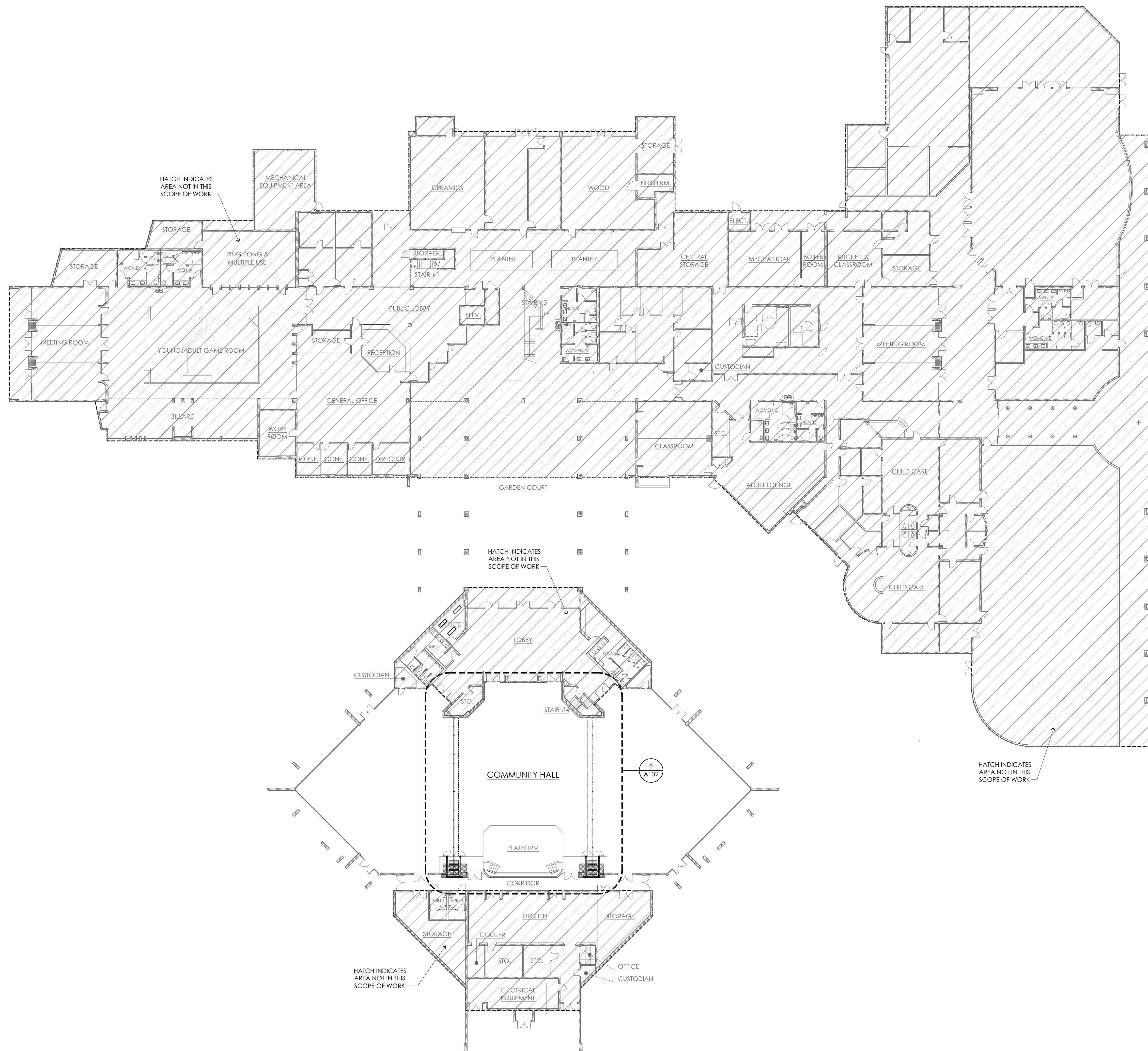
**City of Carson  
Community Center  
Folding Wall Panels**

801 East Carson st., Carson, CA. 90745

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 06-01-2021	DRAWN CHECKED
REVISIONS	SHEET NO.
	<b>D102</b>
	OF SHEETS

**BID SET**





OVERALL FLOOR PLAN



1" = 20'-0"

ARCHITECT



westbergwhite  
architecture

1775 HANCOCK ST. SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX



CONSULTANT

City of Carson  
Community Center

801 East Carson st., Carson, CA. 90745

OVERALL FLOOR PLAN

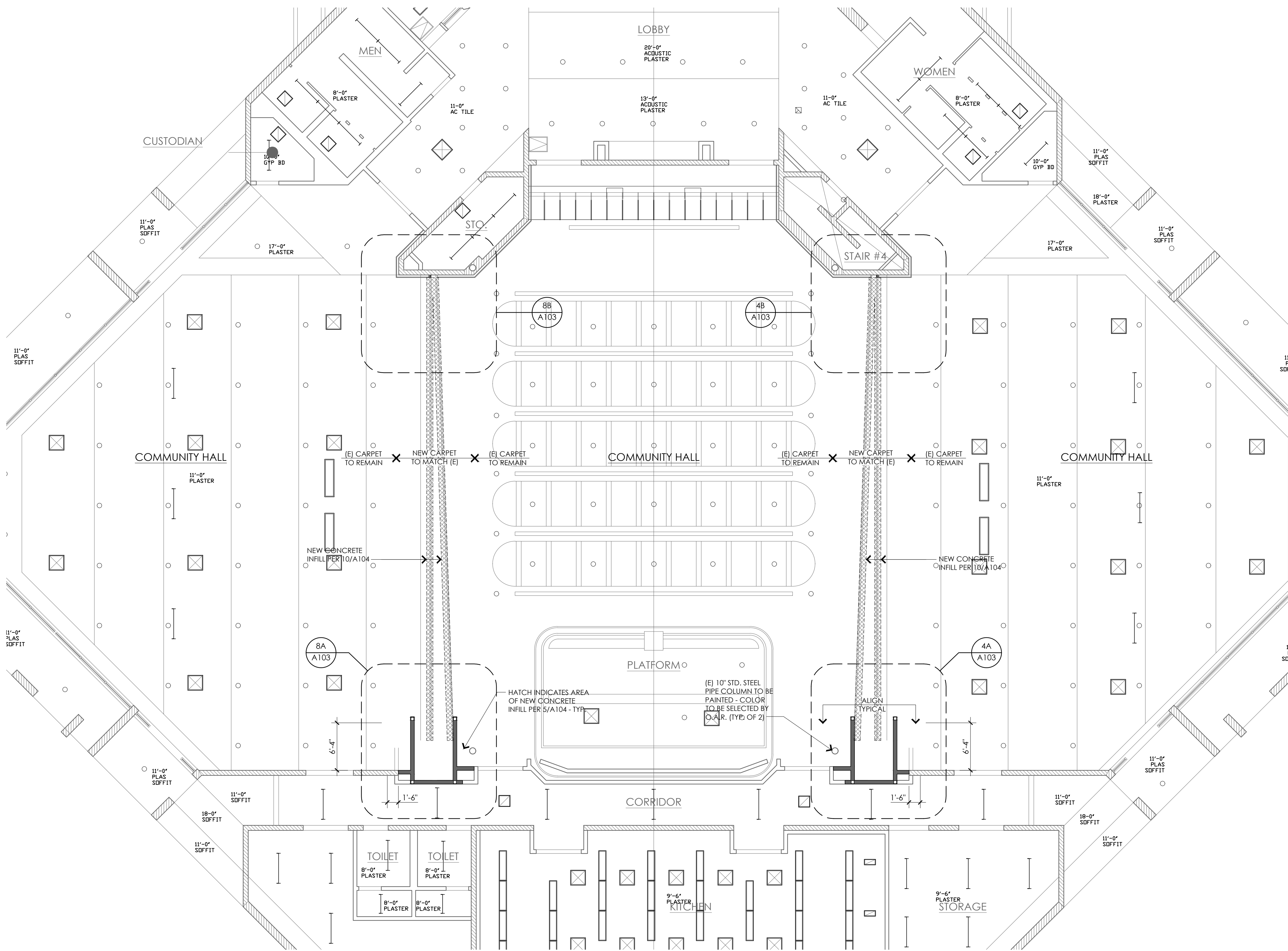
City of Carson  
Community Center  
Folding Wall Panels

801 East Carson st., Carson, CA. 90745

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 06-01-2021	DRAWN CHECKED
REVISIONS	SHEET NO.
	A101
	OF SHEETS

BID SET





PARTIAL FLOOR PLAN

1/8" = 1'-0"

8

WALL LEGEND

- EXISTING MASONRY UNIT WALL TO REMAIN
- EXISTING METAL STUD WALL WITH INTERIOR GYP BOARD AND/OR ACOUSTIC PANEL TO REMAIN
- NEW 6" METAL STUD WALL:  
INTERIOR: STUD AT 16" O.C. FULL HEIGHT WALL W/ 5/8" TYPE 'X' GYP. BD. EACH SIDE U.N.O. W/ SOUND ATTENUATION BATT INSULATION - SEE 1/A104

GENERAL NOTES

1. REPLACE PORTION OF CEILING AND/OR SOFFIT REMOVED DURING DEMOLITION WORK. MATERIALS AND FINISH TO MATCH EXISTING.
2. INFILL WITH CONCRETE WHERE BOTTOM RAIL HAS REMOVED AND LEAVE SURFACE READY TO RECEIVE NEW CARPET.
3. PROVIDE FOR INSTALLATION OF \_\_SPEAKERS AND \_\_LIGHTS.

ARCHITECT

1775 HANCOCK ST. SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX

CONSULTANT

City of Carson  
Community Center

801 East Carson st. Carson, CA. 90745

PARTIAL FLOOR PLAN

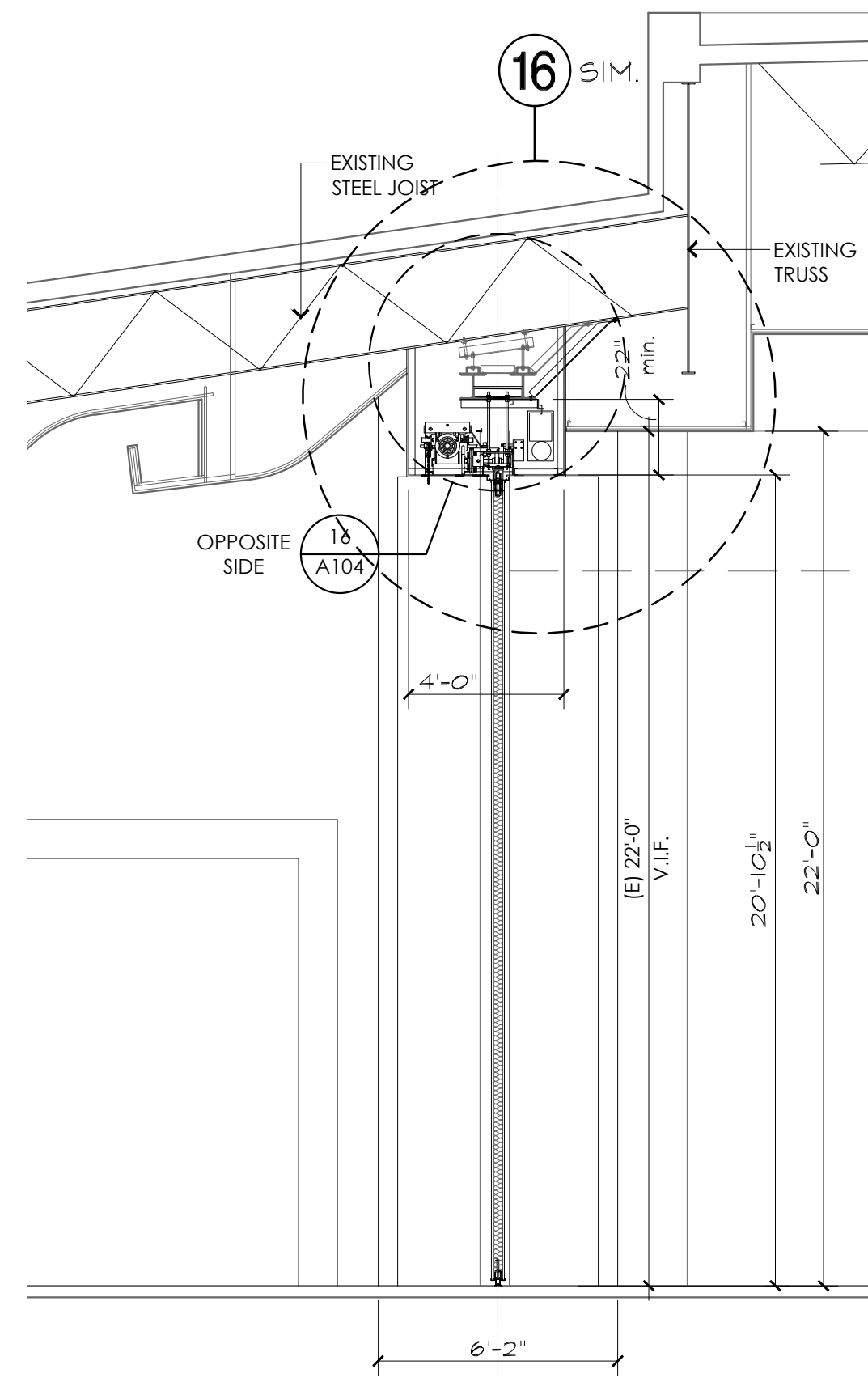
City of Carson  
Community Center  
Folding Wall Panels

801 East Carson st. Carson, CA. 90745

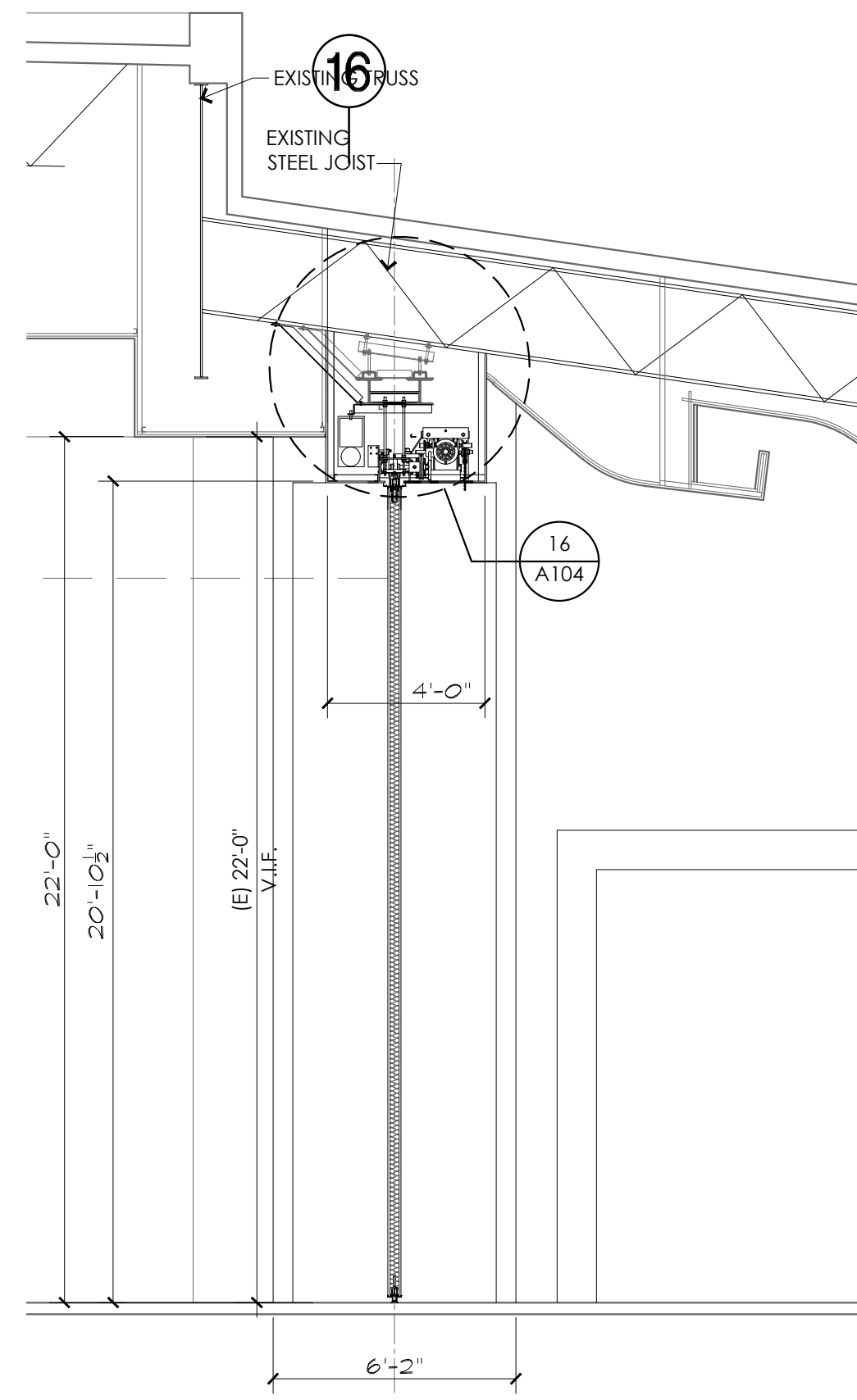
PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 06-01-2021	DRAWN CHECKED
REVISIONS	SHEET NO.
	A102
	OF SHEETS

BID SET

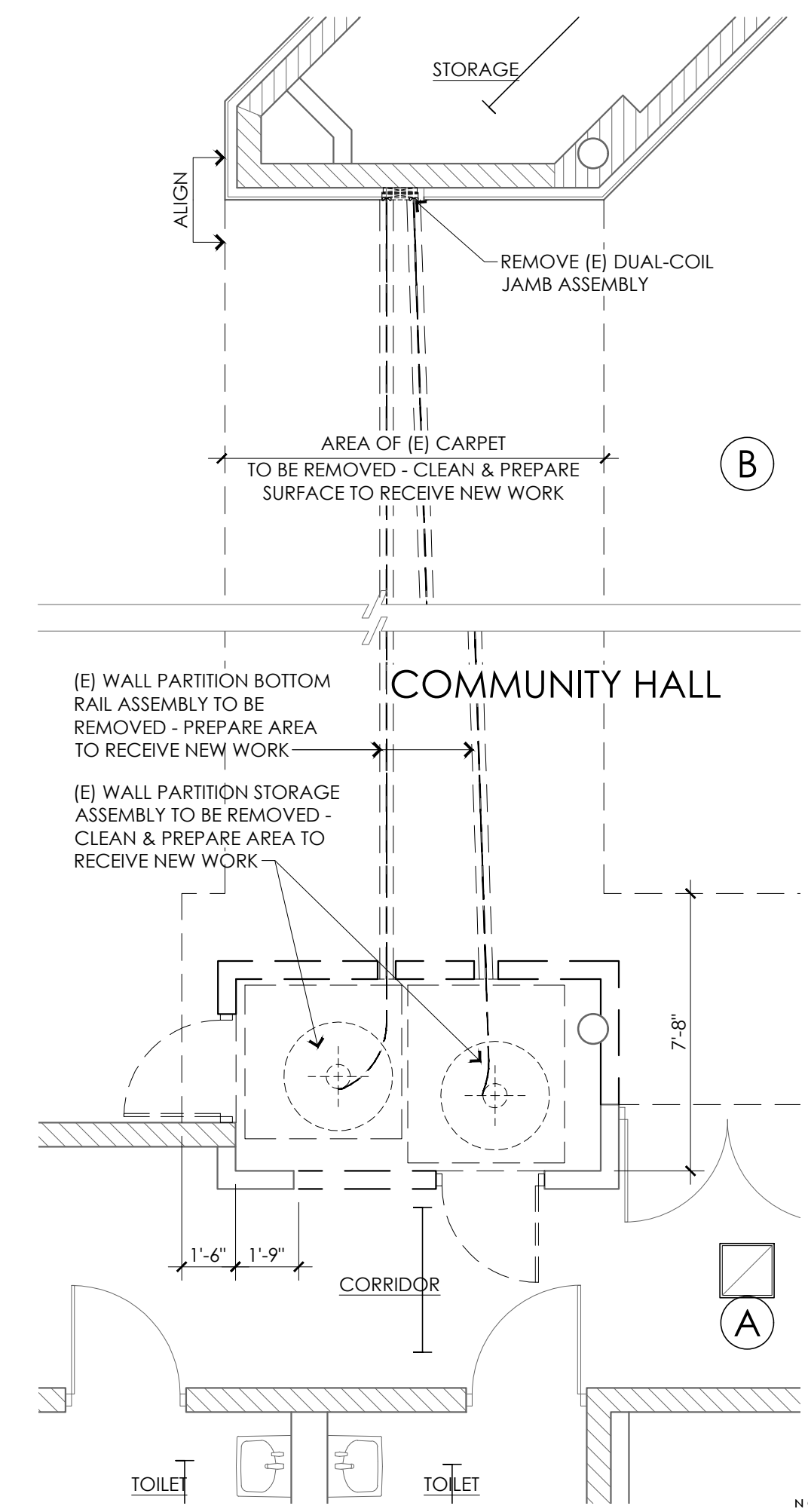




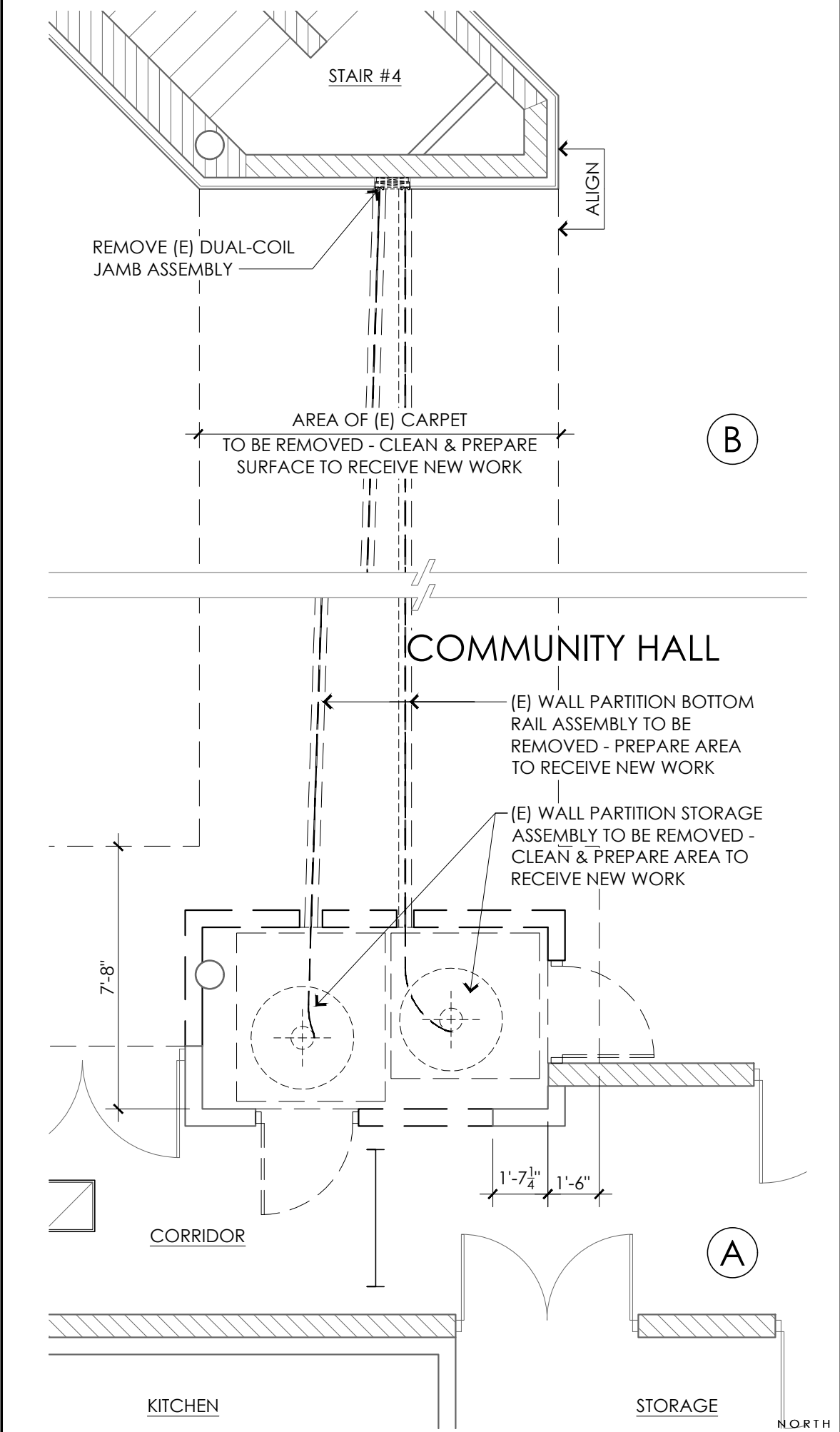
WEST SIDE SECTION 1/4" = 1'-0" 14



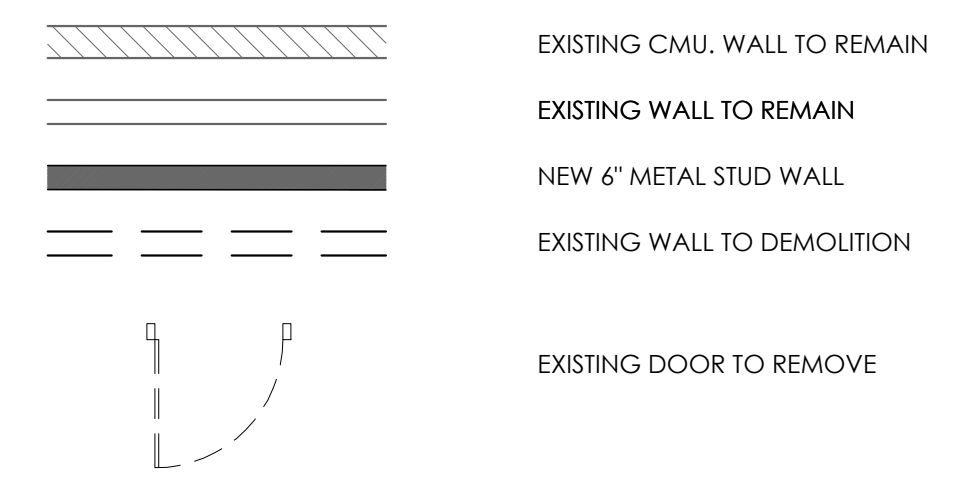
EAST SIDE SECTION 1/4" = 1'-0" 9



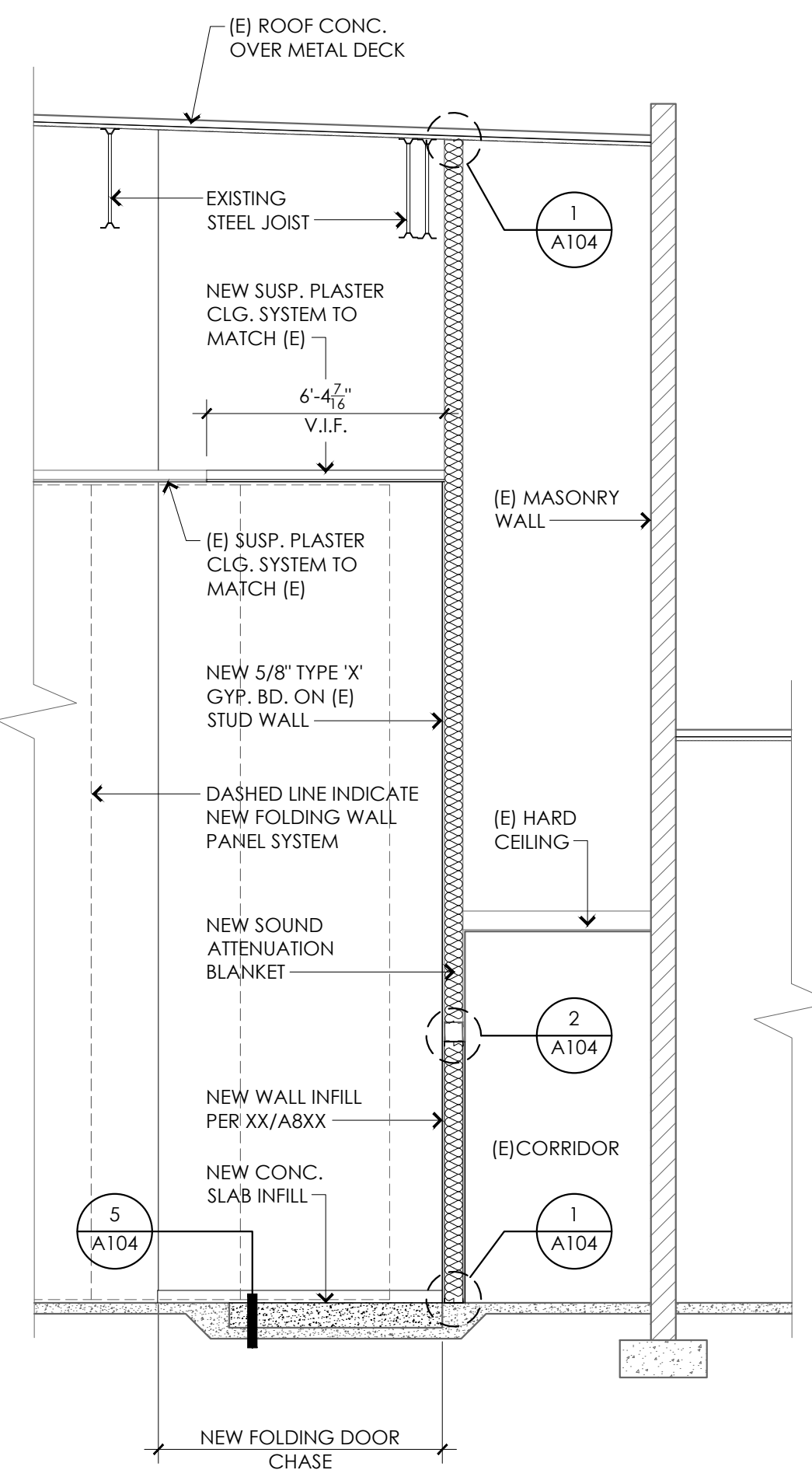
WEST SIDE PARTIAL DEMOLITION 1/4" = 1'-0" 6



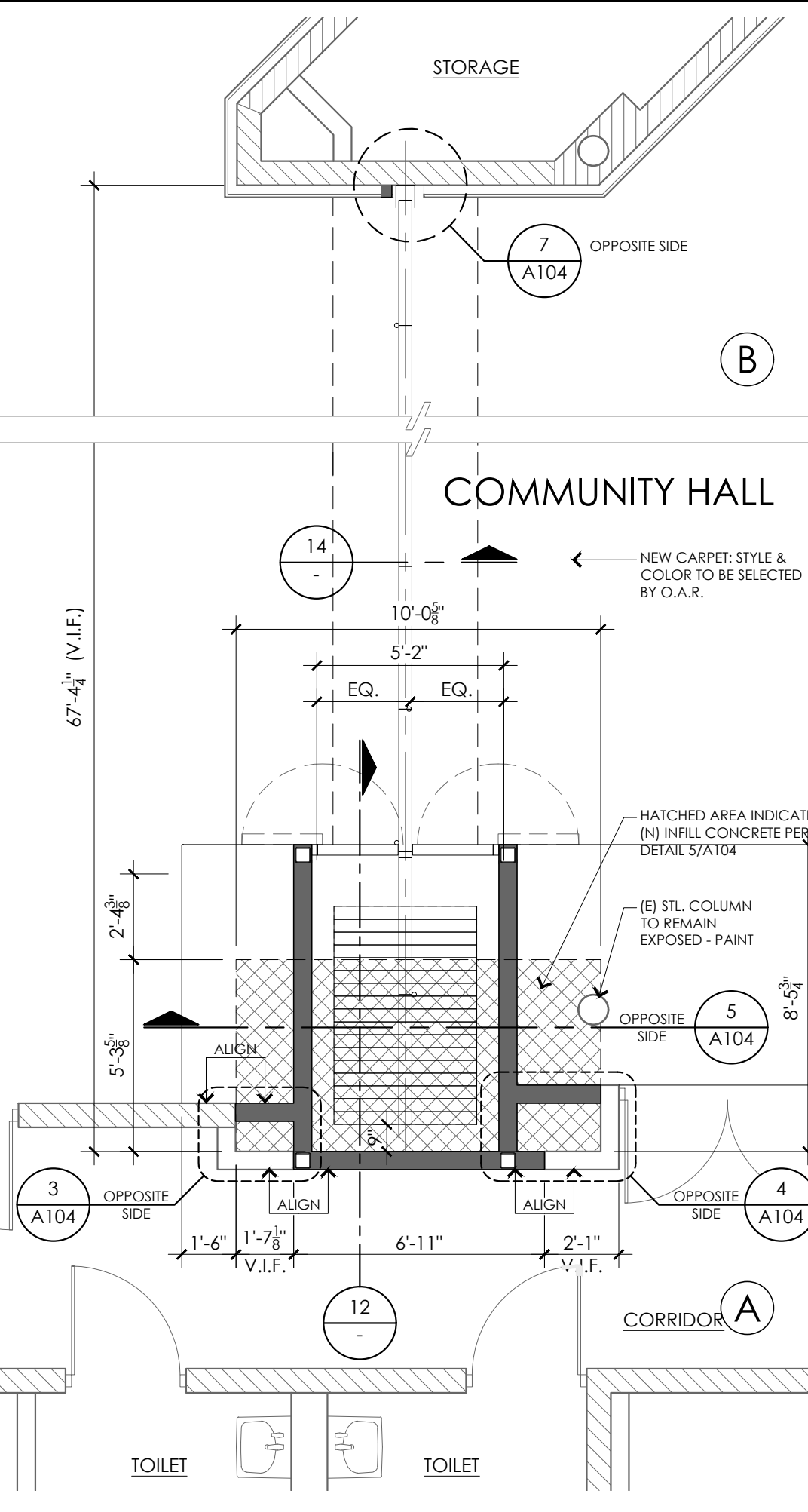
EAST SIDE PARTIAL DEMOLITION 1/4" = 1'-0" 2



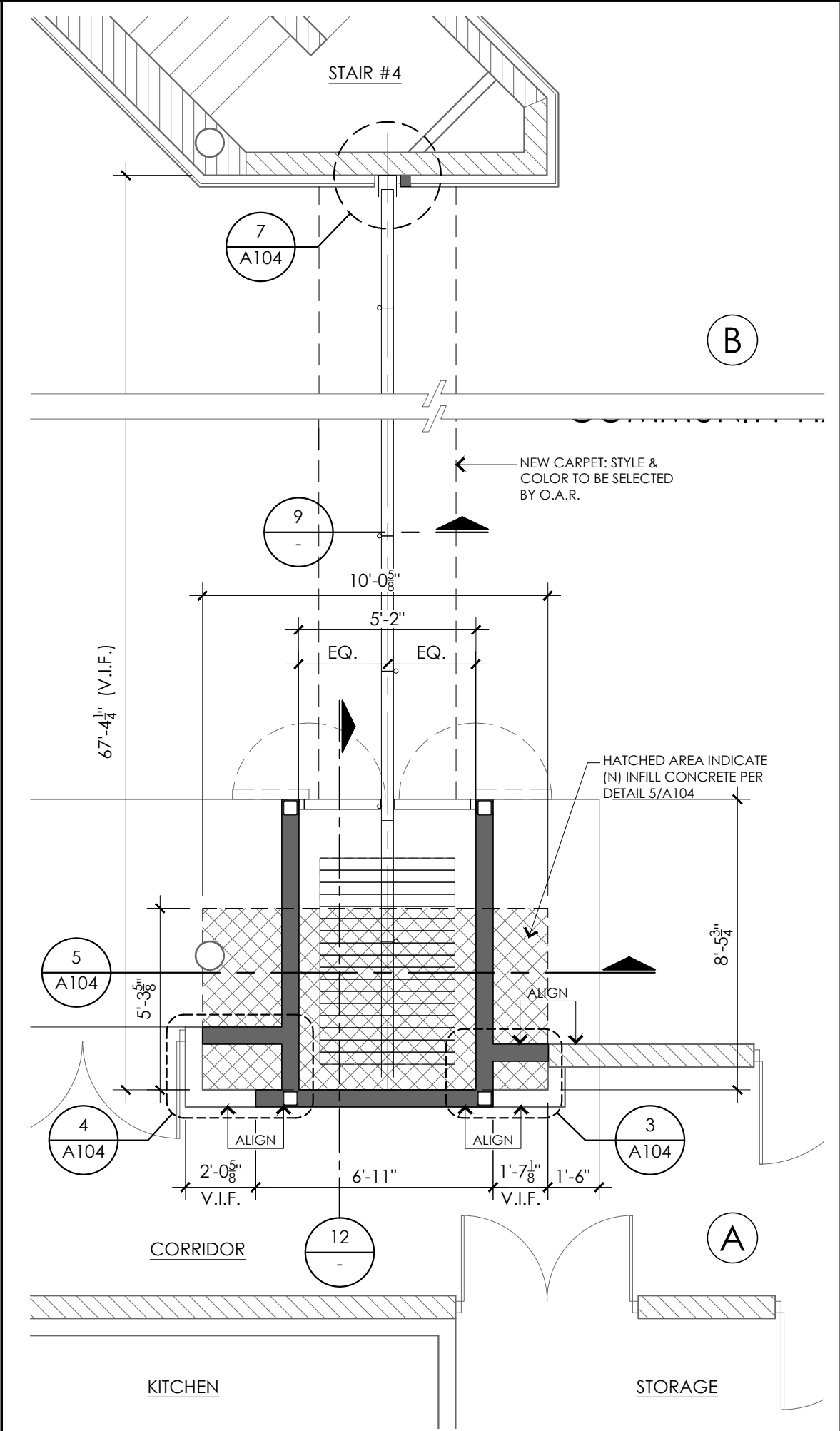
WALL LEGEND 15



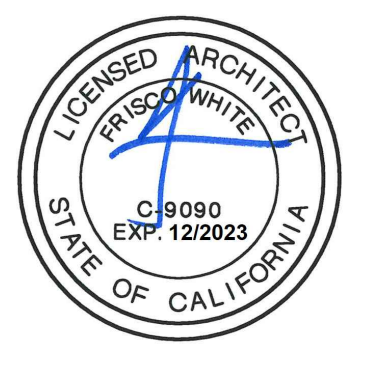
SECTION 1/4" = 1'-0" 12



WEST SIDE PARTIAL ENLARGED FLOOR PLAN 1/4" = 1'-0" 8



EAST SIDE PARTIAL ENLARGED FLOOR PLAN 1/4" = 1'-0" 4



CONSULTANT

City of Carson  
 Community Center

801 East Carson St., Carson, CA. 90745

ENLARGED DEMOLITION & FLOOR PLANS  
 AND SECTIONS

City of Carson  
 Community Center  
 Folding Wall Panels

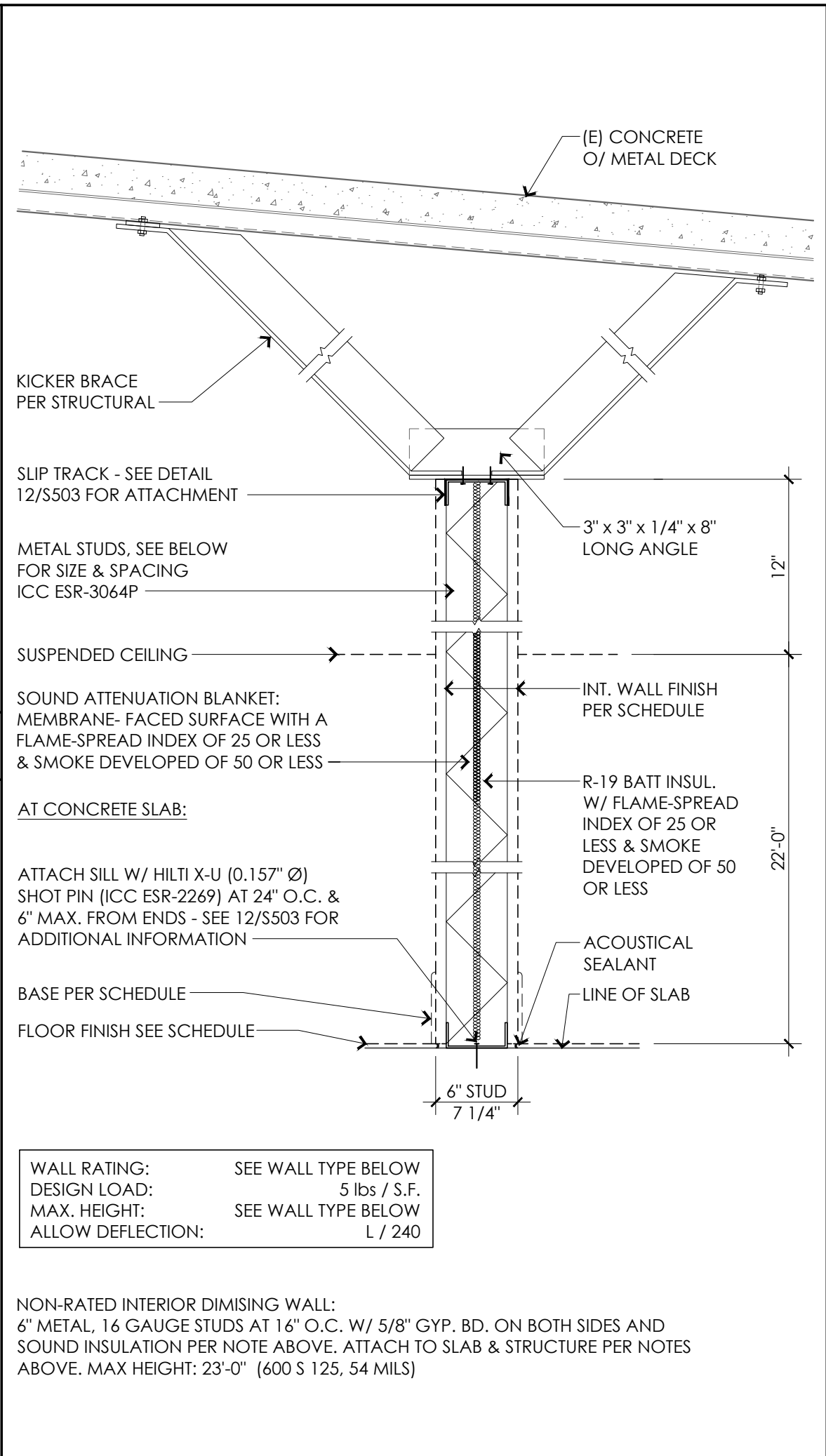
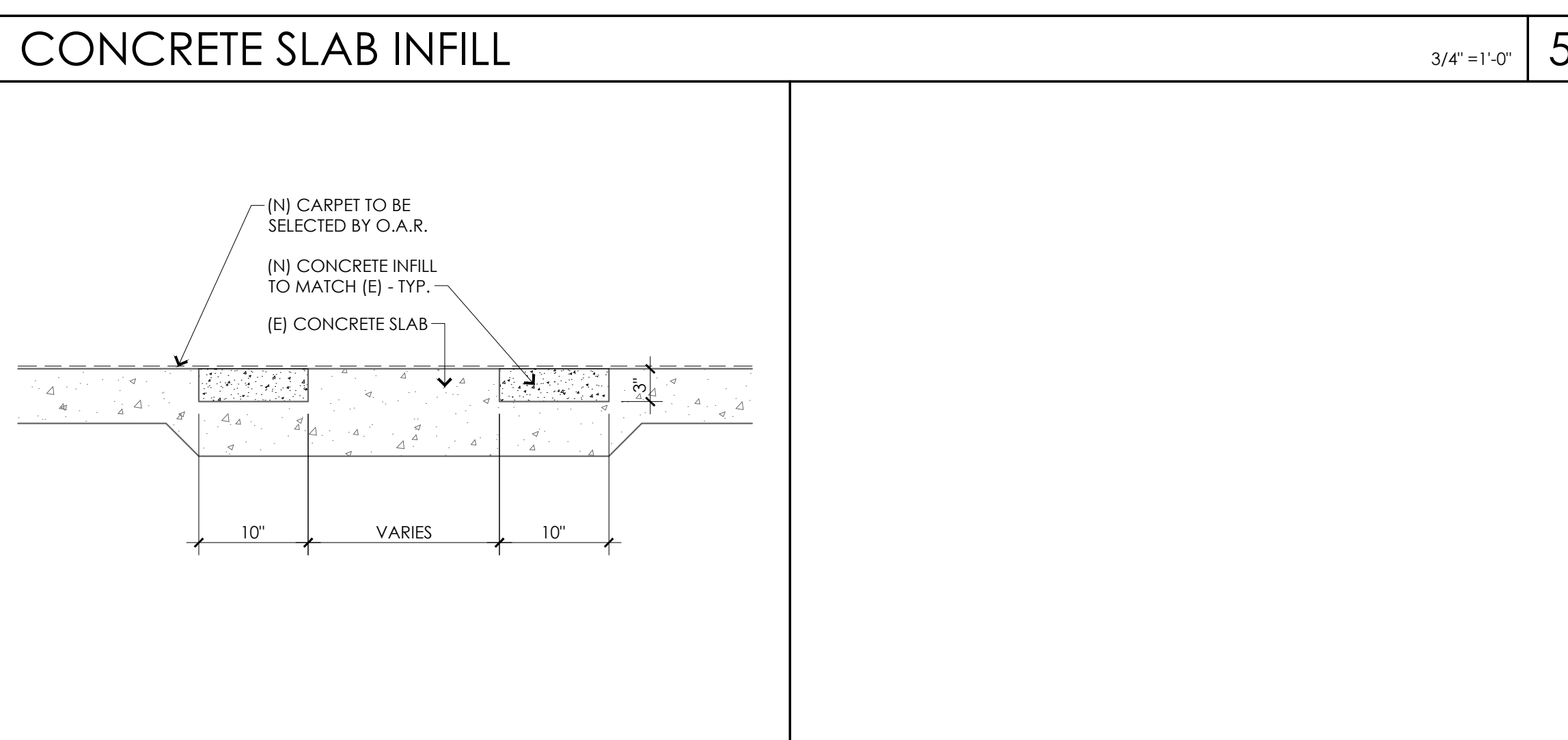
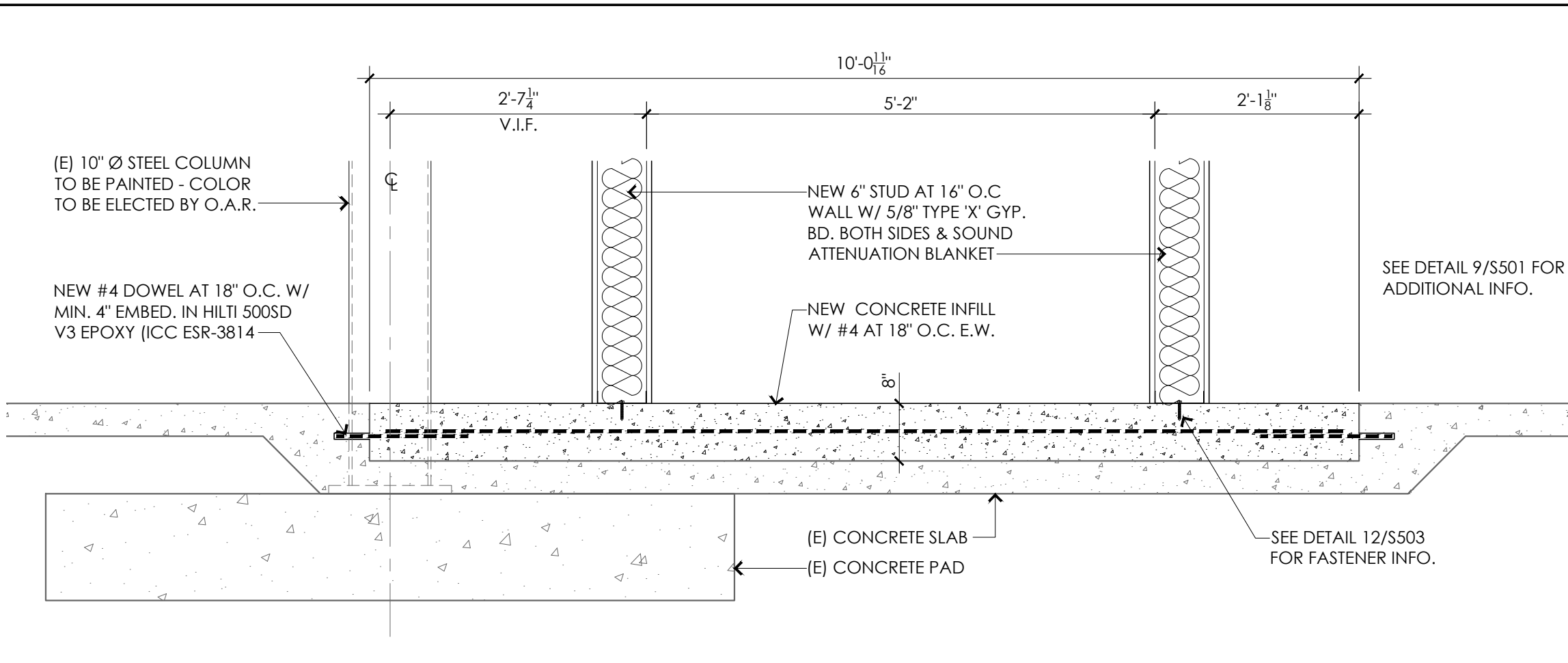
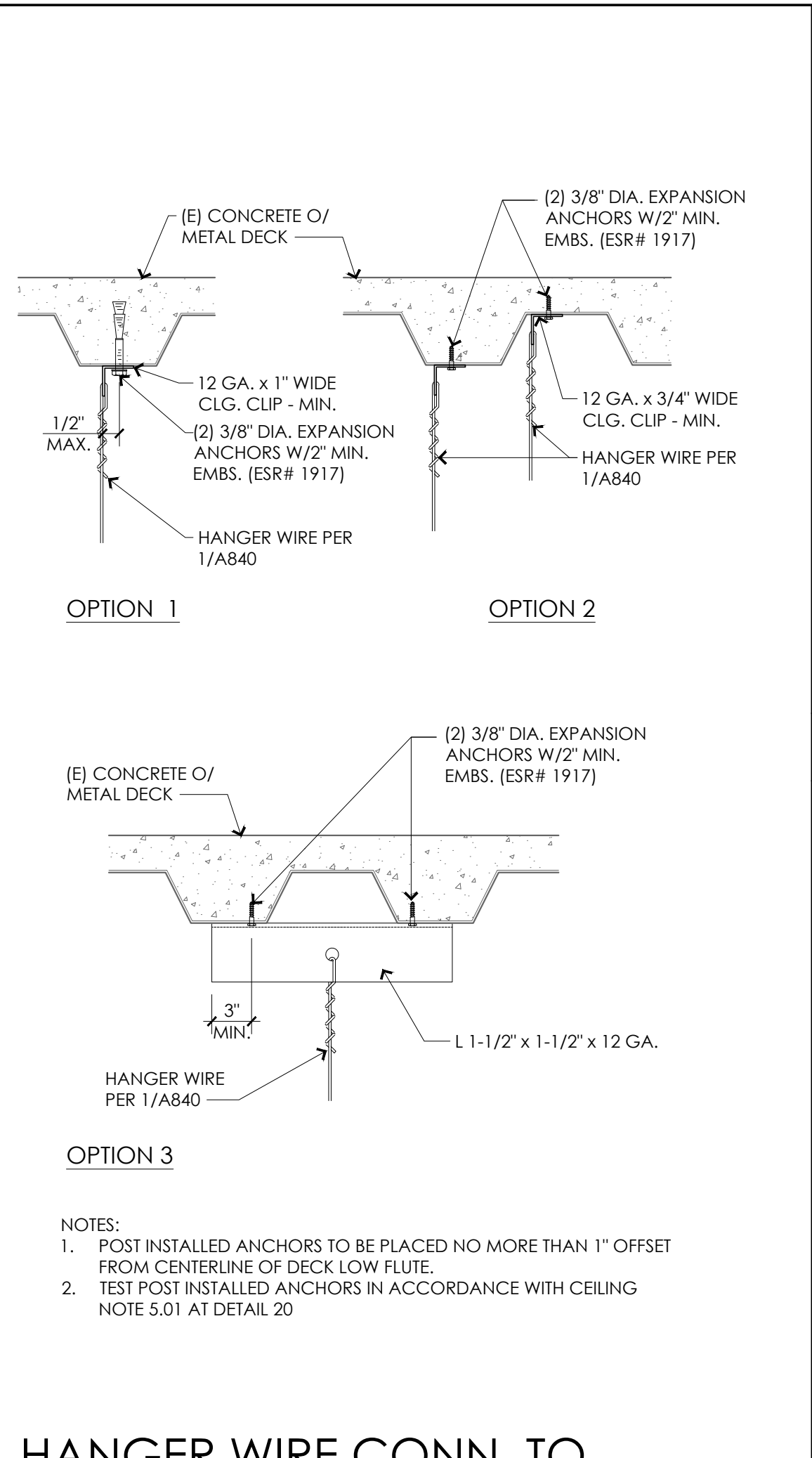
801 East Carson St., Carson, CA. 90745

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 06-01-2021	DRAWN CHECKED
REVISIONS R1-07-27-2021	SHEET NO.	A103 OF SHEETS

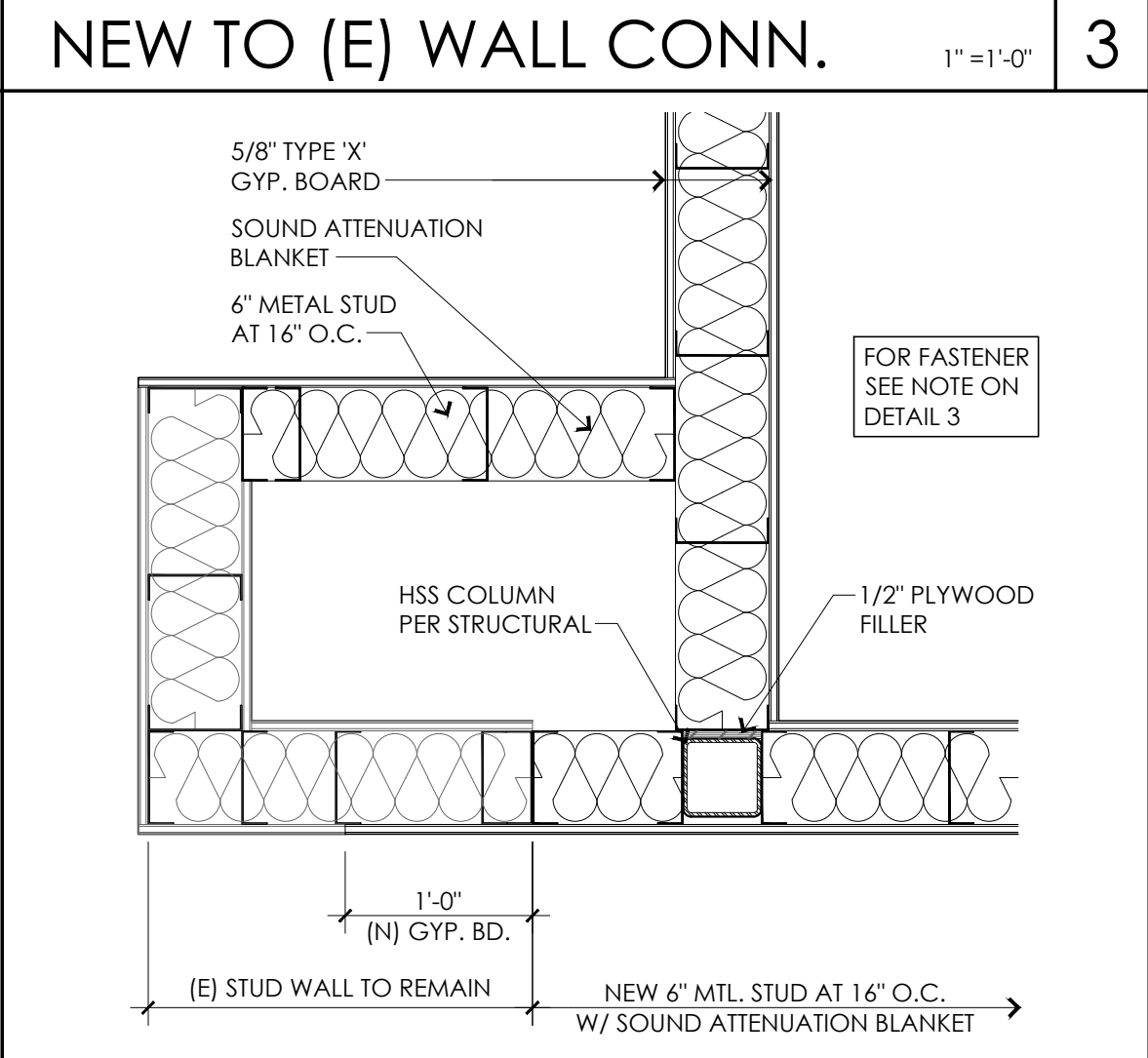
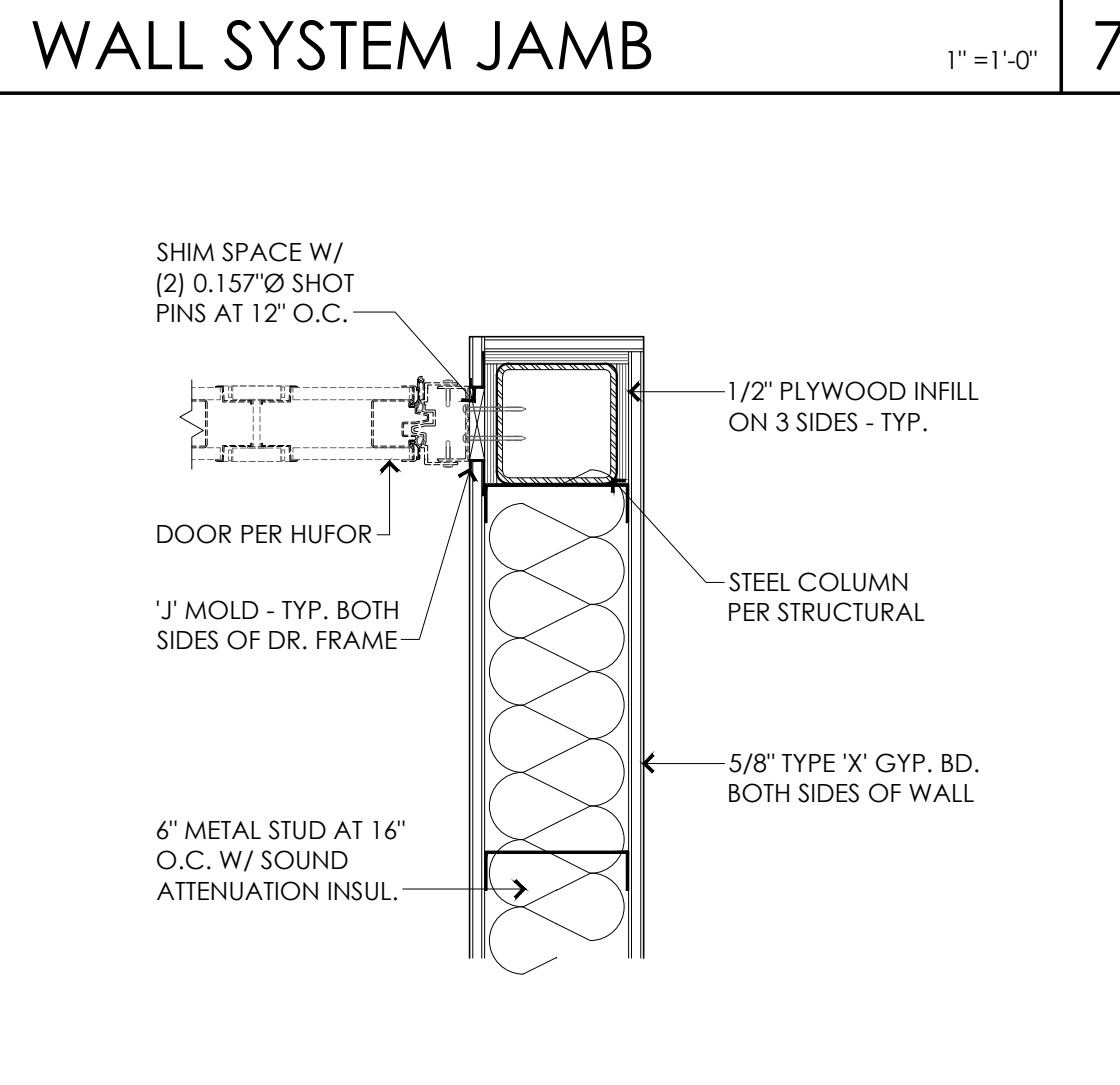
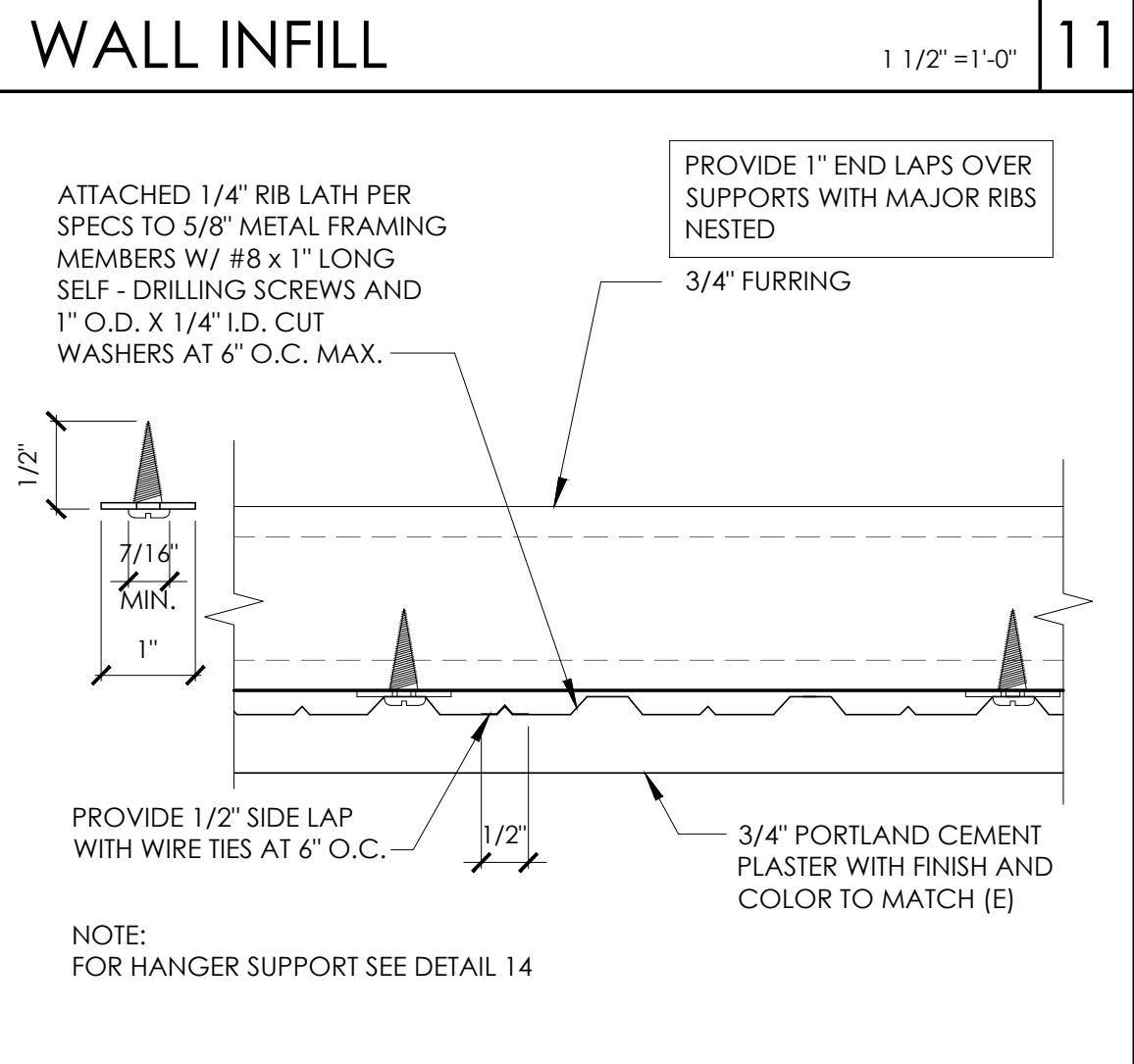
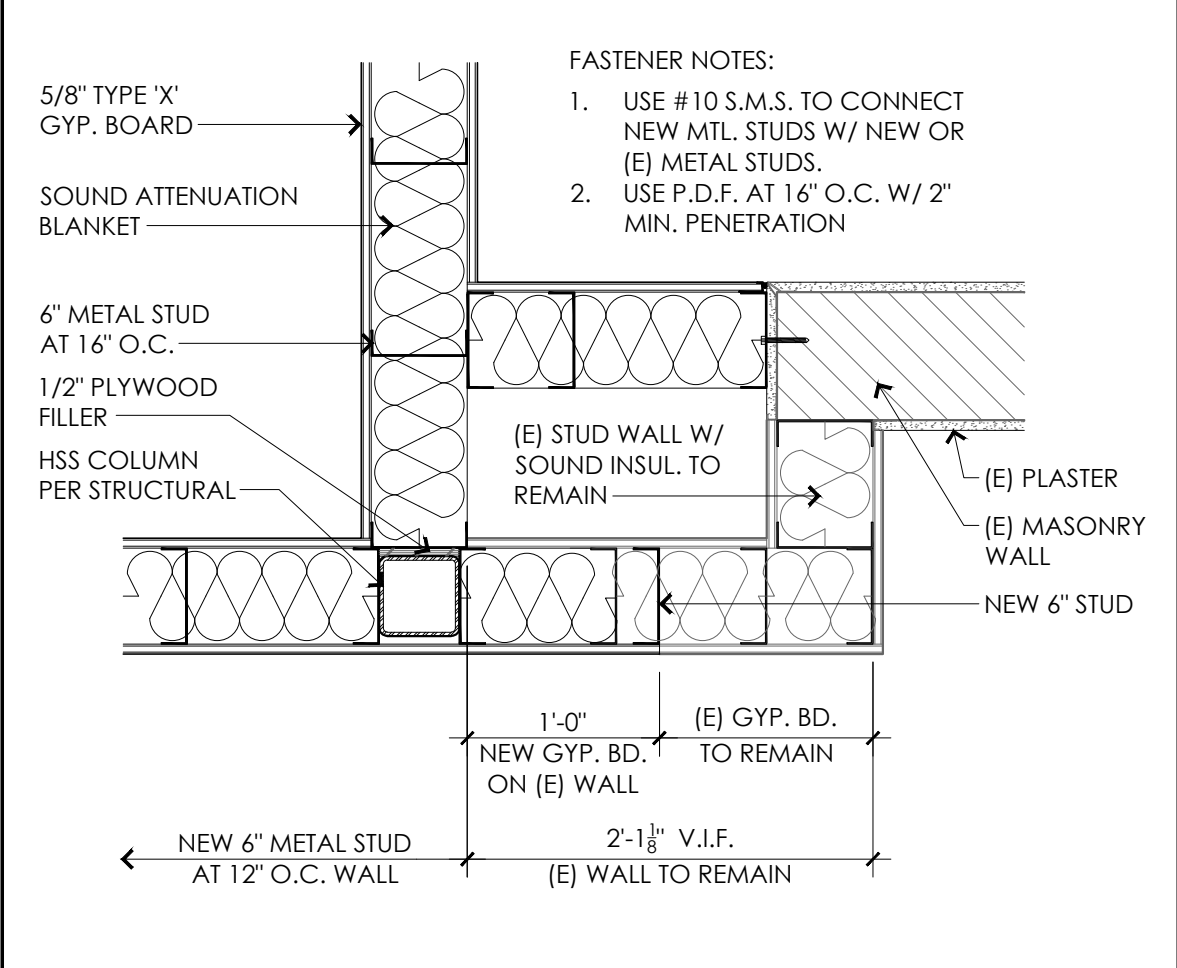
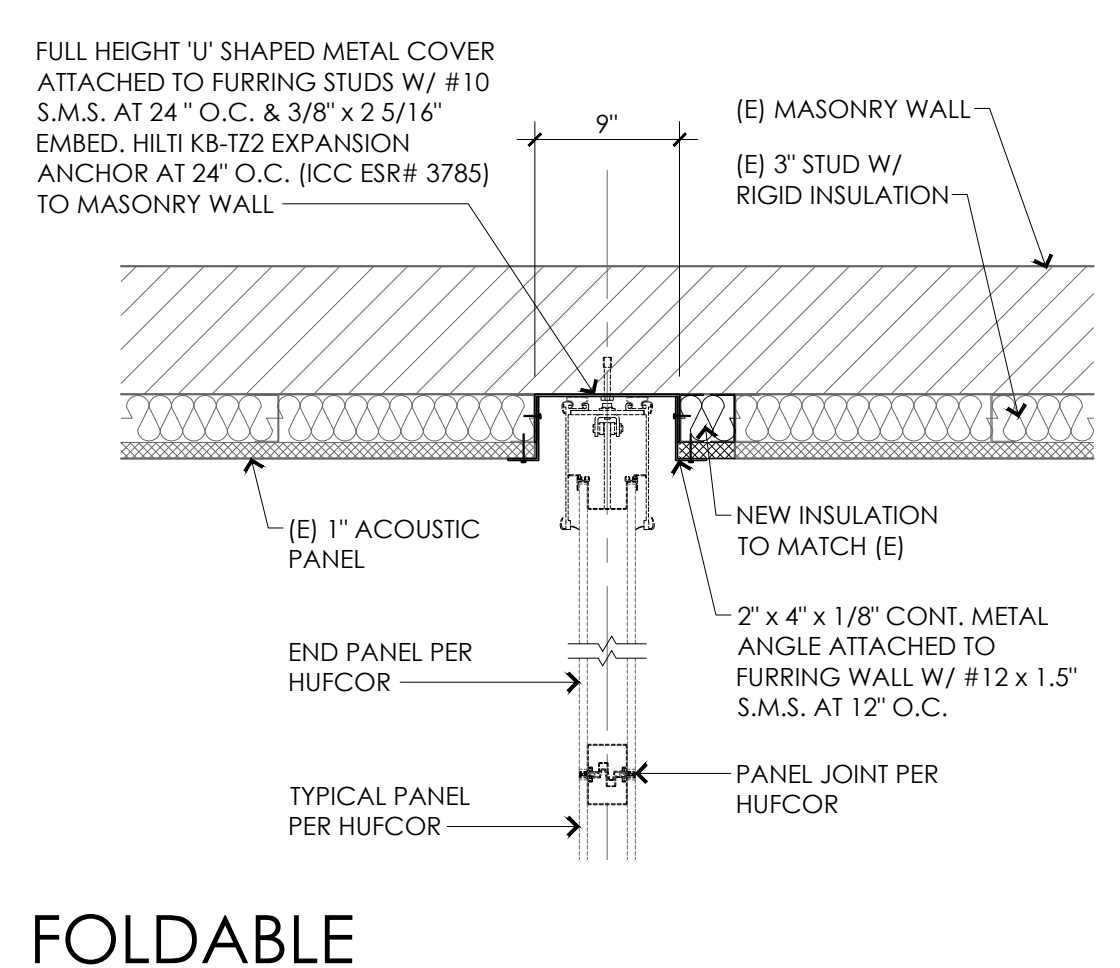
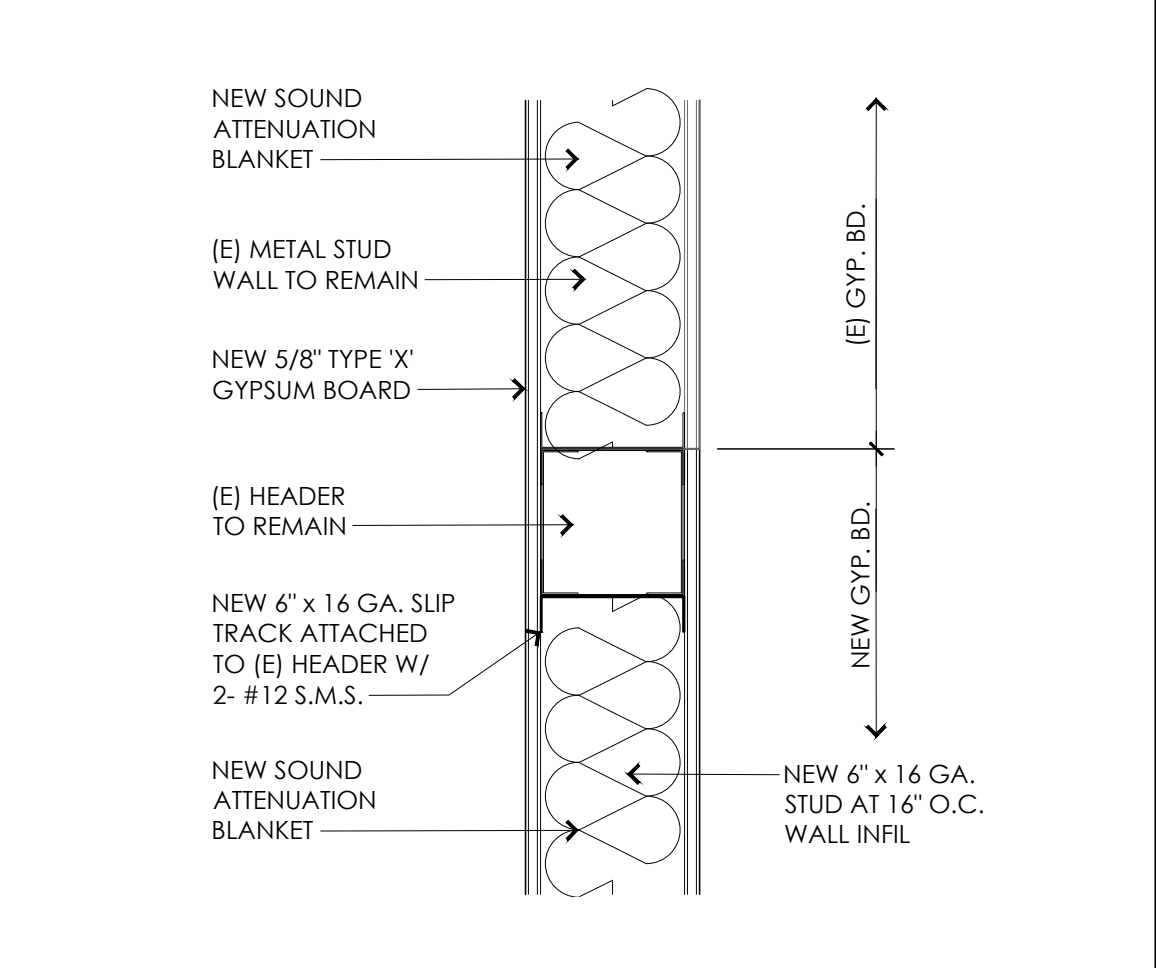
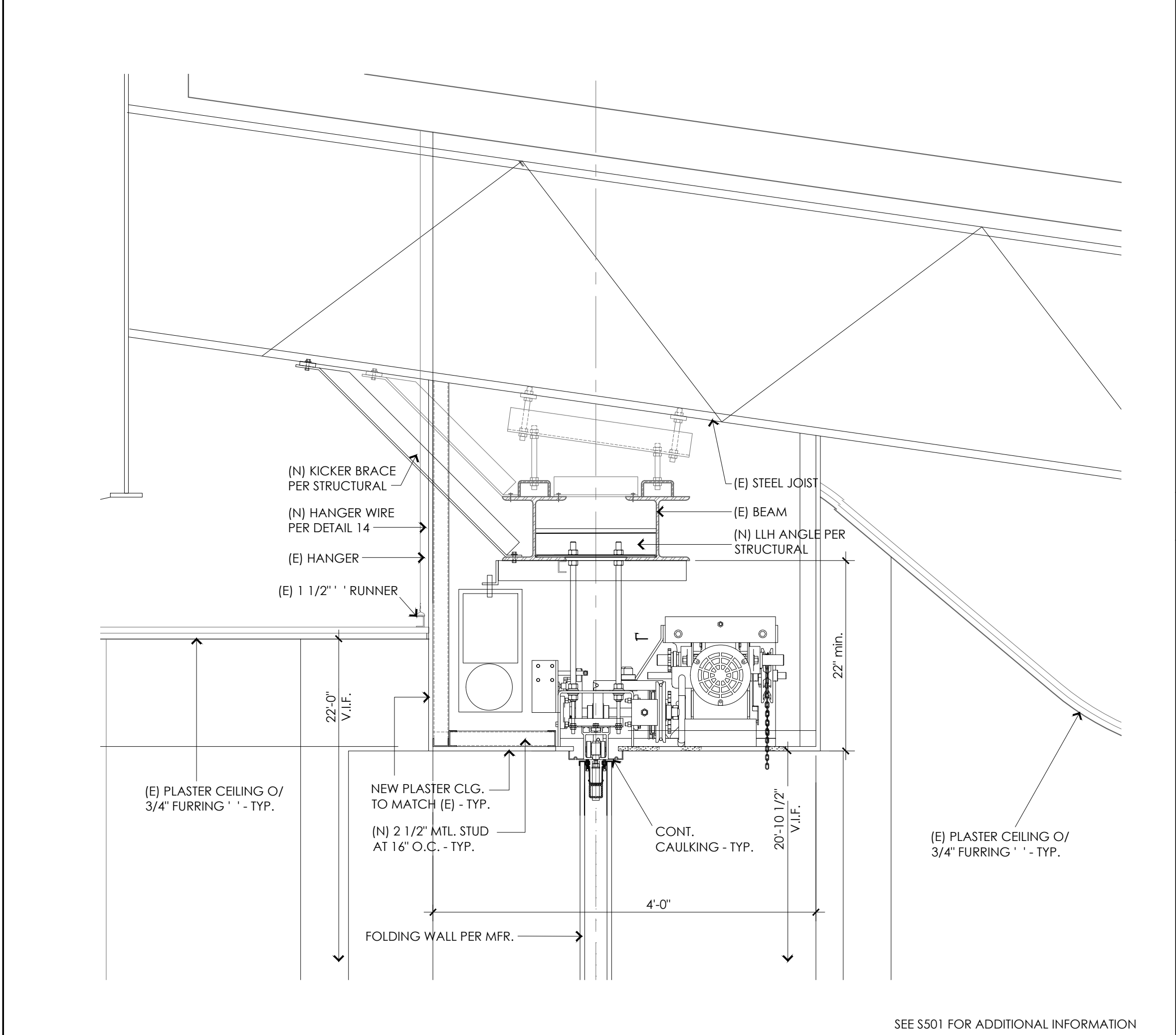
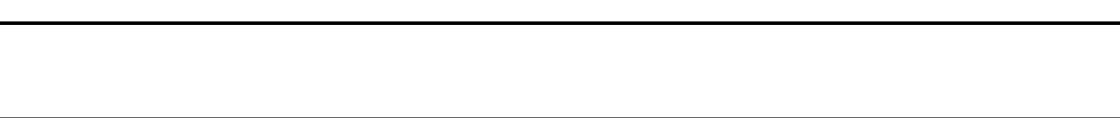
BID SET



- 1. CEILING SYSTEM GENERAL NOTES:**
- CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 & SECTION 5.1 OF ASTM E580-10c.
  - THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08. CEILING SYSTEMS, THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:
  - MANUFACTURER'S NAME: ARMSTRONG WORLD INDUSTRIES, INC. PRODUCT EVALUATION REPORT TYPE & NUMBER: ESR-1308 MANUFACTURER'S MODEL NUMBER - MAIN RUNNER: 7301 MANUFACTURER'S CATALOG NUMBER - CROSS RUNNER: XL7341.
- 2. MATERIALS:**
- CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641-09a. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER & MINIMUM TENSILE STRENGTH OF 70 KSI.
  - GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD & TRACK COMPRESSION STRUT/POST) SHALL CONFORM TO ASTM A653-11 OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2012, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/52-12). MATERIAL 43 MIL (18 GAGE) & LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 53 KSI. MATERIAL 54 MIL (16 GAGE) & HEAVIER SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 50 KSI.
- 3. ATTACHMENT OF HANGER & BRACING WIRES:**
- SEPARATE ALL CEILING HANGER & BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
  - HANGER & BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, CONDUIT & EQUIPMENT.
  - HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.
  - SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION & TESTING REQUIREMENTS.
  - HANGER & BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS & ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE. SCREW EYES IN WOOD MUST BE INSTALLED SO THEY ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.
- 4. FASTENERS & WELDING:**
- SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513-10, ASME B18.6.4-89 (R2005). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
  - EXPANSION ANCHORS SHALL BE: HILTI KWIK BOLT T22 ESR REPORT #4266.
  - POWER-ACTUATED FASTENERS SHALL BE: HILTI ANCHOR PER (ESR #1663).
  - IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER.
  - POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES. CONCRETE REINFORCEMENT & PRESTRESSING TENDONS SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO INSTALLING POST-INSTALLED ANCHOR. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES.
- 5. TESTING: ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR**
- POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10%. POWER ACTUATED FASTENER IN CONCRETE SHALL BE FIELD TESTED FOR 200 LBS. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1910A.5.
  - POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50% IN ACCORDANCE WITH CBC SECTION 1910A.5.



**SUSPENDED CEILING NOTES**



**NEW FOLDABLE WALL SYSTEM HEAD**

**CEMENT PLASTER CEILING**

**CHASE WALL END**

**NEW TO (E) WALL CONN.**

ARCHITECT

**westbergwhite**  
architecture

1775 HANCOCK ST. SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX

CONSULTANT

City of Carson  
Community Center

801 East Carson st., Carson, CA. 90745

DETAILS

City of Carson  
Community Center  
Folding Wall Panels

801 East Carson st., Carson, CA. 90745

PROJECT NO.: 21011  
R.S. A.P.  
FILE NAME  
DATE: 06-01-2021 DRAWN CHECKED  
REVISIONS R1-07-27-2021 SHEET NO.  
A104 OF SHEETS

BID SET



## STRUCTURAL SHEET INDEX

010101-0001

SHEET NUMBER	SHEET NAME
S001	GENERAL NOTES
S002	GENERAL MATERIAL NOTES
S201	ROOF FRAMING PLAN
S401	ENLARGED PLAN
S501	STRUCTURAL DETAILS
S502	TYPICAL STRUCTURAL STEEL DETAILS
S503	TYPICAL COLD-FORMED STEEL DETAILS

## ABBREVIATIONS

010101-0002

AB	ANCHOR BOLT	HSS	HOLLOW STRUCTURAL STEEL
ABV	ABOVE	HT	HEIGHT
ADDL	ADDITIONAL	ID	INSIDE DIAMETER
ADJ	ADJACENT	IF	INSIDE FACE
AFF	ABOVE FINISH FLOOR	IN	INCH
ALT	ALTERNATE	INT	INTERIOR
ARCH	ARCHITECT(URAL)	IOR	INSPECTOR OF RECORD
BLDG	BUILDING	JST	JOIST
BLK	BLOCK	JT	JOINT
BLKG	BLOCKING	KLF	KIPS PER LINEAR FOOT
BLW	BELOW	KSF	KIPS PER SQUARE FOOT
BM	BEAM	KSI	KIPS PER SQUARE INCH
BN	BOUNDARY NAILING	L	ANGLE
B.O.	BOTTOM OF	LFRS	LATERAL FORCE RESISTING SYSTEM
BOTT	BOTTOM	LH	LONG LEG HORIZONTAL
BRB	BUCKLING-RESTRAINED BRACE	LLV	LONG LEG VERTICAL
BRG	BEARING	LONG	LONGITUDINAL
BS	BOTH SIDES	LP	LOW POINT
BTWN	BETWEEN	LS	LAP SPLICE
C	CAMBER	LWC	LIGHT WEIGHT CONCRETE
CG	CENTER OF GRAVITY	MAX	MAXIMUM
CIP	CAST IN PLACE	MB	MACHINE BOLT
CJ	CONTROL/CONSTRUCTION JOINT	MECH	MECHANICAL
CJP	COMPLETE JOINT PENETRATION	MFR	MANUFACTURER
CL	CENTERLINE	MIN	MINIMUM
CLG	CEILING	MTL	METAL
CLR	CLEAR	(N)	NEW
CMU	CONCRETE MASONRY UNIT	NA	NEUTRAL AXIS
COL	COLUMN	NS	NEAR SIDE OR NON-SHRINK
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	NWC	NORMAL WEIGHT CONCRETE
CONT	CONTINUOUS	OC	ON CENTER
CSK	COUNTERSINK, COUNTERSUNK	O.D.	OUTSIDE DIAMETER
CTR(D)	CENTER(ED)	O.F.	OUTSIDE FACE
D <sub>a</sub> , D <sub>b</sub>	BAR OR BOLT DIAMETER	OH	OPPOSITE HAND
DBL	DOUBLE	OPN	OPENING
DEMO	DEMOLITION	PDF	POWDER/POWER DRIVEN FASTENER
DET	DETAIL	PJ	PANEL JOINT
DIAM	DIAMETER	PJP	PARTIAL JOINT PENETRATION
DIAG	DIAGONAL	PL	PLATE
DIM	DIMENSION	PL(S)	PLACE(S)
DIR	DIRECTION	PLF	POUNDS PER LINEAR FOOT
DO	DITTO	PLYWD	PLYWOOD
DWG	DRAWING	PREFAB	PREFABRICATED
(E)	EXISTING	PSF	POUNDS PER SQUARE FOOT
EA	EACH	PSI	POUNDS PER SQUARE INCH
EF	EACH FACE	PT	PRESSURE TREATED OR
EJ	EXPANSION JOINT		POST TENSION
EMBED	EMBEDMENT	QTY	QUANTITY
ELEC	ELECTRICAL	RAD, R	RADIUS
ELEV	ELEVATION OR ELEVATOR	REF	REFERENCE
EN	EDGE NAILING	REIN	REINFORCING
E.O.	EDGE OF	REQD	REQUIRED
EOR	ENGINEER OF RECORD	(S)	"SIMPSON" STRONG TIE CO. OR "USP"
EQ	EQUAL	W	W/EQUIVALENT ICC VALUES
EQUIP	EQUIPMENT	SB	SILL BOLT
ES	EACH SIDE OR EDGE SCREW	SC	SAW CUT OR SLIP CRITICAL
EW	EACH WAY	SCHED	SCHEDULE
EXP	EXPANSION	SEOR	STRUCTURAL ENGINEER OF RECORD
EXT	EXTERIOR	SHTG	SHATHING
FIN	FINISH	SIM	SIMILAR
FLG	FLANGE	SMS	SHEET METAL SCREW
FLR	FLOOR	SN	SILL NAIL
FN	FIELD NAILING	SOG	SLAB ON GRADE
FND	FOUNDATION	SQ	SQUARE
F.O.	FACE OF	SS	STAINLESS STEEL
FS	FAR SIDE OR FIELD SCREW	STD	STANDARD
FRMG	FRAMING	STGRD	STAGGERED
FRP	FIBER REINFORCED POLYMER	STIFF	STIFFENER
FT	FOOT OR FEET	STL	STEEL
FTG	FOOTING	STRUCT	STRUCTURAL
G	GIRDER	T&B	TOP & BOTTOM
GA	GAGE	THK	THICK
GALV	GALVANIZED	THRD	THREADED
GB	GRADE BEAM	T.O.	TOP OF
GC	GENERAL CONTRACTOR	TRANS	TRANSVERSE
GLB	GLUED-LAMINATED BEAM	TYP	TYPICAL
HAB	HEADED ANCHOR BOLT	UNO	UNLESS NOTED OTHERWISE
HD	HOLD-DOWN	VERT	VERTICAL
HDR	HEADER	VIF	VERIFY IN FIELD
HGR	HANGER	W	WITH
HK	HOOK	W/O	WITHOUT
HORIZ	HORIZONTAL	WF, W	WIDE FLANGE
HP	HIGH POINT	WLD	WELDED
HS	HIGH STRENGTH	WO	WHERE OCCURS
HSB	HIGH STRENGTH BOLT	WP	WORK POINT
		WT	WEIGHT
		WWF	WELDED WIRE FABRIC

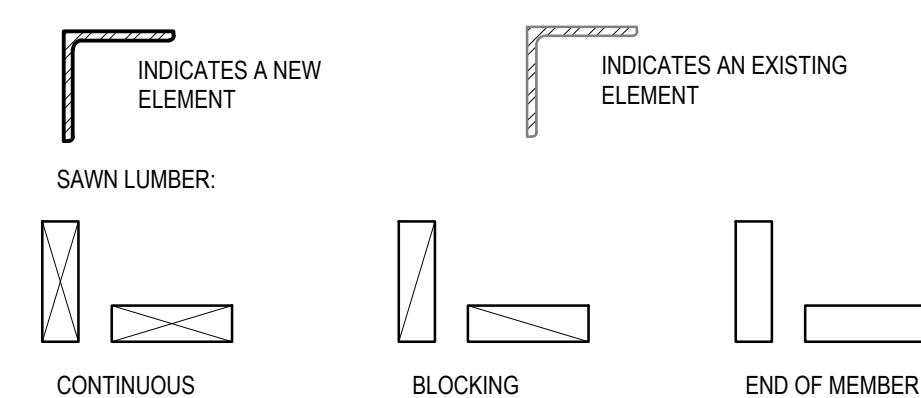
⊕ = REFERENCE ELEVATION OR WORK POINT

INDICATES THAT A DETAIL OR PORTION OF FRAMING IS A PART OF THE LATERAL FORCE RESISTING SYSTEM AND IS SUBJECT TO ADDITIONAL REQUIREMENTS OUTLINED IN THE GENERAL NOTES AND SPECIFICATIONS

TYPICAL HATCH PATTERNS USED (UNLESS NOTED OTHERWISE):

	CONCRETE		STEEL		SOIL/ EARTH
	MASONRY		GROUT/SAND		PLYWOOD/SHEATHING

EXISTING ELEMENTS ARE SHOWN AS HALFTONE, NEW ELEMENTS ARE SHOWN AS FULL TONE UNO, EXAMPLE:



## STRUCTURAL OBSERVATIONS

010101-0003

- VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, SEOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE. VISUAL OBSERVATIONS SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE SPECIAL INSPECTION REQUIREMENTS.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE SEOR AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR OBSERVATION A MINIMUM OF FIVE BUSINESS DAYS IN ADVANCE.
- THE FOLLOWING MAJOR PHASES OF CONSTRUCTION REQUIRE A SITE VISIT AND STRUCTURAL OBSERVATION REPORT FROM THE SEOR.
  - COMPLETION OF THE STRUCTURAL SYSTEM
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NAILING, REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ON-SITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.
- AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVERS' KNOWLEDGE, HAVE NOT BEEN RESOLVED.

## STRUCTURAL SUBMITTALS

010101-0004

- REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY THE EOR IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE EOR (ALLOW FOR A REVIEW DURATION OF 10 BUSINESS DAYS), AND SHALL CONSIST OF ELECTRONIC FILES.
- REPRODUCTION OF STRUCTURAL PLANS AND DETAILS FOR SHOP DRAWINGS IS PROHIBITED. SUBCONTRACTOR/FABRICATOR IS TO PROVIDE INDEPENDENTLY CREATED DRAWINGS BASED ON THE STRUCTURAL PLANS AND DETAILS. SHOP DRAWINGS THAT ARE REPRODUCTIONS OF STRUCTURAL DRAWINGS WILL NOT BE REVIEWED.
- EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTORS STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.
- THE FOLLOWING LIST SUMMARIZES REQUIRED STRUCTURAL SUBMITTALS FOR THIS PROJECT. REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST AND ADDITIONAL REQUIREMENTS.

### GENERAL

- QUALIFICATION DATA FOR APPROVED INSTALLERS AND FABRICATORS
- CERTIFICATES OF CONFORMANCE FOR PREFABRICATED MEMBERS
- SEISMIC JOINT AND EXPANSION JOINT COVER PRODUCT DATA

### CONCRETE REINFORCEMENT

- MANUFACTURER'S PRODUCT DATA, SPECIFICATIONS AND INSTALLATION PROCEDURES FOR PROPRIETARY MATERIALS AND REINFORCEMENT
- STEEL PRODUCER'S CERTIFICATES OF MILL ANALYSIS, TENSILE AND BEND TESTS
- SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT CAST-IN-PLACE CONCRETE

### CAST-IN-PLACE CONCRETE

- DESIGN MIX FOR EACH CONCRETE MIX
- MATERIAL TEST REPORTS
- MATERIAL CERTIFICATES FOR CEMENT, AGGREGATES AND ADMIXTURES
- SHOP DRAWINGS FOR PROPOSED LOCATIONS OF ADDITIONAL CONSTRUCTION OR CONTROL JOINTS NOT SHOWN ON THE STRUCTURAL PLANS
- MINUTES FROM PREINSTALLATION CONFERENCE

### STRUCTURAL STEEL

- MANUFACTURER'S MILL CERTIFICATES
- MILL TEST REPORTS
- SHOP DRAWINGS FOR FABRICATION AND ASSEMBLY OF MEMBERS
- ERECTION PLAN SEQUENCE AND PROCEDURES
- WELDING PROCEDURE SPECIFICATIONS (WPS)
- CERTIFICATES FOR ALL WELDERS VERIFYING CURRENT AWS QUALIFICATIONS
- TEST REPORTS FOR SHOP AND FIELD WELDED AND BOLTED CONNECTIONS

## STATEMENT OF SPECIAL INSPECTIONS

010101-0005

- THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVED FABRICATORS MUST SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFFSITE FABRICATIONS SUCH AS STRUCTURAL STEEL, PRECAST CONCRETE, GLUED LAMINATED TIMBER, ETC.
- ALL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT SPECIAL INSPECTORS. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OR BUILDING OFFICIAL DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS BY A SPECIAL INSPECTOR.
- ALL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND EOR. THE FINAL REPORTS BY THE SPECIAL INSPECTOR(S) MUST CERTIFY THAT THE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.
- IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE INSPECTIONS ARE PERFORMED.
- WORK REQUIRING SPECIAL INSPECTION SHALL BE INSPECTED BY THE SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS PERFORMED AND AT THE COMPLETION OF WORK. CONTINUOUS (CONT.) INSPECTION CONSISTS OF FULL-TIME INSPECTION; PERIODIC INSPECTION CONSISTS OF PART-TIME OR INTERMITTENT INSPECTION.
- AT A MINIMUM, ALL SPECIAL INSPECTIONS REQUIRED BY THE BUILDING CODE SHALL BE PROVIDED. THE FOLLOWING SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIAL. THIS LIST IS NOT INTENDED TO BE ALL INCLUSIVE.

### STRUCTURAL CONCRETE

PERIODIC: INSPECTION OF REINFORCING STEEL AND PLACEMENT  
 CONT: INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE

PERIODIC: VERIFY USE OF REQUIRED DESIGN MIX  
 CONT: SAMPLING FRESH CONCRETE AND PERFORMING SLUMP AND AIR CONTENT TESTS, AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS

CONT: INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES

PERIODIC: INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUE

PERIODIC: VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS

PERIODIC: INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED

PERIODIC: POST-INSTALLED AND ADHESIVE ANCHORS

STRUCTURAL STEEL  
 PERIODIC: HIGH-STRENGTH BOLTS, NUTS, AND WASHERS IDENTIFICATION MARKINGS TO CONFORM TO SPECIFIED ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS

PERIODIC: HIGH-STRENGTH BOLT BEARING-TYPE CONNECTIONS

PERIODIC: STRUCTURAL STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS

PERIODIC: STRUCTURAL STEEL MANUFACTURER'S CERTIFIED MILL TEST REPORTS

REFER TO AISC 360 CHAPTER N FOR MORE INFORMATION ON REQUIRED INSPECTIONS RELATED TO STEEL CONSTRUCTION.

### WELDING

CONT: COMPLETE AND PARTIAL PENETRATION GROOVE WELDS

CONT: FILLET WELDS > 5/16" AND MULTIPASS FILLET WELDS

PERIODIC: FILLET WELDS < 5/16"

PERIODIC: METAL DECK WELDS

PERIODIC: LIGHT GAUGE METAL WELDS

PERIODIC: WELD FILLER MATERIAL IDENTIFICATION MARKINGS TO CONFORM TO AWS STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS, MANUFACTURER'S CERTIFICATION OF COMPLIANCE REQUIRED

CONT: WELDING OF REINFORCING STEEL RESISTING SEISMIC FORCES, INDICATED ON PLANS AND DETAILS AS LFRS ELEMENTS OR CONNECTIONS

PERIODIC: VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706

CONT: WELDING OF STIRRUPS, HOOPS OR TIES

CONT: REINFORCING STEEL WELDS IN CMU

PERIODIC: ALL OTHER REINFORCING STEEL WELDS, UNO

### COLD-FORMED STEEL FRAMING

PERIODIC: SCREW ATTACHMENT, BOLTING, AND ANCHORING OF STRAPS, HOLD-DOWNS, BRACES, DRAG STRUTS, ROOF, WALLS AND FLOORS

### NON-STRUCTURAL COMPONENTS

PERIODIC: ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS, AND INTERIOR AND EXTERIOR VENEER GREATER THAN 30' HEIGHTS, EXTERIOR WALLS GREATER THAN 5 PSF, AND INTERIOR WALLS MORE THAN 15 PSF

PERIODIC: ANCHORAGE OF ELECTRICAL EQUIPMENT

## EXISTING CONDITIONS

010101-0006

- SEE "AS BUILT" DRAWINGS FOR EXISTING BUILDING ITEMS NOT SHOWN OR NOTED.
- FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION OF STRUCTURAL ELEMENTS.
- WHERE EXISTING CONDITIONS VARY FROM THOSE SHOWN ON THESE DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO SUBJECT CONDITIONS.
- SHORE ALL EXISTING CONSTRUCTION AS REQUIRED, INCLUDING WHERE WELDING TO EXISTING STEEL FRAMING. SHORING DESIGN IS BY OTHERS.
- ALL EXISTING CONCRETE SURFACES TO BE IN CONTACT WITH NEW CONCRETE SHALL BE CLEANED AND ROUGHENED TO 1/4" MINIMUM AMPLITUDE. USE THIRD PARTY EVALUATION APPROVED BONDING AGENT ON EXISTING CONCRETE PRIOR TO PLACING NEW CONCRETE.
- VERIFY LOCATION OF EXISTING REBAR BEFORE FABRICATION USING NON-DESTRUCTIVE TESTING.
- THE GENERAL CONTRACTOR SHALL COORDINATE THE WEIGHT AND SPECIFIC LOCATION OF ALL EQUIPMENT WITH THE STRUCTURAL FRAMING. IF THE EQUIPMENT DEVIATES IN WEIGHT OR LOCATION FROM THOSE INDICATED IN THE DRAWINGS, THE STRUCTURAL ENGINEER'S APPROVAL MUST BE OBTAINED PRIOR TO INSTALLATION OF THE UNITS.
- ALL EXISTING WOOD FRAMING MEMBERS SUPPORTING NEW MECHANICAL UNITS SHALL BE INSPECTED FOR DAMAGE AND DETERIORATION PRIOR TO INSTALLATION OF THE UNITS. NOTIFY THE STRUCTURAL ENGINEER IF DAMAGE OR DETERIORATION IS DISCOVERED.

## GENERAL

010101-0007

- REFER TO THE TYPICAL DETAIL SHEETS FOR TYPICAL DETAILS OF CONSTRUCTION. TYPICAL DETAILS APPLY TO ALL CONSTRUCTION UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. WHERE CONDITIONS REQUIRE MODIFICATIONS OF A TYPICAL DETAIL, THE CONTRACTOR SHALL SUBMIT MODIFIED DETAIL FOR APPROVAL BY THE SEOR PRIOR TO FABRICATION AND INSTALLATION. DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE OF SAME NATURE AS THOSE SHOWN FOR SIMILAR CONSTRUCTION.
- CONTRACTOR SHALL CONSIDER THE PROJECT SPECIFICATIONS AS PART OF THE CONTRACT DOCUMENTS. WHERE INFORMATION IS CONFLICTING, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS WHICH SHALL GOVERN OVER GENERAL NOTES WHICH SHALL GOVERN OVER SPECIFICATIONS.
- ALL INSPECTIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT OF RECORD OR SEOR. ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. DIMENSIONS ARE TO THE FACE OF STUDS, AND TO THE CENTERLINE OF COLUMNS UNO.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SEOR OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER DRAWINGS, OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON DRAWINGS, PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOT ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE SCOPE THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR SEOR SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.
- SUBSTITUTION REQUESTS FOR MATERIALS AND PRODUCTS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS AND PRODUCTS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE SEOR DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE EOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL OR PRODUCT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ARCHITECT, SEOR, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
- ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).
- CONSTRUCTION MATERIALS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT LOADS DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO FABRICATION. REFER TO THE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS AND SUBMITTALS. REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY THE SEOR IS FOR GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. THE CONTRACTOR WILL REMAIN RESPONSIBLE FOR ALL ERRORS OF DETAILING AND FABRICATION, AND FOR CORRECT FITTINGS OF ALL STRUCTURAL MEMBERS, INCLUDING COORDINATION WITH OTHER TRADES. SHOP DRAWINGS AND SUBMITTALS DO NOT CONSTITUTE CHANGE ORDERS. ANY PROPOSED CHANGES TO THE STRUCTURAL DOCUMENTS MUST BE SUBMITTED IN WRITING AS A REQUEST FOR SUBSTITUTION TO THE ARCHITECT AND SEOR FOR APPROVAL.
- CORE DRILLS SHALL NOT CUT ANY REINFORCING. THE CONTRACTOR IS TO COORDINATE WORK OF ALL TRADES TO ENSURE COMPLIANCE. ALL CORE DRILLS ARE TO BE PRESENTED TO THE INSPECTOR OF RECORD (IOR) FOR VERIFICATION. THE IOR IS TO DOCUMENT CORES EXAMINED INDICATING AN ABSENCE OF REINFORCING.
- STRUCTURAL JOINT DIMENSIONS SHOWN ON PLANS (EXPANSION, SEISMIC, SEPARATION, ETC (WHERE OCCURS) INDICATE THE MINIMUM CLEAR DISTANCE REQUIRED. SEE PLANS, DETAILS, AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

## STRUCTURAL DESIGN CRITERIA

010101-0001

- CODES: ALL NEW WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2019 EDITION (TITLE 24, PART 2), INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE. THE PURPOSE OF THIS CODE IS TO, IN PART, ESTABLISH THE MINIMUM REQUIREMENTS TO SAFEGUARD THE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE THROUGH STRUCTURAL STRENGTH AND STABILITY. STRUCTURES DESIGNED IN ACCORDANCE WITH THE CODE ARE LIKELY TO HAVE A LOW PROBABILITY OF COLLAPSE BUT MAY SUFFER SERIOUS STRUCTURAL AND NON-STRUCTURAL DAMAGE IF SUBJECTED TO THE DESIGN EARTHQUAKE.

2. GRAVITY	
LIVE LOADS (REDUCIBLE, UNO)	
ROOF, UNIFORM	20 PSF
3. RISK CATEGORY	
	III
4. SEISMIC	
IMPORTANCE FACTOR I <sub>s</sub>	1.25
SITE CLASS	
	D
SEISMIC DESIGN CATEGORY	
	D
S <sub>0</sub>	1.716
S <sub>1</sub>	0.619
S <sub>0S</sub>	1.373
ANALYSIS PROCEDURE	
	EQUIVALENT LATERAL FORCE PROCEDURE
5. WIND	
EXPOSURE CATEGORY	
	C
BASIC WIND SPEED (3 SECOND GUST)	
	Vult = 101 MPH
INTERNAL PRESSURE COEFFICIENT, GC <sub>pi</sub>	
	+/-0.18

ARCHITECT

**westbergwhite**  
**architecture**  
 1775 HANCOCK ST, SUITE 120  
 SAN DIEGO, CA 92110  
 619.542.1188 619.542.1663 FAX

CONSULTANT



**miyamoto.**

5151 Shoreham Place, Suite 280 San Diego, CA 92122 M2110070.00  
 T: (619) 457-3001 myamotointernational.com

City of Carson  
 Community Center  
 AV - Lighting Systems

801 East Carson St. Carson, CA. 90745

GENERAL NOTES

PROJECT NO.: 21011

R.S. A.P.

FILE NAME  
 DATE: 06-30-2021 DRAWN  
 CHECKED

REVISIONS SHEET NO.

S001

OF SHEETS



**STRUCTURAL STEEL**

03300-000

- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) AS CONTAINED IN THE "AISC MANUAL OF STEEL CONSTRUCTION". ALL WORK SHALL BE IN CONFORMANCE WITH THE TESTING, INSPECTION, QUALIFICATION, AND QUALITY ASSURANCE PROVISIONS AS REQUIRED BY THE BUILDING CODE AND ANY APPLICABLE STANDARDS. THESE STANDARDS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", AWS D1.1 "STRUCTURAL WELDING CODE - STEEL", AWS D1.8 "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT", AND RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". CONFORMANCE TO SUPPLEMENTS TO THESE STANDARDS, IF PUBLISHED ON OR BEFORE THE DATE OF PERMIT ISSUANCE, IS ALSO REQUIRED. ALTHOUGH THESE CONTRACT DOCUMENTS INCLUDE GENERAL REFERENCES TO CODES AND STANDARDS, AND REFERENCES TO OR INCLUSIONS OF SPECIFIED PROVISIONS, OMISSIONS OF ANY APPLICABLE CODE, STANDARD, OR PROVISION DOES NOT RELIEVE THE GENERAL CONTRACTOR FROM COMPLIANCE TO THE APPLICABLE REQUIREMENTS. COORDINATION OF QUALITY CONTROL AND QUALITY ASSURANCE IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

- ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.

- STRUCTURAL STEEL MATERIALS/GRADES, UNO:

SHAPE	MATERIAL/GRADE
WIDE FLANGE & TEES	ASTM A992
PLATES, ANGLES, CHANNELS, THREADED RODS (UNO)	ASTM A36
HIGH-STRENGTH PLATE	ASTM A572, GRADE 50
SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (Fy = 50 KSI) OR ASTM A1085
ROUND HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (Fy = 46 KSI) OR ASTM A1085
PIPES	ASTM A53 TYPE E OR S, GRADE B (Fy = 35 KSI)
MACHINE BOLTS (MB)	ASTM A307
WELDED HEADED STUDS	ASTM A108
THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 55

- EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE HIGH-STRENGTH BOLTS.
  - WHERE WELDING TO GRADE 55 THREADED ANCHOR RODS IS REQUIRED, USE ASTM F1554 GRADE 55 WITH SUPPLEMENT S1.
- ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION" AND SHALL BE SUBMITTED ON SHOP DRAWINGS FOR REVIEW BY SEOR PRIOR TO FABRICATION.
  - ALL WELDED HEADED STUDS, THREADED STUDS, AND DEFORMED BARS SHALL BE NELSON, OR EQUIVALENT, AND WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY CERTIFIED WELDERS SO AS TO FULLY DEVELOP THE TENSILE CAPACITY OF THE CONNECTOR.
  - BOLTS WITH UPSET THREADS ARE NOT ALLOWED. USE THE APPROPRIATE NUT AND WASHER TYPE FOR THE SPECIFIED BOLT.
  - ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR.
  - BEAMS NOT SPECIFIED WITH CAMBER SHALL HAVE MILL CAMBER PLACED IN UPWARD POSITION.
  - ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS A WEATHERPROOF COATING IS SPECIFIED BY THE ARCHITECT, UNO. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. GALVANIZED SURFACES SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE REPAIRED AS NECESSARY. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
  - SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS.
  - WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS REQUIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON DRAWINGS.
  - DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT APPROVAL OF THE EOR.
  - PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASEPLATES AND ALLOW TO CURE UNTIL SPECIFIED STRENGTH IS REACHED BEFORE APPLYING LOADS.
  - WHERE AN HSS OR PIPE SECTION IS INSTALLED IN AN EXTERIOR CONDITION, PROVIDE CAP PLATE EACH END WITH SEAL WELD ALL AROUND.

**WELDING**

03300-000

- WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO AWS AND AISC REQUIREMENTS.
- ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.
- PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE EOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH THE APPLICABLE AWS.
- WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 USING E70XX ELECTRODES UNLESS OTHERWISE NOTED.
- ALL FULL PENETRATION WELDS SHALL BE ULTRA-SONIC TESTED PER AWS D1.1 AND D1.8 REQUIREMENTS AS APPLICABLE.
- ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS, UNO. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
- ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
- FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE BID.
- ALL SPECIFIED FILLET WELD SIZES ARE MINIMUM SIZES. INCREASE WELDS TO AISC MINIMUM SIZES BASED ON THICKNESSES OF MATERIALS JOINED.

**REINFORCING STEEL**

03300-000

- REINFORCING GRADES FOR CONCRETE AND MASONRY:

ALL BARS UNLESS NOTED OTHERWISE	ASTM A615 OR A706, GRADE 60
TIES AND STIRRUPS	ASTM A615 OR A706, GRADE 60
WELDED WIRE FABRIC	ASTM A1064
ALL BARS TO BE WELDED	ASTM A706, GRADE 60

- ALL BARS SHALL BE DEFORMED.

- MAINTAIN CONCRETE COVER FROM FACE OF CONCRETE TO EDGE OF ALL REINFORCEMENT AS FOLLOWS (UNO), THE INTENT IS FOR REINFORCEMENT TO BE PLACED SO THAT IT IS AS CLOSE TO CONCRETE SURFACES AS POSSIBLE, WITHIN SPECIFIED TOLERANCES, WHILE MAINTAINING THIS MINIMUM PROTECTION. PROVIDE THE LARGEST COVER REQUIRED FOR ALL APPLICABLE CONDITIONS. WHERE #3 STIRRUPS OR TIES ARE USED, ENSURE THAT THE COVER FOR LONGITUDINAL BARS IS ADEQUATE.

CONDITION	COVER
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED AND EXPOSED TO EARTH OR WEATHER	
#6 BARS AND LARGER	2"
#5 BARS AND SMALLER	1 1/2"
UNEXPOSED RAISED SLABS AND WALL FACES (#11 BARS AND SMALLER)	3/4"
UNEXPOSED COLUMNS AND BEAMS	1 1/2"
STRUCTURAL SLABS ON GRADE	
FROM BOTTOM OF SLAB	2"
FROM TOP OF SLAB	1 1/2"
OTHER CONCRETE NOT EXPOSED TO WEATHER OR EARTH FOR #11 BARS AND SMALLER	3/4"

- "CLEAR" OR "CLR" INDICATES DISTANCE BETWEEN SURFACES AND DOES NOT INDICATE MINIMUM UNLESS SPECIFICALLY NOTED AS SUCH. CLEAR DISTANCES ARE SUBJECT TO TOLERANCES PER CRSI.
- REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE". EACH REINFORCING BAR SHALL BE WIRE TO A CROSS BAR AT A MAXIMUM SPACING OF 24"OC. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN POSITIONS SHOWN ON THE PLANS. DO NOT USE WOOD OR BRICK TO SUPPORT REINFORCING.
- SPLICES IN CONTINUOUS REINFORCEMENT IN WALLS, FOOTINGS, ETC. SHALL HAVE A CLASS "B" LAP (1'-8" MIN) AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRE TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE SPECIFICALLY DETAILED TO BE SEPARATED. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
- ALL DOWELS, ANCHOR BOLTS AND OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE PERFORMED DURING PLACEMENT OF CONCRETE.
- BEND REINFORCING BARS COLD. BARS MAY ONLY BE BENT ONCE.

- REINFORCEMENT SHALL BE FREE FROM MUD, OIL, DIRT, LOOSE RUST, MORTAR, PAINT, GREASE AND OTHER NON-METALLIC AGENTS THAT REDUCE BOND CAPACITY, BONDED RUST OR MILL SCALE IS ACCEPTABLE PROVIDED THE MINIMUM CROSS-SECTIONAL AREA (INCLUDING HEIGHT OF DEFORMATIONS) AND WEIGHT ARE MAINTAINED.
- DOWELS BETWEEN FOOTING AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE MAIN REINFORCING UNO.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE DURING INSPECTION.
- CHAIRS OR SPACERS FOR REINFORCING SHALL BE PLASTIC WHEN RESTING ON EXPOSED SURFACES.
- WHERE LONGITUDINAL REINFORCING BARS ARE PLACED IN 2 OR MORE LAYERS, BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE BARS IN THE BOTTOM LAYER.
- ALL BENDS WITHIN STIRRUPS, HOOPS, AND CROSS-TIES SHALL ENGAGE A LONGITUDINAL BAR. PROVIDE #4 SPACER BAR WHERE A LONGITUDINAL BAR IS NOT SPECIFICALLY DETAILED.
- MECHANICAL BAR SPLICES (COUPLERS) MAY BE USED AT CONTRACTOR'S OPTION IN LIEU OF LAP APPROVED EQUAL. FOR THICK GROUT LAYERS FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE REQUIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL FOR BASE PLATES LARGER THAN 6 SQUARE FEET, USE HI-FLOW GROUT OR MASTERFLOW 928.
- MECHANICAL REINFORCING HEADED END ANCHORS MAY BE USED AT CONTRACTOR'S OPTION IN LIEU OF STANDARD 90 DEGREE HOOKS AS LISTED IN THE PRODUCT SCHEDULE, AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE REINFORCING HEADED END ANCHORS WHERE CONGESTION DOES NOT ALLOW HOOKED REBAR INSTALLATION.
- WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AMERICAN WELDING SOCIETY (AWS) D1.4 USING E80XX ELECTRODES FOR A615 REINFORCING AND E80XX ELECTRODES FOR A706 REINFORCING.
- (SPECIAL SYSTEMS) THE FOLLOWING REINFORCEMENT SHALL COMPLY WITH ASTM A706:
  - VERTICAL REINFORCEMENT AT INTERSECTIONS AND ENDS OF CONCRETE WALLS ENCLOSED IN TIES OR STIRRUPS.
  - LONGITUDINAL MOMENT FRAME REINFORCEMENT.

**HIGH-STRENGTH BOLTS**

03300-000

- JOINT ASSEMBLIES USING HIGH-STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AISC (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
- ALL HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325 OR A490, OR GRADE F1852, TYPE 1, W/ THREADS INCLUDED (N).
- NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM F436.
- PAINT IS PROHIBITED ON CONTACT SURFACES UNLESS NOTED OTHERWISE. CONTACT SURFACES OF BOLTED PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS, AND OTHER DEFECTS WHICH PREVENT SOLID SEATING OF PARTS.
- ALL HIGH-STRENGTH BOLTS SHALL BE TIGHTENED TO THE AISC SNUG TIGHT CONDITION UNLESS SPECIFIED AS SLIP-CRITICAL.
- BOLTS IN "X" CONNECTIONS SHALL HAVE THE THREADS EXCLUDED FROM THE SHEAR PLANE. BOLTS IN "N" CONNECTIONS MAY HAVE THE THREADS INCLUDED IN THE SHEAR PLANE. CONNECTION TYPES ARE INDICATED AFTER THE BOLT GRADE (A325X FOR EXAMPLE) HIGH-STRENGTH BOLTS ARE "N" BEARING CONNECTIONS, UNLESS NOTED OTHERWISE.
- SLIP-CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. SLIP-CRITICAL JOINT ASSEMBLIES SHALL BE FULLY PRE-TENSIONED BY TURN-OF-NUT TIGHTENING, TENSION CONTROL, CALIBRATED WRENCH TIGHTENING, TWIST-OFF BOLTS CONFORMING TO ASTM F3125 GRADE F1852, OR BY DIRECT TENSION INDICATOR TIGHTENING CONFORMING TO ASTM F959.

**STRUCTURAL CONCRETE**

03300-000

- CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318 AND ACI 301 AND PROJECT SPECIFICATIONS.
- CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE DOES NOT EXCEED SIX FEET. A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
- CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. LOCATIONS OF CONSTRUCTION JOINTS NOT SHOWN ON THESE PLANS SHALL BE SUBMITTED FOR APPROVAL TO THE SEOR PRIOR TO PLACING ANY CONCRETE.
- STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING DESIGN CRITERIA:

LOCATION	MIN 28-DAY COMP STRENGTH	CONC TYPE	MAX AGGREGATE SIZE	MAX W/C RATIO
FOUNDATION	3000 PSI	NWC	1 1/2"	0.55
INTERIOR SLAB ON GRADE NOT EXPOSED TO WEATHER OR RECEIVING FLOORING FINISH (#11 BARS AND SMALLER)	4000 PSI	NWC	1"	0.50
FILL OVER METAL DECK	3000 PSI	LWC	1"	0.50
ALL OTHER STRUCTURAL CONCRETE NOT NOTED ABOVE	3000 PSI	NWC	1"	0.50

- MAXIMUM AIR DRY UNIT WEIGHT OF LIGHTWEIGHT CONCRETE SHALL NOT EXCEED 115 PCF, UNLESS APPROVED BY EOR.
  - WHEN THE USE OF PLASTICIZER (ASTM C1017, TYPE I OR II) OR WATER REDUCER (ASTM C494, TYPE F OR G) IS USED, MAXIMUM SLUMP SHALL BE 4" PRIOR TO ADMIXTURE AND 8" INCLUDING ADMIXTURE AT THE POINT OF DELIVERY. IN THE ABSENCE OF PLASTICIZER AND WATER REDUCER, SLUMP AT THE POINT OF DELIVERY SHALL NOT EXCEED 4".
  - W/C RATIO INDICATES WATER TO CEMENTITIOUS MATERIALS RATIO.
  - FOR INTERIOR SLABS ON GRADE AND ALL OTHER SLABS RECEIVING ADHERED FLOORING FINISHES (I.E., GLOUED, ETC.), THE MAXIMUM W/C RATIO SHALL NOT EXCEED 0.46. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECEIVE FINISHES SHALL BE COMPATIBLE WITH TILE AND ADHESIVES OR GROUTS IN ACCORDANCE WITH MANUFACTURER'S DATA AND BE APPROVED BEFORE USE.
  - SLABS ON GRADE, TOPPING SLABS, AND ELEVATED CONCRETE FLOORS SHALL HAVE A MAXIMUM SHRINKAGE RATE OF 0.04% AT 28 DAYS PER ASTM C157 (CURING TEST SPECIMENS TO BE CONSISTENT WITH FIELD CONDITIONS), OR USING EMBEDDED VIBRATING WIRE STRAIN GAUGES. RESULTS OF TESTING SHALL BE SUBMITTED TO ENGINEER.
  - SEE ACI 318 FOR ADDITIONAL REQUIREMENTS REGARDING MAXIMUM AGGREGATE SIZE. AGGREGATE GRADATION OF 3/8" MAXIMUM (PEA GRAVEL) SHALL NOT BE USED WHERE FINISHED CONCRETE SURFACE IS EXPOSED TO VIEW.
- CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF THE BUILDING CODE AND SPECIFICATIONS. ALL CONCRETE MIXES SHALL BE DESIGNED PER ACI 318 BY A RECOGNIZED TESTING LAB STAMPED AND SIGNED BY A LICENSED ENGINEER AND SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
  - AGGREGATES IN NORMALWEIGHT CONCRETE SHALL CONFORM TO ASTM C33 (HARDROCK). AGGREGATES IN LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330.
  - COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE SEOR.
  - PORTLAND CEMENT SHALL BE TYPE II AND SHALL CONFORM TO ASTM C150, LOW ALKALI. MILL TESTS WITH CERTIFICATES OF COMPLIANCE SHALL BE SUBMITTED.
  - FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25% TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IF THE MIX DESIGN IS PROPORTIONED BY FIELD EXPERIENCE OR TRIAL MIXTURES.
  - CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
  - LEAN CONCRETE, WHERE SPECIFICALLY INDICATED, SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
  - DRYPACK OR NONSHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI, AND CONSIST OF MASTERFLOW 713, EUCON NS GROUT, Sika GROUT 212, OR APPROVED EQUAL. FOR THICK GROUT LAYERS FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE REQUIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL FOR BASE PLATES LARGER THAN 6 SQUARE FEET, USE HI-FLOW GROUT OR MASTERFLOW 928.
  - DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES.
  - WATER USED IN MIX SHALL BE CLEAN AND POTABLE.
  - PRIOR TO ERECTING ANY ELEMENTS THAT LOAD THE FOUNDATION, CONCRETE MUST REACH AN UNCONFINED COMPRESSIVE STRENGTH OF 2000 PSI MINIMUM AS DETERMINED BY TESTING OR PREVIOUSLY DOCUMENTED DATA FOR THE MIX DESIGN USED UNDER SIMILAR CONDITIONS, AND MUST CURE FOR A MINIMUM OF 3 DAYS.
  - MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY SEOR.
  - SEE ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, WALL OFFSETS, CHAMFERS, KERFS, DRIPS AND FOR EXTENT OF DEPRESSIONS, RAMPS, ETC.
  - PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS SHOWN ON THESE DRAWINGS. CORING IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE SEOR.
  - EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER OR 1/2" RADIUS TOOLED EDGE, UNO.
  - BEAM LONGITUDINAL BARS SHALL BE ON INSIDE FACE OF COLUMN VERTICAL BARS.

**FOUNDATIONS AND SLABS ON GRADE**

03300-000

- ALLOWABLE SOIL PRESSURES FOR NEW FOOTINGS CODE MIN:  
DEAD LOAD + LIVE LOAD ..... 1500 PSF  
DEAD LOAD + LIVE LOAD + LATERAL LOAD ..... 2000 PSF
- ALLOWABLE LATERAL SOIL BEARING PRESSURE PER FOOT OF DEPTH ..... 100 PSF
- DESIGN COEFFICIENT OF FRICTION FOR SLIDING ..... 0.25
- ALL TRENCHES SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS. FLOODING IS NOT PERMITTED.
- SEE ARCHITECT'S PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.
- CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING. THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
- THE SLAB ON GRADE IS NOT DESIGNED TO SUPPORT TRAFFIC FROM CRANES OR OTHER HEAVY CONSTRUCTION VEHICLES. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED CONCRETE SLABS.

**POST-INSTALLED ANCHORS AND DOWELS**

03300-000

- UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORS INTO HARDENED CONCRETE OR MASONRY, WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE/EPHOXY, SHOT-PISTON, SCREW AND UNDERCUT.
- INSTALL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI) EXCEPT AS OTHERWISE STATED IN THE SPECIFIED PRODUCT REPORTS. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT USE CORE DRILL BITS FOR ANCHOR HOLES WITHOUT PRIOR SEOR APPROVAL. COPIES OF INSTALLATION INSTRUCTIONS SHALL BE MAINTAINED ON SITE.
  - CLEAN OUT ANCHOR HOLES AND SET ANCHORS PER THE PRODUCT'S THIRD PARTY EVALUATION REPORT FOR THE APPROPRIATE CONDITIONS. INSTALL UNDER SUPERVISION OF THE SPECIAL INSPECTOR WHERE REQUIRED.
  - PROVIDE CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS STEEL TYPE 304 OR 316 AT EXTERIOR LOCATIONS AND DAMP INTERIOR LOCATIONS.
  - REINFORCING BARS TO RECEIVE CONCRETE COVER MAY BE UNCOATED.
  - ANCHORS SHALL BE CLEAN AND FREE OF DEBONDING SUBSTANCES.
  - EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "h<sub>ef</sub>" AS DEFINED IN THE PRODUCT REPORT. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.
  - EXISTING REINFORCING SHALL BE AVOIDED WHERE DRILLING FOR POST-INSTALLED ANCHORS OR CONCRETE DOWELS.
  - MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING CONDUIT AND POST-TENSIONING (WHERE OCCURS) PRIOR TO DRILLING, CORING, OR SHOOTING PINS INTO EXISTING CONCRETE OR MASONRY. USE NONDESTRUCTIVE TESTING TO LOCATE SUCH ITEMS.
  - WHERE THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE SEOR AND IOR.
  - FILL ABANDONED HOLES WITH NON-SHRINK GROUT OR EPOXY. CLEAR DISTANCE BETWEEN NEW HOLES AND ABANDONED HOLES SHALL BE 2" OR TWO ANCHOR DIAMETERS, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED BY SEOR. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.
  - INSTALL IN DRY CONCRETE OR MASONRY HAVING A MINIMUM AGE OF 21 DAYS.
  - RE-USE OF SCREW ANCHORS AND SCREW ANCHOR HOLES IS NOT PERMITTED.
  - AN ACI-CRSI CERTIFIED ADHESIVE ANCHOR INSTALLER IS REQUIRED FOR THE INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL AND OVERHEAD CONDITIONS.

ARCHITECT



CONSULTANT



**miyamoto.**

5151 Shoreham Place, Suite 280 San Diego, CA 92122 M2110070.00 T: (858) 457-3001 mryamotointernational.com

City of Carson  
 Community Center  
 AV - Lighting Systems  
 801 East Carson st, Carson, CA, 90745

GENERAL MATERIAL NOTES

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 06-30-2021	DRAWN CHECKED
REVISIONS	SHEET NO.
	<b>S002</b>
	OF SHEETS

BID SET

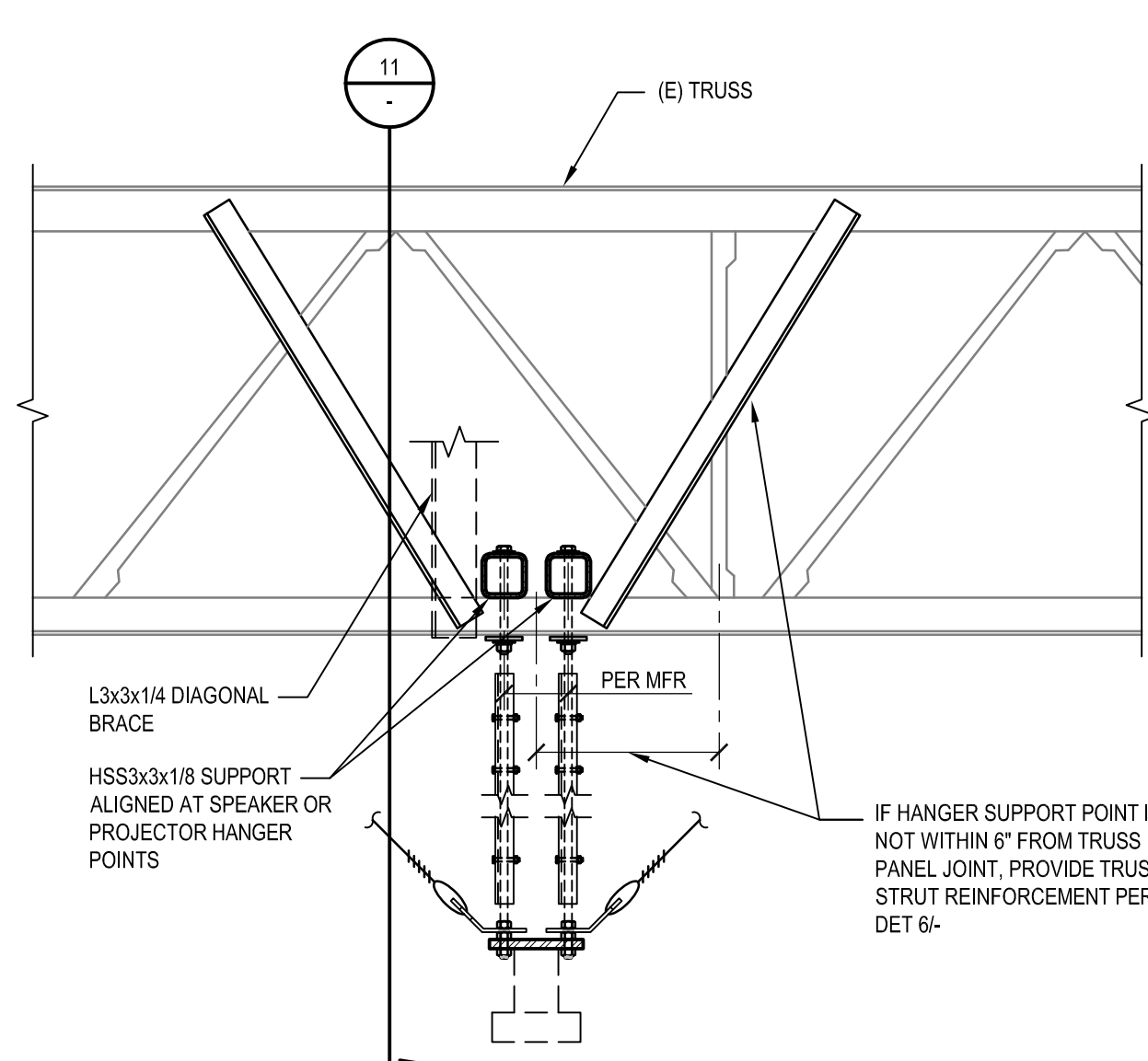




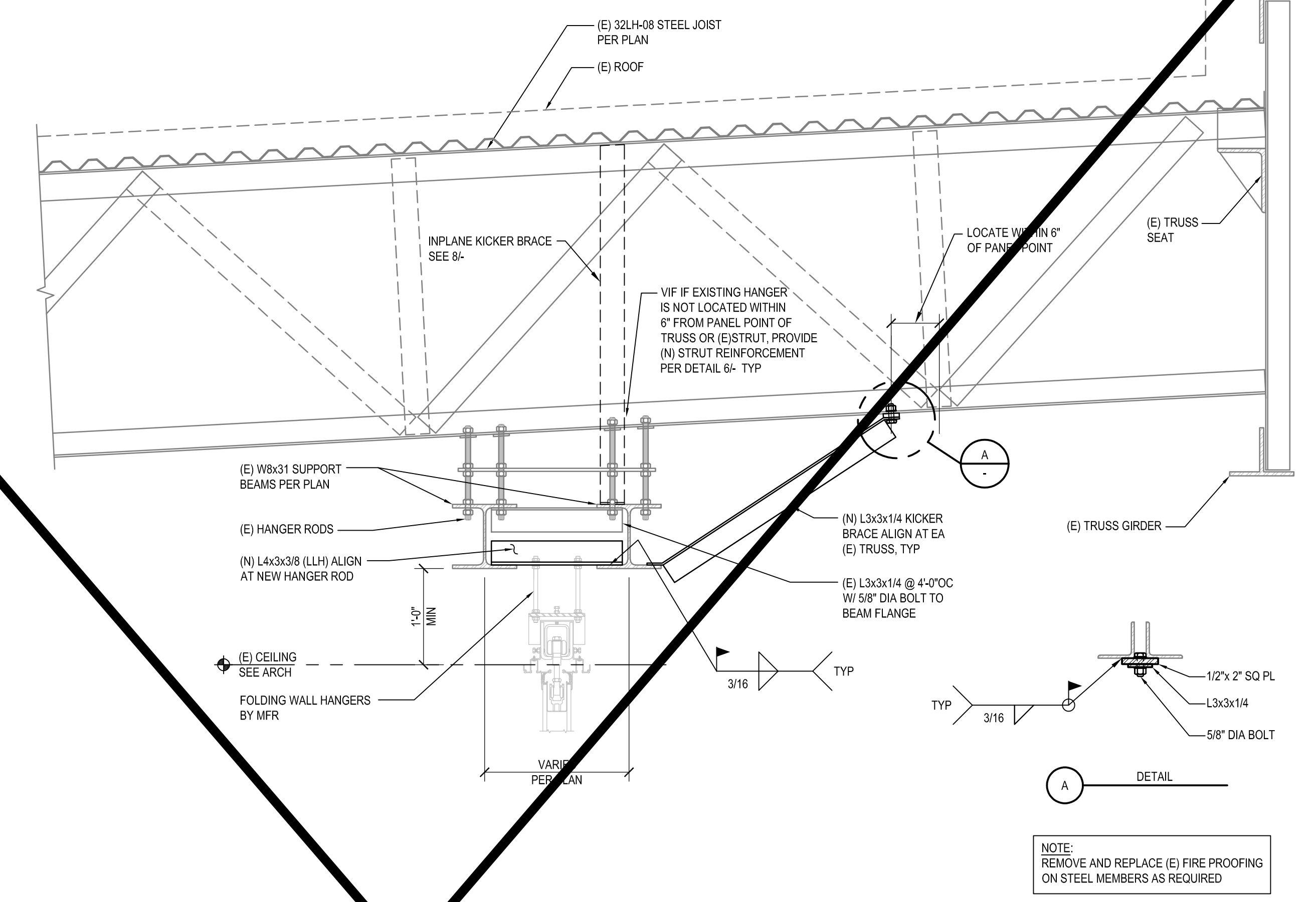




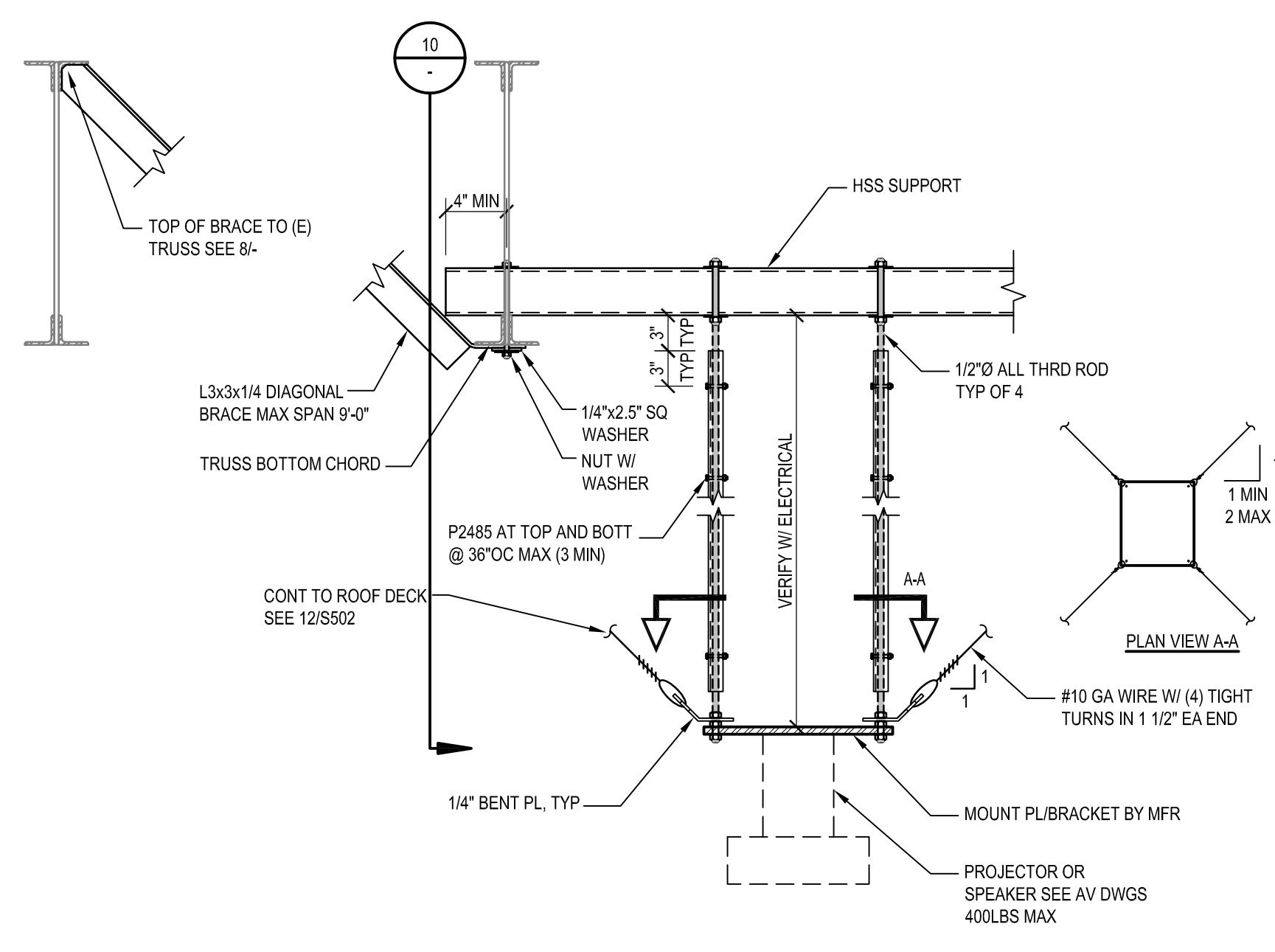




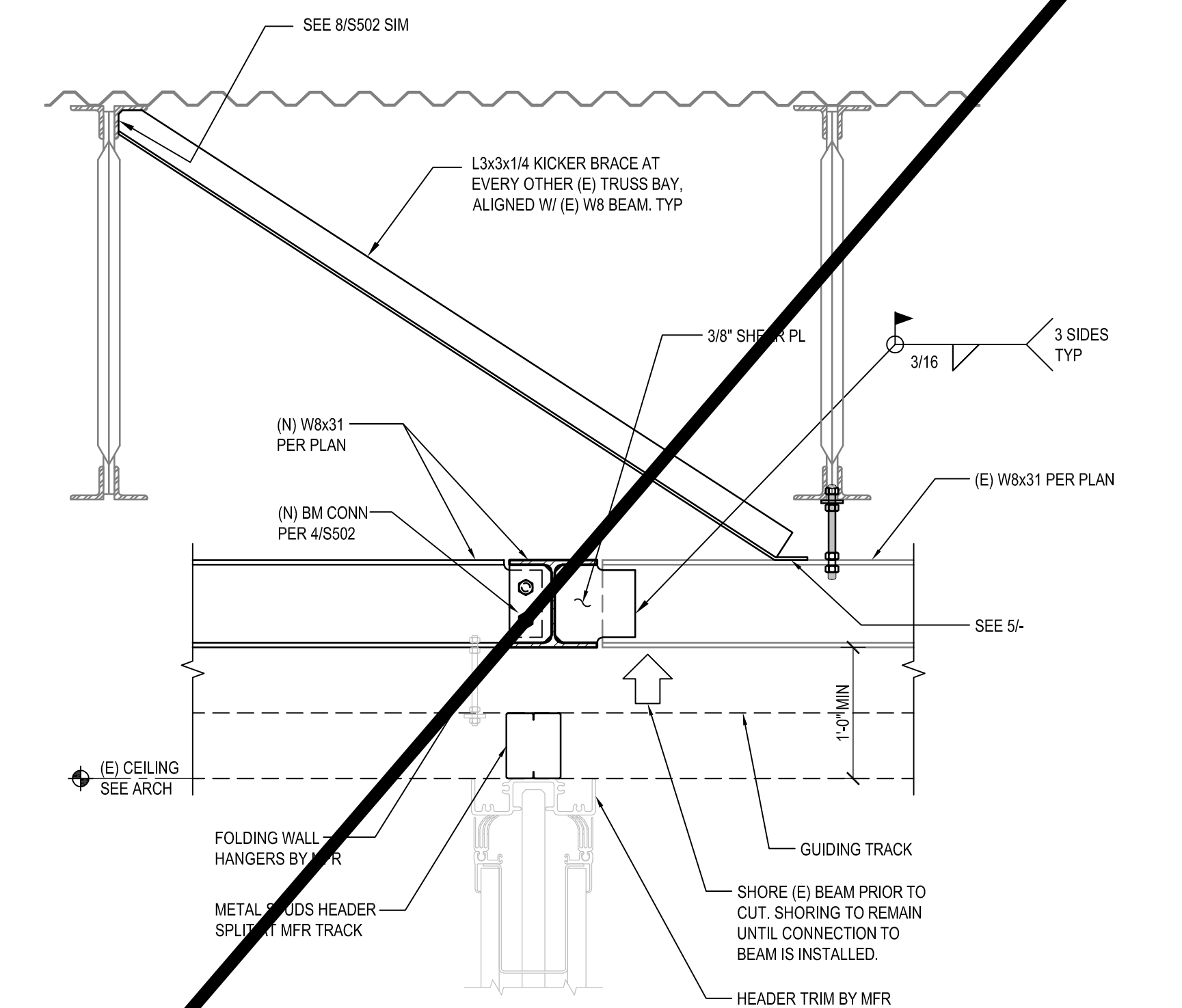
**10** SPEAKER AND PROJECTOR SUPPORT  
 N.T.S.



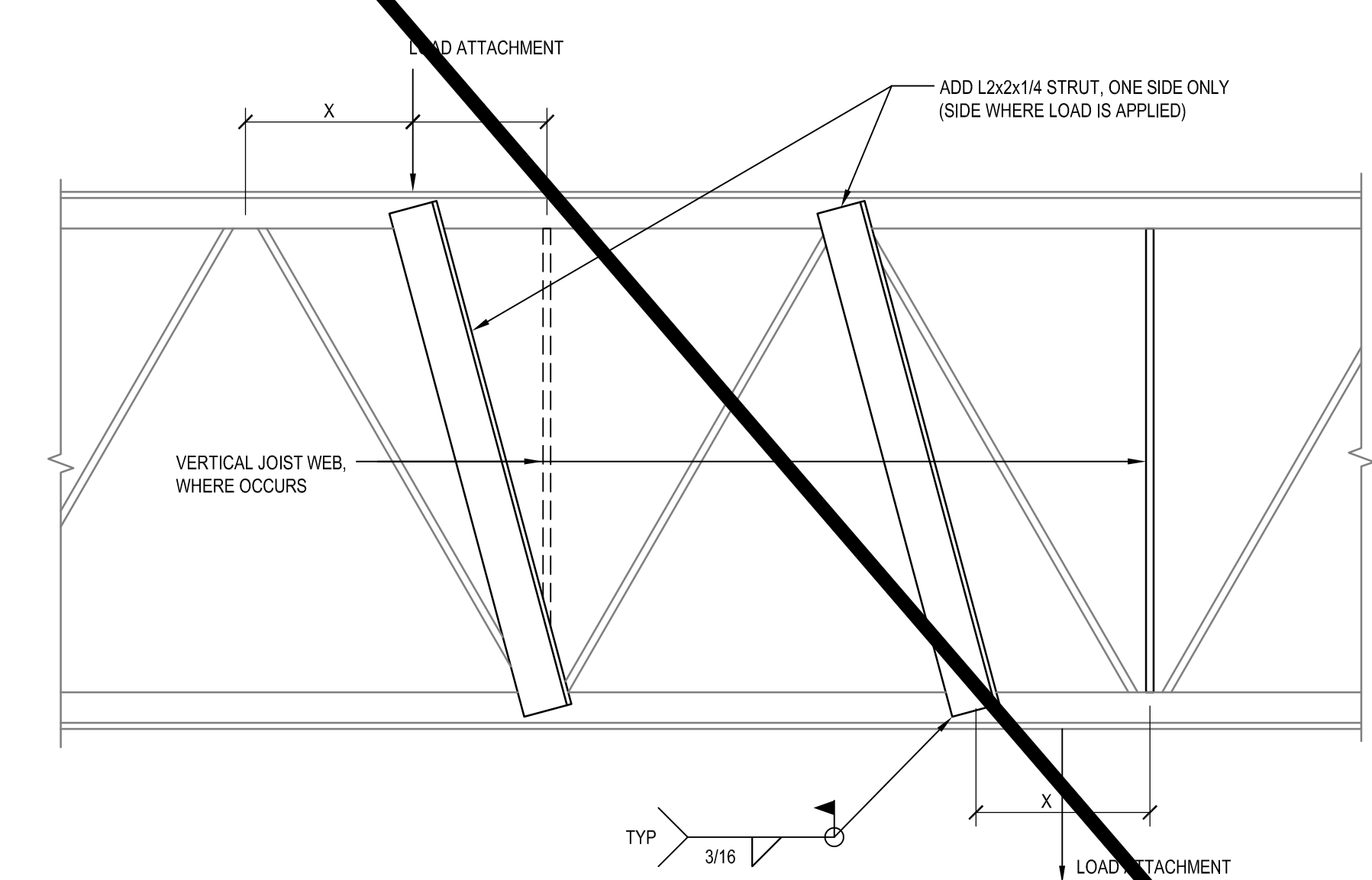
**5** TYPICAL SUSPENDED FOLDING PARTITION SECTION  
 1"=1'-0"



**11** SPEAKER AND PROJECTOR SUPPORT  
 N.T.S.



**8** SECTION  
 1"=1'-0"



- NOTES:
1. AN ADDITIONAL SUPPLEMENTAL STRUT MUST BE INSTALLED IN STEEL JOISTS AT ALL CONCENTRATED LOADS IN EXCESS OF 50 LBS. UNLESS THE LOAD ATTACHMENT IS AT A PANEL POINT OF THE JOIST.
  2. AN ADDITIONAL STRUT IS NOT REQUIRED IF "X" OR "Y" IS LESS THAN OR EQUAL TO 6\"
  3. CONCENTRATED LOADS GREATER THAN 250 LBS, WHICH ARE NOT SPECIFIED ON THE PLANS, ARE NOT PERMITTED WITHOUT REVIEW BY THE ENGINEER-OF-RECORD.

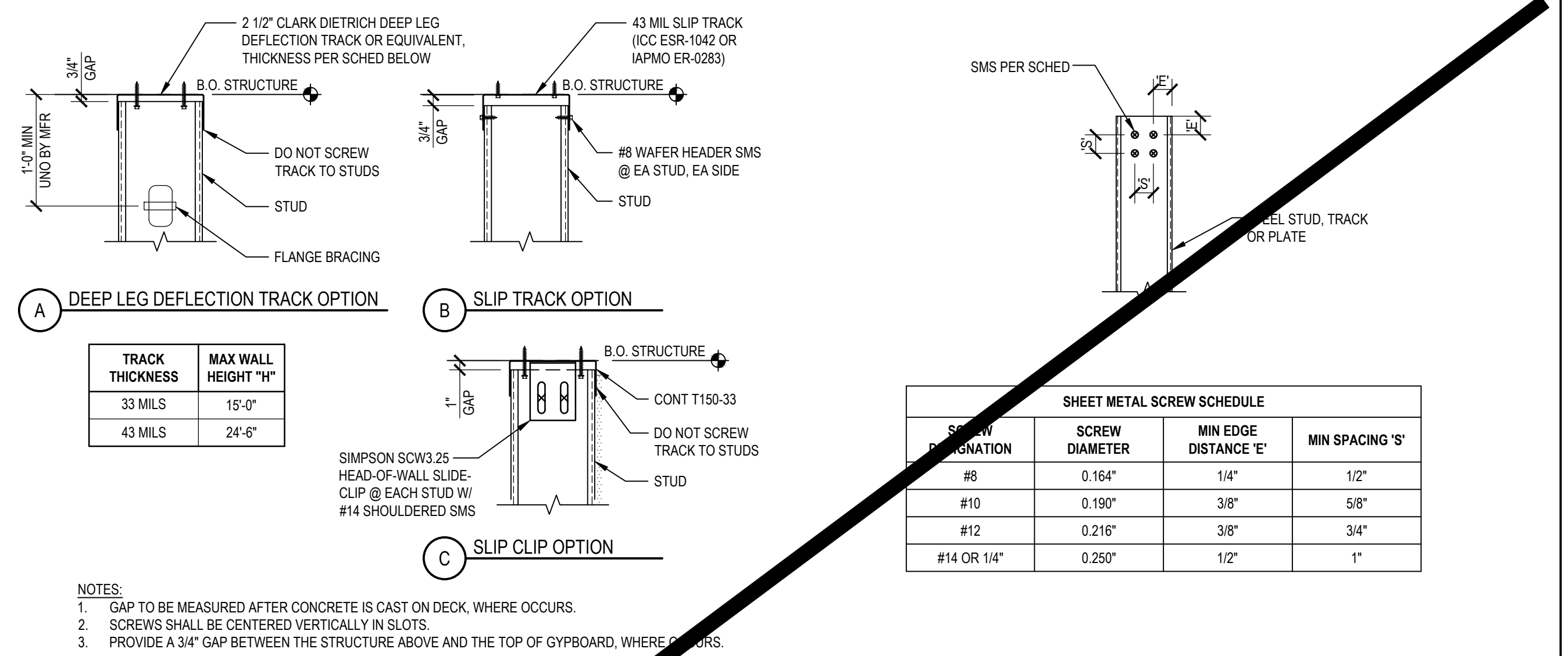
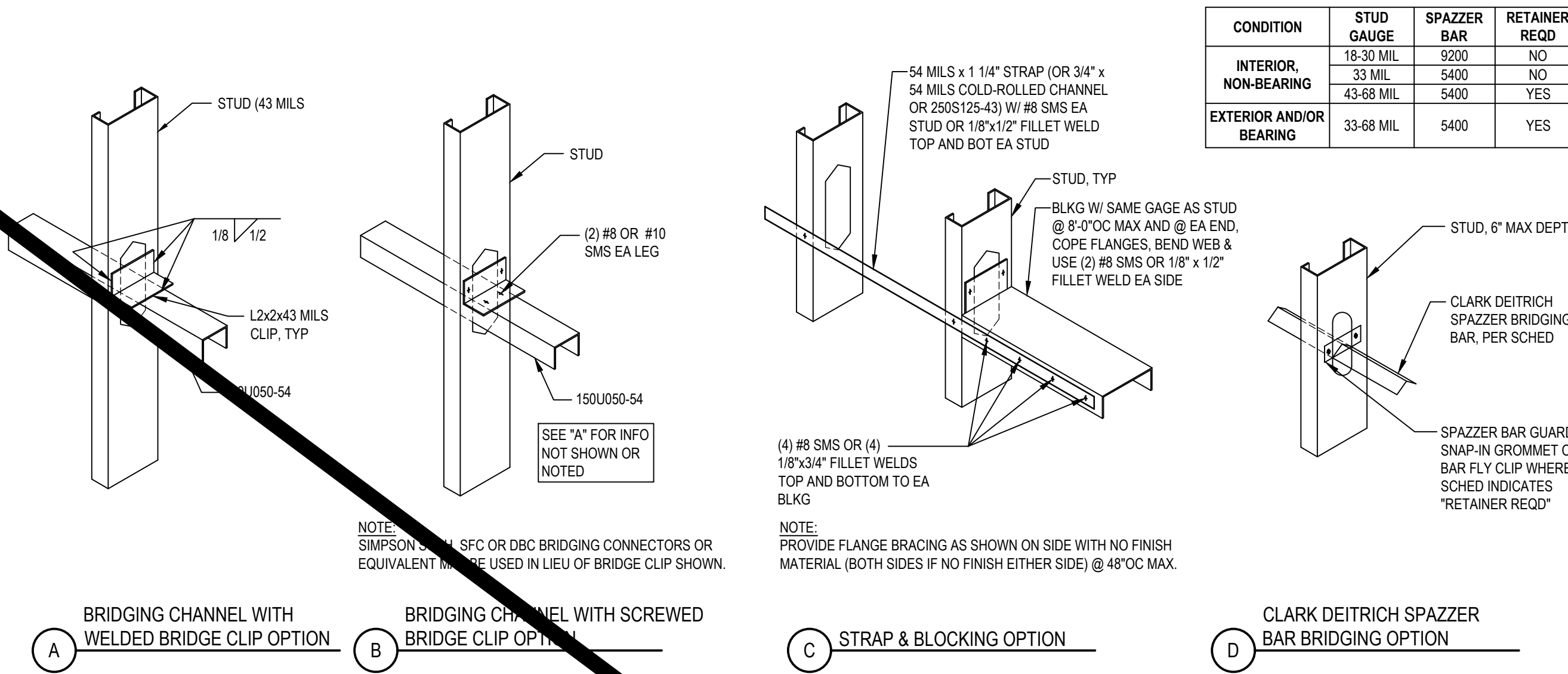
**6** TYPICAL JOIST ADDITIONAL STRUT / WEB DETAIL  
 N.T.S.







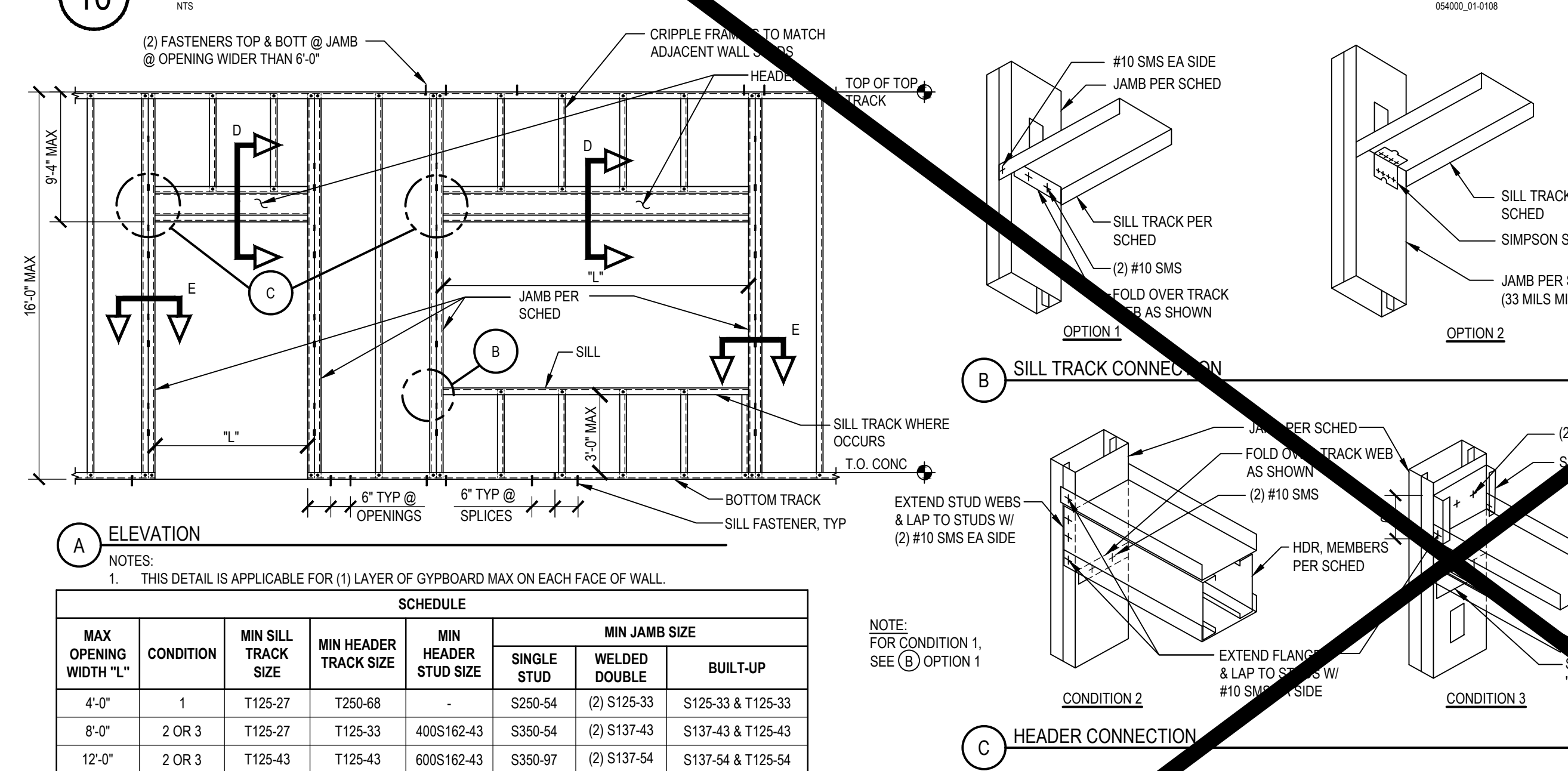
CONDITION	STUD GAUGE	SPAZZER BAR	RETAINER REOD
INTERIOR, NON-BEARING	18-30 MIL	9200	NO
	33 MIL	5400	NO
EXTERIOR AND/OR BEARING	43-68 MIL	5400	YES
	33-68 MIL	5400	YES



TRACK THICKNESS	MAX WALL HEIGHT "H"
33 MILS	15'-0"
43 MILS	24'-6"

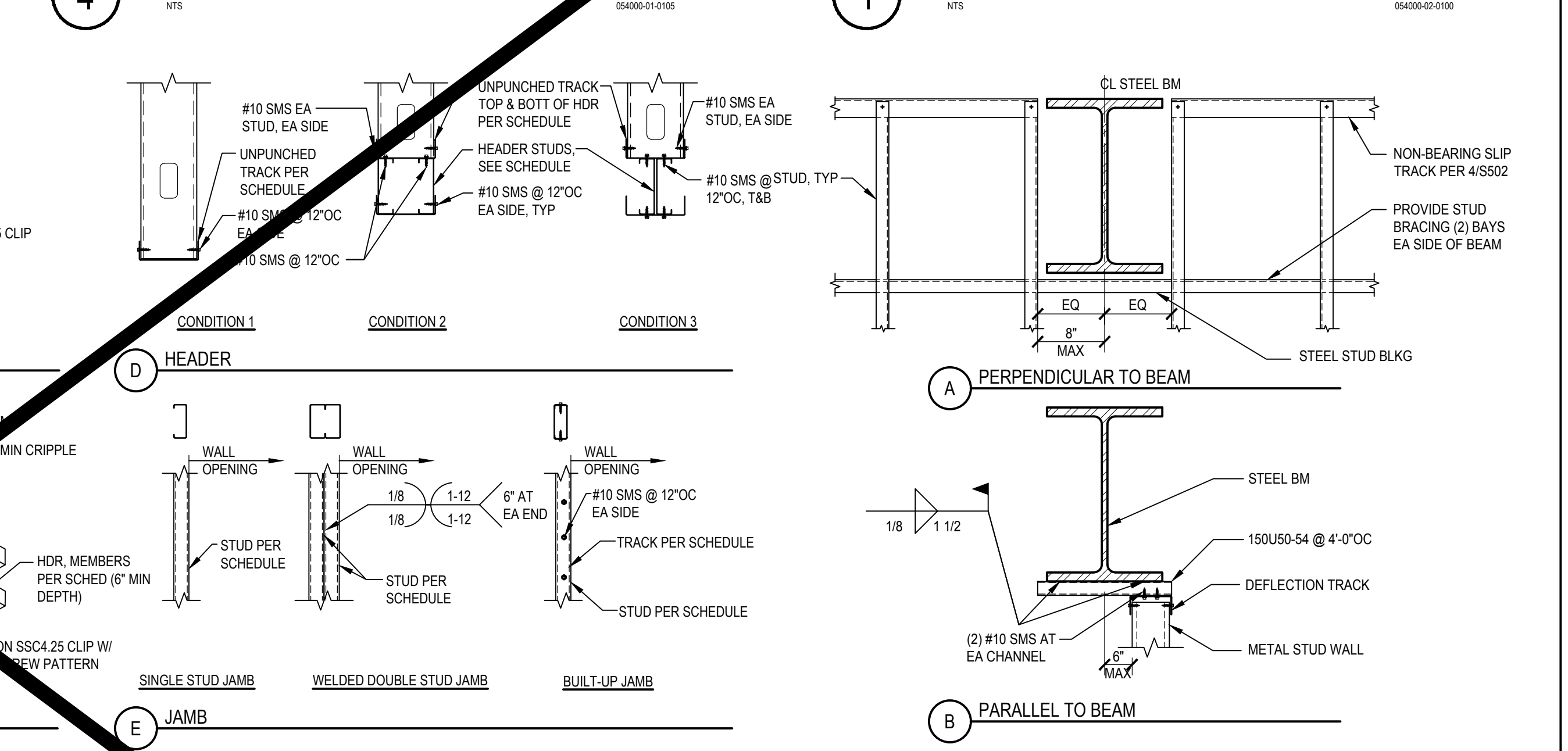
SHEET METAL SCREW SCHEDULE			
SCREW DESIGNATION	SCREW DIAMETER	MIN EDGE DISTANCE "E"	MIN SPACING "S"
#8	0.164"	1/4"	1/2"
#10	0.190"	3/8"	5/8"
#12	0.216"	3/8"	3/4"
#14 OR 1/4"	0.250"	1/2"	1"

**10 STEEL STUD FLANGE BRIDGING**

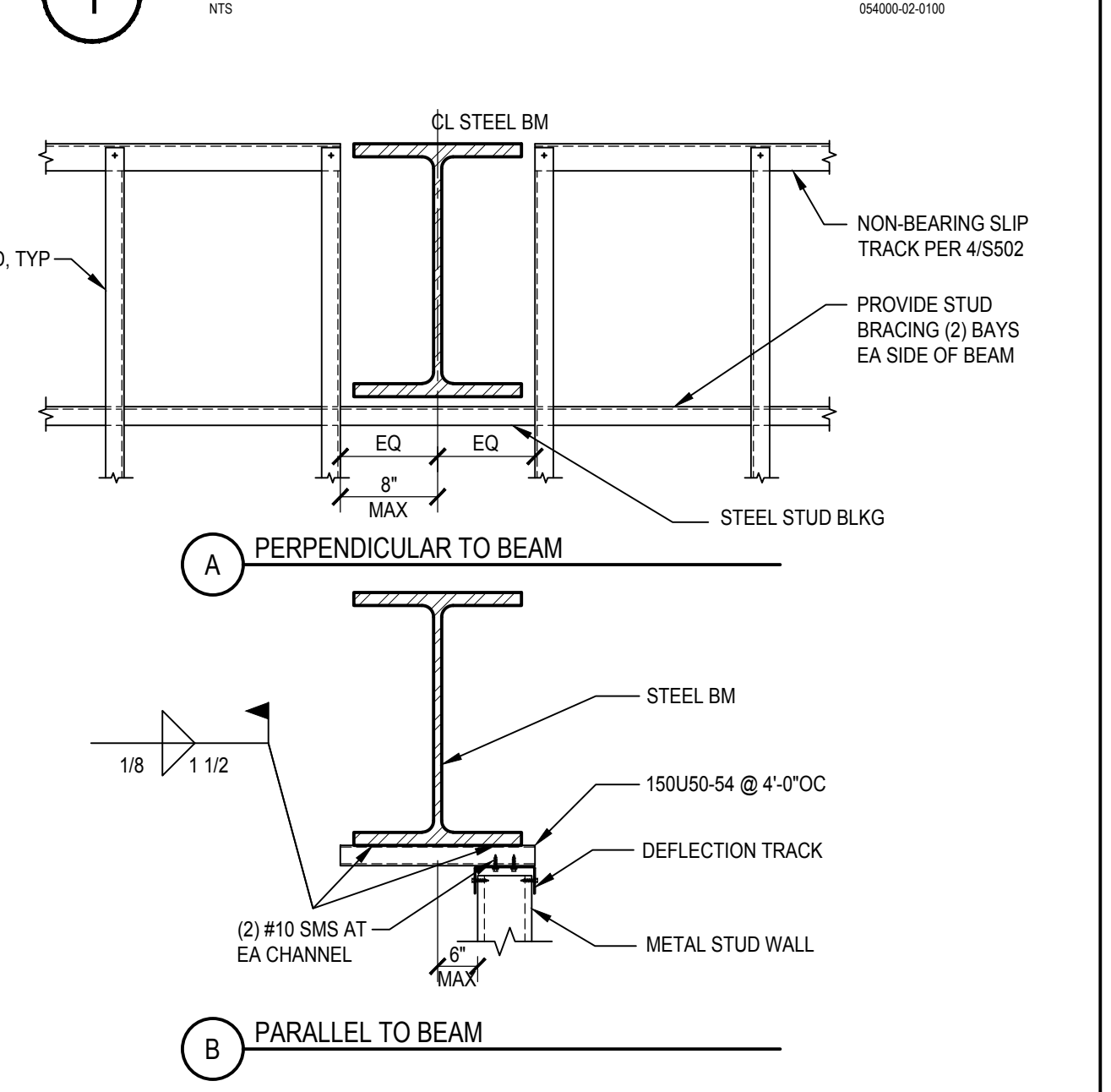


MAX OPENING WIDTH "L"	CONDITION	SCHEDULE			MIN JAMB SIZE		
		MIN SILL TRACK SIZE	MIN HEADER TRACK SIZE	MIN HEADER STUD SIZE	SINGLE STUD	WELDED DOUBLE	BUILT-UP
4'-0"	1	T125-27	T250-68	-	S250-54	(2) S125-33	S125-33 & T125-33
8'-0"	2 OR 3	T125-27	T125-33	400S162-43	S350-54	(2) S137-43	S137-43 & T125-43
12'-0"	2 OR 3	T125-43	T125-43	600S162-43	S350-97	(2) S137-54	S137-54 & T125-54

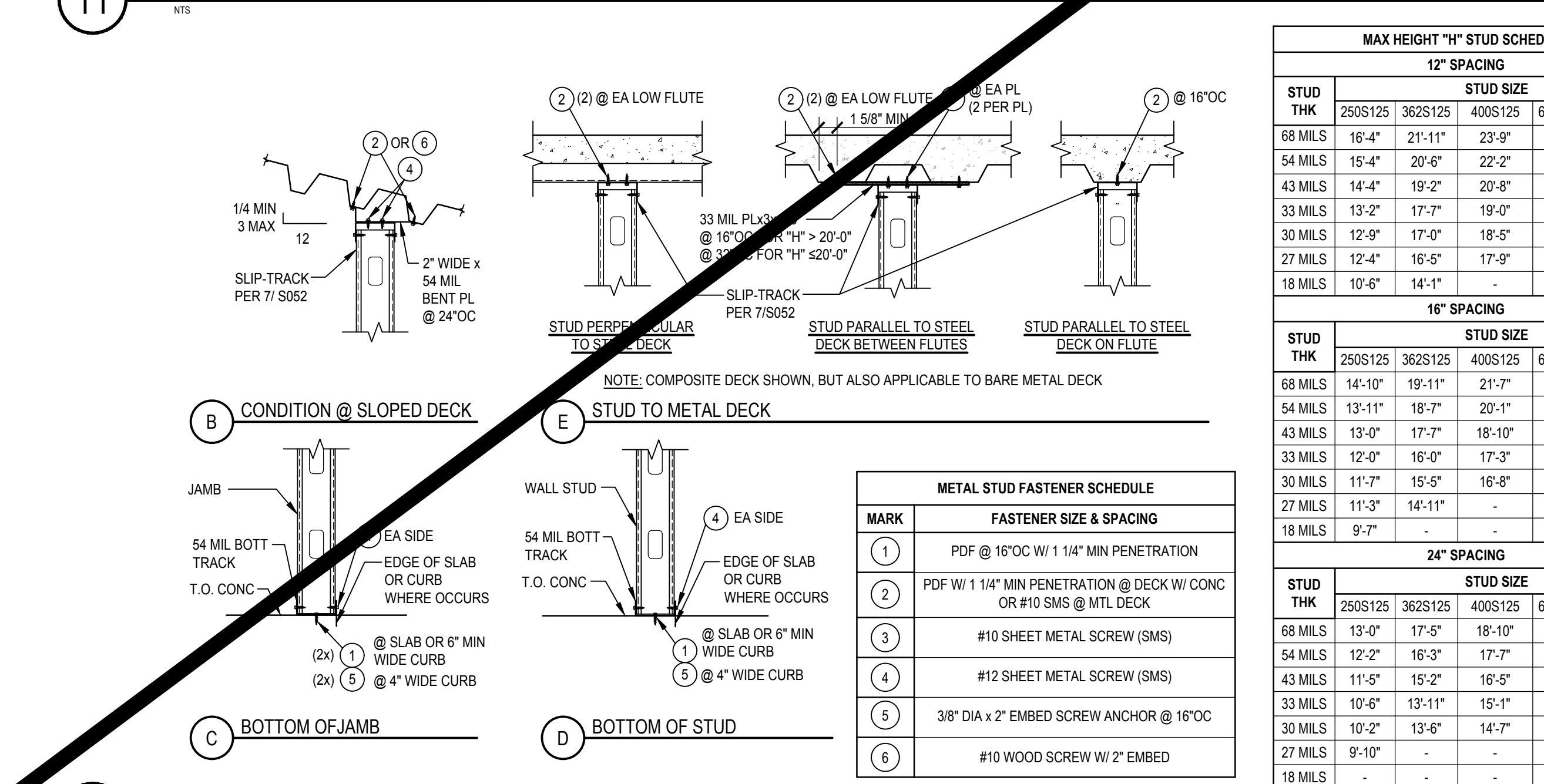
**4 DEFLECTION TRACK ASSEMBLY**



**1 SCREW EDGE DISTANCE & SPACING**



**11 INTERIOR NON-BEARING WALL OPENING FRAMING**

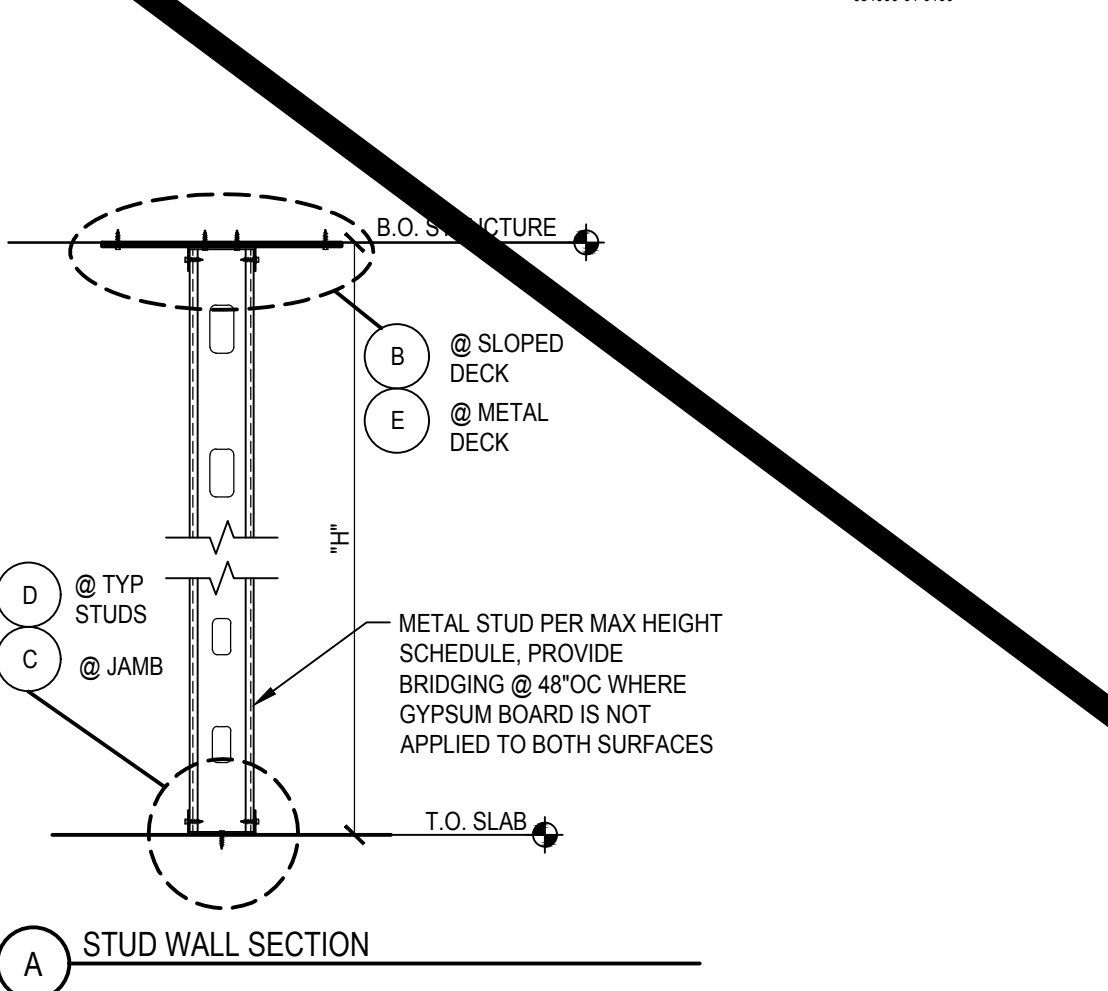


MAX HEIGHT "H" STUD SCHEDULE				
STUD THK	STUD SIZE			
	68 MILS	250S125	362S125	400S125
68 MILS	16'-4"	21'-11"	23'-9"	33'-0"
54 MILS	15'-4"	20'-6"	22'-2"	30'-9"
43 MILS	14'-4"	19'-2"	20'-8"	28'-9"
33 MILS	13'-2"	17'-7"	19'-0"	26'-2"
30 MILS	12'-9"	17'-0"	18'-5"	25'-2"
27 MILS	12'-4"	16'-5"	17'-9"	-
18 MILS	10'-6"	14'-1"	-	-

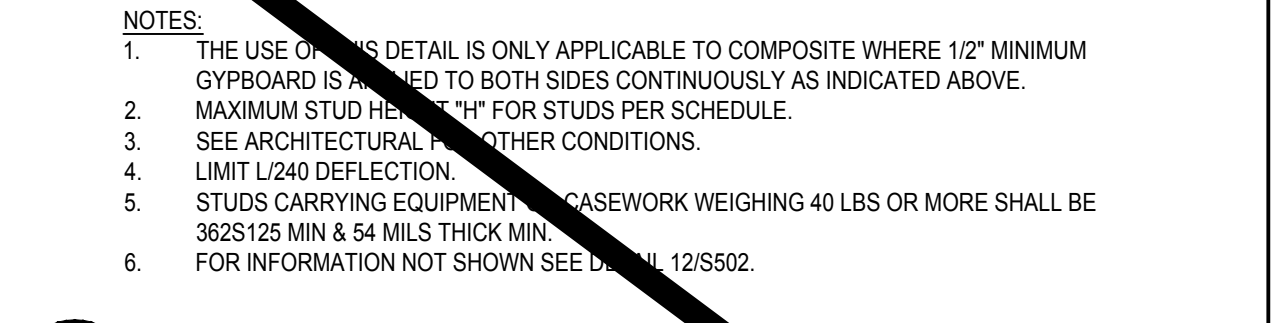
STUD THK	STUD SIZE			
	68 MILS	14'-10"	19'-11"	21'-7"
54 MILS	13'-11"	18'-7"	20'-1"	27'-11"
43 MILS	13'-0"	17'-7"	18'-10"	26'-1"
33 MILS	12'-0"	16'-0"	17'-3"	23'-9"
30 MILS	11'-7"	15'-5"	16'-8"	22'-11"
27 MILS	11'-3"	14'-11"	-	-
18 MILS	9'-7"	-	-	-

STUD THK	STUD SIZE			
	68 MILS	13'-0"	17'-5"	18'-10"
54 MILS	12'-2"	16'-3"	17'-7"	24'-5"
43 MILS	11'-5"	15'-2"	16'-5"	22'-8"
33 MILS	10'-6"	13'-11"	15'-1"	20'-6"
30 MILS	10'-2"	13'-6"	14'-7"	19'-0"
27 MILS	9'-10"	-	-	-
18 MILS	-	-	-	-

MARK	FASTENER SIZE & SPACING	
	1	PDF @ 16"OC W/ 1 1/4" MIN PENETRATION
2	PDF W/ 1 1/4" MIN PENETRATION @ DECK W/ CONC OR #10 SMS @ MTL DECK	
3	#10 SHEET METAL SCREW (SMS)	
4	#12 SHEET METAL SCREW (SMS)	
5	3/8" DIA x 2" EMBED SCREW ANCHOR @ 16"OC	
6	#10 WOOD SCREW W/ 2" EMBED	



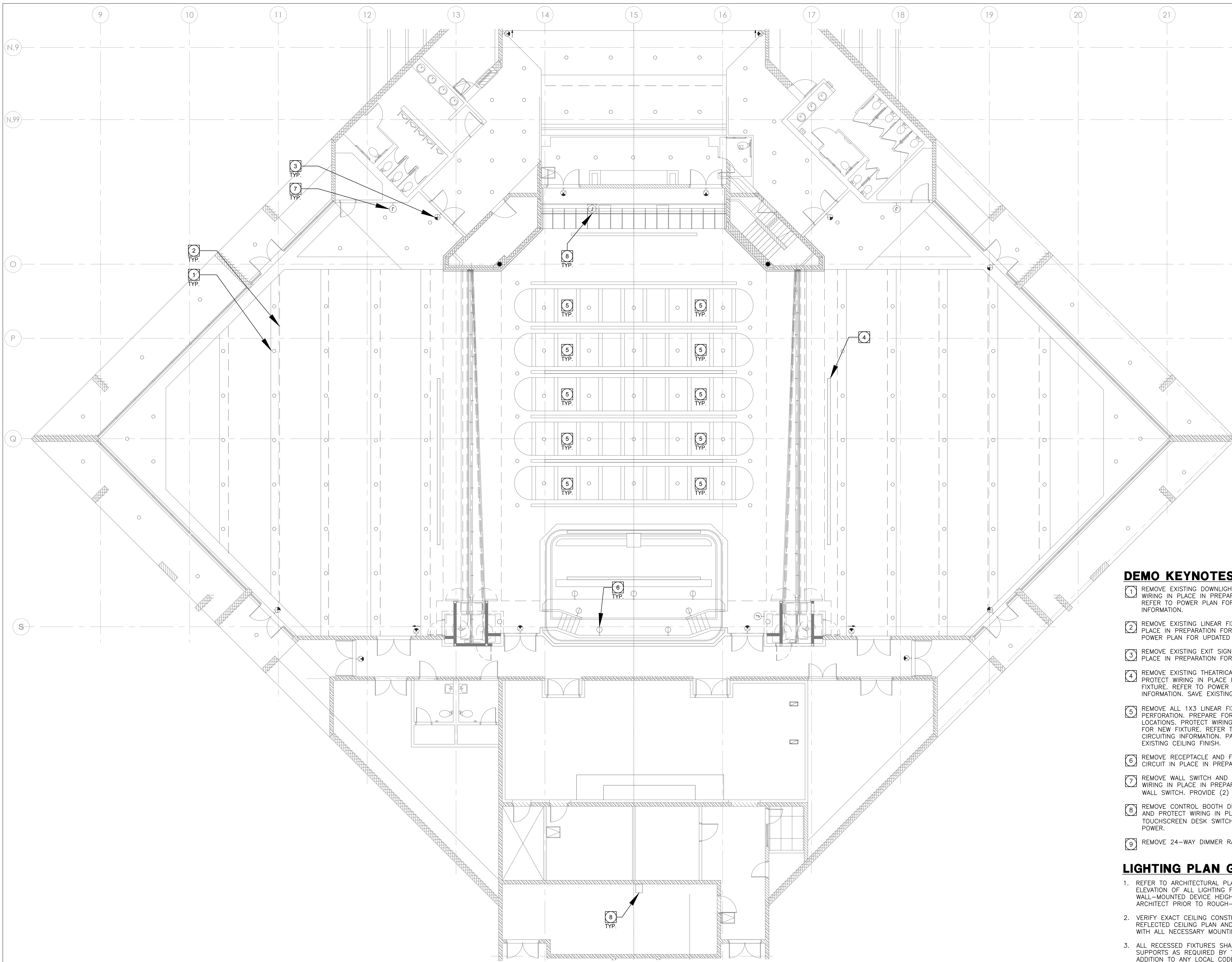
MAX HEIGHT ("H") OF INTERIOR COMPOSITE STUDS SCHEDULE				
STUD THK (MILS)	STUD SIZE			
	33	162S125	250S125	362S125
30	10'-9"	14'-5"	16'-7"	17'-8"
27	10'-7"	13'-11"	16'-6"	17'-8"
18	10'-1"	12'-10"	15'-2"	15'-11"



**12 INTERIOR NON-BEARING STUD WALLS**







**DEMO KEYNOTES**

- 1 REMOVE EXISTING DOWNLIGHT FIXTURE(S) AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW FIXTURE. REFER TO POWER PLAN FOR UPDATED CIRCUITING INFORMATION.
- 2 REMOVE EXISTING LINEAR FIXTURE AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW FIXTURE. REFER TO POWER PLAN FOR UPDATED CIRCUITING INFORMATION.
- 3 REMOVE EXISTING EXIT SIGN AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW FIXTURE.
- 4 REMOVE EXISTING THEATRICAL RACEWAY/FIXTURES AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW FIXTURE. REFER TO POWER PLAN FOR UPDATED CIRCUITING INFORMATION. SAVE EXISTING FIXTURES FOR OWNERSHIP.
- 5 REMOVE ALL 1X3 LINEAR FIXTURE(S) AND PATCH CEILING PERFORATION. PREPARE FOR NEW FIXTURES IN NEW LOCATIONS. PROTECT WIRING IN PLACE IN PREPARATION FOR NEW FIXTURE. REFER TO POWER PLAN FOR UPDATED CIRCUITING INFORMATION. PAINT PATCH WORK TO MATCH EXISTING CEILING FINISH.
- 6 REMOVE RECEPTACLE AND FACEPLATE AND PROTECT CIRCUIT IN PLACE IN PREPARATION FOR NEW RECEPTACLE.
- 7 REMOVE WALL SWITCH AND FACEPLATE AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW TOUCHSCREEN WALL SWITCH. PROVIDE (2) #16 AWG 24V POWER.
- 8 REMOVE CONTROL BOOTH DESK SWITCH AND FACEPLATE AND PROTECT WIRING IN PLACE IN PREPARATION FOR NEW TOUCHSCREEN DESK SWITCH. PROVIDE (2) #16 AWG 24V POWER.
- 9 REMOVE 24-WAY DIMMER RACK? TBD.

**LIGHTING PLAN GENERAL NOTES:**

- 1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- 2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
- 3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
- 4. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.

**LIGHTING DEMO PLAN**

1" = 20'-0"

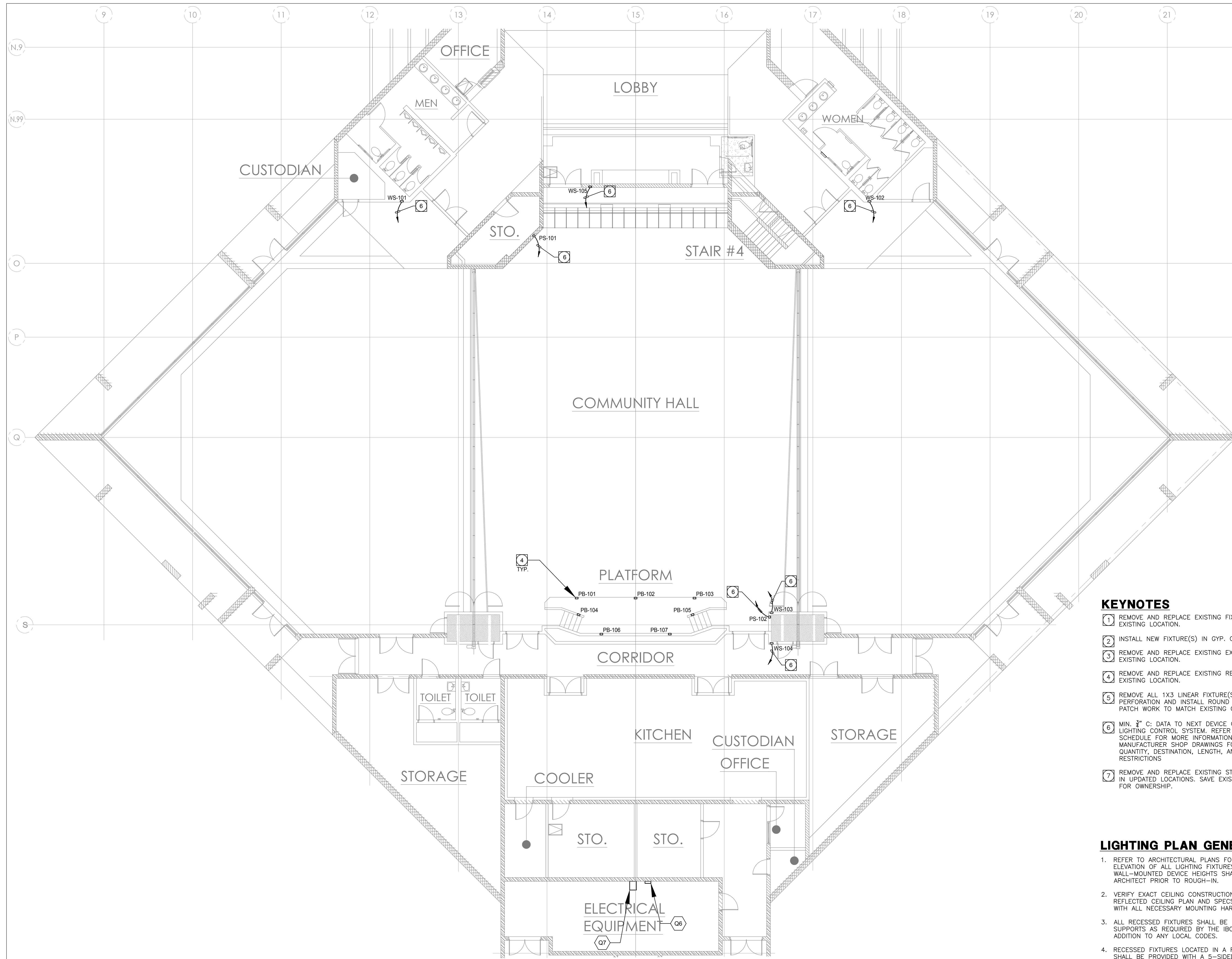
1

LIGHTING DEMO PLAN

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO.
	<b>E100</b>
	OF 10 SHEETS

BID SET





**KEYNOTES**

- 1 REMOVE AND REPLACE EXISTING FIXTURE(S) WITH NEW IN EXISTING LOCATION.
- 2 INSTALL NEW FIXTURE(S) IN GYP. CEILING.
- 3 REMOVE AND REPLACE EXISTING EXIT SIGN WITH NEW IN EXISTING LOCATION.
- 4 REMOVE AND REPLACE EXISTING RECEPTACLE WITH NEW IN EXISTING LOCATION.
- 5 REMOVE ALL 1X3 LINEAR FIXTURE(S)/PATCH CEILING PERFORATION AND INSTALL ROUND SURFACE MOUNT. PAINT PATCH WORK TO MATCH EXISTING CEILING FINISH.
- 6 MIN. 3" C: DATA TO NEXT DEVICE OR HOMERUN TO STAGE LIGHTING CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE FOR MORE INFORMATION. REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT WIRE TYPE, QUANTITY, DESTINATION, LENGTH, AND TOPOLOGY RESTRICTIONS
- 7 REMOVE AND REPLACE EXISTING STAGE LIGHTING WITH NEW IN UPDATED LOCATIONS. SAVE EXISTING STAGE LIGHTING FOR OWNERSHIP.

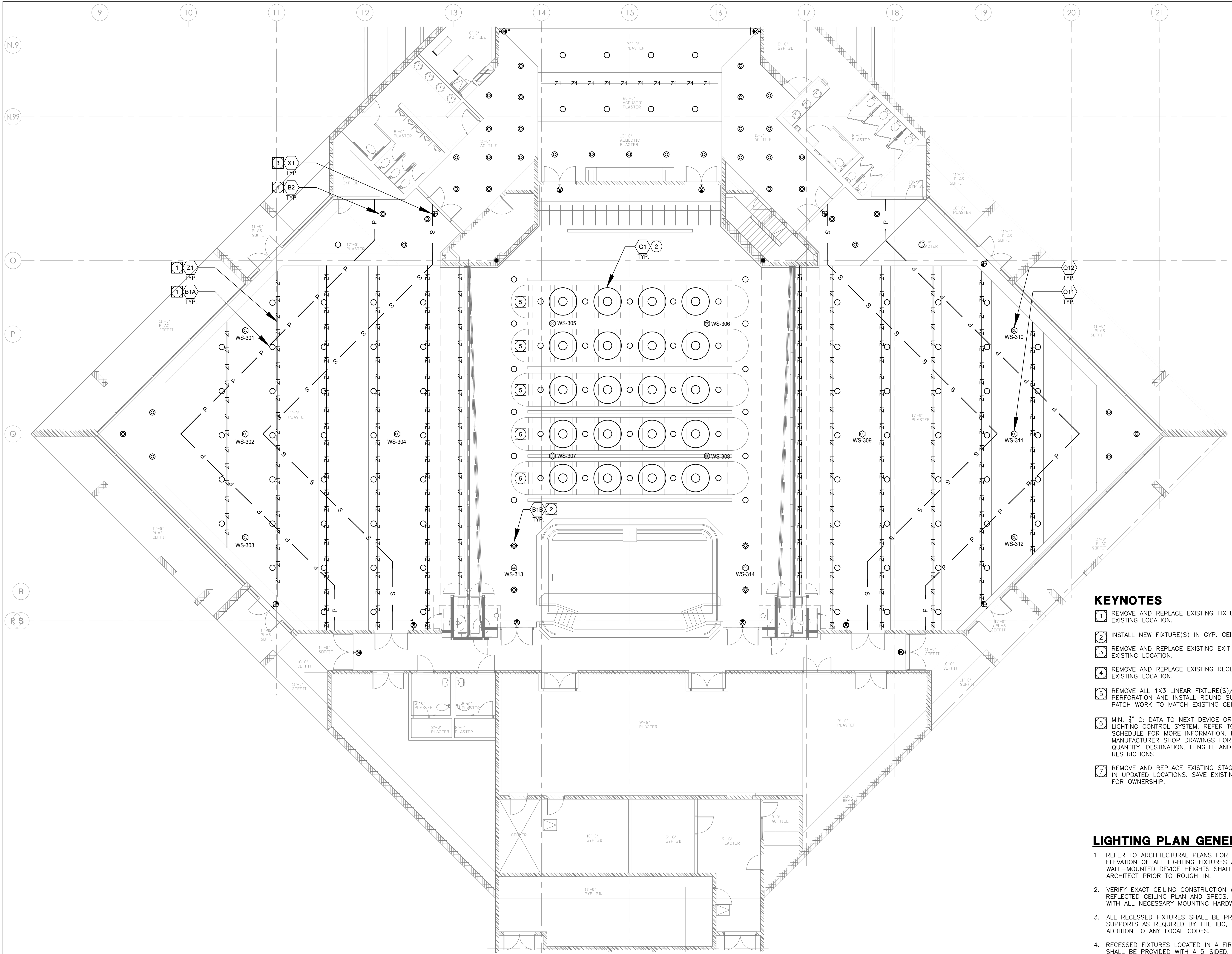
**LIGHTING PLAN GENERAL NOTES:**

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO.
	E101
	OF 10 SHEETS

P:\2021\2021-0397 Carson Comm Ctr Air Hall Renovation\Drawings and Models\CAD\Electrical\Lighting Upgrade\E101.dwg Jan 06, 2022 - 8:24am DPerard





**KEYNOTES**

- 1 REMOVE AND REPLACE EXISTING FIXTURE(S) WITH NEW IN EXISTING LOCATION.
- 2 INSTALL NEW FIXTURE(S) IN GYP. CEILING.
- 3 REMOVE AND REPLACE EXISTING EXIT SIGN WITH NEW IN EXISTING LOCATION.
- 4 REMOVE AND REPLACE EXISTING RECEPTACLE WITH NEW IN EXISTING LOCATION.
- 5 REMOVE ALL 1X3 LINEAR FIXTURE(S)/PATCH CEILING PERFORMANCE AND INSTALL ROUND SURFACE MOUNT. PAINT PATCH WORK TO MATCH EXISTING CEILING FINISH.
- 6 MIN. 3" C: DATA TO NEXT DEVICE OR HOMERUN TO STAGE LIGHTING CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE FOR MORE INFORMATION. REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT WIRE TYPE, QUANTITY, DESTINATION, LENGTH, AND TOPOLOGY RESTRICTIONS
- 7 REMOVE AND REPLACE EXISTING STAGE LIGHTING WITH NEW IN UPDATED LOCATIONS. SAVE EXISTING STAGE LIGHTING FOR OWNERSHIP.

**LIGHTING PLAN GENERAL NOTES:**

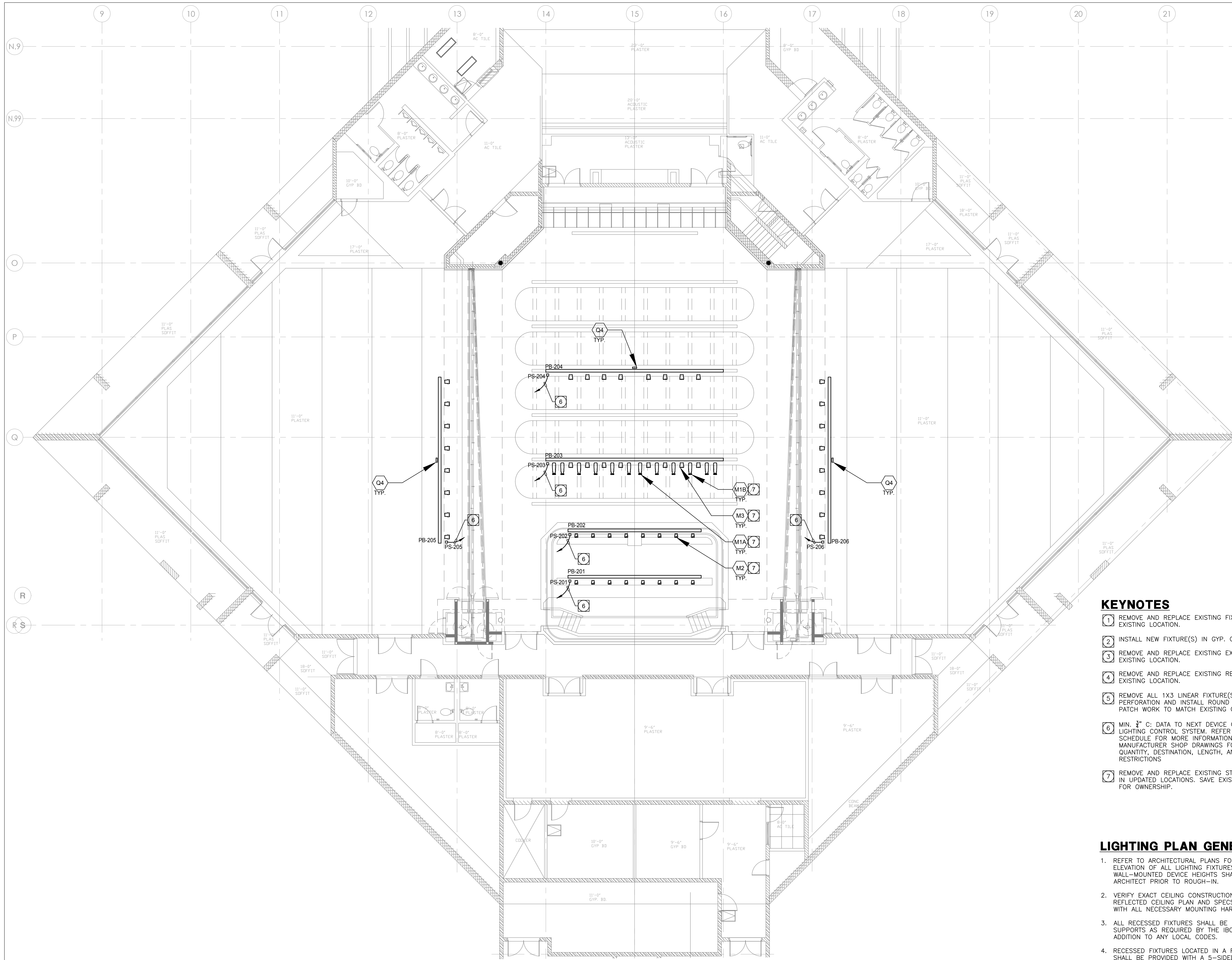
- 1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- 2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
- 3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
- 4. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.

LIGHTING PLAN

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 01-10-2022	DRAWN CHECKED
REVISIONS	SHEET NO.	

P:\2021\2021-0397 Carson Comm Ctr AV Hall Renovation\Drawings and Models\CAD\Electrical\Lighting Upgrade\E201.dwg Jan 06, 2022 - 8:24am DP:rand





**KEYNOTES**

- 1 REMOVE AND REPLACE EXISTING FIXTURE(S) WITH NEW IN EXISTING LOCATION.
- 2 INSTALL NEW FIXTURE(S) IN GYP. CEILING.
- 3 REMOVE AND REPLACE EXISTING EXIT SIGN WITH NEW IN EXISTING LOCATION.
- 4 REMOVE AND REPLACE EXISTING RECEPTACLE WITH NEW IN EXISTING LOCATION.
- 5 REMOVE ALL 1X3 LINEAR FIXTURE(S)/PATCH CEILING PERFORATION AND INSTALL ROUND SURFACE MOUNT. PAINT PATCH WORK TO MATCH EXISTING CEILING FINISH.
- 6 MIN. 3" C. DATA TO NEXT DEVICE OR HOMERUN TO STAGE LIGHTING CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE FOR MORE INFORMATION. REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT WIRE TYPE, QUANTITY, DESTINATION, LENGTH, AND TOPOLOGY RESTRICTIONS
- 7 REMOVE AND REPLACE EXISTING STAGE LIGHTING WITH NEW IN UPDATED LOCATIONS. SAVE EXISTING STAGE LIGHTING FOR OWNERSHIP.

**LIGHTING PLAN GENERAL NOTES:**

- 1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- 2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
- 3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
- 4. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.

**THEATRICAL LIGHTING PLAN**

1/8" = 1'-0"

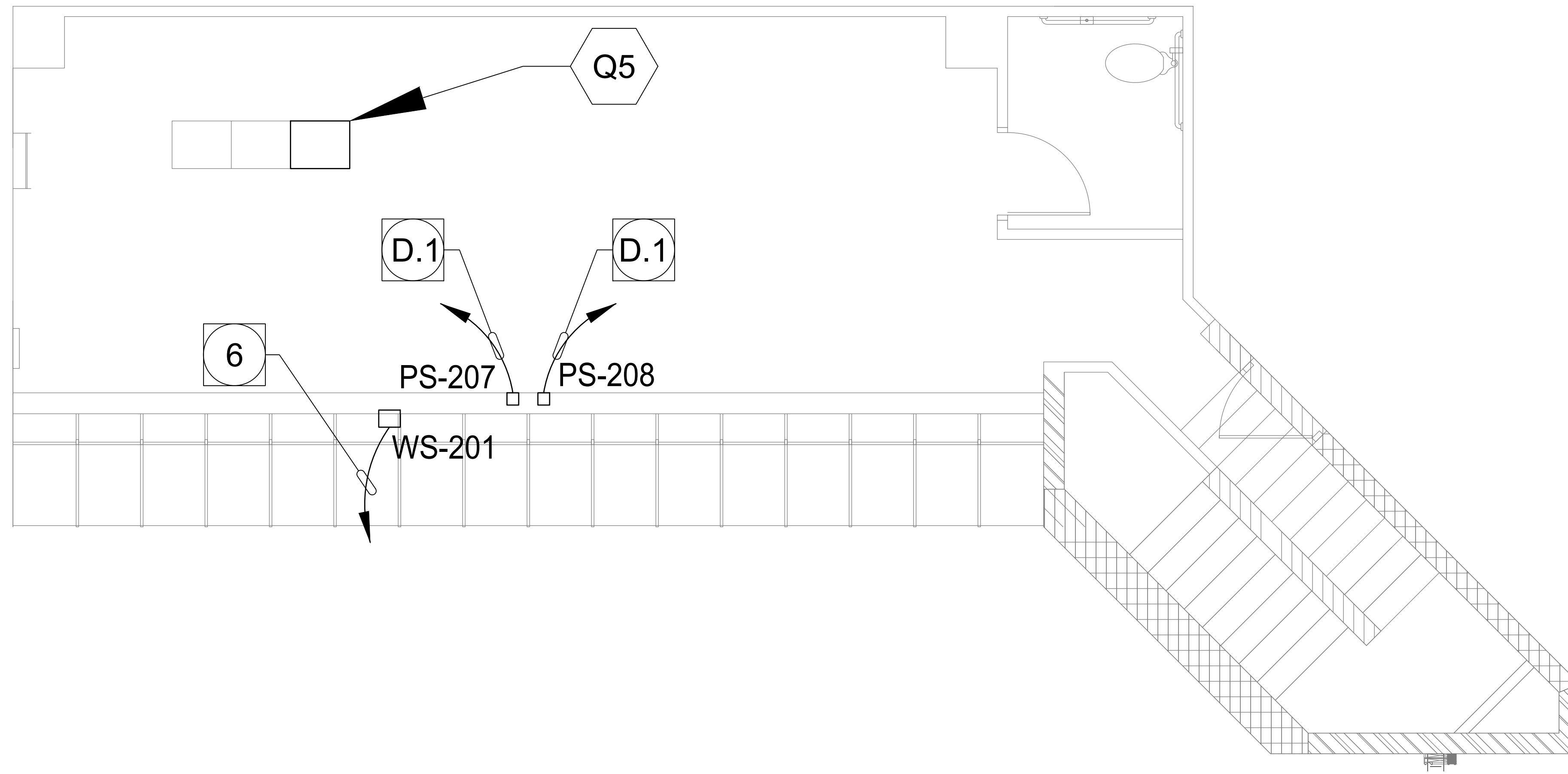
1

THEATRICAL LIGHTING PLAN

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 01-10-2022	DRAWN CHECKED
REVISIONS	SHEET NO.	
	E202	
	OF SHEETS	

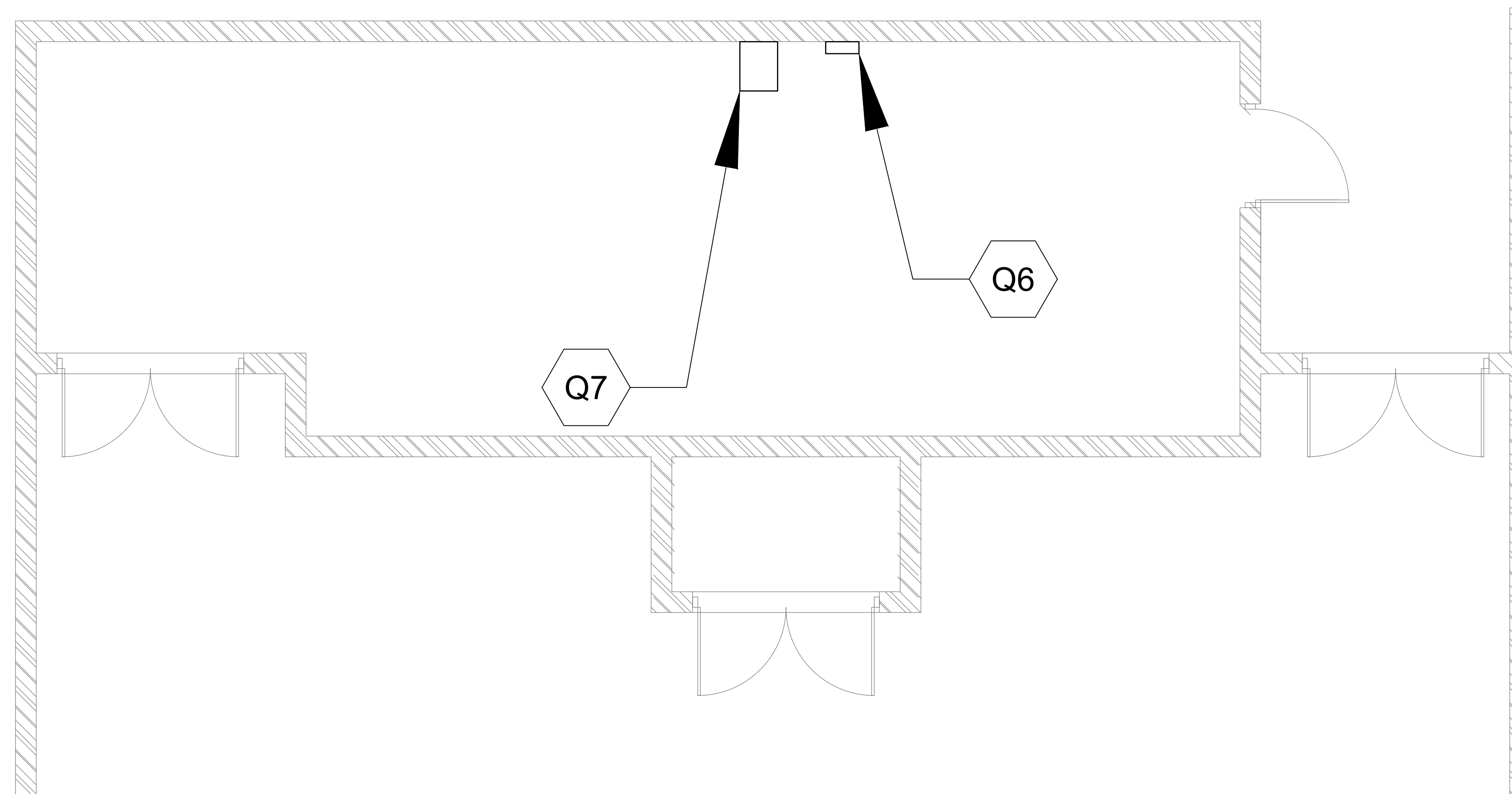
BID SET





ENLARGED CONTROL BOOTH LIGHTING & CONTROLS PLAN

3/8" = 1'-0" 1



ENLARGED ELECTRICAL ROOM LIGHTING & CONTROLS PLAN

3/8" = 1'-0" 1

**KEYNOTES**

- 1 REMOVE AND REPLACE EXISTING FIXTURE(S) WITH NEW IN EXISTING LOCATION.
- 2 INSTALL NEW FIXTURE(S) IN GYP. CEILING.
- 3 REMOVE AND REPLACE EXISTING EXIT SIGN WITH NEW IN EXISTING LOCATION.
- 4 REMOVE AND REPLACE EXISTING RECEPTACLE WITH NEW IN EXISTING LOCATION.
- 5 REMOVE ALL 1X3 LINEAR FIXTURE(S)/PATCH CEILING PERFORATION AND INSTALL ROUND SURFACE MOUNT. PAINT PATCH WORK TO MATCH EXISTING CEILING FINISH.
- 6 MIN. 3" C: DATA TO NEXT DEVICE OR HOMERUN TO STAGE LIGHTING CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE FOR MORE INFORMATION. REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT WIRE TYPE, QUANTITY, DESTINATION, LENGTH, AND TOPOLOGY RESTRICTIONS
- 7 REMOVE AND REPLACE EXISTING STAGE LIGHTING WITH NEW IN UPDATED LOCATIONS. SAVE EXISTING STAGE LIGHTING FOR OWNERSHIP.

**LIGHTING PLAN GENERAL NOTES:**

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.



**LIGHTING FIXTURE SCHEDULE NOTES:**

**A. GENERAL NOTES:**

1. THE LIGHTING FIXTURES, LAMPS, BALLASTS, POWER SUPPLIES, DRIVERS AND TRANSFORMERS FOR THIS PROJECT HAVE BEEN SPECIFIED TO ENSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNER'S, ARCHITECT'S, ENGINEER'S AND LIGHTING CONSULTANT'S DESIGN CRITERIA.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
3. CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT OF ANY PROVISIONS OF THE SPECIFICATION THAT IS IN CONFLICT WITH LOCALLY ENFORCED CODES.
4. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS.
5. ALL ELECTRICAL MATERIAL SHALL BE IN NEW & UNDAMAGED CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
6. ALL DIMENSIONS & MEASUREMENTS FOUND ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL VALIDATE ALL DIMENSIONS PRIOR TO ORDERING MATERIAL TO INCLUDE MAKING FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND SPECIFICATIONS.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ASSOCIATED DEVICES AND EQUIPMENT.
8. PRIOR TO AIMING/ADJUSTING ACTIVITIES, COMMISSIONING OR PUNCHWALK COMMENCEMENT, CONTRACTOR SHALL PROPERLY TEST AND VERIFY ALL CIRCUITRY AND CONTROL WIRING AND IMPLEMENT ALL CONTROLS PROGRAMMING.

**B. INSTALLATION:**

1. LOCATIONS OF THE FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND THE ELECTRICAL/LIGHTING DESIGN PLAN(S) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO ORDERING FIXTURES.
2. LIGHTING DRAWINGS REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES AND ADDITIONAL HARDWARE AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
3. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.
4. CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING HARDWARE IS COMPATIBLE WITH APPROVED MOUNTING CONDITIONS. MOUNTING CONDITIONS MUST ALLOW FOR AIMING AND ADJUSTING OF LIGHTING FIXTURES ON SITE.
5. CONTRACTOR TO INCLUDE AIMING/ADJUSTING LABOR AFTER DARK AS REQUIRED FOR ANY ADJUSTABLE LIGHTING FIXTURE AND FOR EACH INDIVIDUAL LIGHTING FIXTURE HEAD OR LAMP HOLDER IN ALL CASES. CONTRACTOR TO MULTI-FIXTURE/MULTI-LAMP ASSEMBLY LIGHTING FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT AND/OR LIGHTING CONSULTANT.
6. CONTRACTOR TO SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS LIGHTING FIXTURES AT THE TIME OF FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE CONFLICT OR DAYLIGHT IMPACT. AIMING/ADJUSTING LABOR SHALL BE PREPARED FOR WORK WITH COMMON HAND TOOLS TO MAKE ADJUSTMENTS AND MINOR REPAIRS DURING AIMING.
7. ALL COVE MOUNTED LIGHTING FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE AND ORDER QUANTITY OF LIGHTING FIXTURES AS REQUIRED. PROVIDE COMPLETE MANUFACTURER SHOP DRAWINGS OF BUILT-IN COVE OR LINEAR LIGHTING SYSTEMS.
8. CONTRACTOR TO REPLACE ALL INOPERATIVE LAMPS, LED ARRAYS OR SYSTEMS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO THE FOCUS AND PROGRAMMING PHASE AND AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.
9. ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. FOOTING SIZE TO BE PROVIDED BY STRUCTURAL ENGINEER. REFERENCE FIXTURE SCHEDULE AND DETAILS FOR MORE INFORMATION.
10. ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF FACES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN(S). ANY DISCREPANCIES BETWEEN EXIT SIGNS DETECTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.

**C. SUBMITTALS AND SUBSTITUTIONS:**

1. CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS THEY INTEND TO FURNISH WITHIN TEN (10) DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
2. CONTRACTOR TO PROVIDE A SUBMITTAL/SHOP DRAWING SUBMITTAL FOR EACH LIGHTING FIXTURE TYPE INCLUDING ACCESSORIES, BALLAST(S), POWER SUPPLIES, DRIVER(S) TRANSFORMER(S), AND INTEGRAL EMERGENCY BATTERIES AND TEST SWITCHES. ANY LIGHTING FIXTURE SUBMITTAL PROVIDED WITHOUT SPECIFIC LIGHTING FIXTURE'S ACCESSORIES, BALLAST, POWER SUPPLY, DRIVER, TRANSFORMER OR BATTERY INFORMATION SHALL BE REJECTED AS INCOMPLETE.
3. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED – UNLESS APPROVED AS STATED HEREIN. LIGHTING FIXTURE SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS.
  - a. A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
  - b. A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP OR LED TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF UTILIZATION, AND AN ISO-FOOT-CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.
  - c. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS. MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
  - d. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY AFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
  - e. FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.
  - f. FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX:MIN AND AVG:MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS.
    - i. THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
    - ii. THE PHOTOMETRIC CALCULATION SHALL BE BASED ON PROVIDING MAINTAINED FOOT-CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
    - iii. THE PHOTOMETRIC CALCULATION SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.

4. DURING THE BIDDING PROCESS, THE CONTRACTOR SHALL REFER TO THE LIGHTING FIXTURE SCHEDULES ON THE ARCHITECTURAL PLANS (IF PROVIDED ON PROJECT), LIGHTING DESIGN PLANS/SPECIFICATIONS (IF PROVIDED ON PROJECT) AND THE ELECTRICAL PLANS. ANY DISCREPANCIES BETWEEN THEM INCLUDING, BUT NOT LIMITED TO, PART NUMBERS AND FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, ELECTRICAL ENGINEER, AND LIGHTING DESIGNER WITH PRE-BID RFI(S). WHERE DISCREPANCIES ARE DISCOVERED WHEN THERE IS INSUFFICIENT TIME TO ISSUE PRE-BID RFI(S), THE BASE BID SHALL INCORPORATE THE MOST COSTLY VERSION OF THE DISCREPANCY AND SHALL BE MEMORIALIZED IN AN RFI OR AS A BID CLARIFICATION. PROVIDING A VOLUNTARY DEDUCTIVE ALTERNATE BID CLARIFYING FIXTURE SCHEDULE DISCREPANCIES IS ALSO AN ACCEPTABLE FORM OF DISCREPANCY DOCUMENTATION.
5. FIXTURE FINISHES:
  - a. ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS PREMIUM OR CUSTOM, SHALL BE SELECTED FROM THE MANUFACTURERS STANDARD COLOR OPTIONS AS LISTED ON THE FIXTURE SPECIFICATION SHEET. STANDARD FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
  - b. ALL FIXTURES INDICATED WITH A PREMIUM OR CUSTOM COLOR SHALL BE ASSIGNED A CUSTOM COLOR REFERENCE NUMBER (SUCH AS RAL#) OR PROVIDE FIVE (5) PAINT CHIPS FOR MANUFACTURER TO USE TO MATCH COLOR. PREMIUM OR CUSTOM FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.

6. THE LIGHTING FIXTURE MODEL NUMBER MAY INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING/PROVIDING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO: VOLTAGE, MOUNTING CONDITION/HARDWARE, FINISH, DIMMING REQUIREMENTS/BALLAST INFORMATION, GENERALLY, CONTRACTOR-SELECTED OPTIONS ARE DENOTED IN THE PART NUMBER WITH BRACKETS EX: [VOLTS?]

- a. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED CODES.
- b. VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING – SEE ELECTRICAL DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES.
7. "NO KNOWN EQUAL" LIGHTING FIXTURE PRICING/BIDDING NOTES:
  - a. EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
  - b. A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8 1/2" X 11" SHEET.
  - c. FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE MAY RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTOR'S BID.

8. FIXTURES IDENTIFIED AS "NO KNOWN EQUAL – OWNER STANDARD" OR "CAMPUS STANDARD" ARE TO BE PROVIDED AS SPECIFIED, WITH SUBSTITUTIONS STRICTLY PROHIBITED. SEE ADDITIONAL NOTES FOR "NO KNOWN EQUAL" BIDDING REQUIREMENTS.

**D. LIGHTING FIXTURE SPECIFICATIONS:**

1. ALL EXTERIOR LIGHTING EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL EQUIPMENT, INCLUDING BALLAST, POWER SUPPLY AND TRANSFORMER ENCLOSURES SHALL CONFORM TO THE CONDITIONS IN WHICH THE LIGHTING FIXTURE IS MOUNTED.
2. ALL BALLASTS, POWER SUPPLIES, DRIVERS AND/OR TRANSFORMERS THAT ARE REMOTELY LOCATED SHALL BE INSTALLED AS NEAR TO THE LIGHTING FIXTURE(S) AS POSSIBLE, HIDDEN FROM PUBLIC VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED. CONTRACTOR TO COORDINATE LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH-IN.
3. ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
4. COLOR FILTERS SHALL BE GLASS OR DICHROIC UNLESS OTHERWISE INDICATED ON DRAWINGS.
5. CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
6. CONTRACTOR TO VERIFY THAT ALL LIGHTING FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER.
7. ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED, AS WELL AS ANY REQUIRED CIRCUIT LIMITERS FOR A COMPLETE INSTALLATION. TRACK LENGTH(S) SHALL BE PER DRAWINGS.

**E. DRIVERS / TRANSFORMERS:**

1. [OPTION?] IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE DRIVER TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION.
2. CONTINUOUS DIMMING AND CONTROLLABLE LED:
  - a. PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD.
  - b. PRIOR TO BID CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND DISTRIBUTED LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.
  - c. CONTINUOUS LED DIMMING DRIVERS SHALL BE AT MINIMUM 4-WIRE 0-10V 10% DIMMING (HOT, NEUTRAL, DIM+, DIM-).

**F. EMERGENCY FIXTURES / BATTERY PACKS:**

1. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:
  - a. INTEGRAL BATTERY PACK (EB):
    - 3a/3EB – FIXTURE CONNECTED TO CIRCUIT "3", CONTROL SWITCHLEG "g" – WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
    - 3Nl/3EB – FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "#3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
  - b. REMOTE BACK-UP SOURCE (EM):
    - 3a/3EM – ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #GR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS. CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.
    - 3Nl/3EM – FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3".
  - c. REMOTE BACK-UP SOURCE (EM) NOTES:
    - ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE. PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
2. EMERGENCY BATTERY PACK NOTES:
  - a. PROVIDE INTEGRAL TEST SWITCH / CHARGE LIGHT OPTION FOR ALL EMERGENCY BATTERY PACKS INSTALLED IN LIGHT FIXTURES.
  - b. ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT – MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OF SLACK LEADS, FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
  - c. ALL BATTERY PACKS AND ALL COMBINATION LED BATTERY PACK/EMERGENCY DRIVERS SHALL BE UL924 LISTED.
  - d. PRIOR TO BID, CONTRACTOR SHALL VERIFY WITH FIXTURE MANUFACTURER(S) THAT EMERGENCY BATTERY PACKS ARE MANUFACTURED TO BE INTEGRAL TO FIXTURE HOUSINGS.

- e. SHOULD THE SPECIFIED LED EMERGENCY BATTERY PACK(S) NOT FIT WITHIN A GIVEN FIXTURE(S) OR SHOULD THE FIXTURE NOT BE MANUFACTURED TO ACCOMMODATE A BATTERY PACK, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF-TESTING MINI INVERTER(S) (IOTA #LS SERIES OF BODINE#ELI-S-(WATT?)) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM OR TO LOCATE EMERGENCY BATTERY PACK(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.
- f. LED BATTERY PACKS SHALL PROVIDE A MINIMUM OF 90 MINUTES OF EMERGENCY ILLUMINATION, AND SHALL BE RATED AT A MINIMUM OF 10 WATTS, OR AS SPECIFIED. WHERE A FIXTURE TYPE IS UNAVAILABLE WITH A 10W BATTERY PACK OR WHERE THE WATTAGE IS NOT SPECIFIED ON THE PLANS, INCLUDE ALL COST IN BASE BID TO PROVIDE THE HIGHEST WATTAGE AVAILABLE ON THE FIXTURE CUTSHEET. ANY LISTED EQUAL FIXTURE OR ANY SUBSTITUTION OFFERED BY THE CONTRACTOR MUST ALSO HAVE BATTERY PACKS CAPABLE OF PRODUCING THE SAME OR MORE LUMENS WHEN ON BATTERY AS OUTLINED ABOVE. ACCEPTABLE MANUFACTURES: BODINE OR IOTA.
9. TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BATTERY PACKS AT THE FACTORY AND OBTAIN A UL LISTING FOR THE FIXTURE WITH EMERGENCY BATTERY PACK. FIELD-INSTALLATION OF LED EMERGENCY BATTERY PACK(S) IS PROHIBITED.
- h. PROVIDE DAMP LOCATION VERSION IN ALL DAMP LABEL INSTALLATIONS.

**3. CONTINUOUS DIMMING AND CONTROLLABLE LED:**

- a. PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD. PRIOR TO BID CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.

**F. DIMMING AND CONTROL SYSTEM SPECIFICATIONS**

1. LIGHTING CONTROL SYSTEMS REQUIRED SHALL INCLUDE ALL MAJOR COMPONENTS INDICATED, AS WELL AS INCIDENTAL COMPONENTS REQUIRED FOR PROPER OPERATION.
2. ALL BRANCH CIRCUITS TERMINATING IN A DIMMER PANEL SHALL HAVE A SEPARATE NEUTRAL CONDUCTOR. THERE SHALL BE NO COMMON NEUTRAL CONDUCTORS USED FOR ANY LOAD OR BRANCH CIRCUIT WIRING FROM THE DIMMERS.
3. CONTRACTOR SHALL INCLUDE AND COORDINATE FACTORY COMMISSIONING.
4. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY A FACTORY-EMPLOYED ENGINEER. THE FACTORY-EMPLOYED ENGINEER SHALL DEMONSTRATE AND EDUCATE THE OWNER'S REPRESENTATIVE(S) ON THE SYSTEM CAPABILITIES, OPERATION AND MAINTENANCE.
5. SYSTEM MANUFACTURER SHALL BE CAPABLE OF PROVIDING ON-SITE SERVICE SUPPORT WITHIN 24 HOURS ANYWHERE IN THE CONTINENTAL USA AND WITHIN 72 HOURS ANYWHERE IN THE WORLD, EXCEPT WHERE SPECIAL VISAS ARE REQUIRED.
6. SERVICE CONTRACTS SHALL BE AVAILABLE TO OWNER FROM DATE OF SYSTEM COMMISSIONING.
7. DIMMED CIRCUITS THAT ARE PART OF EMERGENCY EGRESS LIGHTING SYSTEM ARE TO BE ROUTED THROUGH A SYSTEM THAT ALLOWS FOR IMMEDIATE BYPASS OF THE DIMMER PANEL TO ALLOW LIGHTING LOADS TO COME ON TO FULL IN EMERGENCY SITUATIONS. THE BYPASS SYSTEM MUST ALLOW LIGHTING SYSTEM TO BE MANUALLY RE-SET FOR NORMAL OPERATIONS.

**G. SYSTEM INTEGRATOR**

1. "SYSTEM INTEGRATOR" SHALL MEAN THE CONTRACTOR RESPONSIBLE TO PROVIDE, FURNISH AND/OR INSTALL, AS NOTED, THE SPECIALTY LIGHTING EQUIPMENT, DIMMING AND CONTROL SYSTEMS.
2. THE SYSTEM INTEGRATOR SHALL TERMINATE ALL LOW VOLTAGE LIGHTING CONTROL DATA CONNECTIONS INCLUDING, BUT NOT LIMITED TO, REMOTE CONSOLE DATA STATIONS, DIMMER CABINETS, LIGHTING RELAY CABINETS, LIGHTING CONTROL STATIONS, LIGHTING CONTROL RACK, AND ALL OTHER LOW VOLTAGE LIGHTING CONTROLS REQUIRED TO PROVIDE A FUNCTIONING AND COMPLETE LIGHTING CONTROL NETWORK.
3. THE SYSTEM INTEGRATOR SHALL SET DMX ADDRESSES FOR EACH LIGHTING FIXTURE OR DEVICE REQUIRING OR RECEIVING DMX/CONTROL SIGNAL ACCORDING TO THE LIGHTING CONSULTANT'S DESIGN DOCUMENTS.
4. THE SYSTEM INTEGRATOR SHALL CERTIFY THAT ALL LIGHTING DATA CABLES ARE TERMINATED CORRECTLY AND FUNCTIONING PRIOR TO THE FOCUS AND PROGRAMMING PHASE.
5. SERVICES SHALL INCLUDE NECESSARY SYSTEMS INTEGRATION TO PROVIDE A COMPLETE AND WORKING LIGHTING SYSTEM.
6. ALL EQUIPMENT SHALL BE THOROUGHLY TESTED BY THE SYSTEM INTEGRATOR PRIOR TO SHIPMENT TO THE SITE TO ENSURE MECHANICAL AND ELECTRICAL INTEGRITY.

**H. ADVANCED PROGRAMMING**

1. CONTRACTOR TO PROVIDE FACTORY CERTIFIED PROGRAMMING PERSONNEL FOR FIVE (5) NIGHT-TIME PROGRAMMING SESSIONS OF NOT LESS THAN EIGHT (8) HOURS PER SESSION.
2. FACTORY TRAINED PERSONNEL (PROGRAMMER), FAMILIAR WITH THE INSTALLED SYSTEM(S), SHALL BE PROVIDED FOR THE PURPOSES OF EXECUTING PROGRAMMING SERVICES TO MEET SPECIFIED REQUIREMENTS. THE PROGRAMMER WILL WORK IN CLOSE CONJUNCTION WITH THE FACTORY CERTIFIED SYSTEM'S COMMISSIONING TECHNICIAN WHO WOULD BE PROVIDING TURN-ON SERVICES. PROGRAMMING SERVICES AND TURN-ON SERVICES MAY, OR MAY NOT, OCCUR CONCURRENTLY DEPENDING ON THE PROJECT SPECIFICS.
3. THE PROGRAMMER, AT THE DIRECTION OF THE LIGHTING CONSULTANT AND/OR OWNER'S REPRESENTATIVE, WILL ADJUST ALL PROGRAMMABLE COMPONENTS OF THE LIGHTING AND CONTROL SYSTEM TO MEET THE DESIGN INTENT OF THE PROJECT.
4. THE PROGRAMMER WILL BE FACTORY TRAINED AND WILL HAVE CURRENT CERTIFICATION FOR ALL FURNISHED CONTROL SYSTEMS. RE-CERTIFICATION FOR PROGRAMMERS WILL BE REQUIRED AT LEAST EVERY FIVE (5) YEARS.
5. ADVANCED PROGRAMMING SERVICES WILL BE PRICED ON A PER-DAY BASIS AND WILL BE ESTIMATED AND QUOTED FOR A COMPLETE PROJECT. ADDITIONAL TIME WILL BE CHARGED AT A QUOTED DAY-RATE.
6. THE CONTRACTOR (NOT THE PROGRAMMER) WILL BE REQUIRED TO PROVIDE ANY AND ALL EQUIPMENT REQUIRED FOR THE EXECUTION OF ADVANCED PROGRAMMING – INCLUDING, BUT NOT LIMITED TO, TEMPORARY PROGRAMMING CONSOLES AND MONITORS, TABLES AND CHAIRS, SITE ACCESS AND NECESSARY SUPPORT PERSONNEL, WHICH WILL BE SPECIFIED BY THE PROGRAMMER AT THE TIME THE SCHEDULE FOR PROGRAMMING SERVICES IS DETERMINED.

ARCHITECT



CONSULTANT



City of Carson  
Community Center  
AV - Lighting Systems

801 East Carson st, Carson, CA. 90745

LIGHTING FIXTURE & STAGE LIGHTING CONTROL NOTES

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO.	
	E501	
	OF 10 SHEETS	

**LIGHTING FIXTURE & STAGE LIGHTING CONTROL NOTES**

N.T.S.

1

BID SET



# LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	MANUFACTURER & MODEL NO.	WATTS	LUMENS	CCT	DIMENSION	GENERAL DESCRIPTION	NOTES	LOCATION
B1A	PRESCOLITE RLCSL-DM1-8LCSL-24L-30K-8-WH-[OPTI ONS?]		32	2400	3000	8" DIA.	RECESSED RETROFIT LED DOWNLIGHT, 8-INCH APERTURE, MATTE WHITE REFLECTOR AND FLANGE. 0-10V DIMMING DRIVER.	-	COMMUNITY HALL
B1B	PRESCOLITE RLCSL-DM1-8LCSL-24L-30K-8-WH-[OPTI ONS?]		32	2400	3000	8" DIA.	RECESSED RETROFIT LED DOWNLIGHT, 8-INCH APERTURE, MATTE WHITE REFLECTOR AND FLANGE. 0-10V DIMMING DRIVER.	-	COMMUNITY HALL
B2	PRESCOLITE RLCSL-DM1-8LCSL-18L-30K-8-WH-[OPTI ONS?]		22	1800	3000	8" DIA.	RECESSED RETROFIT LED DOWNLIGHT, 8-INCH APERTURE, MATTE WHITE REFLECTOR AND FLANGE. 0-10V DIMMING DRIVER.	-	LOBBY & LOW CEILINGS
G1	TLS QR-D60-30K-CL-SF-RO-[FINISH]-LF-0-1 0-S-IN		70	536/SQF T	3000	60" DIA.	SURFACE MOUNTED 60" ROUND LED LIGHT FIXTURE. 0-10V DIMMING DRIVER.	-	COMMUNITY HALL
M1A	ETC FIXTURE: 7461A1051 LENS: 7060A2046 ACCESSORIES: 7060A1022 / 7060A1014 / 7060A3043 / 7060A1015 / 7410B7020 CABLE INPUT: 7410B7037-C		167	8667	RBGW+	26.44"L X 23.33"H X 10.61"W	C-CLAMP PIPE MOUNTED STAGE LIGHTING LED ELLIPSOIDAL FIXTURE, AIMED AT LECTURN. PROVIDE WITH 19" LENS, DONUT, PATTERN HOLDER, COLOR FRAME, 5FT POWERCON TO L5-20 TWIST LOCK POWER CABLE, C-CLAMP, 5FT POWERCON JUMPER, AND SAFETY CABLE. DMX CONTROLLED.	-	COMMUNITY HALL
M1B	ETC FIXTURE: 7461A1051 LENS: 7060A2047 ACCESSORIES: 7060A1022 / 7060A1014 / 7060A3043 / 7060A1015 / 7410B7020 CABLE INPUT: 7410B7037-C		167	8667	RBGW+	26.44"L X 23.33"H X 10.61"W	C-CLAMP PIPE MOUNTED STAGE LIGHTING LED ELLIPSOIDAL FIXTURE, AIMED AT STAGE FOR WASH. PROVIDE WITH 26" LENS, DONUT, PATTERN HOLDER, COLOR FRAME, 5FT POWERCON TO L5-20 TWIST LOCK POWER CABLE, C-CLAMP, 5FT POWERCON JUMPER, AND SAFETY CABLE. DMX CONTROLLED.	-	COMMUNITY HALL
M2	ETC FIXTURE: 7411A1050 LENS: 7411K1002 THRU 7411K1008 ACCESSORIES: 7060A2009 / PSF1114 / 7060A1022 / 7410B7020 CABLE INPUT: 7410B7037-C		56.5	1499	RBGW+	8.17"L X 10.39"H 6.3"W	C-CLAMP PIPE MOUNTED STAGE LIGHTING LED WASH FIXTURE, AIMED AT STAGE FOR DOWN LIGHT WASH. PROVIDE LENSE KIT, COLOR FRAME, SAFETY CABLE, 5FT POWERCON TO L5-20 TWIST LOCK POWER CABLE, 5FT POWERCON JUMPER, AND C-CLAMP. DMX CONTROLLED.	-	COMMUNITY HALL
M3	ETC FIXTURE: 7410A1405-I-0-C LENS: 7410K1011 THRU 7410K1016 / 7410K1039 ACCESSORIES: 7410B7020 / 7061A3007 / 7060A2009 / 7060A1022 CABLE INPUT: DPA-C		103	2593	RBGW+	10.3"L X 14.04"H 10.7"W	C-CLAMP PIPE MOUNTED STAGE LIGHTING LED WASH FIXTURE, AIMED AT STAGE FOR DOWN LIGHT WASH. PROVIDE LENSE KIT, COLOR FRAME, SAFETY CABLE, 5FT POWERCON TO L5-20 TWIST LOCK POWER CABLE, 5FT POWERCON JUMPER, AND C-CLAMP. DMX CONTROLLED.	-	COMMUNITY HALL
Q1	ETC TOUCHSCREEN: P-TS7-[FINISH?] MOUNTING: P-LCD-FBB		-	-	-	8.25"W X 5.5"H X 3.25"D	FLUSH WALL MOUNTED PARADIGM TOUCHSCREEN WALL STATION.	-	THROUGHOUT
Q2A	ETC FIXTURE: RSN-DMX2-0-P-4 ACCESSORIES: 25BD-4 / UBOLT[CUSTOM]		-	-	-	4.5"W X 4.5"H X 4.3"D	PIPE MOUNTED (2) PORT DATA DISTRIBUTION BOX. (2) DMX OUTPUT PORTS. BRACKET FOR MOUNTING TO 1.5" ID SCHEDULE 40 STEEL PIPE GRID. MATTE BLACK FINISH.	MOUNT TO PIPE. SEE DETAIL E-601/1. REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	COMMUNITY HALL
Q2B	ETC FIXTURE: DMX2-I-4		-	-	-	4.5"W X 4.5"H X 4.3"D	FLUSH WALL MOUNTED (2) PORT DATA DISTRIBUTION BOX. (2) DMX INPUTS PORTS. TWO GANG FLUSH MOUNTED BACKBOX. MATTE BLACK FINISH.	MOUNT FLUSH IN WALL AT STANDARD RECEPTACLE HEIGHT. SEE DETAIL E-601/2. REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	THROUGHOUT
Q3	ETC PLUGIN STATION: ECPB NET/NET BACKBOX: RACO 691		-	-	-	4.6"W X 3.75"H X 2.5"D	FLUSH WALL MOUNTED (2) PORT DATA DISTRIBUTION BOX. (2) ETHERNET PORTS. TWO GANG FLUSH MOUNTED BACKBOX. MATTE BLACK FINISH.	MOUNT FLUSH IN WALL AT STANDARD RECEPTACLE HEIGHT. SEE DETAIL E-601/3. REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	THROUGHOUT
Q4	ETC UFMP4		-	-	-	-	SURFACE MOUNTED FOUNDRY 4-ZONE MINI PANEL. MOUNTED IN STAGE LIGHTING POSITION. NEW NORMAL/EMERGENCY LIGHTING CONTROLLER FOR COVE LIGHTING AND TROFFER LIGHTING.	MOUNT IN STAGE LIGHTING PIPE COVE. REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	COMMUNITY HALL
Q5	ETC ERN: ERn2-RM-120-P-ACP DMX GATEWAY: RSN-DMX4-0 N3GA-HBU		-	-	-	-	NEW LIGHTING CONTROL RACK. PROVIDE RACK MOUNTED ERN2 ARCHITECTURAL CONTROL PROCESSOR AND RACK MOUNTED 4-PORT DMX OUT GATEWAY. SYSTEM INTEGRATOR TO PROVIDE 24-PORT ETHERNET SWITCH, BRUSH PANEL, 48-PORT PATCH BAY, UPS, STORAGE DRAWER, SLIDOUT TRAY, VANITY PLATE, AND BLANK PLATES AS NEEDED.	BUILD IN CONTROL BOOTH NEXT TO EXISTING RACKS. SEE DETAIL E-602/2 FOR QUANTITY AND RACK CONFIGURATION. REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	TECH BOOTH
Q6	ETC EBDK		-	-	-	14"W X 10.5"H X 4.2"D	WALL MOUNTED EMERGENCY BYPASS DETECTION KIT.	-	ELECTRICAL ROOM
Q7	ETC THRUPOWER MODULES: TR20AF CONSTANT MODULES: CC20 AIRFLOW MODULE: AFM CEM: CEM3-RK		-	-	-	-	REPLACEMENT DIMMER CARDS & CEM PROCESSOR WITH RETROFIT KIT FOR CEM+ DIMMER RACK. DIMMER CARD REPLACEMENTS PER PANEL SCHEDULE.	CONTRACTOR TO CLEAN FILTER AND EXISTING SENSOR RACK IN PREPARATION FOR NEW MODULE/CARDS. SYSTEM INTEGRATOR TO VERIFY QTY OF CARDS REQUIRED TO REPLACE EXISTING CARDS. MFR TO PROVIDE SHOP DRAWINGS FOR CEM3 RETROFIT (ORIG. CEM+ RACK)/DIMMER CARD PRIOR TO PURCHASING FOR APPROVAL.	ELECTRICAL ROOM
Q8	ETC 9201C		-	-	-	6"W X 6.25"L X 3.25"H	FLUSH MOUNTED 1-OUTLET POWER DISTRIBUTION RECEPTACLE. (1)L5-20 TWIST-LOCK RECEPTACLE WITH (1) 120V/20A CIRCUIT. MATTE BLACK FINISH WITH WHITE CIRCUIT NUMBER LABEL.	MOUNT FLUSH IN WALL AT STANDARD RECEPTACLE HEIGHT. SEE DETAIL E-601/4.	THROUGHOUT
Q9A	ETC 99-32'-[SEE DETAIL/CONTROL SCHEDULE FOR CIRCUIT/RECEPTACLE INFORMATION]-A-C-111		-	-	-	32'	SURFACE MOUNTED 32' RACEWAY. MATTE BLACK FINISH W WHITE CIRCUIT NUMBER LABELS. CUSTOM CENTER FEED TERMINAL BOX REQUIRED.	MOUNT IN STAGE LIGHTING PIPE COVE. SEE DETAIL E-601/7 FOR INFORMATION REGARDING RECEPTACLE COUNT, RECEPTACLE POSITIONING, CIRCUIT QUANTITY, ETC.	COMMUNITY HALL
Q9B	ETC 99-30'-[SEE DETAIL/CONTROL SCHEDULE FOR CIRCUIT/RECEPTACLE INFORMATION]-A-C-121/122		-	-	-	30'	PIPE MOUNTED 30' RACEWAY. MATTE BLACK FINISH W WHITE CIRCUIT NUMBER LABELS. CUSTOM CENTER FEED TERMINAL BOX REQUIRED.	MOUNT IN STAGE LIGHTING PIPE COVE. SEE DETAIL E-601/6 FOR INFORMATION REGARDING RECEPTACLE COUNT, RECEPTACLE POSITIONING, CIRCUIT QUANTITY, ETC.	COMMUNITY HALL
Q9C	ETC 99-24'-[SEE DETAIL/CONTROL SCHEDULE FOR CIRCUIT/RECEPTACLE INFORMATION]-A-C-121/122		-	-	-	24'	PIPE MOUNTED 24' RACEWAY. MATTE BLACK FINISH W WHITE CIRCUIT NUMBER LABELS. CUSTOM CENTER FEED TERMINAL BOX REQUIRED.	MOUNT IN STAGE LIGHTING PIPE COVE. SEE DETAIL E-601/5 FOR INFORMATION REGARDING RECEPTACLE COUNT, RECEPTACLE POSITIONING, CIRCUIT QUANTITY, ETC.	COMMUNITY HALL
Q10	ETC CONSOLE: ION XE 20-4K ACCESSORIES: EOS-MFW-10		-	-	-	29.3"W X 14.3"L X 4"H	PORTABLE THEATRICAL LIGHTING CONSOLE W/ MOTORIZED FADER WING. 4-UNIVERSE. PROVIDE WITH TOUCHSCREEN MONITORS.	REQUIRES DMX CONNECTION TO LIGHTING CONTROL SYSTEM. PLEASE REFER TO MANUFACTURER SHOP DRAWINGS FOR EXACT CABLE TYPE, QUANTITY, LENGTH, AND TOPOLOGY RESTRICTIONS.	TECH BOOTH
Q11	ETC P-OCC-HCM		-	-	-	4.5"DIA X 1.6"H	SURFACE MOUNTED OCCUPANCY SENSOR FOR HIGH CEILING.	-	THROUGHOUT
Q12	ETC P-LS		-	-	-	4.5"DIA X 1.6"H	SURFACE MOUNTED LIGHT SENSOR FOR HIGH CEILING.	-	THROUGHOUT
X1	COMPASS CEL		1	-	-	-	EDGE LIT EXIT SIGN	-	THROUGHOUT
Z1	ECOSENSE FIXTURE: L35-I-12-04-30-80-MULT-120 ACCESSORIES: LDCM-PL-120-277-010V-GR		4/FT	407/FT	3000	1.64"W X 1.4"H X L PER PLANS	SURFACE MOUNTED LINEAR LED COVE LIGHT FIXTURE. 120' OPTICS. 0-10V DIMMING DRIVER.	-	COMMUNITY HALL & LOBBY

SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR CRITICAL FIXTURE SPECIFICATION AND ORDERING INFORMATION.

ARCHITECT



CONSULTANT



City of Carson  
Community Center  
AV - Lighting Systems

801 East Carson st. Carson, CA. 90745

LIGHTING FIXTURE SCHEDULE

PROJECT NO.: 21011  
R.S. A.P.

FILE NAME  
DATE: 01-10-2022 DRAWN DP  
CHECKED JW

REVISIONS SHEET NO.

E502  
OF 10 SHEETS

LIGHTING FIXTURE SCHEDULE

N.T.S.

1

BID SET



## PLUGBOX AND RACEWAY SCHEDULE

TYPE	ID	DEVICE TYPE	LOCATION	O.A.L.	DR1 QTY	MOUNTING	ETC CONFIG	NET DATA	DMX NODE	POSITION A		POSITION B		POSITION C		POSITION D		POSITION E		POSITION F		POSITION G		POSITION H		POSITION I		POSITION J		POSITION K		POSITION L		POSITION M		POSITION N	
										DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG	DR1	CONFIG
PB	101	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-60	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	102	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-60	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	103	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-60	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	104	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-59	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	105	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-60	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	106	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-59	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	107	Q8	HALL B, STAGE	7"	1	WALL, FLUSH	9200C SERIES	-	-	DR1-59	L5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PB	201	Q9C	HALL B	24'-0"	4	PIPE MOUNTED	9900 SERIES	-	-	DR1-19	L5-20	DR1-24	DUP. 5-20R	DR1-19	L5-20	DR1-21	L5-20	DR1-24	DUP. 5-20R	DR1-21	L5-20	DR1-22	L5-20	DR1-24	DUP. 5-20R	DR1-22	L5-20	DR1-23	L5-20	DR1-24	DUP. 5-20R	DR1-23	L5-20	-	-	-	-
PB	202	Q9C	HALL B	24'-0"	4	PIPE MOUNTED	9900 SERIES	-	-	DR1-26	L5-20	DR1-32	DUP. 5-20R	DR1-26	L5-20	DR1-28	L5-20	DR1-32	DUP. 5-20R	DR1-28	L5-20	DR1-30	L5-20	DR1-32	DUP. 5-20R	DR1-30	L5-20	DR1-31	L5-20	DR1-32	DUP. 5-20R	DR1-31	L5-20	-	-	-	-
PB	203	Q9A	HALL B	32'-0"	8	SURFACE MOUNTED	9900 SERIES	-	-	DR1-33	L5-20	DR1-39	DUP. 5-20R	DR1-33	L5-20	DR1-34	L5-20	DR1-39	DUP. 5-20R	DR1-35	L5-20	DR1-36	L5-20	DR1-40	DUP. 5-20R	DR1-37	L5-20	DR1-37	L5-20	DR1-38	L5-20	DR1-40	DUP. 5-20R	DR1-38	L5-20	-	-
PB	204	Q9A	HALL B	32'-0"	8	SURFACE MOUNTED	9900 SERIES	-	-	DR1-41	L5-20	DR1-47	DUP. 5-20R	DR1-41	L5-20	DR1-42	L5-20	DR1-47	DUP. 5-20R	DR1-43	L5-20	DR1-44	L5-20	DR1-48	DUP. 5-20R	DR1-45	L5-20	DR1-45	L5-20	DR1-46	L5-20	DR1-48	DUP. 5-20R	DR1-46	L5-20	-	-
PB	205	Q9B	HALL A	30'-0"	4	PIPE MOUNTED	9900 SERIES	-	-	DR1-49	L5-20	DR1-52	DUP. 5-20R	DR1-49	L5-20	DR1-49	L5-20	DR1-50	L5-20	DR1-52	DUP. 5-20R	DR1-50	L5-20	DR1-50	L5-20	DR1-51	L5-20	DR1-51	L5-20	DR1-51	L5-20	DR1-52	DUP. 5-20R	DR1-51	L5-20	-	-
PB	206	Q9B	HALL C	30'-0"	4	PIPE MOUNTED	9900 SERIES	-	-	DR1-55	L5-20	DR1-58	DUP. 5-20R	DR1-55	L5-20	DR1-55	L5-20	DR1-56	L5-20	DR1-58	DUP. 5-20R	DR1-56	L5-20	DR1-56	L5-20	DR1-58	DUP. 5-20R	DR1-56	L5-20	DR1-57	L5-20	DR1-58	DUP. 5-20R	DR1-57	L5-20	-	-

## LIGHTING CONTROL STATIONS SCHEDULE

TYPE	ID	DEVICE TYPE	LOCATION	MOUNTING	CONFIGURATION	INSTALLATION
WS	101	Q1	HALL A, MAIN DOOR	WALL, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	102	Q1	HALL C, MAIN DOOR	WALL, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	103	Q1	HALL B, STAGE RIGHT DOOR	WALL, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	104	Q1	BOH CORRIDOR	WALL, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	105	Q1	HALL B, MAIN DOOR	WALL, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	201	Q1	CONTROL BOOTH	DESK, FLUSH	TOUCHSCREEN	MFR BACKBOX PROVIDED
WS	301	Q12	HALL A	CEILING, SURFACE	DAYLIGHT SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	302	Q11	HALL A	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	303	Q12	HALL A	CEILING, SURFACE	DAYLIGHT SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	304	Q11	HALL A	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	305	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	306	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	307	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	308	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	309	Q11	HALL C	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	310	Q12	HALL C	CEILING, SURFACE	DAYLIGHT SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	311	Q11	HALL C	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	312	Q12	HALL C	CEILING, SURFACE	DAYLIGHT SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	313	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE
WS	314	Q11	HALL B	CEILING, SURFACE	OCC SENSOR	BACKBOX REQUIRED, REFER TO MFR INSTALLATION GUIDE

## PLUG-IN DATA STATIONS SCHEDULE

TYPE	ID	DEVICE TYPE	LOCATION	CONFIGURATION	MOUNTING	DEVICE A	DEVICE B	DEVICE C	DEVICE D
PS	101	Q3	HALL B, MAIN DOORS	2-GANG	WALL, FLUSH	NET	NET	-	-
PS	102	Q3	HALL B, STAGE RIGHT DOOR	2-GANG	WALL, FLUSH	NET	NET	-	-
PS	201	Q2A	HALL B, OVERHEAD	2-GANG	PIPE, BOTTOM MOUNT	DMX OUT	DMX OUT	-	-
PS	202	Q2A	HALL B, OVERHEAD	2-GANG	PIPE, BOTTOM MOUNT	DMX OUT	DMX OUT	-	-
PS	203	Q2A	HALL B, OVERHEAD	2-GANG	PIPE, TOP MOUNT	DMX OUT	DMX OUT	-	-
PS	204	Q2A	HALL B, OVERHEAD	2-GANG	PIPE, TOP MOUNT	DMX OUT	DMX OUT	-	-
PS	205	Q2A	HALL A, OVERHEAD	2-GANG	PIPE, BOTTOM MOUNT	DMX OUT	DMX OUT	-	-
PS	206	Q2A	HALL C, OVERHEAD	2-GANG	PIPE, BOTTOM MOUNT	DMX OUT	DMX OUT	-	-
PS	207	Q2B	CONTROL BOOTH	2-GANG	WALL, FLUSH	DMX IN	DMX IN	-	-
PS	208	Q3	CONTROL BOOTH	2-GANG	WALL, FLUSH	NET	NET	-	-

## STAGE LIGHTING CONTROLS SCHEDULE

N.T.S.

1

ARCHITECT



CONSULTANT



City of Carson  
Community Center  
AV - Lighting Systems

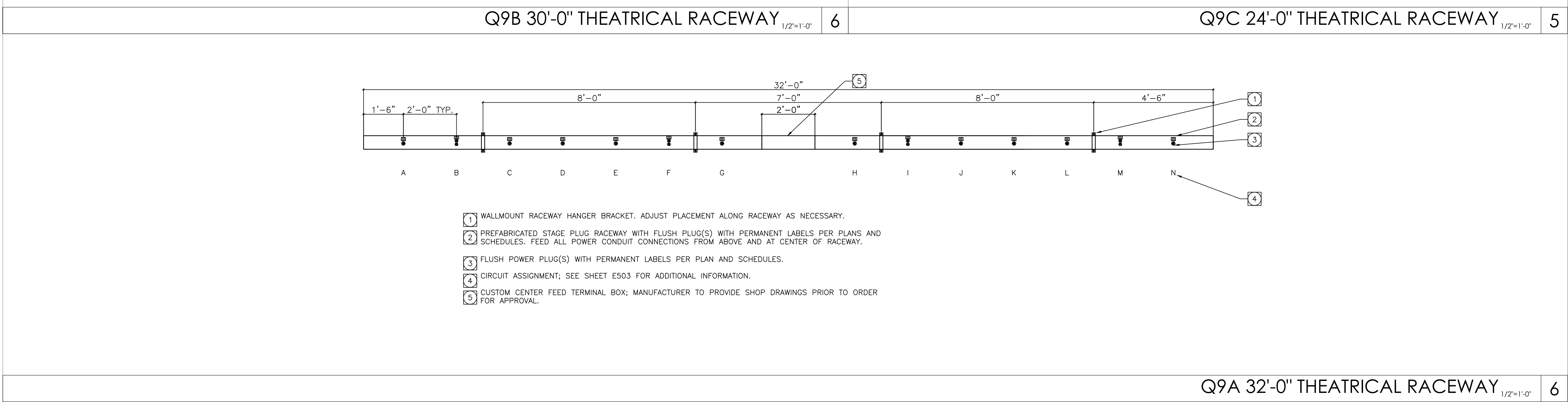
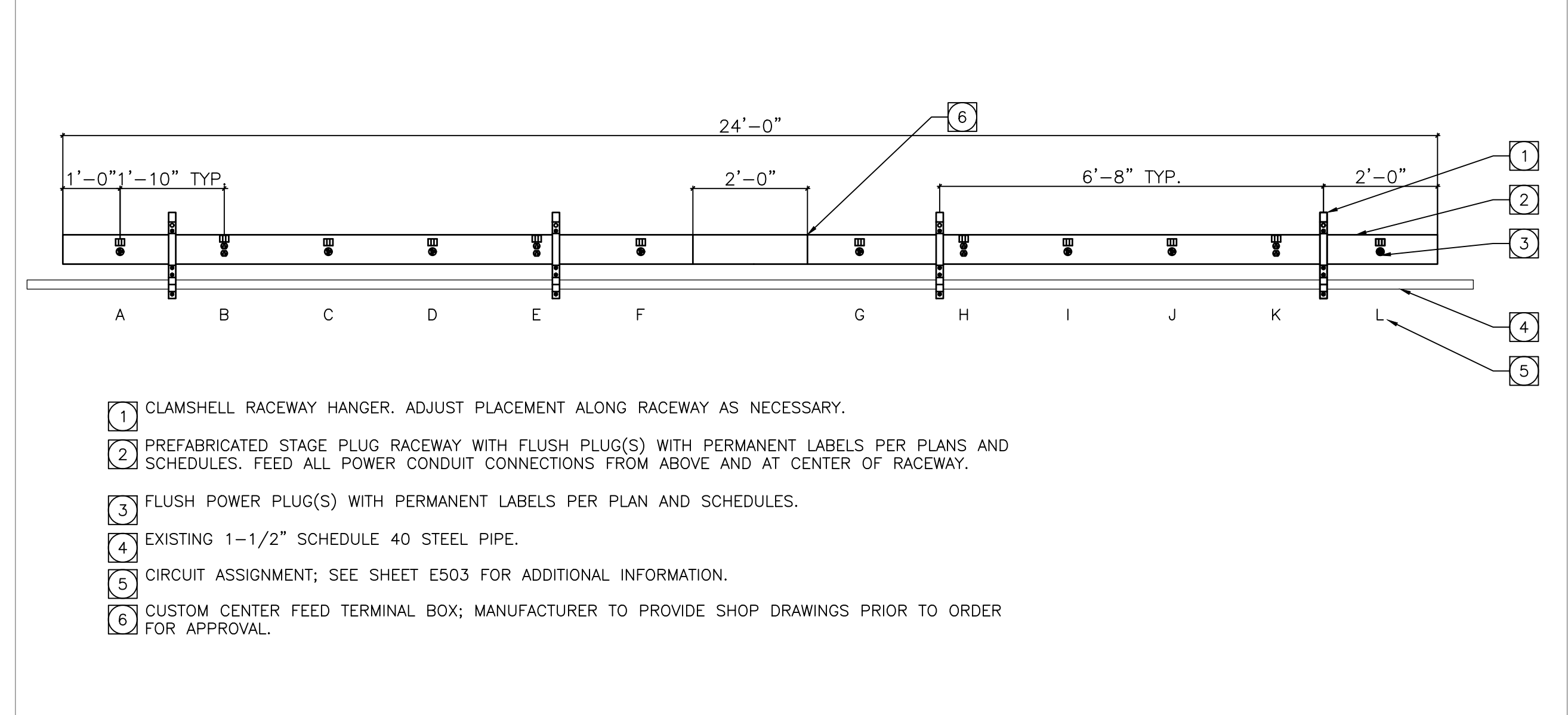
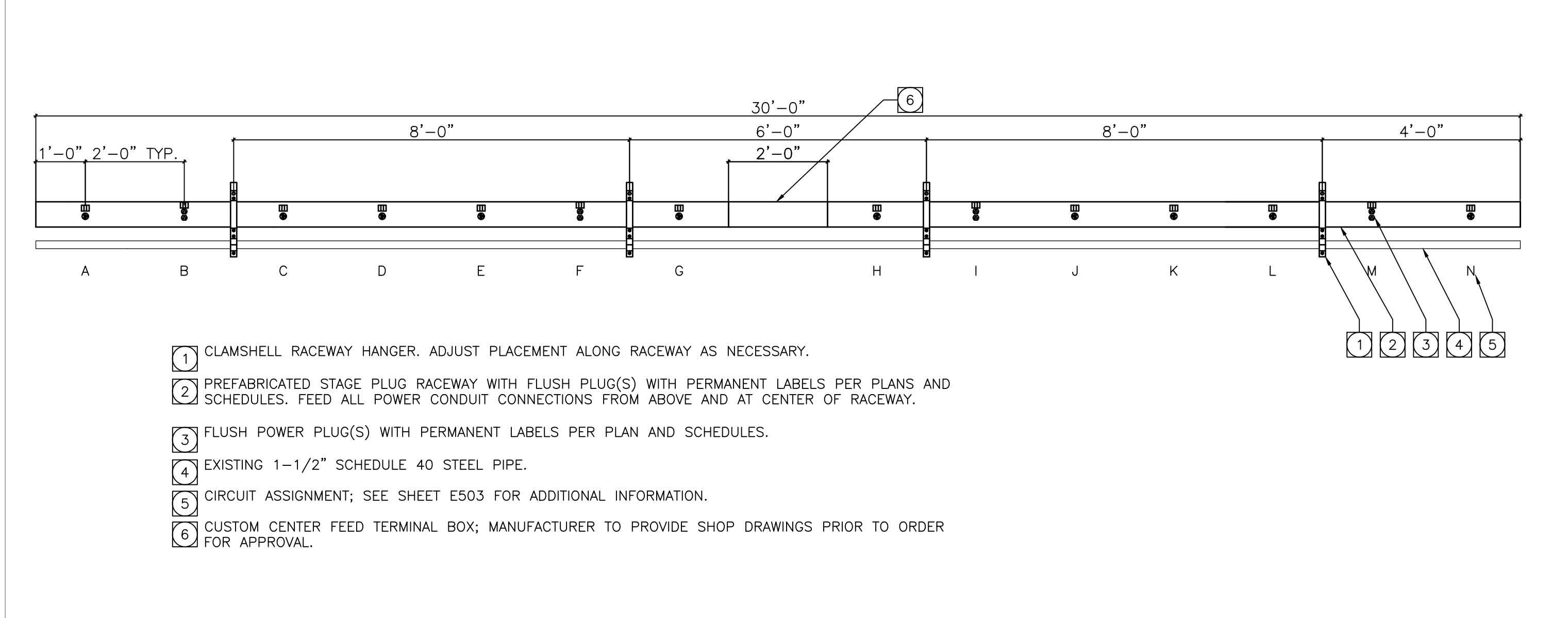
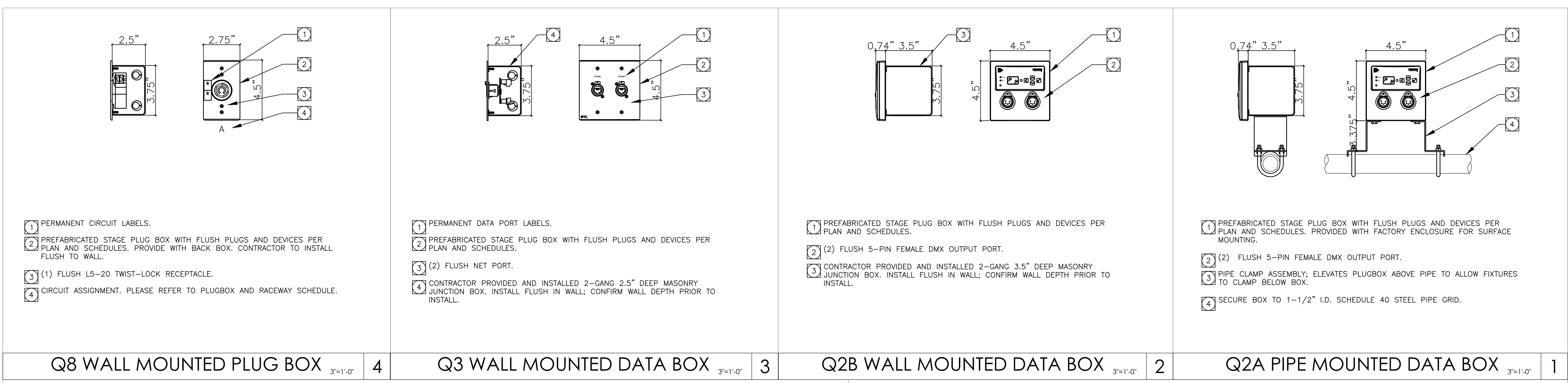
801 East Carson st. Carson, CA. 90745

STAGE LIGHTING CONTROLS SCHEDULE

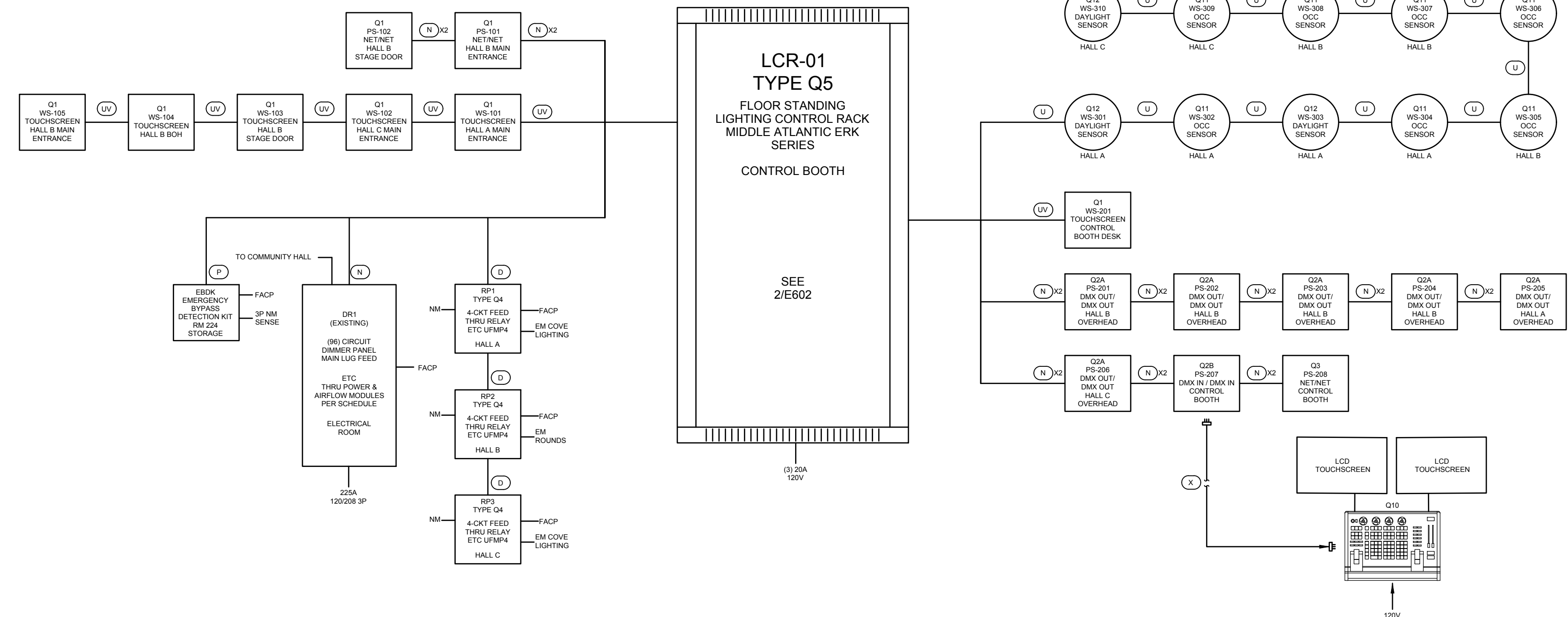
PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO.
	E503
	OF 10 SHEETS

BID SET



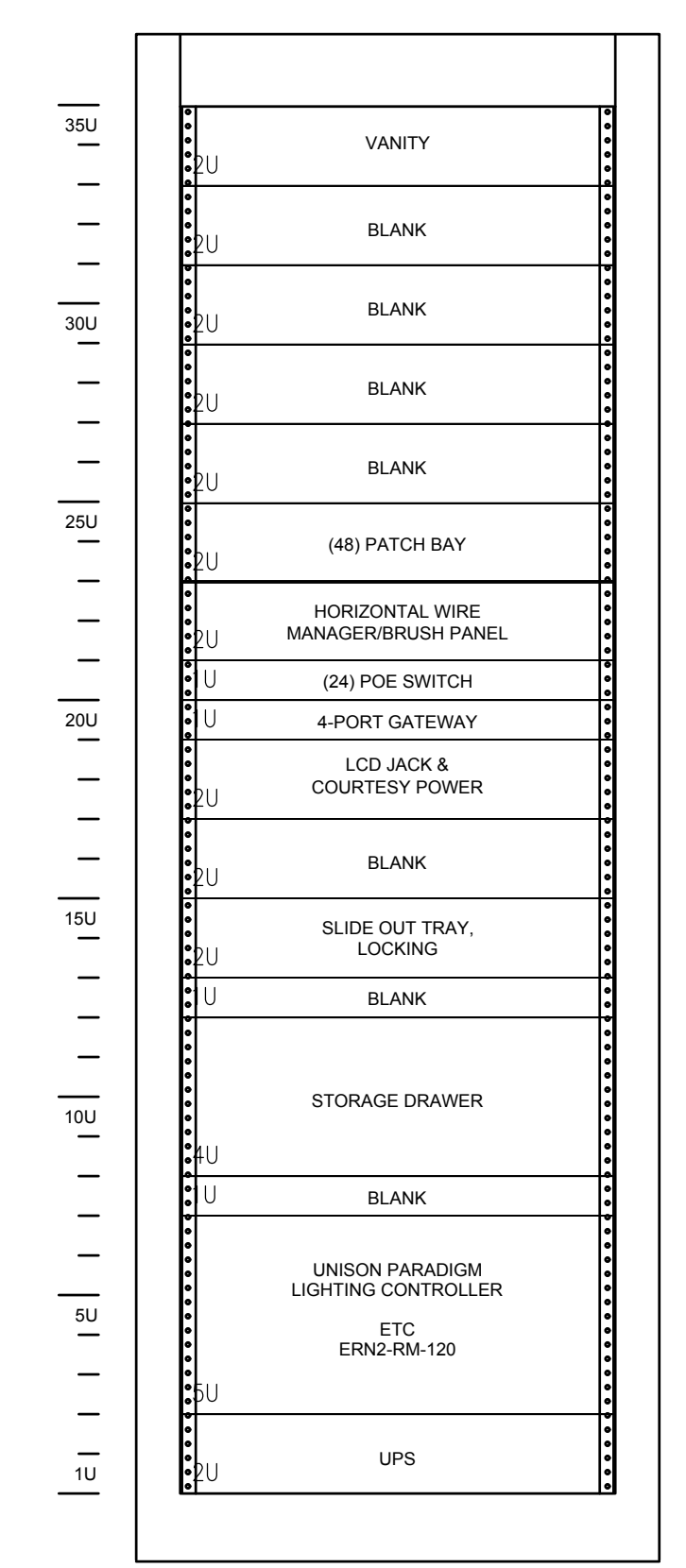






CONTROL WIRING LEGEND		
SYMBOL	WIRE TYPE(S)	SIGNAL
(D)	BELDEN 9729	DMX
(N)	CATEGORY NETWORK WIRE	NET
(P)	(2) #16 AWG. STRANDED WIRES	PANIC
(U)	(1) BELDEN 8471 (1) #14 AWG. STRANDED WIRE	LINKCONNECT
(X)	(1) #14 AWG. STRANDED WIRE (2) #16 AWG. STRANDED WIRES	LINKCONNECT (WITH 2-PIN PINS)
(X)	DMX DIMMER WITH XLR CONNECTORS	DMX
* = WIRE QUANTITY		

STAGE LIGHTING CONTROL RISER DIAGRAM NTS 1



- LIGHTING CONTROLS INSTALLATION NOTES:**
- MINIMUM LIGHTING CONTROL SIGNAL CONDUIT SIZE IS 3/4". ALL CONDUIT TO BE INSTALLED SHALL CONTAIN QUANTITY OF CONDUCTORS COMPLYING WITH 40% FILL AS OUTLINED BY NEC.
  - ALL DATA/SIGNAL/LOW VOLTAGE CONDUCTORS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR AS OUTLINED IN LIGHTING SYSTEM INTEGRATOR'S SHOP DRAWINGS, WITH 6'-0" MINIMUM TERMINATION SLACK AT BOTH ENDS.
  - CONTRACTOR SHALL VERIFY LOCATION & REQUIREMENTS OF ALL LIGHTING CONTROL DEVICES PRIOR TO BID, ROUGH-IN AND INSTALLATION.
  - CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL LIGHTING CONTROL SYSTEM. MAXIMUM 180° OF BEND BETWEEN PULL POINTS.
  - UNIQUELY LABEL ALL CABLES PER LIGHTING SYSTEM INTEGRATOR'S WIRE SCHEDULES.
  - ALL CONTROL/LOW VOLTAGE DATA TERMINATIONS SHALL BE PERFORMED BY THE LIGHTING SYSTEMS INTEGRATOR TECHNICIAN AS PART OF THE COMMISSIONING OF THE SYSTEM.
- LIGHTING SYSTEM CONFIGURATION NOTES:**
- LIGHTING SYSTEMS INTEGRATOR SHALL CONFIGURE AND ADDRESS ALL LUMINAIRES PRIOR TO INSTALLATION.
  - PROGRAM / SNAPSHOT LIGHT SETTINGS UNDER THE DIRECTION OF LIGHTING DESIGNER AND OWNER.
- SYSTEM COMMISSIONING:**
- DIGITALLY ADDRESSED LIGHT FIXTURES SHALL BE ADDRESSED IN LOGICAL GROUPS TO MINIMIZE DMX CHANNEL FOOTPRINT.
  - ALL DMX PROCESSING GEAR SHALL BE CONFIGURED TO DMX UNIVERSE A.
  - ALL WALL STATIONS SHALL BE PROGRAMMED FOR LOGICAL USE, AND ALL CONFIGURED TO "SNAPSHOT" A REMOTE LIGHTING CONSOLE, IF DESIRED.
  - ALL UNISON "SMART JACKS" SHALL BE PROGRAMMED WITH RELEVANT ROOM PRESET AND CHANNEL INFORMATION BASED ON JACK LOCATION.
  - ALL EMERGENCY LIGHTING SYSTEMS SHALL BE TESTED AND VERIFIED AFTER INSTALLATION.
- CONTROL RACK INSTALLATION NOTES:**
- PROVIDE (3) 20A CIRCUITS TO POWER DEVICES. PLEASE SEE POWER PLANS FOR CIRCUIT INFORMATION.
  - PROVIDE MOUNTING IN FLOOR FOR RACK ATTACHMENT. SECURE LIGHTING RACK NEAR EXISTING RACKS.
  - LIGHTING SYSTEMS INTEGRATOR SHALL PROVIDE RACK AND ALL RACK MOUNTED EQUIPMENT:
    - PROVIDE (1) 7U MIDDLE ATLANTIC SWING-OUT RACK, WITH LOCKING PLEXIGLASS DOOR, BLACK.
    - PROVIDE (1) VANITY PLATE WITH LIGHTING SYSTEMS INTEGRATOR CONTACT INFORMATION.
    - PROVIDE (1) RACK MOUNT LIGHTING PROCESSOR: ETC PARADIGM ERN2-RM.
    - PROVIDE (1) DMX NETWORK GATEWAY; (3) OUT / (1) IN, NODES AS REQUIRED.
    - PROVIDE (1) ETHERNET SWITCH, POE, QTY PORTS AS REQ'D.
    - PROVIDE (1) BRUSH PANEL FOR DRESSING CABLES.
    - PROVIDE (1) 2U ETHERNET PATCH BAY, QTY PORTS AS REQ'D.
    - PROVIDE (1) UPS.
    - PROVIDE (1) LOT BLANK PANELS AS REQ'D.
    - PROVIDE (1) LOT ETHERNET, DMX OR OTHER CABLES AS REQUIRED FOR ALL INTERCONNECTIONS.
    - PROVIDE (1) LOT POWER DISTRIBUTION AS REQ'D.
- LIGHTING SYSTEMS INTEGRATOR:**
- LIGHTING SYSTEMS INTEGRATOR SHALL PROVIDE ALL DIMMING CONTROL SYSTEM DEVICES.
  - LIGHTING SYSTEMS INTEGRATOR SHALL COORDINATE INSTALLATION OF DIMMING AND CONTROL DEVICES, LUMINAIRES, AND ALL DATA, WITH ELECTRICAL CONTRACTOR.
  - LIGHTING SYSTEMS INTEGRATOR SHALL CONFIGURE AND PROGRAM LIGHTING CONTROL SYSTEM AS DIRECTED BY LIGHTING CONSULTANT AND OWNER.
  - LIGHTING SYSTEMS INTEGRATOR SHALL BE APPROVED BY LIGHTING CONSULTANT.
    - PRE-APPROVED LIGHTING SYSTEMS INTEGRATORS ARE:
      - 4-WALL ENTERTAINMENT LIGHTING | WWW.4WALL.COM | LOS ANGELES  
CONTACT: BRENT PRITCHETT | 702.263.3858 | BPRITCHETT@4WALL.COM
      - WESTVIEW PRODUCTIONS | WWW.WESTVIEWPRODUCTIONS.COM | LOS ANGELES  
CONTACT: TYLER WISE | 917-678-9560 | THISE@WESTVIEWPRODUCTIONS.COM
      - POLARIS LIGHTING INC. | (NO WEBSITE?) | LOS ANGELES  
818-265-0333

LIGHTING CONTROL RACK DEVICES AND ELEVATION NTS 2

P:\2021\2021-0397 Carson Comm Ctr Air Hall Renovation\Drawings and Models\CAD\Electrical\Lighting Upgrade\E602.dwg Jan 06, 2022 - 8:25am DP:erand



## COMMUNICATIONS PATHWAYS

- CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90°
- BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
- CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
- TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHES TO 3-INCHES ABOVE THE FLOOR SURFACE. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
- FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
- ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED.

## ASSISTIVE LISTENING SYSTEM NOTE:

- PROVIDE PORTABLE OR PERMANENT ASSISTIVE LISTENING SYSTEMS BY LISTEN TECHNOLOGIES OR EQUIVALENT AS SPECIFIED HEREIN.
- SEE SPECIFICATION SECTION XXXXXX FOR MORE INFORMATION.
- ALS SYSTEM SHALL PROVIDE AMPLIFICATION WITHIN A ROOM FOR INDIVIDUALS WITH NORMAL HEARING AND FOR THOSE WITH MINIMUM TO MILD HEARING LOSS IN 10 TO 25 dB RANGE.
- THE RECEIVERS SHALL BE ABLE TO AMPLIFY THE SPEAKER'S VOICE 20 dB ABOVE ROOM NOISE. THEY SHALL HAVE AN AUXILIARY INPUT JACK TO BROADCAST EXTERNAL SOUNDS FROM AN AUDIBLE DEVICE OR TELEVISION. THE RECEIVERS SHALL HAVE AN AUXILIARY VOLUME CONTROL TO CONTROL THE SOUND LEVEL OF INPUT RECEIVED FROM EXTERNAL SOURCES. THE UNITS SHALL HAVE AN FM VOLUME CONTROL TO ALLOW FOR ADJUSTMENT OF THE SOUND LEVEL OF THE FM SIGNAL RECEIVED FROM THE WIRELESS TRANSMITTER. THE RECEIVER MUST HAVE A TONE CONTROL TO ADJUST THE FREQUENCY RESPONSE FOR A VARIETY OF USERS AND LISTENING ENVIRONMENTS. THEY SHALL HAVE COLOR-CODED SPEAKER OUTPUT TERMINALS AND MUST BE CAPABLE OF RECEIVING ANY OF 40 FCC AND INDUSTRY CANADA APPROVED NARROW BAND CHANNEL IN THE 72 TO 76 MHz RANGE.
- PROVIDE TRANSMITTERS AND RECEIVERS WITH RECHARGEABLE BATTERIES.
- LISTENING ACCESSORIES AND CHARGING UNITS EQUAL TO 4% OF THE TOTAL SEATING OF ALL CLASSROOMS BUT NO LESS THAN A QUANTITY OF TWO PER CLASSROOM, LA-323 OR LA-325 AS REQUIRED. 25% OF ALL RECEIVERS TO BE HEARING AID COMPATIBLE. REFER TO ARCHITECTURAL FLOOR PLANS FOR MINIMUM OCCUPANCY SEATING. NUMBER OF TRANSMITTERS SHALL ACCOMMODATE REQUIRED NUMBER OF RECEIVERS.

## DRAWING REFERENCES





## GENERAL NOTES:

- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT, JUNCTION BOXES, CABLE TRAYS, COVER PLATES, PULL STRING, ENCLOSURES, FLOOR BOXES, POWER RECEPTACLES AND POWER CONNECTIONS IDENTIFIED IN THESE DRAWINGS AND SPECIFICATIONS. UNLESS OTHERWISE NOTED.
- ALL JUNCTION BOXES IN WALLS AND CEILINGS SHALL BE FLUSH MOUNTED. CONDUITS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
- ALL AUDIO-VISUAL CONDUIT RUNS SHALL BE CONTINUOUS FROM END TO END. NO CONDUIT RUNS SHALL EXCEED 100 FEET. ALL CONDUIT RUNS EXCEEDING 100 FEET MUST HAVE LARGE RADIUS BENDS. TOTAL BENDS PER RUN IS 360 DEGREES.
- GENERAL CONTRACTOR SHALL PROVIDE STRUCTURAL SUPPORT FOR MOUNTING OF AUDIO-VISUAL EQUIPMENT PROVIDED BY OTHERS AT LOCATIONS DESIGNATED IN THESE DRAWINGS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, BLOCKING FOR WALL MOUNTED DEVICES AND OVERHEAD SUPPORT FOR CEILING MOUNTED PROJECTORS AND PROJECTION SCREENS.
- REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR SUPPORT DETAILS AND REQUIREMENTS.
- DIMENSIONS ARE INDICATED ON AUDIOVISUAL DRAWINGS WHERE CRITICAL TO THE INSTALLATION AND PERFORMANCE OF THE AUDIOVISUAL DEVICES. WHERE INFORMATION AND REQUIREMENTS CONFLICT WITH SPECIFICATIONS AND DESIGNS DELINEATED ELSEWHERE, THE GENERAL CONTRACTOR SHALL IMMEDIATELY BRING SUCH CONFLICTS TO THE ATTENTION OF THE ARCHITECT.
- THE ARCHITECTURAL, FURNITURE AND FINISH CONFIGURATIONS ILLUSTRATED ON THE AUDIOVISUAL DRAWINGS ARE FOR REFERENCE ONLY. REFER TO THE ARCHITECTURAL DRAWINGS FOR SPECIFICATIONS AND REQUIREMENTS.
- ALL EQUIPMENT INSTALLATION AND MOUNTING DETAILS PROVIDED IN THE AUDIO-VISUAL DRAWINGS ARE FOR REFERENCE ONLY. REFER TO ARCHITECTURAL AND ENGINEERING DRAWINGS FOR SPECIFIC REQUIREMENTS.
- DATA/COMMUNICATION OUTLETS AND POWER OUTLETS ARE SHOWN FOR REFERENCE ONLY. REFER TO THE TELECOMMUNICATION DRAWINGS FOR EXACT LOCATION OF THE DATA/COMMUNICATION OUTLETS AND TO THE ELECTRICAL DRAWINGS FOR THE EXACT LOCATION OF THE POWER RECEPTACLES.
- CEILING MOUNTED SPEAKER ENCLOSURES SHALL BE SUPPORTED FROM OVERHEAD STRUCTURE. DO NOT HANG SPEAKER ENCLOSURES FROM FINISHED CEILING.
- GENERAL CONTRACTOR SHALL PROVIDE PULL STRINGS IN ALL CONDUIT SPECIFIED IN AUDIO-VISUAL DRAWINGS. GENERAL CONTRACTOR SHALL LABEL ALL AUDIO-VISUAL JUNCTION BOXES WITH DESIGNATED BOX ID NUMBER (E.G., AV100).
- GENERAL CONTRACTOR SHALL PROVIDE BLANK COVER PLATES AT ALL AUDIO-VISUAL JUNCTION BOXES. VERIFY ALL DEVICE PLATE FINISHES WITH ARCHITECT. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL AUDIOVISUAL JUNCTION BOXES AND DEVICES WITH ARCHITECT.
- SOME JUNCTION BOXES AND ENCLOSURES SPECIFIED IN AUDIO-VISUAL DRAWINGS MAY BE DEEPER THAN STANDARD WALL DEPTH. COORDINATE WITH MANUFACTURER AND/OR ARCHITECT TO VERIFY INSTALLATION REQUIREMENTS AND DETAILING.
- WHERE SPECIFIED, LOW VOLTAGE CONTROL INTERFACE ELECTRONICS SHALL BE PROVIDED TO ENABLE OPERATION OF LINE VOLTAGE DEVICES (E.G., PROJECTION SCREENS, LIGHTING, WINDOW COVERINGS) VIA THE AUDIO-VISUAL CONTROL SYSTEM. PROVIDE SERIAL DIGITAL (E.G., RS232) INTERFACE CONTROL WHERE AVAILABLE WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX THE ELECTRICAL CONTRACTOR SHALL LABEL EACH CONDUIT IN A MANNER ALLOWING IDENTIFICATION OF CONDUITS AFTER WALL FINISHES ARE APPLIED.
- AUDIO-VISUAL INFRASTRUCTURE DIAGRAM IDENTIFY SIGNAL CABLE CONTAINMENT REQUIREMENTS ONLY. AUDIOVISUAL CABLING AND SPECIALTY CONNECTOR PLATES ARE BY AUDIO-VISUAL CONTRACTOR.
- ALL CONDUITS SPECIFIED SHALL BE EMT OR RIGID TYPE. FLEXIBLE CONDUITS MAY BE USED IN RUNS OF 72" OR LESS. FLEXIBLE CONDUITS SHALL NOT BE ALLOWED WHERE ACCESS CANNOT BE PROVIDED TO THE FULL LENGTH OF THE CONDUIT RUN.
- GENERAL CONTRACTOR TO INSTALL PROJECTION SCREEN HOUSING FOR ALL FUTURE PROJECTION SCREEN LOCATIONS. U.O.N.
- DEVICE MOUNTING HEIGHT IS TO THE CENTER, UON.
- POWER RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO THE ELECTRICAL DRAWINGS FOR COMPLETE POWER LAYOUT AND CIRCUITING.
- WHERE SHOWN A TECHNICAL GROUND IS REQUIRED (TGS). PROVIDE AN INSULATED GROUND CONDUCTOR ISOLATED FROM THE BACK BOX/CONDUIT SYSTEM. THIS GROUND CONDUCTOR WILL ONLY BE TERMINATED AT THE ELECTRICAL PANEL'S DEDICATED TGS GROUND BUSS. NO OTHER GROUNDS SHALL BE TERMINATED AT THIS TGS GROUND BUSS. LABEL TGS RECEPTACLE WITH THE TGS DESIGNATION AND CIRCUIT NUMBER.



















## WIRE TYPE AUDIO, VIDEO, CONTROL CABLES SCHEDULE

- LOUDSPEAKER SPEAKER CABLE, 70-VOLT DISTRIBUTION, PLENUM RATED 2-CONDUCTOR, 16 AWG, UNSHIELDED PAIR: WEST PENN, BELDEN OR EQUAL.
- STADIUM LOUD SPEAKER CABLE SHALL BE 8/2 AWG OR 10/2 AWG RATED FOR WATER IMMERSION OR AS SPECIFIED : WEST PENN, BELDEN OR EQUAL
- LOUDSPEAKER CABLE, PLENUM RATED 2-CONDUCTOR, 12 AWG, UNSHIELDED PAIR: WEST PENN, BELDEN OR EQUAL.
- LOUDSPEAKER CABLE, PLENUM RATED 2-CONDUCTOR, 14 AWG, UNSHIELDED PAIR: WEST PENN, BELDEN OR EQUAL.
- ANALOG MICROPHONE/LINE LEVEL INSTALLATION CABLE, 22 AWG CONDUCTOR, JACKETED, SHIELDED, TWISTED-PAIR, PLENUM RATED: WEST PENN, BELDEN OR EQUAL.
- PRE-TERMINATED HDMI, DVI DISPLAY PORT CABLES: EXTRON, OR EQUAL. (NOTE, CABLES MUST BE RATED FOR HDMI 2.0 SPECIFICATIONS OR BETTER, CAPABLE OF PASSING UHD AND 4K RESOLUTION AT DISTANCES LESS THAN 35' WITHOUT AN ACTIVE EQUALIZER.)
- DIGITAL VIDEO SWITCHER, EXTRON XTP/DTP 24, OR CRESTRON ULTRA SHIELDED TWISTED PAIR CABLE. . WITH EXTRON OR CRESTRON ONLY SHIELDED RJ-45 CONNECTORS.
- CONTROL SYSTEM DEVICE CONTROL (RS232, RELAY OR CONTACT CLOSURE): (DUAL 22 AWG SHIELDED TWISTED PAIRS WITH INDIVIDUAL DRAIN WIRES, EACH PAIR IS COLOR-CODED RED/BLACK AND GREEN/WHITE TO SIMPLIFY IDENTIFICATION.) PLENUM RATED: WEST PENN, BELDEN OR EQUIVALENT.
- DATA NETWORK: PLENUM-RATED CATEGORY 6, SEE STRUCTURED CABLING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- SERIAL DIGITAL INTERFACE CABLE RG6, 75 OHM COAXIAL CABLE BELDEN 4694R OR EQUAL.
- FIBER, OM4, MM, 50 MICRON WITH LC CONNECTIONS PER EXTRON OR CRESTRON SPECIFICATIONS. FIBER, SINGLE MODE. PROVIDE CONNECTORS AS SHOWN. PROVIDE PLENUM RATED CABLE FOR ALL CABLE WHERE REQUIRED BY CODE. PROVIDE CABLE RATED FOR WATER IMMERSION AS REQUIRED OR AS SPECIFIED.
- ANY CABLE CHANGES OR SUBSTITUTIONS MUST BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. NON-COMPLIANT CABLE THAT HAS BEEN INSTALLED WITHOUT APPROVAL SHALL BE REPLACED AT THE CONTRACTOR EXPENSE.

## ANNOTATIONS

-  DETAIL CALLOUT, "x" INDICATES DETAIL NUMBER "AVx-xx" INDICATES SHEET NUMBER.
-  PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
-  PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
-  REVISION REFERENCE.

## AV SYMBOLS

-  TOUCH PANEL AV CONTROL. 2 GANG BACK-BOX. +44". (1) ¾" CO TO ACCESSIBLE CEILING
-  ASSISTIVE LISTENING. 1 GANG BACK-BOX. +96". 1" CO TO ACCESSIBLE CEILING.
-  AV RACK. 6" X 6" X 4" J-BOX. + 24". (2) 1" CO TO ACCESSIBLE CEILING. PROVIDE (2) 20 AMP 120V RECEPTACLES.
-  ROOM SCHEDULING PANEL. 2 GANG BACK-BOX. +44". (1) ¾" CO TO ACCESSIBLE CEILING
-  WALL MOUNTED CAMERA. 2 GANG BACK-BOX WITH 1 GANG RING. + 80". 1" CO TO ACCESSIBLE CEILING .
-  DISPLAY. FSR PWB-250 BACK-BOX. +60. (1) 1" CO TO ACCESSIBLE CEILING. COORDINATE WITH ARCHITECTURAL DRAWINGS.
-  WALL MOUNTED SPEAKER. 2 GANG BACK-BOX WITH 1 GANG RING. +80". 1" CO TO ACCESSIBLE CEILING .
-  SPEAKER OUT-BELOW DESKTOP. 2 GANG BACK-BOX WITH 1 GANG RING. +18". 1" CO TO ACCESSIBLE CEILING .
-  AV I/O PANEL. 6 GANG BACK-BOX. +18". 1 ¼" CO TO ACCESSIBLE CEILING SPACE.
-  VIDEO SCREEN UP/DN 2 GANG J-BOX. COORDINATE WITH SCREEN LOCATION. PROVIDE SCREEN POWER 120V.
-  SOUND BAR - UNDER DISPLAY - OPTIONS: INTERNAL MICROPHONE AND/OR CAMERA
-  CEILING MOUNTED CAMERA.
-  CEILING MOUNTED MICROPHONE.
-  CEILING MOUNTED SPEAKER.
-  CEILING MOUNTED PROJECTOR. PROVIDE (1) 20 A 120V RECEPTACLE.
-  CHASE/CONDUIT TO CEILING SPACE ABOVE SIZE AS SHOWN
-  XXXXXX-FLOOR BOX, POWER-DATA-AV
-  XXXXXX-FLOOR BOXES. POWER-DATA-AV

## SHEET INDEX

- AV0.0 AV SYMBOLS, NOTES AND LEGENDS
- AV0.1 AV EQUIPMENT LIST
- AV1.1 OVERALL FLOOR PLAN
- AV3.1 OVERALL REFLECTED CEILING PLAN
- AV4.1 ELEVATION
- AV6.1 AV CONDUIT RISER
- AV7.1 AUDIO SYSTEM ONE LINE DIAGRAM
- AV8.1 AV SYSTEM DETAILS - 1
- AV8.2 AV SYSTEM DETAILS - 2

ARCHITECT

**westbergwhite**  
architecture  
1775 HANCOCK ST, SUITE 120  
SAN DIEGO, CA 92110  
619.542.1188 619.542.1663 FAX

CONSULTANT

**tkisc**  
COLLABORATIVE  
11870 Pierce Street, Suite 160  
Riverside, California 92505  
951.299.4160 www.tkisc.com  
Project Leader: Nikolas Bruno  
Electrical Lead - Nikolas Bruno  
Audio Visual Lead - Daryl Ballou  
Lighting Lead - Jeremy Windle  
tkisc Job #: 2021-0397

City of Carson  
Community Center  
AV - Lighting Systems

801 East Carson St. Carson, CA. 90745

AV SYMBOLS-NOTES AND LEGENDS

PROJECT NO.: 21011

R.S. A.P.

FILE NAME

DATE: 01-10-2022

DRAWN DP

CHECKED JW

REVISIONS

SHEET NO.

**AV0.0**  
OF 11 SHEETS

BID SET



CONSULTANT

**City of Carson  
Community Center  
AV - Lighting Systems**

801 East Carson St. Carson, CA. 90745

MOUNTING-LOCATION	DESCRIPTION	MANUFACTURER	MODEL
Ceiling	Line Array Speaker - System 15 Degrees	Biamp	IV6-1122/15
Ceiling	Line Array Speaker - Bumper Spacers Type-1-Pair	Biamp	Type 1
Ceiling	Line Array Speaker System - Bumper	Biamp	IV6-GP-AF
Ceiling	Line Array Speaker System - Custom Suspension	TBD	TBD
Control Room	Digital Mixing Console	Yamaha	TF5
Control Room	Dante Expansion Card	Yamaha	NY64-D
Control Room	Console Cover	Yamaha	TF5-Cover
Control Room	Network Switch	Netgear	M4250 series
	12/2 Speaker Cable	TBD	TBD
	12/4 Speaker Cable	TBD	TBD
	Misc. Cables and Connectors	TBD	TBD
	Mic/Line Cable	TBD	TBD
	Network Cables	TBD	TBD
Control Room	Video Projector Room B	Digital Projection	Titan 29000WU
Ceiling	Video Projector Room A - C	Digital Projection	E-Vision Laser-10K
Ceiling	Video Screens Room A - C	Dalite	TBD
	Video Projector and Screen Hardware	TBD	TBD
	Re-Work Existing AV Infrastructure	TBD	TBD

**AV EQUIPMENT LIST**

2

<i>Some of the work below is in progress</i>	
Digital Signal Processor	Biamp
Amplifiers	Biamp
AV System Control Processor	Extron
AV System Control Touch Panels	Extron
AV System - HDMI and HD-SDI panels	Extron - Custom
AV System - HDMI Extension Systems	Extron
Cabling for Video Signals-Design Dependant	
Replace Existing Video Screen - Room B	
DSP Programming	
Control System Programming	
Installation of Equipment above	

**PROVIDED BY OWNER**

1

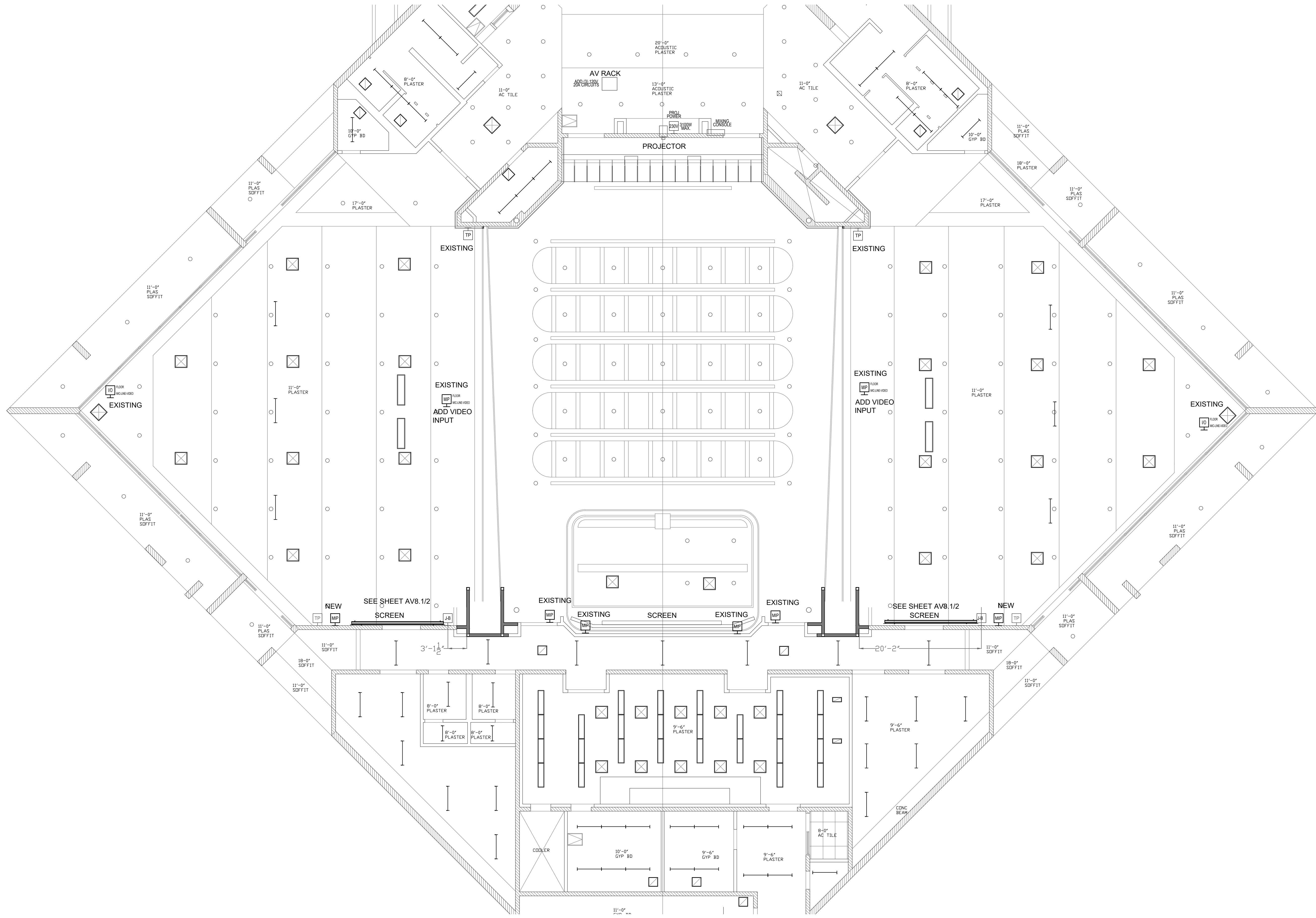
AV SYSTEM EQUIPMENT LIST

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO. <b>AV0.1</b> OF 11 SHEETS	

BID SET

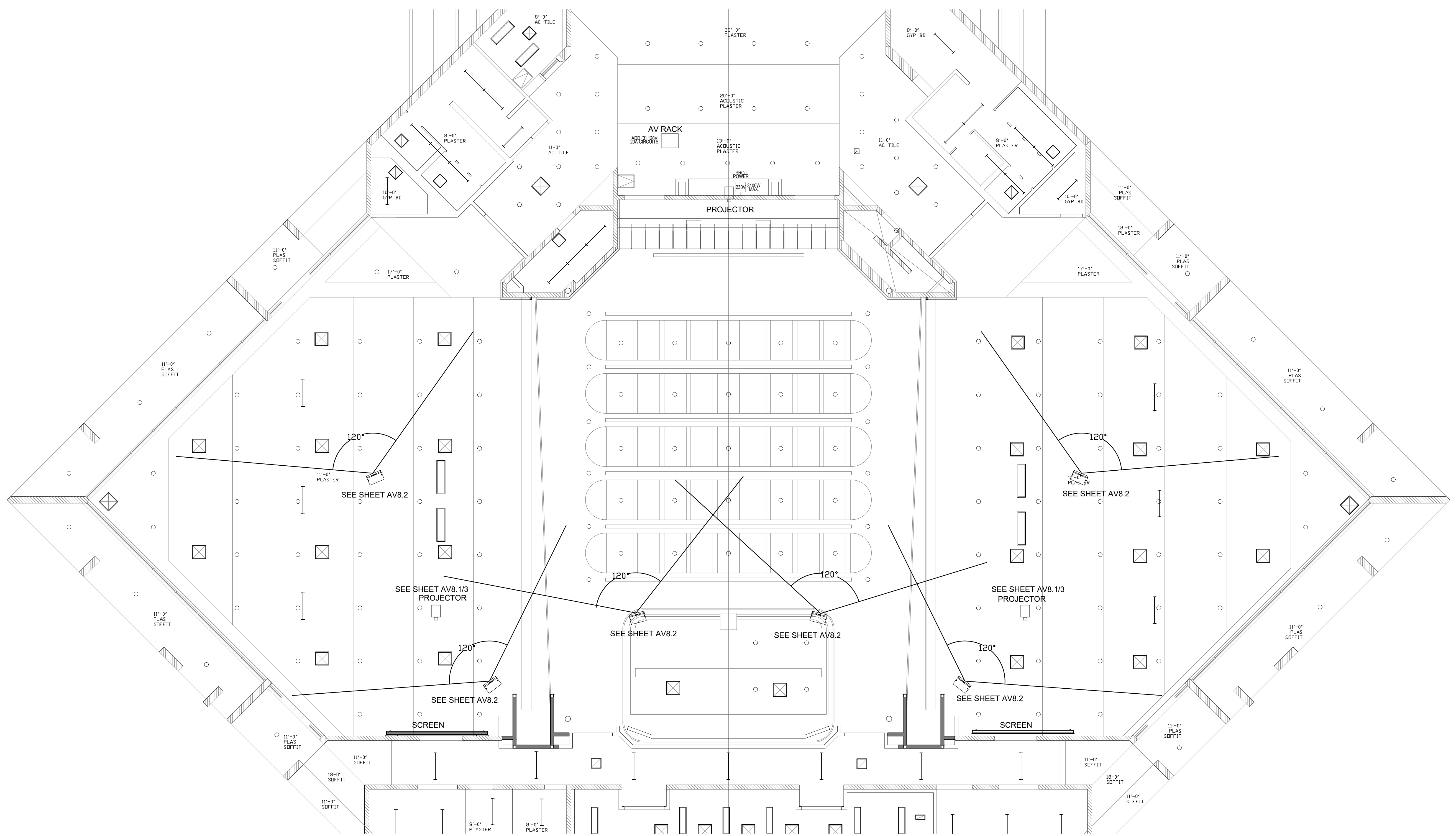


PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO.
	<b>AV1.1</b>
	OF 11 SHEETS

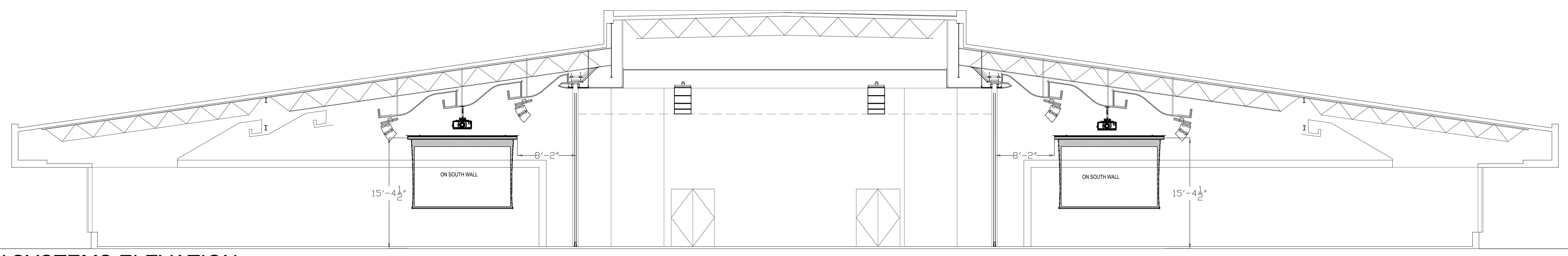


**AV SYSTEMS FLOOR PLAN**  
 1/8" = 1'



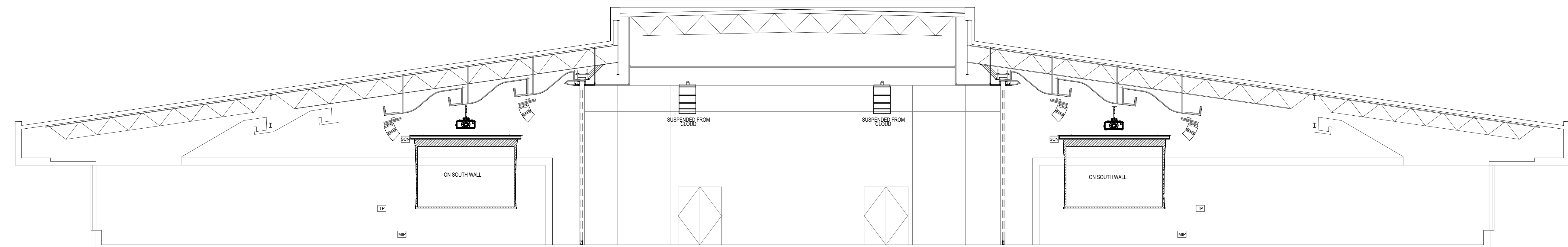


2



1





**AV SYSTEMS ELEVATION**  
 1/8" = 1'

1

ARCHITECT  
**westbergwhite**  
 architecture  
 1775 HANCOCK ST, SUITE 120  
 SAN DIEGO, CA 92110  
 619.542.1188 619.542.1663 FAX

CONSULTANT  
**tk1sc**  
 COLLABORATIVE  
 11870 Pierce Street, Suite 160  
 Riverside, California 92505  
 951.299.4160 www.tk1sc.com  
 Project Leader: Nikolas Bruno  
 Electrical Lead - Nikolas Bruno  
 Audio Visual Lead - Daryl Ballou  
 Lighting Lead - Jeremy Windie  
 tk1sc Job #: 2021-0397

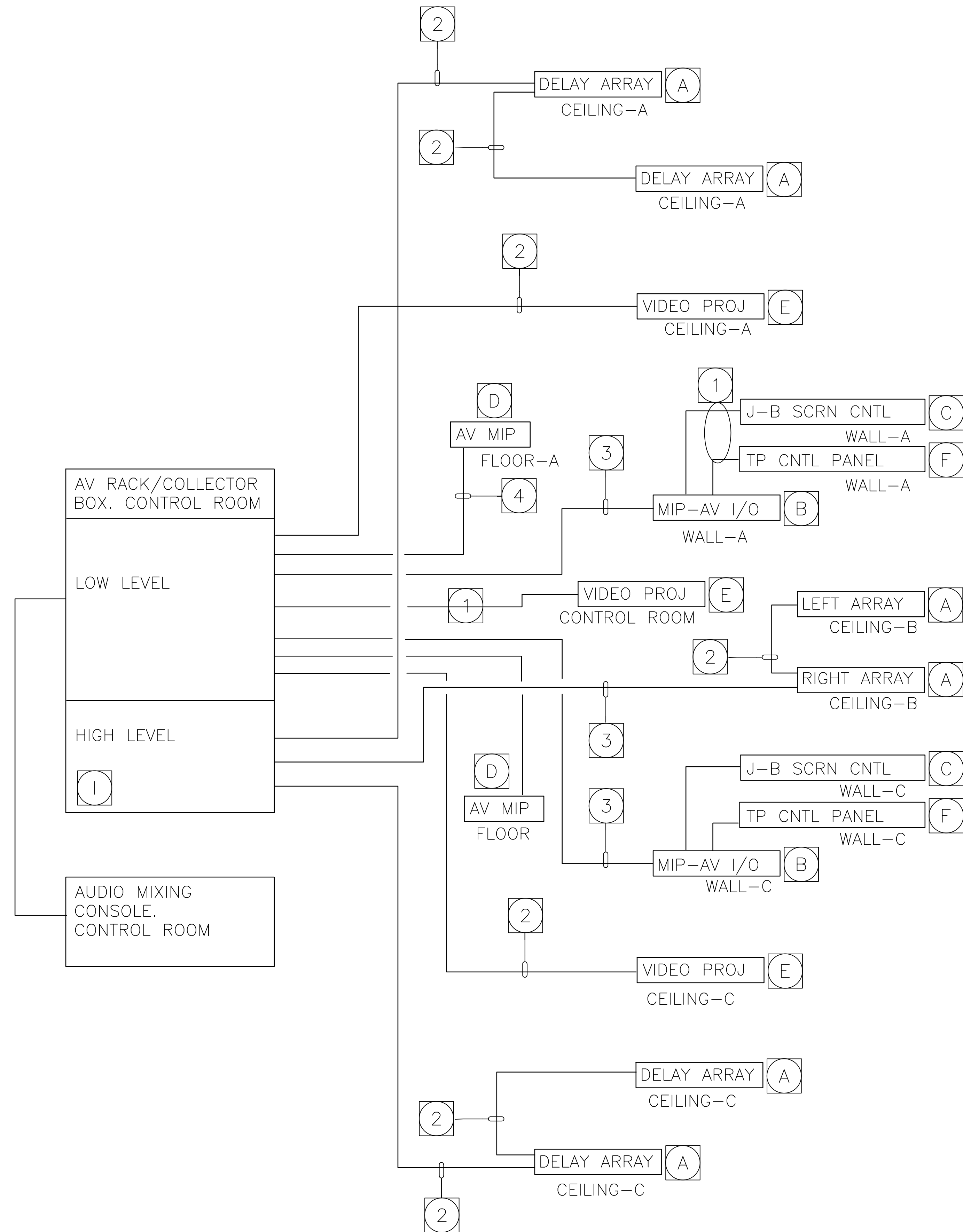
**City of Carson  
 Community Center  
 AV - Lighting Systems**  
 801 East Carson St. Carson, CA. 90745

AV ELEVATIONS

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	DATE: 01-10-2022
DRAWN	DP
CHECKED	JW
REVISIONS	SHEET NO.
	<b>AV4.1</b>
	OF 11 SHEETS

BID SET





**AV SYSTEMS CONDUIT RISER DIAGRAM**  
NTS

1

- (A) ARRAY J-BOX. 4S BACK BOX ABOVE SPEAKER.
- (B) MEDIA INPUT PANEL. 4 GANG BACK BOX, +18"
- (C) SCREEN CONTROL 1 GANG BACK BOX, +15' 4" SEE AV1.1 FOR DIMENSION. VERIFY LOCATION.
- (D) EXISTING FLOOR BOX. ADD AV MIP.
- (E) VIDEO J-BOX. 4S BACK BOX ABOVE PROJECTOR.
- (F) AV TOUCH PANEL BACK BOX, +44". VERIFY TYPE
- (1) 1" CONDUIT OR ACCESSABLE PATHWAY.
- (2) 1.5" CONDUIT OR ACCESSABLE PATHWAY.
- (3) 2" CONDUIT OR ACCESSABLE PATHWAY.
- (4) EXISTING CONDUIT OR PATHWAY.

**CABLE NOTE:**

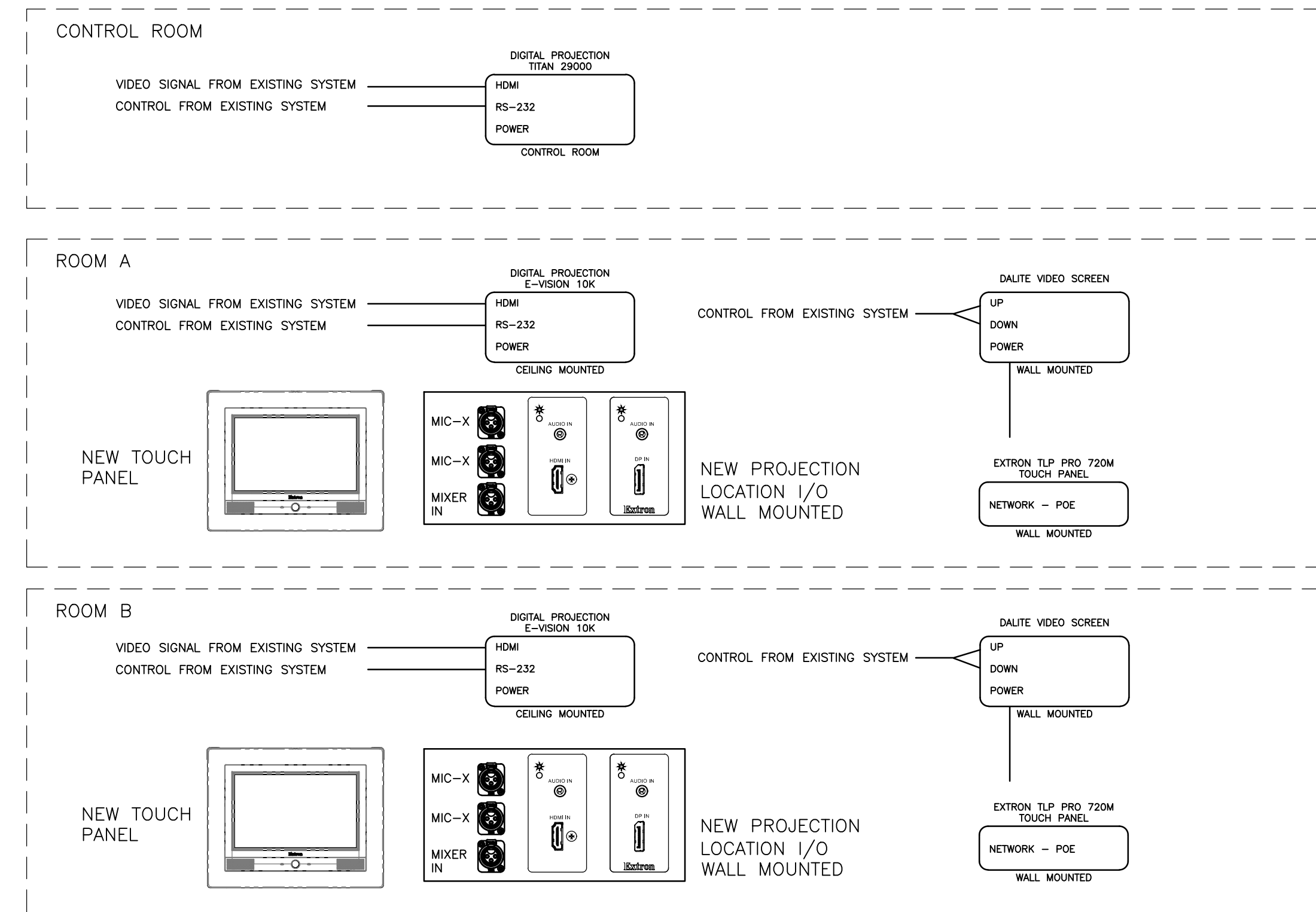
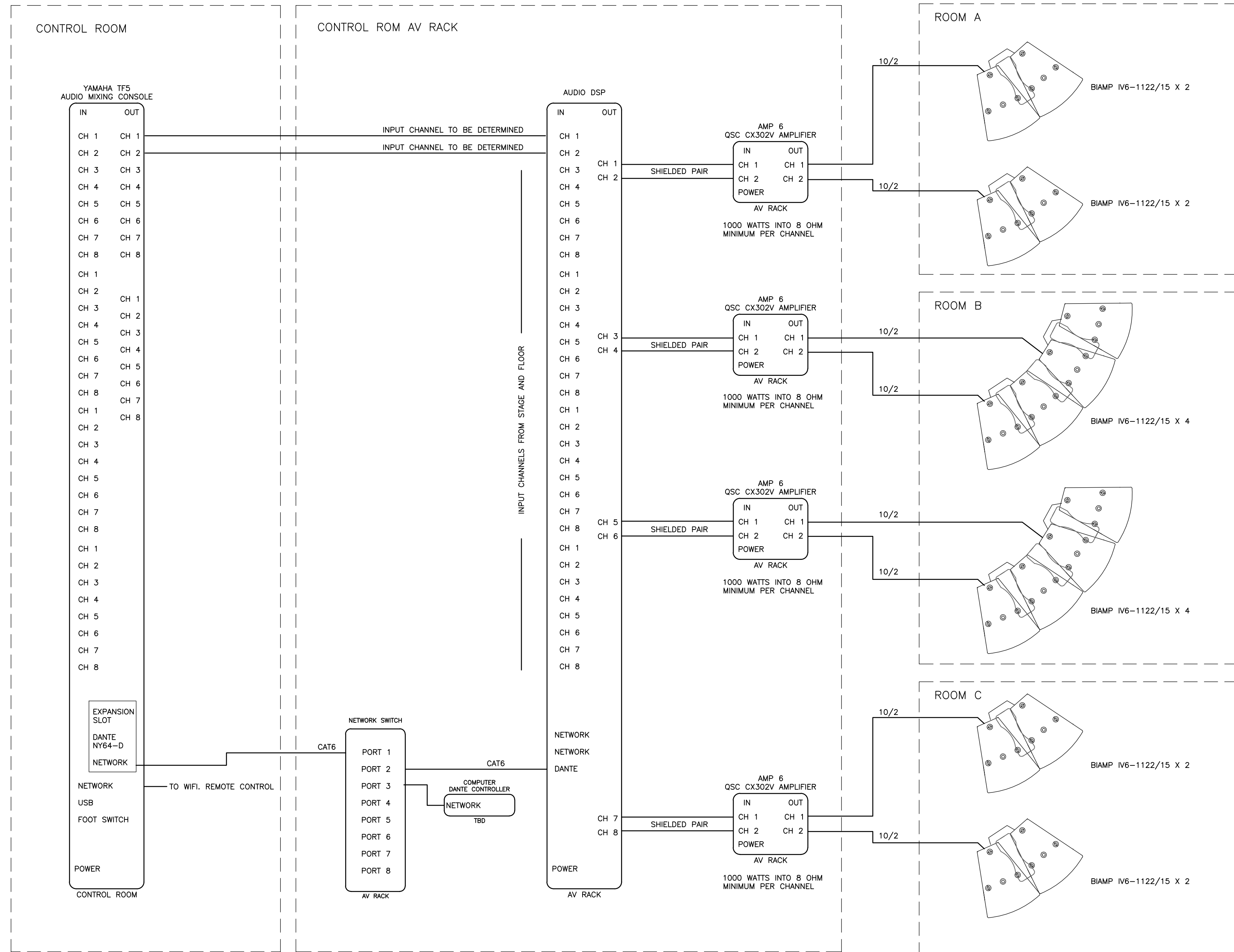
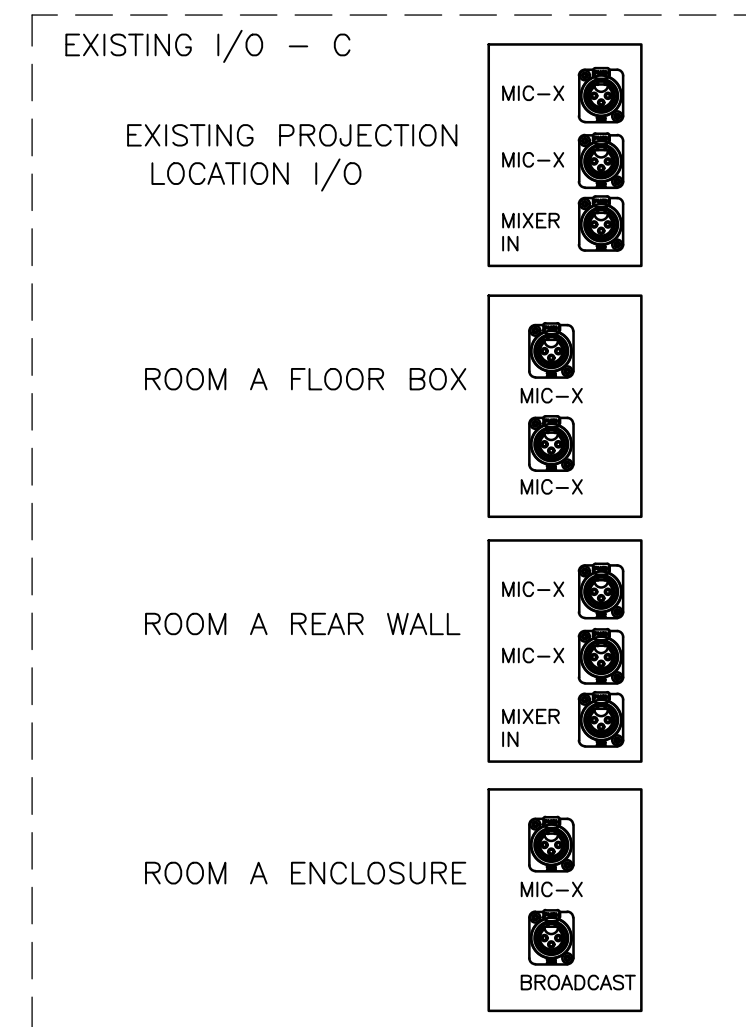
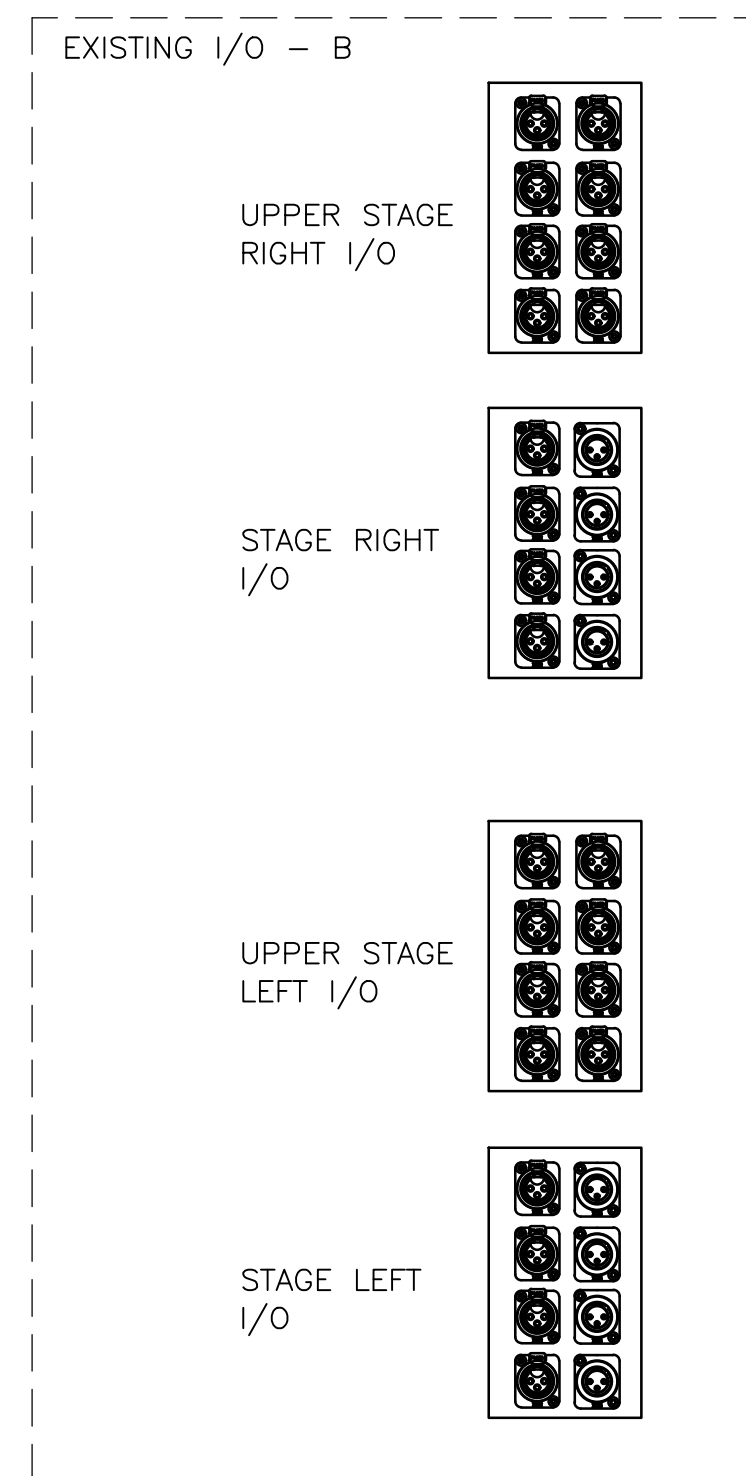
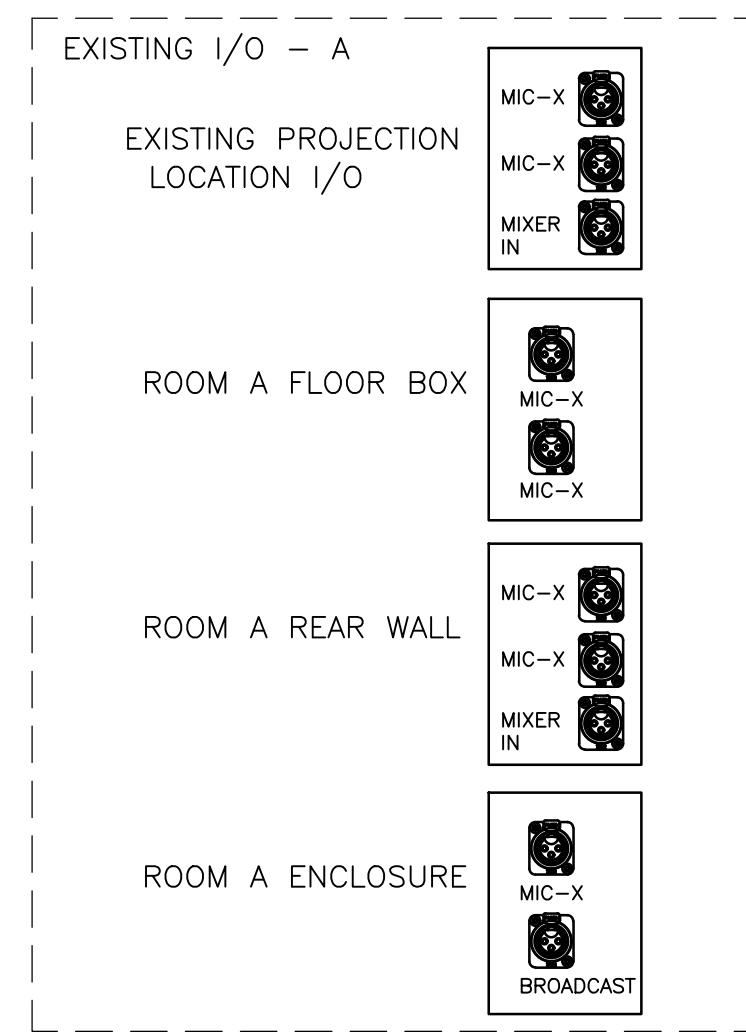
1. IF CABLE IS NOT RUN IN CONDUIT AND AREA IS PLENUM RATED, USE PLENUM RATED CABLE.

**CONDUIT NOTES:**

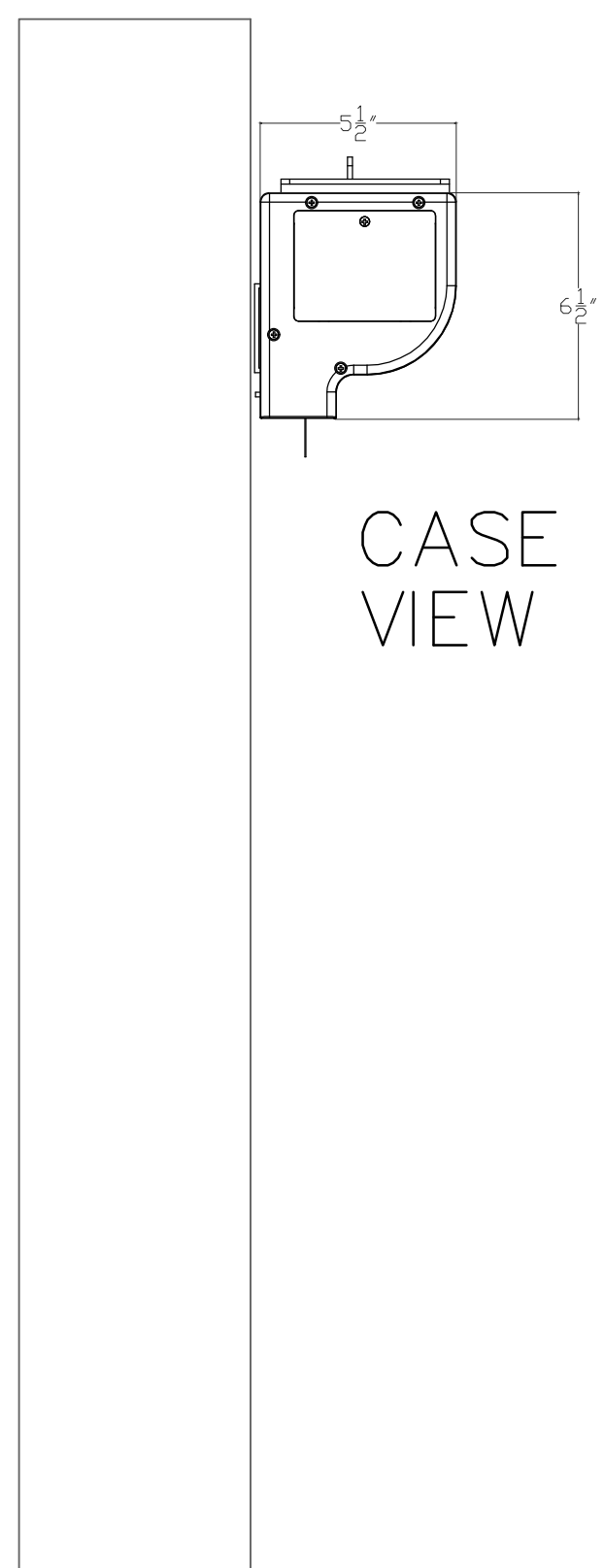
1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90°
2. BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
3. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHES TO 3-INCHES ABOVE THE FLOOR SURFACE. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
5. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
7. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED.

PROJECT NO.: 21011	R.S.	A.P.
FILE NAME	DATE: 01-10-2022	DRAWN DP CHECKED JW
REVISIONS	SHEET NO. <b>AV6.1</b> OF 11 SHEETS	

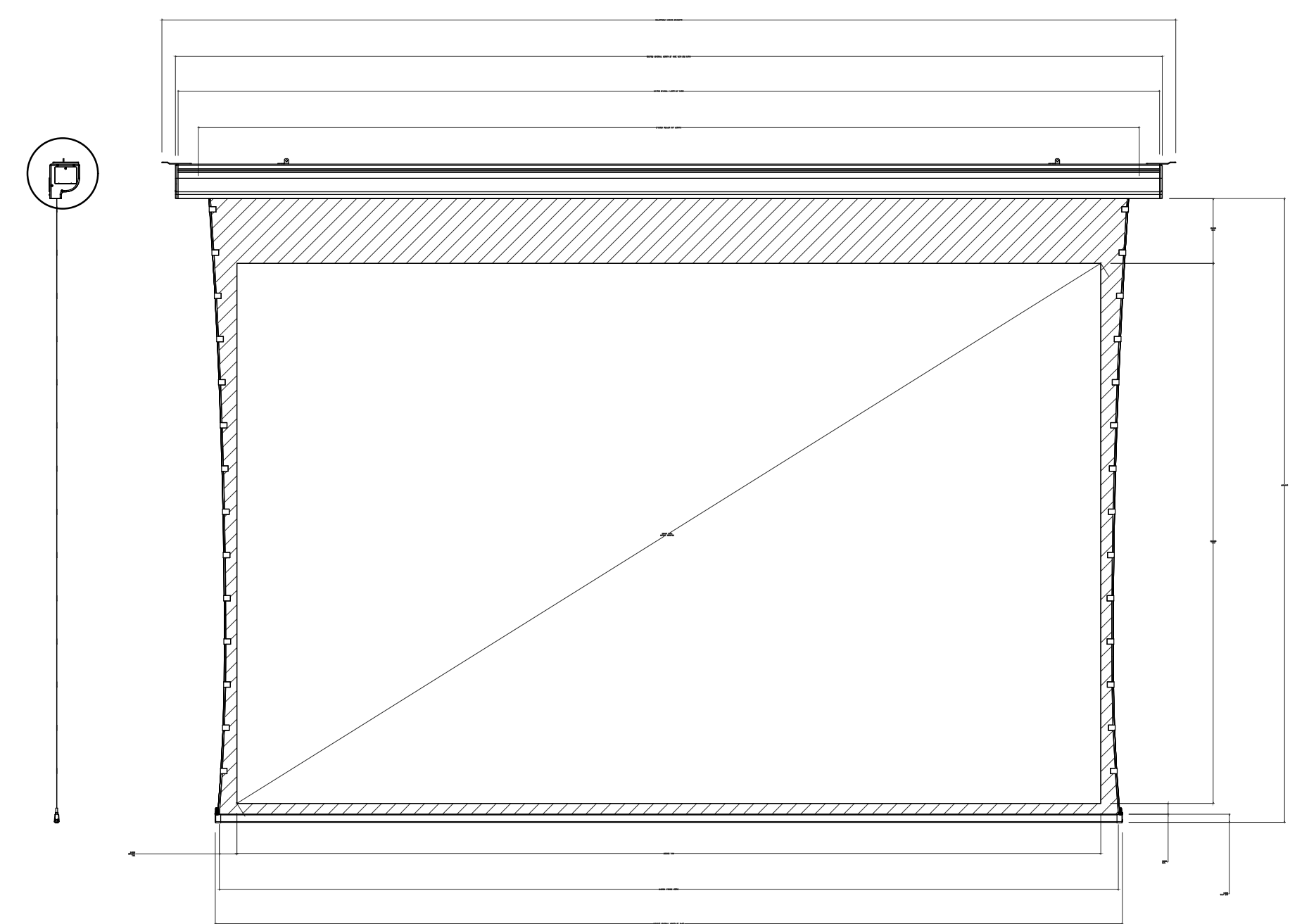








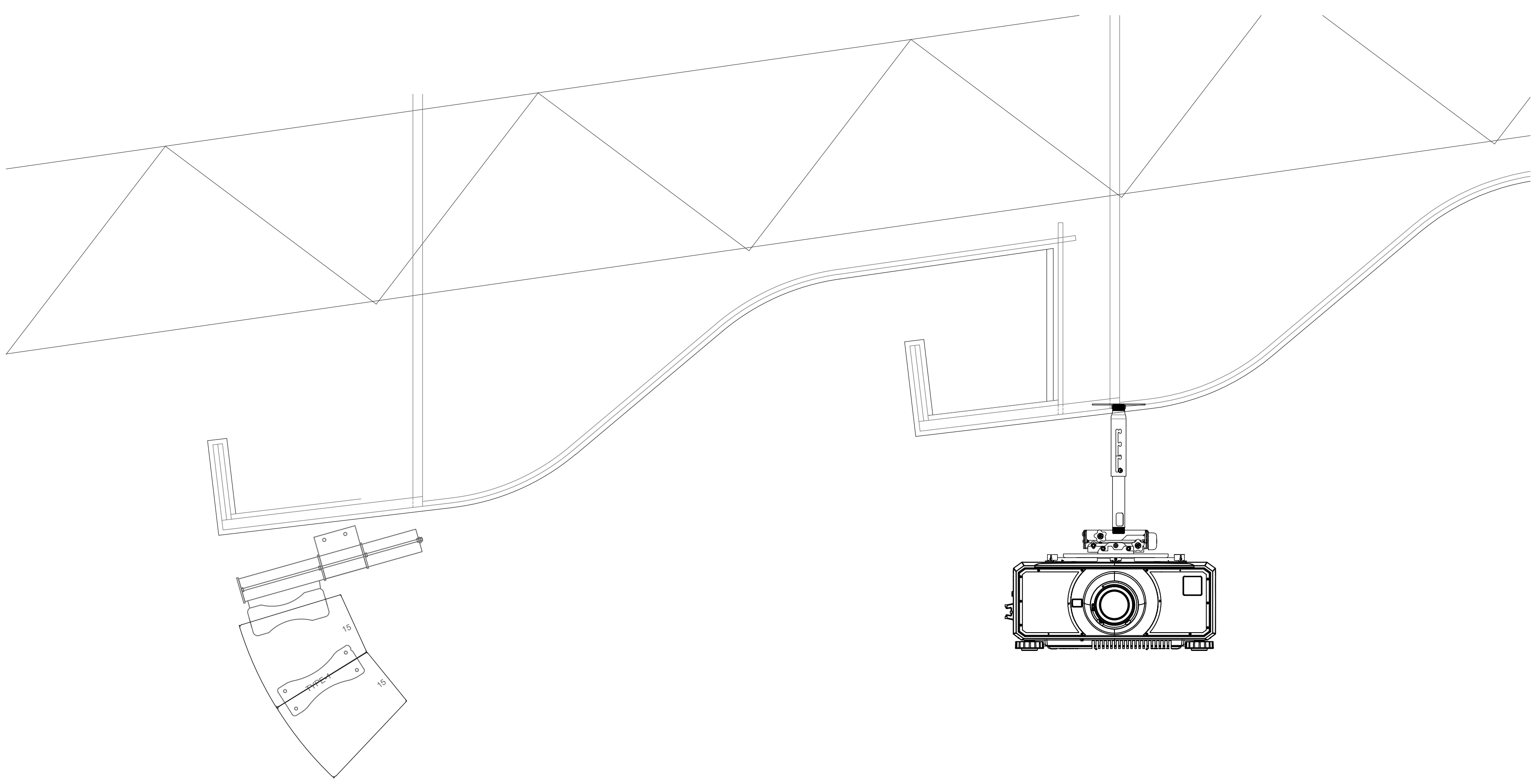
CASE VIEW



DALITE 70181L  
 100" X 160" X 189" DIAG.

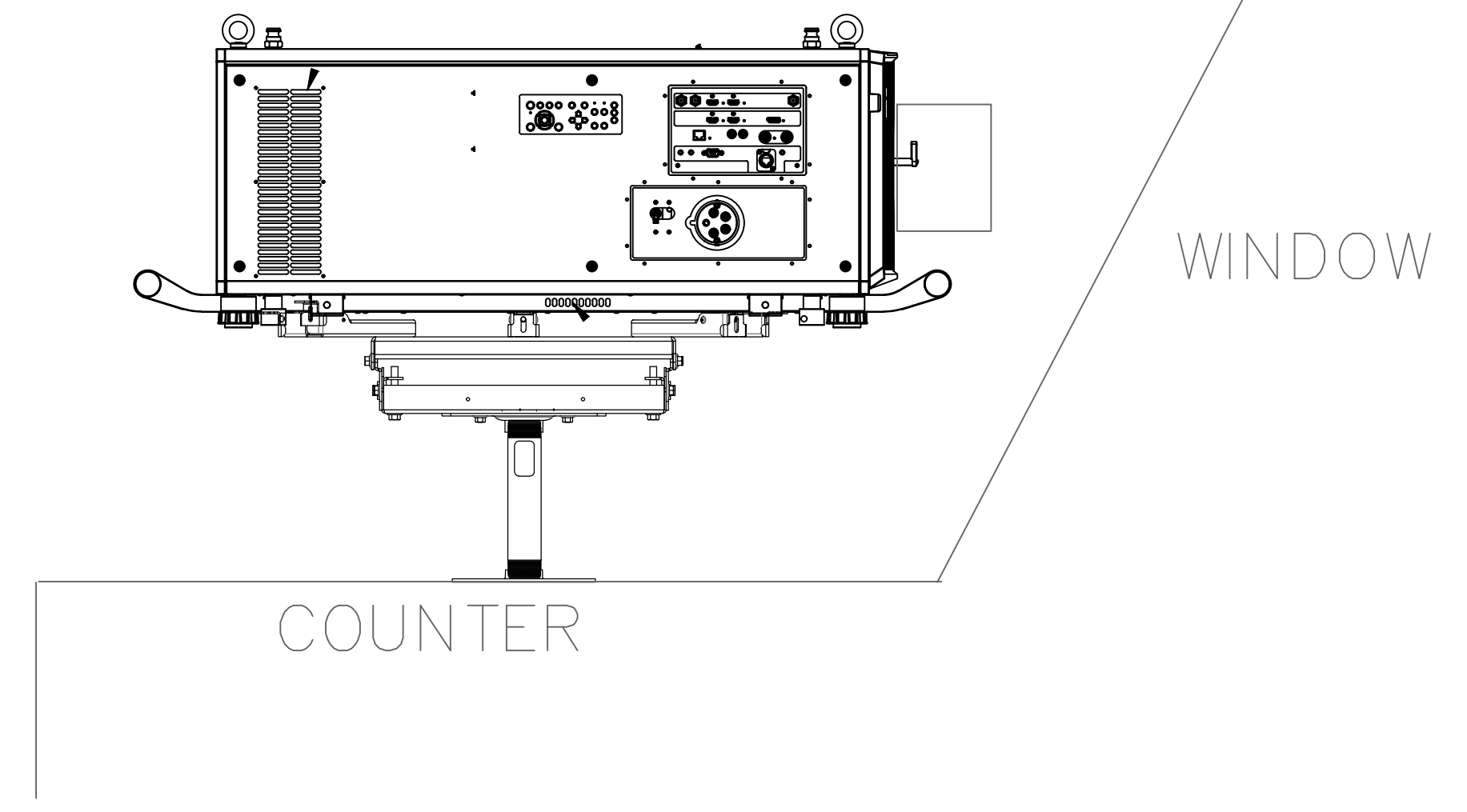
VIDEO SCREEN. WALL MOUNTED. WEIGHT 350 LBS  
 SCALE: N.T.S.

2



VIDEO PROJECTOR ROOM A AND C. WEIGHT 150 LBS  
 SCALE: N.T.S.

3



VIDEO PROJECTOR - CONTROL ROOM  
 SCALE: N.T.S.

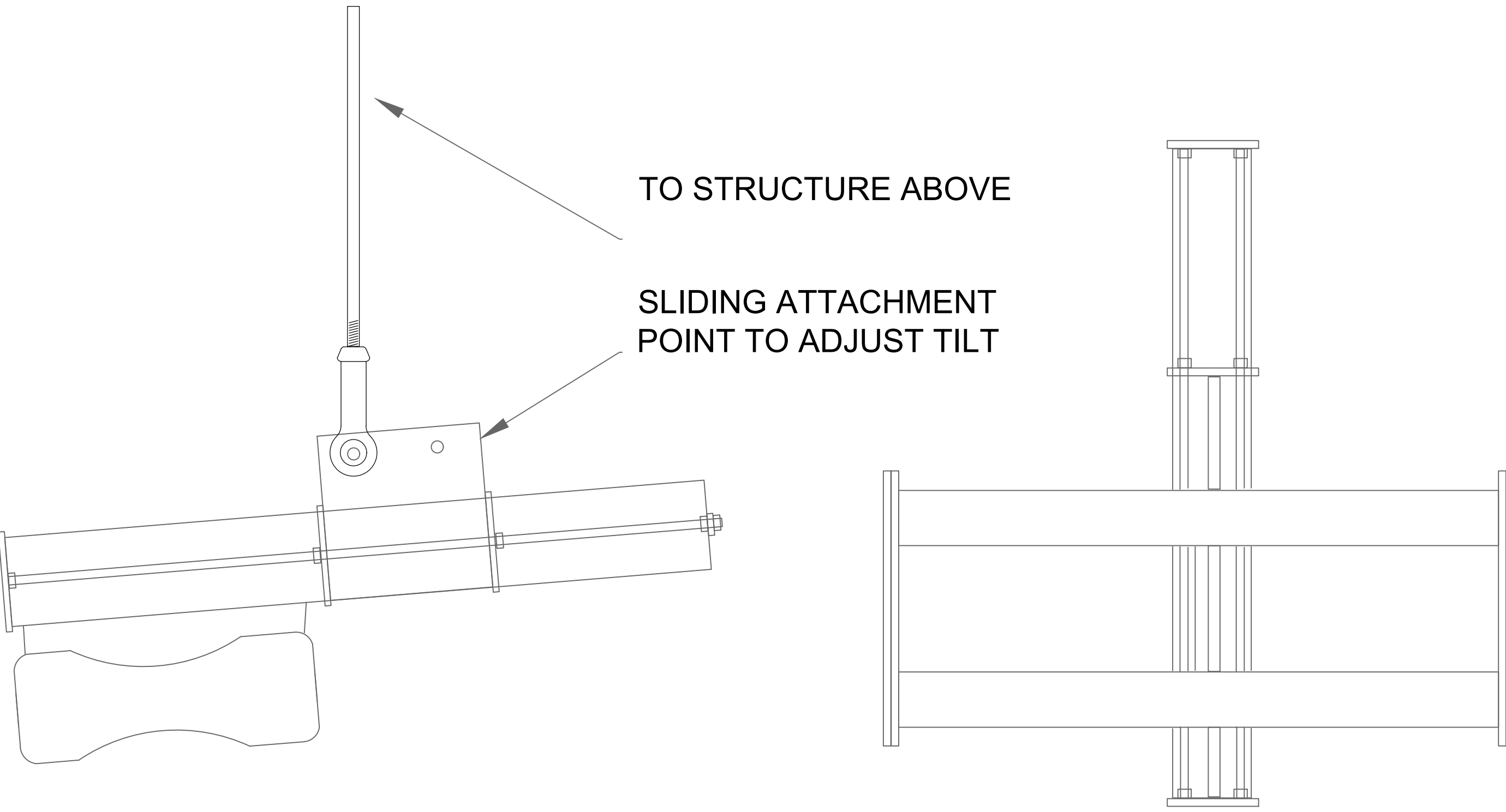
1

AV SYSTEM DETAILS

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN: DP CHECKED: JW
REVISIONS	SHEET NO.
	<b>AV8.1</b>
	OF 11 SHEETS

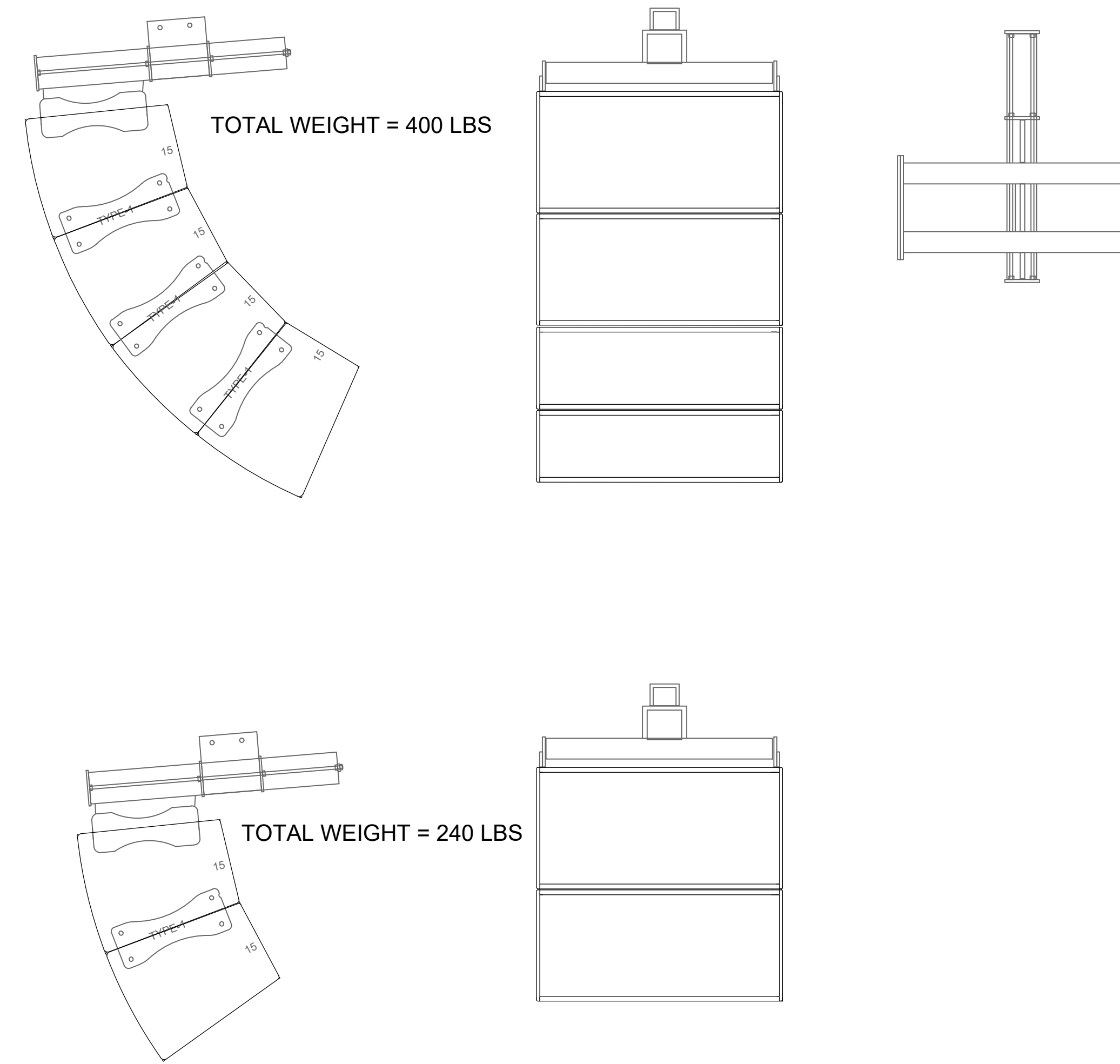
BID SET





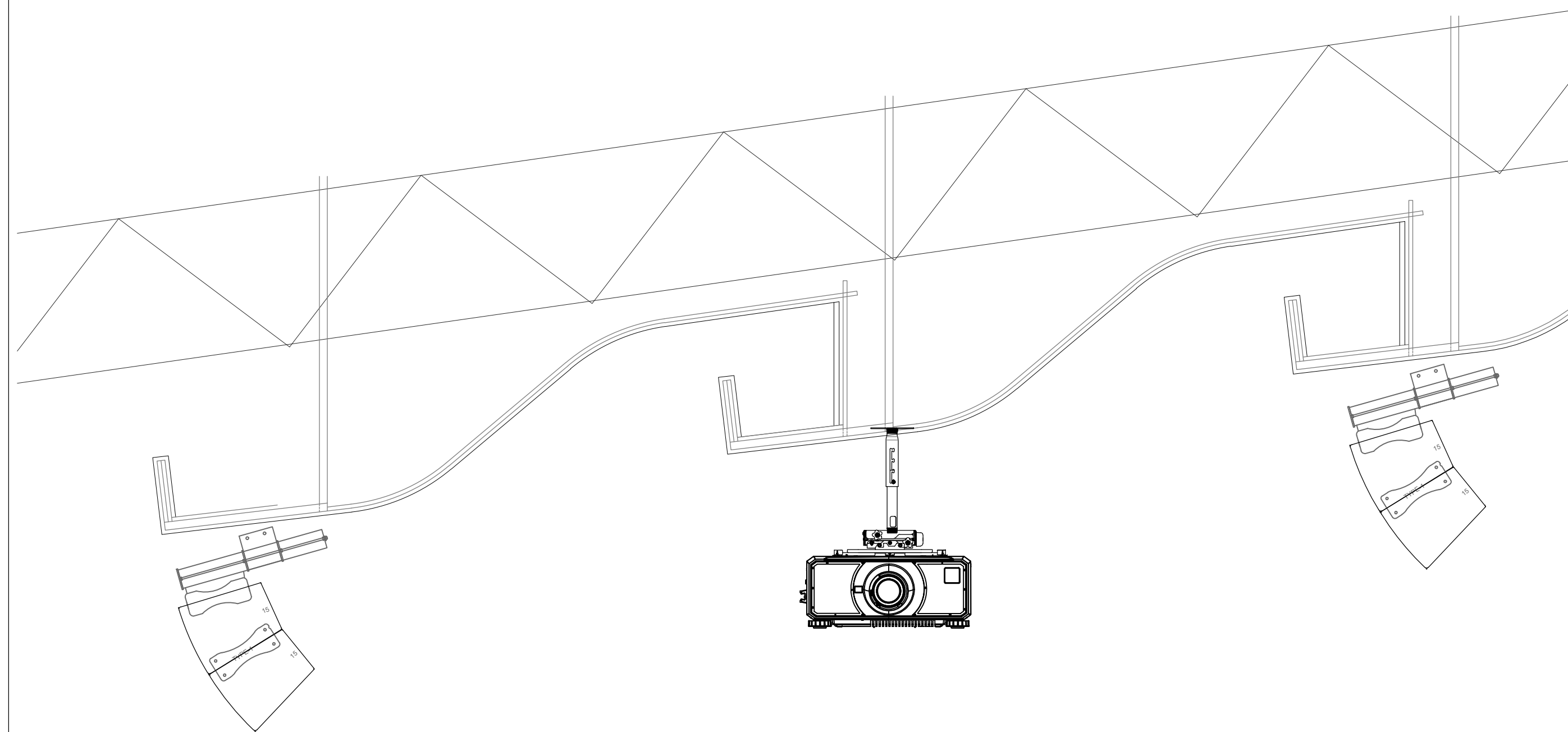
**SPEAKER ARRAY ATTACHMENT TO STRUCTURE ABOVE**  
SCALE: N.T.S.

4



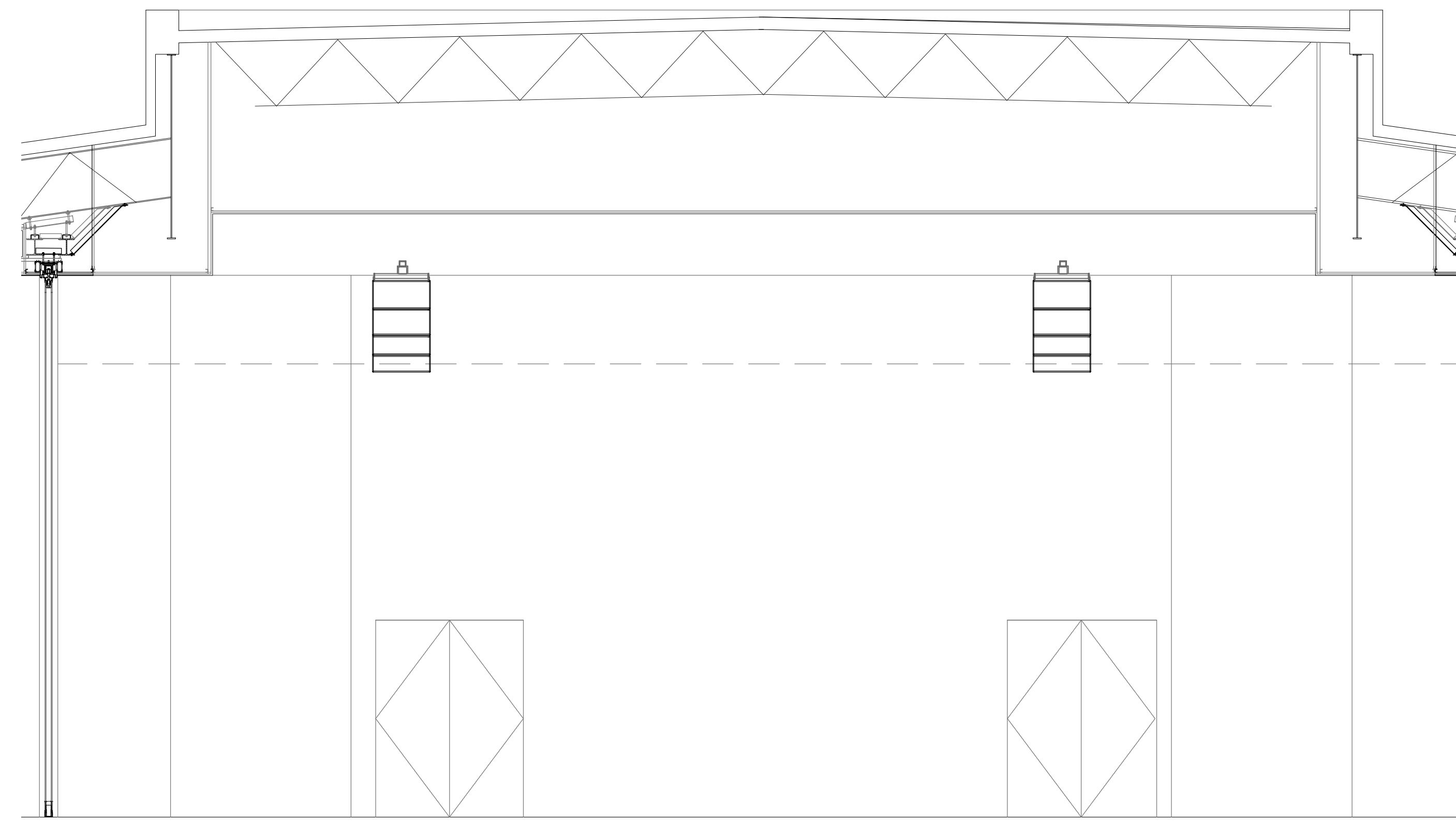
**SPEAKER ARRAY DETAILS**  
SCALE: N.T.S.

2



**ROOM A AND C SPEAKER ARRAYS**  
SCALE: N.T.S.

3



**ROOM B LEFT AND RIGHT SPEAKER ARRAYS**  
SCALE: N.T.S.

1

PROJECT NO.: 21011	
R.S.	A.P.
FILE NAME	
DATE: 01-10-2022	DRAWN: DP CHECKED: JW
REVISIONS	SHEET NO.
	<b>AV8.2</b>
	OF 11 SHEETS











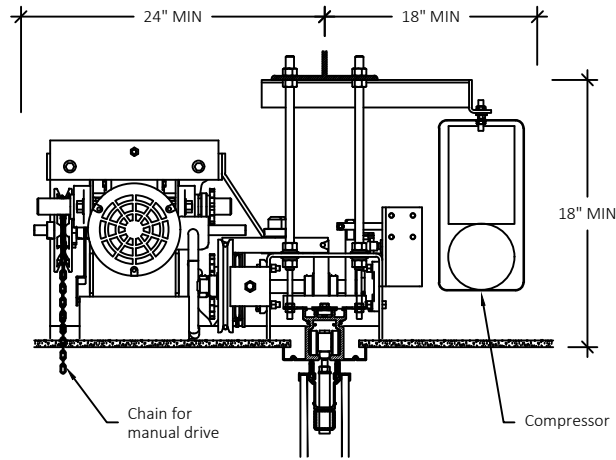




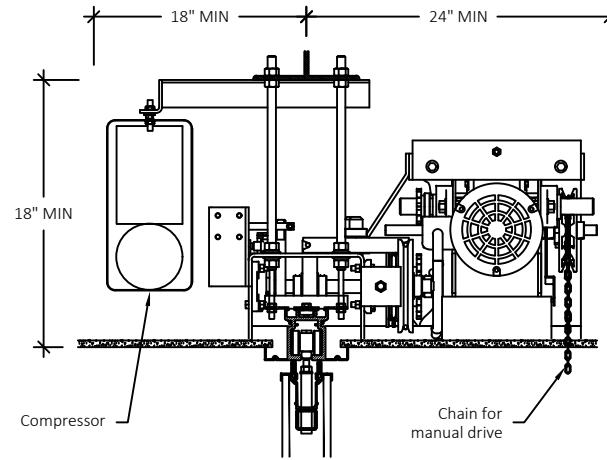






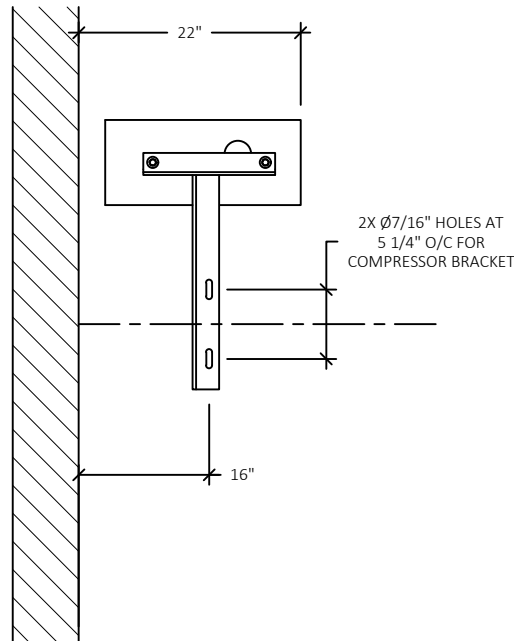


Standard Orientation

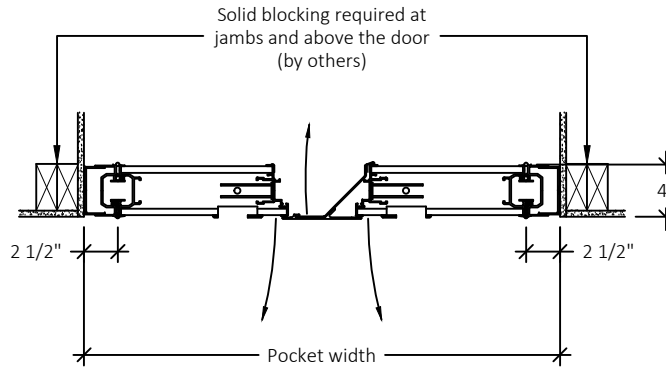


Optionnal Orientation

VERTICAL SECTION AT DRIVE UNIT



Bolt holes location for compressor bracket



3-SECTION POCKET DOOR  
(allow room for door to swing fully 180°)

1	REVISED AS PER G.A.	22-07-07 rp
	REVISION	Date Ini.



www.moderco.com

JOB NAME: <b>CARSON COMMUNITY CENTER</b>	
JOB LOCATION:	
ARCHITECT:	
GEN. CONTRACTOR:	
DISTRIBUTOR: L2 SPECIALTIES INC - QUOTE 63319	
DRAWN BY: MO	REFERENCE
DATE: 2022-07-05	WALL(S): 2
SCALE: N.T.S.	
JOB No.: <b>Proposal</b>	PAGE: <b>6</b> OF <b>6</b> REV: <b>1</b>

**BID SET**