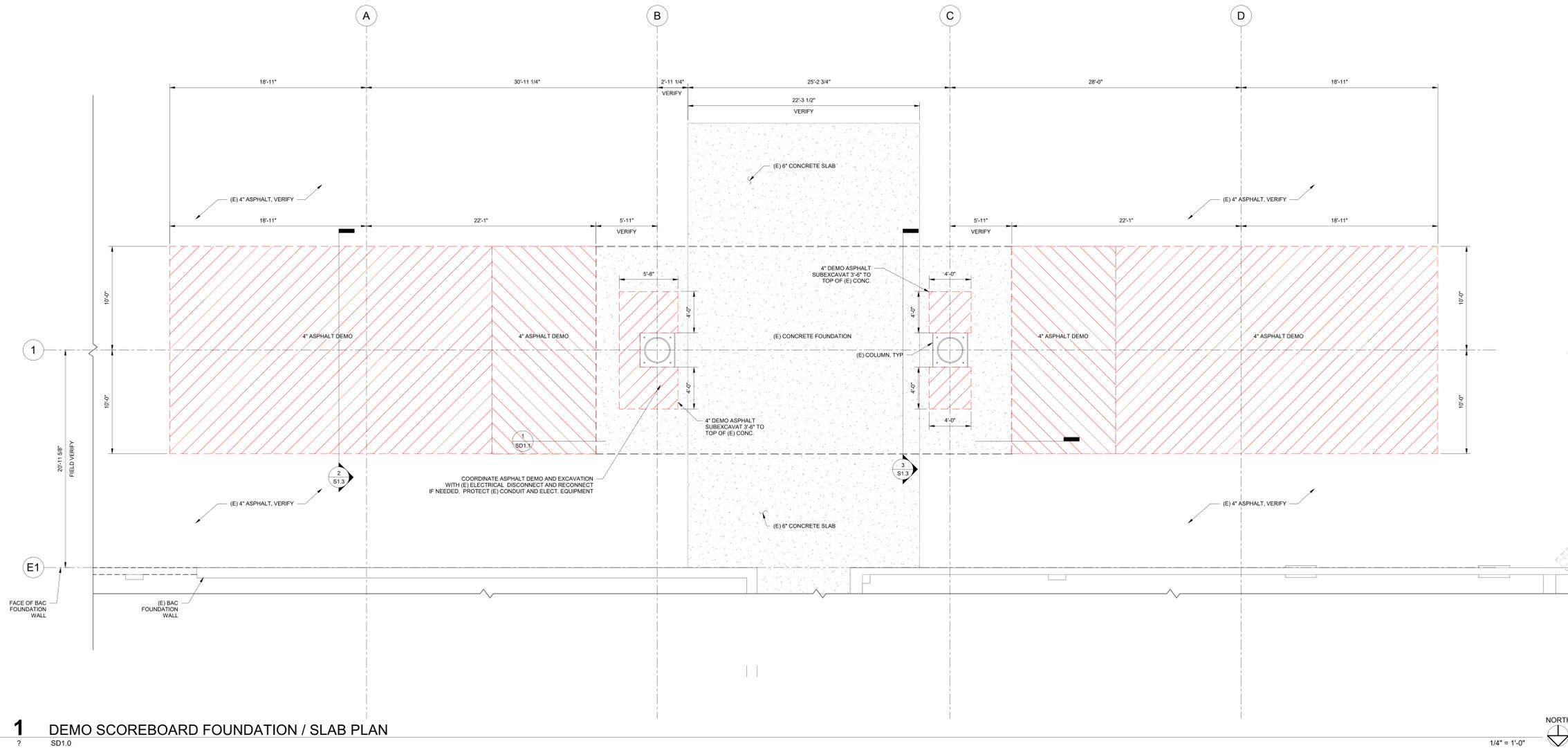




**DEMO NOTES**

1. FIELD VERIFY SIZE AND LOCATION OF EXISTING FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER IF, AFTER THE EXISTING FOUNDATION HAVE BEEN EXPOSED, A POTENTIAL FOUNDATION CONFLICT IS ANTICIPATED. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE UNDERMINING OF EXISTING FOUNDATIONS.
2. CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-424-5555
3. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CITY OF BOZEMAN, MT CONSTRUCTION STANDARDS, THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS AND ALL OTHER GOVERNING AGENCIES' STANDARDS.
4. EXISTING UNDERGROUND INSTALLATIONS AND PRIVATE UTILITIES SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THIS DOES NOT GUARANTEE THE ACCURACY OF SUCH INFORMATION. SERVICE LINES MAY NOT BE STRAIGHT LINE OR AS INDICATED ON THE PLANS. TRADE CONTRACTOR SHALL CALL ALL UTILITY LOCATES.
5. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND COORDINATE WITH THE CITY OF BOZEMAN AND ENGINEER PRIOR TO DEMOLITION ACTIVITIES.
6. REMOVE DEBRIS FROM SITE IMMEDIATELY AND DISPOSE OF LEGALLY.
7. ALL REMOVED ITEMS EXCEPT THOSE NOTED TO BE REUSED OR TO REMAIN SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE JOB SITE, AND LEGALLY DISPOSED.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF OR REMOVAL AND REPLACEMENT OF ALL CONCRETE, ASPHALT AND WALKWAYS WITHIN THE PROJECT LIMITS AREA. CONDITION TO BE ASSESSED BEFORE AND AFTER BY AN ONSITE MEETING BETWEEN THE CONTRACTOR, MSU FACILITIES, AND ENGINEER. DOCUMENT EXISTING CONDITIONS WITH VIDEO AND/OR PHOTOGRAPHS.
9. FIELD VERIFY SIZE AND LOCATION OF EXISTING FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER IF, AFTER THE EXISTING FOUNDATION HAVE BEEN EXPOSED, A POTENTIAL FOUNDATION CONFLICT IS ANTICIPATED. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE UNDERMINING OF EXISTING FOUNDATIONS.



**1** DEMO SCOREBOARD FOUNDATION / SLAB PLAN  
SD1.0



MSU-CAMPUS PLANNING,  
DESIGN, AND CONSTRUCTION  
MONTANA STATE UNIVERSITY  
BOZEMAN, MONTANA  
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**RE-BID DRAWINGS**

**STADIUM VIDEO BOARD UPGRADE**

MONTANA STATE UNIVERSITY



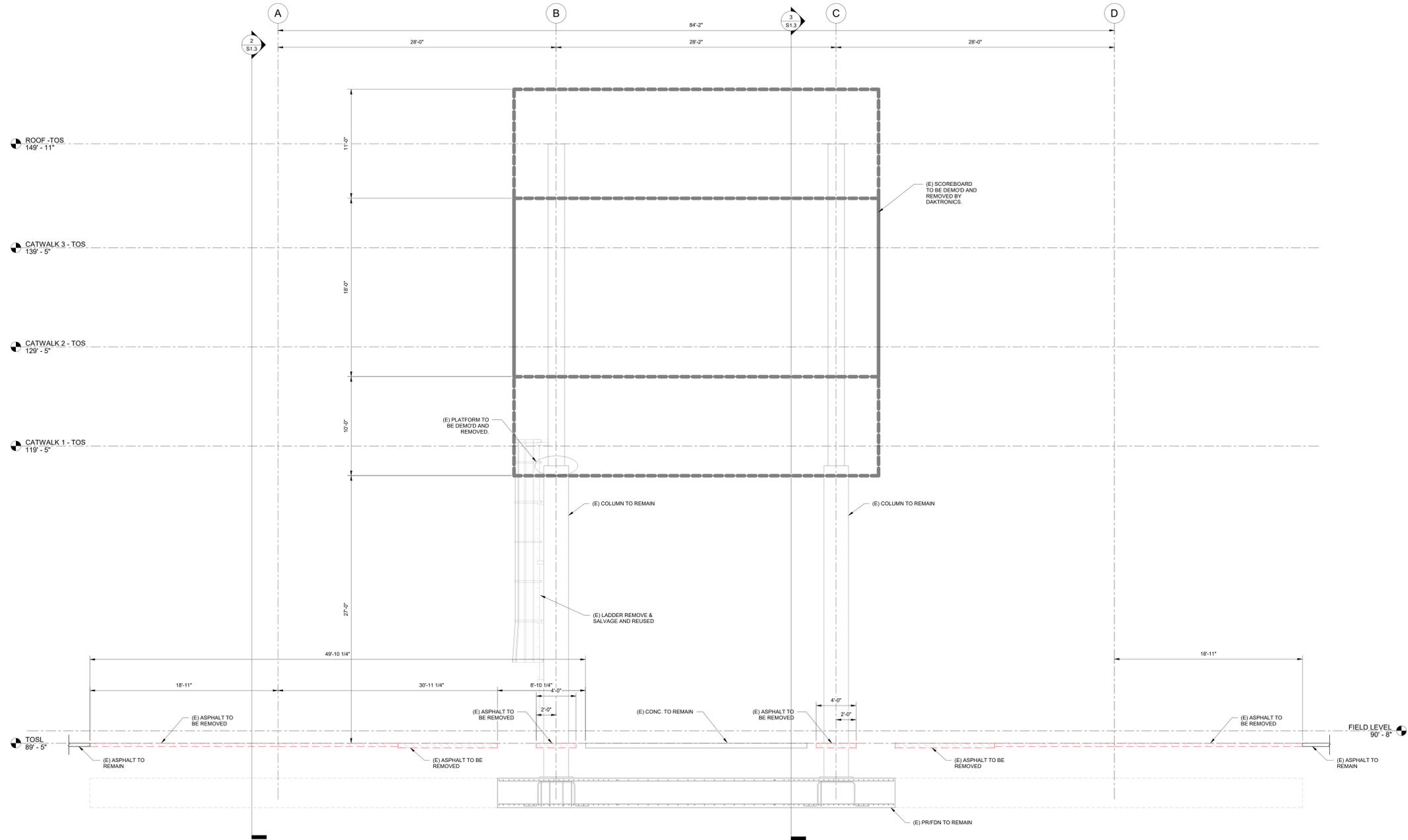
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SHEET TITLE  
DEMO FDN/SLAB  
PLAN  
SHEET  
**SD1.0**  
DATE  
09-16-2023

**DEMO NOTES**

1. FIELD VERIFY SIZE AND LOCATION OF EXISTING FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER IF, AFTER THE EXISTING FOUNDATION HAVE BEEN EXPOSED, A POTENTIAL FOUNDATION CONFLICT IS ANTICIPATED. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE UNDERMINING OF EXISTING FOUNDATIONS.
2. CALL TWO WORKING DAYS BEFORE YOU DIG 1-800-424-5555
3. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CITY OF BOZEMAN, MT CONSTRUCTION STANDARDS, THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS AND ALL OTHER GOVERNING AGENCIES' STANDARDS
4. EXISTING UNDERGROUND INSTALLATIONS AND PRIVATE UTILITIES SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THIS DOES NOT GUARANTEE THE ACCURACY OF SUCH INFORMATION. SERVICE LINES MAY NOT BE STRAIGHT LINE OR AS INDICATED ON THE PLANS. TRADE CONTRACTOR SHALL CALL ALL UTILITY LOCATES.
5. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND COORDINATE WITH THE CITY OF BOZEMAN AND ENGINEER PRIOR TO DEMOLITION ACTIVITIES.
6. REMOVE DEBRIS FROM SITE IMMEDIATELY AND DISPOSE OF LEGALLY.
7. ALL REMOVED ITEMS EXCEPT THOSE NOTED TO BE REUSED OR TO REMAIN SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE JOB SITE, AND LEGALLY DISPOSED.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF GRASS REMOVAL AND REPLACEMENT OF ALL CONCRETE, ASPHALT AND WALKWAYS WITHIN THE PROJECT LIMITS AREA. CONDITION TO BE ASSESSED BEFORE AND AFTER BY AN ONSITE MEETING BETWEEN THE CONTRACTOR, MSU FACILITIES, AND ENGINEER. DOCUMENT EXISTING CONDITIONS WITH VIDEO AND/OR PHOTOGRAPHS.
9. FIELD VERIFY SIZE AND LOCATION OF EXISTING FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER IF, AFTER THE EXISTING FOUNDATION HAVE BEEN EXPOSED, A POTENTIAL FOUNDATION CONFLICT IS ANTICIPATED. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE UNDERMINING OF EXISTING FOUNDATIONS.



**1** SCOREBOARD ELEVATION

SD1.0 1/4" = 1'-0"



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RE-BID DRAWINGS  
**STADIUM VIDEO BOARD UPGRADE**  
MONTANA STATE UNIVERSITY



DRAWN BY: Author  
REVIEWED BY: Checker  
REV. DESCRIPTION DATE



PPA#22-0611  
A/E#00-00-00  
0747.080  
SHEET TITLE  
DEMO ELEVATION

SHEET  
**SD1.1**

DATE  
09-16-2023

**GENERAL STRUCTURAL NOTES:**

THESE DRAWINGS HAVE BEEN PREPARED SOLELY FOR USE IN THE CONSTRUCTION OF NEW MSU SCOREBOARDS AT THE LOCATION OF MONTANA STATE UNIVERSITY. POSSESSION OF THESE DRAWINGS DOES NOT GRANT A LICENSE TO CONSTRUCT OR FABRICATE THE WHOLE, OR PARTS OF THIS PROJECT IN OTHER LOCATIONS.

STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, ELECTRICAL, AND SCORE BOARD SUPPLIER DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DRAWINGS INCLUDING BUT NOT LIMITED TO DIMENSIONS, BLOCKOUTS, OPENINGS, SLEEVES, EMBEDDED ITEMS, ETC. INTO THEIR SHOP DRAWINGS AND WORK. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES OR IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN OR NOTED.

THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS, WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.

THE CONTRACTOR SHALL FURNISH THE PRODUCTS SPECIFIED ON THE DRAWINGS. SUBSTITUTIONS WILL BE CONSIDERED ONLY IF THE CONTRACTOR PROVIDES DOCUMENTATION TO PROVE THE ALTERNATIVE EQUALS OR EXCEEDS THE STRUCTURAL PERFORMANCE CHARACTERISTICS OF THE SPECIFIED PRODUCT.

**CODE REQUIREMENTS:**  
 ALL WORK SHALL BE IN STRICT COMPLIANCE WITH:  
 A. 2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF MONTANA (INTERNATIONAL BUILDING CODE, 2021 EDITION, EFFECTIVE AUGUST 1, 2022)  
 B. ALL OTHER STATE AND LOCAL BUILDING REQUIREMENTS THAT APPLY.

**TEMPORARY CONDITIONS:**  
 CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SUPPORT PRIOR TO COMPLETION OF VERTICAL AND LATERAL LOAD RESISTANCE. MORRISON-MAIERLE HAS NOT BEEN RETAINED TO PROVIDE ANY SERVICES RELATED TO JOB SITE SAFETY PRECAUTIONS, OR TO REVIEW THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR THE CONTRACTOR TO PERFORM WORK, UNLESS WE ARE SPECIFICALLY RETAINED AND COMPENSATED TO DO OTHERWISE. OUR WORK IS LIMITED TO THE FINAL DESIGN OF THE WORK DESCRIBED ON OUR DRAWINGS FOR THIS PROJECT.

BASEMENTS WHICH ARE TO BE EXPOSED SHALL BE PROTECTED FROM WEATHER AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE ARCHITECT PRIOR TO CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, MACHINERY AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO STRUCTURE SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

**ASSUMED FLOOR CONSTRUCTION:**  
 NONE  
 HORIZONTAL NONE

**DESIGN CRITERIA:**  
 DESIGN IS BASED ON THE FOLLOWING LOADING FOR THE BASIS OF STRENGTH, PERFORMANCE, AND SERVICEABILITY OF THE STRUCTURE.

DESIGN CRITERIA		
<b>LIVE LOAD CRITERIA (IBC 1603.1.1)</b>		
FLOOR LIVE LOADS:	UNIFORM LOAD	CONCENTRATED LOAD
COURT WALKS/PLATFORMS FOR ...	40 PSF	N/A
STAIRS AND EXIT WAYS	100 PSF	300 LBS
<b>ROOF LIVE LOAD CRITERIA (IBC 1603.1.2)</b>		
ORDINARY FLAT, PITCHED, CURVED	20 PSF (SEE SNOW LOAD)	N/A
<b>SNOW LOAD CRITERIA (IBC 1603.1.3)</b>		
DESIGN ROOF SNOW LOAD	50 PSF MINIMUM	
SNOW DRIFT	PER ASCE 7.16 AS SHOWN ON PLANS	
GROUND SNOW LOAD	Pg = 41.51 PSF (MONTANA GROUND SNOW LOAD FINDER)	
FLAT ROOF SNOW LOAD	P <sub>f</sub> = 40 PSF	
SNOW EXPOSURE FACTOR	Ce = 1.0	
SNOW LOAD IMPORTANCE FACTOR	I <sub>s</sub> = 1.0	
THERMAL FACTOR	Ct = 1.0	
<b>WIND LOAD CRITERIA (IBC 1603.1.4)</b>		
BASIC DESIGN WIND SPEED	V = 107 MPH	
RISK CATEGORY	II	
WIND EXPOSURE	C	
<b>SEISMIC LOAD CRITERIA (IBC 1603.1.5)</b>		
RISK CATEGORY	II	
SEISMIC IMPORTANCE FACTOR	I <sub>s</sub> = 1.0	
MAPPED SPECTRAL RESPONSE	S <sub>a</sub> = 0.677	S <sub>1</sub> = 0.213
DESIGN SPECTRAL RESPONSE	S <sub>ds</sub> = 0.568	
SEISMIC DESIGN CATEGORY	D	
<b>GEOTECHNICAL CRITERIA (IBC 1603.1.6)</b>		
DESIGN BASIS	PRESUMPTIVE VALUES OF SOILS (IBC 1806)	
DESIGN BASED ON REPORT BY	DOWL/HHM DATED 04/12/2011	
DESIGN SOIL BEARING PRESSURE	1500 PSF (DL + LL)	2000 PSF (EL/WL INCLUDED)
RETAINING WALLS EOE FLUID PRESSURE	35 PCF (ACTIVE)	55 PCF (AT REST)
PASSIVE BEARING PRESSURE	250 PSF/FT	
COEFFICIENT OF SLIDING FRICTION	0.3	

**STRUCTURAL OBSERVATIONS:**  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER OF RECORD A MINIMUM OF 24 HOURS IN ADVANCE OF REQUIRED OBSERVATIONS. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE OBSERVER. APPROVAL BY THE MUNICIPAL INSPECTOR DOES NOT PRECLUDE OBSERVATIONS BY THE ENGINEER OF RECORD AND APPROVAL BY THE ENGINEER OF RECORD DOES NOT PRECLUDE THE INSPECTION PROCESS BY THE MUNICIPAL INSPECTOR AND ANY OTHER CODE REQUIREMENTS FOR INSPECTION.

UPON COMPLETION OF WORK THE STRUCTURAL OBSERVER SHALL SUBMIT A REPORT TO THE OWNER AND BUILDING OFFICIAL ATTESTING TO THE VISUAL OBSERVATION MADE. THE REPORT SHALL IDENTIFY ANY REPORTED DEFICIENCIES WHICH HAVE NOT BEEN RESOLVED.

STRUCTURAL OBSERVATIONS SHALL BE PERFORMED TO DOCUMENT GENERAL CONFORMANCE OF THE STRUCTURAL DRAWINGS AND SPECIFICATIONS AT THE FOLLOWING STAGES:

- FOOTING REINFORCING
- PRIOR TO FIRST CONCRETE FOUNDATION MAT POUR
- PRIOR TO FIRST ELEVATED CONCRETE DECK POUR
- SUBSTANTIAL COMPLETION OF STRUCTURAL STEEL ERECTION
- PRIOR TO CONCRETE SHEARWALL POUR
- STANTIAL COMPLETION OF WOOD CONSTRUCTION
- PRIOR TO BEGINNING SHORCRETE OPERATIONS
- AT COMPLETION OF ROOF DIAPHRAGM FASTENING
- AS REQUIRED TO ADDRESS STRUCTURAL ISSUES

**SUBMITTALS:**

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL PRODUCTS, INCLUDING THE FOLLOWING:

ITEM	SUBMITTAL	DEFERRED SUBMITTAL
MECHANICAL PIERS	X	X
CONCRETE MIX DESIGNS	X	
CONCRETE REINFORCEMENT	X	
CONCRETE ANCHORAGES	X	
EMBEDDED STEEL ITEMS	X	
STRUCTURAL STEEL	X	
STEEL WELDING PROCEDURES	X	
METAL GRATING	X	
STRUCTURAL LIGHT GAUGE METAL FRAMING	X	
STRUCTURAL STEEL FASTENERS	X	
EXTERIOR CLADDING AND FURRING	X	X
STAIRS, LADDERS AND RAILINGS	X	X

SHOP DRAWINGS SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION FOR ALL STRUCTURAL PRODUCTS DELIVERED TO THE PROJECT. IF THE SHOP DRAWINGS DEVIATE FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE ARCHITECT PRIOR TO CONSTRUCTION.

DEFERRED SUBMITTAL DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE DEFERRED SUBMITTAL SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER FOR LOADS IMPOSED ON THE SUPPORTING STRUCTURE. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE CODES AND DESIGN CRITERIA NOTED IN THESE GENERAL STRUCTURAL NOTES.

THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, MACHINERY AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO STRUCTURE SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DEVIATE FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

THE USE OF REPRODUCTIONS OR PHOTOCOPIES OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED WHEN CAD OR REVIT FILES ARE PROVIDED TO THE CONTRACTOR OR SUBCONTRACTORS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL INFORMATION NOT DIRECTLY RELEVANT TO THE CREATION OF THE PLACING DRAWINGS AS WELL AS ALL REFERENCES TO THE OUTSIDE SOURCE FILES.

SUBMITTAL DOCUMENTS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO BEING SUBMITTED TO THE ARCHITECT FOR REVIEW.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE REVIEWED SUBMITTAL TO THE BUILDING DEPARTMENT FOR DEFERRED PERMIT APPLICATION. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

**EARTHWORK:**

**GENERAL:**  
 A GEOTECHNICAL INVESTIGATION AND REPORT HAS BEEN COMPLETED AS NOTED IN THE 'DESIGN CRITERIA' REFER TO THE GEOTECHNICAL REPORT FOR RECOMMENDATIONS ON SITE PREPARATION, FILL SPECIFICATIONS AND SITE SPECIFIC CONSTRUCTION METHODS.

STABILITY OF CONSTRUCTION EXCAVATION AND WORKER SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR. BASED UPON THE GEOTECHNICAL REPORT, TEMPORARY CONSTRUCTION EXCAVATIONS, ABOVE GROUND EXCAVATION, TO BE PLANNED IN ACCORDANCE WITH OSHA PROVISIONS SHOULD ASSUME TYPE B MATERIAL FOR STIFF CLAY, AND TYPE C MATERIAL FOR SAND.

DO NOT EXCAVATE CLOSER THAN 2:1 SLOPE BELOW FOOTING EXCAVATIONS.

ALL SLABS-ON-GRADE SHALL BEAR ON COMPACTED STRUCTURAL FILL OR COMPETENT NATIVE SOIL PER THE GEOTECHNICAL REPORT. ALL MOISTURE SENSITIVE SLABS-ON-GRADE OR THOSE SUBJECT TO RECEIVING MOISTURE SENSITIVE COATINGS OR COVERINGS SHALL BE PROVIDED WITH AN APPROPRIATE CAPILLARY BREAK AND VAPOR BARRIER OR RETARDANT OVER THE SUBGRADE. PREPARED AND INSTALLED AS NOTED IN THE GEOTECHNICAL REPORT. BARRIER MANUFACTURER'S WRITTEN RECOMMENDATIONS AND COORDINATED WITH THE FINISHER SPECIFIED BY THE ARCHITECT.

**DRILLED CONCRETE PIERS:**

**GENERAL:**  
 THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION AND REPORT AS NOTED IN THE 'DESIGN CRITERIA'. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS AND ANTICIPATED CONDITIONS BELOW GRADE.

ALLOWABLE PILE CAPACITY PER GEOTECHNICAL REPORT AND TYPICAL DRILLED SHAFT DETAILS.

DRILLED SHAFT BEARING ELEVATIONS ARE ESTIMATED PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. FINAL BEARING ELEVATIONS MAY VARY DEPENDING ON ACTUAL SOIL CONDITIONS AND SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER OF RECORD AT THE TIME OF INSTALLATION OF EACH DRILLED SHAFT.

THE CONTRACTOR SHALL ESTABLISH SPECIFIC CONSTRUCTION PROCEDURES AND SEQUENCES FOR THE INSTALLATION OF THE DRILLED SHAFTS AND SUBMIT THESE FOR REVIEW BY THE GEOTECHNICAL ENGINEER OF RECORD OF RECORD.

EXCAVATE AND COMPLETE CONCRETING OF DRILLED PIER ON THE SAME DAY. FAILURE TO PLACE CONCRETE ON THE DAY OF DRILLING MAY RESULT IN AN UNDESIRABLE BEDROCK PENETRATION AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

THE PIER INSTALLATION CONTRACTOR SHALL UTILIZE THE APPROPRIATE CLEANING BIT TO ACHIEVE A CLEAN SLOUGH FREE BOTTOM. NO CONCRETE SHALL BE PLACED INTO DRILLED SHAFTS CONTAINING FREE WATER. GEOTECHNICAL ENGINEER OF RECORD SHALL INSPECT AND CONFIRM THAT THE BOTTOM OF THE PIERS ARE LOCATED ON PROPER BEARING MATERIAL AND WITHOUT WATER.

CONCRETE AND REINFORCING SHALL MEET THE REQUIREMENTS INDICATED IN THE CAST-IN-PLACE CONCRETE NOTES.

STEEL REINFORCEMENT MUST BE TIED TOGETHER AND HELD IN PLACE SO THAT IT WILL NOT DEFORM OR DEFLECT DURING PLACEMENT IN THE HOLE. DURING PLACEMENT OF CONCRETE, AND DURING CASKING WITHDRAWAL, PROVIDE REINFORCING SPACERS AT EDGES OF THE REBAR CAGE TO MAINTAIN PROPER REINFORCING LOCATION IN THE DRILLED HOLE.

TREMENS OF THE CONCRETE WILL BE REQUIRED IF GROUNDWATER IS PRESENT. A DROP CHUTE OR EQUIVALENT MEANS SHOULD BE UTILIZED TO ALLOW THE CONCRETE TO FALL FREELY WITHOUT HITTING THE SIDES OF THE HOLE OR REBAR CAGE. DURING PLACEMENT IF THE FREE FALLING CONCRETE IS CAUSING ESTABLISHMENT OF THE HOLE, A TREMIE PIPE WILL BE REQUIRED TO PLACE THE CONCRETE.

DRILLED SHAFT CONCRETING SHALL BE PLACED IN ONE CONTINUOUS OPERATION UP TO THE ELEVATIONS SHOWN ON THE DRAWINGS WITHOUT CONSTRUCTION JOINTS. THE CONTRACTOR SHALL PROVIDE AND KEEP AT THE SITE AT LEAST ONE SET OF REBARS AS SHOWN IN THE DRILLED SHAFT COLD JOINT DETAIL. THESE REBARS SHALL BE USED IF AN EMERGENCY CONSTRUCTION JOINT IS REQUIRED. THE UPPER FEET OF DRILLED SHAFT CONCRETE SHALL BE VIBRATED FOR CONSOLIDATION.

A CERTIFIED PROJECT SURVEY BENCHMARK SHOWING THE ACTUAL LOCATION, SIZE, BEARING ELEVATION AND TOP ELEVATION SHALL BE SUBMITTED FOR THE GEOTECHNICAL AND STRUCTURAL ENGINEER OF RECORD'S REVIEW.

**CONCRETE:**

**CAST-IN-PLACE CONCRETE:**  
 CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301, SPECIFICATION FOR STRUCTURAL CONCRETE, AND ACI 118.1, SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS, UNLESS NOTED OTHERWISE.

AVERAGE CONCRETE STRENGTH DETERMINED BY JOB CAST LAB CURED CYLINDER TO BE AS INDICATED BELOW PLUS INCREASE DEPENDING ON THE PLANT'S STANDARD DEVIATION AS SPECIFIED IN ACI 318. MINIMUM CONCRETE STRENGTH SHALL BE AS FOLLOWS:

USE	EXPOSURE	MIN COMPRESSIVE STRENGTH	TEST DAYS	AIR CONTENT	MAX WATER TO CEMENT RATIO	MAX AGGREGATE SIZE
EXTERIOR FOOTINGS AND WALLS	F2	4,500 PSI	28	6% +/- 1.5%	0.45	1"
INTERIOR FOOTINGS AND WALLS	N/A	4,000 PSI	28	N/A	0.45	1"
EXTERIOR SLABS ON GRADE	F1	3,500 PSI	28	4.5% +/- 1.5%	0.55	1"
INTERIOR SLABS ON GRADE	N/A	3,500 PSI	28	N/A	0.50	1"
EXTERIOR SLABS ON METAL DECK	N/A	3,500 PSI	28	N/A	0.50	3/4"
POST TENSIONED SLABS & BEAMS	N/A	5,000 PSI	28	N/A	0.45	3/4"
COLUMNS AND SHEARWALLS	N/A	5,000 PSI	56	N/A	0.45	3/4"
DRILLED PIERS	N/A	3,000 PSI	28	N/A	0.45	3/4"
MAT FOUNDATIONS	N/A	5,000 PSI	28	N/A	0.45	1"
			90			

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS ALONG WITH TEST DATA A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.

CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER.

CURING OF CONCRETE SHALL COMPLY WITH ACI 308, UNLESS NOTED OTHERWISE.

WHERE CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.

PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE CORNERS UNLESS NOTED OTHERWISE.

SHORING DESIGN IS THE CONTRACTOR'S RESPONSIBILITY. SHORING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH IS AT LEAST 70 PERCENT OF DESIGN STRENGTH AS DETERMINED BY FIELD CURED CYLINDERS.

PROVIDE TOoled OR SAW-CUT CONTROL JOINTS IN SLABS ON GRADE COMPLYING WITH THE FOLLOWING CRITERIA. THE CONTRACTOR SHALL SUBMIT CONTROL JOINT PLAN PRIOR TO POURING THE SLABS.

- JOINT SPACING SHALL NOT EXCEED 30 TIMES THE SLAB THICKNESS.
- ASPECT RATIO OF SLAB PANELS SHALL BE MAXIMUM OF 1.5 TO 1.0; HOWEVER A RATIO OF 1.0 TO 1.0 IS PREFERABLE.
- JOINTS SHALL BE CONTINUOUS ACROSS INTERSECTING JOINTS, NOT STAGGERED OR OFFSET
- JOINTS SHALL EXTEND FROM ISOLATION JOINT AROUND COLUMNS AND WALLS

**REINFORCING STEEL:**  
 REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING PROPERTIES:

REINFORCEMENT STEEL PROPERTIES	REINFORCEMENT SIZE	SPECIFICATION
GENERAL USE	#7 & SMALLER	ASTM A615, GRADE 60
BEAMS AND COLUMNS	#8 & LARGER	ASTM A706
LONGITUDINAL FLEXURAL REINFORCING IN BEAMS, COLUMNS AND SHEARWALLS	ALL	ASTM A706
REINFORCEMENT TO BE WELDED	ALL	ASTM A706
WELDED WIRE REINFORCEMENT	ALL	ASTM A1064

REINFORCING STEEL IN BEAMS AND SLABS SHALL BE SUPPORTED ON CONCRETE DOBBIES, OR APPROVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH IS AT LEAST 70 PERCENT OF DESIGN STRENGTH. REINFORCING STEEL ANCHORS TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. ACI STANDARD SPECIFICATIONS.

CONTACT LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICING LENGTH SCHEDULE, EXCEPT AS NOTED ON DRAWINGS. MECHANICAL SPLICES NOTED ON THE DRAWINGS SHALL BE DAYTON SUPERIOR BAR-LOCK OR APPROVED WITH A CURRENT ICC-ES OR IAPMO'S EVALUATION REPORT.

**GRADE 60 REINFORCING STEEL LAP SPLICING LENGTH AND DEVELOPMENT LENGTH**

BAR SIZE	F <sub>c</sub> = 3,000 PSI			F <sub>c</sub> = 4,000 PSI			F <sub>c</sub> = 5,000 PSI		
	MISC BARS	TOP BARS	HOOK BARS	MISC BARS	TOP BARS	HOOK BARS	MISC BARS	TOP BARS	HOOK BARS
	L <sub>d</sub>	L <sub>l</sub>	L <sub>l</sub>	L <sub>d</sub>	L <sub>l</sub>	L <sub>l</sub>	L <sub>d</sub>	L <sub>l</sub>	L <sub>l</sub>
#3	17	22	22	15	19	23	13	17	22
#4	22	29	29	18	25	33	10	17	23
#5	28	36	36	24	31	41	12	22	28
#6	33	43	43	29	37	49	16	26	34
#7	48	63	63	43	54	71	17	28	40
#8	55	72	72	48	62	82	19	33	46
#9	62	81	81	55	70	91	22	40	53
#10	70	91	91	61	79	102	25	44	61
#11	78	101	101	67	87	114	27	48	70

- ALL TABULATED VALUES ARE IN INCHES; FOR GRADE 60, UNCOATED REINFORCING, NORMAL WEIGHT CONCRETE WITH A MINIMUM COVER GREATER THAN THE BAR DIAMETER.
- IT SHALL BE PERMITTED TO INTERPOLATE BETWEEN CONCRETE STRENGTHS OR USE THE NEXT LOWER CONCRETE STRENGTH.
- TOP BARS ARE ANY HORIZ BAR PLACED SUCH THAT MORE THAN 1/2" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZ WALL BARS ARE CONSIDERED TOP BARS.
- LAP SPLICES ARE FOR NON-LATERAL LOAD RESISTING ELEMENTS. FOR REBAR LAP SPLICES AT LATERAL LOAD RESISTING ELEMENTS, REFER TO SECTION 05050.
- L<sub>d</sub> = DEVELOPMENT LENGTH IN TENSION OF DEFORMED BAR. L<sub>l</sub> = DEVELOPMENT LENGTH IN TENSION OF DEFORMED BAR OR DEFORMED WIRE WITH A STANDARD... LAP = LAP SPLICING LENGTH OF DEFORMED BAR OR DEFORMED WIRE.

REINFORCING STEEL SHALL BE PROTECTED BY PLACING BARS WITH A MINIMUM COVER, UNLESS NOTED OTHERWISE.

REINFORCING STEEL CONCRETE COVER	CLEAR COVER
SLABS	3/4"
BEAMS AND COLUMNS	1-1/2" (TO STIRRUPS OR TIES)
WALLS (INTERIOR FACES)	3/4"
CONCRETE CAST AGAINST EARTH	3"
CONCRETE EXPOSED TO WEATHER OR EARTH	1-1/2" (FOR #8 OR SMALLER), 2" (FOR #8 AND LARGER)

PROVIDE DOWELS FROM FOOTINGS TO MATCH ALL VERTICAL WALL, PILASTER AND COLUMN REINFORCING. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING IN WALLS AND FOOTINGS AT ALL CORNERS AND INTERSECTIONS. CONTINUE HORIZONTAL WALL BARS THROUGH PLASTERS COLUMNS AND INTERSECTING WALLS.

ALL ANCHOR BOLTS, HOLD-DOWNS AND OTHER REQUIRED ACCESSORIES SHALL BE SECURED IN PLACE PRIOR TO INSPECTION AND CONCRETE PLACEMENT. DO NOT STRIKE THE ABOVE LISTED ITEMS AND FRESH CONCRETE AFTER PLACEMENT. PROPERLY VIBRATE AROUND INSTALLED ITEMS TO ENSURE PROPER CONSOLIDATION OF CONCRETE.

**CONCRETE CONNECTIONS:**  
 STEEL HEADED STUD ANCHORS SHALL BE NELSON GRANULAR FLUX-FILLED HEADED STUDS OR PRIOR APPROVED EQUAL AND BE MANUFACTURED FROM ASTM A501-17 / A108, GRADES 100-1020 COLD ROLLED CARBON STEEL WITH A MINIMUM TENSILE STRENGTH OF 60,000 PSI. DEFORMED BAR ANCHORS SHALL BE NELSON, TYPE DDL, STUDS AND DEFORMED BAR SHALL BE AUTOMATICALLY END WELDED WITH A WELDING GUN TO FULLY DEVELOP THE CONNECTION.

UNLESS A SPECIFIC ANCHOR PRODUCT IS NOTED IN THE DRAWINGS, POST-INSTALLED ANCHORS MAY USE ONE OF THE ANCHORS LISTED BELOW FOR THE REQUIRED TYPE.

TYPE	PRODUCT	REPORT #
ADHESIVE ANCHORS & DOWELS	SIMPSON SET-XP	ICC-ES ESR-2598
	SIMPSON AT-XP	IAPMO-UES ER-263
	HILTI HIT-HY 200	ICC-ES ESR-3187
EXPANSION ANCHOR	SIMPSON STRONG-BOLT 2	ICC-ES ESR-3027
	HILTI KWIK-BOLT 2	ICC-ES ESR-1917
SCREW ANCHOR	SIMPSON TITEN HD	ICC-ES ESR-2713
	HILTI KWIK-HUS-EZ	ICC-ES ESR-3027

ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PRODUCT EVALUATION REPORTS.

EMBEDMENTS SPECIFIED ON DRAWINGS ARE "EFFECTIVE" EMBEDMENTS. REFERENCE MANUFACTURER LITERATURE FOR CORRESPONDING ACTUAL EMBEDMENT DEPTHS.

ANCHORS ROOS EXPOSED TO EARTH OR WEATHER SHALL BE PROTECTED FROM CORROSION BY HOT-DIP GALVANIZING OR USE OF STAINLESS STEEL. POST INSTALLED EXPANSION AND SCREW ANCHORS EXPOSED TO EARTH OR WEATHER SHALL BE STAINLESS STEEL.

FOR POST-INSTALLED ANCHORS, LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED.

IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF (2) ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, SEEK GUIDANCE FROM THE STRUCTURAL ENGINEER OF RECORD.

SPECIAL INSPECTION OF ANCHOR INSTALLATION IS REQUIRED UNLESS SPECIFICALLY NOTED OTHERWISE IN DRAWINGS. SEE SPECIAL INSPECTION AND MATERIALS TESTING PROGRAM AND NOTES.

**METALS:**

**STRUCTURAL STEEL:**  
 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS AND AISC CODE OF STANDARD PRACTICE. STRUCTURAL STEEL SHALL BE:

SHAPE	MATERIAL SPECIFICATION AND GRADE
WIDE FLANGE (W-SHAPE)	ASTM A992, GRADE 50
CHANNELS (C-SHAPE)	ASTM A660, GRADE 50
ANGLES (L-SHAPE)	ASTM A36, GRADE 36
STRUCTURAL TEES (WT-SHAPE)	ASTM A992, GRADE 50
HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C
STRUCTURAL PIPES	ASTM A53, GRADE B
PLATES	ASTM A36, GRADE 36
PLATES NOTED AS 'GR 50'	ASTM A572, GRADE 50

BOLTS SHALL

**STATEMENT OF SPECIAL INSPECTION AND TESTING NOTES:**

SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (IBC), CONTRACT DOCUMENTS, AND APPROVED SUBMITTALS. THE OWNER SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS AND TESTING DESCRIBED HEREIN.

SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED AND ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E29 (GENERAL), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A898 (STEEL) AND ASTM E845 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE ARCHITECT AND ENGINEER A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTIONS SHALL BE APPROVED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER AWS D1.1.

THE CONSTRUCTION OR WORK FOR WHICH SPECIAL INSPECTION IS REQUIRED SHALL REMAIN ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS.

THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS. ISSUES REQUIRING IMMEDIATE CORRECTIVE ACTIONS OR ENGINEERING INPUT ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY UPON DISCOVERY.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, ARCHITECT, ENGINEER, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED, IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS, AND THAT ALL DISCREPANCIES NOTED IN THE REPORTS HAVE BEEN CORRECTED.

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 SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED HEREIN.

INSPECTION FREQUENCY:  
 A. CONTINUOUS INSPECTION: THE SPECIAL INSPECTOR SHALL BE PRESENT WHEN AND WHERE THE WORK IS BEING PERFORMED AT ALL TIMES.  
 B. PERIODIC INSPECTION: THE SPECIAL INSPECTOR SHALL BE INTERMITTENTLY PRESENT WHEN AND WHERE THE WORK IS BEING PERFORMED. THE INSPECTOR SHALL OBSERVE THE WORK AT ITS COMMENCEMENT, AT PERIODIC INTERVALS THEREAFTER, AND WHEN THE WORK IS COMPLETED.  
 C. OBSERVE: THE INSPECTOR SHALL OBSERVE THESE FUNCTIONS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS. REFERENCE AISC 300 AND AISC 341 FOR ADDITIONAL INFORMATION.  
 D. PERFORM: THESE INSPECTIONS SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE ITEM (REFERENCE AISC 300 AND AISC 341 FOR ADDITIONAL INFORMATION).  
 E. DOCUMENT: THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS (REFERENCE AISC 300 AND AISC 341 FOR ADDITIONAL INFORMATION).

SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

A. STEEL FABRICATORS AND INSTALLERS CERTIFIED THROUGH AISI COMPLY WITH THIS PROVISION. THE FABRICATOR AND OR INSTALLER MUST STILL COMPLETE AND DOCUMENT THE QUALITY CONTROL TASKS AND NON-DESTRUCTIVE TESTING OUTLINED IN AISC 300 AND AISC 341, AS APPLICABLE.

**REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
VERIFY MATERIALS BELOW SHALLOW FOUNDATION ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY			PERIODIC	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL			PERIODIC	
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6	GEOTECHNICAL REPORT	CONTINUOUS	BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY			PERIODIC	

**REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
INSPECTION OF REINFORCING STEEL AND PLACEMENT	TABLE 1705.3	ACI 318 Ch. 20, 25.2, 25.3, 26.1-26.3	PERIODIC	
INSPECTION OF PRESTRESSING TENDONS AND PLACEMENT			PERIODIC	
WELDING REINFORCING: VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706			PERIODIC	
WELDING REINFORCING: LONGITUDINAL REINFORCING IN BEAMS AND COLUMNS OF INTERMEDIATE AND SPECIAL MOMENT FRAMES			CONTINUOUS	
WELDING REINFORCING: LONGITUDINAL AND TRANSVERSE REINFORCING IN BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS	TABLE 1705.3	AWS D1.4 ACI 318, 26.5.4	CONTINUOUS	
WELDING REINFORCING: TRANSVERSE REINFORCING IN BEAMS AND COLUMNS			CONTINUOUS	
WELDING REINFORCING: OTHER STEEL NOT PREVIOUSLY LISTED			PERIODIC	
INSPECTION OF ANCHORS CAST-IN CONCRETE	ACI 318, 17.8.2		PERIODIC	
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE: VERIFY ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS; HOLE DIMENSIONS; COMPLIANCE WITH DRILL BIT REQUIREMENTS; CLEANLINESS OF THE HOLE AND ANCHOR; PRODUCT EXPIRATION DATE (IF APPLICABLE); COMPLIANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS; ANCHOR EMBEDMENT, AND TIGHTENING TORQUE (IF APPLICABLE) FOR: a) ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UNUSUALLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	TABLE 1705.3	ACI 318, 17.8.2.4 PRODUCT EVALUATION REPORT	CONTINUOUS	
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE: VERIFY ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS; HOLE DIMENSIONS; COMPLIANCE WITH DRILL BIT REQUIREMENTS; CLEANLINESS OF THE HOLE AND ANCHOR; PRODUCT EXPIRATION DATE (IF APPLICABLE); COMPLIANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS; ANCHOR EMBEDMENT, AND TIGHTENING TORQUE (IF APPLICABLE) FOR: b) MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN a)	TABLE 1705.3	ACI 318, 17.8.2 PRODUCT EVALUATION REPORT	PERIODIC	

**REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
VERIFY USE OF REQUIRED MIX DESIGN	ACI 318, Ch. 19, 26.4.3, 26.4.4		PERIODIC	
INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	ACI 318, 26.5, 26.12		CONTINUOUS	
INSPECTION OF SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	ACI 318, 26.5.3-25.5.5		PERIODIC	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES			CONTINUOUS	
PRESTRESSED CONCRETE: APPLICATION OF PRESTRESSING FORCE	ACI 318, 26.10		CONTINUOUS	
PRESTRESSED CONCRETE: GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE RESISTING SYSTEM	ACI 318, 26.9		CONTINUOUS	
ERECTION OF PRECAST CONCRETE MEMBERS	ACI 318, 26.11.2		PERIODIC	
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING TENDONS IN POST-TENSIONED CONCRETE	ACI 318, 26.11.2		PERIODIC	
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	ACI 318, 26.11.2(b)		PERIODIC	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED			PERIODIC	

**REQUIRED SPECIAL INSPECTIONS OF STRUCTURAL STEEL CONSTRUCTION**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
REVIEW THE MATERIAL TEST REPORTS AND CERTIFICATIONS FOR STEEL COMPONENTS FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING PRIMARY STEEL ELEMENTS, STEEL CASTINGS AND FORGINGS, FASTENERS, WELDING CONSUMABLES, HEADED STUD ANCHORS, WELDING FILLER METAL, AND FLUXES; WELDING PROCEDURE SPECIFICATIONS (WPS), PROCEDURE QUALIFICATION RECORDS FOR WPS THAT ARE NOT PREQUALIFIED; WELDING PERSONNEL QUALIFICATION RECORDS AND CONTINUITY RECORDS; FABRICATOR'S WRITTEN QUALITY CONTROL MANUAL, AND ERECTOR'S QUALITY CONTROL MANUAL	1705.2.1	AISC N5.2	PERIODIC	PERFORM A ONE-TIME REVIEW OF EACH APPLICABLE ITEM
PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL: VERIFY THE DIAMETER, GRADE, TYPE, AND LENGTH OF THE ANCHOR ROD OR EMBEDDED METAL AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE PRIOR TO PLACEMENT OF CONCRETE		AISC N5.8	PERIODIC	
INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS AS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS, AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION			PERIODIC	

**REQUIRED SPECIAL INSPECTION TASKS PRIOR TO WELDING STRUCTURAL STEEL**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS			OBSERVE	
WELDING PROCEDURE SPECIFICATIONS AVAILABLE			PERFORM	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE			PERFORM	
MATERIAL IDENTIFICATION (TYPE/GRADE)			OBSERVE	
WELDER IDENTIFICATION SYSTEM			OBSERVE	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY), JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE/BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)	1705.2.1	AISC TABLE N5.4-1	OBSERVE	
FIT-UP OF CJP GROOVE WELDS OF HES, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY, JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)			OBSERVE	
CONFIGURATION AND FRESH OF ACCESS HOLES			OBSERVE	
FIT-UP OF FILLET WELDS: DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACE), TACKING (TACK WELD QUALITY AND LOCATION)			OBSERVE	

**REQUIRED SPECIAL INSPECTION TASKS DURING WELDING STRUCTURAL STEEL**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
CONTROL AND HANDLING OF WELDING CONSUMABLES: PACKAGING, EXPOSURE CONTROL			OBSERVE	
NO WELDING OVER CRACKED TACK WELDS			OBSERVE	
ENVIRONMENTAL CONDITIONS: WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE			OBSERVE	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER
WPS FOLLOWED: SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS, TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED, PROPER WELDING POSITION	1705.2.1	AISC TABLE N5.4-2	OBSERVE	
WELDING TECHNIQUES: INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS			OBSERVE	
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS			PERFORM	

**REQUIRED SPECIAL INSPECTION TASKS AFTER WELDING STRUCTURAL STEEL**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
WELDS CLEANED			OBSERVE	
SIZE, LENGTH, AND LOCATION OF WELDS			PERFORM	
WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION, WELD-BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, POROSITY			PERFORM	
ARC STRIKES			PERFORM	
K-AREA: WHEN WELDING DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA OF ROLLED SHAPES, VISUALLY INSPECT THE WEB FOR K-AREA CRACKS WITHIN 3" OF THE WELD	1705.2.1	AISC TABLE N5.4-3	PERFORM	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP SHAPES: AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.10) AND BUILT-UP HEAVY SHAPES (SEE SECTION A3.16) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS			PERFORM	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED BY THE CONSTRUCTION DOCUMENTS)			PERFORM	
REPAIR ACTIVITIES			PERFORM	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER			PERFORM	
NO PROHIBITED WELDS HAVE BEEN MADE WITHOUT THE APPROVAL OF THE ECR			OBSERVE	

**REQUIRED SPECIAL INSPECTION TASKS PRIOR TO BOLTING STRUCTURAL STEEL**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS			PERFORM	
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)			OBSERVE	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL			OBSERVE	
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	1705.2.1	AISC TABLE N5.6-1	OBSERVE	
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED			OBSERVE	
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS			OBSERVE	

**REQUIRED SPECIAL INSPECTION TASKS DURING BOLTING STRUCTURAL STEEL (NOT REQUIRED FOR SNUG-TIGHT JOINTS)**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED			OBSERVE	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER
JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO THE PRE-TENSIONING OPERATION	1705.2.1	AISC TABLE N5.6-2	OBSERVE	
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING			OBSERVE	
FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RMC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES			OBSERVE	

**REQUIRED SPECIAL INSPECTION TASKS AFTER BOLTING STRUCTURAL STEEL**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2.1	AISC TABLE N5.6-3	PERFORM	SEE NOTES FOR EXCEPTIONS WHEN WORK IS COMPLETED BY AN APPROVED FABRICATOR/INSTALLER

**TESTING OF SOILS AND FOUNDATIONS**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6	PROJECT GEOTECHNICAL REPORT	PERIODIC	
PROOF TESTING OF DEEP FOUNDATION ELEMENTS		PROJECT GEOTECHNICAL REPORT		

**TESTING OF CONCRETE CONSTRUCTION**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
CONCRETE STRENGTH TEST SPECIMENS	TABLE 1705.3	ASTM C31 AND C39		FOR EACH CLASS OF CONCRETE (E.G. FOOTINGS, WALLS, OR SLAB ON GRADE), ONE SET OF SPECIMENS EACH DAY OR LESSER OF ONE SET FOR EACH 150 YDS OF CONCRETE OR ONE SET FOR EACH 5,000 SQUARE FEET OF SLAB OR WALL
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE TEMPERATURE OF CONCRETE		ASTM C172 ACI 318-14, 26.4 AND 26.12		FOR EACH SPECIMEN

**TESTING OF STEEL CONSTRUCTION**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
CJP GROOVE WELD NON-DESTRUCTIVE TESTING: ULTRASONIC TESTING SHALL BE PERFORMED ON WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CRACKER JOINTS, IN MATERIALS 5/16 INCHES OR THICKER		AISC N5.5.B		ALL JOINTS FOR BUILDINGS IN RISK CATEGORY II OR IV, BUILDINGS: 10% OF JOINTS IN RISK CATEGORY II (INCREASE OR DECREASE RATE PER AISC N5.6F AND N5.5E, AS REQUIRED)
THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED USING MAGNETIC PARTICLE TESTING OR PENETRANT TESTING, WHEN THE FLANGE THICKNESS EXCEEDS 2 INCHES FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 INCHES FOR BUILT-UP SHAPES.	1705.2	AISC M2.2	PERFORM	
DOCUMENT ALL WELD NON-DESTRUCTIVE TESTING PERFORMED. WHEN A WELD IS REJECTED ON THE BASIS OF WELD NON-DESTRUCTIVE TESTING, THE WELD NON-DESTRUCTIVE TESTING RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION.		AISC N5.5.G	DOCUMENT	

**TESTING OF STEEL CONSTRUCTION FOR SEISMIC RESISTANCE**

TASK	IBC REFERENCE	REFERENCE STANDARD	FREQUENCY	REMARKS
ULTRASONIC TESTING ON 100% OF WELDS: WELD DISCONTINUITIES SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF CRITERIA OF AWS D1.1 TABLE 6.2 MAGNETIC PARTICLE TESTING ON 25% OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS. AISC 341-10 SECTIONS J6.2 AND J6.2a MAY BE APPLIED TO REDUCE THE RATE OF NOT. FOR STRUCTURES IN RISK CATEGORY II OR IV, AISC SECTION N5.5B REQUIRES THAT THE ULTRASONIC TESTING BE PERFORMED BY QA ON ALL CJP GROOVE WELDS IN MATERIALS 5/16 INCH THICK OR GREATER.		AISC SEISMIC J6.2A		
ULTRASONIC TESTING SHALL BE PERFORMED ON CJP GROOVE WELDS IN MATERIALS 5/16 INCH THICK OR GREATER. MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON BEAM-TO-COLUMN CJP GROOVE WELDS. EXCEPTION FOR ORDINARY MOMENT FRAMES IN RISK CATEGORIES I OR II, UT AND MT OF CJP GROOVE WELDS ARE REQUIRED ONLY FOR DEMAND CRITICAL WELDS		AISC SEISMIC J6.2A		
ULTRASONIC TESTING SHALL BE PERFORMED ON PARTIAL-JOINT PENETRATION (PJP) GROOVE WELDS IN COLUMN SPLICES AND COLUMN TO BASE PLATE WELDS.		AISC SEISMIC J6.2B		



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RE-BID DRAWINGS  
**STADIUM VIDEO BOARD UPGRADE**  
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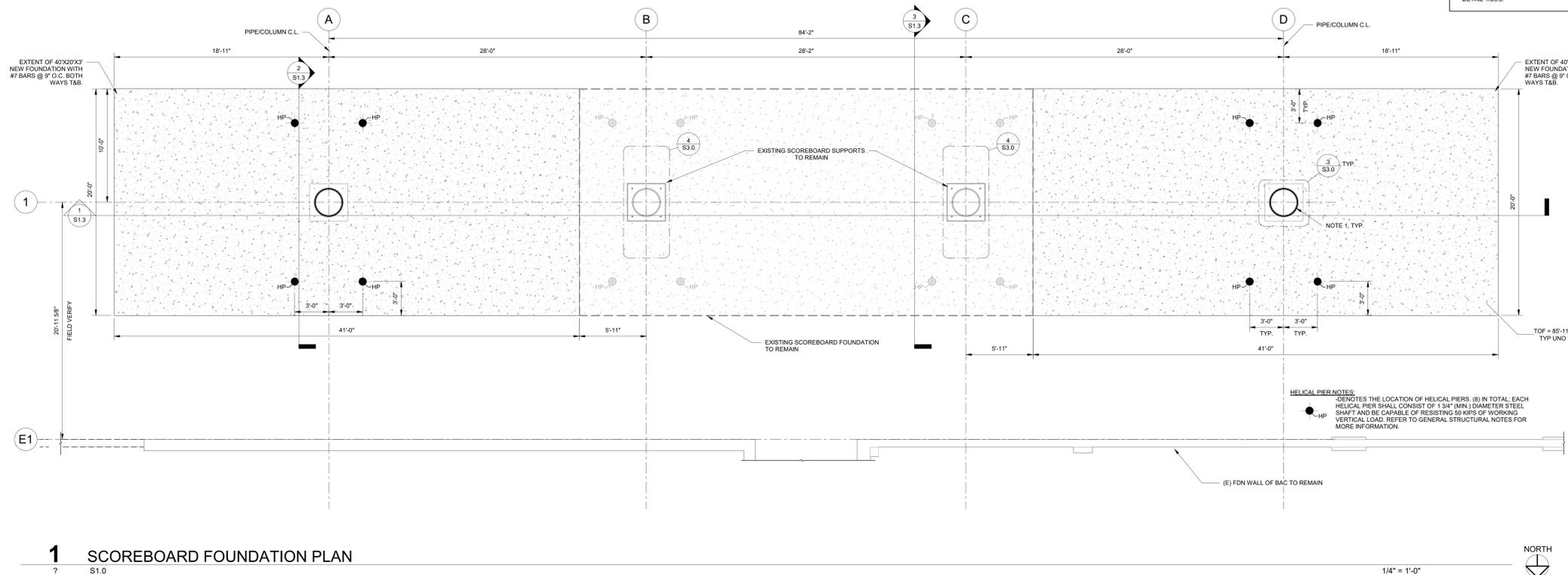
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 0747.080  
 SHEET TITLE  
 STATEMENT OF  
 SPECIAL  
 INSPECTIONS  
 SHEET  
**S0.1**  
 DATE  
 09-16-2023

**PLAN NOTES**

- NOTES:**
1. COMPLETELY FILL STRUCTURAL PIPE WITH 4000 PSI (MIN) CONCRETE CONFORMING TO THE REQUIREMENTS OF THE GENERAL STRUCTURAL NOTES. PLACE CONCRETE USING TREMIE TUBE OR APPROVED EQUIVALENT TO PREVENT GREATER THAN 4- FEET FREEFALL OF CONCRETE INTO THE PIPE.
  2. THIS STRUCTURAL DRAWING SET SERVES TO DEFINE AND INCLUDE THE STRUCTURAL PIPE COLUMNS AND ASSOCIATED BASE PLATES, FOUNDATIONS, REINFORCEMENT, AND ACCESS PLATFORM FRAMING MEMBERS. THE SCOREBOARD / VIDEOBOARD AND ALL ASSOCIATED COMPONENTS AND THE CONNECTION OF THESE ELEMENTS TO THE STRUCTURE ARE THE RESPONSIBILITY OF THE SCOREBOARD / VIDEOBOARD SUPPLY CONSULTANT. COORDINATE SIZE, LOCATION AND CONNECTION REQUIREMENTS OF SAID SCOREBOARD / VIDEOBOARD COMPONENTS WITH THE SCOREBOARD / VIDEOBOARD SUPPLY CONSULTANT.
  3. COORDINATE SLEEVING AND PENETRATIONS FOR MECHANICAL, PLUMBING, AND ELECTRICAL WORK TO BE PROVIDED IN A FUTURE SCHEDULE. AT OPENINGS IN FOUNDATION WALLS, PROVIDE OPENING REINFORCING PER DETAIL 1/S3.3.

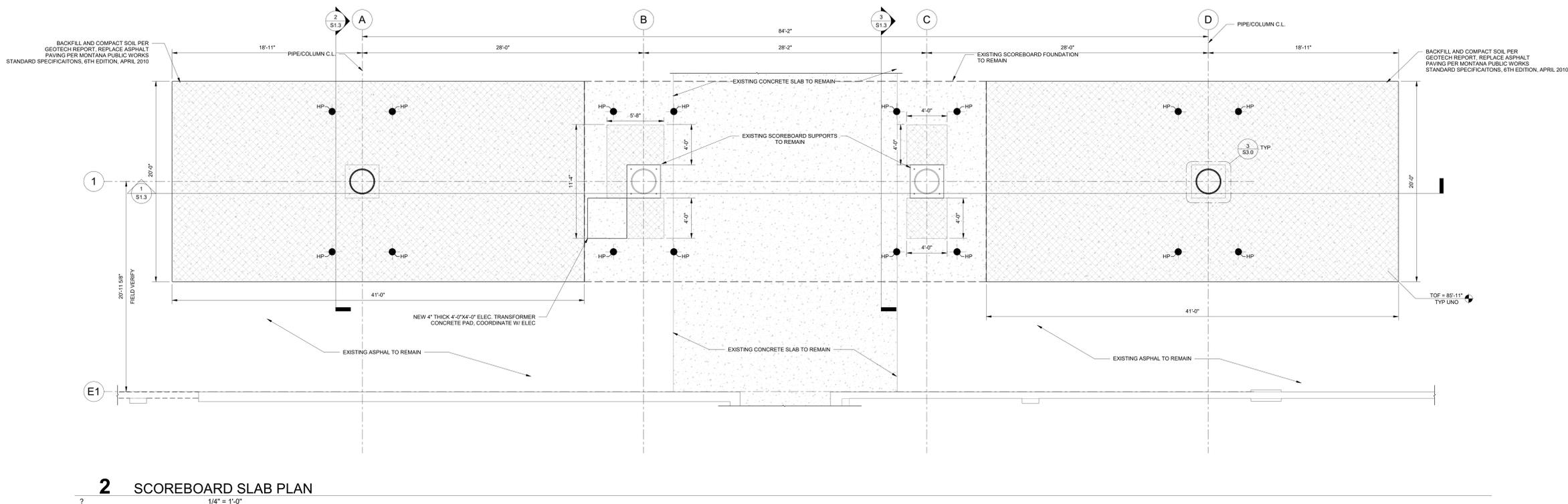


**1** SCOREBOARD FOUNDATION PLAN

7 S1.0



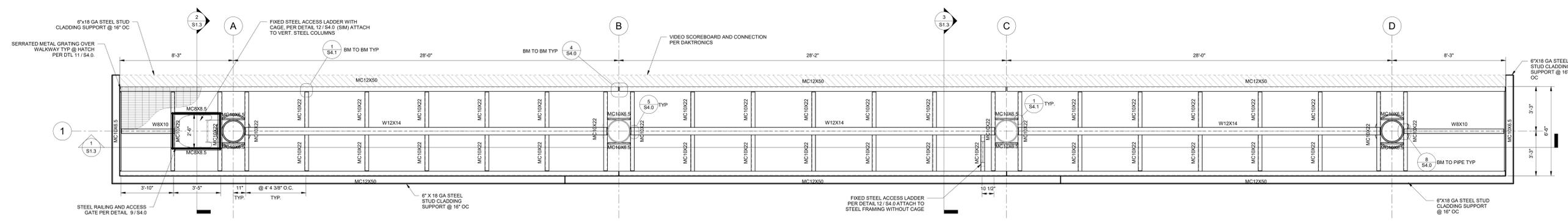
1/4" = 1'-0"



**2** SCOREBOARD SLAB PLAN

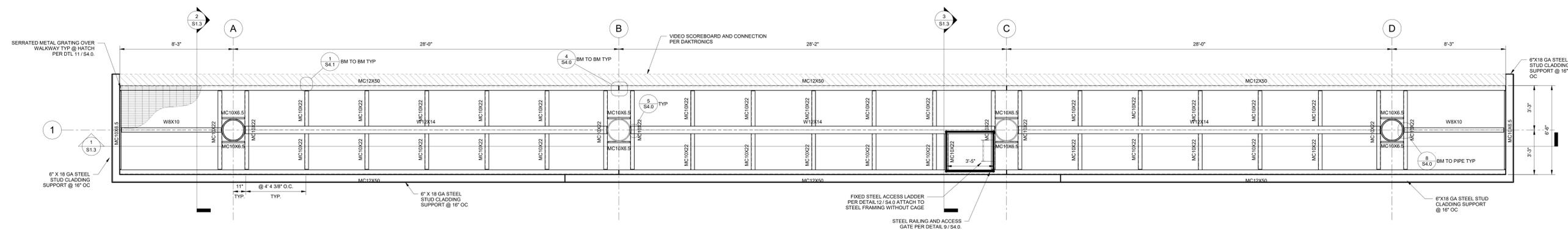
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1/4" = 1'-0"



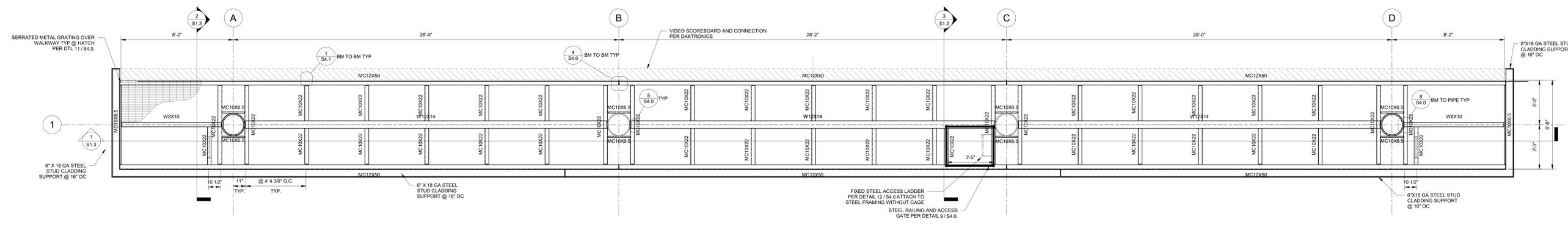
**1 CATWALK 1 FRAMING PLAN**  
S1.3 : S1.1

**3/8" = 1'-0"**



**2 CATWALK 2 FRAMING PLAN**  
S1.3 : S1.1

**3/8" = 1'-0"**

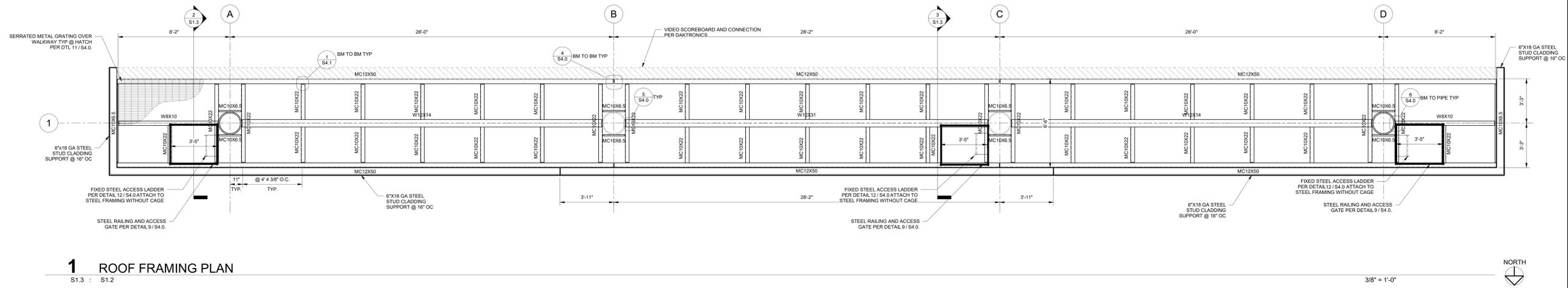


**3 CATWALK 3 FRAMING PLAN**  
S1.3 : S1.1

**3/8" = 1'-0"**

**PLAN NOTES**

- NOTES**
1. MECHANICAL ROOF TOP EQUIPMENT, COORDINATE LOCATIONS AND PENETRATIONS WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR. PROVIDE OPENING FRAMING PER DETAIL 1034.4.
  2. PROVIDE ADDITIONAL CLOSER SPACED ROOF RAFTERS TO SUPPORT MECHANICAL ROOF TOP EQUIPMENT.
  3. COORDINATE OTHER ROOF PENETRATIONS NOT SHOWN (LESS THAN OR EQUAL TO 8" IN LARGEST DIMENSION) WITH MECHANICAL/PLUMBING/ELECTRICAL DRAWINGS AND WITH THE MECHANICAL/PLUMBING/ELECTRICAL CONTRACTORS.
  4. RAFTER/JOIST BRACING IS REQUIRED BUT NOT SHOWN. SEE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR BRACING AND OTHER JOIST/RAFTER REQUIREMENTS.



**1 ROOF FRAMING PLAN**

S1.3 : S1.2

3/8" = 1'-0"



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**RE-BID DRAWINGS**

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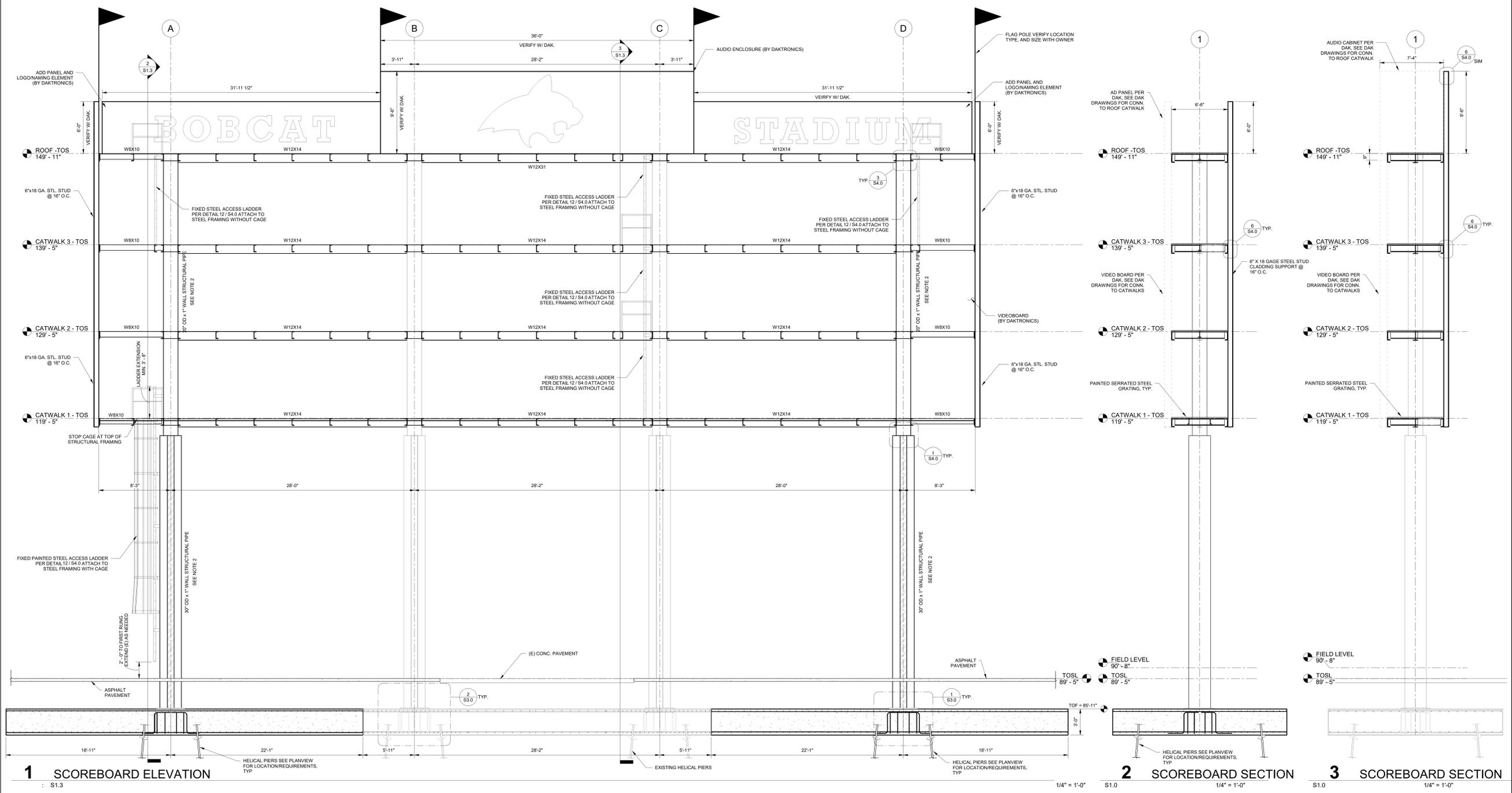


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ROOF PLAN

SHEET  
**S1.2**

DATE  
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- ELEVATION PLAN NOTES**
- FIELD VERIFY SIZE AND LOCATION OF EXISTING FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER IF, AFTER THE EXISTING FOUNDATION HAVE BEEN EXPOSED, A POTENTIAL FOUNDATION CONFLICT IS ANTICIPATED. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE UNDERMINING OF EXISTING FOUNDATIONS.
  - COMPLETELY FILL STRUCTURAL PIPE WITH 4000 PSI (MIN) CONCRETE CONFORMING TO THE REQUIREMENTS OF THE GENERAL STRUCTURAL NOTES. PLACE CONCRETE USING TREME TUBE OR APPROVED EQUIVALENT TO PREVENT GREATER THAN 4 FEET FREEFALL OF CONCRETE INTO THE PIPE. STEEL ELEMENTS TO BE EXPOSED PAINTED ACCORDING TO SPECIFICATIONS.



**1 SCOREBOARD ELEVATION**  
: S1.3

**2 SCOREBOARD SECTION**  
S1.0 1/4" = 1'-0"

**3 SCOREBOARD SECTION**  
S1.0 1/4" = 1'-0"



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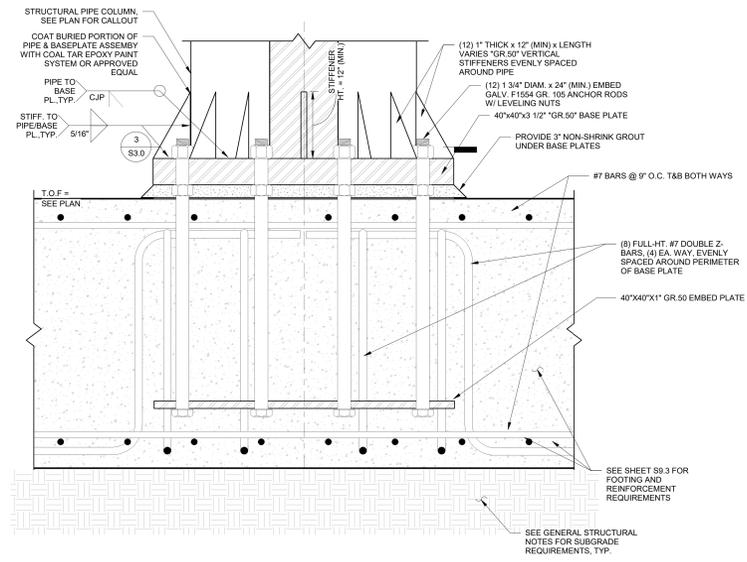


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SHEET TITLE  
ELEVATION PLAN

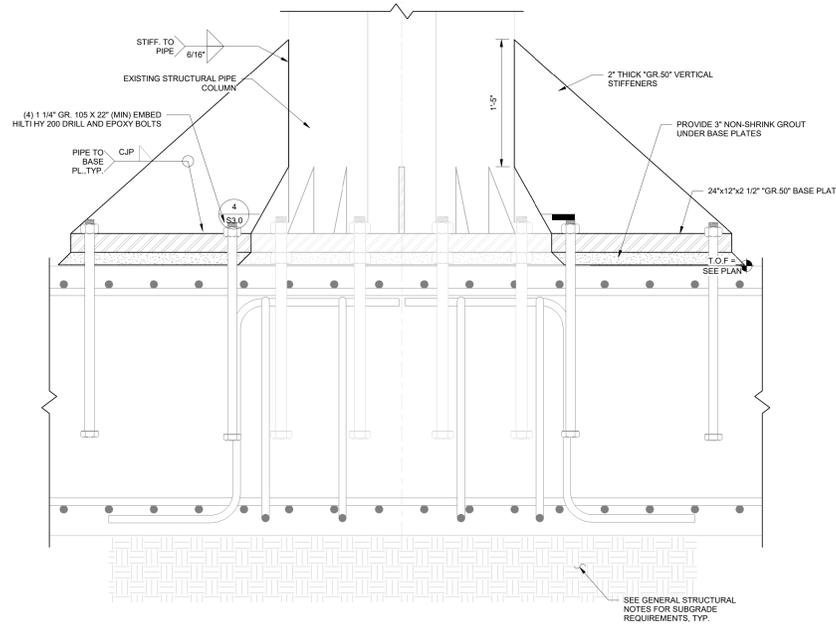
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DATE  
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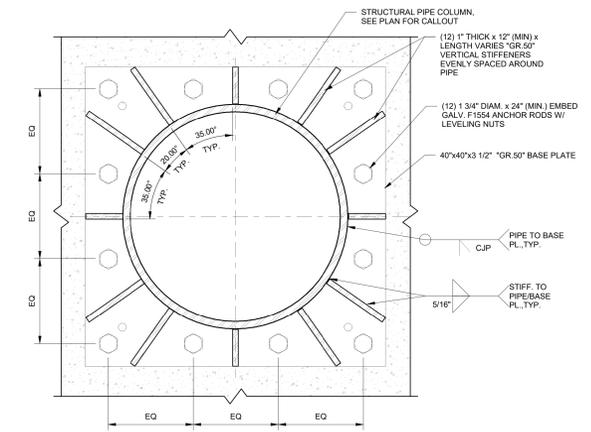
**1** SCOREBOARD FRMG. DETAIL

S1.3 1 1/2" = 1'-0"



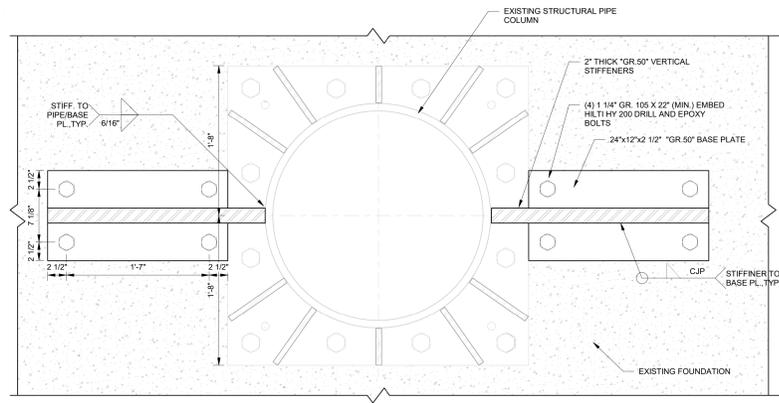
**2** SCOREBOARD FRMG. DETAIL

S1.3 1 1/2" = 1'-0"



**3** SCOREBOARD FRMG. DETAIL

S1.0 1 1/2" = 1'-0"



**4** SCOREBOARD FRMG. DETAIL

S1.0 1 1/2" = 1'-0"



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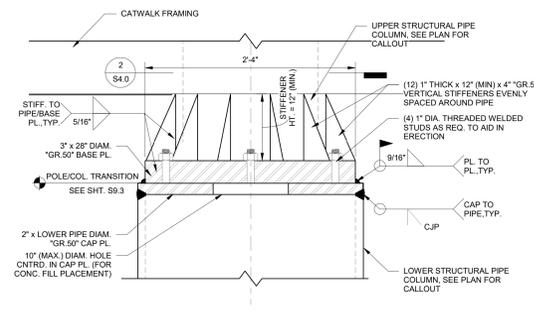
RE-BID DRAWINGS  
**STADIUM VIDEO BOARD UPGRADE**  
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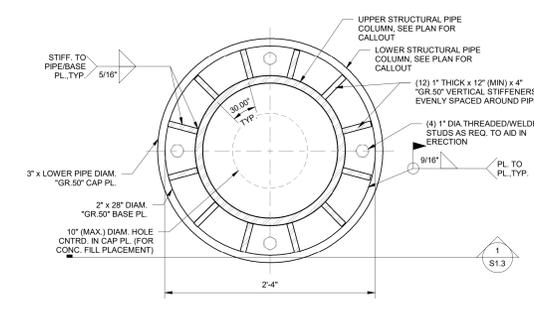
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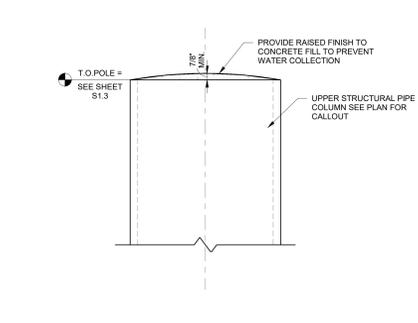
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**S3.0**  
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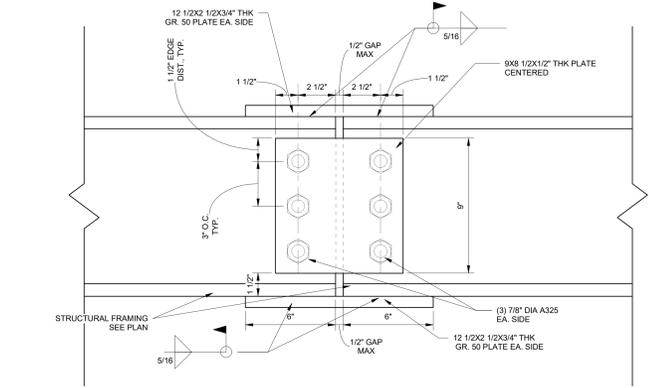
**1 SCOREBOARD FRMG. DETAIL**  
S1.3 1 1/2" = 1'-0"



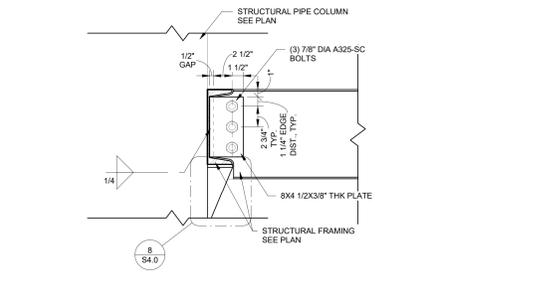
**2 SCOREBOARD FRMG. DETAIL**  
S4.0 1 1/2" = 1'-0"



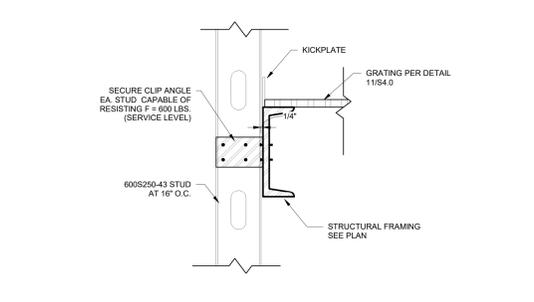
**3 SCOREBOARD FRMG. DETAIL**  
S1.3 1 1/2" = 1'-0"



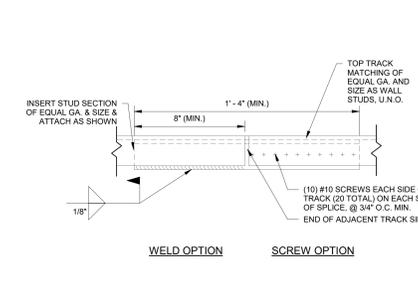
**4 SCOREBOARD FRMG. DETAIL**  
S1.1 3" = 1'-0"



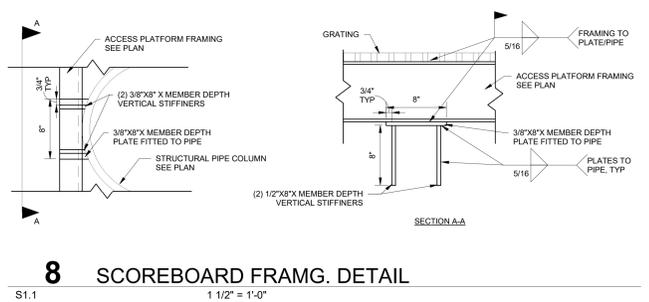
**5 SCOREBOARD FRMG. DETAIL**  
S1.1 1 1/2" = 1'-0"



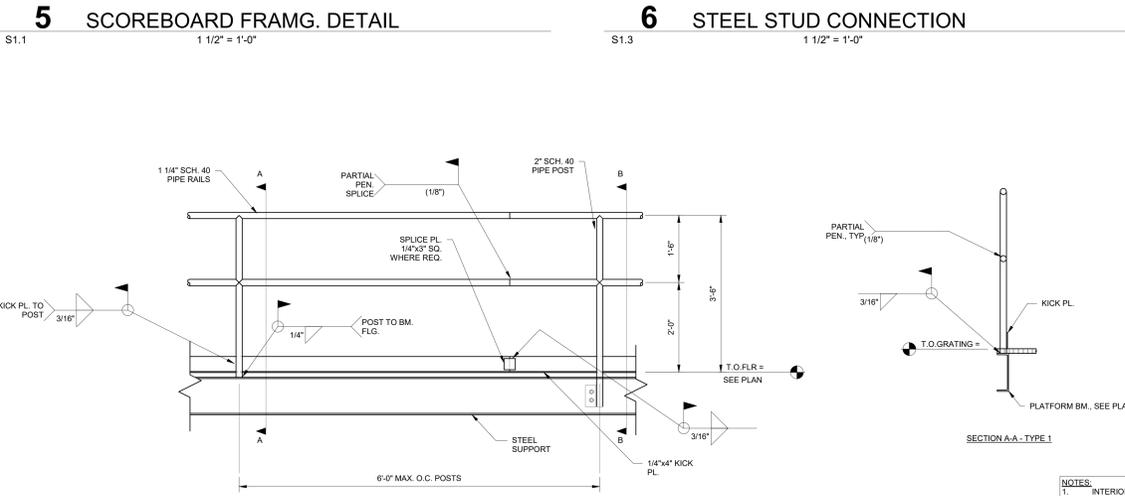
**6 STEEL STUD CONNECTION**  
S1.3 1 1/2" = 1'-0"



**7 STL. STUD WALL TOP TRACK SPLICE**  
S1.1 1" = 1'-0"

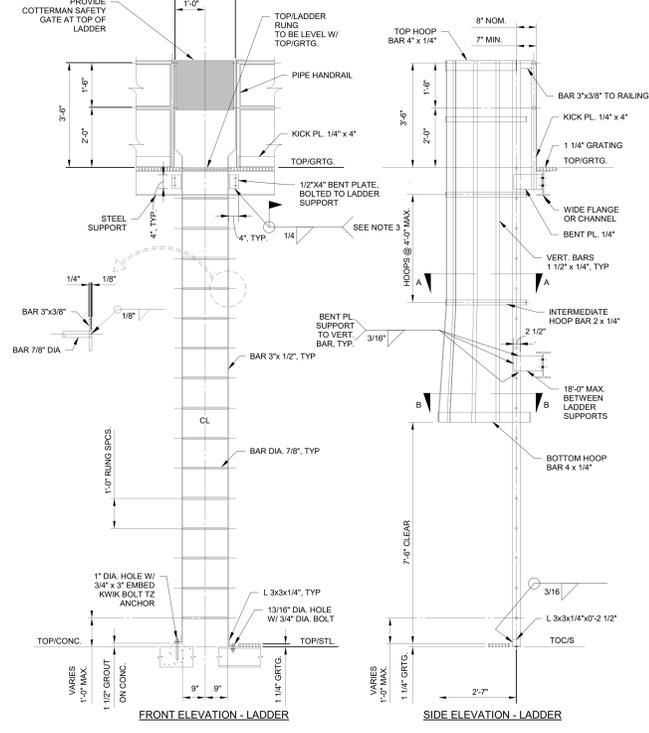
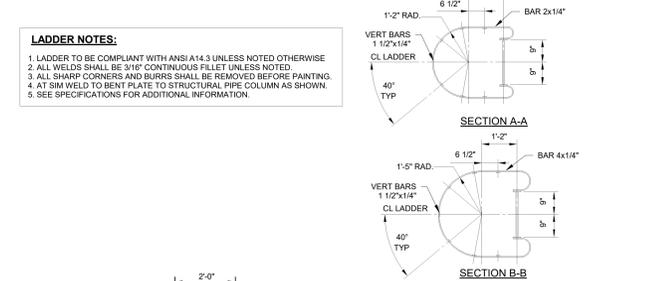


**8 SCOREBOARD FRMG. DETAIL**  
S1.1 1 1/2" = 1'-0"

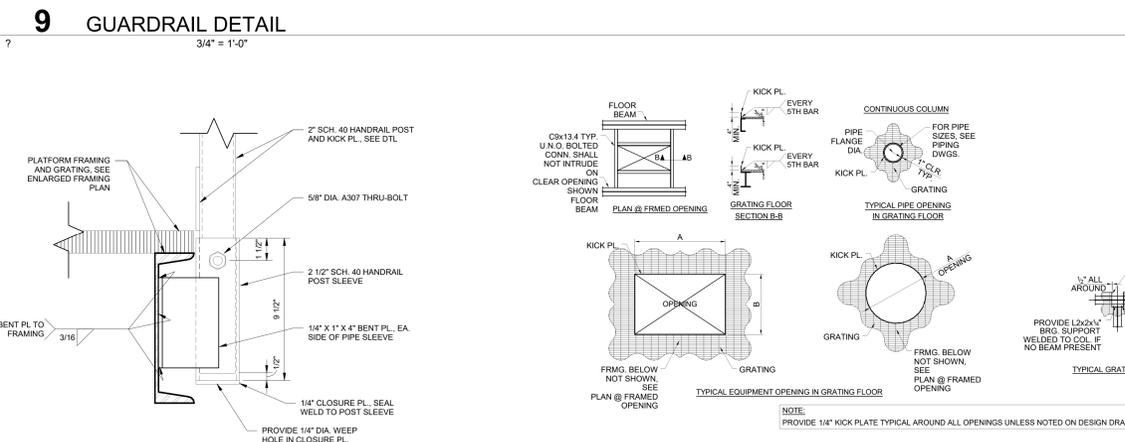


**STEEL HANDRAILS:**  
1. MATERIAL SPECIFICATIONS:  
STEEL PIPE = ASTM A53, GRADE B  
BOLTS = ASTM A307, U.N.O.  
WELDING ELECTRODES = E70XX SERIES  
2. PAINT HANDRAILS PER SYSTEM "P1" IN PAINTING SPECIFICATION, COLOR PER OWNER REQUIREMENTS.  
3. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**NOTES:**  
1. INTERIOR PLATFORMS TO BE TYPE 2, EXTERIOR PLATFORMS TO BE TYPE 1  
2. REMOVABLE GUARDRAIL TO BE FABRICATED IN SECTIONS LESS THAN 100 LBS



**12 LADDER**  
S1.1 1" = 1'-0"



**10 REMOVABLE GUARDRAIL CONNECTION**  
S1.1 3" = 1'-0"

**STEEL GRATING / CHECKERED PLATE FLOORING:**  
1. MATERIAL SPECIFICATIONS:  
GRATING FOR PLATFORMS AND SUMPS  
U.N.O = SERRATED  
CARBON STEEL 1 1/2" x 3 1/2" BEARING BARS @ 1 3/16" O.C. W/ CROSS BARS @ 4" O.C.  
STEEL PLATE PLATFORM WALKING SURFACES  
U.N.O = CHECKER PLATED  
ASTM A36 STEEL  
THICKNESS = AS INDICATED ON DRAWINGS  
2. CONNECT GRATING TO SUPPORTS WITH MANUFACTURER'S REMOVABLE "WING-NUT" FASTENERS CONNECTED TO WELDED / THREADED ANCHORS INSTALLED ON TOP OF FRAMING.  
3. CONNECT STEEL PLATE TO FRAMING BELOW WITH 1/4" MACHINE SCREWS @ 18" O.C. MAX. EA. PL. EDGE. COUNTERSUNK SCREWS INTO PLATE MATERIAL, AND SCREW INTO TAPPED HOLES PROVIDED IN FRAMING BELOW.  
4. GRATING AND PLATE SHALL BE PROVIDED IN REMOVABLE SECTIONS WEIGHING NOT MORE THAN 100 POUNDS. SPLICES AS REQUIRED OVER SUPPORTING MEMBERS, BRINGING SPLICED EDGES TOGETHER TO CREATE HARKLINE JOINTS.  
5. PAINT PER SYSTEM "P1" IN PAINTING SPECIFICATION, COLOR PER OWNER REQUIREMENTS.  
6. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

**11 TYPICAL GRATING DETAIL**  
S1.1 1/4" = 1'-0"

**RE-BID DRAWINGS**

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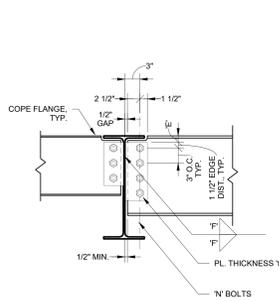
engineers - surveyors - planners - scientists

**Morrison Maierle**

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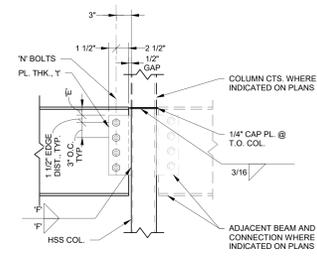
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**SHEET TITLE**  
**FRAMING DETAILS**

**SHEET**  
**S4.0**  
**DATE**  
**09-16-2023**



NOTES:  
1. FOR WELD 'F', NUMBER OF BOLTS 'N', VERT. PLATE OFFSET DIMENSION 'E', AND PLATE THICKNESS 'T', SEE THE TYPICAL SINGLE PLATE CONNECTION SCHEDULE.

**1** SCOREBOARD FRMG. DETAIL  
S1.1 1" = 1'-0"



NOTES:  
1. SIMILAR CONDITIONS APPLY FOR BMS. ON BOTH SIDES OF COL.  
2. FOR WELD SIZE 'F', NUMBER OF BOLTS 'N' & PL. THICKNESS 'T', SEE THE TYPICAL SINGLE PLATE CONNECTION SCHEDULE.  
3. 'K' IS THE FLANGE/WEB FILLET DIMENSION LISTED IN THE AISC MANUAL.

**2** SCOREBOARD FRMG. DETAIL  
? 1" = 1'-0"

BEAM CONNECTION SCHEDULE				
NOMINAL MEMBER DEPTH	SHEAR PL. THICKNESS (T)	FASTENERS A325-SC U.O.N. (N)	WELD SIZE (F)	VERT. PL. OFFSET (E)
8" THRU 10"	3/8"	(2) 7/8"Ø	1/4"	1 1/4"
12" THRU 14"	3/8"	(3) 7/8"Ø	1/4"	1 1/2"
16" THRU 18"	3/8"	(4) 7/8"Ø	1/4"	1 1/2"
21"	3/8"	(5) 7/8"Ø	1/4"	1 1/2"
24"	3/8"	(6) 7/8"Ø	1/4"	1 1/2"
27"	3/8"	(7) 7/8"Ø	1/4"	1 1/2"
30"	3/8"	(8) 7/8"Ø	1/4"	1 1/2"
33"	3/8"	(9) 7/8"Ø	1/4"	1 1/2"

NOTES:  
1. HORIZONTALLY SHORT-SLOTTED HOLES ARE PERMITTED IN THE SHEAR PLATE, AT THE CONTRACTOR'S OPTION, UNLESS OTHERWISE NOTED.  
2. BOLTS ARE TO BE INSTALLED PRE-TENSIONED, UNLESS OTHERWISE NOTED.  
3. SCHEDULE BASED ON NOMINAL DEPTH OF WIDE FLANGE BEAMS, CHANNELS, HOLLOW STRUCTURAL SECTIONS, & OTHER MISCELLANEOUS SHAPES.

**3** SCOREBOARD FRMG. DETAIL  
? NO SCALE



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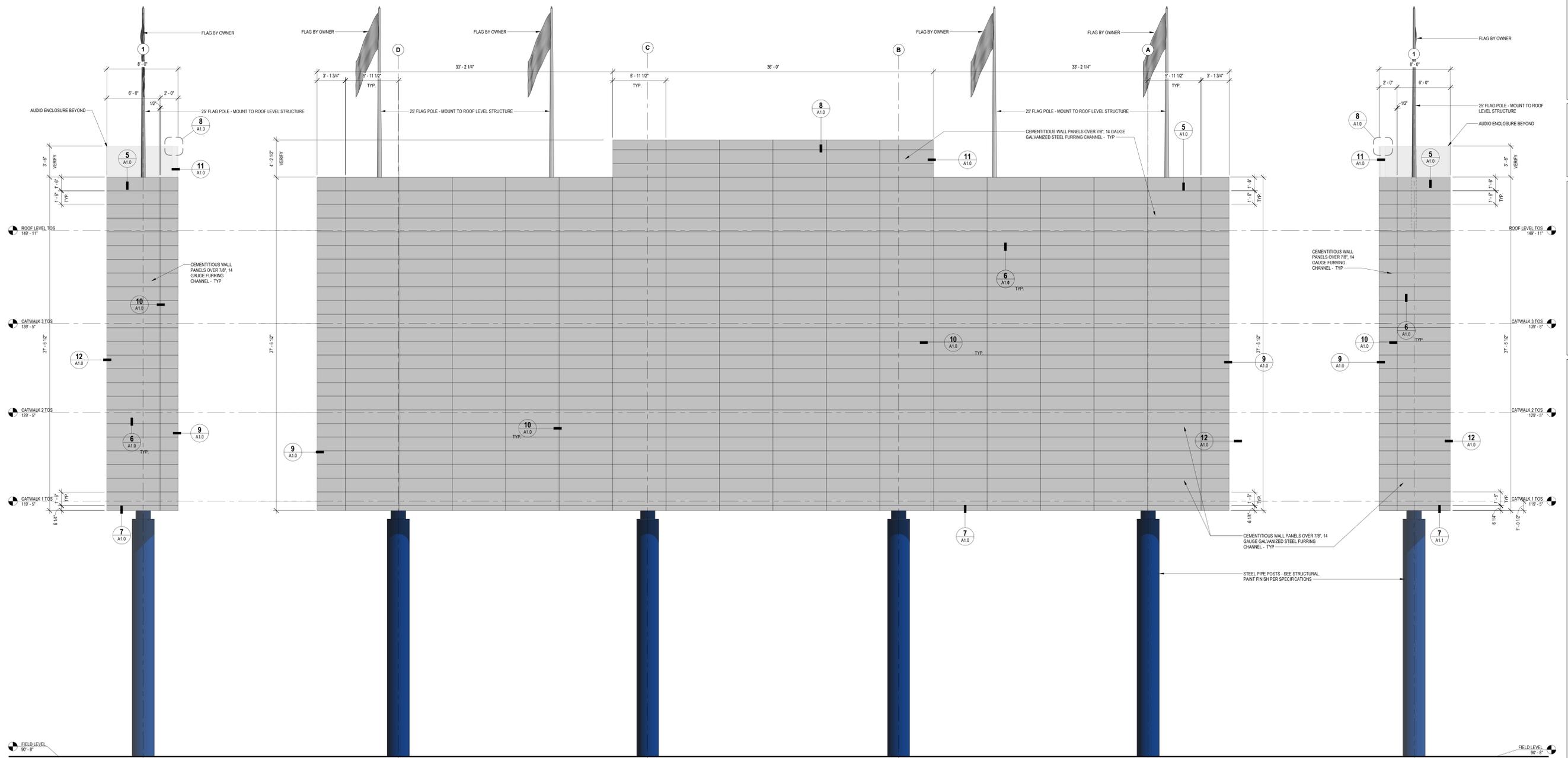
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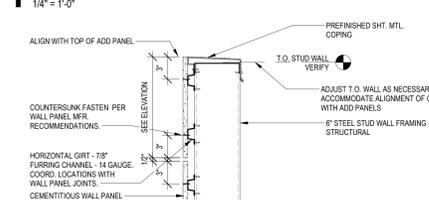
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FRAMING DETAILS

SHEET  
**S4.1**

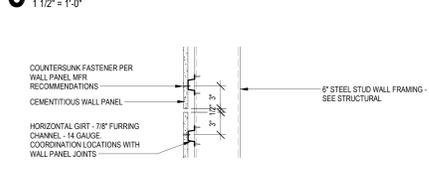
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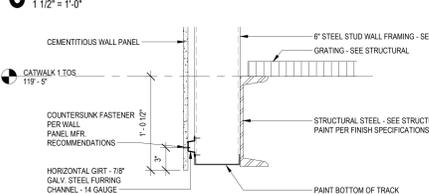
**1 EAST ELEVATION**  
1/4" = 1'-0"



**5 TOP OF WALL - TYP.**  
1 1/2" = 1'-0"



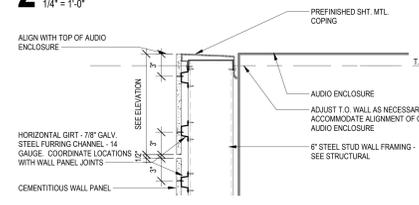
**6 TYPICAL HORIZONTAL PANEL JOINT**  
1 1/2" = 1'-0"



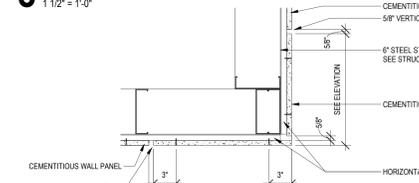
**7 BOTTOM OF WALL DETAIL**  
1 1/2" = 1'-0"



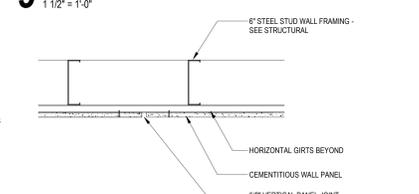
**2 NORTH ELEVATION**  
1/4" = 1'-0"



**8 TOP OF WALL DETAIL AT AUDIO ENCLOSURE**  
1 1/2" = 1'-0"



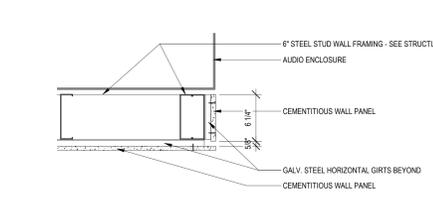
**9 WALL PANEL CORNER DETAIL**  
1 1/2" = 1'-0"



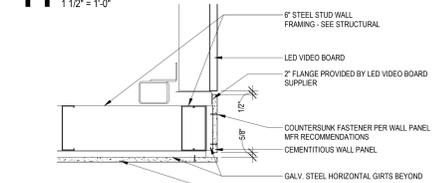
**10 TYPICAL VERTICAL PANEL JOINT**  
1 1/2" = 1'-0"



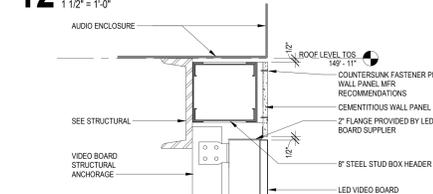
**11 CORNER AT AUDIO ENCLOSURE**  
1 1/2" = 1'-0"



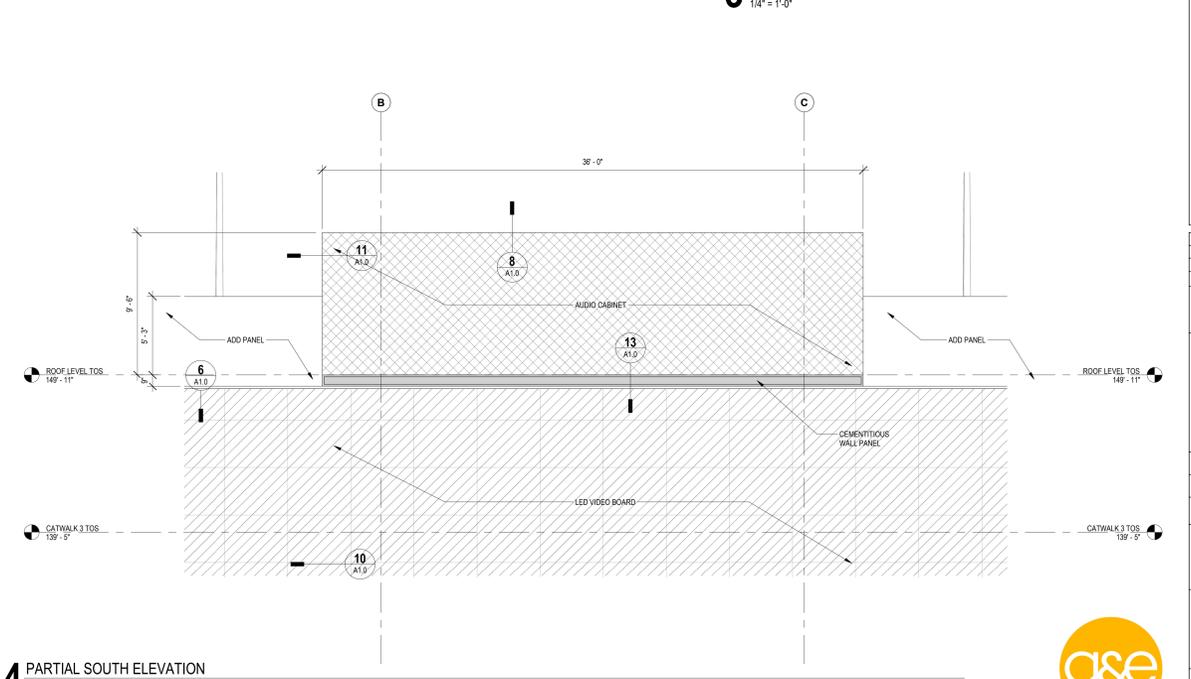
**12 VIDEO BOARD CORNER**  
1 1/2" = 1'-0"



**13 VIDEO BOARD/AUDIO ENCLOSURE INFILL**  
1 1/2" = 1'-0"

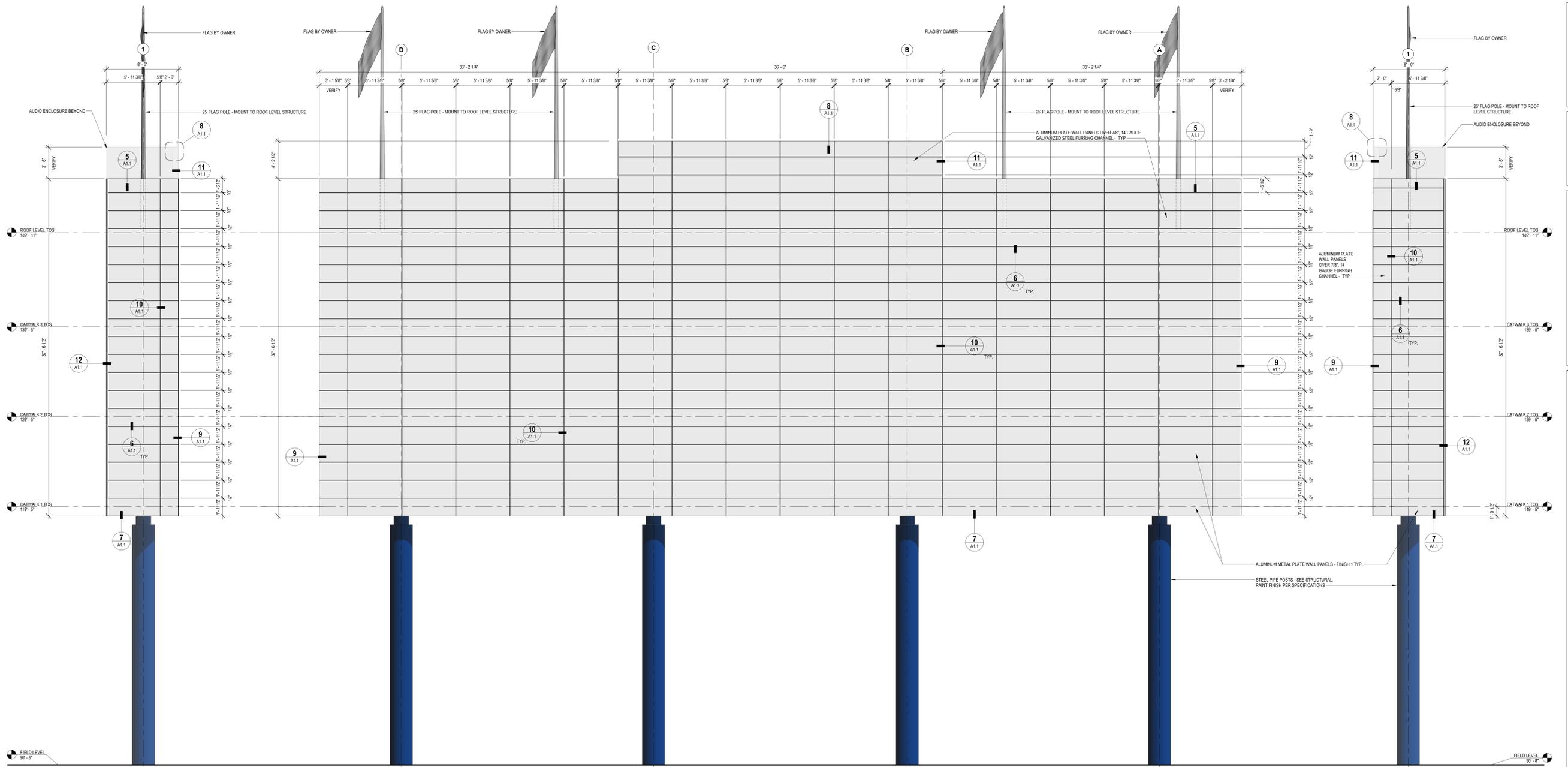


**3 WEST ELEVATION**  
1/4" = 1'-0"

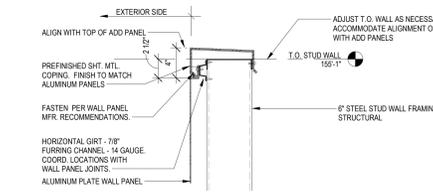


**4 PARTIAL SOUTH ELEVATION**  
1/4" = 1'-0"

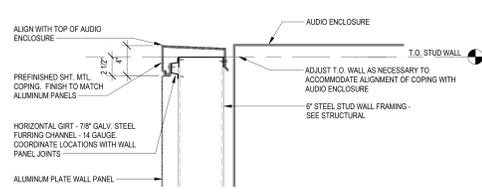




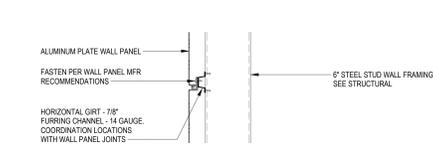
**1 EAST ELEVATION - ALT. 1**  
1/4" = 1'-0"



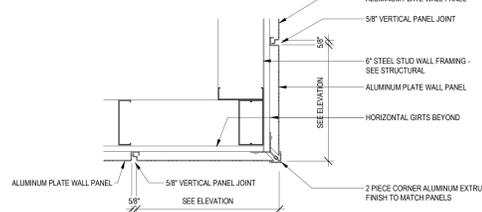
**2 NORTH ELEVATION - ALT. 1**  
1/4" = 1'-0"



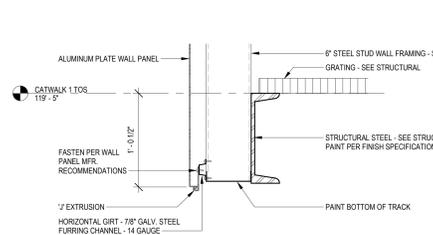
**5 TOP OF WALL - TYP. - ALT. 1**  
1 1/2" = 1'-0"



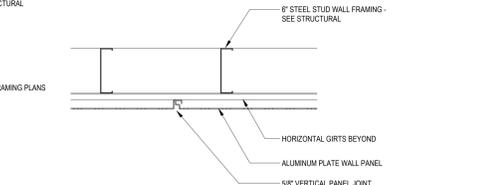
**8 TOP OF WALL DETAIL AT AUDIO ENCLOSURE - ALT. 1**  
1 1/2" = 1'-0"



**6 TYPICAL HORIZONTAL PANEL JOINT - ALT. 1**  
1 1/2" = 1'-0"



**9 PANEL CORNER DETAIL - ALT. 1**  
1 1/2" = 1'-0"



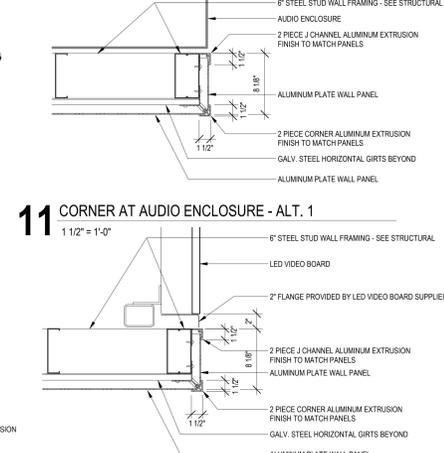
**7 BOTTOM OF WALL DETAIL - ALT. 1**  
1 1/2" = 1'-0"



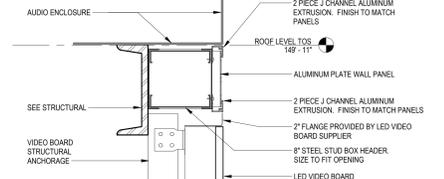
**10 TYPICAL VERTICAL PANEL JOINT - ALT. 1**  
1 1/2" = 1'-0"



**11 CORNER AT AUDIO ENCLOSURE - ALT. 1**  
1 1/2" = 1'-0"



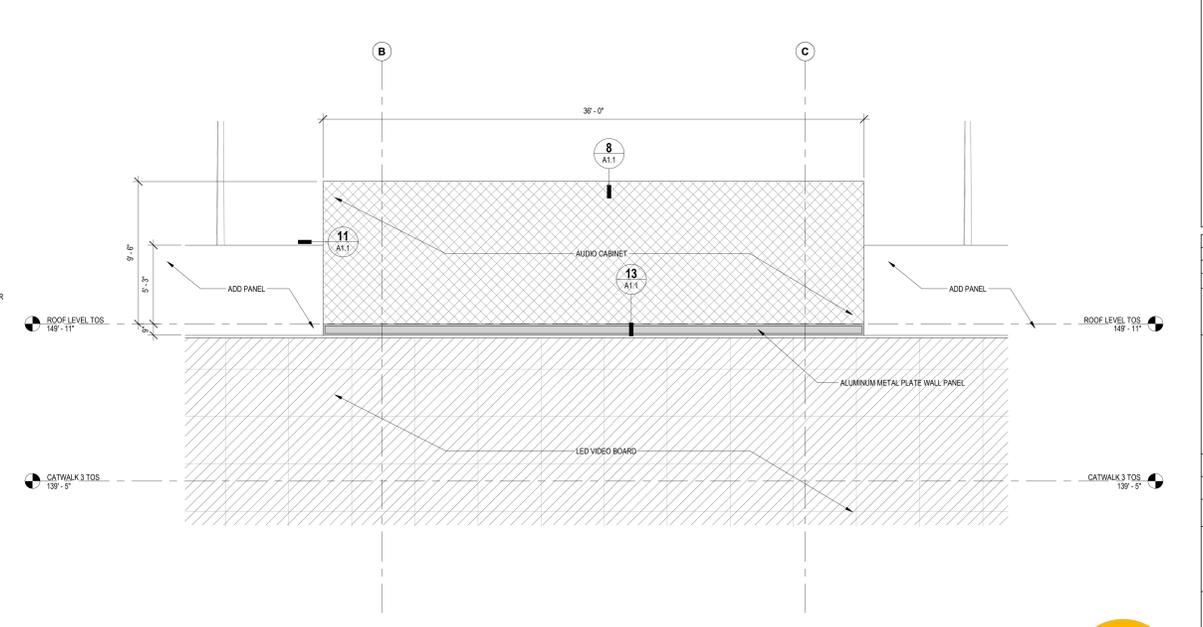
**12 VIDEO BOARD CORNER - ALT. 1**  
1 1/2" = 1'-0"



**13 VIDEO BOARD/AUDIO ENCLOSURE INFILL - ALT. 1**  
1 1/2" = 1'-0"



**4 PARTIAL SOUTH ELEVATION - ALT. 1**  
1/4" = 1'-0"



ELECTRICAL ABBREVIATIONS LEGEND		
A AMP	AMPERES	MAN MANUAL
AC	ALTERNATING CURRENT	MAX MAXIMUM
AIC	AIR CONDITIONING	MCA MINIMUM CIRCUIT AMPACITY
AF	AMP FUSE	MCC MOTOR CONTROL CENTER
AFB	ABOVE FINISHED FLOOR	MDP MAIN DISTRIBUTION PANEL
AFG	ABOVE FINISHED GRADE	MECH MECHANICAL
AHU	AIR HANDLING UNIT	MH METAL HALIDE
AL	ALUMINUM	MIN MINIMUM
AS	AMP SWITCH	MSS MOTOR STARTER SWITCH WITH THERMAL OVERLOADS
ATS	AUTOMATIC TRANSFER SWITCH	N NEUTRAL
BAS	BUILDING AUTOMATION SYSTEM	NC NORMALLY CLOSED
BKR	BREAKER	NEC NATIONAL ELECTRIC CODE
CB	RACEWAY CONDUIT	NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CCTV	CLOSED CIRCUIT TELEVISION	NFD NON-FUSED DISCONNECT
CKT	CIRCUIT	NC NOT IN CONTRACT
CLS	CEILING	NO NORMALLY OPEN
C.O.	RACEWAY CONDUIT ONLY, WITH PULL STRING	OE OR APPROVED EQUAL
CONTR	CONTROL	OC ON CENTER
CU	COPPER	OCPP OVERCURRENT PROTECTIVE DEVICE
D	EXISTING TO BE DEMOLISHED	OH OVERHEAD
DISC	DISCONNECT	P POLE
DIST	DISTRIBUTION	PB PUSHBUTTON
DROT	DOUBLE POLE DOUBLE THROW	PH PHASE
DWG	DRAWING	PNL PANEL
EA	EACH	PS POWER SUPPLY
EC	ELECTRICAL CONTRACTOR	PVC POLYVINYL CHLORIDE CONDUIT
EF	EXHAUST FAN	PWR POWER
ELEC	ELECTRIC	R EXISTING TO REMAIN
EMT	ELECTRICAL METALLIC TUBING	RCPT RECEPTACLE
EQUIP	EQUIPMENT	RCPT RECEPTACLE
EX, EXIST	EXISTING	RCS RIGID GALVANIZED STEEL
FA	FIRE ALARM	RM ROOM
FAA	FIRE ALARM ANNUNCIATOR	RVR REDUCED VOLTAGE NON-REVERSING
FACP	FIRE ALARM CONTROL PANEL	RVNR REDUCED VOLTAGE NON-REVERSING
FD	FUSED DISCONNECT	SPF SINGLE POLE TOGGLE SWITCH
FLR	FLOOR	SPD SURGE PROTECTIVE DEVICE (TVSS)
FO	FIBER OPTIC	SPST SINGLE POLE SINGLE THROW
FSD	FIRE SMOKE DAMPER RELAY, CONTROLLED BY ASSOCIATED SMOKE DETECTOR AND CIRCUITED BACK TO FACP	SSPB START-STOP PUSHBUTTON
FVNR	FULL VOLTAGE NON-REVERSING	SW SWITCH
FVR	FULL VOLTAGE REVERSING	SWBD SWITCHBOARD
GE	GROUND ELECTRODE CONDUCTOR	SWGR SWITCHGEAR
GFCI	GROUND FAULT INTERRUPTER	TB TELEPHONE BOARD
GFI	GROUND FAULT CIRCUIT INTERRUPTER	TC TIME CLOCK
GFP	GROUND FAULT PROTECTION	TD TIME DELAY
GND	GROUND	TEL TELEPHONE
GRC	GALVANIZED RIGID CONDUIT	TSP TWISTED SHIELDED PAIR
HD	HAND DRYER	TTB TELEPHONE TERMINAL BOARD
HP	HORSEPOWER	TYP TYPICAL
HPS	HIGH PRESSURE SODIUM	UG UNDERGROUND
HTR	HEATER	UH UNIT HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING	UNO UNLESS NOTED OTHERWISE
HZ	HERTZ	V VOLT
JBOX	JUNCTION BOX	VA VOLTS-AMPERES
KVA	KILOVOLT-AMPERES	VFD VARIABLE FREQUENCY DRIVE
KW	KILOWATTS	W WATTS
LCP	LIGHTING CONTROL PANEL	WP WEATHERPROOF
LPW	LUMENS PER WATT	W/O WITHOUT
LTO	LIGHTING	WTR TRANSFORMER
LV	LOW VOLTAGE	Y WYE-CONNECTED
MAG	MAGNETIC STARTER	Δ DELTA-CONNECTED
		ø PHASE

ELECTRICAL PLAN LEGEND	
	CT AND CUSTOMER POWER METER
	MOTOR
	UTILITY ELECTRIC METER AND BASE (BASE BY CUSTOMER)
	SURGE PROTECTION DEVICE
	LIGHTNING ARRESTER, TYPE 1 SPD, MOUNTED ON EXTERIOR OF MAIN SWITCHGEAR (SQUARE D NO. SDSA3650, OAE)
	EQUIPMENT TOGGLE DISCONNECT SWITCH *X INDICATES TYPE: F - FUSIBLE M - MOTOR STARTER SWITCH W/ THERMAL OVERLOADS
	CONTACTOR NORMALLY OPEN, NORMALLY CLOSED
	TRANSFORMER, 3-PH, 3-WIRE DELTA CONNECTION
	TRANSFORMER, 3-PH, 4-WIRE GROUNDED WYE CONNECTION
	PANEL AND CIRCUIT DESIGNATION ARE SHOWN NEXT TO EACH DEVICE (PANEL NAME - CIRCUIT NUMBER). BRANCH CIRCUIT WIRE SIZE IS #12, UNO, A SINGLE INSULATED GREEN GROUND CONDUCTOR SHALL BE PROVIDED WITH EACH HOME RUN. PROVIDE A SEPARATE NEUTRAL FOR EACH CIRCUIT. HOME RUNS SHALL HAVE NO MORE THAN THREE CIRCUITS. LINE VOLTAGE AND LOW VOLTAGE WIRING IS NOT SHOWN ON PLANS. FOR EQUIPMENT CIRCUITING, SEE MEP COORDINATION SCHEDULE.
	GFI - GROUND FAULT INTERRUPTER
	WP - WEATHERPROOF WHILE-IN-USE COVER
	U - PROVIDE WITH (2) USB PORTS
	SIMPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18" UNO)
	DUPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18" UNO)
	QUADRUPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18" UNO)
	ABOVE COUNTER RECEPTACLE - MOUNT AT +4" ABOVE BACKSPLASH
	FLOOR BOX WITH QUADRUPLEX RECEPTACLE - WITH TELEDATA PORTS, WITHOUT TELEDATA
	AUTOMATIC TRANSFER SWITCH
	VARIABLE FREQUENCY DRIVE
	FIXED MOUNT LV BREAKER
	FUSED SWITCH ("XXAS/XXAF" - SW AND FUSE AMP RATING)
	GENERATOR
	WALL MOUNTED BREAKER
	THERMAL OVERLOAD ELEMENT
	DISCONNECT SWITCH ("XXAS" = SWITCH AMP RATING)
	FUSED DISCONNECT SWITCH ("XXAS/XXAF" = SW AND FUSE AMP RATING)
	COMBINATION MOTOR STARTER (STR SIZE, TYP, AS, AF, SEE MEP COORDINATION SCHEDULE)
	SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED
	PANELBOARD
	SPECIAL PURPOSE RECEPTACLE (MOUNT AT +18" UNO) *X INDICATES TYPE: A - NEMA 5-20R, #12 CU; B - NEMA 5-30R, #10 CU; C - NEMA 5-50R, #8 CU; D - NEMA 6-20R, #12 CU; E - NEMA 6-30R, #10 CU; F - NEMA 6-50R, #8 CU; G - NEMA 14-30R, #12 CU; H - NEMA 14-30R, #10 CU; I - NEMA 14-50R, #8 CU
	PUSHBUTTON (MOUNT AT +46" UNO) *X INDICATES TYPE: EPO - EMERGENCY POWER OFF ADA - HANDICAPPED ACCESSIBLE DOOR (DEVICE BY OTHERS) ODO - OVERHEAD DOOR OPERATOR (DEVICE BY OTHERS)
	FLATSREEN TV BOX, 2-GANG, FLUSH IN WALL, HUBBELL NS402M, WITH NS402V COVER, 120V DUPLEX RECEPTACLE & RG-6 DATA PORT, MOUNT AT +12" UNO.
	JUNCTION BOX
	DROP-DOWN RECEPTACLE
	SURFACE MOUNTED RACEWAY
	RACEWAY CONCEALED IN WALL, FLOOR, OR CEILING IN FINISHED SPACES, EXPOSED IN UNFINISHED SPACES
	RACEWAY BELOW FLOOR OR BELOW GRADE
	RACEWAY STUB-OUT WITH CAPPED END
	RACEWAY STUB-OUT WITH BRUSHED END
	GROUNDING BUS

ELECTRICAL PROJECT GENERAL NOTES	
A.	PRIOR TO BID CONTRACTOR SHALL VISIT THE SITE. NOT ALL WORK REQUIRED TO COMPLETE THE PROJECT IS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH ALL THE WORK REQUIRED TO COMPLETE THE PROJECT IN ADDITION TO THE LOCAL CONDITIONS AND INCLUDE S&D WORK IN THE BID.
B.	GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1, "STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING." THIS PUBLICATION IS AVAILABLE FROM NECA BY TELEPHONE AT 301-657-3110 OR ON-LINE AT WWW.NECANET.ORG.
C.	FIRE-RESISTANCE: PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 24" BETWEEN OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE-RESISTANCE RATED WALLS. WHERE THIS IS NOT POSSIBLE, INSTALL UL LISTED PUTTY PADS ON ALL OUTLET BOXES NOT MEETING THE 24" SEPARATION. PROVIDE A UL LISTED THROUGH-PENETRATION FIRESTOP FOR PENETRATIONS OF FIRE-RESISTANCE RATED ASSEMBLIES.
D.	CONDUCTORS ARE SIZED PER THE 75 DEGREE C RATING COLUMN OF NEC TABLE 310.16. IF THE TERMINAL USED FOR A TERMINATION OF A PARTICULAR CONDUCTOR IS NOT MARKED, OR THE TERMINAL IS MARKED FOR 60 DEGREE C CONDUCTORS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EITHER ADJUST THE AMPACITY OF THE CONDUCTOR TO MATCH THE 60 DEGREE COLUMN OF TABLE 310.16, OR REPLACE THE TERMINAL WITH ONE RATED FOR AT LEAST 75 DEGREES C.
E.	BASED ON ACTUAL HOMERUN LENGTHS REQUIRED IN THE FIELD, THE CONTRACTOR SHALL CALCULATE AND INCREASE THE WIRE SIZES AS REQUIRED TO LIMIT BRANCH CIRCUIT VOLTAGE DROP TO 3%. FOR 20A BRANCH CIRCUITS THE MINIMUM CONDUCTOR SIZES SHALL BE AS FOLLOWS: #10 AWG CU FOR RUNS BETWEEN 100 AND 200 LINEAR FEET, #8 AWG CU FOR RUNS BETWEEN 200 AND 325 LINEAR FEET, AND AS CALCULATED BY THE CONTRACTOR FOR CIRCUITS EXTENDING BEYOND 325 LINEAR FEET. IN ALL CASES WHERE WIRE SIZES INCREASE, THE CONTRACTOR SHALL PROVIDE LARGER CONDUITS AS REQUIRED.
F.	PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V BRANCH CIRCUIT.

ELECTRICAL PROJECT DEMO NOTES	
A.	DURING DEMOLITION, THE CONTRACTOR SHALL NOTE ALL EXISTING RACEWAY (BOTH SURFACE AND CONCEALED) TO THE EXTENT POSSIBLE. THESE RACEWAYS SHALL BE REUSED TO THE GREATEST EXTENT POSSIBLE TO INSURE A CLEAN FINISHED PRODUCT. WHERE PRACTICAL, AND ALLOWED PER CODE, FISHING THROUGH WALLS WITH MC CABLE IS PREFERRED TO SURFACE MOUNTED CONDUIT.
B.	CONTRACTOR SHALL REMOVE, TRANSPORT AND LEGALLY DISPOSE OF LAMPS AND BALLASTS OFF-SITE. IT IS ASSUMED THAT THE BALLASTS DO NOT CONTAIN PCBs. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF IT IS SUSPECTED THAT BALLASTS CONTAIN PCBs.
C.	ALL POWER INTERRUPTIONS SHALL BE COORDINATED WITH OWNER. ANY DISRUPTION OF WORKERS IN THE SPACE SHALL BE KEPT TO A MINIMUM AND BE COORDINATED WITH THE OWNER PRIOR TO WORK COMMENCING IN THAT SPACE.
D.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY EXISTING CONDUIT OR FEEDER CIRCUITS THAT ARE INTENDED TO REMAIN THAT ARE SAW-CUT, OR OTHERWISE DAMAGED, AS PART OF THE DEMOLITION PROCESS. PROVISION FOR THIS WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL NECESSARY CONDUIT AND CONDUCTORS, MOUNTING ACCESSORIES AND LABOR, TO RESTORE THE SYSTEM TO ITS INTENDED FUNCTION.
E.	ELECTRICAL DRAWINGS SHOWING EXISTING BUILDING CONDITIONS, SUCH AS DEMOLITION DRAWINGS, EXISTING PANEL SCHEDULES, ETC ARE BASED ON RECORD DRAWINGS AND SITE VISITS. IF ACTUAL EXISTING CONDITIONS DIFFER FROM THOSE SHOWN ON DRAWINGS, PLEASE NOTIFY ENGINEER.
F.	OWNER SHALL HAVE FIRST RIGHTS AT ANY DEMOLISHED ITEMS THEY CHOOSE TO RETAIN FOR THEIR USE OR SPARE STOCK. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL REMAINING DEMO ITEMS NOT DESIRED BY OWNER.

ABBREVIATIONS AND SYMBOLS GENERAL NOTES	
A.	THE ABBREVIATIONS ON THIS SHEET COMPRISE A STANDARD LIST. NOT ALL ABBREVIATIONS APPEAR ON THIS PROJECT.
B.	THE SYMBOLS ON THIS SHEET COMPRISE A STANDARD LIST. NOT ALL SYMBOLS APPEAR ON THIS PROJECT.
C.	ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE. MOUNTING HEIGHTS INDICATED ON ARCHITECTURAL WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED.



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RE - BID DOCUMENTS

**STADIUM VIDEOBOARD UPGRADE**

MONTANA STATE UNIVERSITY



engineers • surveyors • planners • scientists

DRAWN BY:	MB	
REVIEWED BY:	RM	
REV.	DESCRIPTION	DATE



PPA#22-0611

MMI#0747.080

SHEET TITLE  
ELECTRICAL NOTES  
AND LEGENDS

SHEET

**E001**

DATE

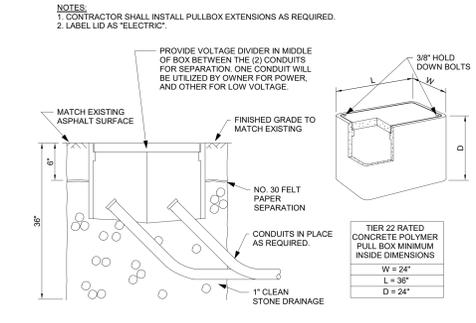
09.16.2023

- KEY NOTES:**
1. PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANEL MDP FOR NEW SCOREBOARD FEEDER. PROVIDE GE SGMH SERIES BREAKER, TO MATCH EXISTING SIZE BREAKER AS 40A FRAME, 300A TRIP.
  2. GROUND PER TRANSFORMER GROUNDING DETAIL ON THIS SHEET.
  3. COORDINATE SHUTDOWN OF NOTED PANEL AS REQUIRED FOR NEW WORK. COORDINATE WITH OWNER WELL IN ADVANCE AND SCHEDULE FOR NIGHT-TIME HOURS TO MINIMIZE DISTRIBUTION OF OUTAGE.
  4. EXISTING SCOREBOARD TO BE DEMOLISHED BY DAKTRONICS. ELECTRICAL CONTRACTOR SHALL DEMOLISH EXISTING POWER CONNECTION BETWEEN SCOREBOARD AND ASSOCIATED DISCONNECT, INCLUDING CONDUCTORS AND CONDUIT. EXISTING FUSED DISCONNECT SWITCH SHALL REMAIN IN PLACE, INCLUDING FEEDER BACK TO PANEL LDP. OWNER TO UTILIZE THIS EXISTING DISCONNECT AND FEEDER FOR SPECIAL EVENT POWER.
  5. SEE PANEL SCHEDULES BELOW FOR DETAILS.
  6. PROVIDE NEW 208V-20A RECEPTACLE AND CIRCUIT FOR NEW AUDIO RACK. DEMOLISH EXISTING 208V-30A RECEPTACLE AND CIRCUIT SERVING OLD AUDIO RACK.
  7. EXISTING 208V-30A RECEPTACLE AND CIRCUIT SERVING OLD AUDIO RACK TO REMAIN AND BE REUSED FOR NEW AUDIO RACK.
  8. PROVIDE NEW 120V-20A RECEPTACLE AND CIRCUIT FOR NEW AUDIO RACK.
  9. REMOVE EXISTING SPARE CIRCUIT BREAKERS AND/OR REARRANGE EXISTING IN-USE CIRCUIT BREAKERS AS REQUIRED FOR MOUNTING OF NEW 30A CIRCUIT BREAKER. ENSURE ALL EXISTING BREAKERS IN-USE REMAIN FULLY OPERATIONAL AND PROVIDE BLANK FILLERS OVER ANY BLANK EMPTY SPACES RESULTING IN PANEL DUE TO REARRANGING OF BREAKERS.
  10. UTILIZE (2) EXISTING SPARE 20A-1P CIRCUIT BREAKERS WITHIN PANEL FOR NEW CIRCUITS.
  11. PROVIDE NEW 120V-20A RECEPTACLE AND CIRCUIT FOR NEW SCOREBOARD CONTROL RACK.
  12. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDER TO PANELBOARD AS SHOWN. PANELBOARD FURNISHED AND INSTALLED BY DAKTRONICS.

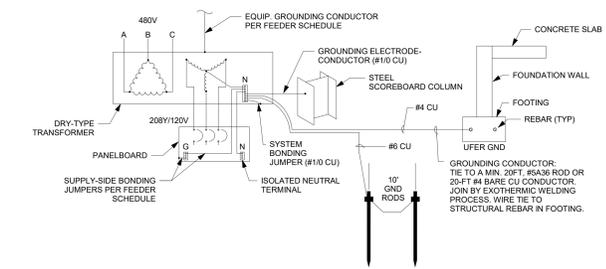
**NOTE:**  
EXISTING ELECTRICAL IS SHOWN IN GRAY.  
NEW ELECTRICAL SCOPE IS SHOWN IN BLACK.  
DEMOLITION SCOPE IS SHOWN AS DASHED.

**COPPER FEEDER SCHEDULE**

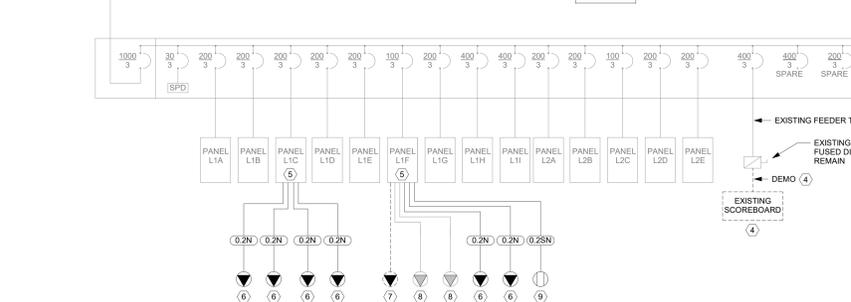
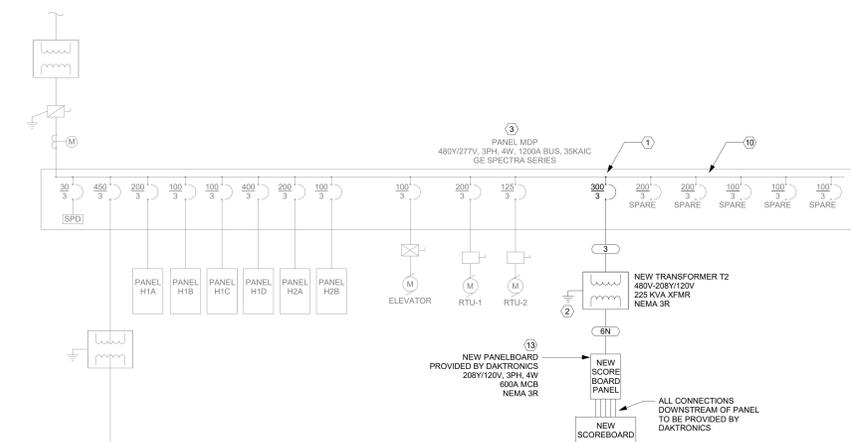
FEEDER NUMBER	AMPS	WIRE QTY PER CONDUIT	SETS IN PARALLEL	75 DEG COPPER			
				CONDUIT	PHASE QTY AND AVG	NEUTRAL AND AVG	GROUND AVG
0.25N	20	2W	1	3/4"	1#12	1#12	1#12
0.2N	20	3W	1	3/4"	2#12	1#12	1#12
3	300	3W	1	3"	3#350	-	1#4
6N	600	4W	2	3"	3#350	1#350	1#1



**3 ELECTRICAL HANDHOLE DETAIL**  
N.T.S.



**2 TRANSFORMER GROUNDING RISER DIAGRAM**  
N.T.S.



**1 PARTIAL ELECTRICAL ONE LINE DIAGRAM**  
N.T.S.

**Branch Panel: L1C**  
Location: ICE 1088  
Supply From: LDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/208 Wye  
Phases: 3  
Wires: 4

A.I.C. Rating: 10 KAIC  
Main Type: M.L.O.  
Main Rating: 200 A

Notes:  
EXISTING PANEL (GE AQ SERIES PANELBOARD).

CKT	Circuit Description	Load Classification	Tripp	Poles	A	B	C	Poles	Tripp	Load Classification	Circuit Description	CKT	
1	EXISTING LOAD	Receptacle	20 A	2	1664 VA	44 VA		1	15 A	HVAC	EXISTING LOAD	2	
3	EXISTING LOAD	Receptacle	20 A	2	1664 VA	400 VA		1	15 A	HVAC	EXISTING LOAD	4	
5	EXISTING LOAD	Receptacle	20 A	1		720 VA	1500 VA		1	20 A	Power	6	
7	EXISTING LOAD	Receptacle	20 A	1			540 VA	1000 VA	1	20 A	Power	8	
9	EXISTING LOAD	Receptacle	20 A	1		720 VA	1000 VA		1	20 A	Power	10	
11	EXISTING LOAD	Receptacle	20 A	1			360 VA	360 VA	1	20 A	Receptacle	12	
13	EXISTING LOAD	Receptacle	20 A	1				1080 VA	360 VA	1	20 A	Receptacle	14
15	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Receptacle	16	
17	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Receptacle	18	
19	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Receptacle	20	
21	EXISTING LOAD	Receptacle	20 A	1					2	50 A	Power	22	
23	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Receptacle	24	
25	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	26	
27	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Receptacle	28	
29	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	30	
31	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	32	
33	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	34	
35	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	36	
37	EXISTING LOAD	Receptacle	20 A	1					1	20 A	Power	38	
39	EXISTING LOAD	Receptacle	20 A	1					2	20 A	Power	40	
41	EXISTING SPARE	Receptacle	20 A	1					1	20 A	Power	42	
43	EXISTING SPARE	Receptacle	20 A	1					2	20 A	Power	44	
45	EXISTING SPARE	Receptacle	20 A	1					2	20 A	Power	46	
47	EXISTING SPARE	Receptacle	20 A	1					1	20 A	Power	48	
49	EXISTING SPARE	Receptacle	20 A	1					2	20 A	Power	50	
51	EXISTING SPARE	Receptacle	20 A	1					2	20 A	Power	52	
53	EXISTING SPARE	Receptacle	20 A	1					1	20 A	Power	54	
					<b>Total Load:</b>	12292 VA	16872 VA	14534 VA					
					<b>Total Amps:</b>	102 A	143 A	124 A					

Legend:  
\*1- PROVIDE NEW 20A-2P BREAKER FOR NEW 208V-20A AUDIO RACK CIRCUIT. MATCH EXISTING BREAKER MANUFACTURER/MODEL WITHIN PANEL AS REQUIRED FOR COMPATIBILITY.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	1052 VA	100.00%	1052 VA	
Power	15930 VA	100.00%	15930 VA	<b>Total Conn. Load:</b> 43688 VA
Receptacle	26716 VA	68.72%	18358 VA	<b>Total Est. Demand:</b> 35340 VA
				<b>Total Conn.:</b> 121 A
				<b>Total Est. Demand:</b> 98 A

Notes:

**Branch Panel: L1F**  
Location: I.T. 1141R  
Supply From: LDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/208 Wye  
Phases: 3  
Wires: 4

A.I.C. Rating: 10 KAIC  
Main Type: M.L.O.  
Main Rating: 100 A

Notes:  
EXISTING PANEL (GE AQ SERIES PANELBOARD).

CKT	Circuit Description	Load Classification	Tripp	Poles	A	B	C	Poles	Tripp	Load Classification	Circuit Description	CKT	
1	<1>- AUDIO RACK (NEW)	Power	20 A	2	1440 VA	1440 VA		2	20 A	Power	<3>- AUDIO RACK (NEW)	2	
3	EXISTING LOAD	Receptacle	20 A	1		1440 VA	1440 VA		1	20 A	Receptacle	4	
5	EXISTING LOAD	Receptacle	20 A	1		360 VA	180 VA		1	20 A	Receptacle	6	
7	EXISTING LOAD	Receptacle	20 A	1		360 VA	2400 VA		1	30 A	Receptacle	8	
9	EXISTING LOAD	Receptacle	20 A	1			0 VA		1	20 A	Receptacle	10	
11	<2>- AUDIO RACK (NEW)	Power	20 A	1		1440 VA	2400 VA		1	30 A	Receptacle	12	
13	EXISTING SPARE	Receptacle	20 A	1		0 VA	2400 VA		1	30 A	Receptacle	14	
15	EXISTING SPARE	Receptacle	20 A	1			0 VA	2400 VA	1	30 A	Receptacle	16	
17	EXISTING SPARE	Receptacle	20 A	1			0 VA	2080 VA	2	30 A	Power	18	
19	EXISTING SPARE	Receptacle	20 A	1			0 VA	2080 VA	2	30 A	Power	20	
21	EXISTING SPARE	Receptacle	20 A	1				2080 VA	2	30 A	Power	22	
23	SPACE	Receptacle	20 A	1					2	30 A	Power	24	
25	SPACE	Receptacle	20 A	1					2	30 A	Power	26	
27	SPACE	Receptacle	20 A	1					2	30 A	Power	28	
29	SPACE	Receptacle	20 A	1					1	20 A	Power	30	
					<b>Total Load:</b>	10120 VA	7720 VA	8540 VA					
					<b>Total Amps:</b>	65 A	64 A	72 A					

Legend:  
\*1- EXISTING 208V-30A CIRCUIT TO BE REUSED FOR NEW AUDIO RACK. NO WORK REQUIRED. SHOWN FOR REFERENCE ONLY.  
\*2- USE EXISTING SPARE 20A-1P BREAKER FOR NEW 208V-20A AUDIO RACK CIRCUIT.  
\*3- USE EXISTING SPARE 20A-2P BREAKER FOR NEW 208V-20A AUDIO RACK CIRCUIT.  
\*4- DEMOLISH EXISTING 308V-30A CIRCUIT AND ASSOCIATED RECEPTACLE. RESULTING BREAKER BECOMES A SPARE.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	15520 VA	100.00%	15520 VA	<b>Total Conn. Load:</b> 26380 VA
Receptacle	10860 VA	96.04%	10430 VA	<b>Total Est. Demand:</b> 25950 VA
				<b>Total Conn.:</b> 73 A
				<b>Total Est. Demand:</b> 72 A

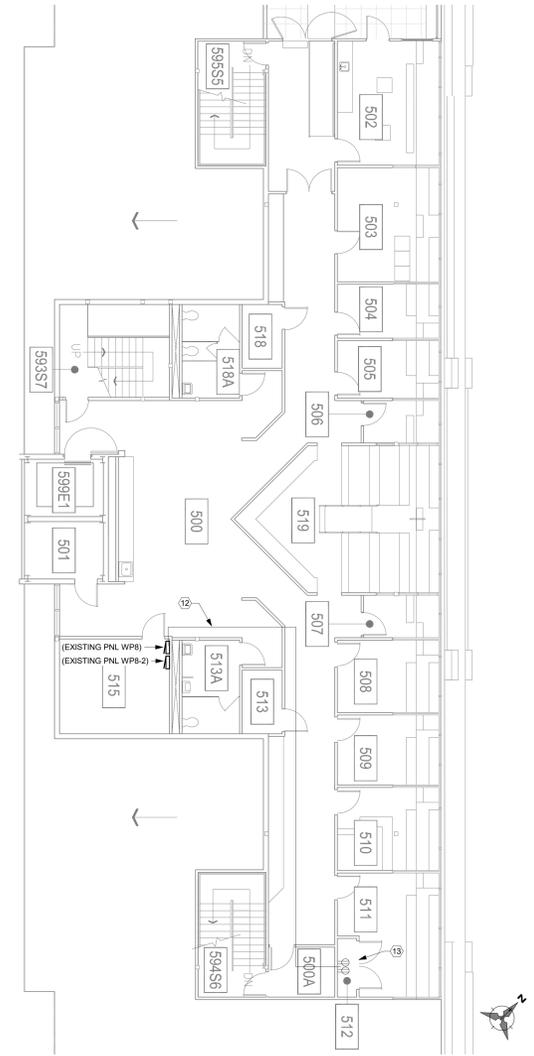
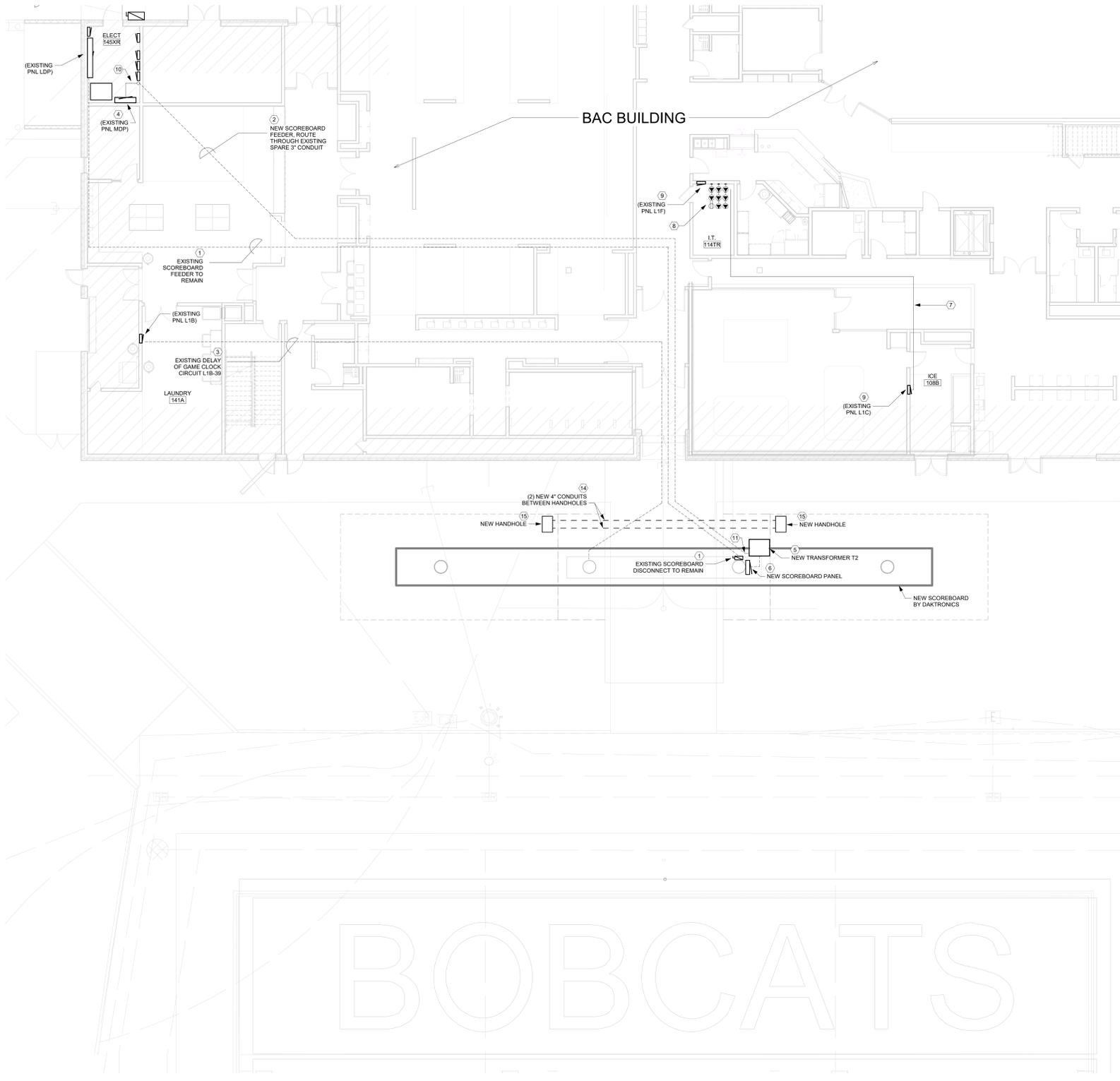
Notes:

**GENERAL ELECTRICAL NOTES**

- A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF CONDUITS, BOXES, STRUCTURE, AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
- B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, ROOFS, ASPHALT, AND CONCRETE TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING/REPAIR TO THE SATISFACTION OF THE OWNER/ENGINEER AND PROJECT MANAGER. PATCH/REPAIR ALL CUTS AS REQUIRED IN ORDER TO RETURN ANY AFFECTED SURFACES TO MATCH THEIR ORIGINAL STATE.
- C. COORDINATE ALL EQUIPMENT, DEVICE, AND CONDUIT LOCATIONS WITH OWNER AND DAKTRONICS PRIOR TO ROUGH-IN.

**KEY NOTES:**

- 1. EXISTING SCOREBOARD TO BE DEMOLISHED BY DAKTRONICS. ELECTRICAL CONTRACTOR SHALL DEMOLISH EXISTING POWER CONNECTION BETWEEN SCOREBOARD AND ASSOCIATED DISCONNECT MOUNTED ON BASE COLUMN. EXISTING FUSED DISCONNECT SWITCH SHALL REMAIN IN PLACE, INCLUDING FEEDER BACK TO PANEL LDP. PROTECT DISCONNECT AND FEEDER THROUGHOUT PROJECT. OWNER TO UTILIZE THIS EXISTING DISCONNECT AND FEEDER FOR SPECIAL EVENT POWER.
- 2. THERE ARE (2) EXISTING SPARE 3" CONDUITS BETWEEN MAIN ELECTRICAL ROOM AND SCOREBOARD. UTILIZE ONE SPARE FOR NEW FEEDER TO NEW SCOREBOARD. SEE ONE-LINE FOR NEW FEEDER REQUIREMENTS.
- 3. EXISTING DELAY OF GAME CLOCK 120V CIRCUIT. (2) #10 CU, #10 CU GND IN 1" CONDUIT. DISCONNECT FROM EXISTING SCOREBOARD AND RECONNECT TO NEW SCOREBOARD AS REQUIRED.
- 4. PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANEL MDP FOR NEW SCOREBOARD FEEDER. SEE ONE-LINE FOR DETAILS.
- 5. PROVIDE NEW DRY-TYPE TRANSFORMER. SEE ONE-LINE FOR DETAILS. PAD MOUNT NEXT TO SCOREBOARD COLUMN AS SHOWN. PROVIDE 4" RAISED CONCRETE HOUSEKEEPING PAD FOR EQUIPMENT. COORDINATE FINAL PAD DIMENSIONS WITH TRANSFORMER SHOP DRAWING SUBMITTAL.
- 6. PROVIDE FEEDER TO NEW SCOREBOARD PANELBOARD AS SHOWN. PANELBOARD FURNISHED AND INSTALLED BY DAKTRONICS. COORDINATE EXACT LOCATION WITH DAKTRONICS PRIOR TO ROUGH-IN.
- 7. ROUTE NEW CIRCUITS FROM PANEL L1C TO AUDIO RACK ABOVE CEILING WITHIN EXISTING ACCESSIBLE CEILING SPACE ALONG PATH SHOWN. SEE ONE-LINE FOR DETAILS.
- 8. NEW AUDIO RACK TO REPLACE EXISTING AUDIO RACK IN ROOM 114TR. MOUNT NEW RECEPTACLES ON NORTH WALL OF ROOM 114TR TO SERVE NEW AUDIO RACK. COORDINATE INSTALLATION WITH DAKTRONICS AND OWNER. SEE ONE-LINE FOR DETAILS.
- 9. SEE ONE-LINE AND PANEL SCHEDULES FOR REQUIRED SCOPE OF WORK.
- 10. EXISTING SPARE 3" CONDUITS STUB UP HERE ALONG EAST WALL OF MAIN ELECTRICAL ROOM. EXTEND (1) 3" CONDUIT TO PANEL MDP WITHIN MAIN ELECTRICAL ROOM AS REQUIRED TO COMPLETE PATHWAY FOR NEW FEEDER. PROVIDE PULL BOX, GUTTER, OR LB AS REQUIRED TO FACILITATE WIRE PULL.
- 11. EXISTING SPARE 3" CONDUITS STUB UP ALONG EXISTING EAST LEG OF OLD SCOREBOARD. INTERCEPT UNDERGROUND AND EXTEND (1) 3" CONDUIT TO NEW TRANSFORMER T2 AS REQUIRED TO COMPLETE PATHWAY FOR NEW FEEDER.
- 12. ROUTE NEW CIRCUITS FROM PANEL WPS TO SCOREBOARD CONTROL RACK ABOVE EXISTING CEILING WITHIN CEILING SPACE ALONG PATH SHOWN. UTILIZE EXISTING EMT CONDUIT PATHWAY RUNNING ABOVE CEILING SPACE IF POSSIBLE TO RUN NEW CIRCUITS. SEE ONE-LINE FOR DETAILS.
- 13. NEW SCOREBOARD CONTROL RACK TO REPLACE EXISTING RACK IN ROOM 511 CLOSET. MOUNT NEW RECEPTACLES ON WEST WALL OF ROOM 512 TO SERVE NEW RACK. COORDINATE INSTALLATION WITH DAKTRONICS AND OWNER. SEE ONE-LINE FOR DETAILS.
- 14. PROVIDE (2) NEW 4" EMPTY CONDUITS UNDERGROUND AS SHOWN. TERMINATE CONDUITS AT A HANDHOLE ON BOTH SIDES OF CONCRETE WALKWAY AS SHOWN. BORE UNDERNEATH EXISTING CONCRETE WALKWAY AS REQUIRED TO INSTALL CONDUITS WITHOUT CUTTING EXISTING CONCRETE. TAKING CARE TO NOT DAMAGE OTHER EXISTING BURIED CONDUITS/UTILITIES. THESE NEW EMPTY CONDUITS WILL BE USED BY OWNER AS PATHWAY FOR CABLE AND HANDHOLES TO AVOID RUNNING CABLES ON SURFACE ACROSS CONCRETE WALKWAY.
- 15. SEE HANDHOLE DETAIL ON SHEET E002. HANDHOLE TO BE LOCATED WITHIN NEW ASPHALT SURFACE. SEE STRUCTURAL DRAWINGS FOR ASPHALT DEMO EXTENTS.



**1** ELECTRICAL PLAN - NORTH SCOREBOARD  
1/8" = 1'-0"

**2** ELECTRICAL PLAN - WEST STADIUM LEVEL 5  
1/8" = 1'-0"



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**STADIUM VIDEOBOARD UPGRADE**  
MONTANA STATE UNIVERSITY



DRAWN BY:	MB	
REVIEWED BY:	RM	
REV.	DESCRIPTION	DATE



PPA#22-0611

MMI#0747.080

SHEET TITLE  
ELECTRICAL PLAN

SHEET  
**E100**

DATE  
09.16.2023

RE - BID DOCUMENTS