COOS BAY SCHOOL DISTRICT
MARSHFIELD HIGH SCHOOL
SOFTBALL BATTING CAGE STRUCTURE

ABBREVIATIONS

(E)	EXISTING
EA.	EACH
O.C.	ON CENTER
GLB	GLUE LAMINATED BEAM
SAMF	SELF ADHERING MEMBRANE FLASHING
TYP.	TYPICAL
WRB	WEATHER RESISTANT BARRIER

ALTERNATE BIDS

NONE

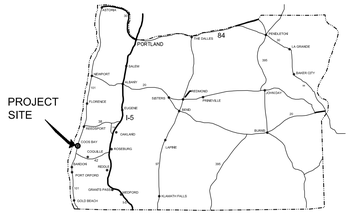
TEAM

OWNER
COOS BAY SCHOOL DISTRICT #9
1225 HEMLOCK AVE.
COOS BAY, OR 97420

ARCHITECT
HGE ARCHITECTS Inc.
333 S. 4TH STREET, COOS BAY, OREGON 97420
PHONE: 541.269.1166 FAX: 541.269.1833
CONTACT - ANDREW J. LOCATI, AIA

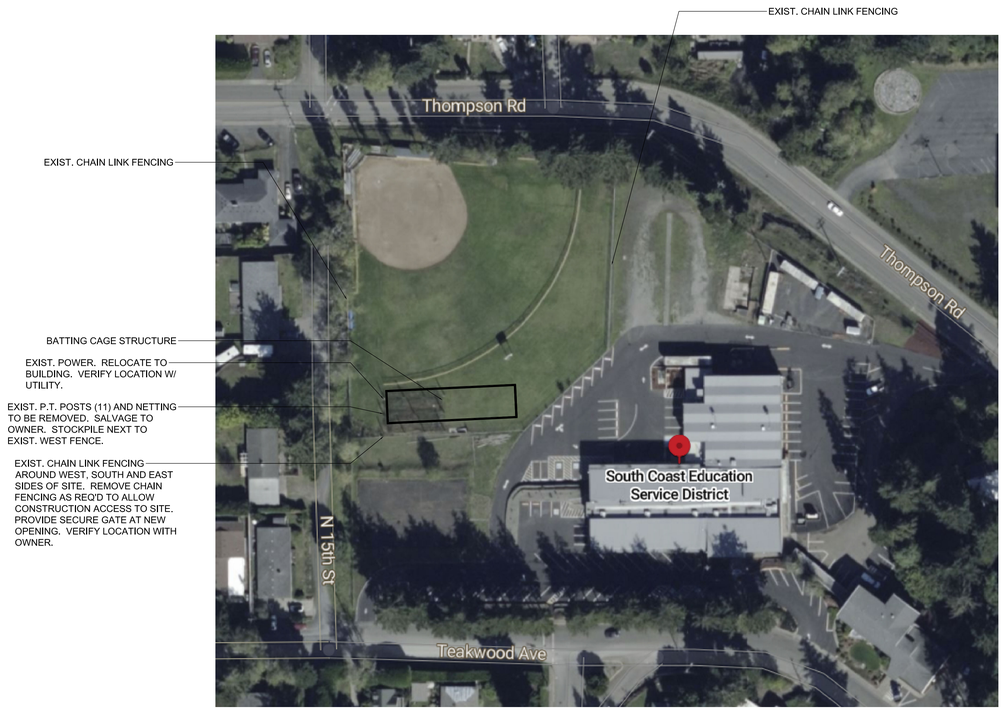
STRUCTURAL ENGINEER
DCI ENGINEERS
818 STEWART STREET, STE 1000
SEATTLE , WA 98101
PHONE: 206.332.1900
CONTACT: KYLE KRAXBERGER

LOCATION



PROJECT SITE:
SOUTH COAST EDUCATION SERVICE DISTRICT FIELD
1350 TEAKWOOD AVE, COOS BAY, OR 97420

SHEET INDEX



1 / A1.0 SITE PLAN
SCALE: NONE

N

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REGISTERED ARCHITECT
ANDREW J. LOCATI
COOS BAY, OREGON
STATE OF OREGON

PROJECT NO.: 22.48

MHS SOFTBALL BATTING CAGE STRUCTURE

SOUTH COAST EDUCATION SERVICE DISTRICT FIELD
1350 TEAKWOOD AVE.
COOS BAY, OR 97420

CONSTRUCTION

REVISIONS:
DATE DESCRIPTION

DATE: MAY 2023

SHEET TITLE:
SITE PLAN

A1.0

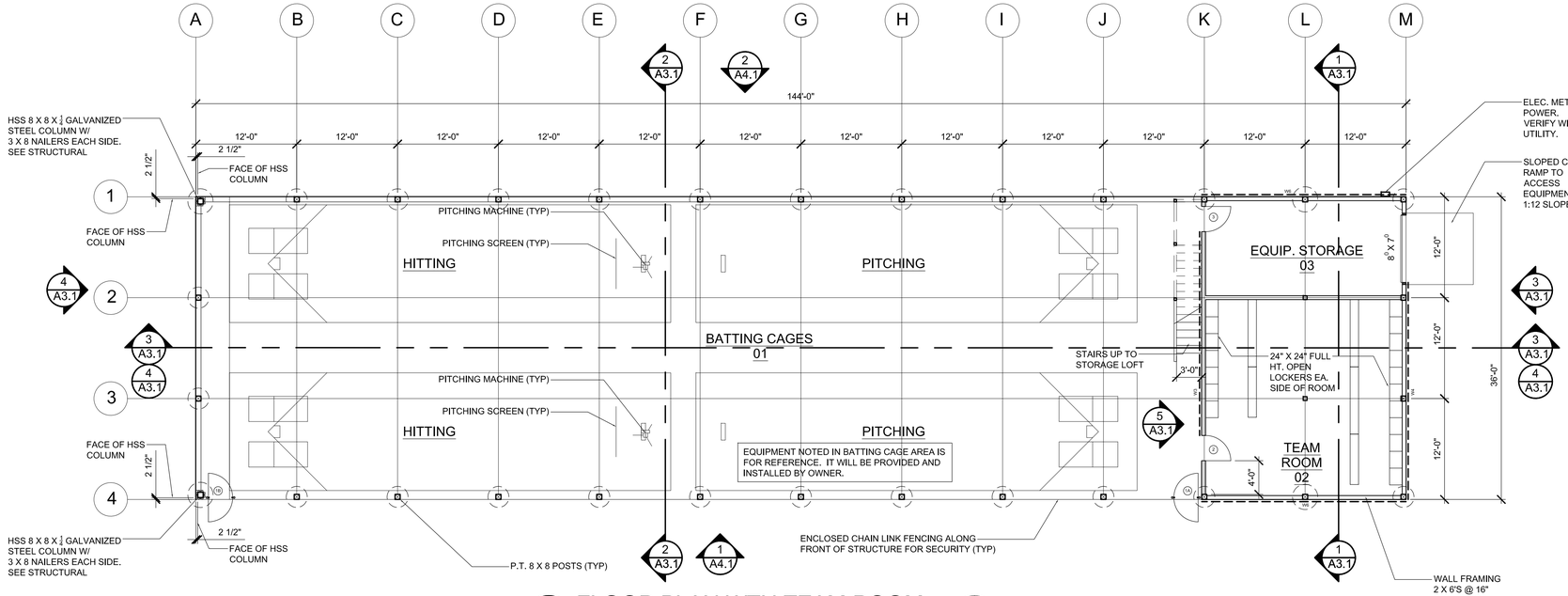
ROOM FINISH SCHEDULE

LOCATION		FLOOR		WALLS				CEILING		
ROOM NAME	NO.	MAT.	BASE	NORTH	SOUTH	EAST	WEST	MAT.	HT.	NOTES / REMARKS
BATTING CAGES	01	GRVL	-----	-----	LEP/ PLYWD	LEP/ PLYWD	LEP/ PLYWD	LEP/ GYP	16'	PAINT WALLS AND COLUMNS OF OPEN AIR SPACE
TEAM ROOM	02	CPT TILE	RBR	LEP/ GYP	LEP/ GYP	LEP/ GYP	LEP/ GYP	LEP/ GYP	8'	
EQUIPMENT STORAGE	03	CONC	-----	-----	-----	-----	-----	-----	8'	PAINT DOOR AND DOOR FRAME IN ROOM
UPPER STORAGE ROOM	04	PLYWD	-----	-----	-----	-----	-----	-----	7'-2"	PAINT DOOR AND DOOR FRAME IN ROOM

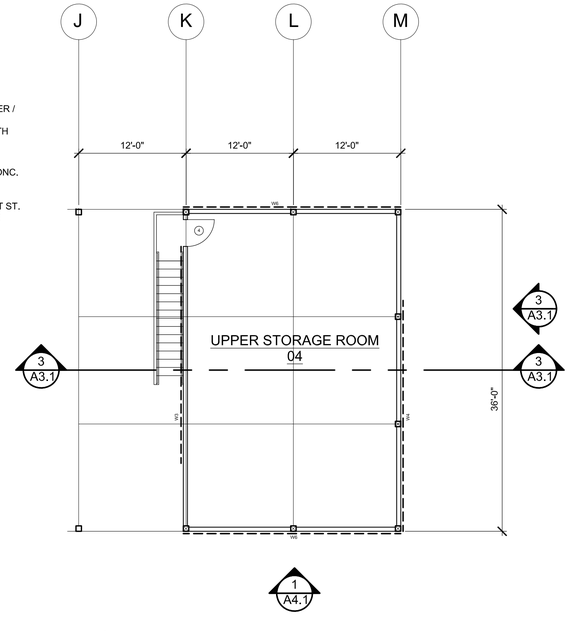
LEGEND

AC	-	ADHESIVE APPLIED ACOUSTICAL CEILING
TILE	-	TILE
CPT	-	CARPET
CPT TILE	-	CARPET TILE
(E)	-	EXISTING
EXP AGG CONC	-	EXPOSED AGGREGATE CONCRETE
FRP	-	FIBERGLASS REINFORCED PLASTIC PANEL
GRVL	-	GRAVEL (3" MINUS, COMPACTED. 4" THICK)
GYP	-	GYPSUM BOARD
LEP	-	LATEX ENAMEL PAINT
LEP/P. LAM	-	LATEX ENAMEL PAINT ABOVE PLASTIC LAMINATE WAINSCOT
LN	-	LINOLEUM
LVT	-	LUXURY VINYL TILE
EM	-	MODULAR ENTRANCE MATTING
P. LAM	-	PLASTIC LAMINATE
PLYWD	-	PLYWOOD
RBR	-	RUBBER BASE
RF	-	RESILIENT FLOORING
SS	-	SOLID SURFACING
SAT	-	SUSPENDED ACOUSTICAL TILE
SGB	-	SUSPENDED GYPSUM BOARD
WD	-	WOOD
WDPL	-	WOOD PANELING OVER GYPSUM BOARD
WD / RBR	-	WOOD AND 2 INCH RUBBER BASE - SEE DETAIL

NOTE:
VERIFY PAINT ACCENT COLOR LOCATIONS WITH OWNER.



1 A2.1 FLOOR PLAN WTH TEAM ROOM
SCALE: 1/8" = 1'-0"



3 A2.1 UPPER FLOOR PLAN
SCALE: 1/8" = 1'-0"

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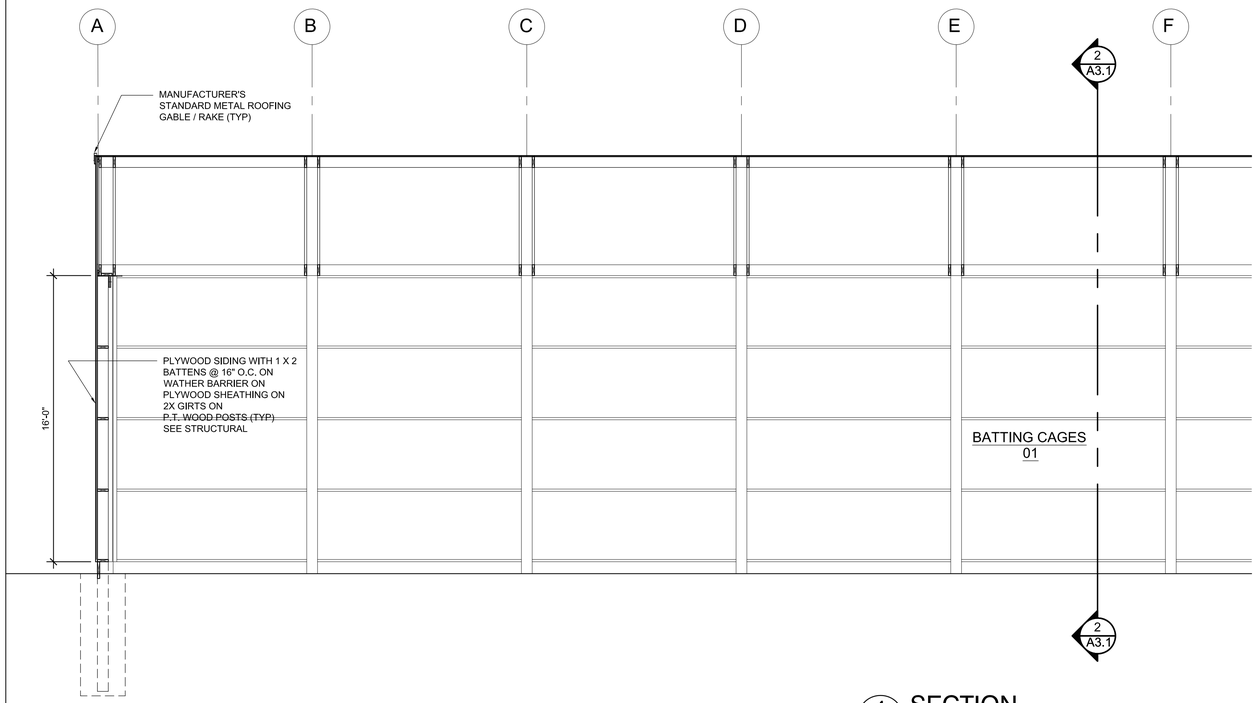
REVISIONS:

#	DATE	DESCRIPTION

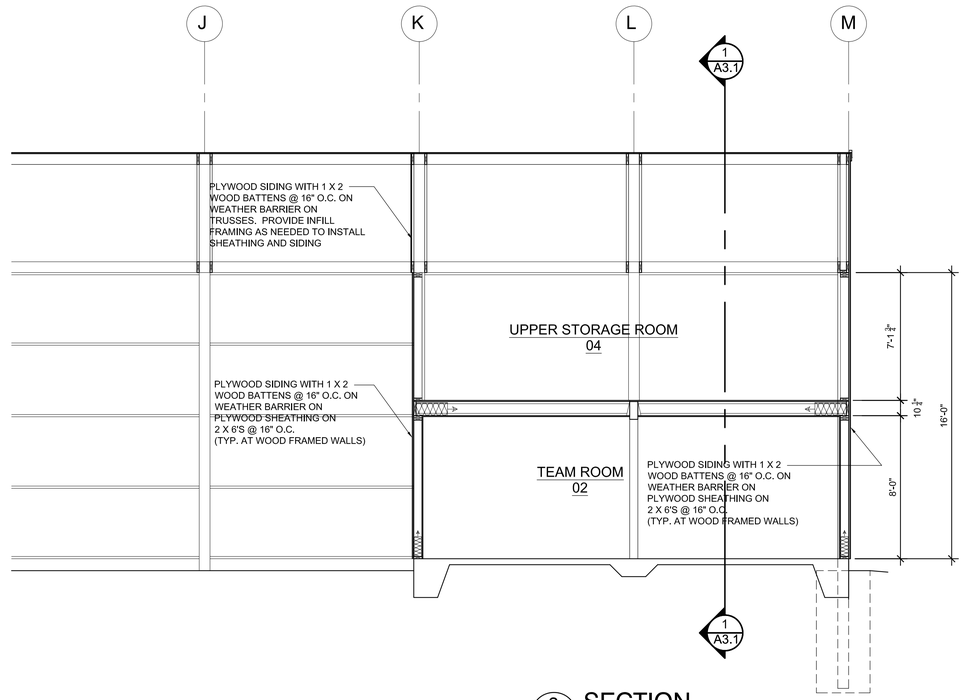
DATE: MAY 2023

SHEET TITLE:
FLOOR PLANS
FINISH SCH

A2.1



4 A3.1 **SECTION**
SCALE: 1/4" = 1'-0"



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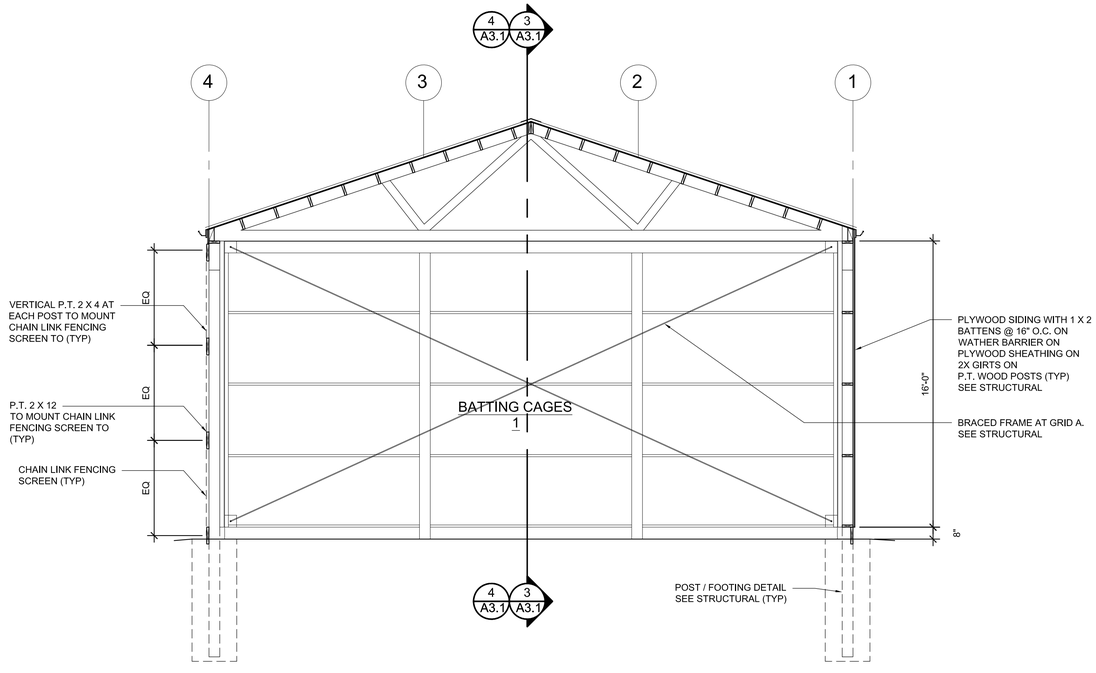

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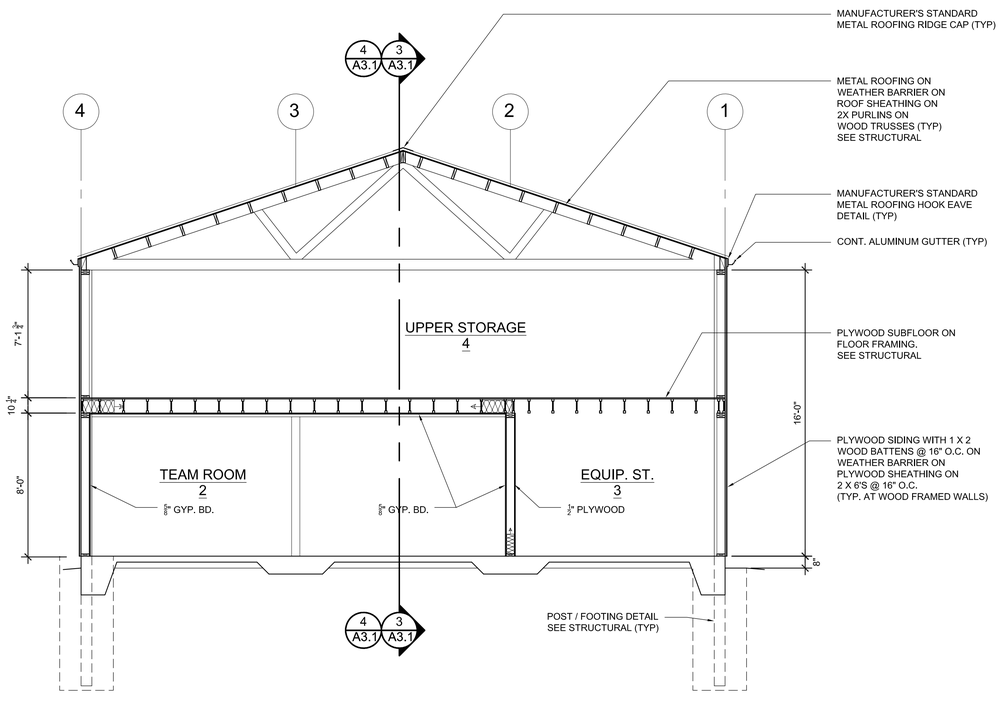

1 A3.1 **SECTION**
SCALE: 1/4" = 1'-0"

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PROJECT NO.: **22.48**

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CONSTRUCTION

REVISIONS:

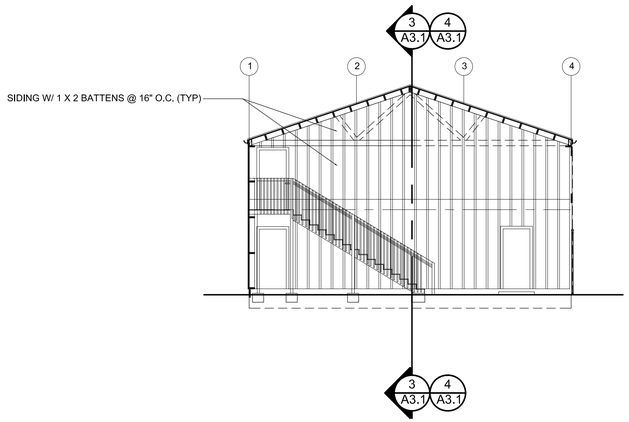
#	DATE	DESCRIPTION

DATE: MAY 2023

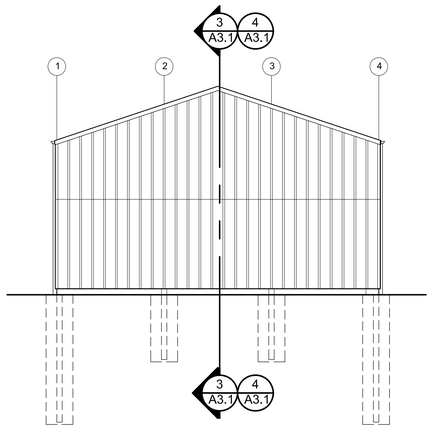
SHEET TITLE:

SECTIONS

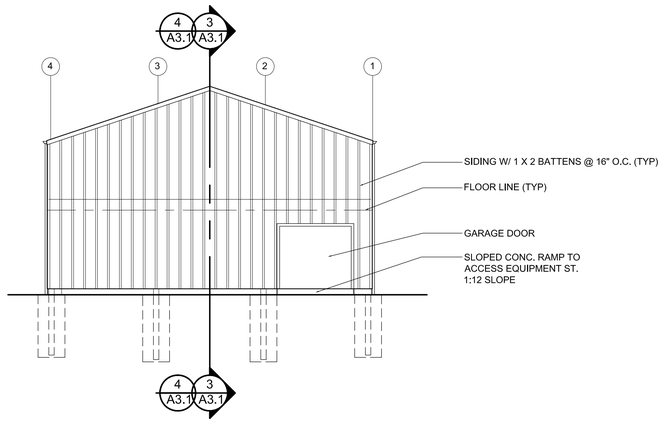
A3.1



5 A3.1 **EAST TEAM ROOM ELEVATION**
SCALE: 1/8" = 1'-0"



4 A3.1 **EAST ELEVATION**
SCALE: 1/8" = 1'-0"



3 A3.1 **WEST ELEVATION**
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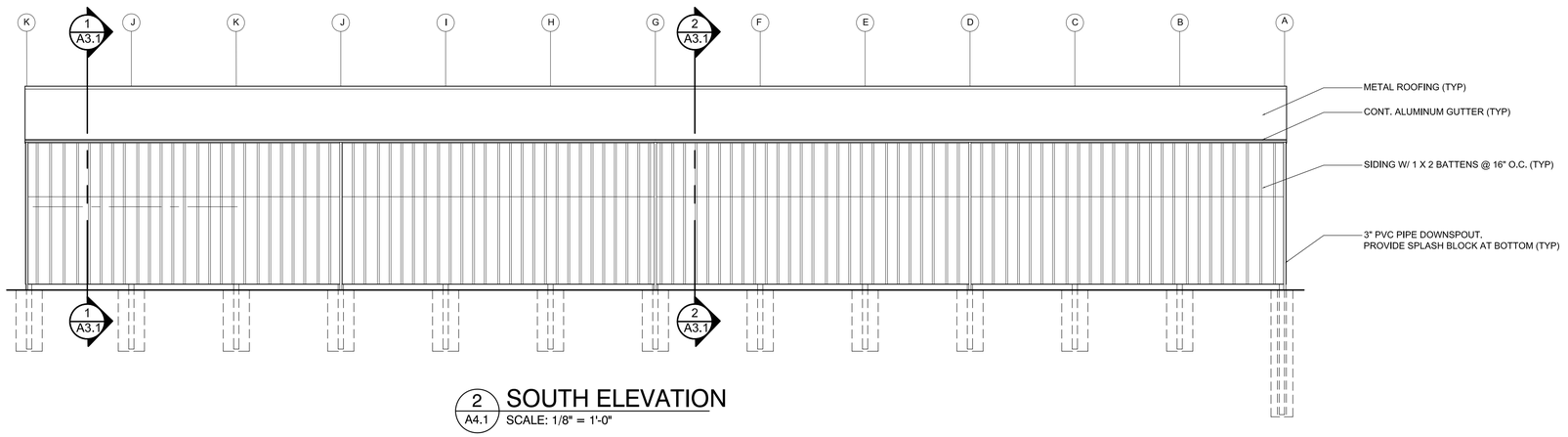

2 A4.1 **SOUTH ELEVATION**
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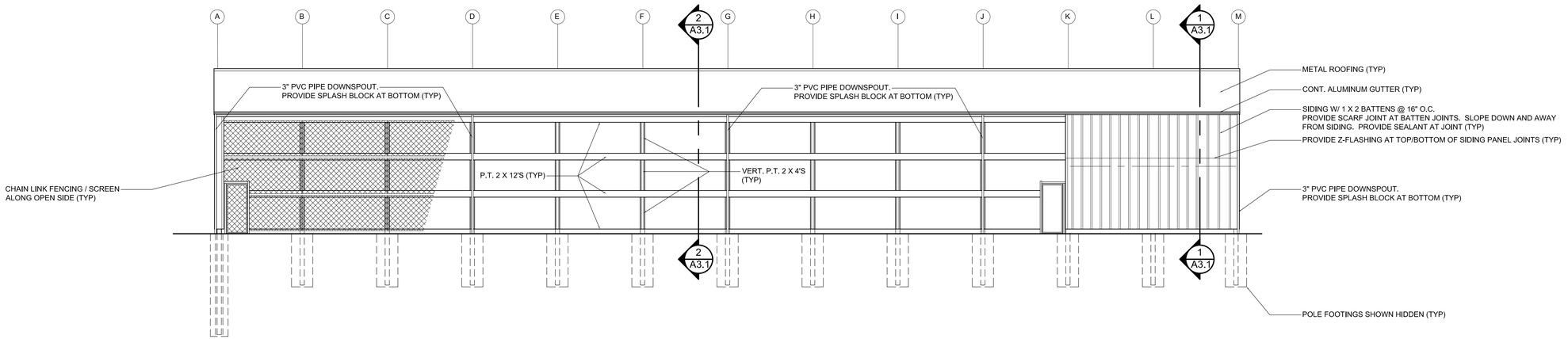

1 A4.1 **NORTH ELEVATION (FRONT)**
SCALE: 1/8" = 1'-0"

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PROJECT NO.: **22.48**

MHS SOFTBALL BATTING CAGE STRUCTURE

SOUTH COAST EDUCATION SERVICE DISTRICT FIELD
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COOS BAY, OR 97420

CONSTRUCTION

REVISIONS:

#	DATE	DESCRIPTION

DATE: MAY 2023

SHEET TITLE:

ELEVATIONS

A4.1

STRUCTURAL - GENERAL NOTES

GENERAL REQUIREMENTS

GOVERNING CODE: The design and construction of this project is governed by the **"Oregon Structural Specialty Code (OSSC)", 2022 Edition**, hereafter referred to as the OSSC, as adopted and modified by the City of **Coos Bay, OR** understood to be the Authority Having Jurisdiction (AHJ).

REFERENCE STANDARDS: Refer to Chapter 35 of 2022 OSSC. Where other Standards are noted in the drawings, use the latest edition of the standard unless a specific date is indicated. Reference to a specific section in a code does not relieve the contractor from compliance with the entire standard.

DEFINITIONS: The following definitions cover the meanings of certain terms used in these notes:

- "**Architect/Engineer**" – The Architect of Record and the Structural Engineer of Record.
- "**Structural Engineer of Record**" **(SER)** – The structural engineer who is licensed to stamp & sign the structural documents for the project. The SER is responsible for the design of the Primary Structural System.
- **"Submit for review"** - Submit to the Architect/SER for review prior to fabrication or construction.
- "**Per Plan**" – Indicates references to the structural plans, elevations and structural general notes.
- "**Seismic Force Resisting System (SFRS)**" **–** A recognized structural system of components (beams, braces, drags, struts, collectors, diaphragms, columns, walls, etc) of the primary structure that are specially designed and proportioned to resist earthquake-induced ground motions and maintain stability of the structure. Fabrication and installation of components designated as part of the SFRS require the general contractor, subcontractor, or supplier who is responsible for any portion of SFRS fabrication or installation to comply with special requirements (including, but not limited to, material control, compliance certifications, personnel qualifications, documentation, reporting requirements, etc) and to provide the required Quality Control including the required coordination of Special Inspections (Quality Assurance – QA). Special provisions apply to any member designated as part of the SFRS. Refer to plans, elevations, details, Design Criteria and Symbols and Legends for applicable members and connections.
- **"Specialty Structural Engineer" (SSE) –** A professional engineer (PE or SE), licensed in the State where the project is located, (typically not the SER), who performs specialty structural engineering services for selected specialty-engineered elements identified in the Contract Documents, and who has experience and training in the Specialty. Documents stamped and signed by the SSE shall be completed by or under the direct supervision of the SSE.
- **"Bidder-designed" –** Components of the structure that require the general contractor, subcontractor, or supplier who is responsible for the design, fabrication and installation of specialty-engineered elements identified in the Contract Documents to retain the services of an SSE. Submittals of "Bidder-designed" elements shall be stamped and signed by the SSE.

SPECIFICATIONS: Refer to the project specifications issued as part of the contract documents for information supplemental to these drawings.

OTHER DRAWINGS: Refer to the architectural, mechanical, electrical, civil and plumbing drawings for additional information including but not limited to: dimensions, elevations, slopes, door and window openings, non-bearing walls, stairs, finishes, drains, waterproofing, railings, mechanical unit locations, and other nonstructural items.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work. Use entire detail sheets and specific details referenced in the plans as "typical" wherever they apply. Similarly, use details on entire sheets with "typical" in the name wherever they apply.

STRUCTURAL RESPONSIBILITIES: The structural engineer (SER) is responsible for the strength and stability of the primary structure in its completed form.

COORDINATION: The Contractor is responsible for coordinating details and accuracy of the work; for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly; and for performing work in a safe and secure manner.

MEANS, METHODS and SAFETY REQUIREMENTS: The contractor is responsible for the means and methods of construction and all job related safety standards such as OSHA and DOSH (Department of Occupational Safety and Health). The contractor is responsible for means and methods of construction related to the intermediate structural conditions (i.e. movement of the structure due to moisture and thermal effects; construction sequence; temporary bracing, etc).

BRACING/SHORING DESIGN ENGINEER: The contractor shall at his discretion employ an SSE, a registered professional engineer for the design of any temporary bracing and shoring.

TEMPORARY SHORING, BRACING: The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is complete. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads as noted in DESIGN CRITERIA & LOADS below or the capacity of partially completed construction as determined by the Contractor's SSE for Bracing/Shoring.

CHANGES IN LOADING: The contractor has the responsibility to notify the SER of any architectural, mechanical, electrical, or plumbing load imposed onto the structure that differs from, or that is not documented on the original Contract Documents (architectural / structural / mechanical / electrical or plumbing drawings). Provide documentation of location, load, size and anchorage of all undocumented loads in excess of **400** pounds. Provide marked-up structural plan indicating locations of any new equipment or loads. Submit plans to the Architect/Engineer for review prior to installation.

NOTE PRIORITIES: Plan and detail notes and specific loading data provided on individual plans and detail drawings supplements information in the Structural General Notes.

DISCREPANCIES: In case of discrepancies between the General Notes, Specifications, Plans/Details or Reference Standards, the Architect/Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Architect/Engineer before proceeding with the work. Should any discrepancy be found in the Contract Documents, the Contractor will be deemed to have included in the price the most expensive way of completing the work, unless prior to the submission of the price, the Contractor asks for a decision from the Architect as to which shall govern. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site. Conflicts between the drawings and actual site conditions shall be brought to the attention of the Architect/Engineer before proceeding with the work.

ADJACENT UTILITIES: The contractor shall determine the location of all adjacent underground utilities prior to earthwork, foundations, shoring, and excavation. Any utility information shown on the drawings and details is approximate and not necessarily complete.

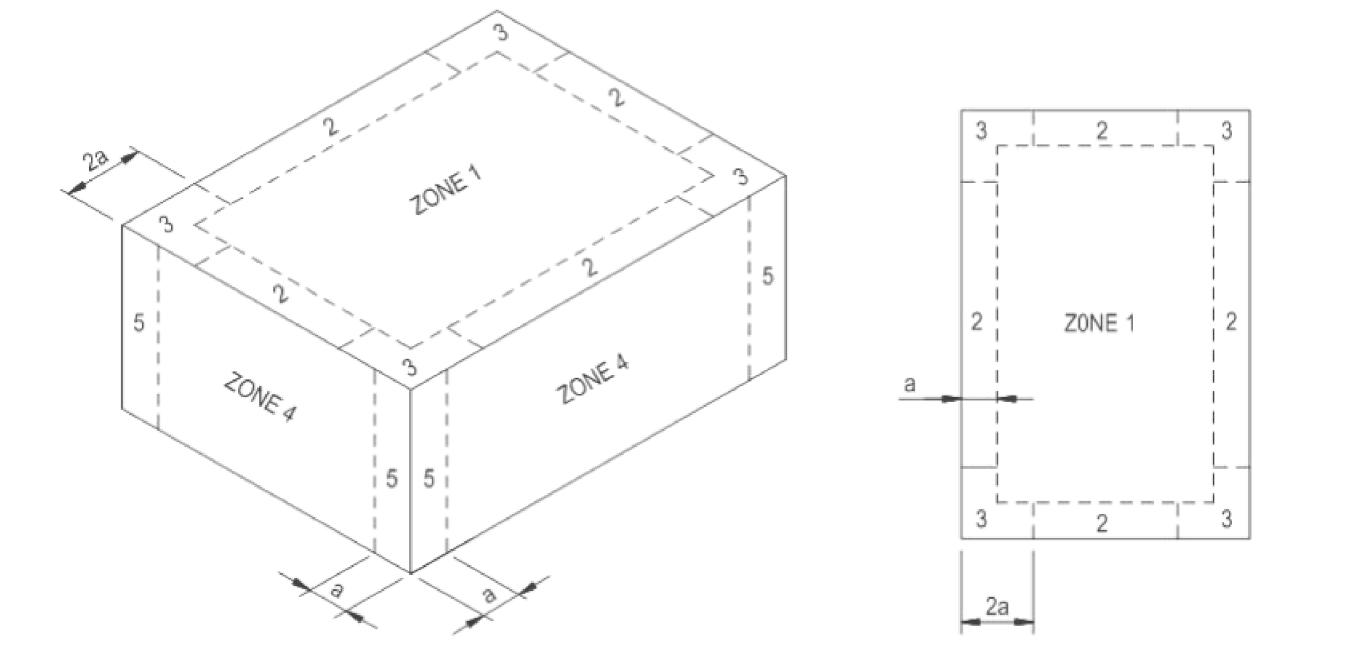
ALTERNATES: Alternate products of similar strength, nature and form for specified items may be submitted with adequate technical documentation (proper test report, etc.) to the Architect/Engineer for review. Alternate materials that are submitted without adequate technical documentation or that significantly deviate from the design intent of materials specified may be returned without review. Alternates that require substantial effort to review will not be reviewed unless authorized by the Owner.

DESIGN CRITERIA AND LOADS

OCCUPANCY:	Risk Category of Building per 2019 OSSC Table 1604.5 =	**II**

WIND DESIGN:	**MAIN WIND FORCE RESISTING SYSTEM**	
	Ultimate Design Wind Speed, V_{ULT} (MPH) =	**120**
	Exposure Category	**B**
	Internal Pressure Coefficient, C_{pi} =	**+/- 0.55**
	Topographic Factor, K_{zt} =	**1.0**
	Wind Analysis procedure used:	**Directional**

WIND DESIGN: COMPONENTS & CLADDING PRESSURES FOR DESIGN (PSF, ULTIMATE)



ISOMETRIC VIEW PLAN VIEW

EFFECTIVE WIND AREA (SQ. FT)

a = 3'-7"	10	20	50	100	500
ZONE 1	+/- 31.8	+/- 31.2	+/- 30.3	+/- 29.6	+/- 29.6
ZONE 2	+/- 49.4	+/- 46.1	+/- 41.7	+/- 38.4	+/- 38.4
ZONE 3	+/- 69.2	+/- 65.2	+/- 59.9	+/- 56.0	+/- 56.0
ZONE 4	+/- 36.2	+/- 35.1	+/- 33.5	+/- 32.3	+/- 29.6
ZONE 5	+/- 42.8	+/- 40.5	+/- 37.4	+/- 35.1	+/- 29.6

1) Components and Cladding Wind Pressures are based on ASCE 7-16 Chapter 30 Part 3: Buildings with h > 60 ft.
2) Components and Cladding zone locations are based on ASCE 7-16 Table 30.5-1 for Flat Roofs Θ < 10 deg.
3) For parapets around the perimeter of the roof equal to or higher than 3 ft, Zone 3 shall be treated as Zone 2.
4) All Parapet Components and Cladding Wind Pressures shall be determined through ASCE 7-16 Figure 30.6-2.

SEISMIC DESIGN:	**Seismic Design Category: SDC =**	E
	Basic Structural System	**Bearing Wall, Building Frame**
	Seismic Force Resisting System	**Wood Shear Walls, Steel Ordinary Concentrically Braced Frame**
	Response Modification Factor: **R =**	**6.5, 3.25**
	System Over Strength Factor **Omega =**	**2.5, 2**
	Deflection Amplification Factor C_d =	**4, 3.25**
	Site Classification per OSSC 1613.3.2 & ASCE 7-16, Ch. 20 **Site Class =**	**D**
	Seismic Importance Factor per ASCE 7-16 Table 1.5-2 I_e =	**1.0**
	Spectral Response Acceleration (Short Period) S_s =	**1.631 g**
	Spectral Response Acceleration (1-Second Period) S_1 =	**0.815 g**
	Spectral Design Response Coefficient (Short Period) S_{DS} =	**1.305 g**
	Seismic response coefficient(s) C_s =	**0.201, 0.401**
	Seismic Analysis procedure used:	**Equivalent Lateral Force (ELF)**

SNOW LOAD: (1)	Flat Roof Snow Load, (PSF) p_f =	1 (2)
	Snow Drift Loading required by Authority Having Jurisdiction?	**Yes**
	Snow Load Importance Factor I_s =	**1.0** (3)
	Ground Snow Load, (PSF) p_g =	**1**
	Snow Exposure Factor C_e =	**B**
	Thermal Factor C_t =	**1.0**
	See Roof Plan for Drift Loading	

1) Snow Load is un-reducible and includes 5 psf rain-on-snow surcharge where ground snow load is greater than zero and 20 psf or less per ASCE 7-16 Section 7.10.
2) Snow Load based on **SEAO Oregon Snow Loading web utility.**
3) Snow Load Importance Factor per ASCE 7-16 Table 1.5-2.

DESIGN LIVE LOADS	**AREA**	**LIVE LOADS (PSF) UNO**	**REMARKS & FOOTNOTES** (6)
	Handrails & Pedestrian Guardrails	50 PLF or 200 LB	(1)
	Stairs & Exits	100 PSF or 300 LB	Stair treads per note (2)
	Interior Mezzanine	50	
	Roofs	20 PSF or 300 LB	Area load is reducible. Point load per note (2), See above for Snow Load

(1) Top rail shall be designed to resist 50 PLF line load or 200 lb point load applied in any direction at any point. Intermediate rails (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 LB on an area not to exceed 1 ft square. These three loads are to be considered separately with worst case used for design.
(2) Place 300 lb concentrated load over 2"x2" area at any point to produce maximum stress. Area load and concentrated load are to be considered separately with worst case used for design.
(3) Need not apply concurrently with other handrail and guardrail loads; applied over not more than 1 square foot.
(4) Apply concentrated wheel load over 4-1/2"x4-1/2" square area.
(5) Floors for Business Group B (Offices) Occupancy shall be designed with a basic floor Live Load plus an additional 15 PSF (minimum) live loading for moveable partitions.
(6) Unless otherwise noted, point loads to be distributed over a 2.5ft x 2.5ft area and located to produce maximum load effects on structural members.

DESIGN DEAD LOADS	BIDDER DESIGN	DEAD LOADS (PSF) UNO	REMARKS & FOOTNOTES
	Roof Dead Load, Total Top Chord Bottom Chord	**8** PSF **6.5** PSF **1.5** PSF	For Pre-Fabricated Wood Truss design,

SUBMITTALS

SUBMIT FOR REVIEW: SUBMITTALS of shop drawings, and product data are required for items noted in the individual materials sections and for *bidder designed* elements.

SUBMITTAL REVIEW PERIOD: Submittals shall be made in time to provide a minimum of TWO WEEKS or 10 WORKING DAYS for review by the Architect/Engineer prior to the onset of fabrication.

GENERAL CONTRACTOR'S PRIOR REVIEW: Prior to submission to the Architect/Engineer, the Contractor shall review the submittal for completeness. Dimensions and quantities are not reviewed by the SER, and therefore, must be verified by the General Contractor. Contractor shall provide any necessary dimensional details requested by the Detailer and provide the Contractor's review stamp and signature before forwarding to the Architect/Engineer.

SHOP DRAWING REVIEW: Once the contractor has completed his review, the SER will review the submittal for general conformance with the design concept and the contract documents of the building and will stamp the submittal accordingly. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures there from. The SER will return submittals in the form they are submitted in (either hard copy or electronic). For hard copy submittals, the contractor is responsible for submitting the required number of copies to the SER for review.

SHOP DRAWING DEVIATIONS: When shop drawings (component design drawings) differ from or add to the requirements of the structural drawings they shall be designed and stamped by the responsible SSE.

BIDDER-DESIGNED ELEMENTS
Submit "Bidder-Designed" submittals to the Architect and SER for review. The deferred submittals shall also be submitted to the city for approval, if required by the city.

Design of prefabricated, "bidder designed", manufactured, pre-engineered, or other fabricated products shall comply with the following requirements:

1) Design considers tributary dead, live, wind and earthquake loads in combinations required by OSSC.
2) Design within the Deflection Limits noted herein and as specified or referenced in the OSSC.
3) Design shall conform to the specifications and reference standards of the governing code.
4) Submittal shall include:
   a. Calculations prepared, stamped and signed by the SSE demonstrating code conformance.
   b. Engineered component design drawings are prepared, stamped and signed by the SSE.
   c. Product data, technical information and manufacturer's written requirements and Agency approvals as applicable.
   d. SSE may submit to the Architect/Engineer, a request to utilize relevant alternate design criteria of similar nature and generally equivalency which is recognized by the Code and acceptable to the Authority Having Jurisdiction. Submit adequate documentation of design.

DEFLECTION LIMITS FOR SSE / BIDDER DESIGNED ELEMENTS:	**VERTICAL**	**LIMIT**
	Roof Members, Dead + Live or Snow or Wind, Total Load (TL) Deflection	L / 240, where (L is span length,inches)
	Roof, Live or Snow or Wind Load (RLL)	L / 360
	Floor Members, Total Load (TL) uno	L / 240
	Floor Live Load (LL) uno	L / 360
	HORIZONTAL	**LIMIT and FOOTNOTE**
	Members Supporting Brittle Finishes	L / 240 (1)
	Members Supporting Flexible Finishes	L / 180 (1)

(1) Wind Load is reducible to 0.42 times the Component and Cladding Loads per Table 1604.3 footnote f.

GENERAL CONTRACTOR'S PRIOR REVIEW: Once the contractor has completed his review of the SSE component drawings, the SER will review the submittal for general conformance with the design of the building and will stamp the submittal accordingly. Review of the Specialty Structural Engineer's (SSE) shop drawings (component design drawings) is for compliance with design criteria and compatibility with the design of the primary structure and does not relieve the SSE of responsibility for that design. All necessary bracing, ties, anchorage, proprietary products shall be furnished and installed per manufacturer's instructions or the SSE's design drawings and calculations. These elements include but are not limited to:

STRUCTURAL DEFERRED SUBMITTALS:
Deferred submittals are required to be submitted to the city for approval under a separate application. These elements include but are not limited to:

- Prefabricated Wood Roof Trusses

INSPECTIONS, QUALITY ASSURANCE VERIFICATIONS AND TEST REQUIREMENTS

INSPECTIONS: Foundations, footings, under slab systems and framing are subject to inspection by the Building Official in accordance with OSSC 110.3. Contractor shall coordinate all required inspections with the Building Official.

SPECIAL INSPECTIONS, VERIFICATIONS and TESTS: Special Inspections, Verifications and Testing shall be done in accordance with OSSC Chapter 17, the STATEMENT AND SCHEDULES OF SPECIAL INSPECTIONS listed in these drawings, and the AHJ STATEMENT OF SPECIAL INSPECTION.

STRUCTURAL OBSERVATION: per OSSC Section 1704.6

Structural Observation is the visual observation of the structural system by a registered design professional for general conformance to the approved construction documents. It is not always required on a project, does not include or waive the responsibility for the special inspections and tests required by a Special Inspector per OSSC Chapter 17, is not continuous, and does not certify conformance with the approved construction documents.

Structural Observation for this project is not required per OSSC Section 1704.6.

CONTRACTOR RESPONSIBILITY: Prior to issuance of the building permit, the Contractor is required to provide the Authority Having Jurisdiction a signed, written acknowledgement of the Contractor's responsibilities associated with the above Statement of Special Inspections addressing the requirements listed in OSSC Section 1704.4. Contractor is referred to OSSC Sections 1705.12.5 and 1705.12.6 for architectural and MEP building systems that may be subject to additional inspections (based on the building's designated Seismic Design Category listed in the CRITERIA), including anchorage of HVAC ductwork containing hazardous materials, piping systems and mechanical units containing flammable, combustible or highly toxic materials, electrical equipment used for emergency or standby power, exterior wall panels and suspended ceiling systems.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to OSSC Chapter 18 "Soils and Foundations."

CONTRACTOR'S RESPONSIBILITIES: Contractor shall be responsible to review the Geotechnical Report and shall follow the recommendations specified therein including, but not limited to, subgrade preparations, pile installation procedures, ground water management and steep slope Best Management Practices."

GEOTECHNICAL SUBGRADE INSPECTION: The Building Official shall inspect all sub-grades and prepared soil bearing surfaces, prior to placement of foundation reinforcing steel and concrete. Assumed values shall be field verified by the Building Official prior to placing concrete.

DESIGN SOIL VALUES:
Safety Factor per Soils Report.. 1.5
Allowable Foundation Bearing Pressure.......................... 1500 PSF
Passive Lateral Pressure .... 100 PSF/FT

FOUNDATIONS and FOOTINGS: Foundations shall bear on either on competent native soil or compacted structural fill as per the geotechnical report. Exterior perimeter footings shall bear not less than **12** inches below finish grade, unless otherwise specified by the geotechnical engineer and/or the building official.

FOOTING DEPTH: Tops of footings shall be as shown on plans with vertical changes as indicated with steps in the footings; locations of steps shown as approximate and shall be coordinated with the civil grading plans.

SLABS-ON-GRADE: 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 receive moisture sensitive coatings/covering shall be provided with an appropriate capillary break and vapor barrier/retardant over the subgrade prepared and installed as noted in the geotechnical report, barrier manufacturer's written recommendations and coordinated with the finishes specified by the Architect.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conform to:
(1) ACI 301-16 "Specifications for Structural Concrete"
(2) OSSC Chapter 19 "Concrete"
(3) ACI 318-14 "Building Code Requirements for Structural Concrete"
(4) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

DRAWING LEGEND

MARK	DESCRIPTION	MARK	DESCRIPTION
F2.0	FOOTING SYMBOL (REFER TO SPREAD FOOTING SCHEDULE)		INDICATES WIDE FLANGE COLUMN
P1	PILE CAP SYMBOL (REFER TO PILE CAP SCHEDULE)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR TUBE STEEL (TS) COLUMN
1	TILT-UP/PRECAST CONCRETE WALL CONNECTION SYMBOL (REFER TO CONNECTION DETAIL)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR STEEL PIPE COLUMN
2W4	SHEAR WALL SYMBOL (REFER TO SHEAR WALL SCHEDULE)		INDICATES WOOD POST
0 RFI 00	REVISION TRIANGLE		INDICATES BUNDLED STUDS
1	TILT-UP/PRECAST CONCRETE WALL PANEL NUMBER (REFER TO TILT-UP/PRECAST CONCRETE WALL ELEVATIONS)		INDICATES CONCRETE COLUMN
1	CMU WALL REINFORCING SYMBOL (REFER TO CMU WALL REINFORCING SCHEDULE)		INDICATES PRECAST CONCRETE COLUMN
8"	CONTINUITY PLATE LENGTH (REFER TO TYPICAL DETAIL)		INDICATES MOMENT FRAME CONNECTION
DS	INDICATES DOUBLE SHEAR CONNECTION (REFER TO THE DOUBLE SHEAR PLATE CONNECTIONS DETAIL)		INDICATES CANTILEVER CONNECTION
00TB	INDICATES REINFORCING TYPE (REFER TO THE REINFORCING SCHEDULE)		INDICATES DRAG CONNECTION
SR__	INDICATES NUMBER OF STUD RAIL REQUIRED AT COLUMN (REFER TO STUD RAIL DETAILS)		INDICATES A LEDGER
1	ROOF/FLOOR DIAPHRAGM NAILING SYMBOL (REFER TO DIAPHRAGM NAILING SCHEDULE)		INDICATES WOOD OR STEEL STUD BEARING WALL LINE PER KEY ON SHEET
C1 COLUMN SIZE	STEEL/CONCRETE COLUMN SYMBOL (REFER TO STEEL COLUMN SCHEDULE)	OR	INDICATES WOOD OR STEEL STUD SHEAR WALL LINE AND HOLD-DOWNS PER KEY ON SHEET
T/FTG = X'-X"	ELEVATION SYMBOL (T/ REFERS TO COMPONENT THAT THE ELEVATION REFERENCES)		INDICATES MASONRY/CMU WALL
3	STUD BUBBLE (INDICATES NUMBER OF STUDS REQUIRED IF EXCEEDS NUMBER SPECIFIED IN PLAN NOTE)		INDICATES CONCRETE/TILT-UP CONCRETE WALL
S	INDICATES STEP IN FOOTING (REFER TO TYPICAL STEP IN FOOTING DETAIL)		INDICATES BEARING WALL BELOW
X SX.X	DETAILS OR SECTION CUT (DETAIL NUMBER/SHEET NUMBER)		INDICATES EXISTING WALL
00 S0.0	DETAILS OR SECTION CUT IN PLAN VIEW (DETAIL NUMBER/SHEET NUMBER)		POST-TENSION DEAD END (PLAN)
XX/SXX.XX	INDICATES LOCATION OF CONCRETE WALLS, SHEAR WALLS OR BRACED FRAME ELEVATIONS		POST-TENSION STRESSING END (PLAN)
	STRUCTURAL EXTENT SYMBOL SINGLE ARROW - END OF EXTENT DOUBLE ARROW - CONTINUOUS EXTENT ALONG THE ELEMENT LINE UNTIL THE ELEMENT IS INTERRUPTED	3	POST-TENSION PROFILE (PLAN) (IN INCHES)
			INTERMEDIATE STRESSING (PLAN)
	INDICATES DIRECTION OF DECK SPAN		

ABBREVIATIONS

L	Angle	FB	Factory-Built	PJP	Partial Joint Penetration
AB	Anchor Bolt	FD	Floor Drain	PREFAB	Prefabricated
ADDL	Additional	FDN	Foundation	PSF	Pounds per Square Foot
ADH	Adhesive	FIN	Finish	PSI	Pounds Per Square Inch
ALT	Alternate	FLR	Floor	PSL	Parallel Strand Lumber
ARCH	Architectural	FRP	Fiberglass Reinforced Plastic	P-T	Post-Tensioned
B or BOT	Bottom	FRT	Fire Retardant Treated	PT	Pressure Treated
B/	Bottom Of	FTG	Footing	R	Radius
BLDG	Building	F/	Face of	RD	Roof Drain
BLKG	Blocking	GA	Gage	REF	Refer/Reference
BMU	Brick Masonry Unit	GALV	Galvanized	REINF	Reinforcing
BP	Baseplate	GEOTECH	Geotechnical	REQD	Required
BRBF	Buckling Restrained Braced Frame	GL	Glue Laminated Timber	RET	Retaining
		GWB	Gypsum Wall Board	SB	Site-Built
BRG	Bearing	HDR	Header	SCBF	Special Concentric Braced Frame
BTWN	Between	HF	Hem-Fir		
C	Camber	HGR	Hanger	SCHED	Schedule
CB	Castellated Beam	HD	Hold-down	SER	Structural Engineer of Record
C'BORE	Counterbore	HORIZ	Horizontal		
CL or ℄	Centerline	HP	High Point	SFRS	Seismic Force-Resisting System
CLT	Cross-Laminated Timber	HSS = TS	(Hollow Structural Section)		
CIP	Cast in Place	IBC	International Building Code	SHTHG	Sheathing
CJ	Construction or Control Joint	ID	Inside Diameter	SIM	Similar
		IE	Invert Elevation	SLBB	Short Leg Back-to-Back
CJP	Complete Joint Penetration	IF	Inside Face	SMF	Special Moment Frame
		INT	Interior	SOG	Slab on Grade
CLR	Clear	k	Kips	SP	Southern Pine
CLG	Ceiling	KSF	Kips Per Square Foot	SPEC	Specification
CMU	Concrete Masonry Unit	LF	Lineal Foot	SQ	Square
COL	Column	LL	Live Load	SR	Studrail
CONC	Concrete	LLBB	Long Leg Back-to-Back	SF	Square Foot
CONN	Connection	LLH	Long Leg Horizontal	SST	Stainless Steel
CONST	Construction	LLV	Long Leg Vertical	STAGG	Stagger/Staggered
CONT	Continuous	LP	Low Point	STD	Standard
C'SINK	Countersink	LONGIT	Longitudinal	STIFF	Stiffener
CTRD	Centered	LSL	Laminated Strand Lumber	STL	Steel
DIA	Diameter	LVL	Laminated Veneer Lumber	STRUCT	Structural
DB	Drop Beam	MAS	Masonry	SWWJ	Solid Web Wood Joist
DBA	Deformed Bar Anchor	MAX	Maximum	SYM	Symmetrical
DBL	Double	MECH	Mechanical	T	Top
DEMO	Demolish	MEP	Mechanical, Electrical, Plumbing	T/	Top Of
DEV	Development			T&B	Top & Bottom
DF	Douglas Fir	MEZZ	Mezzanine	TC AX LD	Top Chord Axial Load
DIAG	Diagonal	MFR	Manufacturer	TCX	Top Chord Extension
DIST	Distributed	MIN	Minimum	TDS	Tie Down System
DL	Dead Load	MISC	Miscellaneous	T&G	Tongue & Groove
DN	Down	NIC	Not In Contract	THKND	Thickened
DO	Ditto	NLT	Nail-Laminated Timber	THRD	Threaded
DP	Depth/Deep	NTS	Not To Scale	THRU	Through
DWG	Drawing	OC	On Center	TRANSV	Transverse
(E)	Existing	OCBF	Ordinary Concentric Braced Frame	TYP	Typical
EA	Each			UNO	Unless Noted Otherwise
EF	Each Face	OD	Outside Diameter	URM	Unreinforced Masonry Unit
EL	Elevation	OF	Outside Face		
ELEC	Electrical	OPNG	Opening	VERT	Vertical
ELEV	Elevator	OPP	Opposite	W	Wide
EMBED	Embedment	OWSJ	Open Web Steel Joist	W/	With
EQ	Equal	OWWJ	Open Web Wood Joist	W/O	Without
EQUIP	Equipment	PL	Plate	WHS	Welded Headed Stud
EW	Each Way	PAF	Powder Actuated Fastener	WP	Working Point
EXP	Expansion	PC	Precast	WWF	Welded Wire Fabric
EXP JT	Expansion Joint	PERP	Perpendicular	±	Plus or Minus
EXT	Exterior	PLWD	Plywood		

FOR PERMIT

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SIGNATURE:

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON SHIRLEY CHALUPA
EXPIRES: 12-31-23

REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - GENERAL NOTES, LEGENDS AND ABBREVIATIONS

SHEET NO.
S1.1

CONCRETE MIXTURES: Conform to ACI 301 Section 4 “Concrete Mixtures” and OSSC Section 1904.1.

MATERIALS: Conform to ACI 301 Section 4.2.1 “Materials” for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide all submittals required by ACI 301 Section 4.1.2. Submit mix designs for each mix in the table below. Substantiating strength results from past tests shall not be older than 24 months per ACI 318 Section 26.4.3.1 (b).

TABLE OF MIX DESIGN REQUIREMENTS

Member Type/Location	Strength f'c (psi)	Test Age (days)	Nominal Maximum Aggregate	Exposure Class	Max W/C Ratio	Air Content	Notes (1 to 8 Typical UNO)
Footings	3000	28	1”	-	-	-	-
Interior Slabs on Grade	3000	28	1”	-	0.50	-	-
Exterior Stem Walls & Curbs	4500	28	1”	F2	0.45	6%	-

Table of Mix Design Requirements Notes:

(1) W/C Ratio: Water–cementitious material ratios shall be based on the total weight of cementitious materials. Maximum ratios are controlled by strength noted in the Table of Mix Design Requirements and durability requirements given in ACI 318 Section 19.3.

(2) Cementitious Materials:
 a. The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 318 Sections 19.3.2 and 26.4.2.2. Maximum amount of fly ash shall be 25% of total cementitious content unless reviewed and approved otherwise by SER.
 b. For concrete used in elevated floors, minimum cementitious-materials content shall conform to ACI 301 Table 4.1.2.9. Acceptance of lower cement content is contingent on providing supporting data to the SER for review and acceptance.
 c. Cementitious materials shall conform to the relevant ASTM standards listed in ACI 318 Section 26.4.1.1.1(a).

(3) Air Content: Conform to ACI 318 Section 19.3.3.1. Minimum standards for exposure class are noted in the table. If freezing and thawing class is not noted, air content given is that required by the SER. Tolerance is ±1-½%. Air content shall be measured at point of placement.

(4) Aggregates shall conform to ASTM C33.

(5) Slump: Conform to ACI 301 Section 4.2.2.2. Slump shall be determined at point of placement.

(6) Chloride Content: Conform to ACI 318 Table 19.3.2.1.

(7) Non- chloride accelerator: Non-chloride accelerating admixture may be used in concrete placed at ambient temperatures below 50°F at the contractor’s option.

(8) ACI 318, Section 19.3.1.1 exposure classes shall be assumed to be F2, S0, W0, and C1 unless different exposure classes are listed in the Table of Mix Design Requirements that modify these base requirements.

FORMWORK & RESHORING: Conform to ACI 301 Section 2 “Formwork and Form Accessories.” Removal of Forms shall conform to Section 2.3.2 except strength indicated in Section 2.3.2.5 shall be 0.75 f’ c.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Section 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Section 5. In addition, hot weather concreting shall conform to ACI 305R-10 and cold weather concreting shall conform to ACI 306R-10.

CONCRETE CURING: Provide curing compounds for concrete as follows:

(1) Use membrane curing compounds that are compatible with and will not affect surfaces to be covered with finish materials applied directly to concrete.

(2) Apply curing compounds at a rate equivalent to the rate of application at which curing compound was originally tested for in conformance to the requirements of ASTM C 309-07 and the manufacturer’s recommendations.

(3) Apply specified curing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer’s directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

(4) Use curing compound compatible with and applied under direction of system manufacturer of protective sealer.

(5) Apply two separate coats with first allowed to become tacky before applying second. Direction of second application shall be at right angles to direction of first.

CONSTRUCTION JOINTS: Conform to ACI 301 Sections. 2.2.2.5 and 5.3.2.6. Construction joints shall be located and detailed as on the construction drawings. Submit alternate locations per ACI 301 Section 5.1.2.4(a) for review and approval by the SER two weeks minimum prior to forming. Use of an acceptable adhesive, surface retardant, portland cement grout or roughening the surface is not required unless specifically noted on the drawings.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate other embedded items.

POST-INSTALLED ANCHORS to CONCRETE: Anchor location, type, diameter and embedment shall be as indicated on drawings. Reference the POST INSTALLED ANCHORS section for applicable Post-Installed Anchor Adhesives. Anchors shall be installed and inspected in strict accordance with the applicable ICC-Evaluation Service Report (ESR). Special inspection shall be per the TESTS and INSPECTIONS section.

STRENGTH TESTING AND ACCEPTANCE:

Testing: Obtain samples and conduct tests in accordance with ACI 301 Section 1.6.3.2. Additional samples may be required to obtain concrete strengths at alternate intervals than shown below.

- Cure 4 cylinders for 28-day test age test 1 cylinder at 7 days, test 2 cylinders at 28 days, and hold 1 cylinder in reserve for use as the Engineer directs. After 56 days, unless notified by the Engineer to the contrary, the reserve cylinder may be discarded without being tested for specimens meeting 28-day strength requirements.
- The number of cylinders indicated above reference 6 by 12 in cylinders. If 4 by 8 in cylinders are to be used, additional cylinders must be cured for testing of 3 cylinders at test age per the table of mix design requirements.

Acceptance. Strength is satisfactory when:

(1) The averages of all sets of 3 consecutive tests equal or exceed the specified strength.

(2) No individual test falls below the specified strength by more than 500 psi.

A “test” for acceptance is the average strength of two 6 by 12 in. cylinders or three 4 by 8 in. cylinders tested at the specified test age.

CONCRETE PLACEMENT TOLERANCE: Conform to ACI 117-10 for concrete placement tolerance.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:
(1) ACI 301-16 "Standard Specifications for Structural Concrete", Section 3 "Reinforcement and Reinforcement Supports."
(2) ACI SP-66(04) "ACI Detailing Manual"
(3) CRSI MSP-09, 28th Edition, "Manual of Standard Practice."
(4) ANSI/AWS D1.4: 2005, "Structural Welding Code - Reinforcing Steel."
(5) OSSC Chapter 19-Concrete.
(6) ACI 318-14 “Building Code Requirements for Structural Concrete.”
(7) ACI 117-10 “Specifications for Tolerances for Concrete Construction and Materials”

SUBMITTALS: Conform to ACI 301 Section 3.1.2 "Submittals." Submit placing drawings showing fabrication dimensions and placement locations of reinforcement and reinforcement supports.

MATERIALS:

Reinforcing Bars..................................ASTM A615, Grade 60, deformed bars.
ASTM A706, Grade 60, deformed bars.
Bar Supports ....CRSI MSP-09, Chapter 3 "Bar Supports."
Tie Wire ....16 gage or heavier, black annealed.

FABRICATION: Conform to ACI 301, Section 3.2.2. “Fabrication”, and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Section 3.2.2.2. "Welding", AWS D1.4, and provide ASTM A706, grade 60 reinforcement.

PLACING: Conform to ACI 301, Section 3.3.2 "Placing.” Placing tolerances shall conform to ACI 117.

CONCRETE COVER: Conform to the following cover requirements unless noted otherwise in the drawings.
Concrete cast against earth ....3”
Concrete exposed to earth or weather................2”
Bars in slabs..¾”

SPLICES: Conform to ACI 301, Section 3.3.2.7, “Splices”. Refer to "Typical Lap Splice and Development Length Schedule" for typical reinforcement splices.

FIELD BENDING: Conform to ACI 301 Section 3.3.2.8. "Field Bending or Straightening.” Bar sizes #3 through #5 may be field bent cold the first time. Subsequent bends and other bar sizes require preheating. Do not twist bars. Bars shall not be bent past 45 degrees.

TYPICAL CONCRETE REINFORCEMENT: Unless noted on the plans, concrete walls shall have the following minimum reinforcement. Contractor shall confirm minimum reinforcement of walls with SER prior to rebar fabrication.

POST-INSTALLED ANCHORS (INTO CONCRETE AND MASONRY)

REFERENCE STANDARDS: Conform to:
1) OSSC Chapter 19 “Concrete”
2) ACI 318-14 “Building Code Requirements for Structural Concrete”
3) OSSC Chapter 21 “Masonry”
4) TMS402-16 “Building Code Requirements for Masonry Structures”

POST-INSTALLED ANCHORS: Install only where specifically shown in the details or allowed by SER. All post-Installed anchors types and locations shall be approved by the SER and shall have a current ICC-Evaluation Service Report that provides relevant design values necessary to validate the available strength exceeds the required strength. Submit current manufacturer’s data and ICC ESR report to SER for approval regardless of whether or not it is a pre-approved anchor. Anchors shall be installed in strict accordance to ICC-ESR and the manufacturer’s printed installation instructions (MPII) in conjunction with edge distance, spacing and embedment depth as indicated on the drawings. The contractor shall arrange for a manufacturer’s field representative to provide installation training for all products to be used, prior to the commencement of work. Only trained installer shall perform post installed anchor installation. A record of training shall be kept on site and be made available to the SER as requested. Adhesive anchors installed in horizontally or upwardly inclined orientation shall be performed by a certified adhesive anchor installer (AAI) as certified through ACI/CRSI or approved equivalent. Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation. No reinforcing bars shall be damaged during installation of post-installed anchors. Special inspection shall be per the TESTS and INSPECTIONS section. Anchor type, diameter and embedment shall be as indicated on drawings.

1. ADHESIVE ANCHORS: The following Adhesive-type anchoring systems have been used in the design and shall be used for anchorage to CONCRETE, as applicable and in accordance with corresponding current ICC ESR report. Reference the corresponding ICC ESR report for required minimum age of concrete, concrete temperature range, moisture condition, light weight concrete, and hole drilling and preparation requirements. Drilled-in anchor embedment lengths shall be as shown on drawings, or not less than 7 times the anchor nominal diameter (7D). Adhesive anchors are to be installed in concrete aged a minimum of 21 days, unless otherwise specified in the ICC ESR report.
   a. HILTI “HIT-HY 200” – ICC ESR-3187 for anchorage to CONCRETE with embedment depth less than or equal to 20 bar diameters
   b. HILTI “HIT-RE 500 V3” – ICC ESR-3814 for anchorage to CONCRETE with any embedment depth
2. EXPANSION ANCHORS: The following Expansion type anchors are pre-approved for anchorage to CONCRETE in accordance with corresponding current ICC ESR report:
   a. HILTI “KWIK BOLT TZ” – ICC ESR-1917 for anchorage to CONCRETE Only
3. SCREW ANCHORS: The following Screw type anchor is pre-approved for anchorage to CONCRETE in accordance with corresponding current ICC ESR report:
   a. HILTI “KWIK HUS-EZ” – ICC ESR-3027 for anchorage to CONCRETE Only

STRUCTURAL STEEL

REFERENCE STANDARDS: Conform to:
1) OSSC Chapter 22 – “Steel”
2) ANSI/AISC 303-16 – “Code of Standard Practice for Steel Buildings & Bridges”
3) AISC – “Manual of Steel Construction”, Fifteenth Edition (2016)
4) ANSI/AISC 360-16 – “Specification for Structural Steel Buildings”
5) AWS D1.1:2015 – “Structural Welding Code – Steel”
6) 2014 RCSC – “Specification for Structural Joints using High-Strength Bolts”
7) ANSI/AISC 341-16 – “Seismic Provisions for Structural Steel Buildings”
8) AWS D1.8:2009 – “Structural Welding Code – Seismic Supplement”

SPECIAL PROVISIONS for ELEMENTS of the SEISMIC FORCE RESISTING SYSTEM (SFRS): Selected steel elements of this project are part of the Seismic Force Resisting System” (SFRS) and, thus are subject to special requirements detailed in the AISC “Seismic Provisions”. Elements of the **SFRS** are designated on plans. Refer to DRAWING LEGEND for symbols used to designate elements on the plans and **STRUCTURAL STEEL SEISMIC PROVISIONS** Section of General Notes for supplemental requirements.

SUBMITTALS: Submit the following documents to the SER for review:

(1) SHOP DRAWINGS complying with AISC 360 Sections M1and N3 and AISC 303 Section 4.
(2) ERECTION DRAWINGS complying AISC 360 Sections M1and N3 and AISC 303 Section 4.
(3) Weld Procedure Specifications (WPS’s) for shop and field welding.

Make copies of the following documents “Available upon Request” to the SER or Owner’s Inspection Agency in electronic or printed form prior to fabrication per AISC 360 Section N3.2 requirements:

(1) Fabricator’s written Quality Control Manual that includes, as a minimum:
 a. Material Control Procedures
 b. Inspection Procedures
 c. Non-conformance Procedures
(2) Steel & Anchor Rod suppliers’ Material Test Reports (MTR’s) indicating the compliance with specifications.
(3) Fastener manufacturer’s Certification documenting conformance with the specification.
(4) Filler metal manufacturer’s product data for SMAW, FCAW and GMAW indicating:
 a. Product specification compliance
 b. Recommended welding parameters
 c. Recommended storage and exposure requirements including baking
 d. Limitations of use
(5) Welded Headed (Shear) Stud Anchors Manufacturer’s certification indicating the meet specifications.
(6) Weld Procedure Specifications (WPS’s) for shop and field welding.
(7) Manufacturer’s Certificates of Conformance for electrodes, fluxes and gases (welding consumables).
(8) Procedure Qualification Records (PQR’s) for WPS’s that are not prequalified in accordance with AWS.
(9) Welding personnel Performance Qualification Records (WPQR) and continuity records conforming to AWS standards.

MATERIALS:
Structural steel materials shall conform to materials and requirements listed in AISC 360 section A3 including, but not limited to:
Wide Flange (W), Tee (WT) Shapes...................ASTM A992 Fy = 50 ksi
Structural (S), (M) & (HP) Shapes.......................ASTM A36, Fy = 36 ksi
Channel (C) & Angle (L) Shapes.........................ASTM A36, Fy = 36 ksi
Structural Plate (PL)...ASTM A36, Fy = 36 ksi
Hollow Structural Section – Square/Rect (HSS)..ASTM A500, Grade C Fy = 50 ksi
High Strength, Heavy Hex Structural Bolts..........ASTM F3125 Gr. A325/F1852, Type 1 or 3, Plain
Heavy Hex Nuts ....ASTM A563, Grade and Finish per RCSC Table 2.1
Washers (Hardened Flat or Beveled) ....ASTM F436, Grade and Finish per RCSC Table 2.1
Anchor Rods (Anchor Bolts, typical) ....ASTM F1554, Gr. 36
Welded Headed Stud (WHS) Anchors.................ASTM A108 – Nelson/TRW H4L

STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS:

1) ASTM F3125 Gr. A325-N bolts – “threads NOT excluded in the shear plane”.
2) High-strength bolted joints have been designed as “BEARING” connections.
3) Provide ASTM Bolt Grade and Type as specified in the Materials section above.
4) Provide Washers over outer ply of slotted holes and oversize holes per RCSC Table 6.1.
5) Provide Nut and Washer grades, types and finishes conforming to RCSC specification Table 2.1.
6) Provide *fastener assemblies* from a single supplier.
7) Joint Types shall be:
 a. ST - “Snug Tight”, for typical beam end “shear” connections, unless noted otherwise.
 b. SC - “Slip Critical”, where specifically indicated. Provide with Class A Faying surface.
8) Install bolts in joints in accordance with the RCSC Specification Section 8 and Table 4.1.
9) Inspection is per RCSC Section 9.

ANCHORAGE to CONCRETE:

1) EMBEDDED STEEL PLATES for Anchorage to Concrete: Plates (PL) embedded in concrete with studs (WHS) or dowel bar anchors (DBA) shall be of the sizes and lengths as indicated on the plans with minimum 1/2” dia. WHS x 6” long but provide not less than ¾” interior cover or 1 ½” exterior cover to the opposite face of concrete, unless noted otherwise.
2) COLUMN ANCHOR RODS and BASE PLATES: All columns (vertical member assemblies weighing over 300 pounds) shall be provided with a **minimum of four ¾” diameter anchor rods**. Column base plates shall be at least ¾” thick, unless noted otherwise. Cast-in-place anchor rods shall be provided unless otherwise approved by the Engineer. Unless noted otherwise, embedment of cast-in-place anchor rods shall be 12 times the anchor diameter (12D).

FABRICATION:

1) Conform to AISC 360 Section M2 “Fabrication” and AISC 303 Section 6 “Shop Fabrication”.
2) Quality Control (QC) shall conform to:
 a. AISC 360 Chapter N “Quality Control and Quality Assurance” and
 b. AISC 303 Section 8 “Quality Control”.
 c. Fabricator and Erector shall establish and maintain written Quality Control (QC) procedures per AISC 360 section N3.
 d. Fabricator shall perform self-inspections per AISC 360 section N5 to ensure that their work is performed in accordance with Code of Standard Practice, the AISC Specification, Contract Documents and the Applicable Building Code.
 e. QC inspections may be coordinated with Quality Assurance inspections per Section N5.3 where fabricators QA procedures provide the necessary basis for material control, inspection, and control of the workmanship expected by the Special Inspector.

WELDING:

1) Welding shall conform to AWS D1.1 and D1.8 as applicable for Seismic elements with Prequalified Welding Processes except as modified by AISC 360 section J2 and AISC 341 as applicable. Welders shall be qualified in accordance with AWS D1.1 (and D1.8 for Demand Critical Welds where applicable) requirements.
2) Use 70ksi strength, low-hydrogen type electrodes (E7018) or E71T as appropriate for the process selected.
3) Welding of high strength anchor rods is prohibited unless approved by Engineer.
4) Welding of headed stud anchors shall be in accordance with AWS D1.1 Chapter 7 “Stud Welding”.

ERECTION:

1) Conform to AISC 360 Section M4 “Erection” and AISC 303 Section 7 “Erection”.
2) Conform to AISC 360 Chapter N “Quality Control and Quality Assurance” and AISC 303 Section 8.
 a. The Erector shall maintain detailed erection quality control procedures that ensure that the work is performed in accordance with these requirements and the Contract Documents.
3) Steel work shall be carried up true and plumb within the limits defined in AISC 303 Section 7.13.
4) High strength bolting shall comply with the RCSC requirements including RCSC Section 7.2 “Required Testing”, as applicable and AISC 360 Chapter J, Section M2.5 and Section N5.6.
5) Welding of HEADED STUD ANCHORS shall be in accordance with AWS D1.1 Chapter 7 “Stud Welding.
6) Provide Headed (Shear) Stud Anchors welded through the metal deck to tops of beams denoted in plans.
7) The contractor shall provide temporary bracing and safety protection required by AISC 360 Section M4.2 and AISC 303 Section 7.10 and 7.11.

PROTECTIVE COATING REQUIREMENTS:

1) SHOP PAINTING: Conform to AISC 360 Section M3 and AISC 303 Section 6.5 unless otherwise specified by the project specifications.

2) INTERIOR STEEL:
 a. Unless noted otherwise, ***do not paint*** any of the steel surfaces meeting the following conditions:
  - Concealed by the interior building finishes,
  - Fireproofed,
  - Embedded in concrete,
  - Specially prepared as a “faying surface” for Type-SC “slip-critical” connections including bolted connections that form a part of the Seismic Force Resisting System governed by AISC 341 unless the coating conforms to requirements of the RCSC Bolt Specification and is approved by the Engineer.
  - Welded; if area requires painting, do not paint until after weld inspections and non-destructive testing requirement, if any, are satisfied.

 b. Interior steel, exposed to view, shall be painted with one coat of shop primer unless otherwise indicated in the project specifications. Field touch-ups to match the finish coat or as otherwise indicated in the project specifications.

3) EXTERIOR STEEL: Exposed exterior steel shall be protected by either:
 a. Paint with an exterior multi-coat system as per the project specifications. Field touch-up painting shall match top coat.
 b. Galvanizing: Unless protected with a paint system, exposed steel (outside the building envelope) shall be hot-dipped galvanized, where noted on the plans or otherwise indicated by the finishes specified by the Architect. Apply field touch-ups per project specifications.

4) Steel need not be primed or painted unless noted otherwise on the drawings or in the project specifications. Conform to AISC 360 Section M3 and AISC 303 Section 6.5 unless a multi-coat system is required per the project specifications.

STRUCTURAL STEEL - SEISMIC PROVISIONS

REFERENCE STANDARDS: Conform to the standards in the STRUCTURAL STEEL section and the following:

1) ANSI/AISC 341-16 – “Seismic Provisions for Structural Steel Buildings”
2) AWS D1.8:2009 – “Structural Welding Code – Seismic Supplement”

SCOPE: In addition to the standards specified in the STRUCTURAL STEEL Section of these GENERAL REQUIREMENTS, Structural Steel that is part of or that transfers seismic loads to the designated Seismic Force Resisting System (SFRS) defined in the DESIGN CRITERIA AND LOADS section of these GENERAL REQUIREMENTS, shall comply with the applicable SEISMIC PROVISIONS below.

SEISMIC FORCE RESISTING SYSTEM (SFRS): The SFRS is an assemblage of beams, columns, and braces that have been specially proportioned into vertical frame systems to resist lateral seismic forces. Beyond the frames are typically other horizontal members connecting to the vertical shear-resisting frames and walls that collect and deliver concentrated seismic forces to the vertical shear elements. These elements include “collectors”, “drags”, and “diaphragms” (such as the floor slab and roof deck), which also form part of the SFRS and are subject to the “Seismic Provisions” of AISC 341.

DESIGNATION of the primary SFRS Framing System for this project is provided in the DESIGN CRITERIA AND LOADS section of these GENERAL REQUIREMENTS. Stability of the structure under seismic loads is reliant upon structural steel collectors, drag struts, and diaphragm chords which are also governed by the Seismic Provisions.

Lowest Anticipated Service Temperature (LAST): The primary SFRS framing for this project is to be enclosed and expected to be maintained with the LAST of 30 degrees Fahrenheit.

Structural members and their connections considered in the design of the SFRS are subject to the special Seismic Provisions of this section. Subject elements require special attention to detailing, material control, documentation, fabrication, inspection, and protections from all trades. Special requirements include but are not limited to:
1) *Identification of SFRS Members and their Connections* on shop and erection drawings; include special detailing, welding and inspection requirements and limitations on where other trades are restricted from any attachments. Refer to AISC 341 section D1.3 Protected Zones.
2) *Connection Configurations* detailed to scale, including the layout of bolts, plates, welds and protected zones and any special erection procedures and welding sequence requirements.
 a. *Protected Zones (PZ) - Locations and Dimensions* shall be clearly dimensioned on the shop drawings including applicable painting, labeling, and warnings.
 b. Include placement detail of shear studs on applicable members with respect to the protected zones.

QUALITY CONTROL and QUALITY ASSURANCE PLAN:

Quality Control (QC) (by Contractor) and Quality Assurance (QA) (by an approved Special Inspection Agency) for members of the SFRS shall be provided in accordance with AISC 341, Chapter J and coordinated per Section J5.4.
1) Fabricator and Erector shall have Quality Control Program per AISC 360 Section N2.
 a. Fabricator and Erector shall provide access to the Quality Assurance/Special Inspection Agency, prior to the start of work, for purposes of review of the Quality Control Program required per AISC 360 Section N3.2 and per OSSC 1704.2.5.
2) Special Inspections required per OSSC sections 1705.2.1 and 1705.12.1 and the STATEMENT OF SPECIAL INSPECTIONS section of these GENERAL REQUIREMENTS.

SUBMITTALS:
(1) Submit Fabricator and Erector Documents per AISC 360 Section N3 and AISC 341 Section J2.1.
(2) *Shop drawings* of the SFRS shall be prepared in accordance with AISC 303 Section 4, AISC 341 Sections A4.1, A4.2, and I1 and shall include the following:
 - DESIGNATION of the SFRS.
 - MEMBER and CONNECTIONS of the SFRS clearly identified.
 - PROTECTED ZONES, locations and dimensions provided.
 - PRE-TENSIONED BOLTS and FAYING SURFACE PREPARATION LOCATIONS in SFRS.
 - WELD ACCESS HOLE DIMENSIONS, surface profile and finish requirements.
(3) Weld Procedure Specifications (WPS’s).
(4) Bolt Installation Procedures.
(5) Charpy V-notch Conformance Certification for *Welding Electrodes*, Fluxes and Shielding Gases.
(6) Material Data for Demand Critical Welds per AISC 341 J2.1(3).
(7) Charpy V-notch Conformance Certification/Verification Test Results *for “Heavy Shapes” or Jumbo Sections, if applicable.*

SFRS MATERIALS: Structural steel part of the SFRS shall meet the requirements of AISC 341 Section A3.1. Reference the MATERIALS section of the STRUCTURAL STEEL for specific ASTM specifications.

SFRS BOLTED JOINT REQUIREMENTS: All bolts shall be installed as pre-tensioned high-strength bolts of size and orientations as shown on the drawings. Bolt holes shall be standard holes or short-slotted holes perpendicular to the applied load unless otherwise noted. Exception: For diagonal braces in OCBF frames, oversized holes are permitted in one connection ply provided brace connection strength is based on slip-critical capacities. All bolted joints shall be prepared with Class A faying surfaces (or better) per RCSC Specification Section 3.2 and shall have faying surfaces prepared and bolts installed in accordance with Joint Type SC - Class A (uncoated) - “Slip-Critical” per RCSC Specification Table 4.1 and Section 8.2. Inspections shall be per RCSC Section 9.3.

SFRS WELDING REQUIREMENTS: All welding of the SFRS shall conform to the Structural Welding Code, AWS D1.1, and the Seismic Supplement, AWS D1.8. This includes both shop fabrication and field erection welding.

1) WELDING PROCEDURE SPECIFICATIONS (WPS): Welding shall be done with appropriate Weld Procedures prepared in accordance with AWS D1.1 and AWS D1.8 clause 6.1. Submit for review per AISC 341 Section I2.3.

2) FILLER METAL: Welds of members of the SFRS shall be made with filler metal conforming to the requirements of AISC 341 Section A3.4 and AWS D1.8 clause 6.3, which can produce welds that have a minimum Charpy V-Notch toughness of 20 foot-pounds at 0 degrees Fahrenheit. Submit evidence of compliance.

3) TACK WELDS: All Tack Welds part of the SFRS shall comply with the requirements of AWS D1.8 Section 6.16.

WOOD FRAMING

REFERENCE STANDARDS: Conform to:
(1) OSSC Chapter 23 “WOOD”
(2) NDS - “2018 National Design Specification (NDS) for Wood Construction”
(3) ANSI/AWC – SDPWS-15: Special Design Provisions for Wind and Seismic
(4) APA D510C-12 Plywood Design Specification
(5) ANSI/TPI 1-2014 “National Design Standard for Metal-Plate-Connected Wood Truss Construction”
(6) BCSI B1 “Guide to Good Practice for Handling, Installing, Restraining & Bracing of Trusses”
(7) TPI DSB “Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses”
(8) APA Report TT-045B “Minimum Nail Penetration for Wood Structural Panel Connections Subject to Lateral Loads”
(9) APA Report TT-061 “1-5/16 Inch-Thick I-Joist Flanges and Diaphragm Nail Penetration

SUBMITTALS: Submit shop drawings to the Architect/Engineer for review. Shop drawings shall include member size, spacing, camber, material type, grade, shop and field assembly details and connections, types and location of bolts and other fasteners. Supply shop drawings for the following:
(1) Glued laminated members
(2) LSL members
(3) Wood I Joists (Solid web-wood joists)
(4) Panelized wood walls & connection details

DEFERRED SUBMITTALS: Submit product data and proof of ICC approval for framing members and fasteners that have been designed by others. Submit calculations prepared by the SSE in the state of Oregon for all members and connections designed by others along with shop drawings. All necessary bridging, blocking, blocking panels and web stiffeners shall be detailed and furnished by the supplier. Temporary and permanent bridging shall be installed in conformance with the manufacturer’s specifications. Deflection limits shall be as noted under DEFFERED SUBMITTLALS section specific details. Products included are:

- Metal plate connected trusses (prefabricated trusses) Conform to OSSC Section 2303.4. **[**HUD Truss Connector Bulletin for Metal Plate Connected Wood Trusses is required.**]** Truss Supplier to provide design and materials for all permanent truss bracing. Shop drawings shall provide for shapes, bearing points, intersections, hips, and valleys shown on the drawings. The manufacturer shall provide special hip, valley and intersection areas (step down trusses, jack trusses and girder trusses) unless specifically indicated on the plans. Provide all truss-to-truss and truss-to-support connection details and required connection materials. Specify temporary and permanent bracing and connections on the shop drawings. Provide all truss reactions on shop drawings.

IDENTIFICATION: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

- Sawn Lumber: Conform to grading rules of WWPA, WCLIB or NLGA and Table below. Finger jointed studs acceptable at interior walls only.

TABLE of SOLID SAWN LUMBER

Member Use	Size	Species	Grade
Wall Stud/ Top & Bottom Plates	2x4, 3x4, 2x6, 3x6	Doug Fir Larch	No. 2
Sill Plate (at concrete)	2x4, 3x4, 2x6, 3x6	PT Doug Fir Larch	No. 2
Post	4x4, 4x6, 4x8	Doug Fir Larch	No. 2
Floor or Roof Joist	2x6 through 2x12	Doug Fir Larch	No. 2
Beam	4x8 through 4x12	Doug Fir Larch	No. 2
Beam	6x8 through 6x12	Doug Fir Larch	No. 1
Post or Timber	6x6, 8x8	Doug-Fir Larch	No. 1

- Glued Laminated Timber: Conform to ANSI 117-**2015** “Standard Specifications for Structural Glue-laminated Timber of Softwood Species, Manufacturing and Design” and ANSI A190.1 “Structural Glued Laminated Timber.” Camber all glued laminated beams, except cantilevered and continuous beams, to 3000’ radius, unless shown otherwise on the plans. Fabricate cantilevered and continuous beams flat, unless shown otherwise on plans.

TABLE of GLULAM and GRADE

Member	Sizes	Species	Comb. Symbol	Uses
Beams	All	DF/DF	24F–V4	Simple Spans

- Wood Structural Sheathing (Plywood): Wood APA-rated structural sheathing includes: all veneer plywood, oriented strand board, waferboard, particleboard, T1-11 siding, and composites of veneer and wood based material with T&G joint. **Architect** may disallow OSB. Confirm with **Architect**. Conform to “Construction and Industrial Plywood” based on Product Standard PS 1-09 by the U.S. Dept. of Commerce, and “Performance Standard for Wood-Based Structural-Use Panels” based on Product Standard PS 2-10 by the U.S. Dept. of Commerce and “Plywood Design Specification” based on APA D510C-12 by the American Plywood Association. Unless noted otherwise, sheathing shall comply with the following table:

FOR PERMIT
This Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the authority having jurisdiction and DCI Engineers.

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON MARCH 23, 2011 SHIRLEY CHALUPA
EXPIRES: 12-31-23

REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: SC
Dwg. Chk.:
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - GENERAL NOTES

SHEET NO.
SI.2

TABLE of SHEATHING - Use, Minimum Thickness and Minimum APA Rating

Location	Thickness	Span Rating	Plywood Grade	Exposure
Roof	15/32"	32/16	C-D	1
Floor	23/32" T&G	24 OC	STURD-I-FLOOR	1
Shear Walls	15/32"	32/16	C-D	1
Girt Walls	3/4	48/24	C-D	1

Unless noted otherwise on drawings, install roof and floor panels with long dimension across supports and with panel continuous over two or more spans. End joints shall occur over supports.

- Timber Connectors: Shall be "Strong Tie" by Simpson Company as specified in their latest catalog. Alternate connectors by other manufacturers may be substituted provided they have current ICC approval for equivalent or greater load capacities and are reviewed and approved by the SER prior to ordering. Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, place one-half of the nails or bolts in each member. Where straps are used as hold-downs, nail straps to wood framing just prior to drywall application, as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

  Where connectors are in exposed exterior applications in contact with preservative treated wood (PT) other than CCA, connectors shall be either batch hot-dipped galvanized (HDG), mechanically galvanized (ASTM B695, Class 55 minimum) stainless steel, or provided with 1.85 oz/sf of zinc galvanizing equal to or better than Simpson ZMAX finish.

  Nail straps to wood framing as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

- Fasteners (nails, bolts, screws, etc) attaching timber connectors (joist hangers, post caps and bases, etc) to PT wood shall have similar corrosion resistance properties (matching protective treatments) as the protected connector. Fasteners (nails, bolts, screws, etc) attaching sawn timber members or sheathing (shear walls) to PT wood shall be corrosion resistant; nails and lag bolts shall be either HDG (ASTM A153) or stainless steel. Verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/ supplier.

  Provide washers under the heads and nuts of all bolts and lag screws bearing on wood.

- Lag Bolts/Bolts: Conform to ASTM A307 and OSSC Section 2304.10.
- Nails and Staples: Conform to ASTM F1667 and OSSC Sections 2303.6 and 2304.10.

NAILING REQUIREMENTS: Conform to OSSC Section 2304.10 "Connections and fasteners." Unless noted on plans, nail per Table 2304.10.1. Nailing for roof/floor diaphragms/shear walls shall be per drawings. Nails shall be driven flush and shall not fracture the surface of sheathing. Alternate nails may be used but are subject to review and approval by the Structural Engineer. Substitution of staples for the nailing of rated sheathing is subject to review by the structural engineer prior to construction.

STANDARD LIGHT-FRAME CONSTRUCTION: Unless noted on the plans, construction shall conform to OSSC Section 2308 "Conventional Light-Frame Construction."

NAILERS ON STEEL COLUMNS and BEAMS: Wood 3x nailers are generally required on all HSS columns and steel beams abutting or embedded within wood framing. Unless noted otherwise, attach with 5/8" diameter bolts or welded studs at 16" on centers. Unless noted otherwise, wood nailers on beams supporting joist hangers shall not overhang the beam flange by more than ¼".

WOOD SHRINKAGE AND EXPANSION: Wood materials will expand or contract based on relative changes in moisture. The contractor is responsible for means and methods of construction related to mitigating and managing the effects of changes in moisture.

MOISTURE CONTENT: Solid Sawn wood material used for this project shall be handled and protected to maintain a maximum moisture content of less than 19%. Engineered wood products and sheathing shall be handled and protected to maintain the moisture content below the limits required by the manufacturer. Refer to TESTING & INSPECTIONS for the verification of these limits. The maximum moisture content required may be less than these limits when based on particular product requirements (i.e. finishes, cladding, insulation systems, etc.). Refer to the Architect's drawings, project specifications, or installer/product requirements for additional requirements.

SHRINKAGE COMPENSATION FOR MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS: MEP systems, including ductwork, pipes, and other elements that run continuously between levels shall be installed/designed in such a manner to accommodate shrinkage in the wood framing. Wood shrinkage amounts will vary depending on the construction process and materials used. The anticipated shrinkage under typical conditions is expected to range between 1/8" and 1/4" per floor.

CLADDING COMPATIBILITY: The Architect/Owner and contractor shall review the cladding, finishes, insulation systems, other non-structural components and construction procedures proposed for the project with respect to their performance over wood framing. EIFS systems should be avoided on wood-framed projects due to problems with moisture proofing. Note that DCI is not responsible for the attachment of the cladding to the wood studs which needs to be verified and provided by the cladding supplier.

PRESERVATIVE TREATMENT (PT): Wood materials that are required to be "treated wood" in accordance with OSSC Section 2304.12. "Protection Against Decay and Termite Protection" shall conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark. Fasteners or anchors in treated wood shall be of stainless steel or hot-dipped galvanized or as per OSSC 2304.10.5.

Mud sill plates in normally dry interior applications may be treated with Sodium Borate (DOT - Disodium Octaborate Tetrahydrate) as recent studies have noted less connector corrosion potential than other available wood treatments or the original CCA treated sill plates. Wood treated with Sodium Borate shall be protected during shipment, storage and installation to minimize leaching of the water-soluble preservative from the lumber. Sodium borate pressure treated plates do not require hot-dipped galvanized connectors.

If using preservative treatments other than CCA or sodium borate, fasteners must be hot dipped galvanized or stainless steel. Wood treated with Alkaline Copper Quaternary (ACQ) requires steel components in contact with the wood to be stainless (nails, bolts, screws, washers & lag screws). Fasteners (nails, bolts, screws, washers & lag screws) attaching timber connectors (joist hangers, post caps and bases, etc) to PT wood shall have similar corrosion resistance properties (matching protective treatments) as the protected connector; that is, use hot dipped galvanized or stainless-steel fasteners. Fasteners (nails, bolts, screws, washers & lag screws) attaching sawn timber members or sheathing (shear walls) to Pressure Treated wood shall be corrosion resistant (hot dipped galvanized or stainless steel).

Always verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/ supplier.

FOR PERMIT

The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the authority having jurisdiction and DCI Engineers.

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SIGNATURE:

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EXPIRES: 12-31-23

REVISIONS:
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Job No.: 23031-0048
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PROJECT TITLE:

MHS SOFTBALL BATTING CAGE STRUCTURE

COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - GENERAL NOTES

SHEET NO.
S1.3

SPECIAL INSPECTIONS

The following Statement and Schedules of Inspections are those Special Inspections and Tests that shall be performed for this project. Special Inspectors shall reference these plans and OSSC Chapter 17 for all special inspection requirements.
The owner shall retain an "approved agency" per OSSC 1703 to provide special inspections for this project. Special Inspectors shall be qualified persons per OSSC 1704.2.1.
Special inspection reports shall be provided on a weekly basis. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review. In addition to special inspection reports and tests, submit reports and certificates noted in OSSC 1704.5 to the Authority Having Jurisdiction. Final special inspection reports will be required by each special inspection firm per OSSC 1704.2.4.

STATEMENT OF SPECIAL INSPECTIONS:
This statement of Special Inspections has been written with the understanding that the Building Official will:
- **Review and approve the qualifications of the Special Inspectors**
- **Monitor the special inspection activity on the project site to assure that Special Inspectors are qualified and performing their duty as state within this statement.**
- **Review all Special Inspection Reports submitted to them by the Special Inspector**
- **Perform inspections as required by OSSC Section 110.3.**

The following Special Inspections are applicable to this project:
- **Special Inspections for Standard Buildings (per OSSC 1705.1) REQUIRED**
- **Special Inspections for Seismic Resistance (per OSSC 1705.12) REQUIRED**
- **Testing for Seismic Resistance (per OSSC 1705.13) REQUIRED**
- **Special Inspections for Wind Resistance (per OSSC 1705.11) REQUIRED**

SPECIAL INSPECTION OF SHOP FABRICATED GRAVITY LOAD-BEARING MEMBERS AND ASSEMBLIES:
Special Inspection of shop fabricated Gravity Load Bearing Members & Assemblies shall be verified by the Special Inspector as stated in Section 1704.2.5.

STRUCTURAL STEEL per OSSC 1705.2.1 ,1705.12.1, 1705.13.1

A qualified Special Inspector of an "approved agency" providing Quality Assurance (QA) Special Inspections for the project shall review and confirm the Fabricator and Erector's Quality Control (QC) procedures for completeness and adequacy relative to AISC 360-16 Chapter N, AISC 303-16 Code of Standard Practice, AWS D1.1-2015 Structural Welding Code, AISC 341-16 Seismic Provisions Chapter J, AWS D1.8-2009 Seismic Supplement and 2019 OSSC code requirements for the fabricator's scope of work.

- QA Agency providing Special Inspections shall provide personnel meeting the minimum qualification requirements for Inspection and Nondestructive Testing NDT per AISC 360 Section N4.
- For Special Inspections of Steel Seismic Force Resisting Systems, QA Agency personnel shall meet the minimum qualification requirements for Inspection and Nondestructive Testing NDT per AISC 341 Sections J3 and J4.
  - QC Agency shall submit qualification documents per AISC 341 section J2 on projects subject to Special Inspections on Seismic Force Resisting Systems with R >3.
  - NDT personnel shall be qualified per AISC 341 Section J4.
  - Provide QC and QA Inspections per AISC 341 Section J5 through J10 as applicable.
- Verify Fabricator and Erector QC Program per AISC 360 Section N2.
- Inspection of welds and bolts by both QC and QA personnel shall be per the Schedule of Special Inspections below. All provisions of AWS D1.1 Structural Welding Code for statically loaded structures shall apply. Additional Weld and Bolt Inspections shall be performed by both QC and QA personnel on SFRS elements in accordance with the Schedule of Special Inspections below. Welding inspection and nondestructive testing shall also satisfy AISC 360 and AWS D1.8 Seismic Supplement.
- Nondestructive Testing (NDT) of welds:
  - Non-Destructive Testing (NDT) of welded joints per AISC 360 N5.5 and AISC 341 J6.2 for elements of the SFRS.
  - Risk Category for determination of extent of NDT per AISC 360 N5.5b is noted in the Design Criteria and Loads section of these General Requirements.
  - NDT performed shall be documented and reports shall identify the tested weld by piece mark and location of the piece.
  - For field work, the NDT report shall identify the tested weld by location in the structure, piece mark and location of the piece.
- Additional Inspection tasks per AISC 360 Section N5.8.
- Inspection for Composite Construction shall be done per AISC 360 Section N6.

POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY: shall comply with OSSC Section 1703. Inspections shall be in accordance with the requirements set forth in the approved ICC Evaluation Report and as indicated by the design requirements specified on the drawings. Refer to the POST INSTALLED ANCHORS section of these notes for anchors that are the basis of the design. Special inspector shall verify anchors are as specified in the POST INSTALLED ANCHORS section of these notes or as otherwise specified on the drawings. Substitutions require approval by the SER and require substantiating calculations and current 2019 OSSC recognized ICC Evaluation Services (ES) Report. Special Inspector shall document in their Special Inspection Report compliance with each of the elements required within the applicable ICC Evaluation Services (ES) Report.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to OSSC Section 1703.

SCHEDULES OF SPECIAL INSPECTIONS:

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity	-	X
2. Verify excavations are extended to proper depth and have reach proper material	-	X
3. Perform classification and testing of compacted fill materials	-	X
4. Verify use of proper materials, densities and list thickness during placement and compaction of compacted fill	X	-
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly	-	X

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	OSSC REFERENCE
1. Inspection, reinforcement, including pre-stressing tendons, and verify placement.	-	X	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. Reinforcing bar welding:				
a. Verify weldability of reinforcing bars other than ASTM A706	-	X	AWS D1.4 ACI 318: 26.6.4	-
b. Inspect single pass fillet weld maximum 5/16"	-	X		
c. Inspect all other welds	X	-		
3. Inspect anchors cast in concrete	-	X	ACI 318: 17.8.2	-
4. Inspect anchors post-installed in hardened concrete members:				
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads	X	-	ACI 318: 17.8.2.4	-
b. Mechanical anchors and adhesive anchors not defined in 4.a	-	X	ACI 318: 17.8.2	
5. Verify use of required design mix	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens, for strength tests, perform slump and air content tests, and determine the temperature of the concrete	X	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
7. Inspect concrete and shotcrete placement for proper application techniques	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques	-	X	ACI 318 :26.5.3 – 26.5.5	1908.9
9. Inspect formwork for shape, location and dimensions of the concrete member being formed	-	X	ACI 318: 26.11.1.2 (b)	-

REQUIRED SPECIAL INSPECTIONS OF WOOD CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD
1. High Load Diaphragms			OSSC Section 1705.5.1
a. Panel sheathing for grade and thickness	X	-	
b. Nominal size of framing members at adjoining panel edges	X	-	
c. Nail and staple diameters and lengths	X	-	
d. Number of fastener lines, spacing between fasteners in each line and at edge margins	X	-	
2. Shear Walls (where fastener spacing of the sheathing is 4 inches or less on center)			[OSSC Section 1705.11.1] [OSSC Section 1705.12.2]
a. Anchor Bolts including proper bottom plate sizes (2x and 3x) and plate washers	-	X	
b. Hold-downs (HD) and Continuous Rod Tie-Down Systems (TDS) including squash blocks and anchors to concrete	-	X	
c. A35 and LPT shear connectors	-	X	
d. Strap Connectors	-	X	
e. Boundary Edge Nailing	-	X	
f. Plate Nailing and Panel Edge Nailing for size and spacing	-	X	
g. Blocking	-	X	
3. Blocked and Unblocked Diaphragms (where fastener spacing of the sheathing is 4 inches or less on center)			[OSSC Section 1705.11.1] [OSSC Section 1705.12.2]
a. Blocking and strap connections	-	X	
b. Boundary edge and panel shear nailing size and spacing	-	X	
4. Moisture Content of wood studs, plates, beams, decking, and joists			As directed by the contractor to meet moisture content requirements
5. Roof truss 'hurricane clips'	-	X	

MINIMUM REQUIREMENTS FOR INSPECTIONS OF STRUCTURAL STEEL CONSTRUCTION

INSPECTION TASKS	QC	QA	REFERENCED STANDARD
INSPECTION TASKS PRIOR TO WELDING			
1. Welder qualification records and continuity records	P	O	AISC 360 TABLE N5.4-1
2. Welding procedure specifications (WPSs) available	P	P	AISC 360 TABLE N5.4-1
3. Manufacturing certifications for welding consumables available	P	P	AISC 360 TABLE N5.4-1
4. Material identification (type/grade)	O	O	AISC 360 TABLE N5.4-1
5. Welder Identification system	O	O	AISC 360 TABLE N5.4-1
6. Fit-up of groove welds (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack welding quality and location) • Backing type and fit (if applicable)	O	O	AISC 360 TABLE N5.4-1
7. Fit-up of CJP groove welds of HSS T-, 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 welding quality and location)	P	O	AISC 360 TABLE N5.4-1
8. Configuration and finish of access holes	O	O	AISC 360 TABLE N5.4-1
9. Fit-up of fillet welds • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	O	O	AISC 360 TABLE N5.4-1
10. Check welding equipment	O	-	AISC 360 TABLE N5.4-1
INSPECTION TASKS DURING WELDING			
1. Use of qualified welders	O	O	AISC 360 TABLE N5.4-2
2. Control and handling of welding consumables • Packaging • Exposure control	O	O	AISC 360 TABLE N5.4-2
3. No welding over cracked tack welds	O	O	AISC 360 TABLE N5.4-2
4. Environmental conditions • Wind speed within limits • Precipitation and temperature	O	O	AISC 360 TABLE N5.4-2
5. WPS followed • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flowrate • Preheat applied • Interpass temperature maintained (min/max) • Proper position (F, V, H, OH)	O	O	AISC 360 TABLE N5.4-2
6. Welding techniques • Interpass and final cleaning • Each pass within profile limitations • Each pass meets quality requirements	O	O	AISC 360 TABLE N5.4-2
INSPECTION TASKS AFTER WELDING			
1. Welds cleaned	O	O	AISC 360 TABLE N5.4-3
2. Size, length, and locations of welds	P	P	AISC 360 TABLE N5.4-3
3. Welds meet visual acceptance criteria • Crack prohibition • Weld/base-metal fusion • Crater cross section • Weld profiles • Weld size • Undercut • Porosity	P	P	AISC 360 TABLE N5.4-3
4. Arc strikes	P	P	AISC 360 TABLE N5.4-3
5. k-area	P	P	AISC 360 TABLE N5.4-3
6. Weld access holes in rolled heavy shapes and built-up heavy shapes	P	P	AISC 360 TABLE N5.4-3
7. Backing removed and weld tabs removed (if required)	P	P	AISC 360 TABLE N5.4-3
8. Repair activities	P	P	AISC 360 TABLE N5.4-3
9. Document acceptance or rejection of welded joint or member	P	P	AISC 360 TABLE N5.4-3
10. No prohibited welds have been added without the approval of the EOR	P	P	AISC 360 TABLE N5.4-3
INSPECTION TASKS PRIOR TO BOLTING			
1. Manufacturer's certifications available for fastener materials	O	P	AISC 360 TABLE N5.6-1
2. Fasteners marked in accordance with ASTM requirements	O	O	AISC 360 TABLE N5.6-1
3. Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O	AISC 360 TABLE N5.6-1
4. Correct bolting procedure selected for joint detail	O	O	AISC 360 TABLE N5.6-1
5. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O	AISC 360 TABLE N5.6-1
6. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.	P	O	AISC 360 TABLE N5.6-1
7. Proper storage provided for bolts, nuts, washers and other fasteners components	O	O	AISC 360 TABLE N5.6-1
INSPECTION TASKS DURING BOLTING			
1. Fastener assemblies, of suitable condition, placed in all holes and washers are positioned as required	O	O	AISC 360 TABLE N5.6-2
2. Joint brought to the snug-tight condition prior to the pre-tensioning operation	O	O	AISC 360 TABLE N5.6-2
3. Fastener component not turned by the wrench prevented from rotating	O	O	AISC 360 TABLE N5.6-2
4. Fasteners are pre-tensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges	O	O	AISC 360-10 TABLE N5.6-2
INSPECTION TASKS AFTER BOLTING			
1. Document acceptance or rejection of bolted connections	P	P	AISC 360 TABLE N5.6-3
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT			
1. Placement and installation of steel deck	P	P	AISC 360 TABLE N6.1
2. Placement and installation of steel headed stud anchors	P	P	AISC 360 TABLE N6.1
3. Document acceptance or rejection of steel elements	P	P	AISC 360 TABLE N6.1

O - Observe these items on a random basis. Operations need not be delayed pending these inspections
P - Perform these tasks for each welded joint or member, each bolted connection, or each steel element

MINIMUM REQUIREMENTS SPECIAL INSPECTION OF STRUCTURAL STEEL SEISMIC FORCE RESISTING SYSTEM (SFRS)

INSPECTION TASK	QC	QC	QA	QA	REFERENCED STANDARD
	TASK	DOC	TASK	DOC	
VISUAL INSPECTION TASKS PRIOR TO WELDING					
1. Material Identification (Type/Grade)	O	-	O	-	AISC 341 TABLE J6-1
2. Welder Identification System	O	-	O	-	AISC 341 TABLE J6-1
3. Fit-up 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)	P/O**	-	O	-	AISC 341 TABLE J6-1
4. Configuration and finish of access holes	O	-	O	-	AISC 341 TABLE J6-1
5. Fit-up fillet welds • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location	P/O**	-	O	-	AISC 341 TABLE J6-1
VISUAL INSPECTION TASKS DURING WELDING					
1. WPS followed • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flowrate • Preheat applied • Interpass temperature maintained(min/max) • Proper position (F, V, H, OH) • Intermix of filler metals avoided unless approved	O	-	O	-	AISC 341 TABLE J6-2
2. Use of qualified welders	O	-	O	-	AISC 341 TABLE J6-2
3. Control and handling of welding consumables • Packaging • Exposure control	O	-	O	-	AISC 341 TABLE J6-2
4. Environmental conditions • Wind speed within limits • Precipitation and temperature	O	-	O	-	AISC 341 TABLE J6-2
5. Welding techniques • Interpass and final cleaning • Each pass within profile limitations • Each pass meets quality requirements	O	-	O	-	AISC 341 TABLE J6-2
6. No welding over cracked tacks	O	-	O	-	AISC 341 TABLE J6-2
VISUAL INSPECTION TASKS AFTER WELDING					
1. Welds cleaned	O	-	O	-	AISC 341 TABLE J6-3
2. Size, length, and locations of welds	P	-	P	-	AISC 341 TABLE J6-3
3. Welds meet visual acceptance criteria • Crack prohibition • Weld/base-metal fusion • Crater cross section • Weld profiles and size • Undercut • Porosity	P	D	P	D	AISC 341 TABLE J6-3
4. k-area	P	D	P	D	AISC 341 TABLE J6-3
5. Placement of reinforcing or contouring fillet welds (if required)	P	D	P	D	AISC 341 TABLE J6-3
6. Backing removed, weld tabs removed, and finished, and fillet welds added (if required)	P	D	P	D	AISC 341 TABLE J6-3
7. Repair activities	P	-	P	D	AISC 341 TABLE J6-3
INSPECTION TASKS PRIOR TO BOLTING					
1. Proper fasteners selected for the joint detail	O	-	O	-	AISC 341 TABLE J7-1
2. Proper bolting procedure selected for joint detail	O	-	O	-	AISC 341 TABLE J7-1
3. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	-	O	-	AISC 341 TABLE J7-1
4. Pre-installation verification testing by installation personnel observed for fastener assemblies and methods used.	P	D	O	D	AISC 341 TABLE J7-1
5. Proper storage provided for bolts, nuts, washers and other fastener components	O	-	O	-	AISC 341 TABLE J7-1
INSPECTION TASKS DURING BOLTING					
1. Fastener assemblies placed in all holes and washers (if required) are positioned as required	O	-	O	-	AISC 341 TABLE J7-2
2. Joint brought to the snug-tight condition prior to the pre-tensioning operation	O	-	O	-	AISC 341 TABLE J7-2
3. Fastener component not turned by the wrench prevented from rotating	O	-	O	-	AISC 341 TABLE J7-2
4. Bolts are pre-tensioned progressing systematically from the most rigid point toward the free edges	O	-	O	-	AISC 341 TABLE J7-2
INSPECTION TASKS AFTER BOLTING					
1. Document accepted and rejected connections	P	D	P	D	AISC 341 TABLE J7-3

O - The inspector shall observe these functions on a random, daily basis. Operations need not be delayed pending observations.
P - These inspections shall be performed prior to the final acceptance of the item.
D - The inspector shall prepare reports indicating that the work has been performed in accordance with the contract documents. The report need not provide detailed measurements for joint fit-up, WPS settings, completed welds, or other individual items listed in the tables. For shop fabrication, the report shall indicate the piece mark of the piece inspected. For field work, the report shall indicate the reference gird lines and floor elevation inspected. Work not in compliance with the contract documents and whether the noncompliance has been satisfactorily repaired shall be noted in the inspection report.
**Follow performance of this inspection task 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 reestablishes adequate assurance that the welder will perform the inspection tasks listed.

FOR PERMIT
The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the authority having jurisdiction and DCI Engineers.

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SIGNATURE: REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON SHIRLEY CHALUPA EXPIRES: 12-31-23

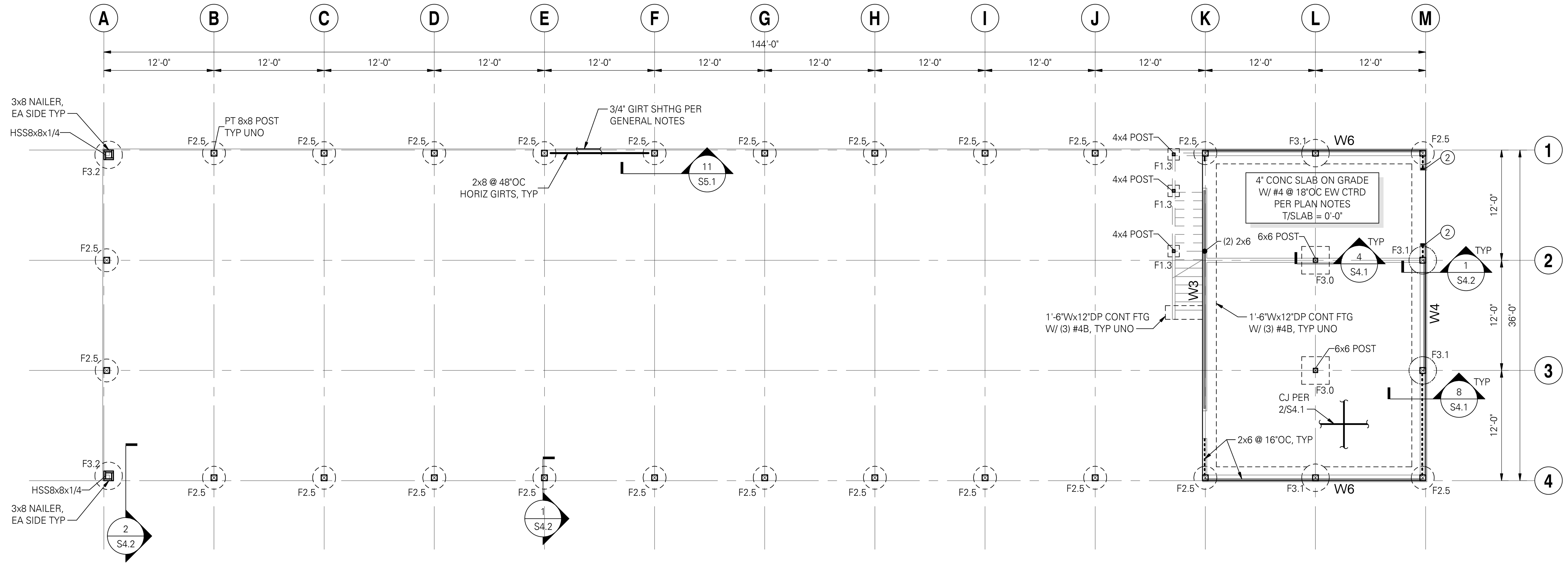
REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - SPECIAL INSPECTIONS

SHEET NO.
S1.4



FOUNDATION PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1, S1.2, S1.3 AND S1.4
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. CONTRACTOR SHALL LOCATE AND VERIFY THE FOLLOWING WITH OTHERS PRIOR TO POURING CONCRETE: ALL DOOR OPENINGS IN FOUNDATION WALLS; DRAINS AND SLOPES; BLOCKOUTS FOR PLUMBING, SPRINKLERS AND HVAC. ALL DUCTS, CHASES AND PIPES PER MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS. STAIR DETAILS AND GUARDRAILS PER ARCHITECTURAL DRAWINGS.
4. TOP OF SLAB (T/SLAB) ELEVATION ASSUMED 0'-0". FOR ACTUAL T/SLAB ELEVATION REFER TO CIVIL AND ARCHITECTURAL DRAWINGS. PROVIDE 6 MIL VAPOR BARRIER BELOW SLAB AT INTERIOR SPACES. PROVIDE FREE-DRAINING GRANULAR FILL PER OSSC CHAPTER 18.
5. ALL FOOTINGS AND SLABS TO BEAR ON COMPETENT NATIVE SOIL AND/OR STRUCTURAL FILL. SUBGRADE PREPARATION, STRUCTURAL FILL, DRAINAGE SYSTEM, AND OTHER REQUIREMENTS PER OSSC CHAPTER 18.
6. CJ INDICATES CONTROL JOINT PER PLAN.
7. MOISTURE PROOF ALL CONCRETE STEM AND BASEMENT WALLS PER ARCHITECT. CONTRACTOR TO VERIFY ADDITIONAL LOCATIONS WHICH REQUIRE WATERPROOFING PER ARCHITECTURAL DRAWINGS.
8. TYPICAL DETAILS PER:

    1/S4.1 TYPICAL LAP SPLICE SCHEDULE
    3/S4.1 TYPICAL SILL PLATE ANCHORAGE TO CONCRETE
    5/S4.1 STANDARD HOOKS AND BAR BENDS
    6/S4.1 TYPICAL PIPE AND TRENCH LOCATIONS AT CONCRETE STEMWALL/FOOTING
    8/S4.1 EXTERIOR THICKENED SLAB EDGE FOOTING AT STUD WALL
    9/S4.1 TYPICAL ANCHOR BOLT SCHEDULE
    10/S4.1 TYPICAL CORNER REINFORCING AT CONCRETE FOOTINGS
    11/S4.1 TYPICAL SILL PLATE ANCHORAGE TO CONCRETE
    12/S4.1 TYPICAL STEPPED FOOTING

STUD AND SHEAR WALL PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1, S1.2, S1.3 AND S1.4
2. LUMBER GRADE PER STRUCTURAL GENERAL NOTES.
3. HEADERS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (1) TRIMMER AND (1) KING STUD MINIMUM, UNO. WHERE MORE THAN (1) TRIMMER IS REQUIRED, THE NUMBER OF TRIMMER STUDS SHALL BE NOTED THUS: ■-② . TRIMMERS TO BE CONTINUOUS TO THE FOUNDATION. BLOCK SOLID AT FLOOR FRAMING.
4. BEAMS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (2) BUNDLED STUDS MINIMUM, UNO. WHERE MORE THAN (2) BUNDLED STUDS ARE REQUIRED, THE NUMBER OF BUNDLED STUDS SHALL BE NOTED THUS: ■-③ . BUNDLED STUDS TO BE CONTINUOUS TO THE FOUNDATION. BLOCK SOLID AT FLOOR FRAMING.
5. SHEAR WALL AND NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE 11/S5.2.
6. ALL EXTERIOR WALLS REQUIRING WOOD SHEATHING PER THE ARCHITECT SHALL BE SHEAR WALL TYPE W6 UNO.
7. HD (2) 2x (-) INDICATES HOLD-DOWN TYPE PER HOLD-DOWN SCHEDULE 9/S5.2. CIRCLED NUMBER INDICATES NUMBER OF TRIM STUDS REQUIRED AND BOTTOM NUMBER INDICATES NUMBER OF FULL HEIGHT (KING) STUDS REQUIRED IN ADDITION TO BUNDLED OR TRIM STUDS OR POSTS SHOWN ON PLAN.
8. TYPICAL HOLD-DOWN ELEVATION PER 5/S5.1.
9. ANCHOR BOLTS TO BE 5/8" DIA x 7" MINIMUM EMBEDMENT PER 3.S4.1.
10. TYPICAL DETAILS PER:

    1/S5.1 TYPICAL SHEAR WALL ELEVATION
    5/S5.1 TYPICAL HOLD-DOWN AT FOUNDATION
    6/S5.1 TYPICAL STUD WALL OPENING (HEADER) DETAIL
    7/S5.1 TYPICAL INTERIOR STAIRWAY SECTION AT SLOPED STRINGERS
    8/S5.1 TYPICAL STAIRWAY STRINGER DETAILS AND SPANS
    9/S5.1 TYPICAL TOP PLATE SPLICE DETAIL
    4/S5.2 TYPICAL HOLD-DOWN OR STRAP CONNECTION AT FLOOR FRAMING

BEARING/SHEAR WALL LINE KEY

SHEAR WALL LINE

INDICATES SIDE WHERE SHEATHING IS LOCATED AND NAILING PATTERN PER SHEAR WALL SCHEDULE

S/HDU2 6x6 — 2W4 — S/HDU2 6x6

INDICATES SHEAR WALL LINE

INDICATES STUD WALL LOCATION PER ARCH

HOLD-DOWN TYPE PER HOLD-DOWN SCHEDULE

SIZE OF STUD PER TYPICAL STUD BEARING WALL SCHEDULE UNLESS NOTED OTHERWISE HERE

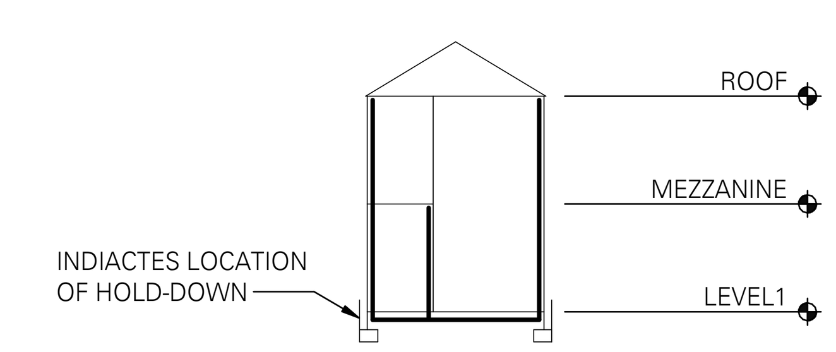
BEARING WALL LINE

INDICATES BEARING WALL LINE STUD SIZE AND SPACING PER TYPICAL STUD BEARING WALL SCHEDULE

INDICATES STUD WALL LOCATION PER ARCH

SPREAD FOOTING SCHEDULE

MARK	SIZE			REINFORCING	COMMENTS
	LENGTH	WIDTH	DEPTH		
F1.3	1'-3"	1'-3"	10"	(2) #4B EW	
F2.5	---	2'-6"Ø	7'-6"	REF DETAIL 1/S4.2	
F3.0	3'-0"	3'-0"	1'-0"	(4) #4B EW	
F3.1	---	3'-0"Ø	7'-6"	REF DETAIL 1/S4.2	
F3.2	---	3'-0"Ø	14'-6"	REF DETAIL 2/S4.2	



NOTE:
DARKENED LINE DESIGNATE AREA OF WORK

FOUNDATION & FIRST FLOOR STUD AND SHEAR WALL PLAN

SCALE: 1/8" = 1'-0"

FOR PERMIT
The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the authority having jurisdiction and DCI Engineers.

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON MARCH 23, 2011 SHIRLEY CHALUPA
EXPIRES: 12-31-23

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - FOUNDATION & FIRST FLOOR STUD AND SHEAR WALL PLAN

SHEET NO.
S2.1

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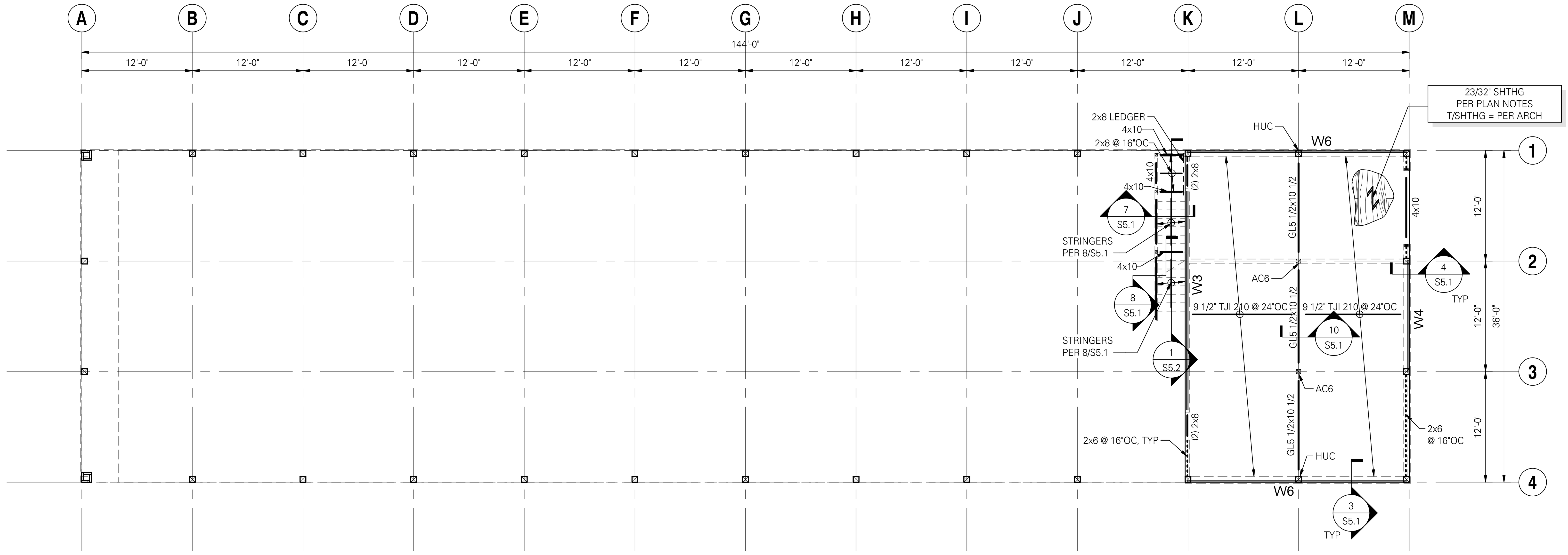


MEZZANINE FRAMING & STUD AND SHEAR WALL PLAN

SCALE: 1/8" = 1'-0"

FLOOR FRAMING PLAN NOTES:

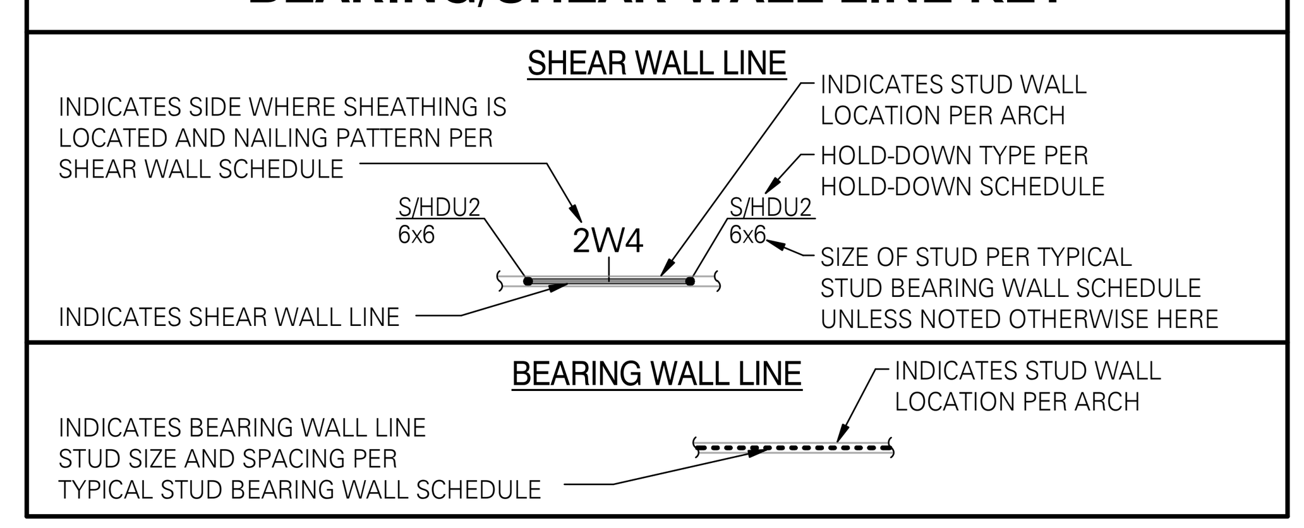
1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1, S1.2, S1.3 AND S1.4.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. FLOOR SHEATHING PER PLAN AND STRUCTURAL GENERAL NOTES. SHEATHING TO BE GLUED AND NAILED TO FRAMING WITH 0.131" DIAx2 1/2" NAILS @ 6"OC AT SUPPORTED PANEL EDGES AND @ 12"OC FIELD, UNO. LAY SHEATHING WITH FACE GRAIN (LONG DIRECTION) PERPENDICULAR TO SUPPORTS AND STAGGER PANEL END JOINTS. ALLOW 1/8" SPACE BETWEEN PANEL ENDS AND EDGES.
4. ALL DUCTS, CHASES AND PIPES SHALL BE PER MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS. STAIR DETAILS AND GUARDRAILS PER ARCHITECTURAL DRAWINGS.
5. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
6. ALL 2x HANGERS TO BE FACE MOUNT TYPE LUS, UNO. GLULAM, PARALLAM AND MICROLLAM HANGERS ARE AS SPECIFIED ON PLAN. "I" JOIST HANGERS TO BE FACE MOUNT SIMPSON IUS TYPE, UNO.
7. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (2) 2x8 MINIMUM. HEADER SUPPORTS PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.
8. BEAMS ARE FLUSH FRAMED WITH JOISTS UNLESS NOTED OTHERWISE ON DETAILS, OR ON PLANS AS "DB" INDICATING THAT DROPPED BEAM FRAMING IS REQUIRED. BEAM SUPPORTS PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.
9. PROVIDE FULL HEIGHT SOLID BLOCKING OR DOUBLE JOISTS UNDER ALL SHEAR WALLS AND BEARING WALLS. AT SHEAR WALLS PARALLEL TO FRAMING, ALIGN (1) JOIST OVER SHEAR WALL (ADDITIONAL JOISTS MAY BE REQUIRED).
10. ALL RIM JOISTS AND BLOCKING TO BE 1 1/2" LSL MINIMUM UNO.
11. PROVIDE DOUBLE JOISTS AROUND ALL FLOOR AND ROOF OPENINGS GREATER THAN 24" ON ONE SIDE.
12. BEARING STUD, SHEAR WALL, HOLD-DOWN, POST SIZE, AND POST CAP AND BASE REQUIREMENTS BELOW PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.

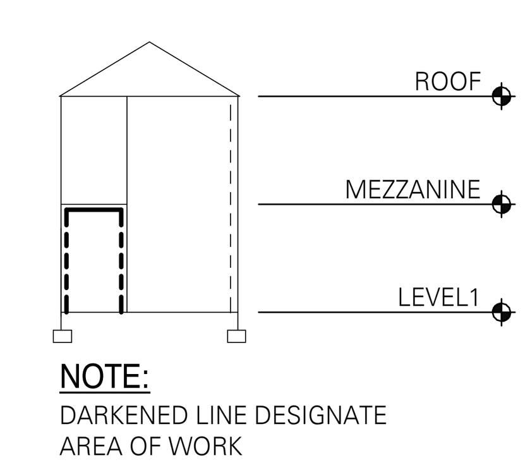
STUD AND SHEAR WALL PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1, S1.2, S1.3 AND S1.4
2. LUMBER GRADE PER STRUCTURAL GENERAL NOTES.
3. HEADERS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (1) TRIMMER AND (1) KING STUD MINIMUM, UNO. WHERE MORE THAN (1) TRIMMER IS REQUIRED, THE NUMBER OF TRIMMER STUDS SHALL BE NOTED THUS: ■-(2) . TRIMMERS TO BE CONTINUOUS TO THE FOUNDATION. BLOCK SOLID AT FLOOR FRAMING.
4. BEAMS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (2) BUNDLED STUDS MINIMUM, UNO. WHERE MORE THAN (2) BUNDLED STUDS ARE REQUIRED, THE NUMBER OF BUNDLED STUDS SHALL BE NOTED THUS: ■-(3) . BUNDLED STUDS TO BE CONTINUOUS TO THE FOUNDATION. BLOCK SOLID AT FLOOR FRAMING.
5. SHEAR WALL AND NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE 11/S5.2.
6. ALL EXTERIOR WALLS REQUIRING WOOD SHEATHING PER THE ARCHITECT SHALL BE SHEAR WALL TYPE W6 UNO.
7. HD / (2) 2x (-) INDICATES HOLD-DOWN TYPE PER HOLD-DOWN SCHEDULE 9/S5.2. CIRCLED NUMBER INDICATES NUMBER OF TRIM STUDS REQUIRED AND BOTTOM NUMBER INDICATES NUMBER OF FULL HEIGHT (KING) STUDS REQUIRED IN ADDITION TO BUNDLED OR TRIM STUDS OR POSTS SHOWN ON PLAN.
8. TYPICAL HOLD-DOWN ELEVATION PER 5/S5.1.
9. ANCHOR BOLTS TO BE 5/8" DIA x 7" MINIMUM EMBEDMENT PER 3.S4.1.
10. TYPICAL DETAILS PER:

1/S5.1	TYPICAL SHEAR WALL ELEVATION
5/S5.1	TYPICAL HOLD-DOWN AT FOUNDATION
6/S5.1	TYPICAL STUD WALL OPENING (HEADER) DETAIL
7/S5.1	TYPICAL INTERIOR STAIRWAY SECTION AT SLOPED STRINGERS
8/S5.1	TYPICAL STAIRWAY STRINGER DETAILS AND SPANS
9/S5.1	TYPICAL TOP PLATE SPLICE DETAIL
4/S5.2	TYPICAL HOLD-DOWN OR STRAP CONNECTION AT FLOOR FRAMING

BEARING/SHEAR WALL LINE KEY





NOTE:
DARKENED LINE DESIGNATE AREA OF WORK

FOR PERMIT

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EXPIRES: 12-31-23

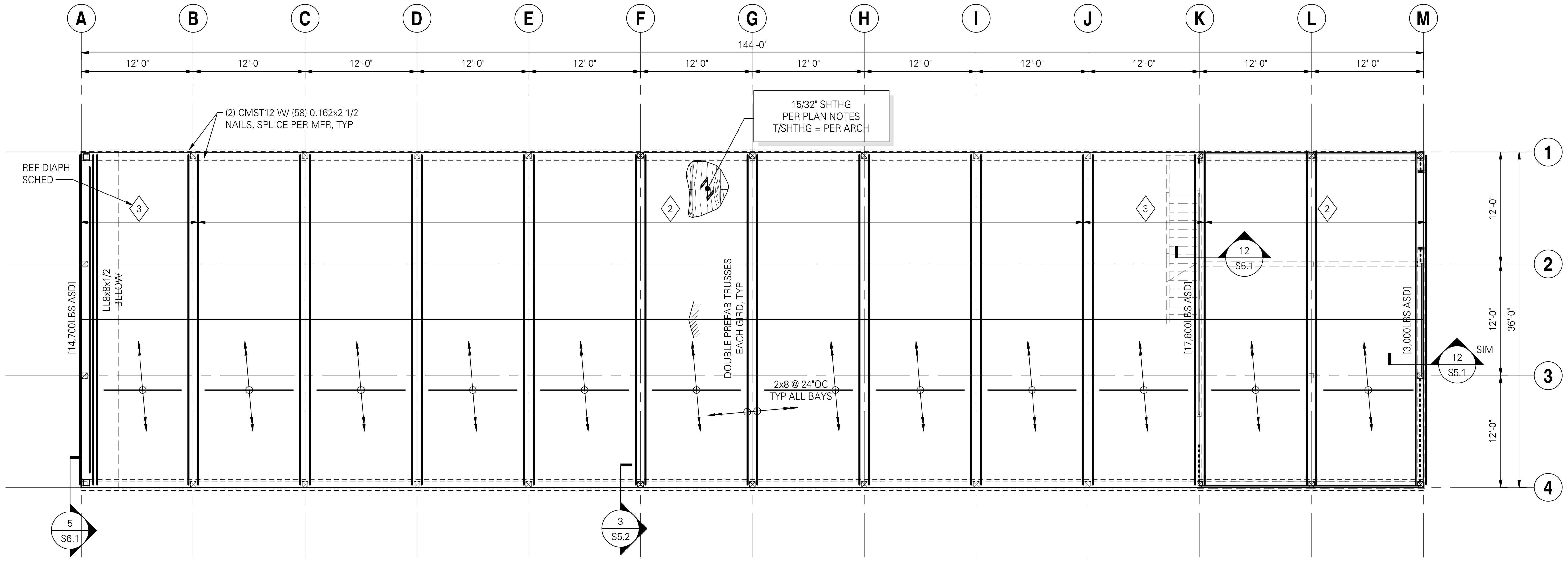
REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - MEZZANINE FRAMING & STUD AND SHEAR WALL PLAN

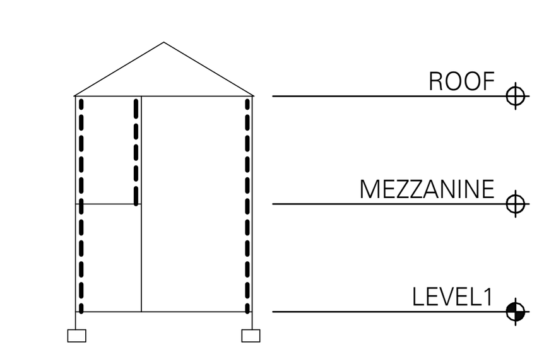
SHEET NO.
S2.2



ROOF FRAMING PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1, S1.2, S1.3 AND S1.4
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. ALL DUCTS, CHASES AND PIPES SHALL BE PER MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS. STAIR DETAILS AND GUARDRAILS PER ARCHITECTURAL DRAWINGS.
4. ROOF SHEATHING PER PLAN AND STRUCTURAL GENERAL NOTES. SHEATHING TO BE NAILED TO ROOF FRAMING WITH 0.131"DIAx2 1/2" NAILS @ 4"OC AT SUPPORTED PANEL EDGES AND @ 12"OC FIELD, UNO. LAY SHEATHING WITH FACE GRAIN (LONG DIRECTION) PERPENDICULAR TO SUPPORTS AND STAGGER PANEL END JOINTS. ALLOW 1/8" SPACE BETWEEN PANEL ENDS AND EDGES. BLOCK AND NAIL PANEL EDGES PER SCHEDULE.
5. ALL 2x HANGERS TO BE FACE MOUNT TYPE LUS, UNO. GLULAM, PARALLAM AND MICROLLAM HANGERS ARE AS SPECIFIED ON PLAN. WOOD "I" JOIST HANGERS SHALL BE SUPPLIED AND DESIGNED BY JOIST SUPPLIER. "I" JOIST HANGERS TO BE FACE MOUNT SIMPSON IUS TYPE, UNO.
6. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (2) 2x8 MINIMUM. HEADER SUPPORTS PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.
7. PROVIDE SOLID BLOCKING OVER ALL SHEAR WALLS AND BEARING WALLS. AT SHEAR WALLS PARALLEL TO FRAMING, ALIGN JOIST OR TRUSS OVER SHEAR WALL (ADDITIONAL JOISTS OR TRUSSES MAY BE REQUIRED).
8. HORIZONTAL STRAP TIES INDICATED ON THE FRAMING PLAN ARE TO BE CENTERED OVER WALL TOP PLATE AND/OR HEADER, BLOCKING OR BEAM. SPLICE REQUIREMENTS PER STRAP MANUFACTURER SPECIFICATIONS.
9. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING CRITERIA:
   - ROOF SYSTEM TO BE BIDDER DESIGNED. ROOF PLAN SHOWN IS A SUGGESTED LAYOUT. CHANGES MUST BE SUBMITTED TO THE ENGINEER-OF-RECORD THRU THE ARCHITECT WITH BEARING POINTS AND REACTIONS TO STRUCTURE.
   - TRUSS LAYOUT SHOWN IS APPROXIMATE. TRUSS SUPPLIER IS RESPONSIBLE FOR FINAL TRUSS LAYOUT AND CONFIGURATION. NOTIFY ENGINEER OF REVISIONS TO PLAN.
   - STANDARD DEAD AND LIVE LOADS AND SUBMITTAL INFORMATION PER STRUCTURAL GENERAL NOTES.
   - [2000LBS] INDICATES SHEAR TRANSFER LOAD IN ROOF TRUSS TO BE LOCATED ABOVE SHEAR WALLS TRUSS. MANUFACTURER SHALL DESIGN THESE TRUSSES FOR THE BRACKETED LATERAL LOAD SPECIFIED ON PLAN, IN ADDITION TO THE DESIGN DEAD AND LIVE LOADS.
   - SHADED REGION INDICATES APPROXIMATE AREA OF OVER-FRAMING. TRUSS MANUFACTURER IS RESPONSIBLE FOR DESIGNING THE OVER-FRAMING REQUIRED. TRUSSES SHALL BE DESIGNED TO SUPPORT OVER-FRAMING IN ADDITION TO THE SPECIFIED DESIGN LOADS.
   - ALL GIRDER TRUSSES SHALL BE SUPPORTED BY A MINIMUM OF TWO STUDS. TRUSS MANUFACTURER TO SUBMIT TO ENGINEER GIRDER TRUSSES REACTIONS.
   - ALL MULTIPLE STUDS SUPPORTING HIP MASTER AND GIRDER TRUSSES TO CONTINUE TO FOUNDATION.
   - ROOF TRUSSES SHALL BE DESIGNED FOR ADDITIONAL LOADS FROM MECHANICAL UNITS AND PIPING. CONTRACTOR TO PROVIDE THE TRUSS SUPPLIER WITH LOCATIONS AND SUPPORT CONDITIONS OF ALL MECHANICAL, ELECTRICAL, PLUMBING, AND SPRINKLER LOADS. SPECIAL TRUSS SHAPES AND OPENING REQUIREMENTS ARE AS DESIGNATED ON PLANS.
   - TRUSS HANGERS SHALL BE SUPPLIED AND DESIGNED BY THE TRUSS SUPPLIER.
   - TRUSS MANUFACTURER TO DESIGN BEARING AT TOP PLATES FOR COMPRESSION PERPENDICULAR TO GRAIN f'c = 405 PSI.

14. BEARING STUD, SHEAR WALL, HOLD-DOWN, POST SIZE, AND POST CAP AND BASE REQUIREMENTS BELOW PER STUD AND SHEAR WALL PLAN.



NOTE:
DARKENED LINE DESIGNATE AREA OF WORK

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

FOR PERMIT
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MARCH 23, 2011
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S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - ROOF FRAMING PLAN

SHEET NO.
S2.3

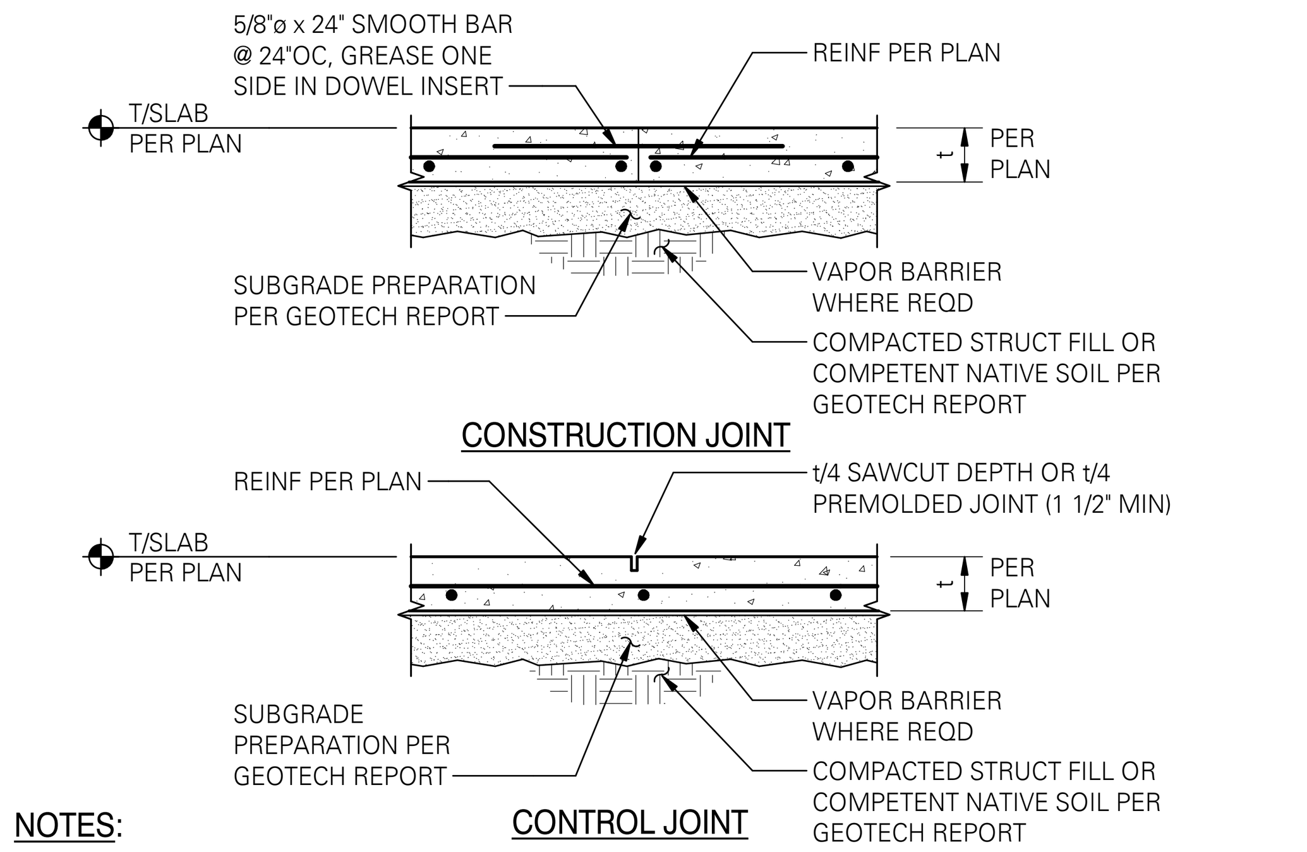
01400	GRADE 60 REINFORCING				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS (see note #5)		HOOKED BARS
	Ld	Splice	Ld	Splice	Ldh
f'c = 3000psi					
#3	17	22	22	28	9
#4	22	29	29	38	11
#5	28	36	36	47	14
#6	33	43	43	56	17
#7	48	63	63	81	20
#8	55	72	72	93	22
#9	62	81	81	105	25
#10	70	91	91	118	28
#11	78	101	101	131	31
#14	93	N/A	121	N/A	38
#18	124	N/A	161	N/A	50

NOTES:

1. ALL TABULATED VALUES ARE IN INCHES.
2. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
3. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
4. Ldh = DEVELOPMENT LENGTH OF BAR WITH STANDARD HOOK.
5. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
6. LAP SPLICE OF DIFFERENT SIZED BARS TO BE THE LARGER OF Ld OF THE LARGER BAR OR SPLICE LENGTH OF THE SMALLER BAR.

1 TYPICAL LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE

SCALE: 3/4" = 1'-0" (01400)

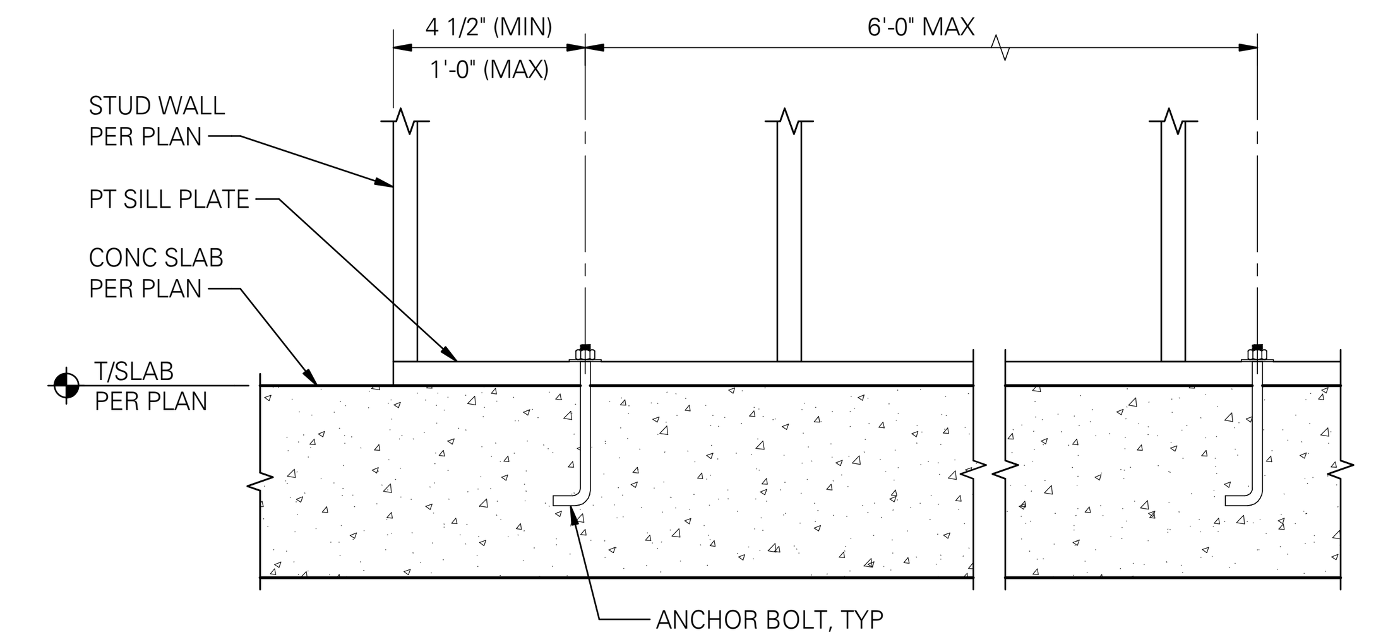


NOTES:

1. CONSTRUCTION JOINT IS A JOINT BETWEEN DIFFERENT POURS. CONTROL JOINT IS A CRACK CONTROL JOINT WITHIN THE SAME POUR.
2. USE "EARLY ENTRY DRY-CUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST.
3. ALIGN A CONSTRUCTION OR CONTROL JOINT WITH RE-ENTRANT SLAB CORNERS, EACH WAY, TYPICAL.
4. CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS 225 SQUARE FEET MAXIMUM, WITH MAXIMUM PANEL ASPECT RATIO OF 1.3 TO 1.0.
5. CONTRACTOR TO SUBMIT CONSTRUCTION/CONTROL JOINT PLAN TO STRUCTURAL ENGINEER OF RECORD FOR REVIEW/APPROVAL.

2 TYPICAL SLAB ON GRADE JOINT DETAILS WITH REINFORCING

SCALE: 3/4" = 1'-0" (03201)

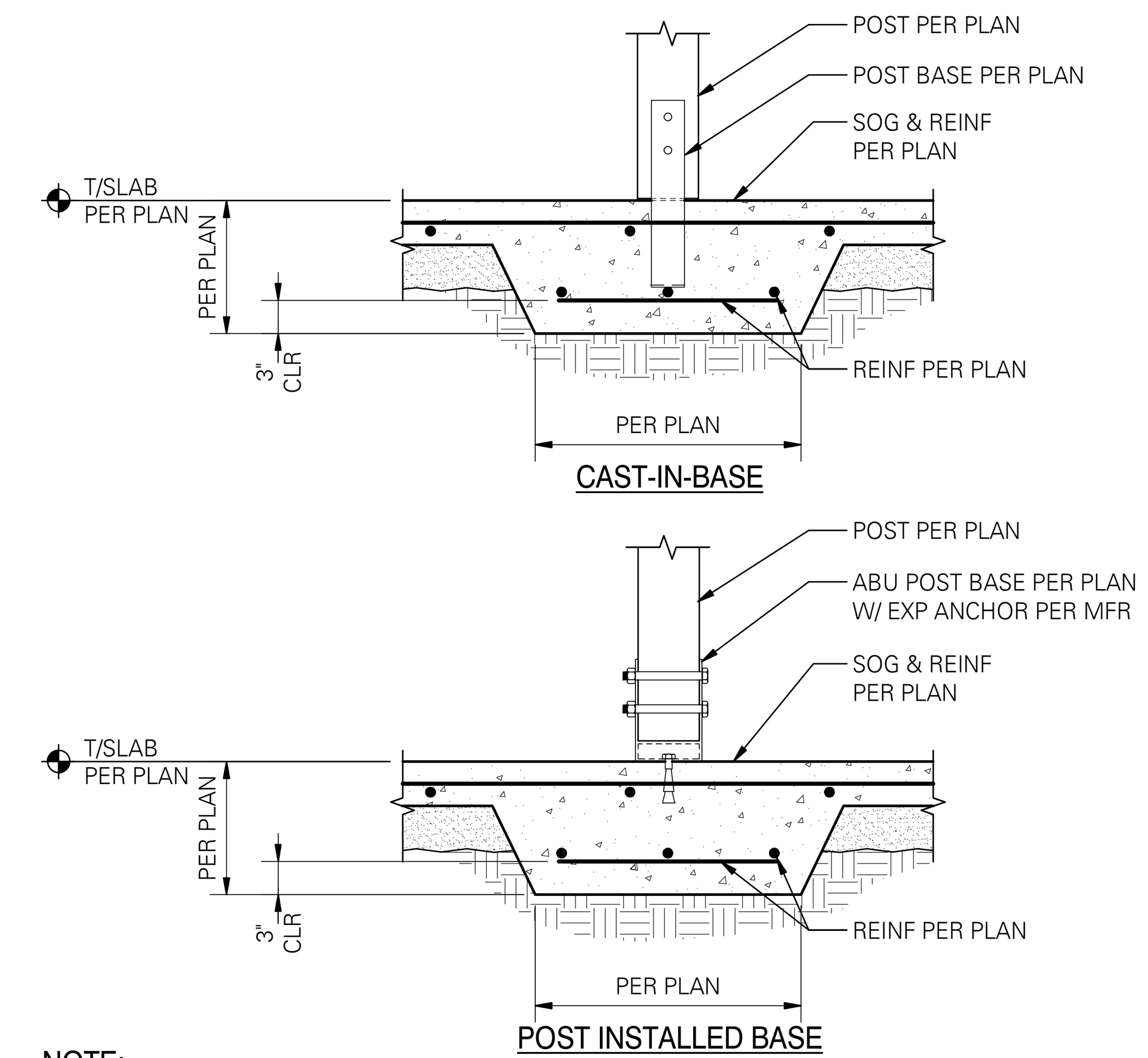


NOTES:

1. USE 5/8"Ø ANCHOR BOLTS WITH 7" MINIMUM EMBEDMENT INTO CONCRETE SLAB.
2. EACH SILL PLATE PIECE SHALL HAVE (2) BOLTS MINIMUM. HOLD-DOWN ANCHORS ARE NOT TO BE CONSIDERED AN ANCHOR BOLT.
3. LOCATE BOLTS WITHIN 1'-0" OF SILL PLATE PIECE ENDS AND AT 6'-0"OC MAXIMUM.
4. USE PLATE WASHER PER SHEAR WALL SCHEDULE AT EACH BOLT. STANDARD CUT WASHERS ARE ACCEPTABLE AT NON-SHEAR WALLS.
5. DO NOT DRILL OVERSIZE HOLES THRU SILL PLATE. USE 11/16"Ø DRILL BIT.
6. SILL PLATE THICKNESS AND FASTENING AT SHEAR WALLS PER SHEAR WALL SCHEDULE.

3 TYPICAL SILL PLATE ANCHORAGE TO CONCRETE

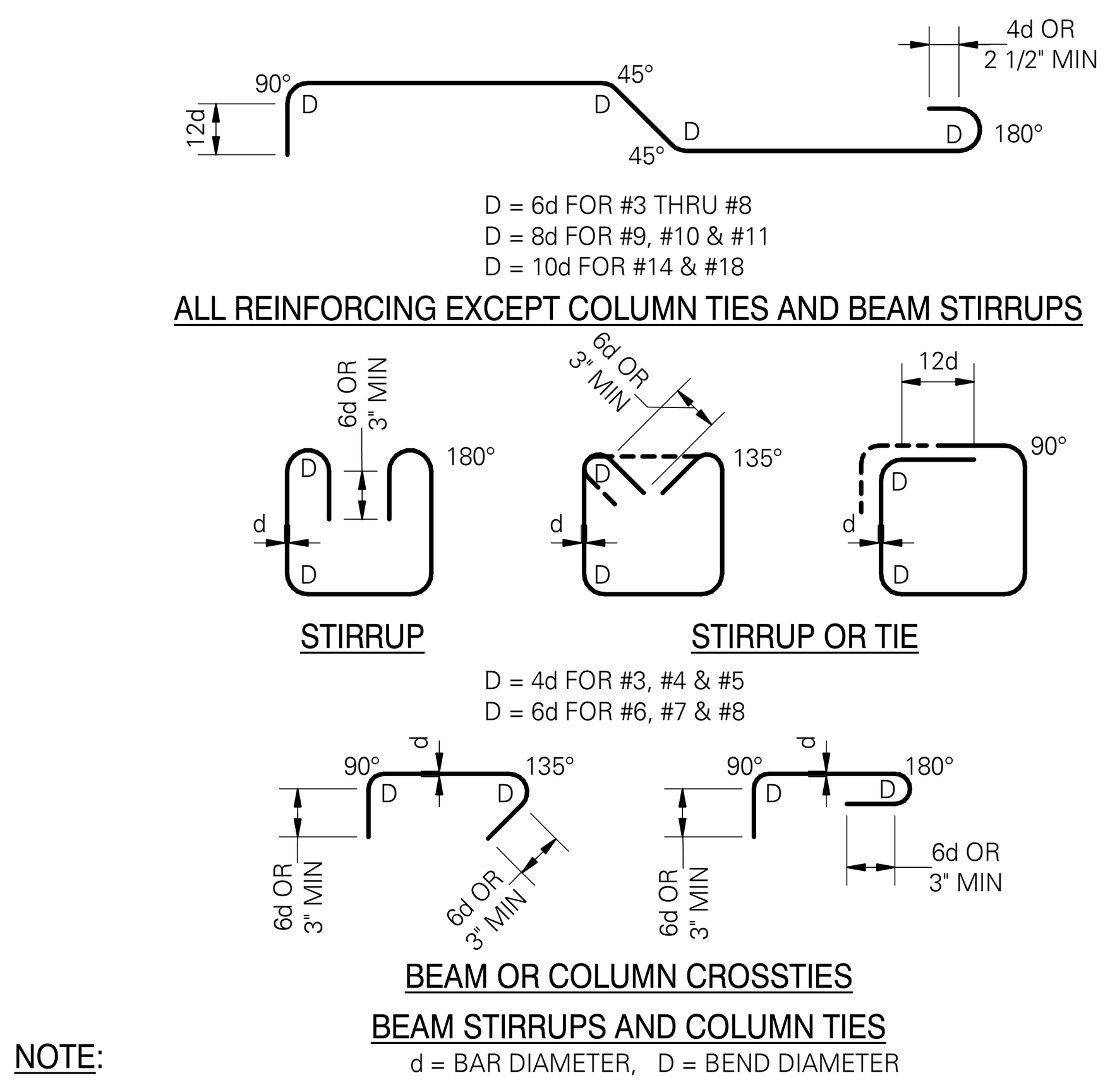
SCALE: 1" = 1'-0" (06910)



NOTE:
COLD JOINT BETWEEN FOOTING AND SLAB NOT PERMITTED.

4 INTERIOR THICKENED SLAB FOOTING AT WOOD POST

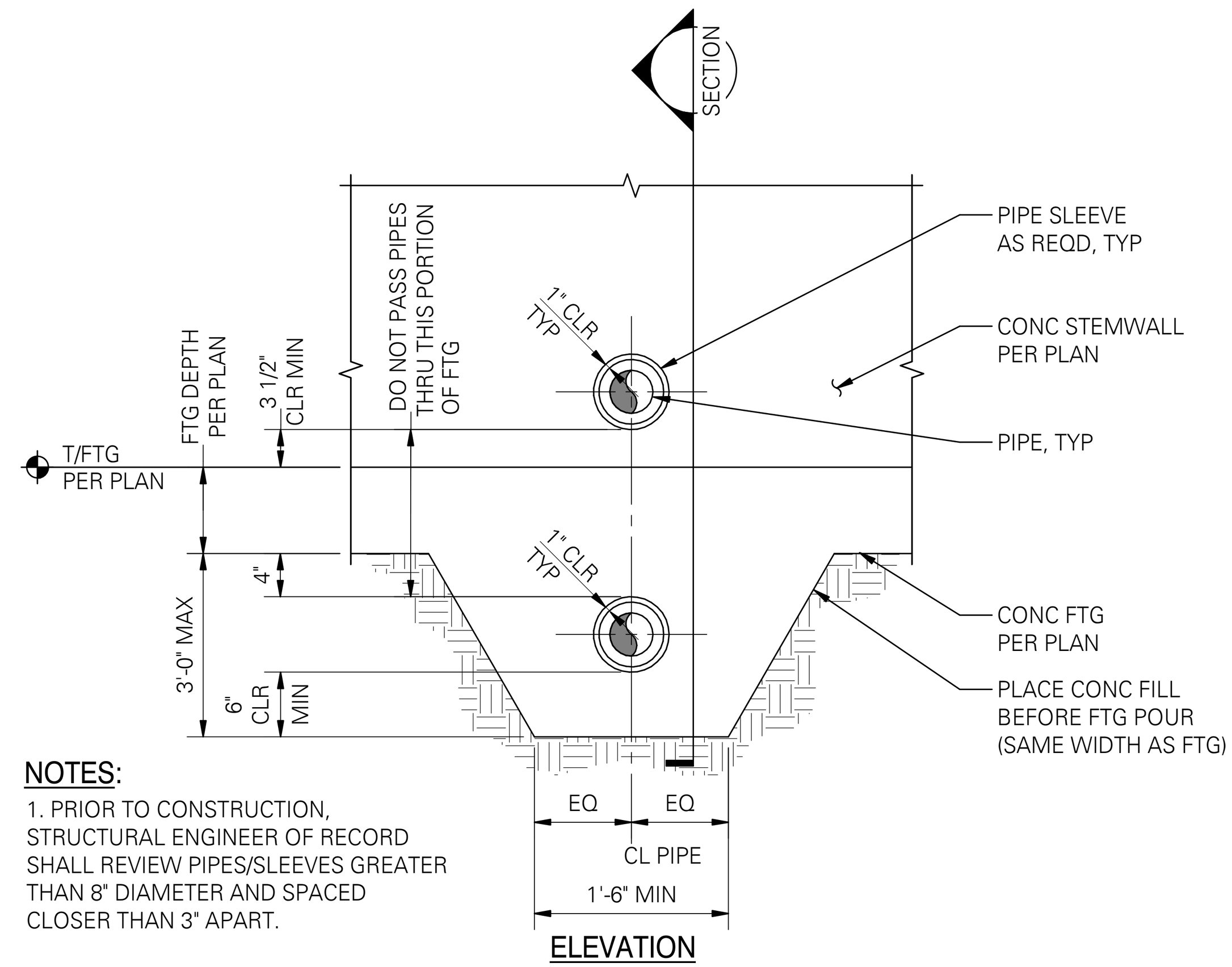
SCALE: 3/4" = 1'-0" (03010)



NOTE:
TIES AND CROSSTIES FOR SHEAR WALL BOUNDARY ELEMENTS SHALL BE DETAILED AS COLUMN TIES/CROSSTIES.

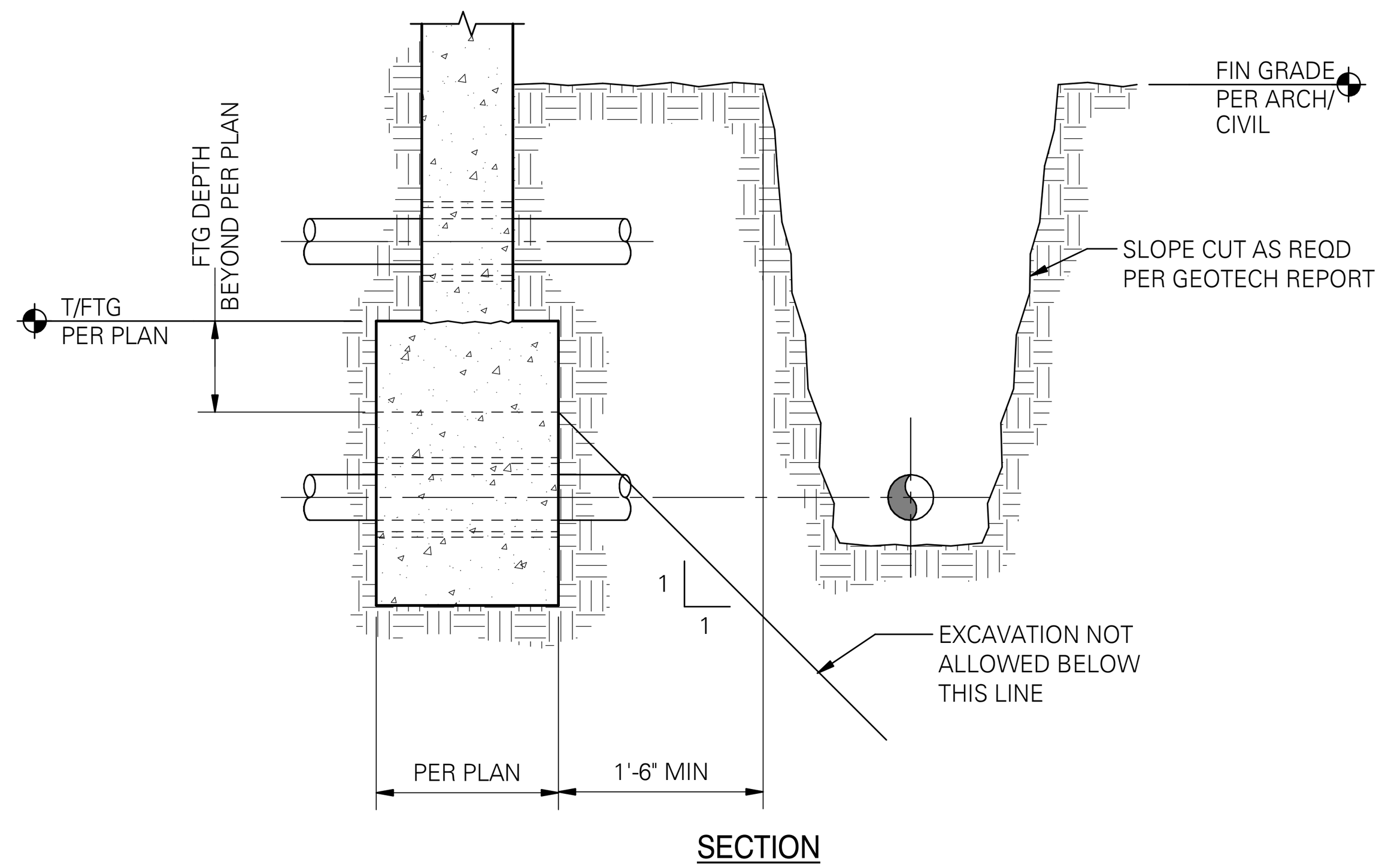
5 STANDARD HOOKS AND BENDS

SCALE: 3/4" = 1'-0" (03400)



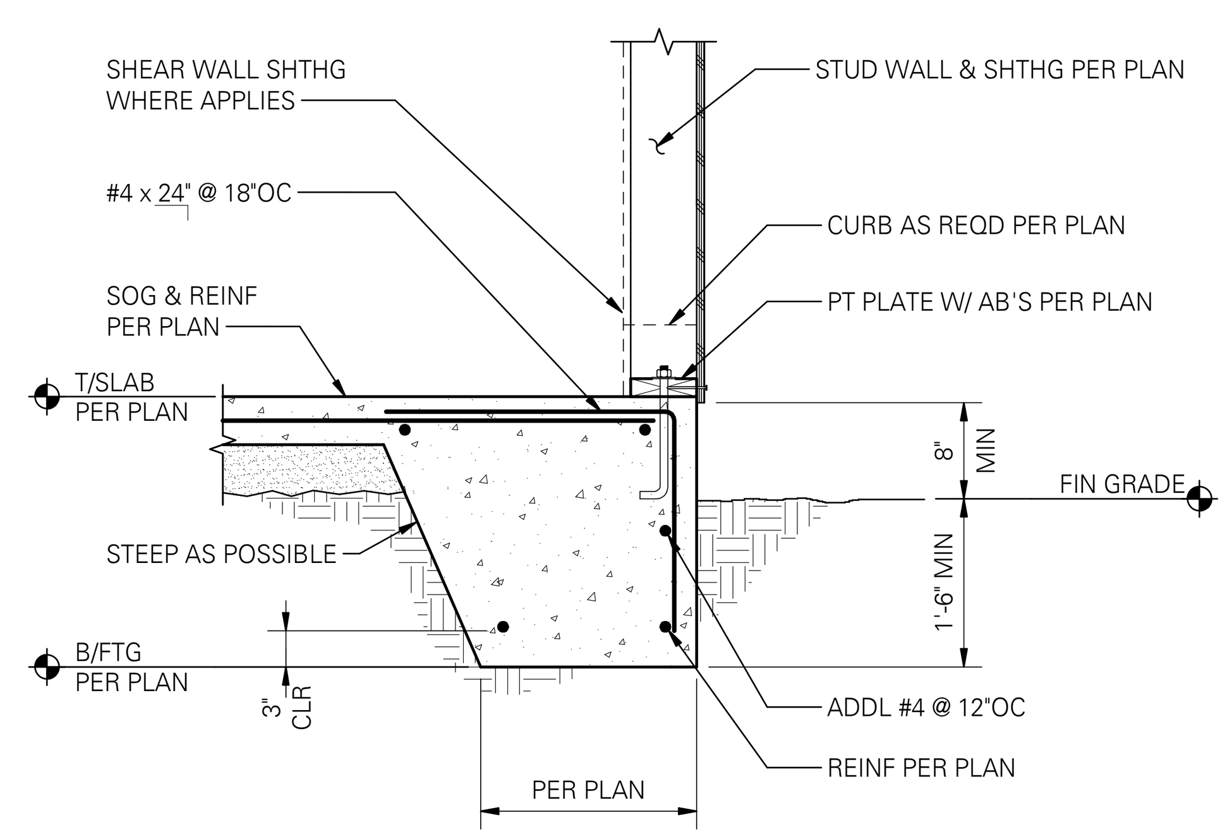
NOTES:

1. PRIOR TO CONSTRUCTION, STRUCTURAL ENGINEER OF RECORD SHALL REVIEW PIPES/SLEEVES GREATER THAN 8" DIAMETER AND SPACED CLOSER THAN 3" APART.
2. ALUMINUM MATERIALS SHALL NOT BE EMBEDDED IN CONCRETE.



6 TYPICAL PIPE AND TRENCH LOCATIONS AT CONCRETE STEMWALL/FOOTING

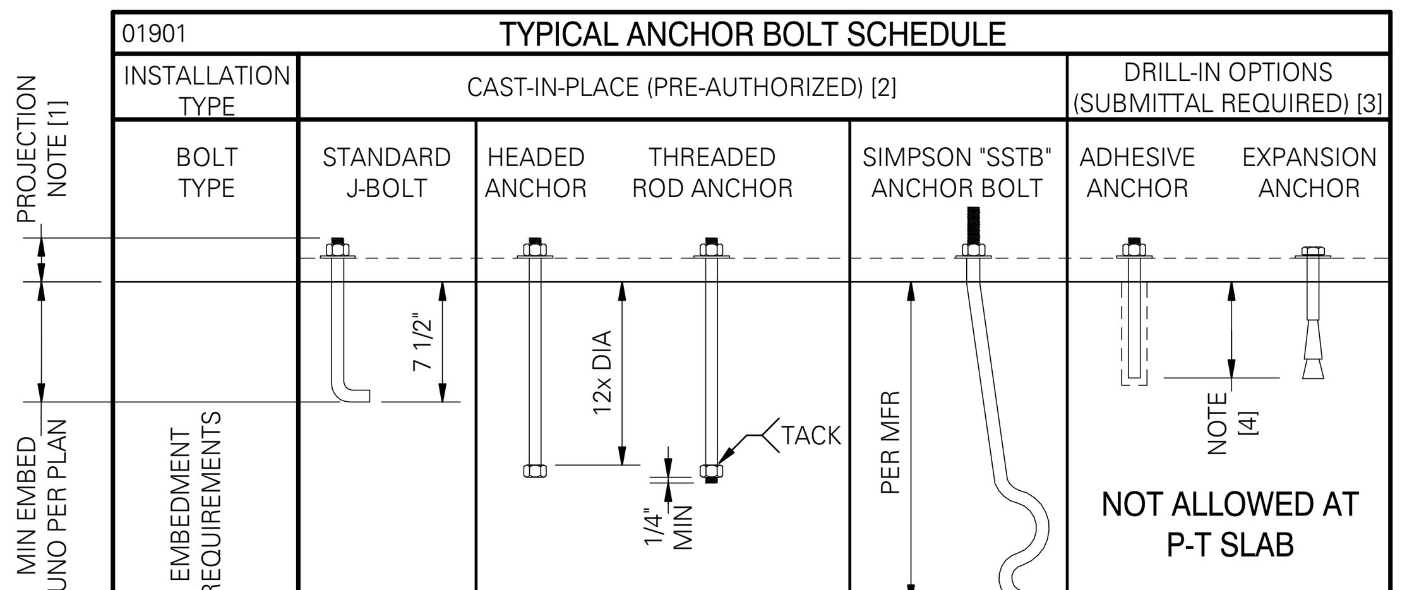
SCALE: 3/4" = 1'-0" (03190)



8 EXTERIOR THICKENED SLAB EDGE FOOTING AT STUD WALL

SCALE: 3/4" = 1'-0" (03030)

01901	TYPICAL ANCHOR BOLT SCHEDULE					
INSTALLATION TYPE	CAST-IN-PLACE (PRE-AUTHORIZED) [2]				DRILL-IN OPTIONS (SUBMITTAL REQUIRED) [3]	
BOLT TYPE	STANDARD J-BOLT	HEADED ANCHOR	THREADED ROD ANCHOR	SIMPSON "SSTB" ANCHOR BOLT	ADHESIVE ANCHOR	EXPANSION ANCHOR
EMBEDMENT REQUIREMENTS	7 1/2"	12x DIA	1/4" MIN, TACK	PER MFR	NOTE [4]; NOT ALLOWED AT P-T SLAB	
LIMITS	5/8"Ø MAX	5/8"Ø THRU 2 1/2"Ø		FOR WOOD FRAME ONLY	5/8"Ø THRU 1"Ø	
DIA = ANCHOR BOLT DIAMETER (NOMINAL)						



NOTES:

[1] CONTRACTOR SHALL DETERMINE THE REQUIRED THREAD PROJECTION SUITABLE FOR THE THICKNESS OF MATERIAL BEING FASTENED PLUS GROUT ALLOWANCE, IF ANY, AND CONSTRUCTION TOLERANCES, UNO.

[2] CONTRACTOR MAY SELECT APPROPRIATE CAST-IN-PLACE ANCHOR BOLT OPTION WITHOUT SUBMITTAL.

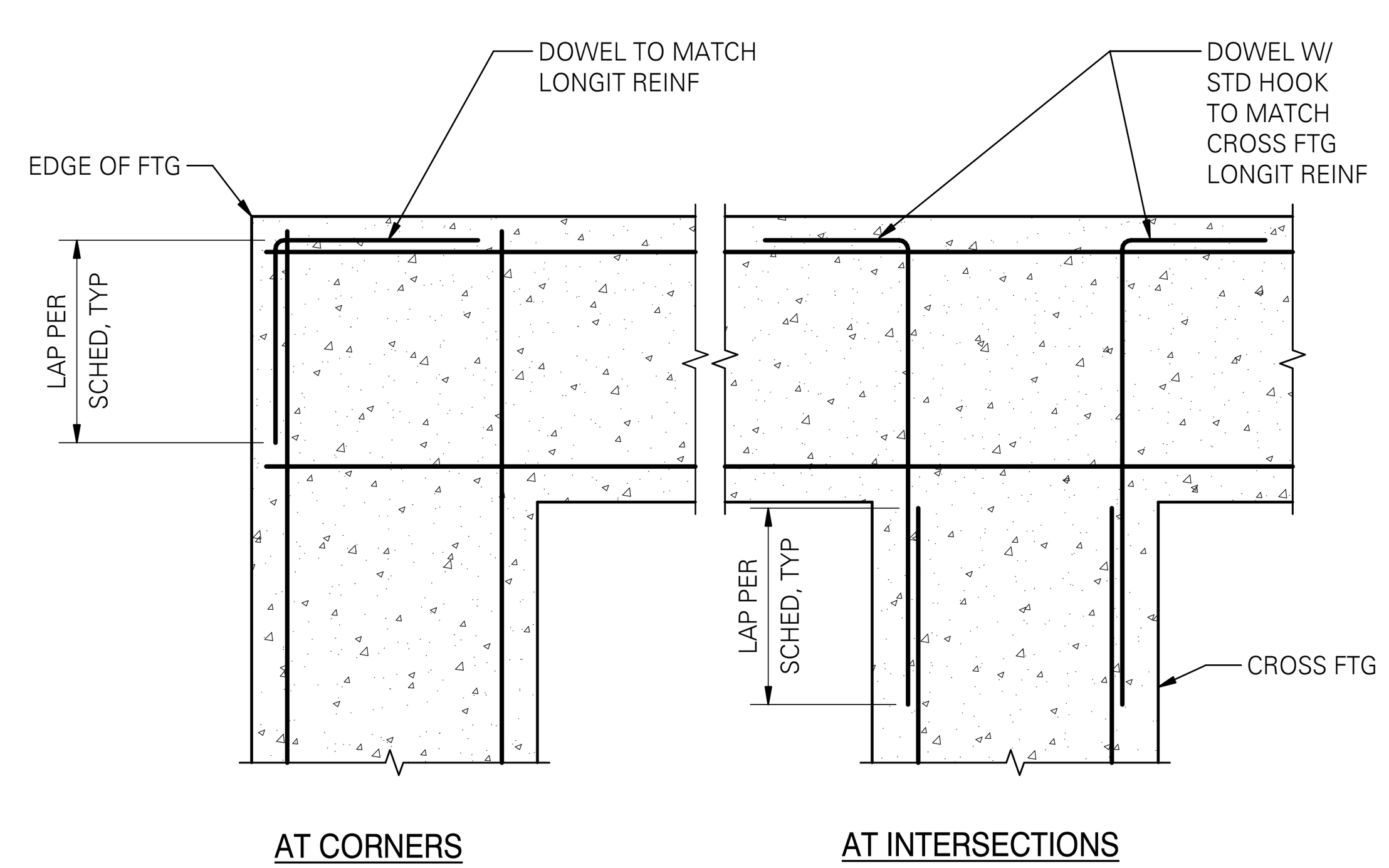
[3] DRILL-IN OPTIONS ARE NOT APPROPRIATE AT ALL CONDITIONS. IF DRILL-IN METHOD IS PREFERRED, SUBMIT MANUFACTURER'S INFORMATION, ALLOWABLE LOAD VS EMBEDMENT DATA AND LOCATIONS OF WHERE SUBSTITUTIONS ARE REQUESTED. ENGINEER WILL DETERMINE IF SUBSTITUTION IS APPROPRIATE FOR LOCATION AND LOADING.

[4] EMBEDMENT OF DRILL-IN ANCHORS SHALL BE PER ENGINEER'S SUBMITTAL REVIEW COMMENTS. EMBEDMENT SHALL BE (9) NINE TIMES THE NOMINAL ANCHOR DIAMETER, UNO.

[5] AT PRESSURE TREATED SILLS, PROVIDE HOT-DIPPED GALVANIZED OR STAINLESS STEEL ANCHORS.

9 TYPICAL ANCHOR BOLT SCHEDULE

SCALE: 1" = 1'-0" (01901)

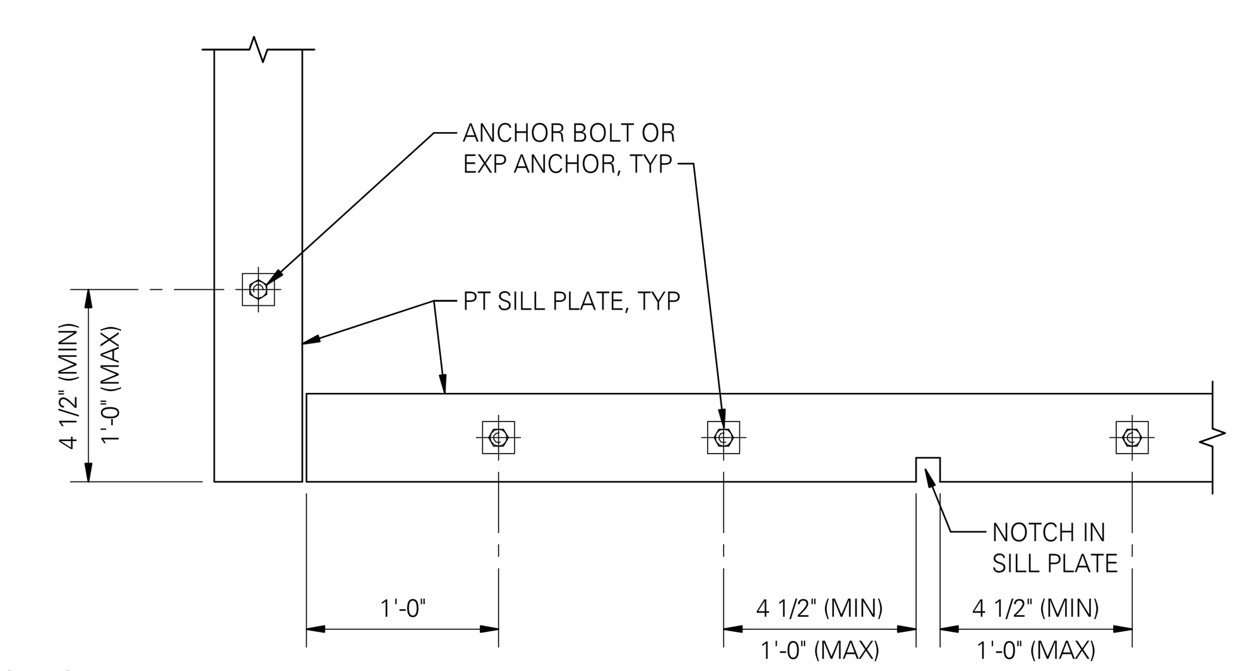


NOTE:

1. SPLICE LENGTHS PER LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE.
2. FOOTING REINFORCING PER PLAN OR ELEVATIONS, SECTIONS AND DETAILS.

10 PLAN - TYPICAL CORNER REINFORCING AT CONCRETE FOOTINGS

SCALE: 3/4" = 1'-0" (03132)

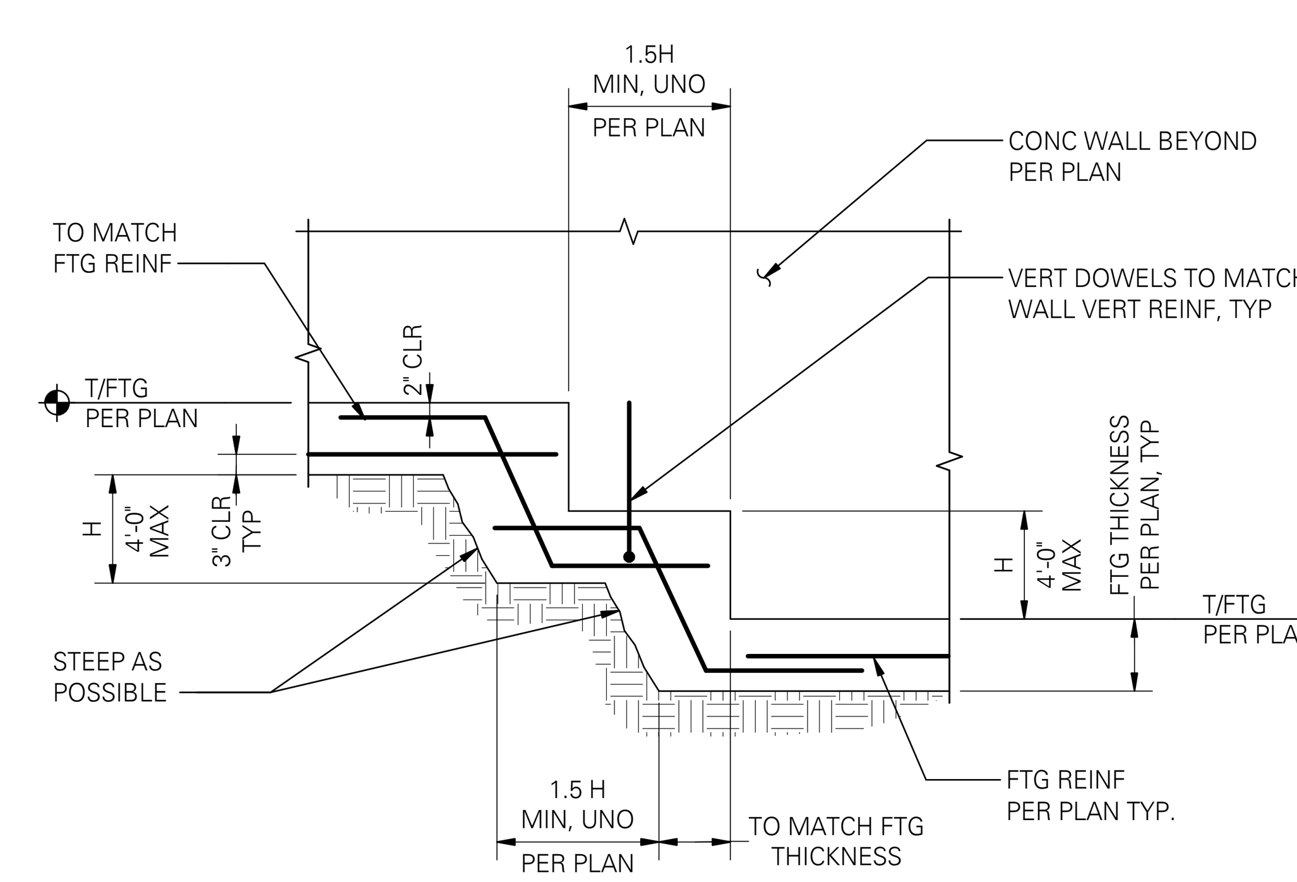


NOTES:

1. USE 5/8"Ø ANCHOR BOLT PER 3/S4.1.
2. EACH SILL PLATE PIECE SHALL HAVE (2) BOLTS MINIMUM. HOLD-DOWN ANCHORS ARE NOT TO BE CONSIDERED AN ANCHOR BOLT.
3. LOCATE BOLTS WITHIN 1'-0" OF SILL PLATE PIECE ENDS AND AT 6'-0"OC MAXIMUM.
4. USE PLATE WASHER PER SHEAR WALL SCHEDULE AT EACH BOLT. STANDARD CUT WASHERS ARE ACCEPTABLE AT NON-SHEAR WALLS.
5. DO NOT DRILL OVERSIZE HOLES THRU SILL PLATE. USE 11/16"Ø DRILL BIT.
6. SILL PLATE THICKNESS AND FASTENING AT SHEAR WALLS PER SHEAR WALL SCHEDULE.

11 PLAN - TYPICAL SILL PLATE ANCHORAGE TO CONCRETE

SCALE: 1" = 1'-0" (06911)



12 TYPICAL STEPPED FOOTING

SCALE: 3/4" = 1'-0" (03140)

FOR PERMIT
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EXPIRES: 12-31-23

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:

Job No.:	23031-0048
Proj. Manager:	TY
Drawn:	VP
Reviewed:	TY
Dwg. Chk.	SC
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PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE

COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - CONCRETE DETAILS

SHEET NO.
S4.1

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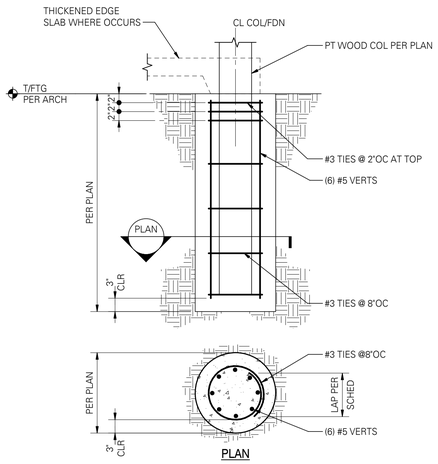
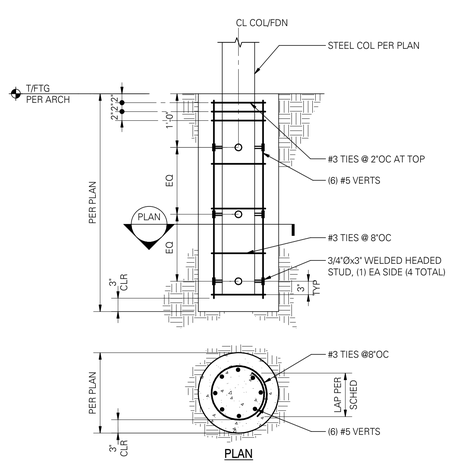


1 TYPICAL WOOD POST FOUNDATION

SCALE: 3/4" = 1'-0" (03192M)



2 TYPICAL STEEL POST FOUNDATION

SCALE: 3/4" = 1'-0" (03192M)

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MARCH 28, 2011
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EXPIRES: 12-31-23

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:
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Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk. SC
Date: 04/26/23
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COOS BAY SCHOOL DISTRICT
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COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - CONCRETE DETAILS

SHEET NO.
S4.2

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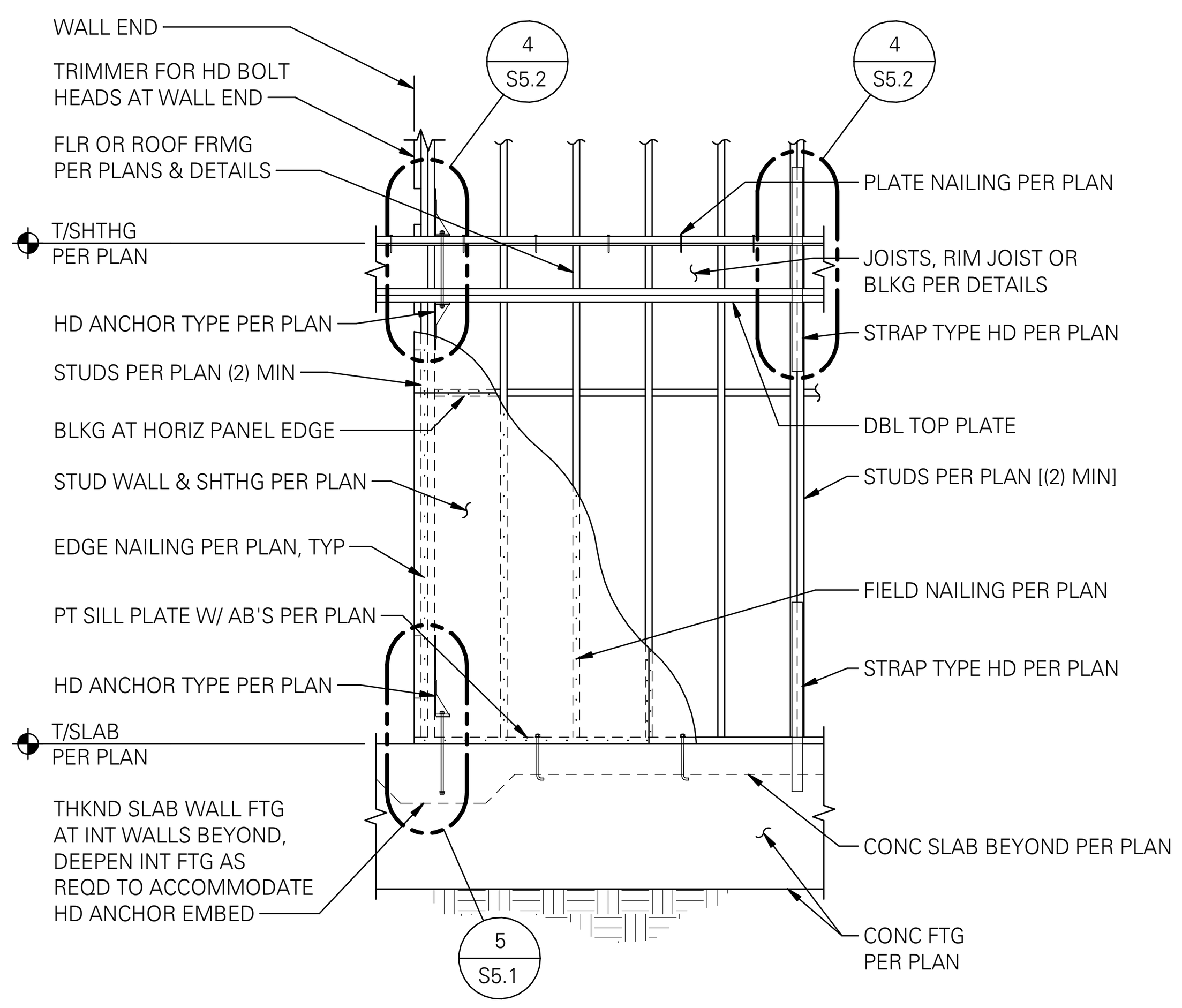
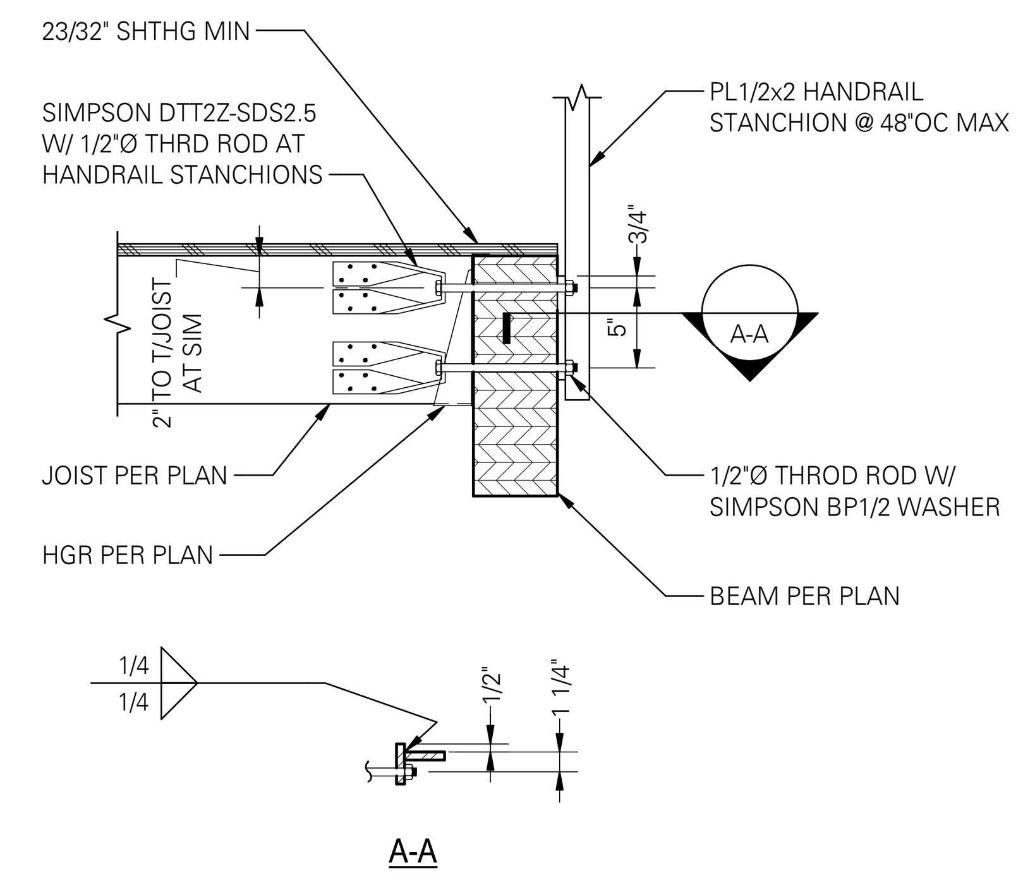


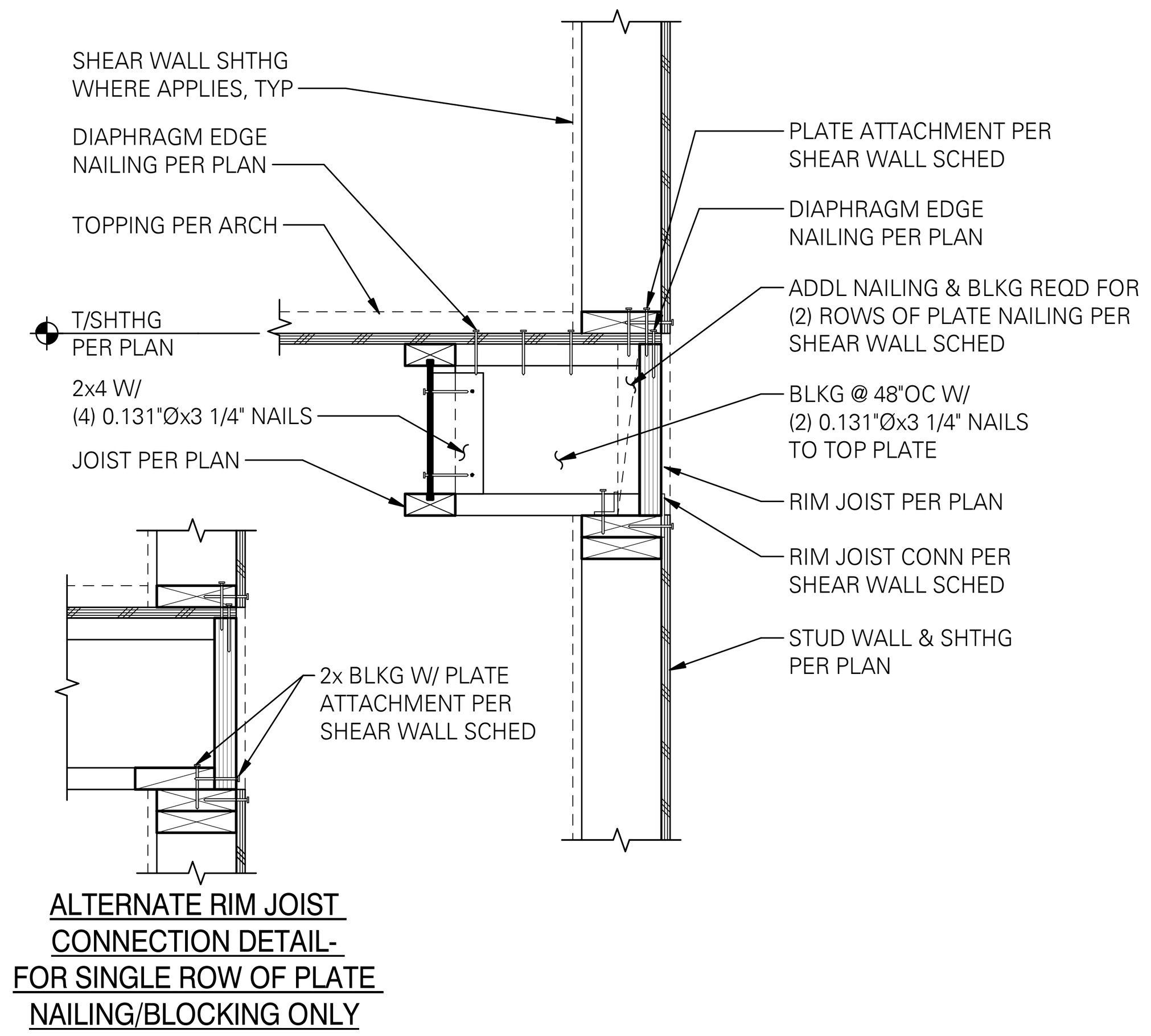
1 TYPICAL SHEAR WALL ELEVATION

SCALE: 1" = 1'-0" (06090)



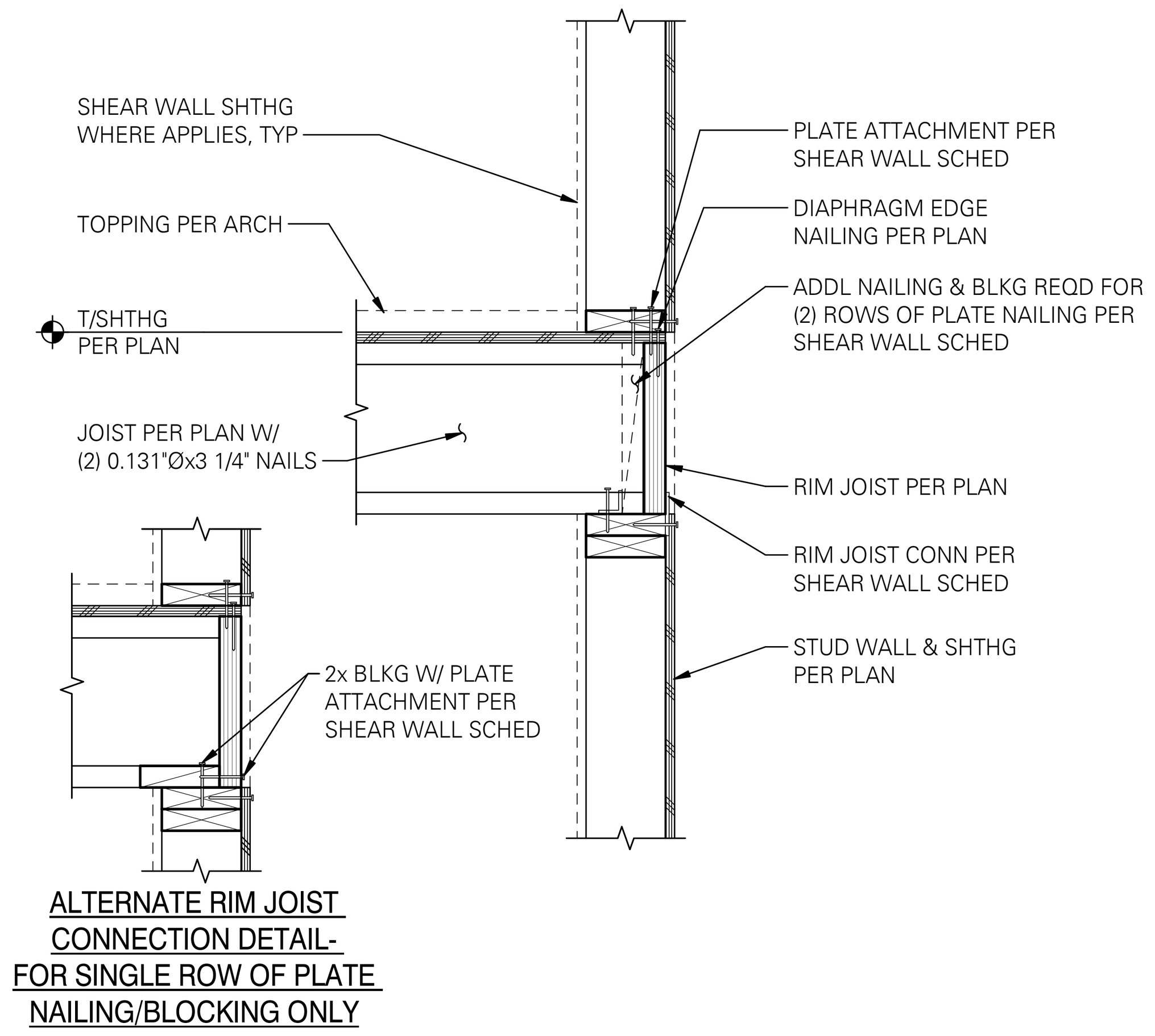
2 GUARDRAIL

SCALE: 1" = 1'-0"



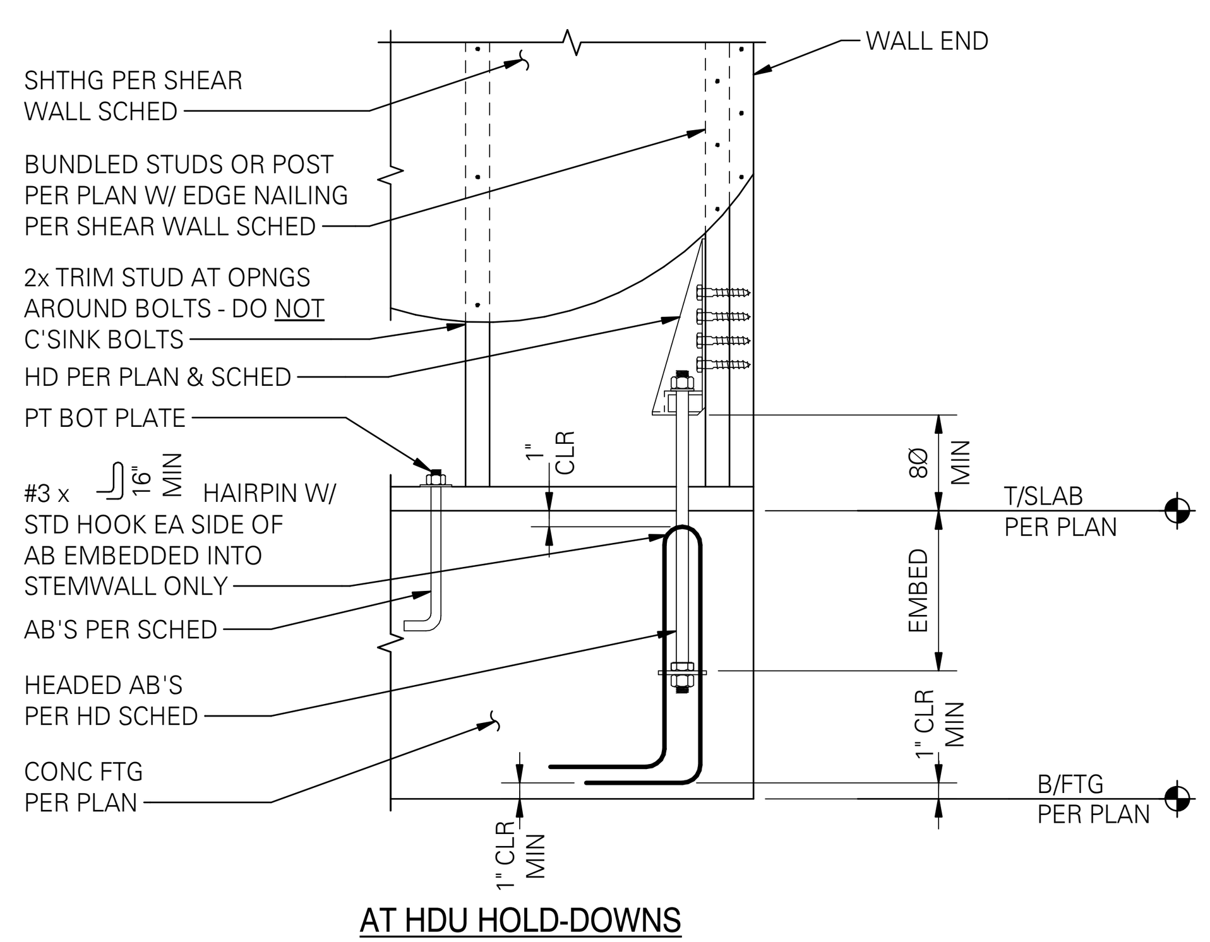
3 EXTERIOR WALL PARALLEL TO FLOOR JOISTS

SCALE: 1" = 1'-0" (06001)



4 EXTERIOR WALL PERPENDICULAR TO FLOOR JOISTS

SCALE: 1" = 1'-0" (06002)

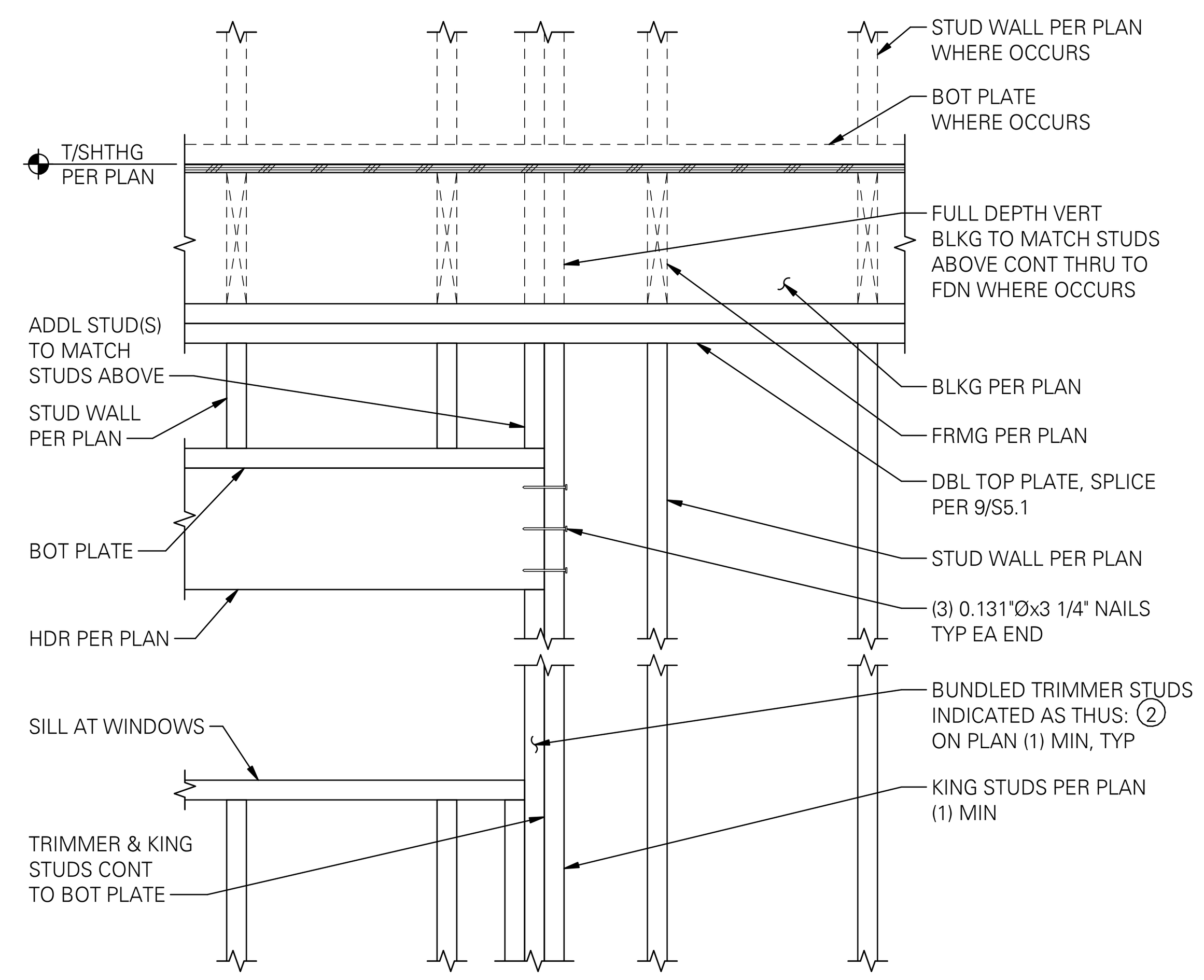


NOTES:

1. MINIMUM FOOTING SIZE FOR ANCHORS EMBEDDED INTO FOOTING IS 2x EMBED SQUARE WITH DEPTH AS INDICATED.

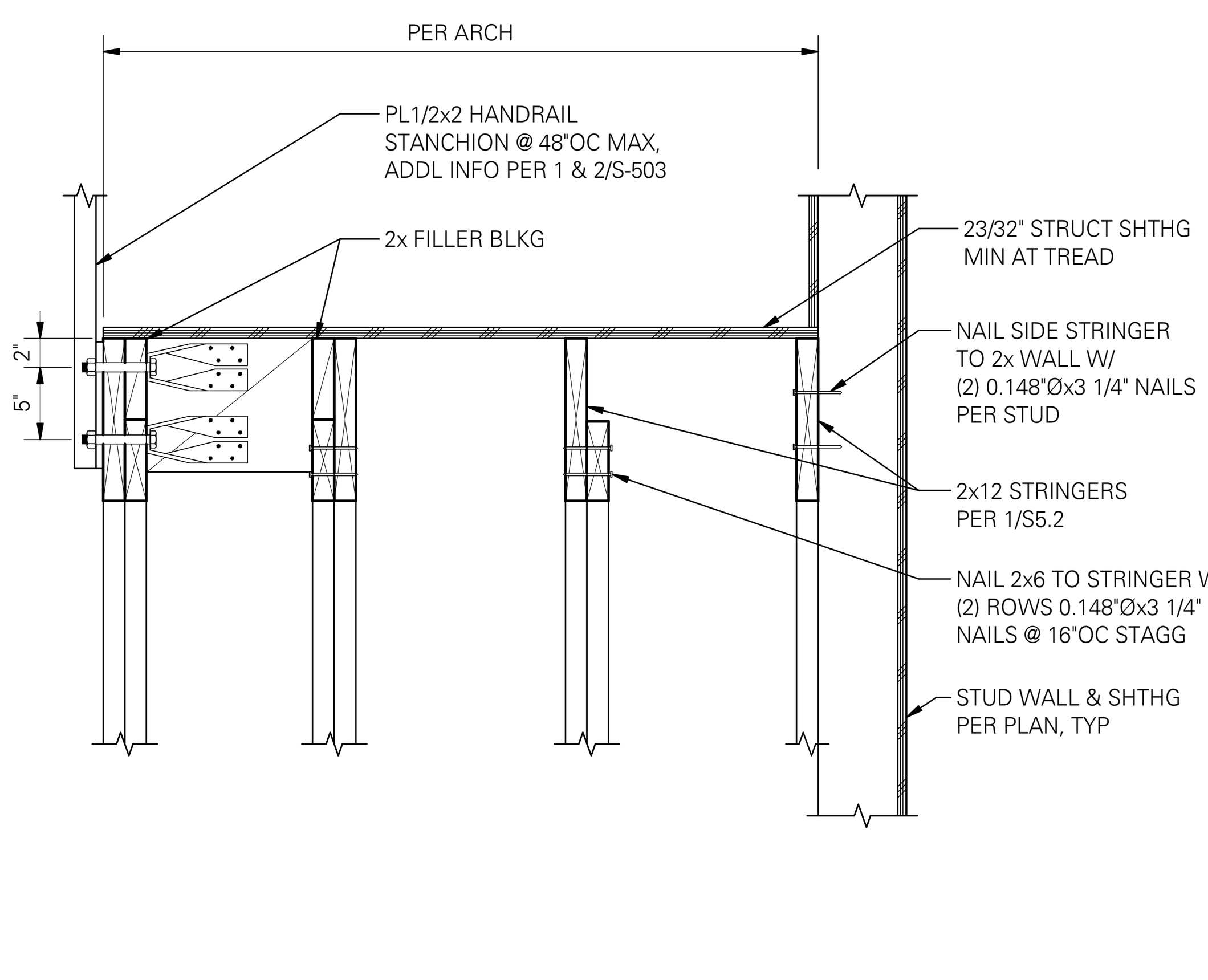
5 TYPICAL HOLD-DOWN AT FOUNDATION

SCALE: 1" = 1'-0" (06091M)



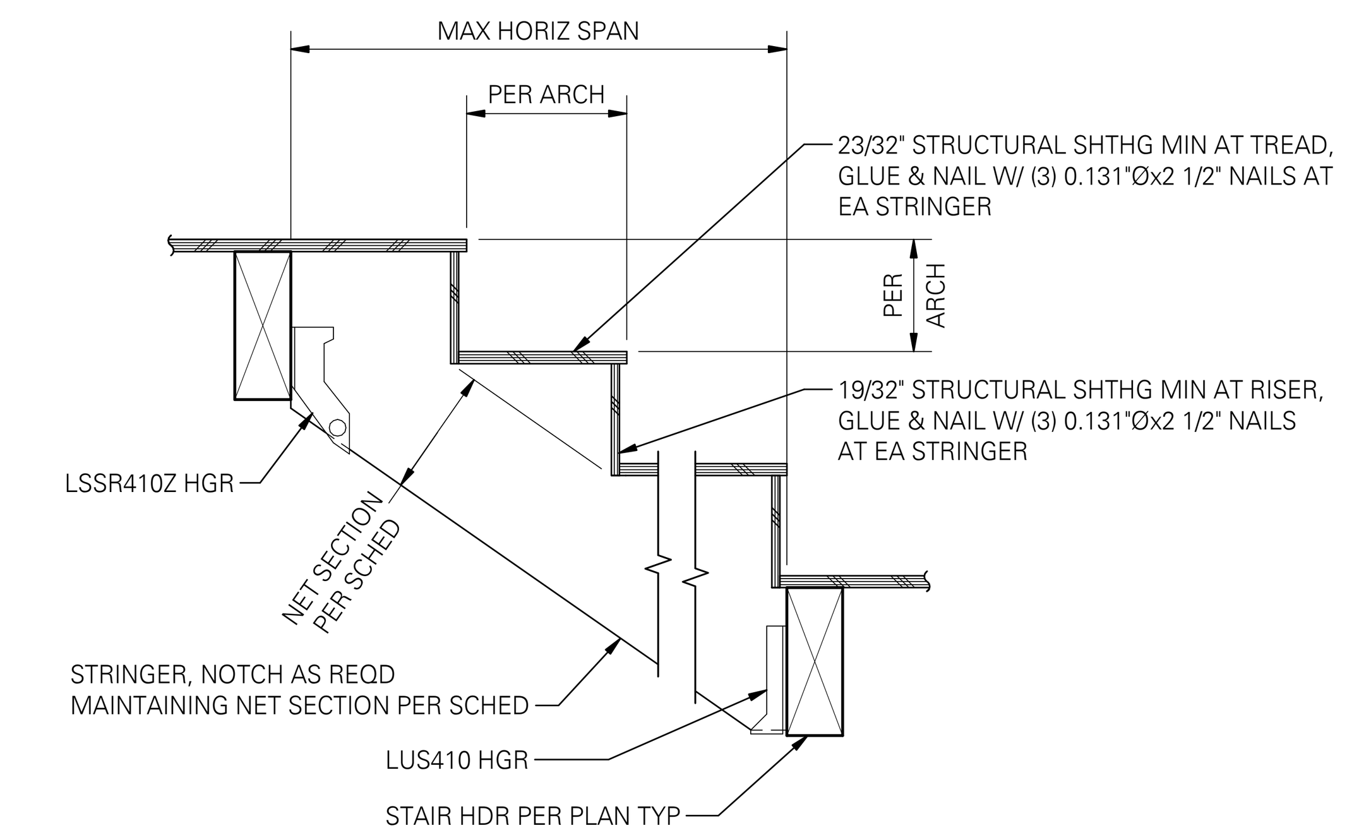
6 TYPICAL HEADER

SCALE: 1" = 1'-0" (06210)



7 TYPICAL INTERIOR STAIRWAY SECTION AT SLOPED STRINGERS

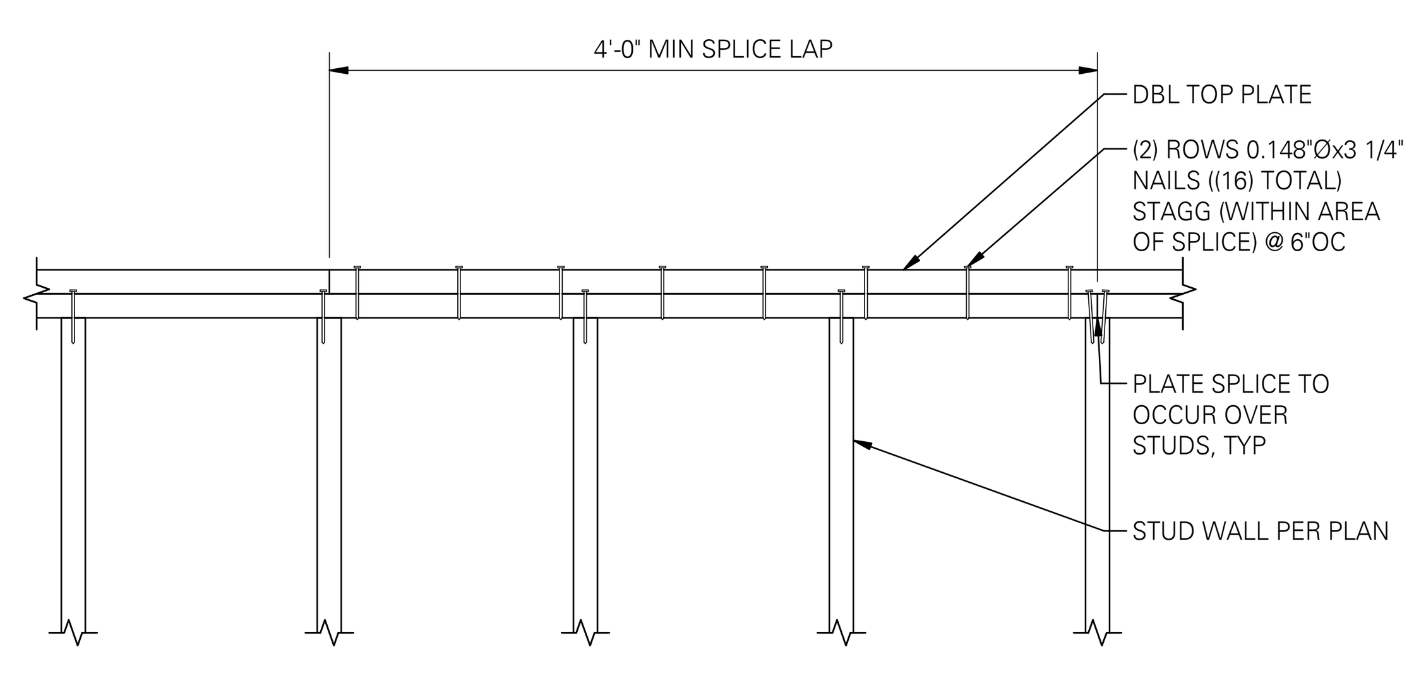
SCALE: 1" = 1'-0" (06301M)



STRINGER SCHEDULE		
MAX HORIZONTAL SPAN LENGTH	STRINGER SIZE	NET SECTION
13'-7"	LSL3 1/2x14 @ 16"OC	8"
14'-11"	LSL3 1/2x14 @ 12"OC	8"
17'-0"	LSL3 1/2x16 @ 16"OC	10"

8 TYPICAL INTERIOR STAIRWAY STRINGER DETAILS AND SPANS

SCALE: 1" = 1'-0" (06302)

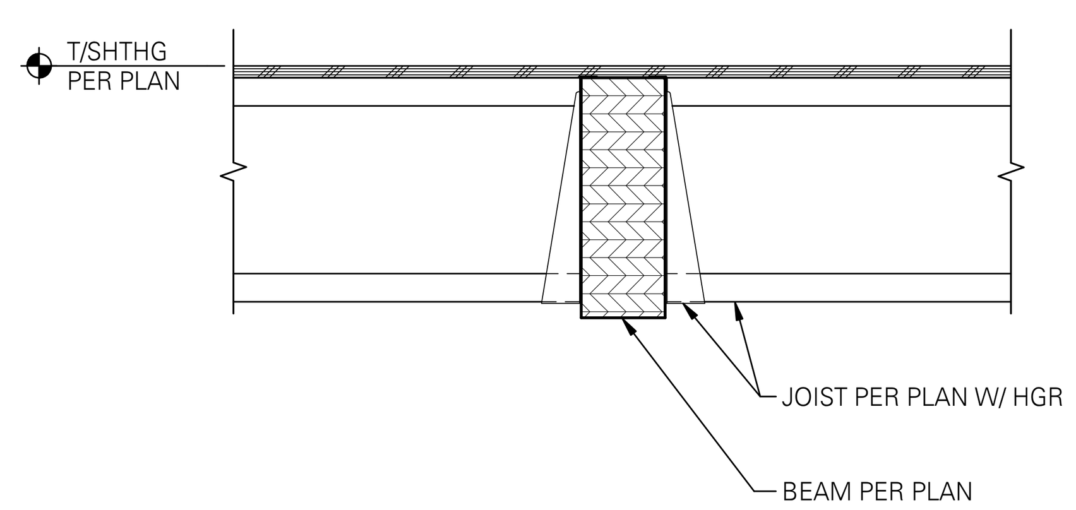


NOTE:

FLOOR/ROOF JOISTS NOT SHOWN FOR CLARITY.

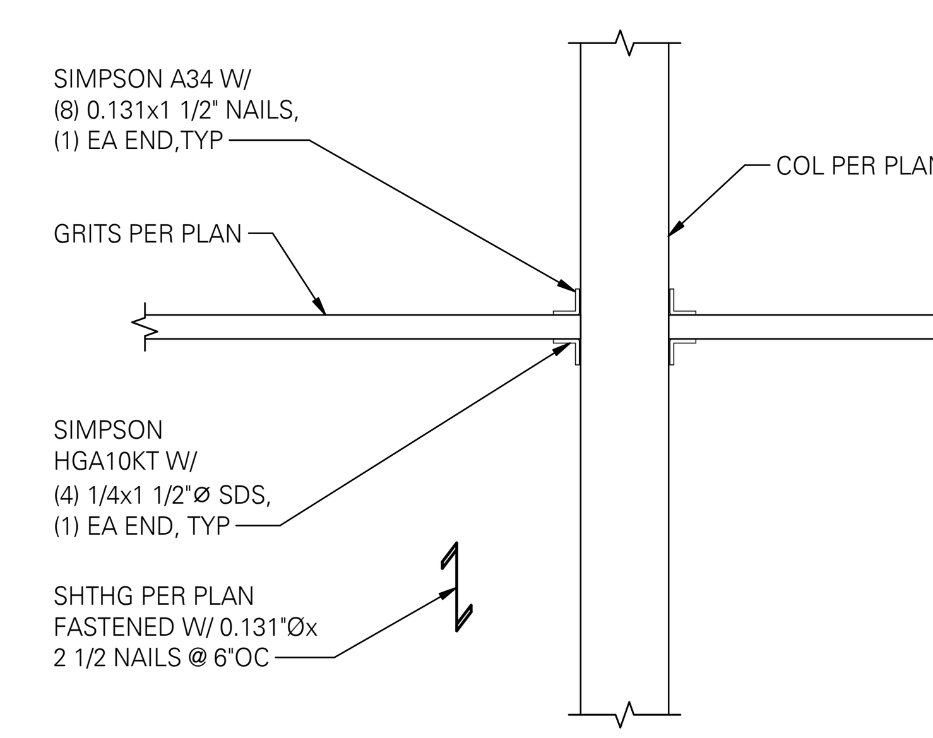
9 TYPICAL PLATE SPLICE DETAIL

SCALE: 1" = 1'-0" (06904)



10 TYPICAL JOIST TO BEAM CONNECTION

SCALE: 1" = 1'-0" (06204)

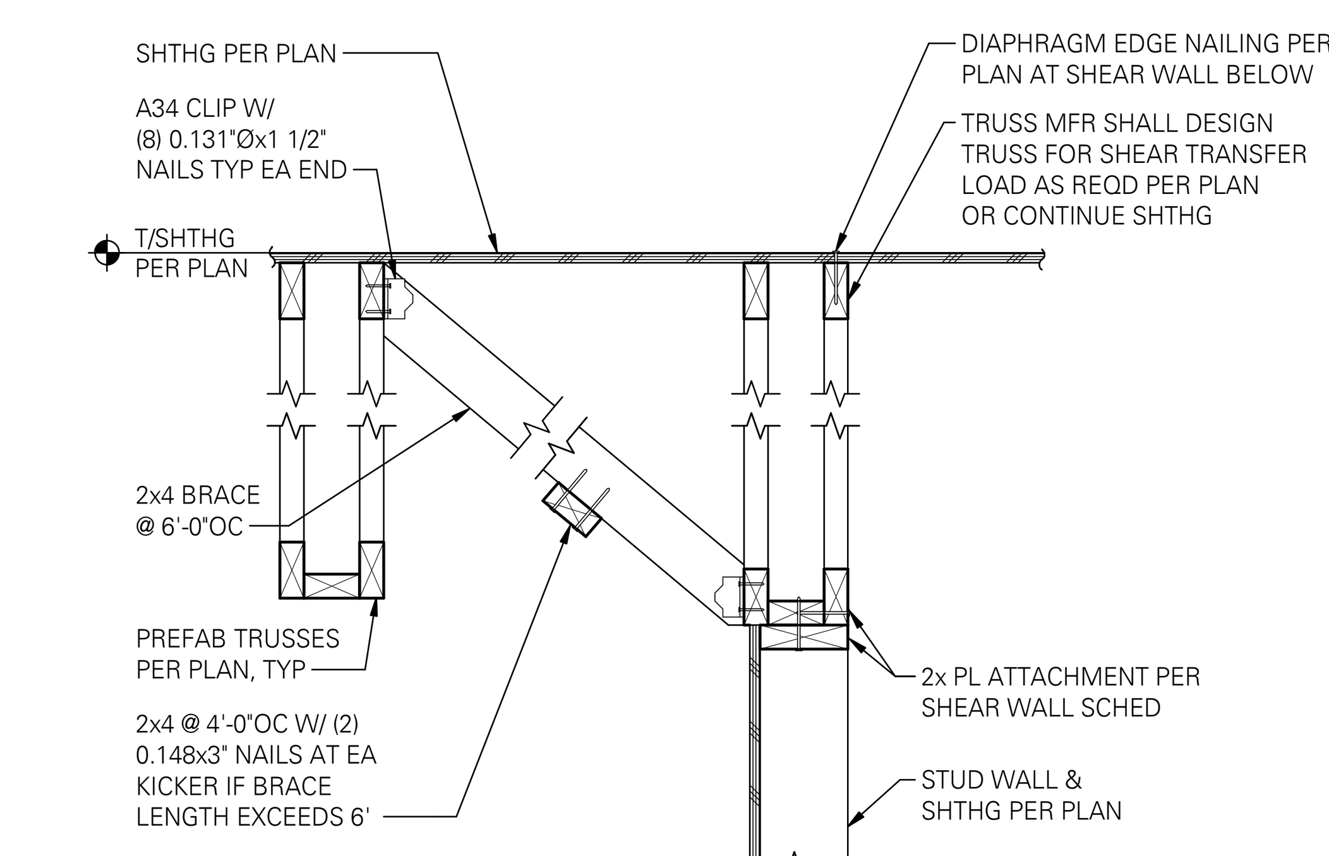


NOTE:

GIRTS ARE NOT REQUIRED WHERE WOOD WALL FRAMING IS PROVIDED BETWEEN POSTS.

11 TYPICAL COLUMN TO GIRT CONNECTION

SCALE: 1" = 1'-0"



NOTE:

IF NO SHEAR TRANSFER LOAD IS INDICATED ON PLAN, TRUSS MANUFACTURER SHALL PROVIDE TRUSS WITH VERTICALS @ 24"OC MAXIMUM WITH SHEATHING AND NAILING TO MATCH SHEAR WALL WHERE INDICATED BELOW. COORDINATE VENTING REQUIREMENTS WITH ARCHITECT AND STRUCTURAL ENGINEER. BLOCK PANEL EDGES PER SHEAR WALL SCHEDULE AS REQUIRED.

12 INTERIOR WALL PARALLEL TO ROOF TRUSSES

SCALE: 1" = 1'-0" (06074M)

FOR PERMIT

The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the authority having jurisdiction and DCI Engineers.

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SIGNATURE: STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON MARCH 23, 2011 SHIRLEY CHALUPA EXPIRES: 12-31-23

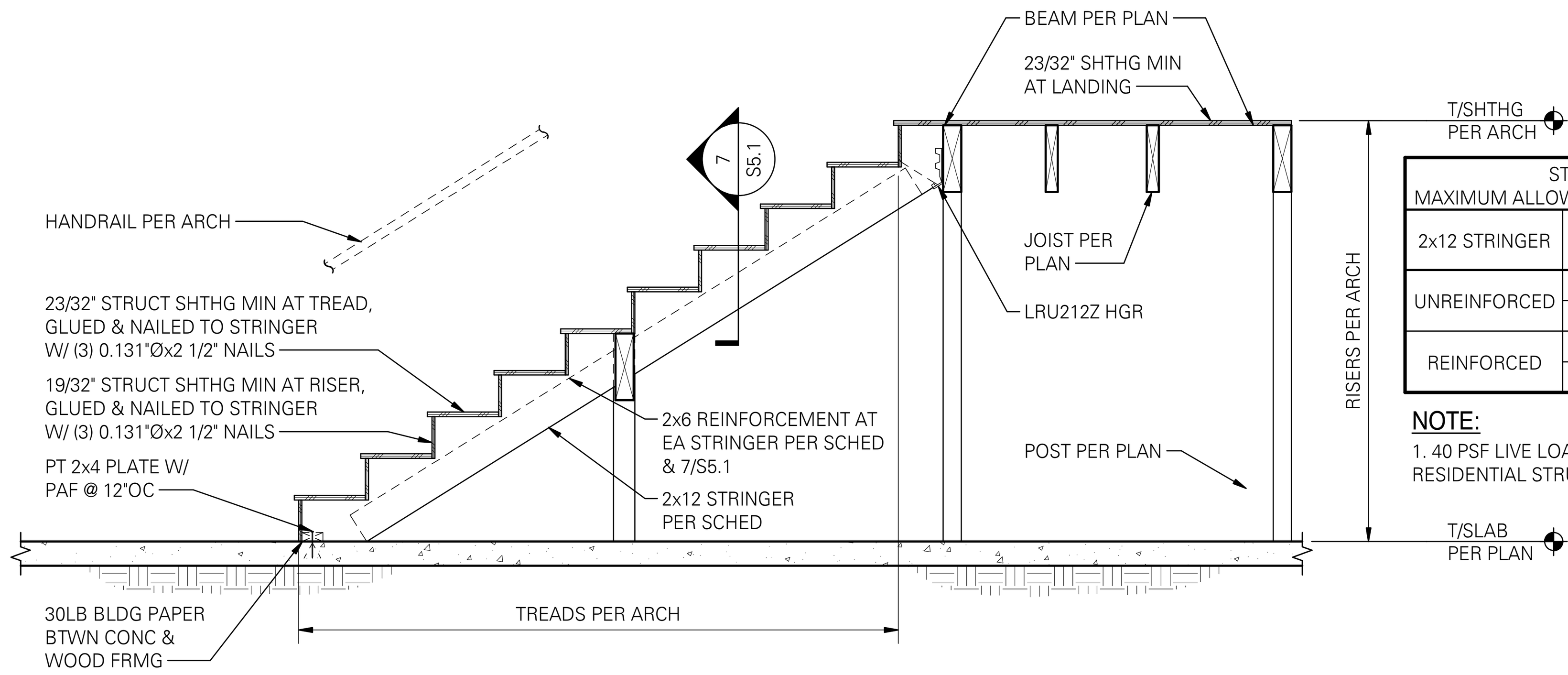
REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - WOOD FRAMING DETAILS

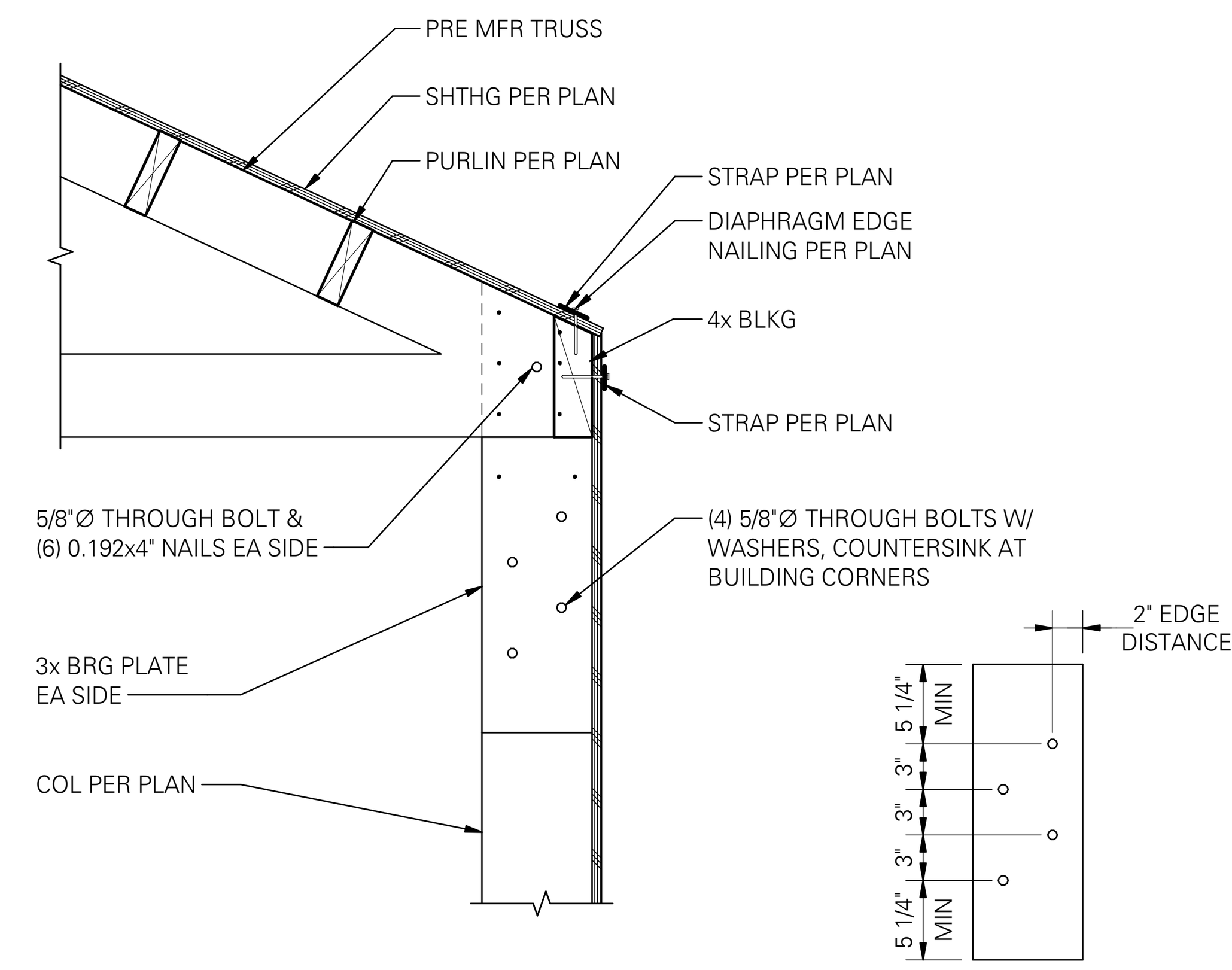
SHEET NO.
S5.1



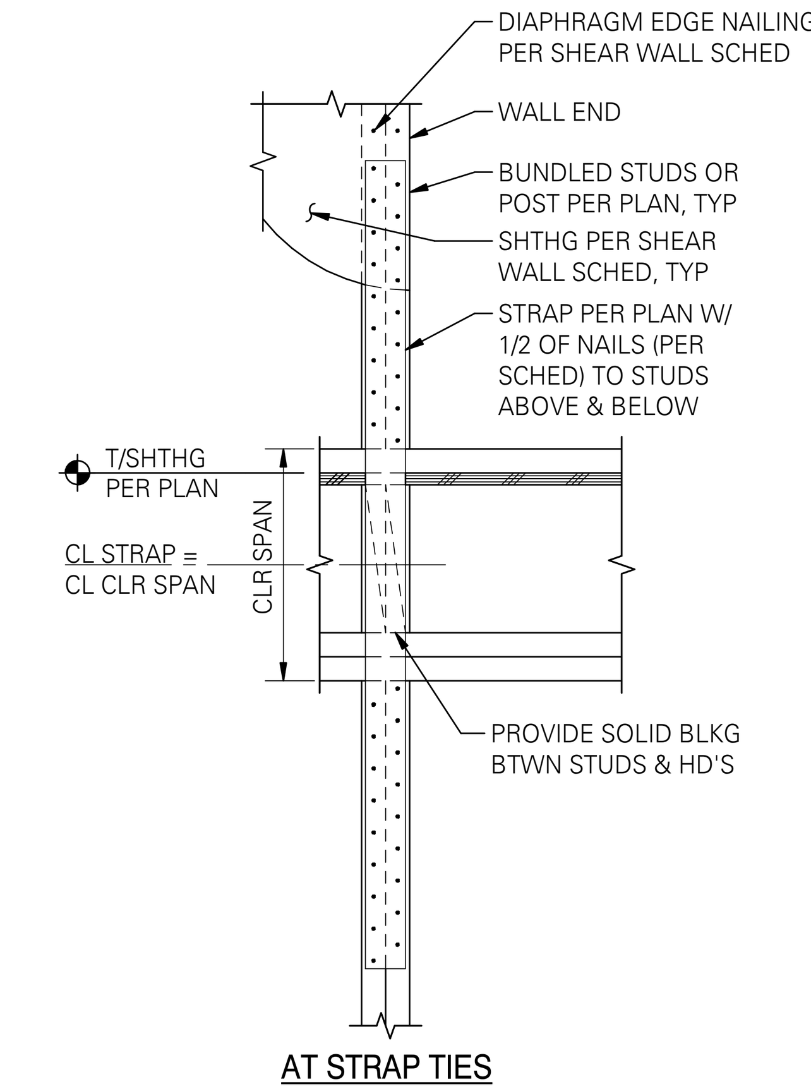
STRINGER SCHEDULE MAXIMUM ALLOWABLE HORIZONTAL SPAN LENGTH			
2x12 STRINGER	SPACING	LIVE LOAD 40PSF (1)	LIVE LOAD 100PSF
UNREINFORCED	16"OC	8'-5"	6'-2"
	12"OC	12'-0"	8'-6"
REINFORCED	16"OC	12'-0"	8'-6"
	12"OC	13'-6"	9'-10"

NOTE:
1. 40 PSF LIVE LOAD APPLIES TO SINGLE FAMILY RESIDENTIAL STRUCTURES ONLY.

1 TYPICAL INTERIOR STAIRWAY ELEVATION
SCALE: NOT TO SCLE (06300)



3 TYPICAL TRUSS CONNECTION
SCALE: 1" = 1'-0"



4 TYPICAL HOLD-DOWN OR STRAP CONNECTION AT FLOOR FRAMING
SCALE: 1" = 1'-0" (06094)

01440

DIAPHRAGM SCHEDULE 1

FOR 0.131"Øx2 1/2" NAILS IN 2x DOUG-FIR LARCH [1]

TYPE	NAILING AT BOUNDARY AND CONTINUOUS PANEL EDGES	NAILING AT OTHER PANEL EDGES	NAILING AT INTERIOR PANEL EDGES	CAPACITY (LBS/FT)	PLYWOOD THICKNESS	BLOCKING	NOTES
1	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	180/240	15/32"	NO	[2]
2	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	270	15/32"	YES	---
3	0.131"Øx2 1/2" NAILS @ 4"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	360	15/32"	YES	---
4	0.131"Øx2 1/2" NAILS @ 2 1/2"OC	0.131"Øx2 1/2" NAILS @ 4"OC	0.131"Øx2 1/2" NAILS @ 12"OC	530	15/32"	YES	[3]
5	0.131"Øx2 1/2" NAILS @ 2"OC	0.131"Øx2 1/2" NAILS @ 3"OC	0.131"Øx2 1/2" NAILS @ 12"OC	600	15/32"	YES	[3]

NOTES:
[1] SOME DIAPHRAGM TYPES NOTED MAY NOT BE USED ON THIS PROJECT.
[2] CAPACITY PARALLEL (180) AND PERPENDICULAR (240) TO CONTINUOUS PANEL JOINTS.
[3] FRAMING AT BOUNDARY AND CONTINUOUS PANEL EDGES SHALL BE 3" NOMINAL OR WIDER.

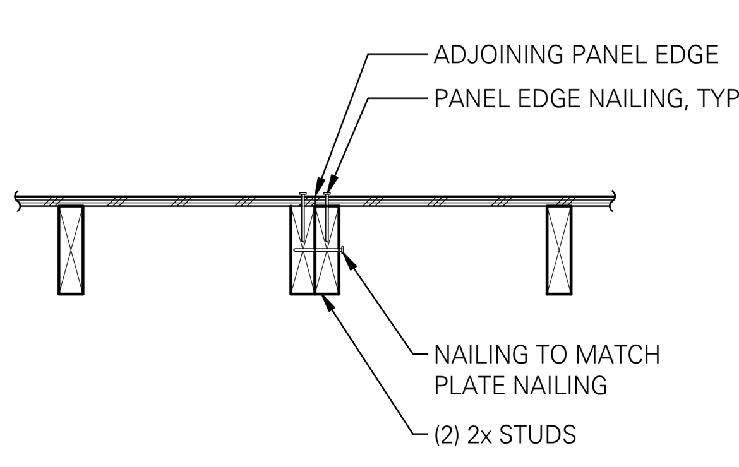
5 DIAPHRAGM SCHEDULE
SCALE: 12" = 1'-0" (01440)

01430A

SHEAR WALL SCHEDULE
W6 FOR 0.148"Øx 2 1/2" NAILS IN DOUG-FIR LARCH (2018 IBC) [16]
SOME SHEAR WALL TYPES NOTED MAY NOT BE USED ON THIS PROJECT.

WALL TYPE	WALL SHEATHING APA-RATED [1, 2, 12]	NAIL SIZE & SPACING AT ALL PANEL EDGES [4, 5]	BLOCKING & STUD SIZE AT ADJOINING PANEL EDGES [3, 6, 13]	RIM JOIST OR BLOCKING CONN TO TOP PLATE BELOW [7, 8]	2x PLATE ATTACHMENT: NAILING TO WOOD RIM JOIST OR BLOCKING BELOW	SILL PLATE ATTACHMENT: ANCHOR BOLT TO CONCRETE BELOW [10]	SILL PLATE ATTACHMENT: SILL PLATE AT FOUNDATION [11]	SHEAR CAPACITY LBS/FT
W6	15/32"	0.148"Øx2 1/2" @ 6"OC	2x	CLIP @ 16"OC	0.148"Øx3 1/4" @ 6"OC	5/8"Ø @ 48"OC	2x	310
W4	15/32"	0.148"Øx2 1/2" @ 4"OC STAGGERED	3x	CLIP @ 12"OC	0.148"Øx3 1/4" @ 4"OC	5/8"Ø @ 32"OC	2x	460
						5/8"Ø @ 48"OC	3x [15]	
W3	15/32"	0.148"Øx2 1/2" @ 3"OC STAGGERED	3x	CLIP @ 16"OC EACH SIDE	0.148"Øx3 1/4" @ 6"OC (2) ROWS [9]	5/8"Ø @ 24"OC	2x	600
						5/8"Ø @ 32"OC	3x [15]	

NOTES:
[1] INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY.
[2] WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.
[3] BLOCKING IS REQUIRED AT ALL PANEL EDGES.
[4] PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLD-DOWN REQUIREMENTS PER PLANS. (ALTERNATE NOTE: WALLS SHOWN WITH HORIZONTAL STRAPS BELOW AND/OR ABOVE OPENINGS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC ABOVE AND BELOW ALL OPENINGS).
[5] SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLD-DOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD-DOWN POSTS. ADDITIONAL INFORMATION PER HOLD-DOWN DETAILS.
[6] INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148"Øx2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148"Øx2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
[7] BASED ON 0.131"Øx1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131"Øx2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
[8] FRAMING CLIPS: A35 OR LTP5 OR APPROVED EQUIVALENT.
[9] WHERE BOTTOM PLATE ATTACHMENT SPECIFIES (2) ROWS OF NAILS OR SCREWS, PROVIDE DOUBLE JOIST, RIM JOIST OR EQUAL BELOW. STAGGER NAILS/SCREWS IN ROWS 1 1/2" APART MINIMUM.
[10] ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 0.229"x3"x3" MINIMUM. THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. AT 2x6 WALLS WITH SHEATHING ON BOTH SIDES USE PLATE WASHER 0.229"x4 1/2"x4 1/2" MINIMUM. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
[11] PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL GENERAL NOTES.
[12] WHERE WOOD SHEATHING (W) IS APPLIED OVER GYPSUM SHEATHING (G), CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
[13] AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING, PER SECTION.
[14] NAIL STUDS TO 3x SILL PLATES WITH EITHER (2) 0.148"Øx4" END NAILS OR (4) 0.131"Øx2 1/2" TOENAILS.
[15] WX WHERE "W" INDICATES WOOD SHEATHING AND "X" INDICATES EDGE NAIL SPACING.
[16] EDGE NAILS SHALL BE LOCATED 3/8" FROM PANEL EDGES.



PLAN

HOLD-DOWN/STRAP SCHEDULE - DOUG-FIR STUDS
[1, 2, 7, 11] ← INDICATES FOOTNOTES

	TYPE	NUMBER OF STUDS/POST [3, 12]	NAILS, SCREWS OR BOLTS	ANCHOR [4]: DIAMETER [10]	ANCHOR [4]: CONCRETE EMBEDMENT/CAPACITY FOOTING: EMBED CIP [6]	ANCHOR [4]: CONCRETE EMBEDMENT/CAPACITY FOOTING: CAPACITY	NOTES
WOOD TO CONCRETE	HDU14	(1) 6x	(36) SDS1/4x2 1/2	1"Ø	15"	13.6k	----
WOOD TO WOOD	CMST12	(2) 2x	(86) 0.148"Øx3" NAILS	----	----	9.22k	[9]

NOTES:
[1] SOME HOLD-DOWN TYPES MAY NOT BE USED ON THIS PROJECT.
[2] TYPICAL HOLD-DOWN DETAILS PER 5/S5.1. ANCHOR REINFORCEMENT REQUIRED AT STEMWALLS.
[3] PROVIDE PANEL EDGE NAILING PER SHEAR WALL SCHEDULE AT HOLD-DOWN STUDS/POSTS.
[4] BASED ON MINIMUM f'c = 3000 PSI CONCRETE.
[5] STEMWALLS SHALL BE 8" WIDE x 18" TALL MINIMUM.
[6] CAST-IN-PLACE (CIP) TYPE THREADED RODS AT HOLD-DOWNS SHALL HAVE TWO HEX HEAD NUTS WITH OVERSIZED WASHERS.
[7] INCLUDES 1.6 LOAD DURATION INCREASE FOR WOOD.
[8] BASED ON 11 7/8" DEEP FLOOR JOIST.
[9] TOTAL NAILS SPECIFIED, USE HALF THE NAILS AT THE STUDS ABOVE AND BELOW LEVEL BEING CONNECTED.
[10] AT PRESSURE TREATED SILLS, USE HOT DIPPED GALVANIZED BOLTS.
[11] NAIL LAMINATE MULTIPLE 2x STUDS WITH PLATE NAILING PER SHEAR WALL SCHEDULE.
[12] MIDWALL/CORNER
WALL END
[13] STUD WALLS SHALL BE 2x6, CENTER HOLD-DOWN IN STUD WALL.

9 HOLD-DOWN/STRAP SCHEDULE - DOUG-FIR STUDS
SCALE: 1" = 1'-0" (01420)

11 SHEAR WALL SCHEDULE - DOUG-FIR LARCH
SCALE: 1" = 1'-0" (01430A)

FOR PERMIT
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PREPARED BY:
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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 74858PE OREGON MARCH 23, 2011 SHIRLEY CHALUPA
EXPIRES: 12-31-23

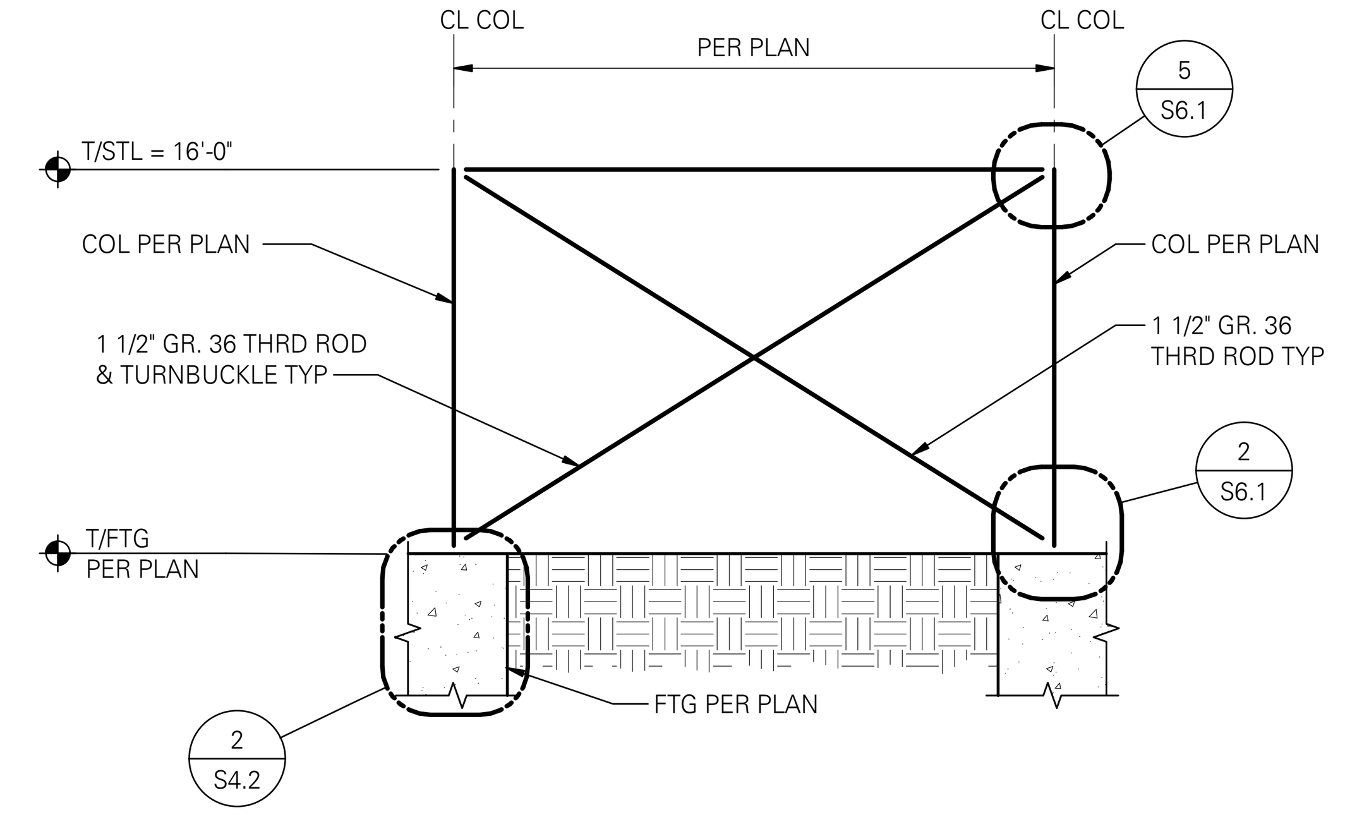
REVISIONS: NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23031-0048
Proj. Manager: TY
Drawn: VP
Reviewed: TY
Dwg. Chk.: SC
Date: 04/26/23
Scale: AS NOTED

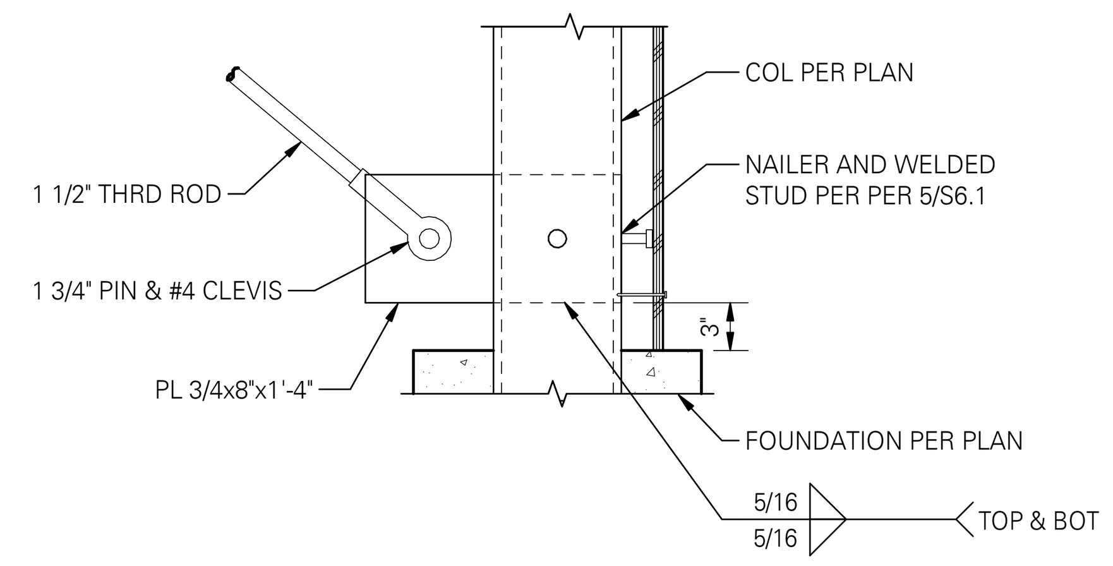
PROJECT TITLE:
MHS SOFTBALL BATTING CAGE STRUCTURE
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - WOOD FRAMING DETAILS

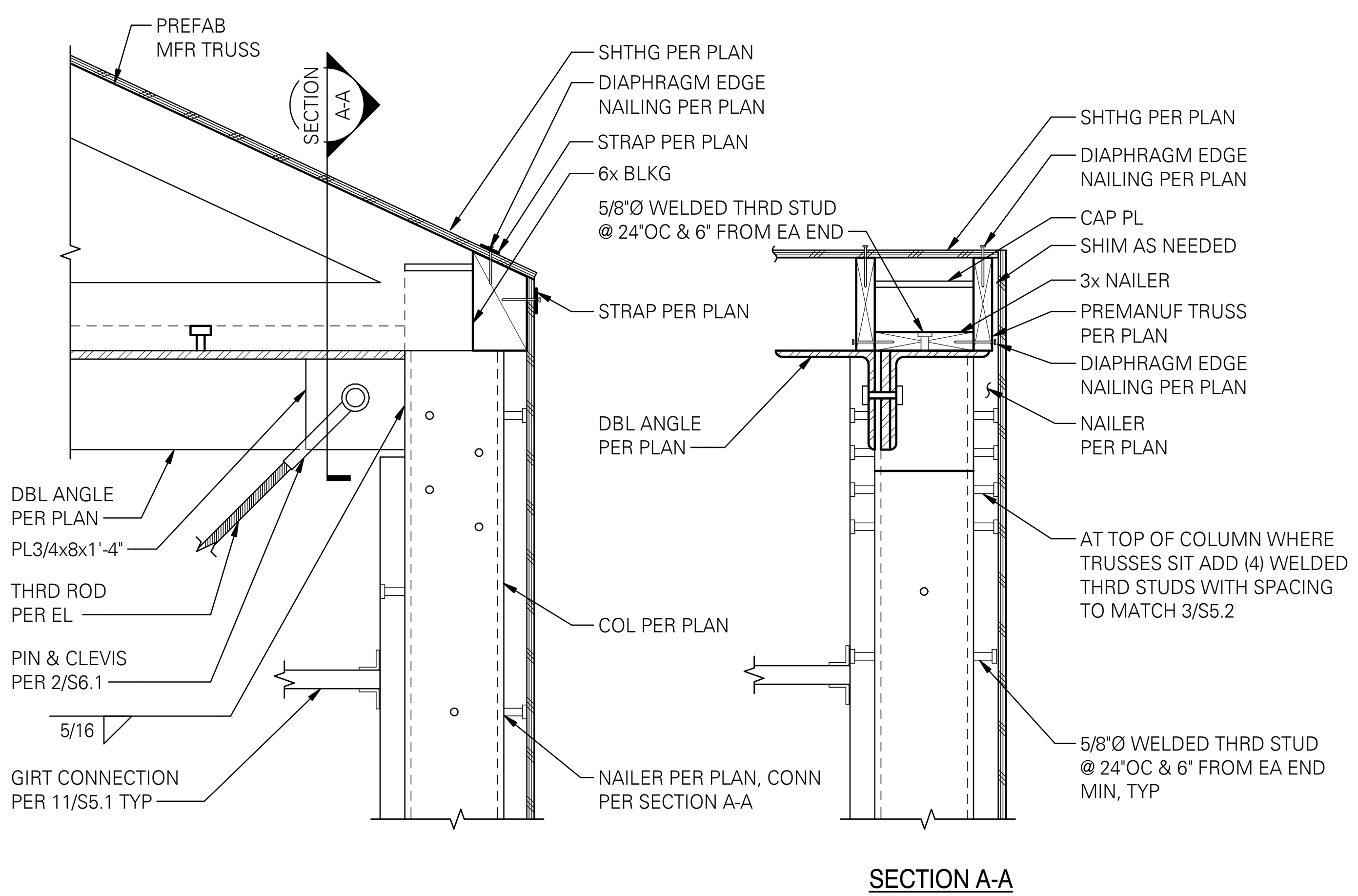
SHEET NO.
S5.2



1 BRACED FRAME ELEVATION ALONG GRID A
SCALE: 1/8" = 1'-0" (05320M)



2 CLEVIS CONNECTION
SCALE: 1" = 1'-0"



5 TYPICAL HSS COLUMN TO PREFAB TRUSSES
SCALE: 1" = 1'-0"

FOR PERMIT
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SIGNATURE:

STRUCTURAL
REGISTERED PROFESSIONAL ENGINEER
74858PE
OREGON
MARCH 23, 2011
SHIRLEY CHALUPA
EXPIRES: 12-31-23

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:

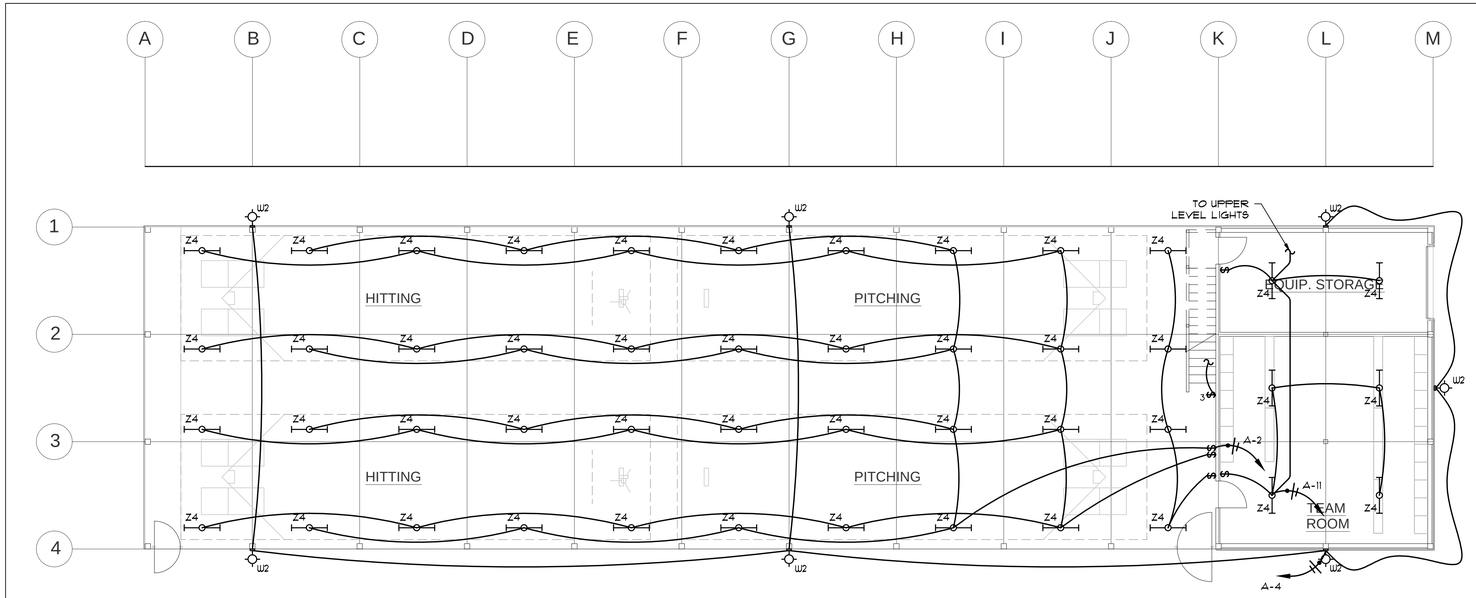
Job No.:	23031-0048
Proj. Manager:	TY
Drawn:	VP
Reviewed:	TY
Dwg. Chk.:	SC
Date:	04/26/23
Scale:	AS NOTED

PROJECT TITLE:
MHS SOFTBALL BATTING
CAGE STRUCTURE

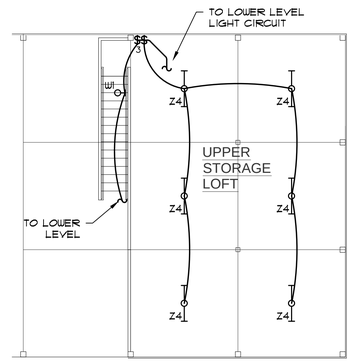
COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

SHEET TITLE:
STRUCTURAL - STEEL
DETAILS

SHEET NO.
S6.1

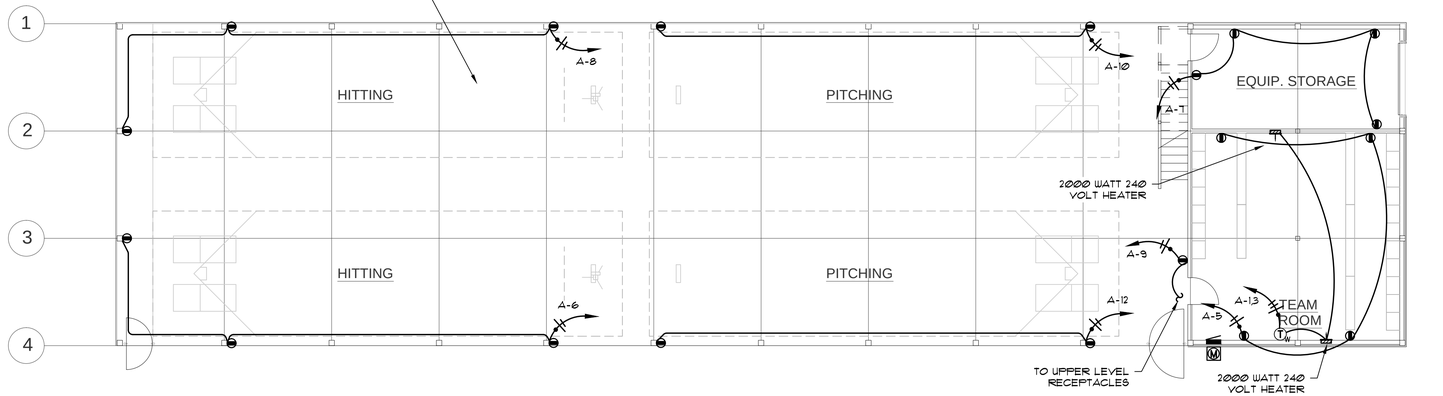


1 LIGHTING PLAN
E1 SCALE: 1/8" = 1'-0"

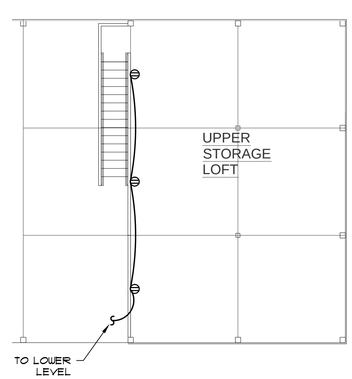


LIGHT FIXTURE SCHEDULE

W1	LED WALL PACK, LITHONIA WPX0 LED ALO4 SWW2 (4000) MVOLT DDBXD DISABLE PHOTOCELL. 13 WATTS
W2	SAME AS W1 EXCEPT USE PHOTOCELL CONTROL
Z4	4-FOOT LED LENSED STRIP, LITHONIA Z-SERIES ZLID L48 SMR 5000LM FST 35K 80CRI OR APPROVED. 41 WATTS



2 POWER PLAN
E1 SCALE: 1/8" = 1'-0"



PANEL ' A ' — FAULT CURRENT = 6,537

100 AMP — MAIN BREAKER — 120 / 240 VOLTS — 1-PHASE, 3-WIRE

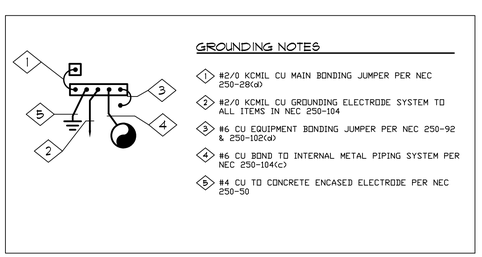
FEEDER SIZE — ALUMINUM: 1 1/2" C, 3 #1/0 PH, #6 GRD — FLUSH MOUNTED

LOAD DISTRIBUTION	LTG	REC	MOTOR	DATA	EXTG	HEAT		MISC	PH-A	PH-B	TOTAL	AMPS	WITH SPARE	25%
CONNECTED VA	2236	3960	0	0	0	4000		0	5980	4216	10196	50	12745 VA	62
DIVERSITY FACTOR	125%	100%	100%	100%	65%	100%		100%						
DIVERSIFIED VA	2795	3960	0	0	0	4000		0	6390	4365	10755	53	13444 VA	67

PL	T	LOAD	VA	HP	PHW	GND	CON	BKR	PH		BKR	CON	GND	PHW	HP	VA	LOAD	T	PL
1	H	HEATERS	2000		10	10	1/2	30	2	A	1	20	1/2	12	12	1640	LTS: CAGES	L	2
3	H		2000							B	1	20	1/2	12	12	91	LTS: EXTERIOR	L	4
5	R	REC: TEAM ROOM	720		12	12	1/2	20	1	A	1	20	1/2	12	12	540	REC: CAGES	R	6
7	R	REC: EQUIP STORE	720		12	12	1/2	20	1	B	1	20	1/2	12	12	540	REC: CAGES	R	8
9	R	REC: LOFT STORE	720		12	12	1/2	20	1	A	1	20	1/2	12	12	360	REC: CAGES	R	10
11	L	LTS: TEAM / STORE	505		12	12	1/2	20	1	B	1	20	1/2	12	12	360	REC: CAGES	R	12
13										A									14
15										B									16
17										A									18
19										B									20
21										A									22
23										B									24

A — 4/21/2023 — FED FROM UTILITY TRANSFORMER

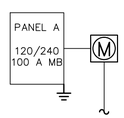
ALL CIRCUIT CONDUCTORS SIZED FOR COPPER — 23.07 Schedules



GROUNDING NOTES

1. #2/0 KCMIL CU MAIN BONDING JUMPER PER NEC 250-28(d)
2. #2/0 KCMIL CU GROUNDING ELECTRODE SYSTEM TO ALL ITEMS IN NEC 250-104
3. #6 CU EQUIPMENT BONDING JUMPER PER NEC 250-92 & 250-102(d)
4. #6 CU BOND TO INTERNAL METAL PIPING SYSTEM PER NEC 250-104(c)
5. #4 CU TO CONCRETE ENCASED ELECTRODE PER NEC 250-50

3 GROUNDING DETAIL
E1 DIAGRAMMATIC



3 1-LINE DIAGRAM
E1 120/240 VOLT, 1-PH

PROJECT NOTES

1. ELECTRICAL SERVICE: FIELD COORDINATE ELECTRICAL SERVICE WITH OWNER AND UTILITY.
2. EXISTING SERVICE: IF FEEDING FROM EXISTING BUILDING / SERVICE, PROVIDE GROUNDING CONDUCTOR IN FEEDER. ALSO PROVIDE APPROVED GROUNDING RODS AT BATTING CAGES. MAINTAIN ISOLATION OF GROUND BUS FROM NEUTRAL BUS. VERIFY ADEQUATE CAPACITY IN EXISTING PANEL FOR ADDITIONAL LOAD PER NEC REQUIREMENTS. FIELD COORDINATE ALL REQUIREMENTS.
3. NEW UTILITY SERVICE: IF PROVIDING NEW UTILITY SERVICE, GROUND AND BOND PER NEC. FIELD COORDINATE ALL REQUIREMENTS WITH SERVING UTILITY.

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DOUBLE 'E' ENGINEERING, LLC
Myrtle Point, Oregon
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REGISTERED PROFESSIONAL ENGINEER 65580 OREGON JULY 13, 2004 GREGORY L. PRIDE
EXPIRES 12-31-24

PROJECT NO.: 22.48

MHS SOFTBALL BATTING CAGE STRUCTURE

COOS BAY SCHOOL DISTRICT
S. 10TH & INGERSOLL ST.
COOS BAY, OR 97420

CONSTRUCTION

REVISIONS:

#	DATE	DESCRIPTION

DATE: MAY 2023

SHEET TITLE: ELECTRICAL PLAN

E1