

BEAVERTON SCHOOL DISTRICT SEISMIC UPGRADE

SUNSET HIGH SCHOOL AUDITORIUM AND ROCK CREEK COVERED PLAY

Beaverton School District
16500 SW Merlo Road Beaverton, OR 97003

CONTENTS

Sunset High School

- SK-1 Sunset High School - Finishes Detail
- SK-2 Sunset High School - Area of work
- S001 Drawing Index Abbreviations and Special Inspections
- S101 Auditorium Foundation Plan

Rock Creek Elementary

- SK-3 Rock Creek - Plan Notes
- SK-4 Rock Creek - Work by others
- S001 Drawing Index and List of Abbreviations
- S002 General Structural Notes
- S003 General Structural Notes Cont.
- S010 Special Inspections and Testing
- S011 Special Inspections and Testing Cont.
- S012 Special Inspections and Testing Cont.
- S201 Foundation and Roof Framing Plan
- S501 Foundation Details
- S601 Framing Details

SCHOOL DISTRICT CONTACTS

Beaverton School District
Kurt Meeuwsen, Project Manager
Ph: 503 964-2091
Email: Kurt_Meeuwsen@beaverton.k12.or.us

Patrick O'Harrow, Project Coordinator
Phone: 503 319-8289

DESIGN TEAM

KPFF Portland Structural
Nathan Ingraffea, Principal
Ph: 503 341-8862
Nathan.Ingraffea@kpff.com

Sunset High School: Andi Camp
Ph: 503 764-0514
Andi.Camp@kpff.com

Rock Creek: Mike Dutton
Ph: 503 764-0540
Mike.Dutton@kpff.com

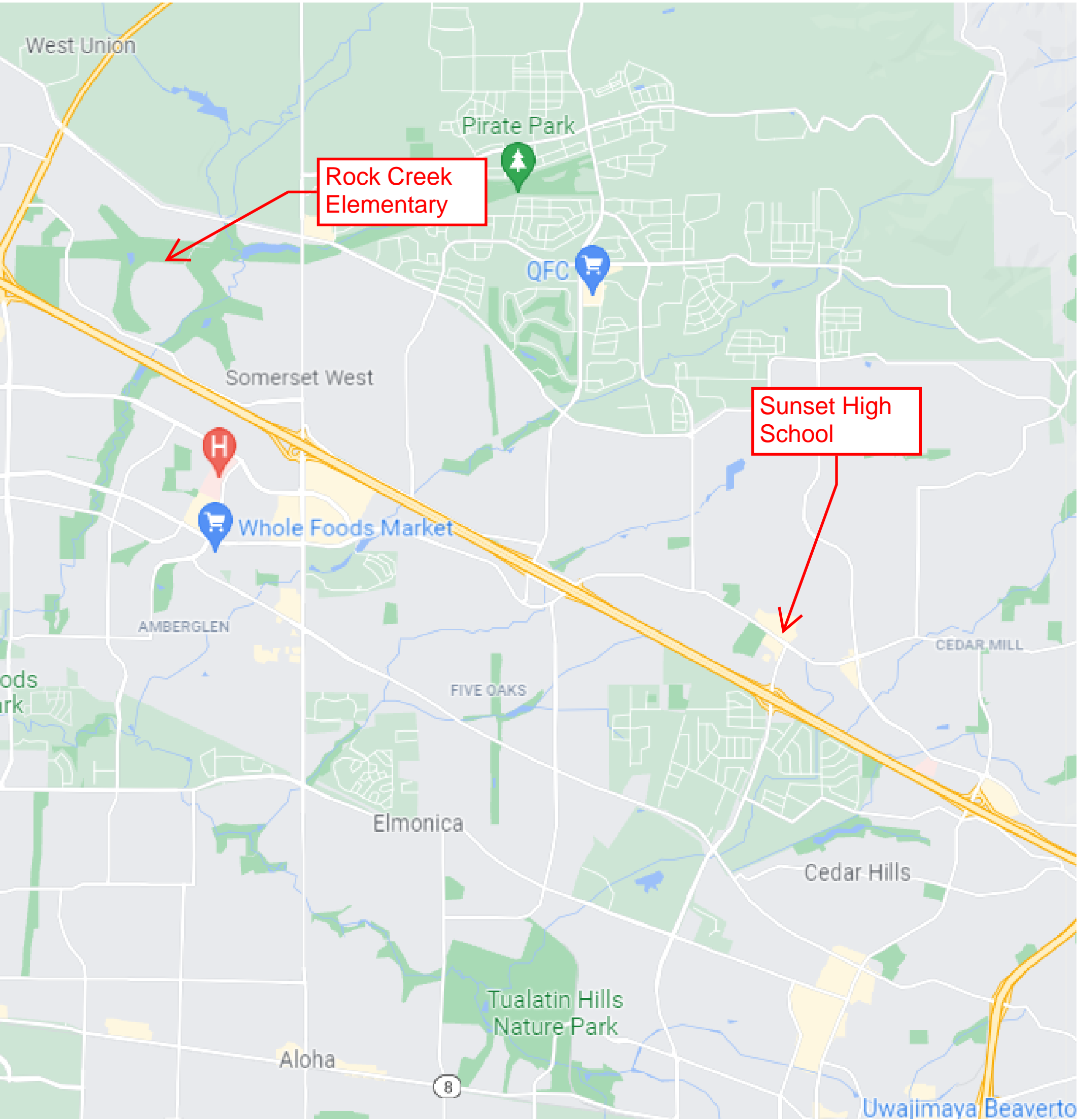
SCHOOL ADDRESSES

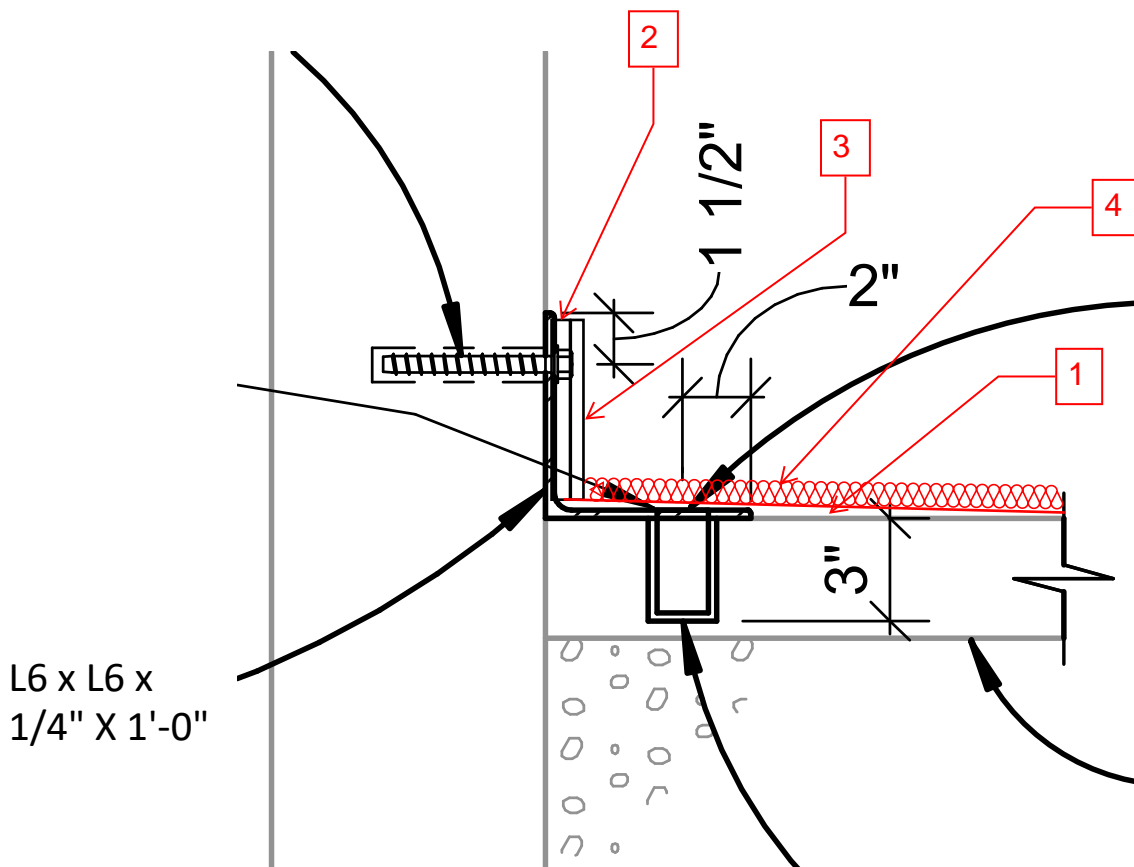
Sunset High School
13840 NW Cornell Rd, Portland, OR 97229

Rock Creek Elementary
4125 NW 185th Ave, Portland, OR 97229

PROJECT DESCRIPTION

SEISMIC UPGRADE OF SUNSET HIGH SCHOOL AUDITORIUM AND THE
ROCK CREEK COVERED PLAY AREAS





After installing the steel angle L6 x L6 x 1/4" x 1'-0", apply following scope of work:

1. Trowel on cementitious underlayment. Zero Thickness to 1/2": Armstrong Latex Underlayment, Ardex Feather Finish by Ardex Americas, or accepted substitute.

a. Feather out from the 1/4" angle to 0 over 24" minimum. Do not exceed 2% cross slope for the finished floor if there is existing slope to the floor.

2. Apply 2 layers of MDF S2S tempered hardboard to the wall between the angle clips, and over the angles with a hole for the bolt heads.

a. Apply with adhesive.

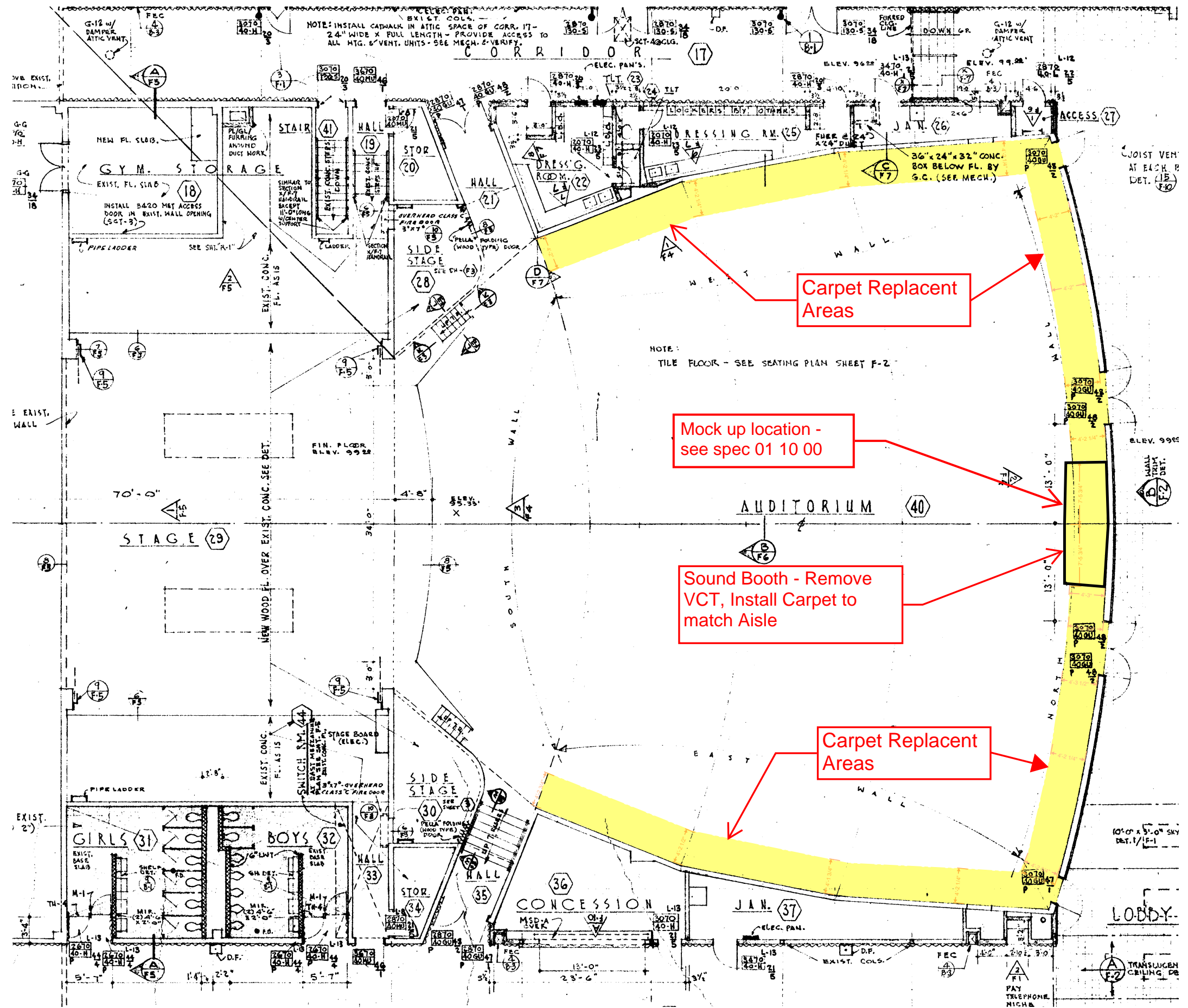
b. 1/4" for the first layer between the angle clips

c. 1/4" or 3/8" over the first layer and over the angles with a hole drilled for the bolt heads. Select material thickness to flush out with the bolt head.

d. Paint the hardboard furring to match the wall.

3. Apply 6" rubber base over the hardboard furring. Rubber base to match existing.

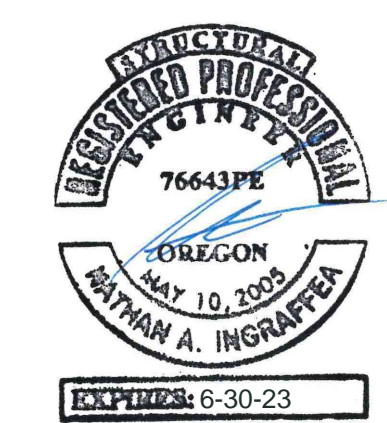
4. Apply carpet to match existing.



SHS
Auditorium
Seismic

2/14/22

SK-2



Drawn By: Author

Designed By: Designer

Project No: 100221100870

Date: 01/28/22

Scale: 12" = 1'-0"

Drawing No:

S001

DRAWING INDEX

ISSUE LOG

S001	DRAWING INDEX AND LIST OF ABBREVIATIONS GENERAL STRUCTURAL NOTES AND SPECIAL INSPECTIONS	X
S101	AUDITORIUM FOUNDATION PLAN	X
ISSUE LOG KEY: ' X ' ISSUED AS PART OF A SET ' - ' NOT A PART OF ISSUED SET ' * ' FOR INFORMATION ONLY		DATE 01/28/2022

LIST OF ABBREVIATIONS

A.B.	ANCHOR BOLT	IBC	INTERNATIONAL BUILDING CODE	R. RAD.	RADIUS
ACI	AMERICAN CONCRETE INSTITUTE	I.D.	INSIDE DIAMETER	RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS
ADD'L.	ADDITIONAL	IN.	INCHES	REF.	REFERENCE
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	INT.	INTERIOR	RET.	RETURN
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	K	KIPS	REINF.	REINFORCING
ALT.	ALTERNATE	KSF	KIPS PER SQUARE FOOT	REQ'D.	REQUIRED
ALUM.	ALUMINUM	KSI	KIPS PER SQUARE INCH	REQ'MTS.	REQUIREMENTS
ARCH.	ARCHITECT / ARCHITECTURAL	L.L.	LIVE LOAD	SCHED.	SCHEDULE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LLH	LONG LEG HORIZONTAL	S.C.	SLIP CRITICAL
ASD	ALLOWABLE STRENGTH DESIGN LOAD LEVEL	LLV	LONG LEG VERTICAL	SCL	STRUCTURAL COMPOSITE LUMBER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LOC.	LOCATION	SIM.	SIMILAR
AWS	AMERICAN WELDING SOCIETY	LONG.	LONGITUDINAL	SFRS	SEISMIC FORCE RESISTING SYSTEM
BLDG.	BUILDING	LSL	LAMINATED STRAND LUMBER	S.O.G.	SLAB ON GRADE
BOT.	BOTTOM	LVL	LOW VELOCITY FASTENER	SPEC.	SPECIFICATION
BRBF	BUCKLING RESTRAINED BRACED FRAME	LVL	LAMINATED VENEER LUMBER	SQ.	SQUARE
C.G.	CENTER OF GRAVITY	MAX.	MAXIMUM	SS	STAINLESS STEEL
C.I.P.	CAST IN PLACE	MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION	SSMA	STEEL STUD MANUFACTURERS ASSOCIATION
C.J.	CONTROL JOINT	MECH.	MECHANICAL	STD.	STANDARD
C.J.P.	COMPLETE JOINT PENETRATION	MEPF	MECHANICAL ELECTRICAL PLUMBING AND FIRE SAFETY	STRUCT.	STRUCTURAL
CL	CENTERLINE	MFR.	MANUFACTURER	SYM.	SYMMETRICAL
CLR.	CLEAR	MFR.	MANUFACTURER	THRU	THROUGH
CLT	CROSS LAMINATED TIMBER	MIN.	MINIMUM	T&G	TONGUE AND GROOVE
CMU	CONCRETE MASONRY UNIT	MISC.	MISCELLANEOUS	TS	LIGHT GAUGE TUBE STEEL
COL.	COLUMN	MPH	MILES PER HOUR	TYP.	TYPICAL
CONC.	CONCRETE	MPP	MASS PLYWOOD PANELS	ULT.	ULTIMATE STRENGTH DESIGN LOAD LEVEL
CONN.	CONNECTION	MT	MAGNETIC PARTICLE TESTING	U.N.O.	UNLESS NOTED OTHERWISE
CONST.	CONSTRUCTION	(N)	NEW	U.T.	ULTRASONIC TESTING
CONT.	CONTINUOUS	N.I.C.	NOT IN CONTRACT	VERT.	VERTICAL
db	BAR DIAMETER	NLT	NAIL LAMINATED TIMBER	V.I.F.	VERIFY IN FIELD
DBA	DEFORMED BAR ANCHOR	NOM.	NOMINAL	w/	WITH
DET.	DETAIL	NO.	NUMBER	WF	WIDE FLANGE
DIA., Ø	DIAMETER	N.T.S.	NOT TO SCALE	w/o	WITHOUT
DIAG.	DIAGONAL	o.c.	ON CENTER	W.P.	WORK POINT
D.L.	DEAD LOAD	O.D.	OUTSIDE DIAMETER	WPS	WELDING PROCEDURE SPECIFICATION
DLT	DOWEL LAMINATED TIMBER	OPP.	OPPOSITE	WWF	WELDED WIRE FABRIC
DWG.	DRAWING	OSL	ORIENTED STRAND LUMBER		
ELEC.	ELECTRICAL	OSL	ORIENTED STRAND LUMBER		
EL.	ELEVATION	OWJ	OPEN WEB JOIST		
EQ.	EQUAL	PAF	POWDER ACTUATED FASTENER		
EXIST., (E)	EXISTING	PART.	PARTITION		
EXP.	EXPANSION	P/C	PRECAST		
EXT.	EXTERIOR	PCF	POUNDS PER CUBIC FOOT		
FDN.	FOUNDATION	PERIM.	PERIMETER		
FIN.	FINISH	PL	PLATE		
FLR.	FLOOR	PP	PARTIAL PENETRATION		
FRT	FIRE RETARDANT TREATED	PSF	POUNDS PER SQUARE FOOT		
FT.	FOOT	PSL	PARALLEL STRAND LUMBER		
FTG.	FOOTING	PSI	POUNDS PER SQUARE INCH		
GA.	GAUGE	P/T	POST-TENSIONED		
GALV.	GALVANIZED	P.T.	PRESSURE TREATED		
GL	GLULAM	PVC	POLYVINYL CHLORIDE		
HORIZ.	HORIZONTAL				
HSS	HOLLOW STRUCTURAL STEEL				

GENERAL

STRUCTURAL DRAWINGS ARE A PART OF THE CONTRACT DOCUMENTS AND ARE COMPLEMENTARY TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS, THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE CONTRACT DOCUMENTS INTO THEIR SHOP DRAWINGS AND WORK. AS REQUIRED BY THE GENERAL CONDITIONS, THE CONTRACTOR SHALL PROMPTLY REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCIES, OR OMISSIONS IN THE CONTRACT DOCUMENTS DISCOVERED BY OR MADE KNOWN TO THE CONTRACTOR.

THE GENERAL STRUCTURAL 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 STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. WHERE CONFLICT EXISTS, THE MORE STRINGENT OR RESTRICTIVE REQUIREMENT SHALL GOVERN UNTIL CLARIFICATION IS REQUESTED.

CODE REQUIREMENTS:

THIS IS A VOLUNTARY PARTIAL SEISMIC UPGRADE CONFORMING TO ASCE 41-17.

TEMPORARY CONDITIONS:

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES UNTIL COMPLETION.

CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:

ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE EOR OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

ASSUMED FUTURE CONSTRUCTION:

VERTICAL: NONE
HORIZONTAL: NONE

SEISMIC DESIGN CRITERIA

RISK CATEGORY	III	
SEISMIC DESIGN CATEGORY	D	
SITE CLASS	D	
ANALYSIS PROCEDURE	ASCE 41-17 CHAPTER 7	Y DIRECTION (NORTH / SOUTH)
SEISMIC FORCE RESISTING SYSTEM (SFRS)	X DIRECTION (EAST / WEST)	CONCRETE SHEAR WALLS
DESIGN EVENT	GREATER OF BSE-1E AND 75% BSE-1N	
PERFORMANCE CRITERIA	LIFE SAFETY PER ASCE 41-17	
DESIGN EVENT	S _{xs} = 0.542g	C ₁ C ₂ = 1.1
PERFORMANCE CRITERIA	GREATER OF BSE-2E AND 75% BSE-2N	
DESIGN EVENT	COLLAPSE PREVENTION PER ASCE 41-17	
PERFORMANCE CRITERIA	S _{xs} = 0.812g	C ₁ C ₂ = 1.2

VOLUNTARY PARTIAL SEISMIC RETROFIT NARRATIVE

THE EXISTING LATERAL SYSTEM CONSISTS OF PLYWOOD SHEATHING WHICH ACTS AS A DIAPHRAGM TO TRANSFER LATERAL LOADS TO CONCRETE SHEAR WALLS. THIS VOLUNTARY PARTIAL RETROFIT ADDS A DIRECT SHEAR TRANSFER MECHANISM FROM THE BASE OF THE CONCRETE SHEAR WALLS TO THE SLAB ON GRADE. NO OTHER DEFICIENCIES ARE ADDRESSED AT THIS TIME.

STRUCTURAL OBSERVATIONS

THE STRUCTURAL ENGINEER OF RECORD (SEOR) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE OSSC AT THE STAGES OF CONSTRUCTION LISTED BELOW. CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCED NOTICE AND ACCESS FOR THE SEOR TO PERFORM THESE OBSERVATIONS.

ITEM	COMMENTS
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	

A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH SITE VISIT.

STRUCTURAL OBSERVATION IS FOR THE GENERAL CONFORMANCE OF THE STRUCTURAL DRAWINGS AND DOES NOT ALLEVIATE ANY SPECIAL INSPECTION REQUIREMENTS.

SPECIAL INSPECTIONS AND TESTING

SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE OSSC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS

SUBMIT SHOP DRAWINGS AND OTHER SUBMITTALS TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION AND CONSTRUCTION OF STRUCTURAL ITEMS. IF THE SUBMITTALS DIFFER FROM OR ADD TO THE STRUCTURAL CONTRACT DOCUMENTS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE SEOR.

FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

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

DELEGATED DESIGN SUBMITTALS SHALL INCLUDE DESIGN DRAWINGS AND CALCULATIONS FOR ITEMS THAT ARE DESIGNED BY OTHERS. DELEGATED DESIGN SUBMITTALS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON ON EVERY DRAWING SHEET AND ON THE CALCULATION COVER SHEET, AND SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC AND AS NOTED UNDER "DESIGN CRITERIA".

SUBMITTALS AND DELEGATED DESIGN SUBMITTALS SHALL INCLUDE THE FOLLOWING:

ITEM	SUBMITTAL	DELEGATED DESIGN SUBMITTAL	COMMENTS
STRUCTURAL STEEL	X		

STRUCTURAL STEEL

STRUCTURAL STEEL SHALL BE OF THE MATERIAL AND TYPE LISTED BELOW, U.N.O.:

STRUCTURAL STEEL	
SHAPE	MATERIAL GRADE
CHANNELS, PLATES AND ANGLES, U.N.O.	ASTM A36

DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", WITH THE FOLLOWING CLARIFICATIONS AND ADDITIONS:

- CLARIFY SECTIONS 7.5.1 AND 7.5.3 AS FOLLOWS:
EMBEDMENT LOCATION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR INFORMATION ONLY. THE SEOR IS NOT RESPONSIBLE FOR THE APPROVAL OF EMBEDMENT LOCATION DRAWINGS.
- ADD THE FOLLOWING PARAGRAPH TO SECTION 7.10.3:
"THE ERECTOR SHALL HAVE THE SOLE RESPONSIBILITY FOR DETERMINING THE MEANS AND METHODS USED TO PROPERLY AND ADEQUATELY BRACE THE FRAMING DURING ERECTION."

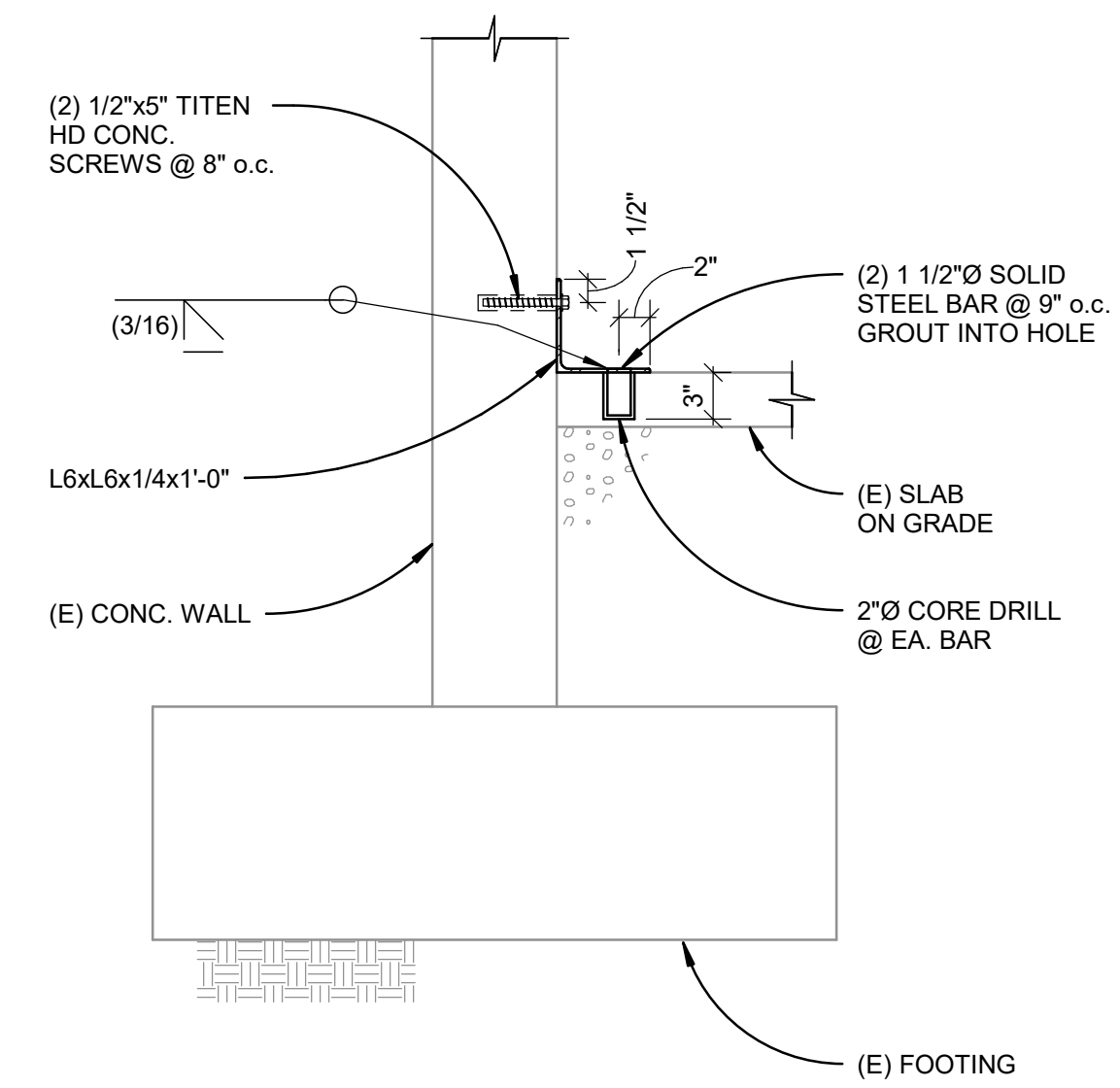
GROUT

NON-SHRINK GROUT SHALL BE ASTM C 1107, FACTORY-PACKAGED NONMETALLIC AGGREGATE GROUT, NONCORROSIVE, NONSTAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME. GROUT STRENGTH SHALL BE 8,000 PSI MINIMUM AT 28 DAYS.

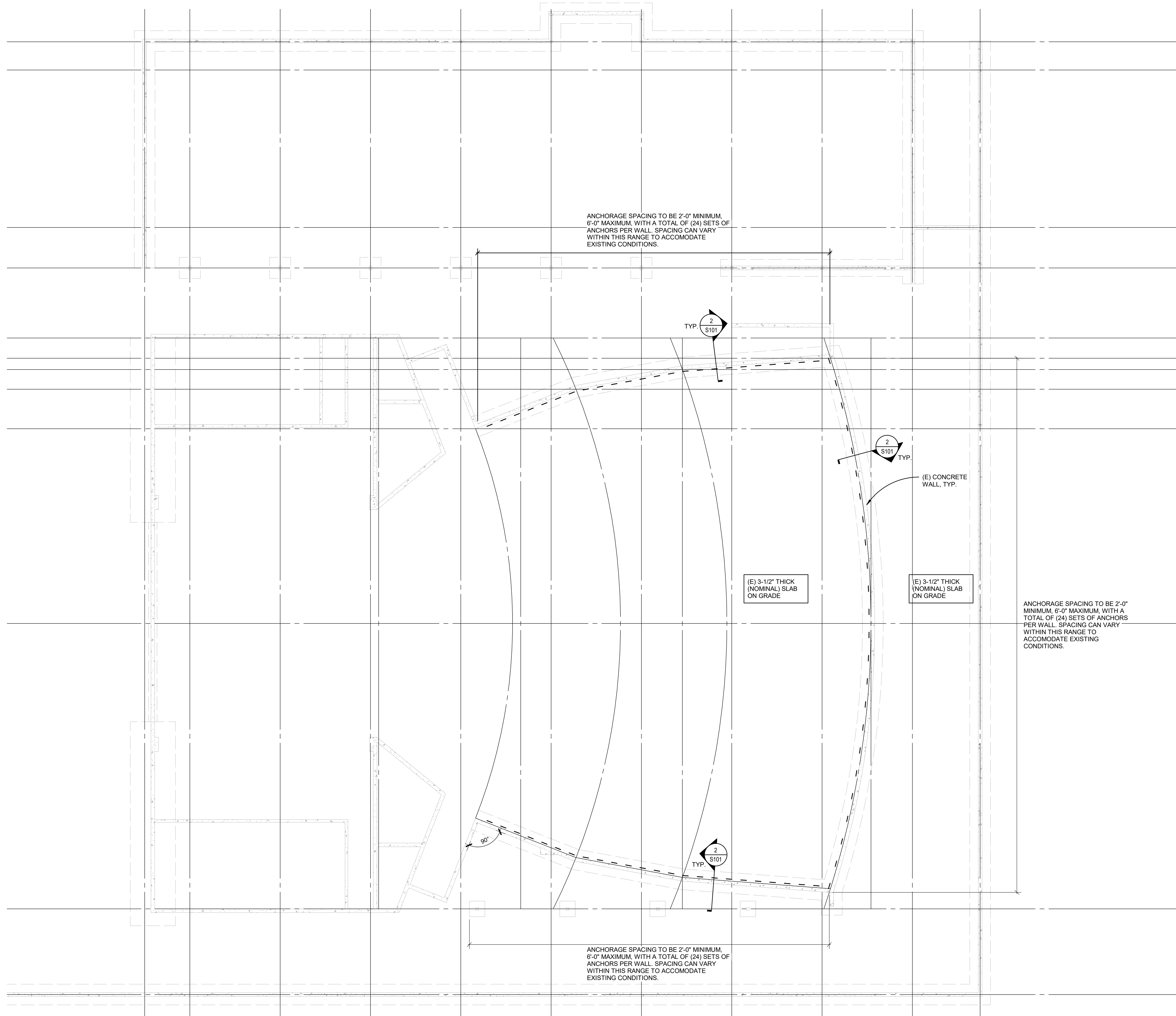
SPECIAL INSPECTIONS

GENERAL - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS (EXCLUDING CONDITIONS NOTED ABOVE) IN HARDENED CONCRETE				X	

STEEL - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION (NOTES 5 AND 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
STEEL FABRICATION					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1505.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS



2 (N) SHEAR TRANSFER AT (E) CONC. WALL
1" = 1'-0"



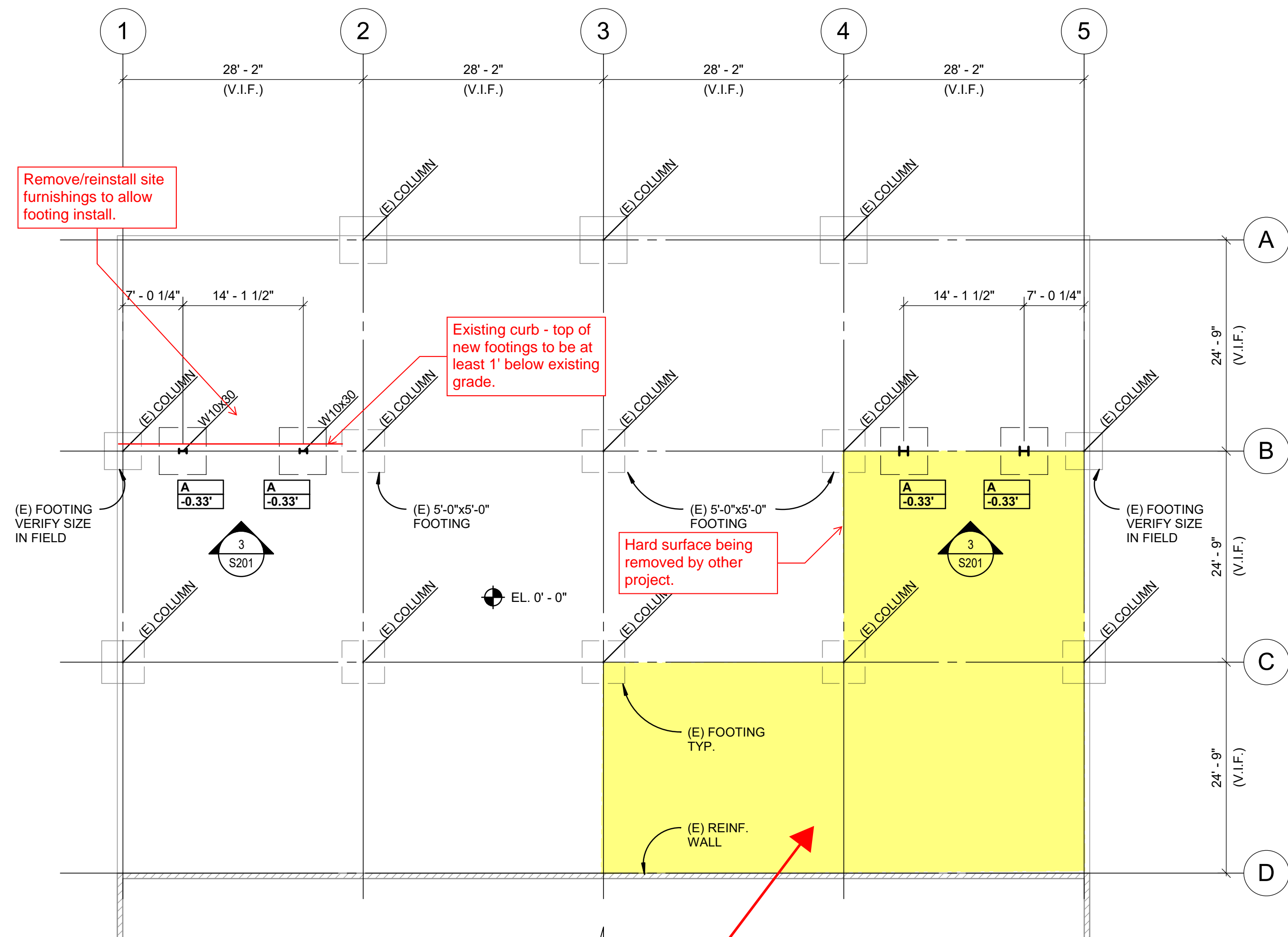
1 AUDITORIUM FOUNDATION PLAN
1/8" = 1'-0"

Sunset HS Auditorium
13840 NW Cornell Rd, Portland, OR 97229

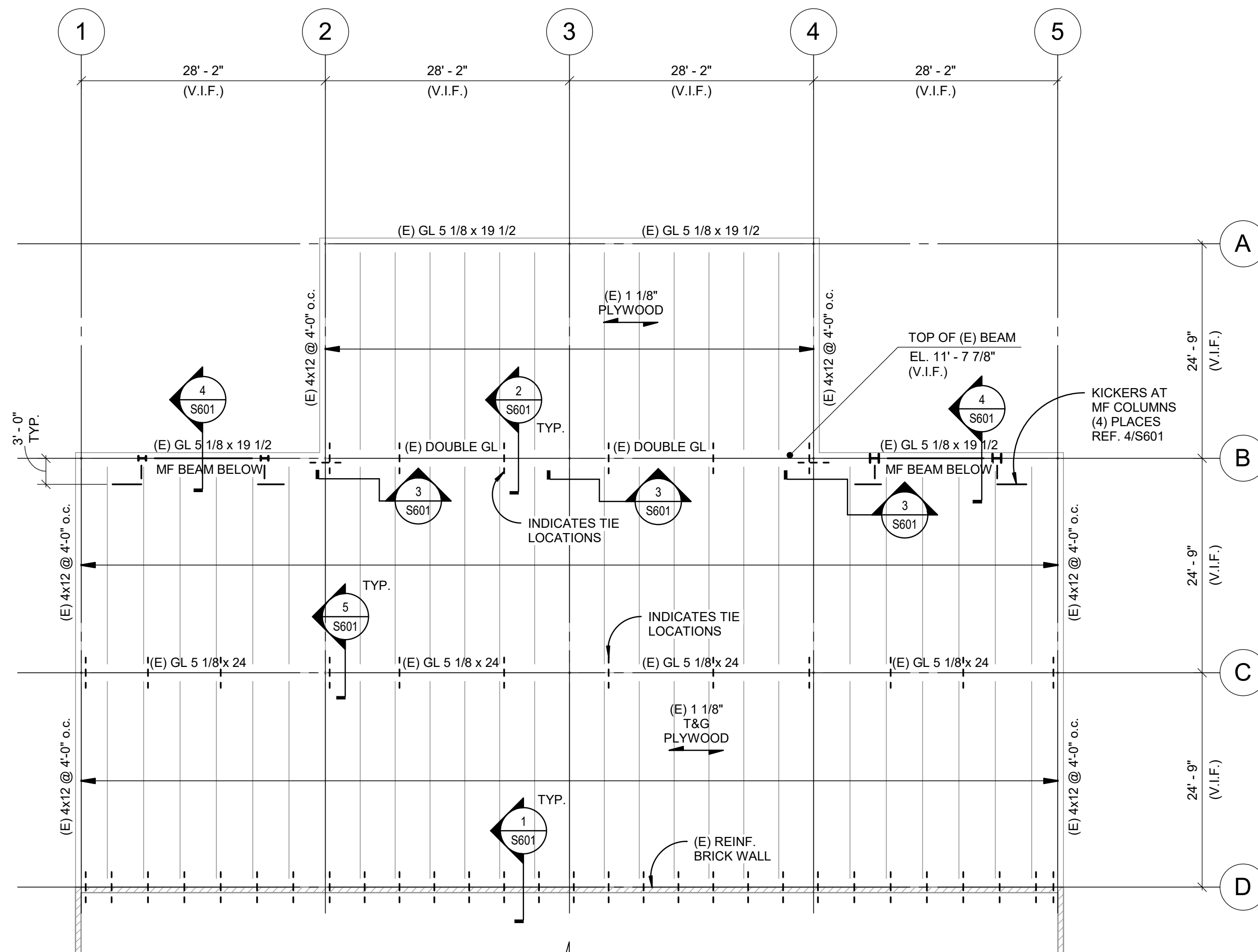
AUDITORIUM
FOUNDATION
PLAN

Drawn By: Author
Designed By: Designer
Project No: 100221100870
Date: 01/28/22
Scale: As indicated
Drawing No:

S101

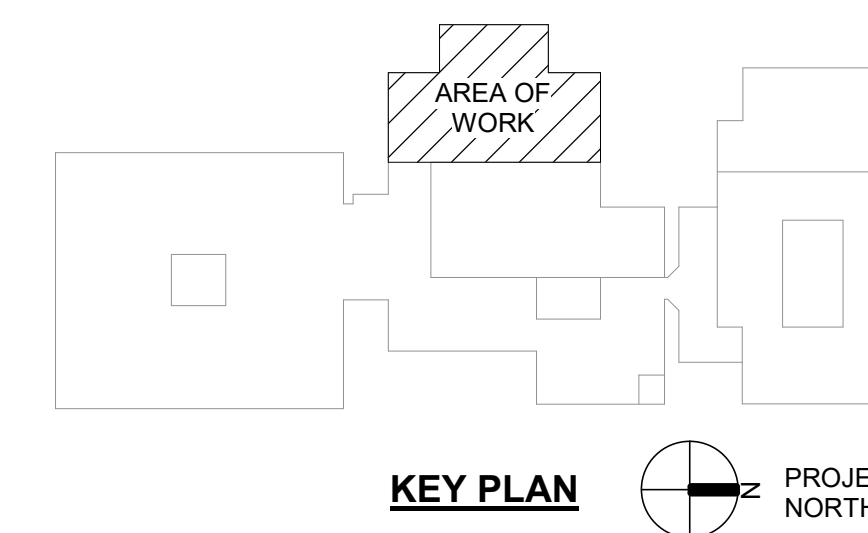
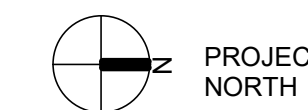


WORK UNDER SEPARATE CONTRACT
 Contractor to coordinate with work by others
 Separate contract schedule:
 Demolition starts 6/27
 Placing concrete starts in Area A and B 7/11.
 AC placement in Area C to be delayed to no later than 8/29 to allow footings to be placed

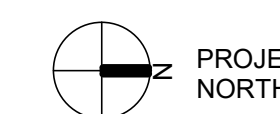


- NOTES:**
1. VERIFY ALL EXISTING DIMENSIONS AND FRAMING SIZES IN FIELD.
 2. NOTIFY EOR OF ANY DRYROT DAMAGE OF EXISTING WOOD FRAMING MEMBERS.

Reference Only
2 ROOF FRAMING PLAN
 3/32" = 1'-0"



KEY PLAN



BEAVERTON SCHOOL DISTRICT
 ROCK CREEK ELEMENTARY SCHOOL
 COVERED PLAY SEISMIC UPGRADES
 4125 NW 185th Ave, PORTLAND, OR 97229

Seismic Upgrade:
 SHS Auditorium
 and Rock Creek
 Covered Play

SK-3

DRAWING INDEX		ISSUE LOG	
		Permit Set	
S001	DRAWING INDEX AND LIST OF ABBREVIATIONS	X	
S002	GENERAL STRUCTURAL NOTES	X	
S003	GENERAL STRUCTURAL NOTES CONT.	X	
S010	SPECIAL INSPECTIONS AND TESTING	X	
S011	SPECIAL INSPECTION AND TESTING CONT.	X	
S012	SPECIAL INSPECTION AND TESTING CONT.	X	
S201	FOUNDATION AND ROOF FRAMING PLAN	X	
S501	FOUNDATION DETAILS	X	
S601	FRAMING DETAILS	X	
ISSUE LOG KEY: ' X 'ISSUED AS PART OF A SET ' - ' NOT A PART OF ISSUED SET ' * ' FOR INFORMATION ONLY		DATE	02/09/2022

LIST OF ABBREVIATIONS

A.B.	ANCHOR BOLT	GA.	GAUGE	PL	PLATE
ACI	AMERICAN CONCRETE INSTITUTE	GALV.	GALVANIZED	PP	PARTIAL PENETRATION
ADD'L	ADDITIONAL	GL	GLULAM	PSF	POUNDS PER SQUARE FOOT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL	HORIZ.	HORIZONTAL	PSL	PARALLEL STRAND LUMBER
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION INCORPORATED	HSS	HOLLOW STRUCTURAL STEEL	PSI	POUNDS PER SQUARE INCH
ALT.	ALTERNATE	IBC	INTERNATIONAL BUILDING CODE	P/T	POST-TENSIONED
ALUM.	ALUMINUM	ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS	P.T.	PRESSURE TREATED
ARCH.	ARCHITECT	I.D.	INSIDE DIAMETER	PVC	POLYVINYL CHLORIDE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	IN.	INCH	R, RAD.	RADIUS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	INT.	INTERIOR	RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS
AWS	AMERICAN WELDING SOCIETY	K	KIPS	REF.	REFERENCE
BLDG.	BUILDING	KSF	KIPS PER SQUARE FOOT	RET.	RETURN
BOT.	BOTTOM	KSI	KIPS PER SQUARE INCH	REINF.	REINFORCING
BRBF	BUCKLING RESTRAINED BRACED FRAME	LB.	POUND	REQ'D.	REQUIRED
C.G.	CENTER OF GRAVITY	L.L.	LIVE LOAD	REQ'MTS.	REQUIREMENTS
C.I.P.	CAST IN PLACE	LLH	LONG LEG HORIZONTAL	SCHED.	SCHEDULE
C.J.	CONTROL JOINT	LLV	LONG LEG VERTICAL	S.C.	SLIP CRITICAL
C.J.P.	COMPLETE JOINT PENETRATION	LOC.	LOCATION	SCL	STRUCTURAL COMPOSITE LUMBER
CL	CENTERLINE	LONG.	LONGITUDINAL	SIM.	SIMILAR
CLR.	CLEAR	LSL	LAMINATED STRAND LUMBER BEAM	SLRS	SEISMIC LOAD RESISTING SYSTEM
CMU	CONCRETE MASONRY UNIT	LVF	LOW VELOCITY FASTENER	S.O.G.	SLAB ON GRADE
COL.	COLUMN	LVL	LAMINATED VENEER LUMBER BEAM	SPEC.	SPECIFICATION
CONC.	CONCRETE	MAX.	MAXIMUM	SQ.	SQUARE
CONN.	CONNECTION	MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION	SS	STAINLESS STEEL
CONST.	CONSTRUCTION	MECH.	MECHANICAL	SSMA	STEEL STUD MANUFACTURERS ASSOCIATION
CONT.	CONTINUOUS	MFR.	MANUFACTURER	STD.	STANDARD
db	BAR DIAMETER	MIN.	MINIMUM	STRUCT.	STRUCTURAL
DBA	DEFORMED BAR ANCHOR	MISC.	MISCELLANEOUS	SYM.	SYMMETRICAL
DET.	DETAIL	MPH	MILES PER HOUR	THRU	THROUGH
DIA., Ø	DIAMETER	MT	MAGNETIC PARTICLE TESTING	T & G	TONGUE AND GROOVE
DIAG.	DIAGONAL	(N)	NEW	TRANS.	TRANSVERSE
D.L.	DEAD LOAD	N.I.C.	NOT IN CONTRACT	TJ	TRUSS JOIST
DWG.	DRAWING	NOM.	NOMINAL	TS	LIGHT GAUGE TUBE STEEL
ELEC.	ELECTRICAL	NO.	NUMBER	TYP.	TYPICAL
EL.	ELEVATION	N.T.S.	NOT TO SCALE	U.N.O.	UNLESS NOTED OTHERWISE
EQ.	EQUAL	o.c.	ON CENTER	U.T.	ULTRASONIC TESTING
EXIST., (E)	EXISTING	O.D.	OUTSIDE DIAMETER	VERT.	VERTICAL
EXP.	EXPANSION	OPP.	OPPOSITE	V.I.F.	VERIFY IN FIELD
EXT.	EXTERIOR	OWJ	OPEN WEB JOIST	w/	WITH
FDN.	FOUNDATION	PAF	POWDER ACTUATED FASTENER	WF	WIDE FLANGE
FIN.	FINISH	PART.	PARTITION	w/o	WITHOUT
FLR.	FLOOR	P/C	PRECAST	W.P.	WORK POINT
FT.	FOOT	PCF	POUNDS PER CUBIC FOOT	WPS	WELDING PROCEDURE SPECIFICATION
FTG.	FOOTING	PERIM.	PERIMETER	WWF	WELDED WIRE FABRIC



kpff
111 SW Fifth Ave., Suite 2600
Portland, OR 97204
O: 503.227.3251
F: 503.227.7980
www.kpff.com
10022100871 - Revit 2020



BEAVERTON SCHOOL DISTRICT
ROCK CREEK ELEMENTARY SCHOOL
COVERED PLAY SEISMIC UPGRADES
4125 NW 185th Ave, PORTLAND, OR 97229

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2 INCHES THEN
SCALE ACCORDINGLY)

date: 09 FEB 2022
drawn by: RL
checked: MD
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job no.: 10022100871

Sheet
S001

GENERAL

STRUCTURAL DRAWINGS ARE A PART OF THE CONTRACT DOCUMENTS AND ARE COMPLEMENTARY TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS, THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE CONTRACT DOCUMENTS INTO THEIR SHOP DRAWINGS AND WORK. AS REQUIRED BY THE GENERAL CONDITIONS, THE CONTRACTOR SHALL PROMPTLY REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCIES, OR OMISSIONS IN THE CONTRACT DOCUMENTS DISCOVERED BY OR MADE KNOWN TO THE CONTRACTOR.

THE GENERAL STRUCTURAL 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 STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. WHERE CONFLICT EXISTS, THE MORE STRINGENT OR RESTRICTIVE REQUIREMENT SHALL GOVERN UNTIL CLARIFICATION IS REQUESTED.

CODE REQUIREMENTS:
CONFORM TO THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC).

TEMPORARY CONDITIONS:
THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES UNTIL COMPLETION.

CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXCAVATIONS SHALL NOT REDUCE THE VERTICAL OR LATERAL SUPPORT FOR ANY FOUNDATION OF THIS PROJECT OR ANY ADJACENT STRUCTURE WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOUNDATION AGAINST DETRIMENTAL LATERAL AND/OR VERTICAL MOVEMENT.

EXISTING CONDITIONS:
ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

ASSUMED FUTURE CONSTRUCTION:
VERTICAL: NONE
HORIZONTAL: NONE

DESIGN CRITERIA

DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE OSSC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWABLES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED PER OSSC:

GRAVITY SYSTEM CRITERIA		
OCCUPANCY OR USE	UNIFORM LOAD	CONCENTRATED LOAD
ROOF LIVE/SNOW LOAD	25 PSF L.L. (ALSO SEE SNOW LOAD CRITERIA BELOW)	
GRAVITY LOADING NOTES:	1. LIVE LOADS REDUCED PER OSSC. 2. MEMBERS DESIGNED FOR MORE CRITICAL OF UNIFORM OR CONCENTRATED LOAD.	
SNOW CRITERIA		
DESIGN ROOF SNOW LOAD	25 PSF MINIMUM IN ACCORDANCE WITH OSSC	
GEOTECHNICAL CRITERIA		
DESIGN BASED ON REPORT BY:	OSSC TABLE 1806.2	
ALLOWABLE SOIL PRESSURE:	1,500 PSF	
WIND CRITERIA		
RISK CATEGORY	II	
MAIN WIND FORCE RESISTING SYSTEM	V = 103 MPH BASIC DESIGN WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDING	V = 103 MPH BASIC DESIGN WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	B	
SEISMIC CRITERIA		
RISK CATEGORY	III	
SEISMIC DESIGN CATEGORY	D	
SITE CLASS	D (Default)	
IMPORTANCE FACTOR	IE = 1.25	
MAPPED MCE SPECTRAL ACCELERATION	Ss = 0.91	S1 = 0.42
SITE COEFFICIENT	Fa = 1.136	
DESIGN SPECTRAL ACCELERATION	SDS = 0.729	
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-16, SECTION 12.8	
	X DIRECTION (EAST / WEST)	Y DIRECTION (NORTH / SOUTH)
SEISMIC FORCE RESISTING SYSTEM (SFRS)	INTERMEDIATE REINFORCED MASONRY SHEAR WALL	INTERMEDIATE REINFORCED MASONRY SHEAR WALL
RESPONSE MODIFICATION FACTOR	R = 3.5	R = 3.5
SEISMIC RESPONSE COEFFICIENT	Cs = 0.260	Cs = 0.260
REDUNDANCY FACTOR	rho = 1.0	rho = 1.0

SEISMIC FORCE-RESISTING SYSTEM

THE SEISMIC FORCE-RESISTING SYSTEM (SFRS) FOR THE COMPLETED STRUCTURE IS AS FOLLOWS:

NEW STEEL ORDINARY MOMENT FRAMES ALONG GRIDLINE B FOR THE COVERED PLAY AREA. EXISTING MASONRY SHEAR WALLS AT GRIDS D, 1 AND 5 AT THE MAIN BUILDING.

REFERENCE SHEETS S201 FOR SFRS ELEVATIONS. REFERENCE PLANS AND MOMENT FRAME DRAWINGS (BY OTHERS) FOR ADDITIONAL SFRS COMPONENTS AND DETAILS.

REFER TO THE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS FOR ADDITIONAL FABRICATING, INSTALLATION, TESTING AND INSPECTION REQUIREMENTS FOR MEMBERS THAT ARE PART OF THE SFRS.

STRUCTURAL OBSERVATIONS

THE STRUCTURAL ENGINEER OF RECORD (SEOR) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE OSSC AT THE STAGES OF CONSTRUCTION LISTED BELOW. CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCED NOTICE AND ACCESS FOR THE SEOR TO PERFORM THESE OBSERVATIONS.

ITEM	COMMENTS
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	

A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH SITE VISIT.

STRUCTURAL OBSERVATION IS FOR THE GENERAL CONFORMANCE OF THE STRUCTURAL DRAWINGS AND DOES NOT ALLEVIATE ANY SPECIAL INSPECTION REQUIREMENTS.

SPECIAL INSPECTIONS AND TESTING

SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE OSSC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEETS S010-S012. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS

SUBMIT SHOP DRAWINGS AND OTHER SUBMITTALS TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION AND CONSTRUCTION OF STRUCTURAL ITEMS. IF THE SUBMITTALS DIFFER FROM OR ADD TO THE STRUCTURAL CONTRACT DOCUMENTS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE SEOR.

FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

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

DELEGATED DESIGN SUBMITTALS SHALL INCLUDE DESIGN DRAWINGS AND CALCULATIONS FOR ITEMS THAT ARE DESIGNED BY OTHERS. DELEGATED DESIGN SUBMITTALS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON ON EVERY DRAWING SHEET AND ON THE CALCULATION COVER SHEET, AND SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION. CALCULATIONS AND DETAILS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC AND AS NOTED UNDER "DESIGN CRITERIA".

SUBMITTALS AND DELEGATED DESIGN SUBMITTALS SHALL INCLUDE THE FOLLOWING:

ITEM	SUBMITTAL	DELEGATED DESIGN SUBMITTAL	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
CONCRETE ANCHORAGES	X		
EMBEDDED STEEL ITEMS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL SPECIAL MOMENT FRAMES		X	

TABLE NOTES:

- CONTRACTOR SHALL ENGAGE A PROFESSIONAL ENGINEER TO PREPARE AN ASSESSMENT OF ANY EXCAVATIONS THAT MAY REDUCE THE VERTICAL OR LATERAL SUPPORT OF AN EXISTING FOUNDATION AS REQUIRED BY OSSC SECTION 1803.5.7. THE ASSESSMENT SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND SHALL INCLUDE DETAILS AND SEQUENCING FOR CONSTRUCTION OF ANY UNDERPINNING OR BRACING THAT IS REQUIRED.
- CONTRACTOR SHALL COORDINATE AND SHOW ALL REQUIRED PENETRATIONS, WITH DIMENSIONS FOR MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, TECHNOLOGY AND OTHER SERVICES ON A SINGLE DRAWING FOR REVIEW AT EACH SLAB/DECK, STRUCTURAL WALL AND/OR BEAM.

CONCRETE MIX DESIGNS

CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE OSSC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS PER ASTM C39. CONCRETE MIX TO BE DESIGNED AND PROPORTIONED BY THE CONTRACTOR IN ACCORDANCE WITH ACI 318-14 CHAPTER 26, ACI 301-16 CHAPTER 4 AND THE FOLLOWING INFORMATION:

MIX TYPE	USE	f'c (PSI)	TEST AGE (DAYS)	MAX. W/CM RATIO	MAX. AGG. SIZE	EXPOSURE CLASS
E	SPREAD FOOTINGS	4,000	28	N/A	1"	F0 S0 W0 C0

TABLE NOTES:

- REF. ACI 318-14 TABLE 19.3.2.1 FOR ADDITIONAL MIX REQUIREMENTS SPECIFIC TO EXPOSURE CLASS.
- ALL CONCRETE MIXES TO BE NORMAL WEIGHT CONCRETE, U.N.O.
- EXPOSURE CATEGORY "F" APPLIES TO LEVEL OF FREEZE THAW EXPOSURE.
- EXPOSURE CATEGORY "S" APPLIES TO LEVEL OF SULFATE EXPOSURE.
- EXPOSURE CATEGORY "W" APPLIES TO REQUIRED LEVEL OF PERMEABILITY.
- EXPOSURE CATEGORY "C" APPLIES TO CORROSIVE LOCATIONS - INCLUDING SURROUNDING ENVIRONMENT (SUCH AS MARINE ENVIRONMENT) AND CORROSIVE SOILS.
- ESTABLISH WATER-CEMENTITIOUS MATERIAL RATIO PER ACI 301-16 CHAPTER 4.

PORTLAND CEMENT CONTENT MAY BE REPLACED WITH FLY ASH CONFORMING TO ASTM C618 (INCLUDING TABLE 2A) TYPE F OR TYPE C, SLAG CEMENT CONFORMING TO ASTM C989, AND SILICA FUME CONFORMING TO ASTM C1240 PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

FOR MIX DESIGNS WITH f'c = 5,000 PSI OR LESS, SLAG CEMENT MAY BE SUBSTITUTED FOR FLY ASH AT A 1:1 RATIO WITHOUT TEST DATA. WHEN SLAG CEMENT IS SUBSTITUTED IN HIGHER STRENGTH MIXES OR AT A DIFFERENT RATIO, THE MIX STRENGTH MUST BE SUBSTANTIATED BY TEST DATA.

ALL CONCRETE SUBJECT TO EXPOSURE CLASSES F1, F2 OR F3 SHALL BE AIR ENTRAINED. AIR-ENTRAINING AGENTS SHALL CONFORM TO ASTM C260. THE AMOUNT OF ENTRAINED AIR SHALL BE ACCORDING TO ACI 318-14 TABLE 19.3.3.1 AS INDICATED BELOW WITH A FIELD TOLERANCE OF ± 1.5 PERCENT BY VOLUME. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK.

CONCRETE MIX AIR CONTENT		
MAX. AGGREGATE SIZE	CONCRETE SUBJECT TO FREEZE/THAW (EXPOSURE CLASS F1)	CONCRETE SUBJECT TO CONT. MOISTURE AND/OR DEICING CHEMICALS (EXPOSURE CLASS F2 AND F3)
3/8"	6.0%	7.5%
1/2"	5.5%	7.0%
3/4"	5.0%	6.0%
1"	4.5%	6.0%
1-1/2"	4.5%	5.5%

A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED IN CONCRETE MIX DESIGNS. A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494 TYPE F OR G MAY BE USED IN CONCRETE MIXES PROVIDING THAT THE SLUMP DOES NOT EXCEED 10".

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS ALONG WITH TEST DATA COMPLIANT WITH ACI 301-16 AND ACI 318-14 A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER AND SEOR IN CONJUNCTION WITH THE CONCRETE MIX DESIGN.

CONCRETE REINFORCING STEEL

CONCRETE REINFORCEMENT SHALL BE AS LISTED BELOW. ASTM A615 REINFORCEMENT MAY BE SUBSTITUTED FOR ASTM A706 REINFORCEMENT PROVIDED THAT THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED Fy BY MORE THAN 18,000 PSI AND THE RATIO OF ACTUAL TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25 AND THE ELONGATION REQUIREMENTS OF ASTM A706 ARE MET PER ACI 318-14 SECTION 20.2.2.5. MILL TESTS CERTIFICATIONS FOR SUBSTITUTED BARS SHALL BE SUBMITTED TO THE SPECIAL INSPECTOR AND SEOR PRIOR TO PLACEMENT. ASTM A706 REINFORCEMENT MAY BE SUBSTITUTED FOR ASTM A615 REINFORCEMENT.

REINFORCING LOCATION	MATERIAL GRADE
REINFORCING TO BE WELDED	ASTM A706 GRADE 60
ALL OTHER USES U.N.O.	ASTM A615 GRADE 60

ALL REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS AND SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL OR PLASTIC CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI MNL-66 "ACI DETAILING MANUAL". SHOP DRAWINGS SHALL INCLUDE ELEVATIONS OF ALL BEAMS, WALLS AND COLUMNS SHOWING BAR LOCATIONS.

REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN THE FIELD WITHOUT APPROVAL OF THE SEOR. PREHEATING METHODS SHALL BE SUBMITTED TO THE SEOR FOR APPROVAL PRIOR TO BENDING OF BARS #6 OR LARGER.

LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULES, EXCEPT AS NOTED ON DRAWINGS. USE LAP LENGTH FOR SMALLER BAR WHEN SPLICING DIFFERENT BAR SIZES. BARS SPLICED WITH NONCONTACT LAPS SHALL BE SPACED NO FARTHER THAN 1/5TH THE LAP LENGTH OR 6 INCHES. MECHANICAL SPLICES NOTED ON THE PLANS SHALL BE DAYTON SUPERIOR BAR-LOCK OR TAPER-LOCK COUPLERS (UES ER-319) OR APPROVED EQUAL WITH A CURRENT EVALUATION REPORT.

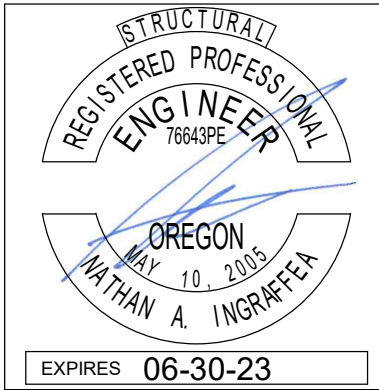
TYP. FOUNDATION AND MAT LAP SPLICE LENGTH SCHEDULE (IN.) - 60 KSI		
BAR SIZE	BOTTOM BARS	TOP BARS
	4,000 PSI	4,000 PSI
#3	14	20
#4	20	26
#5	24	32
#6	28	38
#7	42	54
#8	48	62
#9	54	70
#10	60	78
#11	70	90

TABLE NOTES:

- SPLICE LENGTHS APPLY TO ASTM A615 OR ASTM A706 GRADE 60 DEFORMED REINFORCING BARS ONLY.
- SPLICE LENGTHS ARE BASED ON THE CLEAR COVER AND MINIMUM BAR CLEAR SPACING INDICATED BELOW.
- SPLICE LENGTHS APPLY TO NORMAL WEIGHT CONCRETE ONLY. MULTIPLY TABLE VALUES BY 1.3 FOR LIGHT-WEIGHT CONCRETE.
- SPLICE LENGTHS APPLY TO UNCOATED BARS ONLY. MULTIPLY TABLE VALUES BY 1.5 FOR EPOXY-COATED BARS.
- COMBINATIONS OF EFFECTS DUE TO CONCRETE STRENGTH, CONCRETE WEIGHT, AND EPOXY COATING ARE CUMULATIVE.
- SLAB, FOUNDATION AND MAT TOP BARS ARE BARS CAST ABOVE MORE THAN 12" OF FRESH CONCRETE. ALL OTHER SLAB BARS MAY BE CONSIDERED BOTTOM BARS.

REINFORCING STEEL SHALL HAVE PROTECTION AND SPACING AS FOLLOWS:

CONCRETE COVER		
USE	CLEAR COVER	MIN. CLEAR SPACING
CONCRETE EXPOSED TO EARTH OR WEATHER	1-1/2" (#5 AND SMALLER) 2" (#6 AND LARGER)	2db OR 1"
CONCRETE CAST AGAINST AND EXPOSED TO EARTH	3"	3db OR 1"



EXPIRES 06-30-23

kpff

111 SW Fifth Ave., Suite 2600
Portland, OR 97204
O: 503.227.3251
F: 503.227.7980
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CAST-IN-PLACE ANCHOR BOLTS SHALL BE HEADED BOLTS CONFORMING TO ASTM F1554 GRADE 55, MEETING SUPPLEMENTAL REQUIREMENT S1 (WELDABLE) U.N.O.

SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE PLACING CONCRETE.

VERIFY ALL BLOCK OUTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING REQUIREMENTS.

POST-INSTALLED CONCRETE ANCHORS

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. DO NOT CUT REINFORCING IN NEW OR EXISTING CONCRETE DURING INSTALLATION.

REQUESTS FOR ANCHOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE SEOR IN WRITING ALONG WITH EVIDENCE OF EQUAL OR GREATER CAPACITY TO THE SPECIFIED CONNECTION.

INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED SHALL BE PERFORMED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER AS CERTIFIED THROUGH ACI/CRSI AND IN ACCORDANCE WITH ACI 318-14 SECTION 17.8.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE SEOR PRIOR TO INSTALLATION.

ALL-THREAD ROD FOR ADHESIVE ANCHORS SHALL CONFORM TO ASTM F1554 GRADE 55, U.N.O. ANCHORS EXPOSED TO EARTH OR WEATHER SHALL BE PROTECTED FROM CORROSION BY HOT-DIP GALVANIZING OR USE OF STAINLESS STEEL. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION, U.N.O.

NO LOADS OR WELDS SHALL BE PLACED ON EMBEDDED PLATES OR ANGLES FOR A MINIMUM OF 7 DAYS AFTER CASTING. ADHESIVE ANCHORS SHALL NOT BE INSTALLED FOR A MINIMUM OF 21 DAYS AFTER CASTING CONCRETE IN ACCORDANCE WITH ACI 318-14 SECTION 17.1.2.

STRUCTURAL STEEL

STRUCTURAL STEEL SHALL BE OF THE MATERIAL AND TYPE LISTED BELOW, U.N.O.:

STRUCTURAL STEEL	
SHAPE	MATERIAL GRADE
WIDE FLANGE SHAPES	ASTM A992, GRADE 50

STRUCTURAL STEEL THAT IS PART OF THE SEISMIC FORCE-RESISTING SYSTEM SHALL MEET THE FOLLOWING MATERIAL SPECIFICATIONS, U.N.O.:

STRUCTURAL STEEL - SFRS	
SHAPE	MATERIAL GRADE
PLATES	ASTM A572, GRADE 50

DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC 360, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", WITH THE FOLLOWING CLARIFICATIONS AND ADDITIONS:

- CLARIFY SECTIONS 7.5.1 AND 7.5.3 AS FOLLOWS:
EMBEDMENT LOCATION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR INFORMATION ONLY. THE SEOR IS NOT RESPONSIBLE FOR THE APPROVAL OF EMBEDMENT LOCATION DRAWINGS.
- ADD THE FOLLOWING PARAGRAPH TO SECTION 7.10.3:
"THE ERECTOR SHALL HAVE THE SOLE RESPONSIBILITY FOR DETERMINING THE MEANS AND METHODS USED TO PROPERLY AND ADEQUATELY BRACE THE FRAMING DURING ERECTION."

WELDING SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE STRUCTURAL ENGINEER. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER. FOR MEMBERS INCLUDED IN THE SEISMIC FORCE RESISTING SYSTEM (SFRS), REQUIREMENTS OF AWS D1.8 SHALL APPLY.

FOR MEMBERS AND CONNECTIONS THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM, DISCONTINUITIES CREATED BY ERRORS OR BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING, AND FLAME CUTTING, SHALL BE REPAIRED AS REQUIRED BY THE STRUCTURAL ENGINEER.

WELDS SHALL BE MADE USING E70XX ELECTRODES AND SHALL BE 3/16" MINIMUM, UNLESS OTHERWISE NOTED. WELDING SHALL BE BY AWS CERTIFIED WELDERS.

PROVIDE WEEP HOLES AT EXTERIOR CLOSED SECTIONS WHERE MOISTURE MAY ACCUMULATE. LOCATE WEEP HOLES AT BOTTOM OF HORIZONTAL MEMBERS AT MIDSPAN UNLESS OTHER NOTED. LOCATE WEEP HOLES AT BOTTOM OF VERTICAL MEMBERS EXCEPT AT ROOF ASSEMBLIES. ALL WEEP HOLES TO BE APPROVED PRIOR TO FABRICATION.

NON-SHRINK GROUT USED UNDER BEARING AND BASE PLATES SHALL BE ASTM C 1107, FACTORY-PACKAGED, NONMETALLIC AGGREGATE GROUT, NONCORROSIVE, NONSTAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME. GROUT STRENGTH SHALL BE 8,000 PSI MINIMUM AT 28 DAYS.

DISSIMILAR METALS SHALL BE SEPARATED AS REQUIRED TO PREVENT GALVANIC CORROSION BY COMPLETELY COVERING CONTACT AREAS WITH HESKINS 3453 CORROSION PROTECTION TAPE OR APPROVED EQUAL MATERIAL.

SAWN LUMBER

SAWN LUMBER SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE CURRENTLY ACCEPTED NATIONAL DESIGN SPECIFICATION (NDS) DESIGN VALUES FOR WOOD CONSTRUCTION AND CONFORMING TO THE WEST COAST LUMBER INSPECTION BUREAU OR WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES. LUMBER SHALL BE THE SPECIES, GRADE, AND MOISTURE CONTENT NOTED BELOW, U.N.O.:

USE	SPECIES AND GRADE	MOISTURE CONTENT
LUMBER 2" TO 4" THICK x 5" OR WIDER (JOISTS/RAFTERS)	DOUGLAS FIR-LARCH NO. 2 & BTR	MC 15, KD
LUMBER 2" TO 3" THICK x 4" TO 6" WIDE (STUDS)	DOUGLAS FIR-LARCH STUD	S-DRY, MC 15, KD

ALL LUMBER IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED, UNLESS AN APPROVED MOISTURE BARRIER IS PROVIDED.

CUTTING AND NOTCHING OF JOISTS AND STUDS SHALL CONFORM TO THE TYPICAL WOOD DETAILS PROVIDED OR OSSC SECTIONS 2308.4.2.4, 2308.5.9 AND 2308.7.4 WHERE NO DETAILS ARE SPECIFIED.

SALVAGED LUMBER IS ACCEPTABLE PROVIDED IT IS GRADED BY AN APPROVED GRADING AGENCY PRIOR TO USE AND MEETS A MINIMUM ALLOWABLE BENDING STRESS (Fb) OF 1,000 PSI. CONTRACTOR TO SUBMIT A GRADING REPORT ON EACH MEMBER TO THE ARCHITECT PRIOR TO INSTALLATION.

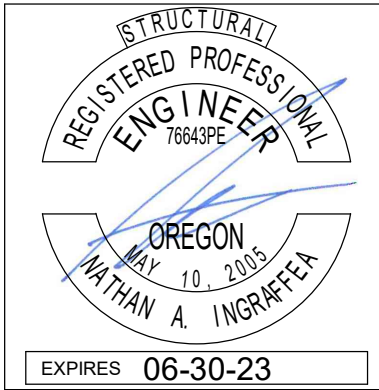
LUMBER FASTENERS AND ACCESSORIES

FRAMING ACCESSORIES INDICATED SHALL BE MANUFACTURED BY SIMPSON STRONG TIE (OR APPROVED EQUAL) AND OF THE SIZE AND TYPE SPECIFIED. ALL NAIL HOLES SHALL BE FILLED WITH STRUCTURAL FASTENERS, UNLESS NOTED OTHERWISE ON THE DRAWINGS AND FASTENERS SHALL BE INSTALLED FOLLOWING ALL MANUFACTURERS REQUIREMENTS. ACCESSORIES SHALL BE GALVANIZED UNLESS INDICATED OTHERWISE. PROVIDE G90 COATING EXCEPT WHERE IN CONTACT WITH PRESERVATIVE OR FIRE RETARDANT TREATED WOOD IN WHICH CASE G185 SHALL BE PROVIDED. SUBMIT SUBSTITUTION REQUESTS TO ENGINEER FOR APPROVAL OUTLINING THE FRAMING ACCESSORIES BEING REPLACED AND THE SUBSTITUTED FRAMING ACCESSORIES. ALLOWABLE LOADS FOR THE SPECIFIED ACCESSORIES SHALL BE TABULATED ALONG WITH THE ALLOWABLE LOADS FOR THE SUBSTITUTED ACCESSORIES. SUBSTITUTION REQUESTS WILL ONLY BE APPROVED WHERE SUBSTITUTED PRODUCTS ARE CLEARLY DOCUMENTED TO HAVE EQUAL OR GREATER CAPACITY IN ALL DIRECTIONS.

ALL FRAMING NAILS SHALL BE THE SIZE AND QUANTITY INDICATED AND CONFORM TO ASTM F 1667, INCLUDING SUPPLEMENT 1, "STANDARD SPECIFICATION OF DRIVEN FASTENERS: NAILS, SPIKES, AND STAPLES" AND ICC-ES REPORT ESR-1539 "POWER-DRIVEN STAPLES AND NAILS". NAILS SHALL BE IDENTIFIED BY LABELS (ATTACHED TO THEIR CONTAINERS) THAT SHOW THE MANUFACTURER'S NAME AND ICC-ES REPORT NUMBER, NAIL SHANK DIAMETER AND LENGTH AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FRAMING. NAILING NOT SHOWN SHALL BE AS INDICATED IN OSSC TABLE 2304.10.1 OR ICC ESR-1539. THE FOLLOWING NAIL SIZES SHALL BE USED WITH THE NAIL LENGTH DETERMINED BY MINIMUM PENETRATION INTO FRAMING MEMBER:

FRAMING NAILS		
NAIL TYPE	SHANK DIAMETER (IN.)	MINIMUM PENETRATION INTO FRAMING MEMBER (IN.)
6d	0.113	1.125
8d	0.131	1.375
10d	0.148	1.5
12d	0.148	1.5
16d	0.162	1.625

BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS.



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Portland, OR 97204
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F: 503.227.7980
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STATEMENT OF SPECIAL INSPECTION NOTES:

1.

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE 2019 OSSC, CONTRACT DOCUMENTS AND APPROVED SUBMITTALS. REFER TO SPECIAL INSPECTION AND TESTING TABLES FOR PROJECT REQUIREMENTS.

2.

SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE OWNER A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE APPROVED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1(1) OF AWS D1.1.

3.

THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS.

4.

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

5.

QUALITY ASSURANCE (QA) IS REQUIRED FOR STRUCTURAL STEEL ITEMS PER AISC 360 AND 341 UNLESS SPECIFICALLY NOTED OTHERWISE. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.

6.

INSPECTION TYPES:

CONTINUOUS : THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.

PERIODIC : THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.

OBSERVE : OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.

PERFORM : INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.

7.

PERFORM INSPECTION PRIOR TO FINAL ACCEPTANCE OF THE ITEM FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF SKILLS AND TOOLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THAT THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THAT THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.

8.

SPECIAL INSPECTION OF MECHANICAL POST INSTALLED ANCHORS SHALL BE IN STRICT CONFORMANCE WITH THE ICC REPORT AND MANUFACTURER'S INSTALLATION REQUIREMENTS. ANCHOR INSTALLERS SHALL BE QUALIFIED AS REQUIRED BY JURISDICTION

•

INSPECTION REPORTS SHALL IDENTIFY NAMES OF INSTALLERS.

•

SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING THAT THE ANCHORS WERE INSPECTED PER APPROVED ANCHOR EVALUATION REPORT.

9.

TESTING ABBREVIATIONS:

NDT - NON-DESTRUCTIVE TESTING

C.J.P. - COMPLETE JOINT PENETRATION

MT - MAGNETIC PARTICLE TESTING

RBS - REDUCED BEAM SECTION

10.

DOCUMENT (D); INDICATES CONTRACTOR AND SPECIAL INSPECTOR TO PROVIDE DOCUMENTATION IN ACCORDANCE WITH AISC 341.

CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED THE TABLES 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 CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

1.

ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.

2.

PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.

3.

IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

GENERAL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FABRICATORS	1705.10 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.
DELEGATED SUBMITTALS				X	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED/DELEGATED SUBMITTAL ITEMS, INCLUDING REQUIREMENTS FOR DESIGNATED SEISMIC SYSTEMS IN ACCORDANCE WITH OSSC SECTION 1705.12.4 IF APPLICABLE, TO BE SPECIFIED BY THE SYSTEM ENGINEER AND INCLUDED WITH DEFERRED SUBMITAL DOCUMENTS.
SUBMITTALS TO THE BUILDING OFFICIAL	1704.5			X	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS IN HARDENED CONCRETE AND COMPLETED MASONRY				X	

SOILS/GEOTECHNICAL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARDS REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
SOILS					
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6			X	BY QUALIFIED SPECIAL INSPECTOR
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL				X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS				X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL			X		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY				X	

SOILS/GEOTECHNICAL - TESTING

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6	VARIES; GEOTECHNICAL REPORT OR MINIMUM PER OSSC APPENDIX J107.5, WHICHEVER IS GREATER		X	BY QUALIFIED SPECIAL INSPECTOR
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	BY QUALIFIED SPECIAL INSPECTOR

STRUCTURAL
REGISTERED PROFESSIONAL
ENGINEER
1964SPE

OREGON
MAY 19, 2025
MATTHEW A. INGRAM, P.E.

EXPIRES 06-30-23

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111 SW Fifth Ave., Suite 2600
Portland, OR 97204
O: 503.227.3251
F: 503.227.7980
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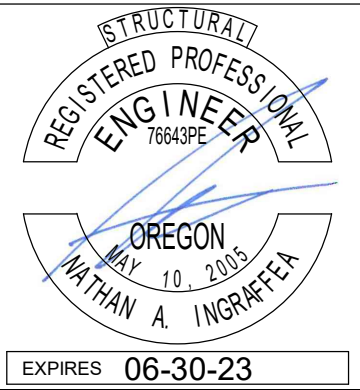
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SPECIAL INSPECTIONS AND TESTING

CONCRETE - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
GENERAL	1705.3 1901.6	ACI 318: 26.13			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE IBC AND SECTION 26.13 OF ACI 318.
REINFORCING STEEL PLACEMENT	1901.5.2 1908.4	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3, 26.13.3.3		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
INSPECT ANCHORS/BOLTS CAST IN CONCRETE	-	ACI 318: 17.8.2	X	X	ALL CAST-IN-PLACE ANCHORS/BOLTS SHALL BE VISUALLY INSPECTED. REFERENCE STEEL INSPECTIONS FOR ADDITIONAL INSTALLATION, MATERIAL AND WELDING INSPECTIONS OF STEEL ITEMS EMBEDDED IN CONCRETE (HEADED STUDS, DBA's, ETC.)
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.1 1904.2 1908.2 1908.3	ACI 318: CH. 19, 26.4.3, 26.4.4		X	
CONCRETE SPECIMENS FOR TESTING	1908.10	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	X		PRIOR TO CONCRETE PLACEMENT, FABRICATE CONCRETE SPECIMENS FOR TESTING. SEE THE CONCRETE TESTING TABLE FOR ADDITIONAL INFORMATION.
CONCRETE PLACEMENT, NON-SHRINK GROUT	1908.6, 1908.7, 1908.8	ACI 318: 26.5, 26.13.3.2(a)	X		
CONCRETE CURING	1908.9	ACI 318: 26.5.3 - 26.5.5, 26.13.3.3		X	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES
VERIFICATION OF FORMWORK		ACI 318: 26.11.1.2(b), 26.13.3.3		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
EMBEDDED ITEMS IN CONCRETE				X	ALL NON-STRUCTURAL EMBEDDED ITEMS, SUCH AS CONDUITS, PIPES AND SLEEVES, SHALL BE REVIEWED FOR CONFORMANCE WITH STRUCTURAL DOCUMENTS FOR SIZE, SPACING, LOCATION, EDGE DISTANCE AND TRIM REINFORCING.
REINFORCING STEEL MECHANICAL COUPLERS, TERMINATORS AND FORMSAVERS		ICC EVALUATION REPORTS		X	

CONCRETE - TESTING				
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
CONCRETE STRENGTH	1705.3	ASTM C39	EACH 150 CY NOR LESS THAN EACH 5000 SF OF SLAB OR WALL PLACED EACH SHIFT	FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED
CONCRETE SLUMP	ASTM C172	ASTM C143		
CONCRETE AIR CONTENT	ASTM C 31	ASTM C231		
CONCRETE TEMPERATURE	ACI 318 26.12 ACI 318 26.5	ASTM C1064		

STEEL - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION (NOTES 5 AND 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
CONTRACTOR QUALITY CONTROL REQUIREMENTS		AISC 360 CHAPTER N	X	X	CONTRACTOR TO PROVIDE QUALITY CONTROL FOR ALL ITEMS INDICATED TO BE OBSERVED AND/OR PERFORMED IN TABLE BELOW
STEEL FABRICATION					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1505.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS	1705.2.1.2 AISC 360 N5 TABLE 1705.2-2	AISC 360 A3.3 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 A3.4 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2.1.1 TABLE 1705.2-5	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING					
VERIFYING USE OF PROPER WPS'S	1705.2.1 AWS D1.1	AISC 360 N3.2			RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS		AWS D1.1		X	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2-6	AWS D1.1 CLAUSE 6	X		
MULTIPASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS GREATER THAN 5/16"			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
PLUG AND SLOT WELDS			X		
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	
VERIFICATION OF JOINT & CONNECTION DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING, AND STIFFENERS	TABLE 1705.2-7	AWS D1.1		X	
HIGH-STRENGTH BOLTING					
SNUG-TIGHT BOLT INSTALLATION	1705.2.1 TABLE 1705.2-2 AISC 360 M2-5 AISC 360 N5-6	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9 AISC 360 SECTION M2.5		X	ALL CONNECTIONS VISUALLY INSPECTED AND VERIFIED SNUG
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITH MATCH MARKING, DIRECT TENSION INDICATOR METHOD, OR TWIST-OFF TYPE TENSION CONTROL BOLT METHOD				X	ALL CONNECTIONS VISUALLY INSPECTED. CONNECTIONS USING DIRECT TENSION INDICATORS, ALL BOLTS SHALL BE INSPECTED AFTER SNUGGING AND AFTER PRETENSIONING
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITHOUT MATCH MARKING OR CALIBRATED WRENCH METHOD			X		ALL CONNECTIONS VISUALLY INSPECTED
INSPECTION TASKS PRIOR TO BOLTING					
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-1 AISC 360 M2.5	X		
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS				X	
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)				X	
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL				X	
CONNECTING ELEMENTS< INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS				X	
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED				X	
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS				X	
INSPECTION TASKS DURING BOLTING					
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-2 AISC M2.5 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9		X	
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION				X	
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				X	
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES				X	
INSPECTION TASKS AFTER BOLTING					
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-3	X		



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STEEL LATERAL SYSTEM - SPECIAL INSPECTIONS							
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	QA/QC TASKS (NOTES 5,6,10)		REMARKS		
			OBSERVE	PERFORM			
VISUAL INSPECTION TASKS PRIOR TO WELDING							
MATERIAL IDENTIFICATION (TYPE/GRADE)	1705.12.1	AISC 341 TABLE J6.1 AWS D1.8/D1.8M	X				
WELDER IDENTIFICATION SYSTEM			X				
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)							
JOINT PREPARATION			X		NOTE 7		
DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)			X				
CLEANLINESS (CONDITION OF STEEL SURFACES)			X				
TACKING (TACK WELD QUALITY AND LOCATION)			X				
BACKING TYPE AND FIT (IF APPLICABLE)			X				
CONFIGURATION AND FINISH OF ACCESS HOLES			X				
FIT-UP OF FILLET WELDS							
DIMENSIONS (ALIGNMENT, GAPS AT ROOT)			X		NOTE 7		
CLEANLINESS(CONDITION OF STEEL SURFACES)			X				
TACKING (TACK WELD QUALITY AND LOCATION)			X				
VISUAL INSPECTION TASKS DURING WELDING							
WPS FOLLOWED			1705.12.1	AISC 341 TABLE J6.2 AWS D1.8/D1.8M			
SETTINGS ON WELDING EQUIPMENT	X						
TRAVEL SPEED	X						
SELECTED WELDING MATERIALS	X						
SHIELDING GAS TYPE/FLOW RATE	X						
PREHEAT APPLIED	X						
INTERPASS TEMPERATURE MAINTAINED (MIN/MAX.)	X						
PROPER POSITION (F, V, H, OH)	X						
INTERMIX OF FILLER METALS AVOIDED UNLESS APPROVED	X						
USE OF QUALIFIED WELDERS	X						
CONTROL AND HANDLING OF WELDING CONSUMABLES							
PACKAGING	X						
EXPOSURE CONTROL	X						
ENVIRONMENTAL CONDITIONS							
WIND SPEED WITHIN LIMITS	X						
PRECIPITATION AND TEMPERATURE	X						
WELDING TECHNIQUES							
INTERPASS AND FINAL CLEANING	X						
EACH PASS WITHIN PROFILE LIMITATIONS	X						
EACH PASS MEETS QUALITY REQUIREMENTS	X						
NO WELDING OVER CRACKED TACKS	X						
FIELD INSTALLED DBA'S IN DIAPHRAGMS		AWS D1.1 CLAUSE 7		X			
WELDED REBAR ANCHORS IN DIAPHRAGMS		AWS D1.4	X		#6 AND LARGER BARS ARE TO BE WELDED		
VISUAL INSPECTION TASKS AFTER WELDING							
WELDS CLEANED	1705.12.1	AISC 341 TABLE J6.3 AWS D1.8/D1.8M	X				
SIZE, LENGTH, AND LOCATION OF WELDS				X			
WELDS MEET VISUAL ACCEPTANCE CRITERIA							
CRACK PROHIBITION				X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. * WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING		
WELD/BASE-METAL FUSION				X(D)			
CRATER CROSS SECTION				X(D)			
WELD PROFILE AND SIZE				X(D)			
UNDERCUT				X(D)			
POROSITY				X(D)			
K-AREA *							
PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS (IF REQUIRED)							
BACKING REMOVED, WELD TABS REMOVED AND FINISHED, AND FILLET WELDS ADDED (IF REQUIRED)				X(D)			
REPAIR ACTIVITIES				X(D)			
INSPECTION TASKS PRIOR TO BOLTING							
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL			1705.12.1	AISC 341 TABLE J7.1 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS	X		
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	X						
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	X						
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED FOR FASTENER ASSEMBLIES AND METHODS USED	X (D)				(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.		
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	X						
INSPECTION TASKS DURING BOLTING							
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.12.1	AISC 341 TABLE J7.2 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS	X				
JOINT BROUGHT TO THE SNUG TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION			X				
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING			X				
BOLTS ARE PRETENSIONED PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES			X				
INSPECTION TASKS AFTER BOLTING							
DOCUMENT ACCEPTED AND REJECTED CONNECTION	1705.12.1	AISC 341 TABLE J7.3		X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.		

OTHER INSPECTION TASKS					
RBS REQUIREMENTS, IF APPLICABLE	1705.12.1	AISC 341 TABLE J8.1 AISC 358 5.7		X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
CONTOUR AND FINISH				X(D)	
DIMENSIONAL TOLERANCES					
PROTECTED ZONE - NO HOLES AND UNAPPROVED ATTACHMENTS MADE BY FABRICATOR OR ERECTOR, AS APPLICABLE		AISC 341 TABLE J8.1 AISC 341 D1.3 AISC 341 I2.1		X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
PROPRIETARY SYSTEMS					
PROPRIETARY MOMENT RESISTING FRAME CONNECTION SYSTEMS	1705.1.1				REFER TO WELDING AND HIGH STRENGTH BOLTING SPECIAL INSPECTION REQUIREMENTS AND MATERIAL SPECIFIC TESTING REQUIREMENTS. REFER TO DEFERRED SUBMITTAL FOR ADDITIONAL INFORMATION

STEEL - TESTING				
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
STEEL				
ULTRASONIC (UT) TESTING OF WELDS	1705.2.1	AWS D1.1 6.13 & 6.14.3		ALL C.J.P. WELDS 5/16" AND THICKER REQUIRE UT TESTING.
MAGNETIC PARTICLE (MT) TESTING OF WELDS	1705.2.1	AWS D1.1 6.14.4 AISC360 N5.5c		REQUIRED AT THERMALLY CUT ACCESS HOLES WHERE FLANGE THICKNESS EXCEEDS 2" FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 2" FOR BUILT-UP SHAPES. REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS
PRE-CONSTRUCTION TESTING OF WELDING STUDS	1705.2.1	AWS D1.1 7.7.1	EACH SIZE AND TYPE OF STUD/BAR EACH SHIFT	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
STUD APPLICATION QUALIFICATION	1705.2.1	AWS D1.1 7.6	NON-PREQUALIFIED APPLICATIONS	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
PRE-INSTALLATION VERIFICATION OF PRETENSIONED HIGH STRENGTH BOLTS	1705.2.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 7	EACH COMBINATION OF DIAMETER, LENGTH, GRADE, AND LOT TO BE USED IN THE WORK	

STEEL LATERAL SYSTEM - TESTING				
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	DESCRIPTION/FREQUENCY	REMARKS
2a) CJP GROOVE WELD NDT	1705.13.1	AISC 341 SECTION J6	UT SHALL BE PERFORMED ON 5/16" THICKNESS AND GREATER. MT SHALL BE PERFORMED ON 25% OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS.	WELD DISCONTINUITIES SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF CRITERIA OF AWS D1.1/D1.1M TABLE 6.2. UT TESTING NOT REQUIRED ON THICKNESS LESS THAN 5/16"
2b) COLUMN SPLICE AND COLUMN TO BASE PL PJP GROOVE WELD NDT			UT SHALL BE PERFORMED ON PJP GROOVE WELDS IN COLUMN SPLICES AND COLUMN TO BASE PL WELDS	
2c) BASE METAL NDT FOR LAMELLAR TEARING AND LAMINATIONS			FOR BASE METAL THICKNESS (t) OF 1 1/2" AND GREATER AND CONNECTED MATERIAL THICKNESS OF 3/4" AND GREATER, UT FOR DISCONTINUITIES BEHIND AND ADJACENT TO THE FUSION LINE.	ANY BASE METAL DISCONTINUITIES FOUND WITHIN 1/4 OF THE STEEL SURFACE SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF THE CRITERIA OF AWS D1.1/D1.1M TABLE 6.2. t IS THE THICKNESS OF THE PART SUBJECTED TO THE THROUGH-THICKNESS STRAIN
2d) BEAM COPE AND ACCESS HOLE NDT			MT OR PENETRANT TESTING OF WELD SPLICES AND CONNECTIONS, THERMALLY CUT SURFACES OF BEAM COPEs AND ACCESS HOLES WHERE FLANGE THICKNESS EXCEEDS 1 1/2" FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 1 1/2" FOR BUILT-UP SHAPES	
2e) REDUCED BEAM SECTION REPAIR NDT			MT SHALL BE PERFORMED ON ANY WELD AND ADJACENT AREA OF THE RBS CUT SURFACE THAT HAS BEEN REPAIRED BY WELDING OR ON THE BASE METAL OF THE RBS CUT SURFACE IF A SHARP NOTCH HAS BEEN REMOVED BY GRINDING	
2f) WELD TAB REMOVAL SITES			AT THE END OF WELDS WHERE WELD TABS HAVE BEEN REMOVED, MT SHALL BE PERFORMED ON THE SAME BEAM-TO-COLUMN JOINTS RECEIVING UT AS REQUIRED UNDER ITEM 2a	MT OF CONTINUITY PLATE WELD TABS REMOVAL SITES IS NOT REQUIRED.



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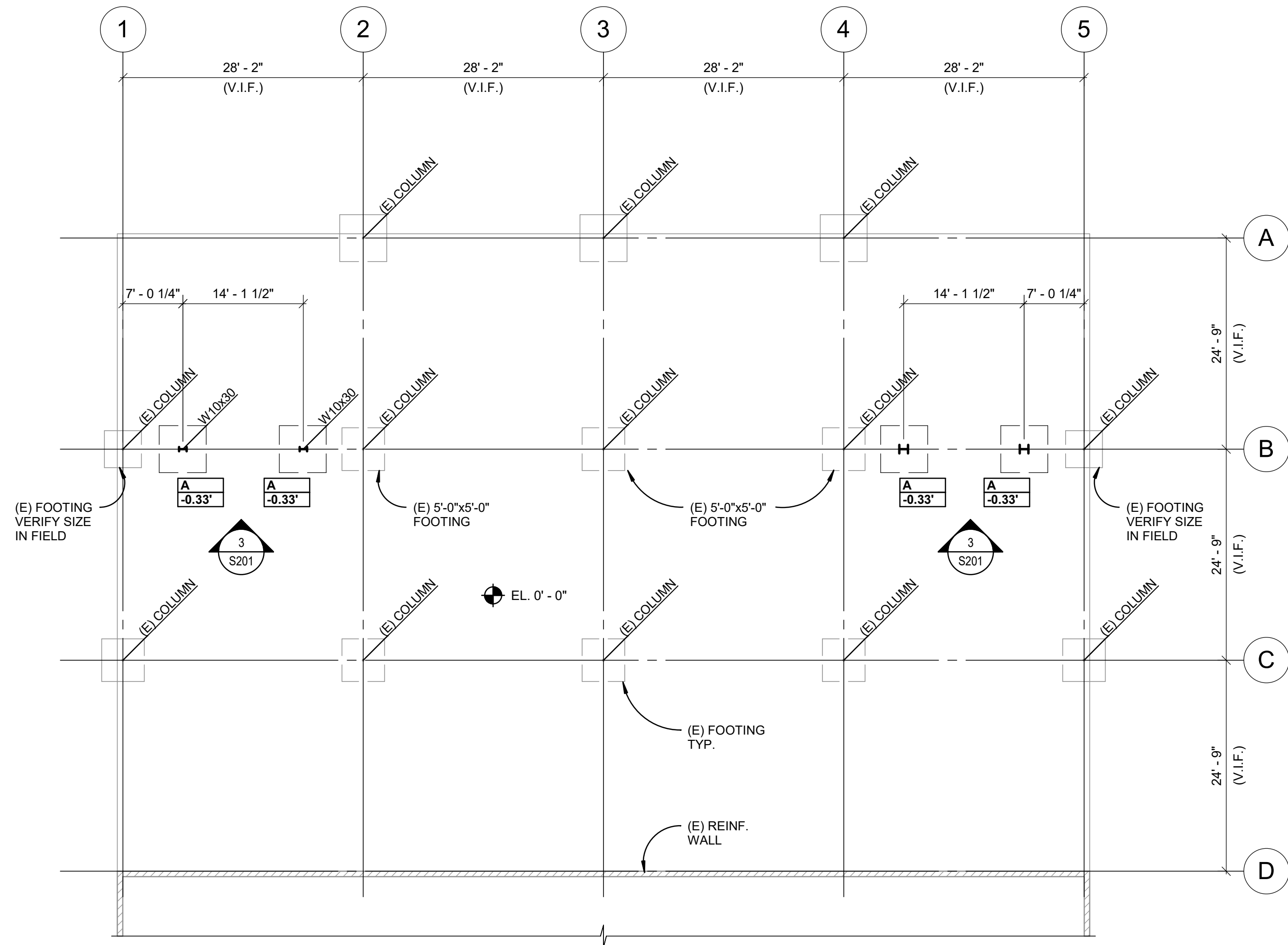
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SCHOOL DISTRICT

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COVERED PLAY SEISMIC UPGRADES
4125 NW 185th Ave, PORTLAND, OR 97229

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2 INCHES THEN
SCALE ACCORDINGLY)

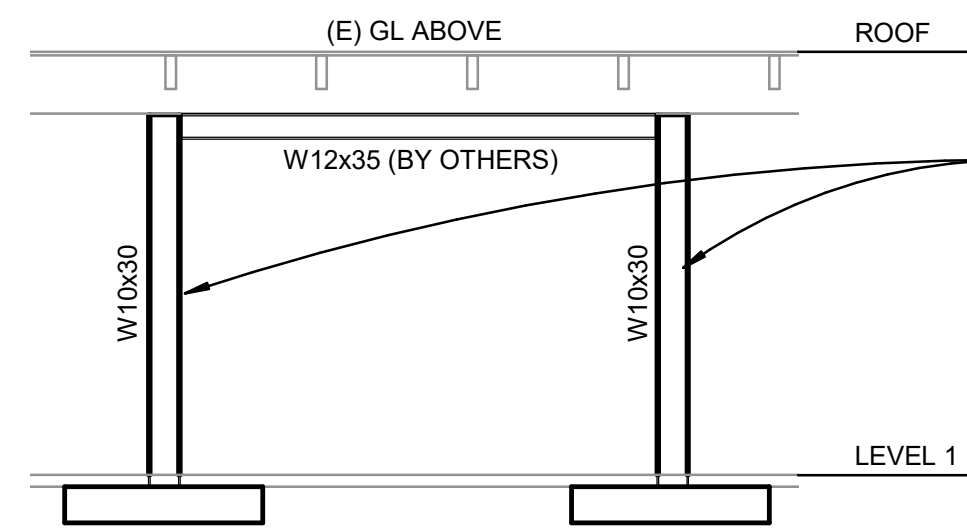
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checked: MD
job no.: 10022100871



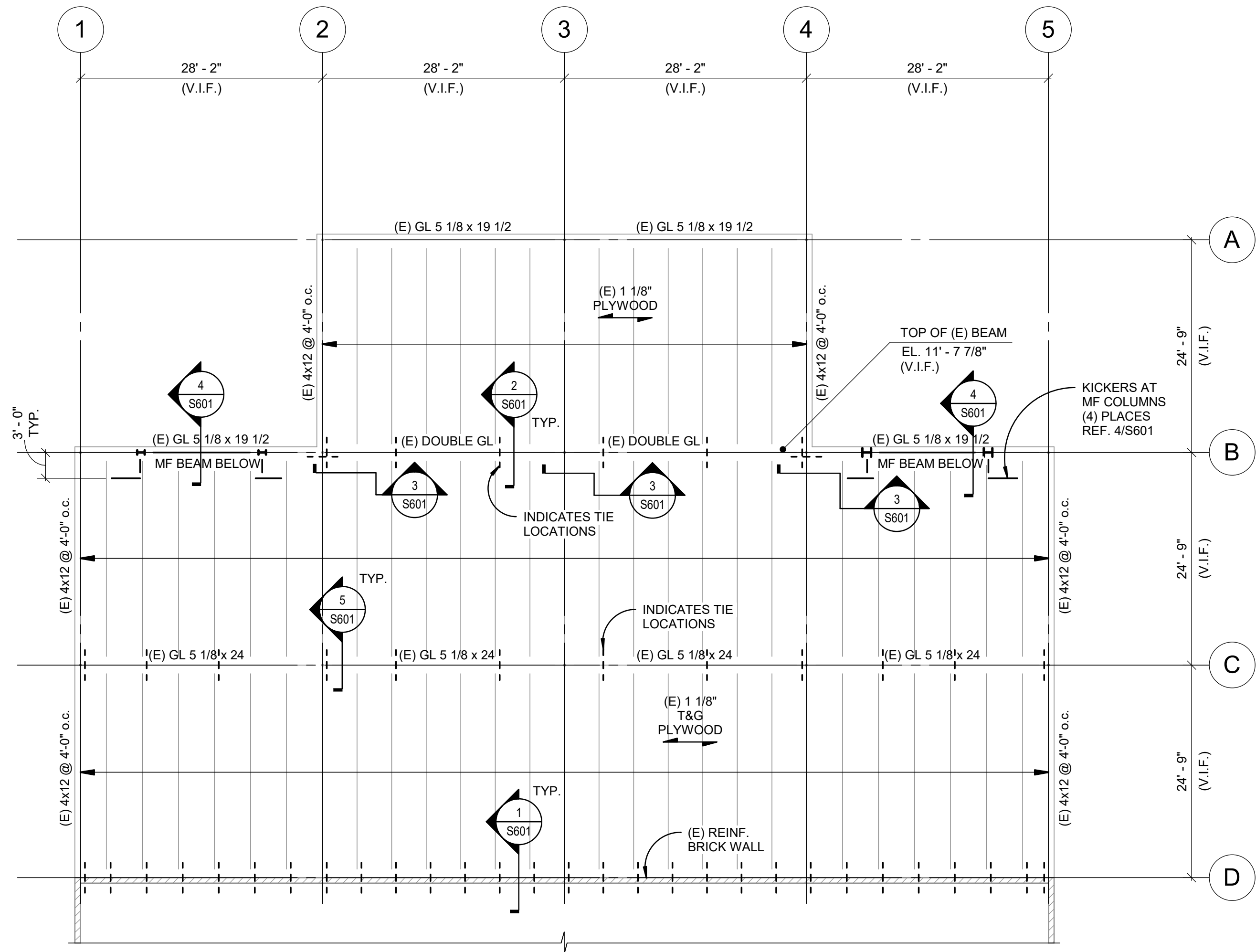
1 FOUNDATION PLAN
3/32" = 1'-0"

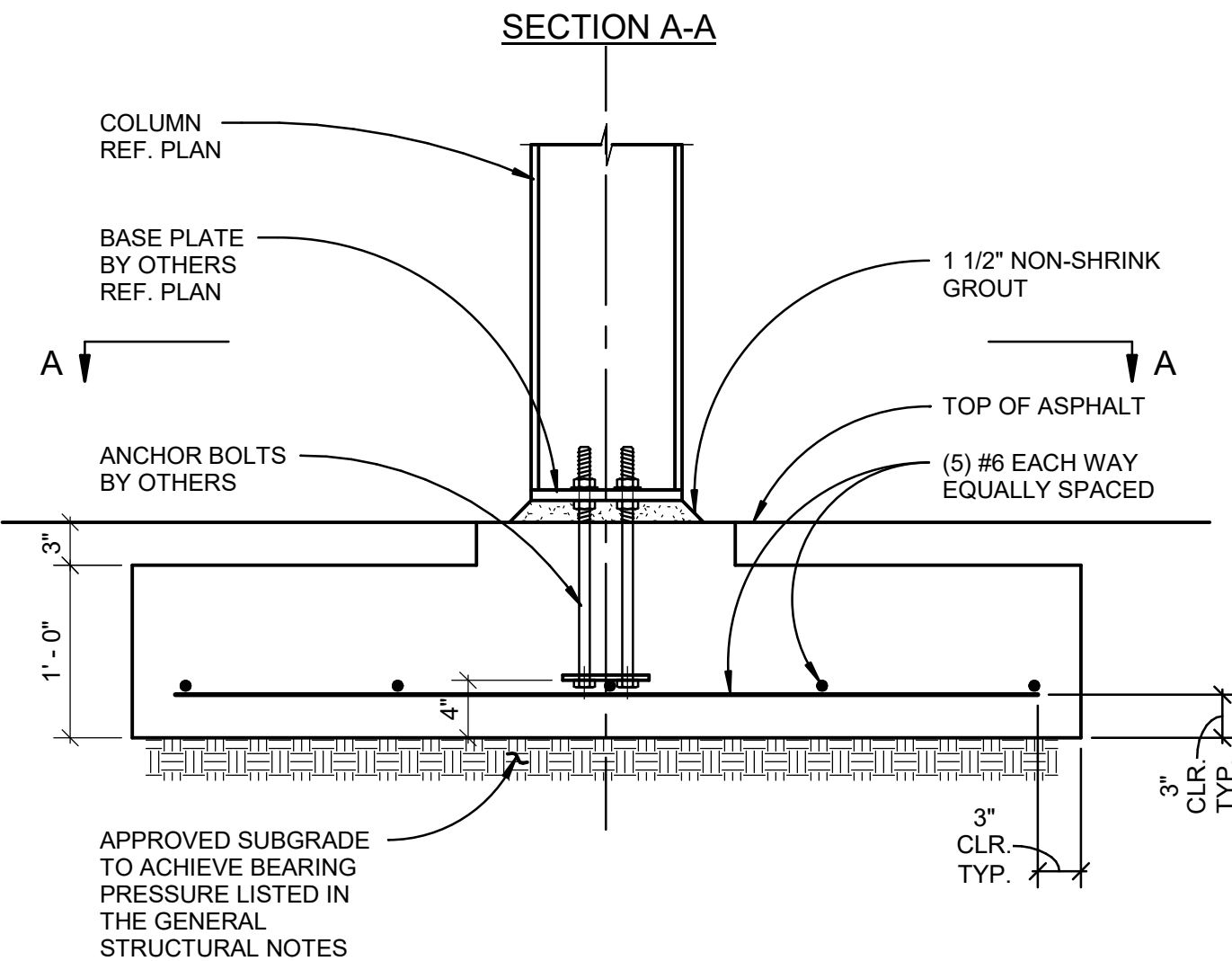
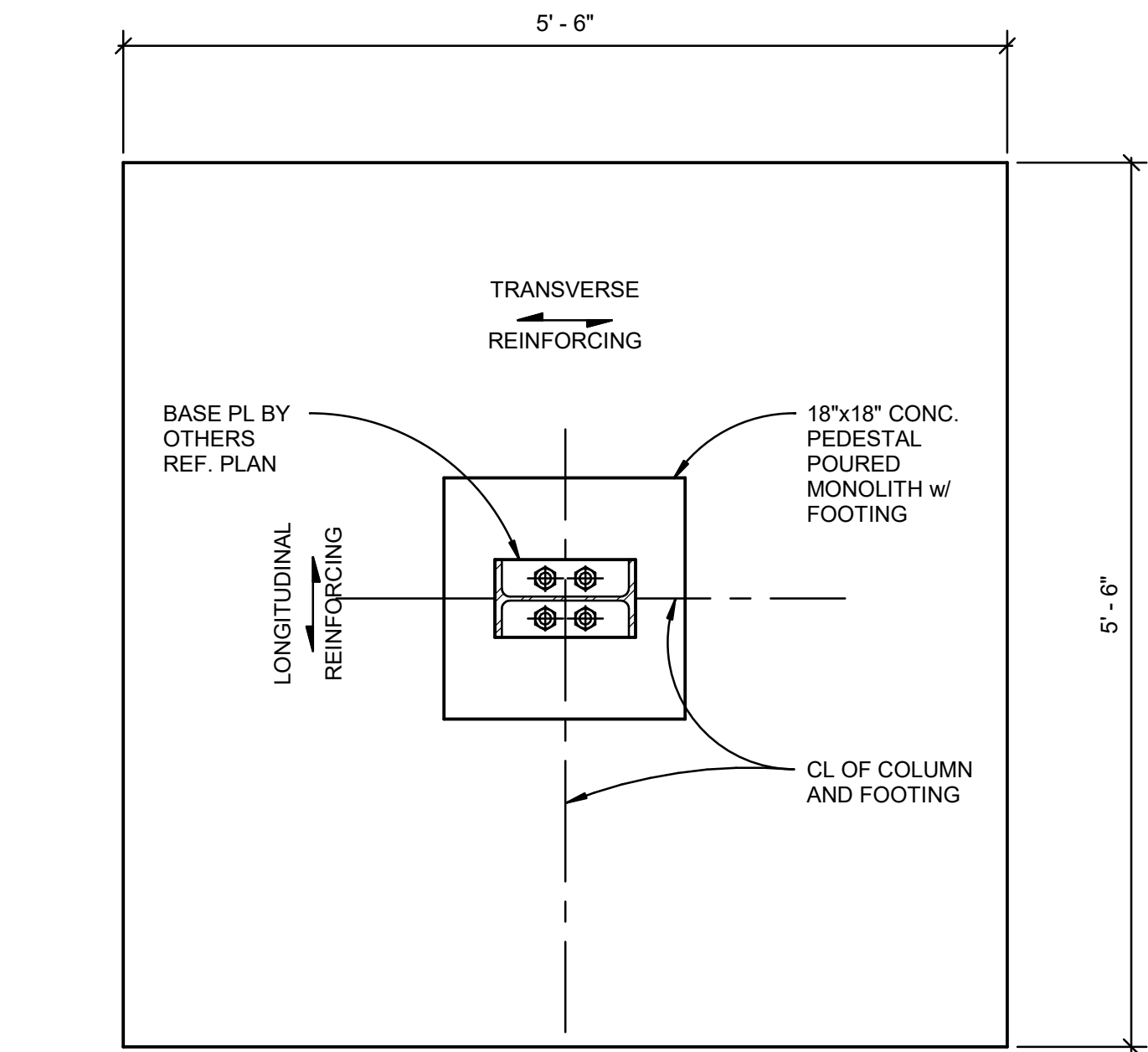


- NOTES:
- INDICATES FOOTING TYPE. REF. 1/S501 FOR SCHEDULE.
INDICATES TOP OF FOOTING ELEVATION RELATIVE TO GRADE.
 - EL. XXX'-XX" INDICATES TOP OF SLAB ELEVATION.
 - INDICATES EXISTING STRUCTURE.
 - FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS.



3 MOMENT FRAME ELEVATION
3/16" = 1'-0"





1 TYP. FOOTING AT STEEL COLUMN
1" = 1'-0"



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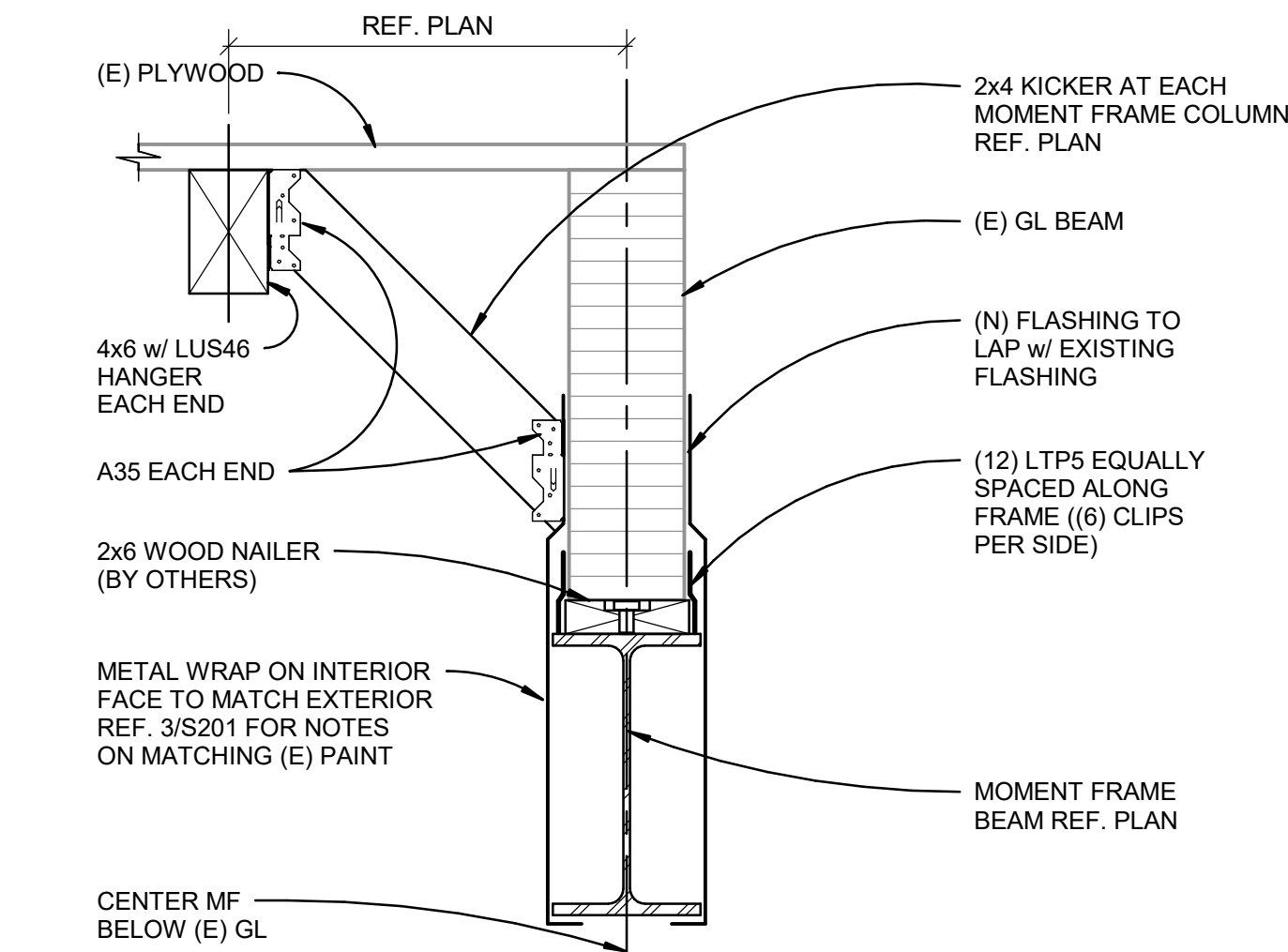


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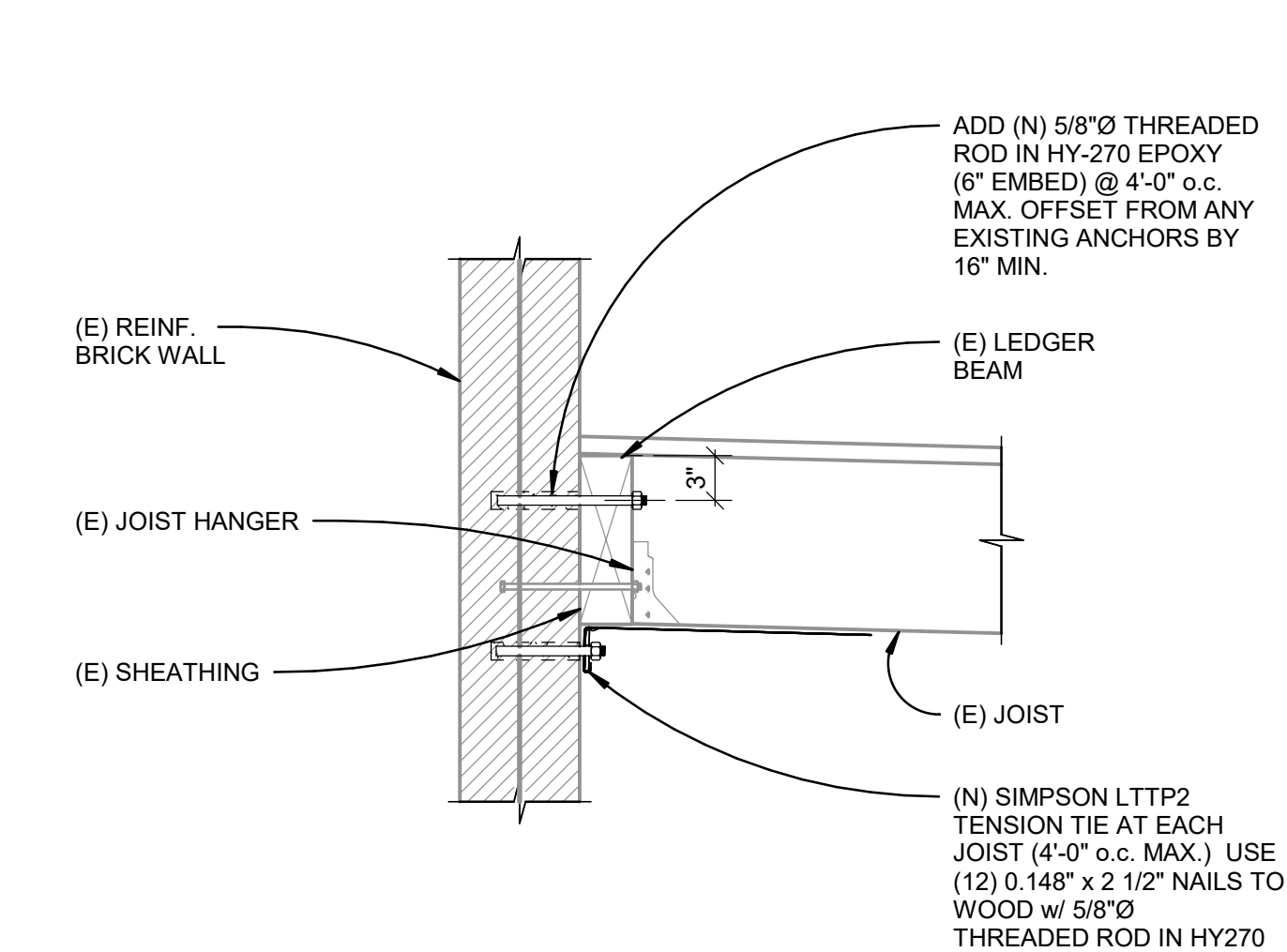
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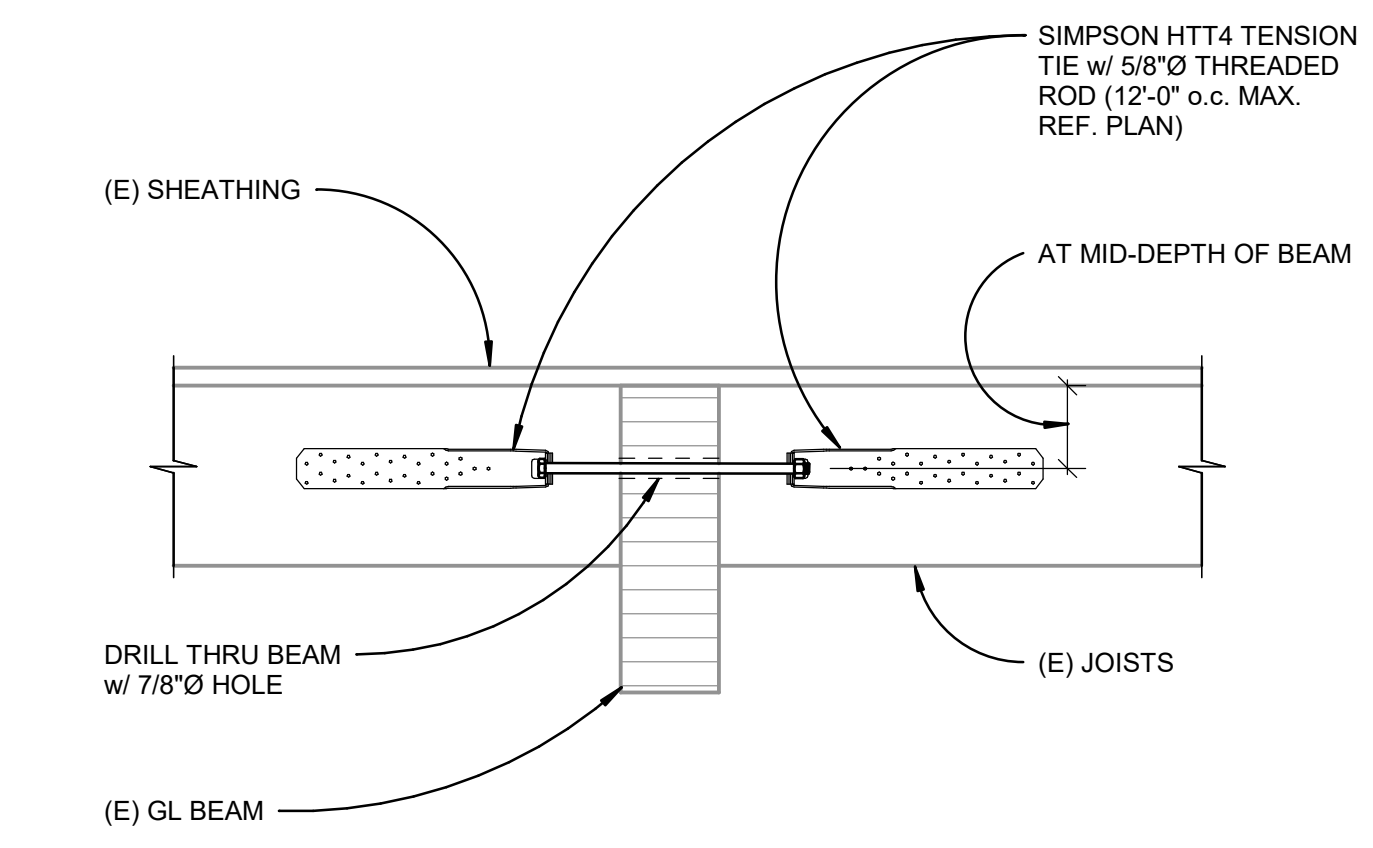
Sheet
S501



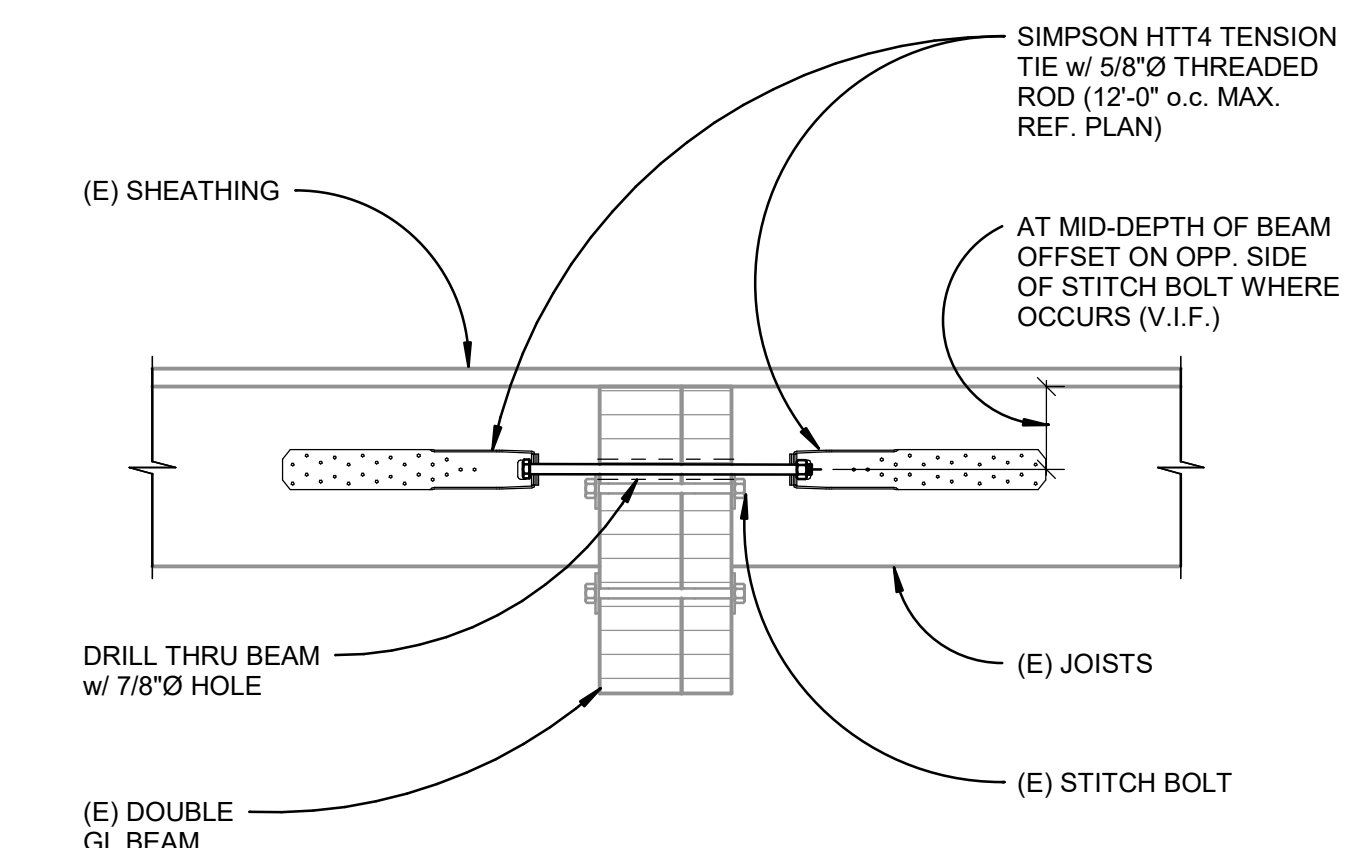
4 TYP. MOMENT FRAME CONN. TO (E) GL
1 1/2" = 1'-0"



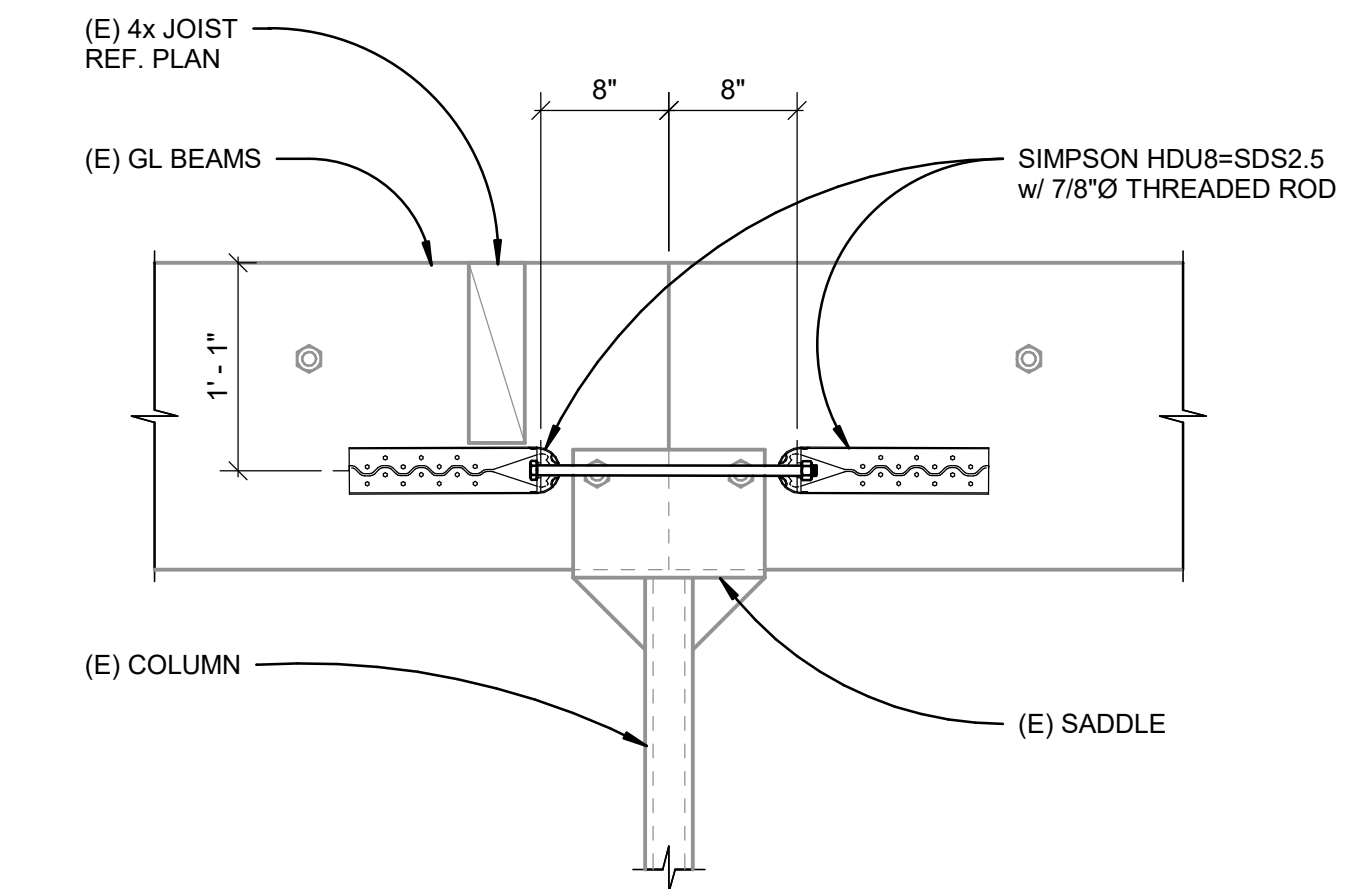
1 TYP. CONN. TO (E) WALL
1" = 1'-0"



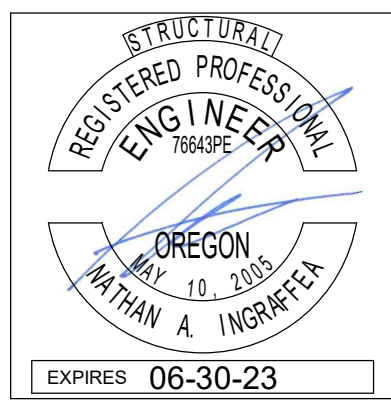
5 TYP. JOIST TIE
1" = 1'-0"



2 TYP. JOIST TIE AT DOUBLE GL BEAM
1" = 1'-0"



3 TYP. GIRDER TIE
1" = 1'-0"



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