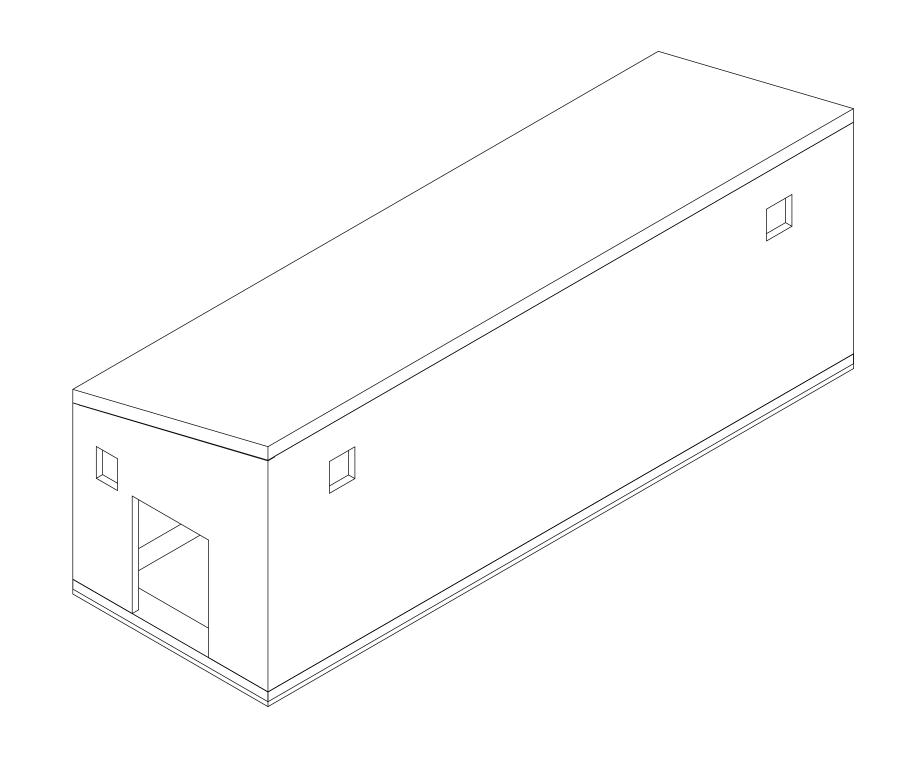
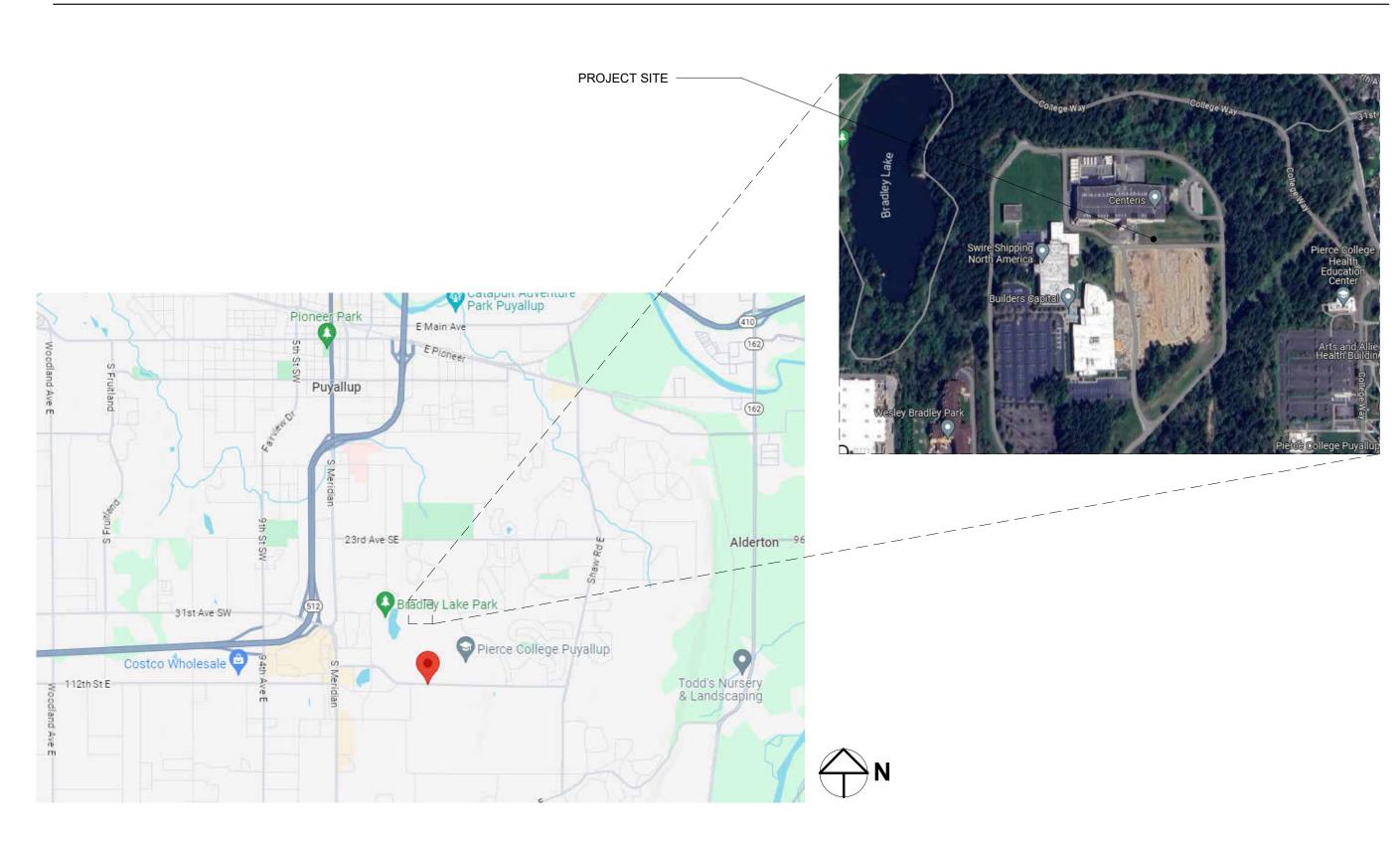
CENTERIS SHED



Vicinity Map



The approved construction plans, documents, and all engineering must be posted on the job at all inspections in a visible and readily accessible location.

Full sized legible color plans are required to be provided by the permitee on site for

Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

Separate Electrical Permit is required with the Washington State Department of Labor & Industries.

https://lni.wa.gov/licensing-permits/electrical/ electrical-permits-fees-and-inspections

or call for Licensing Information: 1-800-647-0982

City of Puyallup REVIEWED FOR COMPLIANCE SKinnear 12/24/2024 11:47:52 AM

OF WASHIN

City of Puyallup **Development & Permitting Services** ISSUED PERMIT Building Planning Engineering Public Works Fire Traffic

Structural **E**ngineers





CENTERIS SOUTH UTILITY YARD SWITCHGEAR BUILDING OUTH 98374

Permit Submittal 24201.5 Drawn Checked

> COVER SHEET

THE TERM 'ENGINEER', 'EOR', AND/OR 'SE' AS USED IN THESE STRUCTURAL DOCUMENTS SHALL MEAN BRIENEN STRUCTURAL ENGINEERS, P.S.

ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE REFERENCE STANDARDS AND CODES INDICATED IN THE DRAWINGS UNLESS NOTED OTHERWISE. REFERENCE TO ASTM AND OTHER STANDARDS SHALL MEAN THE LATEST EDITION AS OF THE BID DATE OR DATE OF OWNER-CONTRACTOR AGREEMENT, WHICHEVER IS LATER, UNLESS NOTED IN THESE DOCUMENTS OR DESIGNATED BY THE BUILDING CODE.

PRIME CONTRACT DRAWINGS THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. STRUCTURAL MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, AND LANDSCAPING, AMONG OTHERS, ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS TO THE PRIME CONTRACT DRAWINGS, STRUCTURAL DRAWINGS, AND OTHER SUPPLEMENTARY DRAWINGS.

OMISSIONS/CONFLICTS CONTRACTOR SHALL VERIFY ALL DIMENSIONS, FLOOR ELEVATIONS. DEPRESSIONS. FINISHES, STAIR DETAILS, GUARDRAILS, AND ETC. WITH OTHER DISCIPLINES INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE.

TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. SOME TYPICAL DETAILS ARE CUT OR OTHERWISE REFERENCED IN THE DRAWINGS HOWEVER MOST OR NOT. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS THE SPECIFIC DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CHOOSE THE APPROPRIATE DETAIL FROM THOSE PROVIDED.

THE CONTRACTOR SHALL SUBMIT ALL SUBSTITUTION REQUESTS (MATERIAL, PROCEDURE CONFIGURATION, AND/OR DETAIL) TO THE ARCHITECT/ENGINEER PRIOR TO SHOP DRAWING PRODUCTION.

REFER TO THE SPECIFICATIONS FOR INFORMATION IN ADDITION TO THESE NOTES AND THE STRUCTURAL DRAWINGS.

CONSTRUCTION MEANS AND METHODS AND SAFETY

CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS/METHODS AND FOR VERIFYING STRUCTURAL CAPACITY PRIOR TO APPLYING CONSTRUCTION LOADING. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY AT THE SITE AND FOR PROVIDING THE STRENGTH AND STABILITY OF ALL PARTIALLY COMPLETED STRUCTURE CONFORMING TO ASCE 37 'DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION'.

CONTRACTOR PROVIDED DESIGN SUBMITTALS THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE ITEMS NOTED IN THE DEFERRED SUBMITTALS SECTION OF THE GENERAL NOTES.

THE ENGINEER WILL PERFORM PERIODIC OBSERVATION DURING CONSTRUCTION OF THE FOUNDATION AND STRUCTURAL FRAME AS REQUIRED BY THE BUILDING CODE.

GEOTECHNICAL

ALLOWABLE BEARING PRESSURE (DEAD + LIVE) = 1500 PSF (ASSUMED) A 1/3 INCREASE IS ALLOWED FOR WIND OR SEISMIC

PASSIVE LATERAL PRESSURE = 250 PSF/FT ACTIVE LATERAL PRESSURE = 35 PSF/FT AT-REST LATERAL PRESSURE = 55 PSF/FT

COEFFICIENT OF FRICTION = 0.35 (INCLUDES A 1.5 FACTOR OF SAFETY)

DESIGN CRITERIA

20 PSF

20 PSF

25 PSF

IMPORTANCE FACTOR SNOW ------ Is = 1.0 IMPORTANCE FACTOR SEISMIC ----- le = 1.0 <u>GRAVITY LOADS</u>

STRUCTURAL RISK CATEGORY II

DESIGN DEAD LOAD

LIVE LOAD SNOW LOAD SEISMIC LOADS

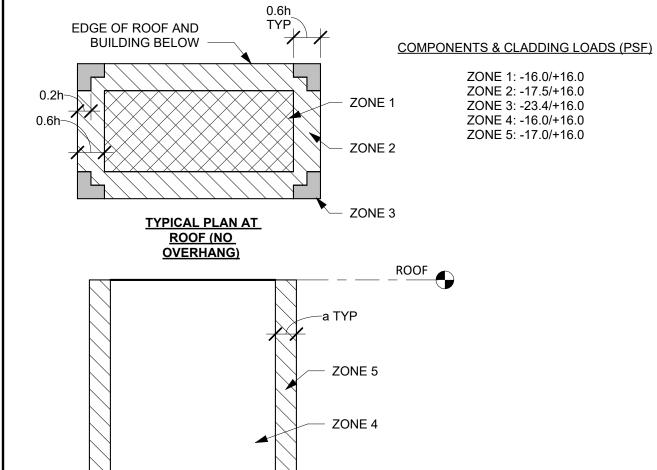
SITE CLASS = D - DEFAULT SEISMIC DESIGN CATEGORY = D MAPPED SPECTRAL RESPONSE PARAMETERS Ss = 1.257 g; S1 = 0.434 gSds = 1.006 g; Sd1 = ---

ANALYSIS TYPE = EQUIVALENT LATERAL FORCE PROCEDURE (STAGED ANALYSIS PROCEDURE)

R = 6.5 (CFS WALLS WITH WOOD STRUCTURAL PANELS) WEIGHT, W = 26.3 KIPS, SEISMIC RESPONSE COEFFICIENT, Cs = 0.155 BASE SHEAR, V = Cs*W = 4.1 KIPS REDUNDANCY FACTOR = 1.0

WIND LOADS EXPOSURE CATEGORY = B BASIC WIND SPEED = 98 MPH

COMPONENT AND CLADDING WIND PRESSURE



TYPICAL BUILDING **ELEVATION**

WIND LOADS FOR COMPONENT AND CLADDING ARE STRENGTH LEVEL AND DETERMINED IN ACCORDANCE WITH ASCE 7-16, CHAPTER 30, PART 1.

- EXTERIOR COMPONENTS AND CLADDING SHALL BE DESIGNED TO ACCOMMODATE WORST-CASE WIND LOAD SHOWN.
- POSITIVE PRESSURE ACTS TOWARDS THE SURFACE OF THE STRUCTURE.

NEGATIVE PRESSURE ACTS OUTWARD AS SUCTION ON THE BUILDING SURFACE.

PRESSURE ARE CALCULATED USING MINIMUM EFFECTIVE AREA OF 10 sf. FOR ROOF AREAS GREATER THAN 10 sf EXCEPT AT OVERHANGS, NEGATIVE

PRESSURE MAY BE REDUCED AS FOLLOWS: 20 sf ≤ AREA < 50 sf 5% REDUCTION 12% REDUCTION 50 sf < AREA < 80 sf 80 sf < AREA < 200 sf 16% REDUCTION

200 sf ≤ AREA 20% REDUCTION FOR ALL OVERHANGS. NO WIND LOAD MAY BE REDUCED. FOR WALL AREAS AND PARAPET AREAS GREATER THAN 10 sf, POSITIVE PRESSURE MAY BE REDUCED AS FOLLOW: 20 sf < AREA < 50 sf 5% REDUCTION 50 sf ≤ AREA < 80 sf 12% REDUCTION 80 sf < AREA < 200 sf 16% REDUCTION

200 sf ≤ AREA 20% REDUCTION FOR WALL AREAS AND PARAPET AREAS GREATER THAN 10 sf, NEGATIVE PRESSURE MAY BE REDUCED AS FOLLOW: 20 sf < AREA < 50 sf 3% REDUCTION 50 sf ≤ AREA < 80 sf 8% REDUCTION

80 sf ≤ AREA < 200 sf

200 sf ≤ AREA

EDGE PRESSURE SHALL BE USED FOR A DISTANCE "a" FROM THE BUILDING CORNERS, WHERE "a" IS THE SMALLER OF 10% OF THE LEAST HORIZONTAL DIMENSION OR 0.4*h BUT NOT LESS THAN EITHER 4% OF THE LEAST HORIZONTAL

10% REDUCTION

15% REDUCTION

REFERENCE STANDARDS

AISI S100-16 (2020) W/ S2-20 - NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AISI S202-20 - CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL STRUCTURAL AISI S220-20 - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL NONSTRUCTURAL FRAMING AISI S230-19 - STANDARD FOR COLD-FORMED STEEL FRAMING - PRESCRIPTIVE METHOD FOR ONE- AND TWO-FAMILY DWELLINGS AISI S240-20 - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL STRUCTURAL

AISI S400-20 - NORTH AMERICAN STANDARD FOR SEISMIC DESIGN OF COLD-FORMED

STEEL STRUCTURAL SYSTEMS

MATERIAL CRITERIA

COLD-FORMED STEEL MATERIAL SHALL BE MANUFACTURED AND FORMED, PER ASTM A1003/A1003M, FROM GALVANIZED ASTM A653 SS GRADE 50 STEEL FOR 54, 68 AND 97 MIL BASE THICKNESS MATERIAL AND FROM GALVANIZED ASTM A653 SS GRADE 33 MATERIAL FOR 43 AND 33 MIL BASE THICKNESS MATERIAL, UNO. WHERE NOTED, PAINTED COLD-FORMED STEEL MATERIAL SHALL CONFORM TO ASTM A570 SS GRADE 80. MINIMUM COLD-FORMED STEEL ACCEPTANCE CRITERIA SHALL BE PER ICC-ES AC46.

ALL GALVANIZED MEMBERS SHALL CONFORM TO ASTM A924 WITH THE FOLLOWING MINIMUM COATING REQUIREMENTS: NON-STRUCTURAL MEMBERS (ASTM C645 - G40 COATING), STRUCTURAL MEMBERS (ASTM C955 - G60 COATING), EXPOSED EXTERIOR MEMBERS (ASTM C955 - G90 COATING).

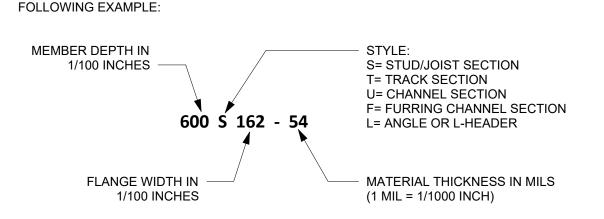
EACH MEMBER SHALL BEAR A LEGIBLE STICKER, STAMP, STENCIL, OR EMBOSSMENT, SPACED A MAXIMUM OF 48"OC ON THE WEB OF THE FRAMING MEMBER, INDICATING THE MINIMUM STEEL SHEET THICKNESS. METALLIC-COATING DESIGNATION. MINIMUM YIELD STRENGTH, PRODUCT DESIGNATION, AND NAME OF MANUFACTURER. WHERE MEMBERS ARE NOT LABELED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE STEEL IS IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS.

PRODUCT DATA FOR ALL MEMBERS, ACCESSORIES, AND FASTENERS SHALL BE SUBMITTED TO THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT FOR REVIEW AND ACCEPTANCE PRIOR TO FABRICATION AND ERECTION. FRAMING SUBSTITUTIONS SHALL BE SUBJECT TO REVIEW AND ACCEPTANCE BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FABRICATION AND INSTALLATION.

COLD-FORMED STEEL FRAMING ALL COLD-FORMED STEEL FRAMING SHALL BE IN ACCORDANCE WITH AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", AS AMENDED BY THE INTERNATIONAL BUILDING CODE AND SHALL STRICTLY

CONFORM WITH ICC REPORT ER-4943P.

ALL COLD-FORMED STEEL PRODUCTS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA). MATERIAL DESIGNATIONS NOTED ON THE DRAWINGS, RELATING TO MEMBER TYPES AND SIZES OR MISCELLANEOUS FRAMING ITEMS, REFER TO PRODUCT IDENTIFICATION STANDARDS ADOPTED BY THE SSMA. SSMA PRODUCTS HAVE A FOUR PART IDENTIFICATION CODE AS INDICATED IN THE



INSTALLATION EACH JOIST, RAFTER, TRUSS AND STRUCTURAL WALL STUDS SHALL BE ALIGNED WITHIN 3/4 FROM CENTERLINE OF HORIZONTAL FRAMING MEMBER TO CENTERLINE OF VERTICAL FRAMING MEMBER, UNO, OR AS SPECIFIED IN FIGURE C1-1 OF THE AISI STANDARD "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS ". STRUCTURAL FRAMING MEMBERS SHALL BE INSTALLED PER ASTM C1007 AND NON-STRUCTURAL FRAMING MEMBERS PER ASTM C754.

CONCRETE BEARING SURFACES AT STRUCTURAL FRAMING SHALL PROVIDE A UNIFORM BEARING SURFACE WITH A MAXIMUM 1/4" GAP BETWEEN THE TRACK AND THE CONCRETE. STEEL BEARING SHIMS OR NON-SHRINK GROUT CAN BE USED TO ACHIEVE THIS REQUIREMENT. THE BOTTOM TRACK OF LOAD BEARING WALLS SHALL NOT EXTEND OVER THE EDGE OF FORMED CONCRETE BEARING SURFACES BELOW.

COLD-FORMED STEEL SHALL NOT BE IN DIRECT CONTACT WITH THE GROUND UNLESS NOTED OTHERWISE.

COLD-FORMED STEEL CONNECTIONS

FOR STEEL-TO-STEEL CONNECTIONS AND FOR STRUCTURAL SHEATHING-TO-STEEL CONNECTIONS SHALL BE SELF TAPPING, SELF DRILLING FASTENERS IN COMPLIANCE WITH ASTM C1513 AND SHALL HAVE A TYPE II COATING IN ACCORDANCE WITH ASTM B633 "ELECTRO-DEPOSITED COATING OF ZINC ON IRON AND STEEL". SELF-PIERCING SCREWS PER ASTM C1002 ARE PERMITTED FOR CONNECTION OF 33 MILS STEEL OR THINNER. THE SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS' RESISTANCE TO HYDROGEN EMBRITTLEMENT. SCREWS SHALL CONFORM TO SAEJ78 "STANDARD SPECIFICATION FOR SELF-DRILL TAPPING SCREWS". SCREW ACCEPTANCE SHALL BE BASED ON ICC-ES AC118 "ACCEPTANCE CRITERIA FOR TAPPING SCREW FASTENERS".

SCREW CONNECTIONS SHALL BE IN COMPLIANCE WITH THE AISI STANDARD "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS, 2007 EDITION". SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE THICKER MATERIAL, UNO. SCREWS SHALL EXTEND THROUGH THE STEEL CONNECTION A MINIMUM OF THREE EXPOSED THREADS AND SHALL HAVE MINIMUM CENTER-TO-CENTER SPACING AND EDGE DISTANCES OF THREE TIMES THE NOMINAL SCREW DIAMETER. SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL NOT CAUSE PERMANENT SEPARATION BETWEEN COMPONENTS. SHEATHING FASTENERS SHALL MAINTAIN A MINIMUM 3/8" EDGE DISTANCE IN SHEATHING AND SHALL HAVE THEIR HEADS FLUSH WITH THE SHEATHING (BUT NO MORE THAN 1/16" BELOW THE SURFACE OF THE SHEATHING).

STRIPPED SCREWS IN DIRECT TENSION SHALL BE CONSIDERED INEFFECTIVE AND SHALL BE REPLACED. STRIPPED SCREWS IN SHEAR THAT CONSTITUTE MORE THAN 25% OF THE TOTAL SCREWS IN THE CONNECTION SHALL BE CONSIDERED INEFFECTIVE AND SHALL BE REPLACED. STRIPPED SCREWS ARE PERMITTED TO BE REMOVED AND REPLACED WITH SCREWS OF THE NEXT LARGER DIAMETER.

MINIMUM SCREW SIZES IN COLD-FORMED STEEL TABLE				
CONNECTION	MINIMUM SCREW SIZE			
METAL TO METAL (68 MILS)	#10-16 (#3 POINT)			
METAL TO METAL (33 MILS - 54 MILS	#8-18 (#2 POINT)			
METAL TO METAL (SHEAR WALLS)	#8-18 (#2) POINT) WAFER HEAD			
APA SHEATHING (SHEAR WALLS)	#8-18 (#2 POINT FLAT HEAD w/ 0.292"Ø HEAD MIN			
GWB OR GYPSUM SHEATHING	#6 x 1" (#2 POINT) DRYWALL			
METAL DECK TO FRAMING	#12-14 (#3 POINT)			
SIMPSON HARDWARE	PER SIMPSON CATALOG			

ALLOWABLE LOADS FOR SCREW CONNECTIONS (LBS/SCREW) SHALL BE AS INDICATED IN THE TABLE BELOW AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EITHER PROVIDE SCREW TEST DATA FROM THE SCREW MANUFACTURER'S QUALITY ASSURANCE PROGRAM OR SHALL RETAIN AN INDEPENDENT CERTIFIED TESTING AGENCY TO PROVIDE THE LOAD TEST VERIFICATION. NOMINAL STRENGTH OF SCREWS SHALL BE AT LEAST 3.0 TIMES THE ALLOWABLE LOADS SHOWN IN THE

ALLOWABLE LOADS FOR SCREW CONNECTIONS (POUNDS)									
SHEET	STEEL THICK	33 Mils (0.0346")		43 Mils (0.0451")		54 Mils (0.0566")		68 Mils (0.0713")	
METAL SCREW	STEEL	Fy	Fu	Fy	Fu	Fy	Fu	Fy	Fu
SIZE PROPTY (KSI)	33 45	45	33	45	45 50	65	50	65	
NO. 6	SHEAR	141		2	14	214		214	
(Ø0.138")	PULLOUT	61		7	79	14	40	14	40
NO. 8	SHEAR	164		2	44	426		426	
(Ø0.164")	PULLOUT	72		94		171		195	
NO. 10	SHEAR	177		2	36	5	34	54	48
(Ø0.190")	PULLOUT	84		1	09	19	98	24	49
No. 12	SHEAR	18	88	2	80	50	69	7	77
(Ø0.216")	PULLOUT	9)5	124		225		284	

COLD FORMED STEEL CONNECTORS

COLD-FORMED STEEL CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY THE SIMPSON STRONG-TIE COMPANY. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER, LENGTH, TYPE, AND SIZE OF FASTENERS AS SPECIFIED BY THE MANUFACTURER. FILL ALL HOLES WITH FASTENERS AS SPECIFIED BY THE MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

WELDING OF COLD-FORMED METAL FRAMING SHALL CONFORM TO LATEST EDITION OF THE "STRUCTURAL WELDING CODE - SHEET STEEL" AWS D1.3 AND SHALL BE PERFORMED BY WELDERS CERTIFIED BY W.A.B.O. TO PRODUCE THE SPECIFIED CLASSES OF WELD. ONLY PRE-QUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL WELDS SHALL BE MADE USING LOW HYDROGEN ELECTRODES OR PROCESSES. LOW HYDROGEN ELECTRODES SHALL BE PROVIDED IN HERMETICALLY SEALED CONTAINERS; ELECTRODES THAT HAVE BEEN WET SHALL NOT BE USED. REFER TO AWS REQUIREMENTS REGARDING ALLOWABLE EXPOSURE OF LOW HYDROGEN ELECTRODES TO THE ATMOSPHERE AND FOR RE-DRYING RECOMMENDATIONS AND RESTRICTIONS. MATCHING FILLER METALS PER AWS D1.3 SHALL BE USED AND SHALL BE ADJUSTED TO ELIMINATE BURN-THROUGH IN LIGHT-GAUGE STEEL MATERIALS. WELDED AREAS SHALL BE TREATED WITH ZINC PAINT CONFORMING TO ASTM A780. FOR MATERIAL LESS THAN 0.15" THICK, DRAWINGS SHOW NOMINAL WELD SIZES. FOR SUCH MATERIAL, THE EFFECTIVE THROAT OF WELDS SHALL NOT BE LESS THAN THE THICKNESS OF THE THINNEST CONNECTED PART. PUDDLE WELDS ARE PROHIBITED. WELDING OF COLD-FORMED STEEL SHALL ONLY BE APPLIED TO MATERIAL WITH A BASE STEEL THICKNESS OF 43 MILS OR GREATER, UNO.

BOLTED CONNECTIONS BOLTED CONNECTIONS SHALL BE IN ACCORDANCE WITH SECTION E3 OF THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURES". PRE-DRILLED HOLES FOR BOLTS SHALL NOT BE OVERSIZED MORE THAN 1/16" FOR BOLTS UP TO 1/2" IN DIAMETER AND 1/8" FOR LARGER BOLTS. BURNED HOLES ARE PROHIBITED.

MAY LIMIT ACTUAL DESIGN VALUES.

DRILLED ANCHORS USED TO FASTEN COLD-FORMED STEEL MEMBERS TO CONCRETE SHALL BE KWIK BOLT TZ AS MANUFACTURED BY THE HILTI CORPORATION. AND SHALL CONFORM TO ICC REPORT ESR-1917 INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. FASTENERS SHALL NOT BE INSTALLED BEFORE THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH OF THE CONCRETE HAS BEEN OBTAINED. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED WITH ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. CONNECTED MEMBERS MAY LIMIT ACTUAL DESIGN VALUES.

POWDER-DRIVEN OR PNEUMATIC FASTENERS POWDER-DRIVEN OR PNEUMATIC FASTENERS USED TO FASTEN COLD-FORMED STEEL MEMBERS TO STRUCTURAL STEEL OR CONCRETE SHALL BE MANUFACTURED BY THE HILTI CORPORATION, AS INDICATED IN THE TABLE BELOW. ALL FASTENERS SHALL CONFORM STRICTLY TO ICC REPORT ESR-2269 INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. FASTENERS THROUGH STRUCTURAL STEEL SHALL FULLY PENETRATE THE STRUCTURAL STEEL WITH A MINIMUM PENETRATION OF 1/4" THROUGH THE LAST MATERIAL JOINED. UNDERDRIVEN PINS SHALL NOT BE RESET BUT SHALL BE REPLACED BY ANOTHER PIN INSTALLED IN ANOTHER LOCATION. FASTENERS IN CONCRETE SHALL NOT BE INSTALLED BEFORE THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH OF THE CONCRETE HAS BEEN ACHIEVED. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED WITH ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. THE FOLLOWING TABLE

INDICATES REQUIRED SHEAR AND PULLOUT VALUES (LBS/FASTENER). CONNECTED MEMBERS

STATEMENT OF SPECIAL INSPECTIONS

SPECIAL INSPECTION: SPECIAL INSPECTION SHALL BE PROVIDED PER THE REQUIREMENTS OF IBC SECTION 1704 AND AS

С	ONC	RE	ГЕ	
VERIFICATION AND INSPECTION	С	Р	REFERENCED STANDARD	NOTES
ANCHORS CAST IN CONCRETE		Х	ACI 318: 17.8.2	SPECIAL INSPECTION SHALL CONFORM TO ACI 26.13 UNO
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS: A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAIN TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN A.	x	х	ACI 318: 17.8.2.4 ACI 318: 17.8.2	SPECIAL INSPECTIONS NOT REQUIRED FOR CONTINUOUS FOOTINGS SUPPORTING WALLS OF THREE-STORIES AND LESS ABOVE GRADE PLANE WHERE WALLS ARE LIGHT-FRAME CONSTRUCTION AND STRUCTURAL DESIGN IS BASED ON F'C ≤ 2500 PSI
COLD-FORM	IED	STE	EL FRAMING	
VERIFICATION AND INSPECTION	С	Р	REFERENCED STANDARD	NOTES
SCREW ATTACHMENT, WELDING, BOLTING, ANCHORING AND FASTENING OF SHEAR WALLS, BRACES, DIAPHRAGMS, DRAG STRUTS, AND HOLD-DOWNS THAT ARE PART OF SEISMIC		Х	AWS D1.3 IBC 1705.12.2, 1705.13.3	EXCEPTIONS PER IBC 1705.12.2

X IBC 1705.12.3, 1705.13.5

IBC 1705.13.5

EXCEPTIONS PER IBC

1705.13.5

SPECIAL INSPECTION OF PLUMBING, ELECTRICAL AND MECHANICAL COMPONENTS PER IBC 1705.13.6 WHERE APPLICABLE.

"C" DENOTES CONTINUOUS INSPECTION "P" DENOTES PERIODIC INSPECTION

REVIEW OF TESTING AND INSPECTION REPORTS.

RESISTING SYSTEM

INSPECTION.

ROOF AND WALL CLADDING

NON LOAD BEARING WALLS

TESTING AND SPECIAL INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM. REPORTS SHALL BE DISTRIBUTED TO OWNER, CONTRACTOR, BUILDING OFFICIAL, ARCHITECT AND STRUCTURAL ENGINEER. SPECIAL INSPECTOR SHALL UTILIZE DRAWINGS, SPECIFICATIONS, RFI'S, AND OTHER PERTINENT DESIGN DOCUMENTS DURING INSPECTIONS.

SPECIAL INSPECTOR SHALL CLEARLY NOTE ON THE INSPECTION REPORTS WHEN AN ITEM IS NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATION, AND KEEP A LOG OF EACH ITEM UNTIL THEY ARE CLEARED VIA RFI OR OTHER MEANS.

SPECIAL INSPECTOR SHALL PROVIDE A STRUCTURAL CLOSE OUT LETTER AT THE END OF THE PROJECT. THIS LETTER SHALL CONFIRM THAT ALL STRUCTURAL NON-CONFORMANCES NOTED IN INSPECTION REPORTS HAVE BEEN CLEARED AND THAT TO THE BEST OF THEIR KNOWLEDGE THERE ARE NO OUTSTANDING STRUCTURAL DEFICIENIES TO BE RESOLVED.

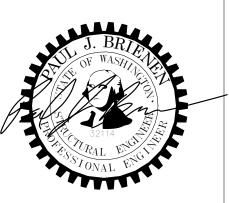
STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNATED REPRESENTATIVE IN ACCORDANCE WITH IBC 1704.6. STRUCTURAL OBSERVATION SHALL BE PERFORMED AS FOLLOWS:

REPORTS SHALL BE PREPARED FOR EACH SITE VISIT AND SHALL BE DISTRIBUTED TO ARCHITECT.

PERIODIC VISUAL OBSERVATION OF STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES.

GENERAL CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL

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Permit Submittal 24201.5 Job# Drawn Checked BJB

GENERAL NOTES

City of Puyallup

Development & Permitting Services

ISSUED PERMIT

Planning

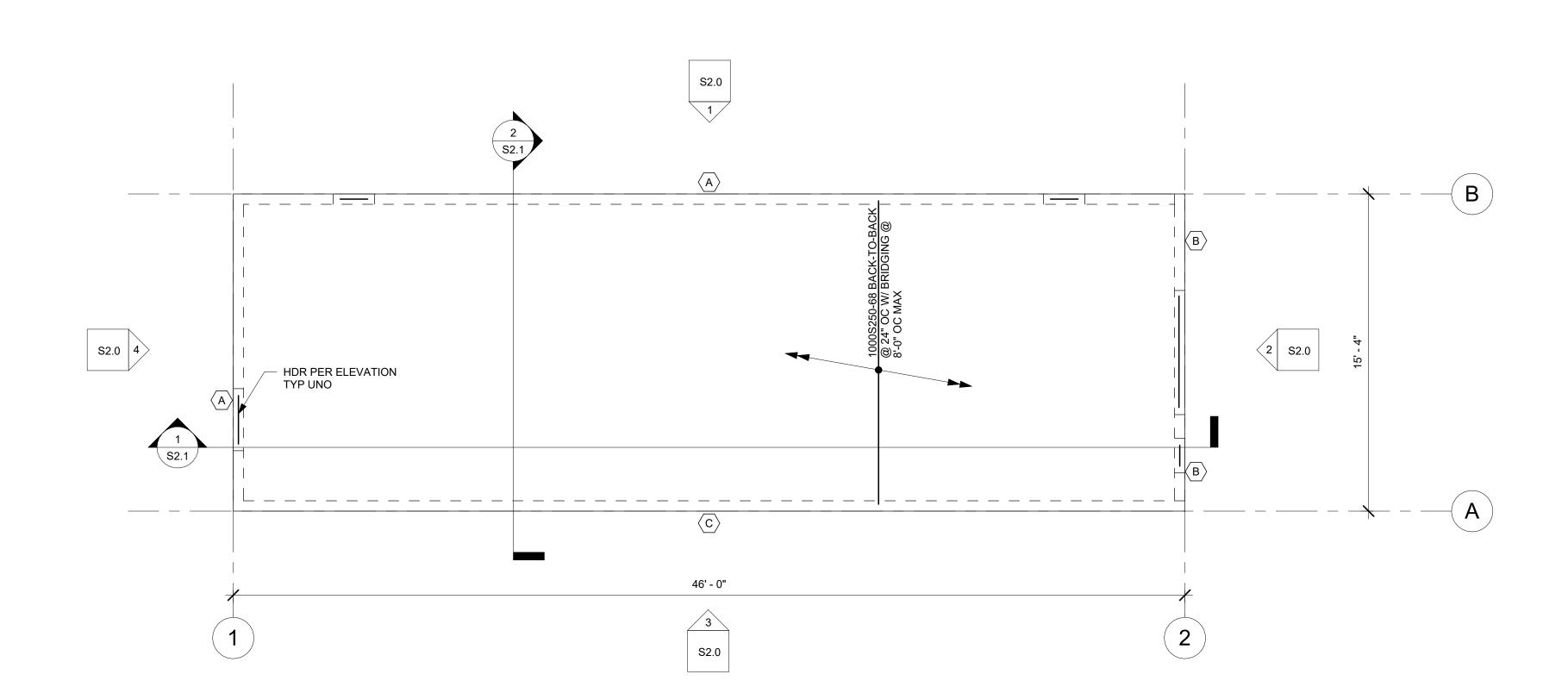
Public Works

Traffic

Building

Engineering

Fire



City of Puyallup **Development & Permitting Services** ISSUED PERMIT Building Engineering Public Works Traffic

COLD-FORMED STEEL FRAMING PLAN NOTES

- 1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- COLD-FORMED STEEL STUD WALLS SHALL ALIGN WITH TRUSS/JOIST LAYOUT AND BE SPACED AT 24" OC MAXIMUM, UNLESS NOTED OTHERWISE.
- 3. A INDICATES PLYWOOD SHEAR WALL. SEE SHEAR WALL SCHEDULE ON SHEET S3.0 AT WALLS SHEATHED ON ONE FACE ONLY, PLACE SHEATHING ON THE CHEVRON TAG SIDE. ALL EXTERIOR BEARING AND NON-BEARING WALLS SHALL MEET SHEAR WALL TYPE A REQUIREMENTS UNLESS NOTED OTHERWISE.
- 4. PLACE ALL HOLDOWNS AND SILL ANCHORS EMBEDDED IN CONCRETE PRIOR TO CASTING OF THE CONCRETE. DRILLING SUCH ITEMS IN AFTER THE DECK IS CAST SHALL BE ASSUMED NOT FESABLE.
- 5. PROVIDE 3/4" NOMINAL TOUNGE & GROOVE WOOD SHEATHING OVER ALL ROOF STRUCTURE. PROVIDE #8 SMS @ 6" OC EDGE NAILING AND #8 SMS @ 10" OC FIELD NAILING, UNLESS OTHERWISE NOTED.
- 6. ALL ROOF TRUSSES SHALL ALIGN WITH WALL STUDS.

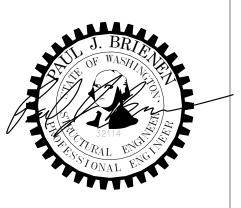
7. PROVIDE EDGE NAILING OVER ALL RIM JOISTS AND TRUSS BLOCKINGS OVER SHEAR WALLS.

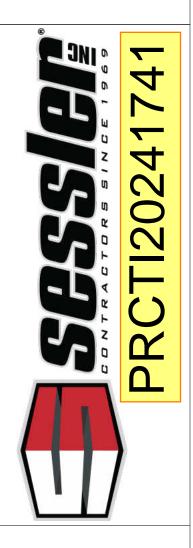
8. REFERENCE DRAWINGS: S3.X FOR TYPICAL CFS DETAILS

Brienen **S**tructural

Engineers

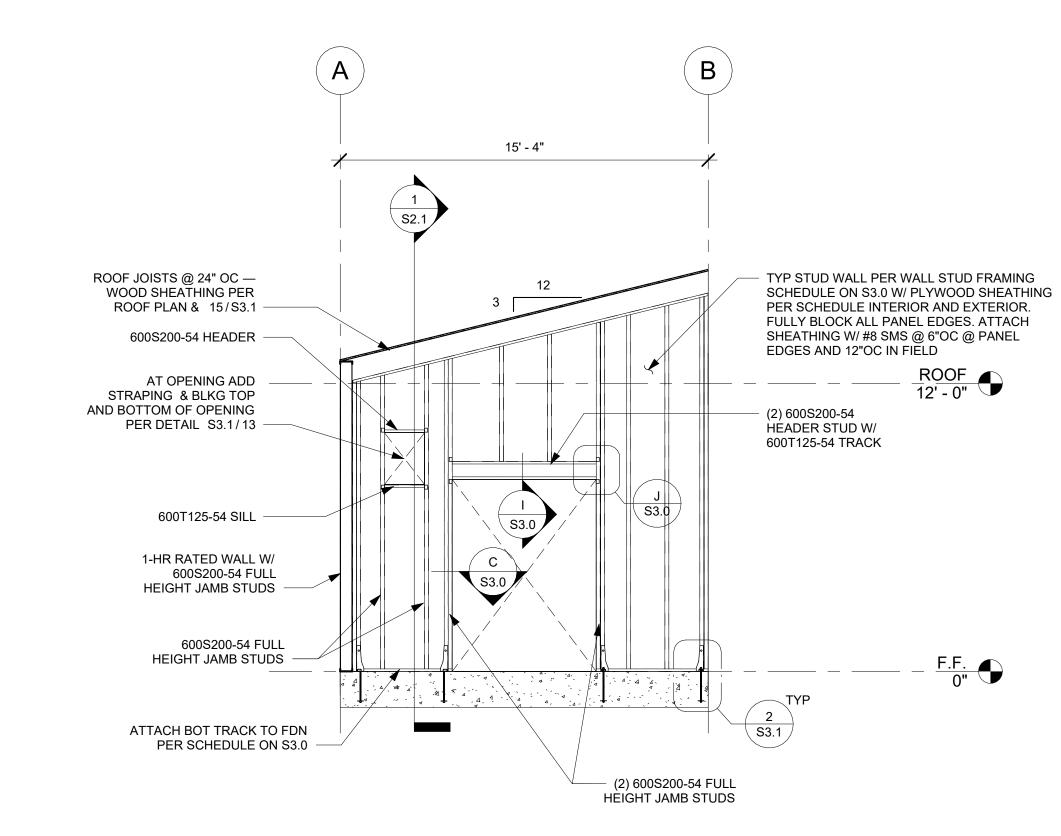






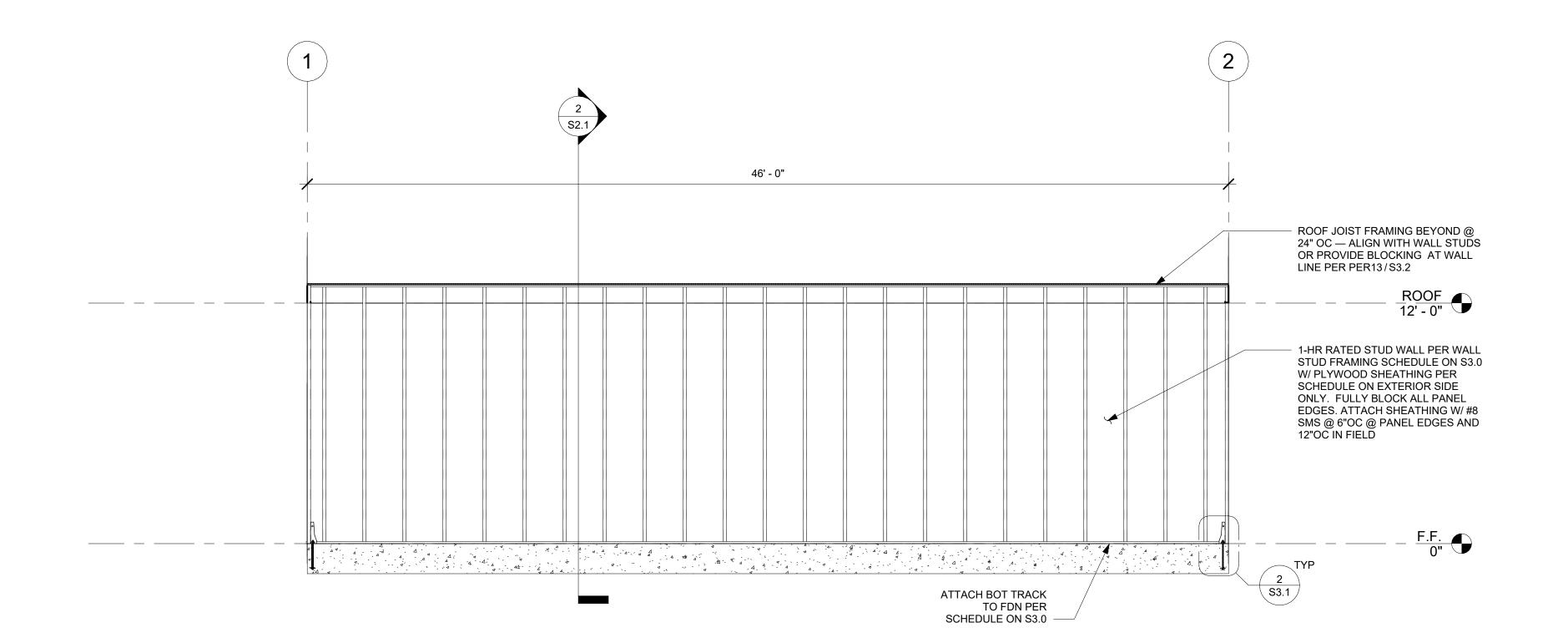
Δ	Issue	Dat
	Permit Submittal	11/08/202
J	ob #	24201.5
D)rawn	RRS
C	Checked	BJE

FRAMING **PLANS**



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

2 <u>EAST ELEVATION</u> 1/4" = 1'-0"



TYP STUD WALL PER WALL STUD
FRAMING SCHEDULE ON \$3.0 W
PLYWOOD SHEATHING PER SCHEDULE
ON EXTERIOR SIDE ONLY, FULLY
BLOCK ALL PANEL EDGES ATTACH
SHEATHING W #8 SMS @ FOC @
PANEL EDGES AND 12'0 CIN FIELD

600S162-54 FULL HEIGHT
STUD @ HOLD DOWN TYP

2
S3.1

600S162-54 FULL HEIGHT
STUD @ HOLD DOWN TYP

7
PER SCHEDULE ON \$3.0

F.F.
0"

600S162-54 FULL HEIGHT
STUD @ HOLD DOWN TYP

800S162-54 FULL HEIGHT
STUD @ HOLD DOWN TYP

12'-0"

ATTACH BOT TRACK TO FDN
PER SCHEDULE ON \$3.0

F.F.
0"

3 SOUTH ELEVATION
1/4" = 1'-0"

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building Planning

Engineering Public Works

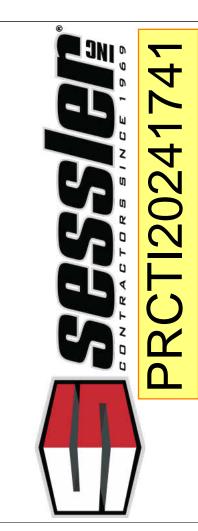
Fire Traffic

BSE

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SWITCHGEAR BUILDING

1023 39TH AVENUE SOUTH EAST
PUYALLUP, WA 98374

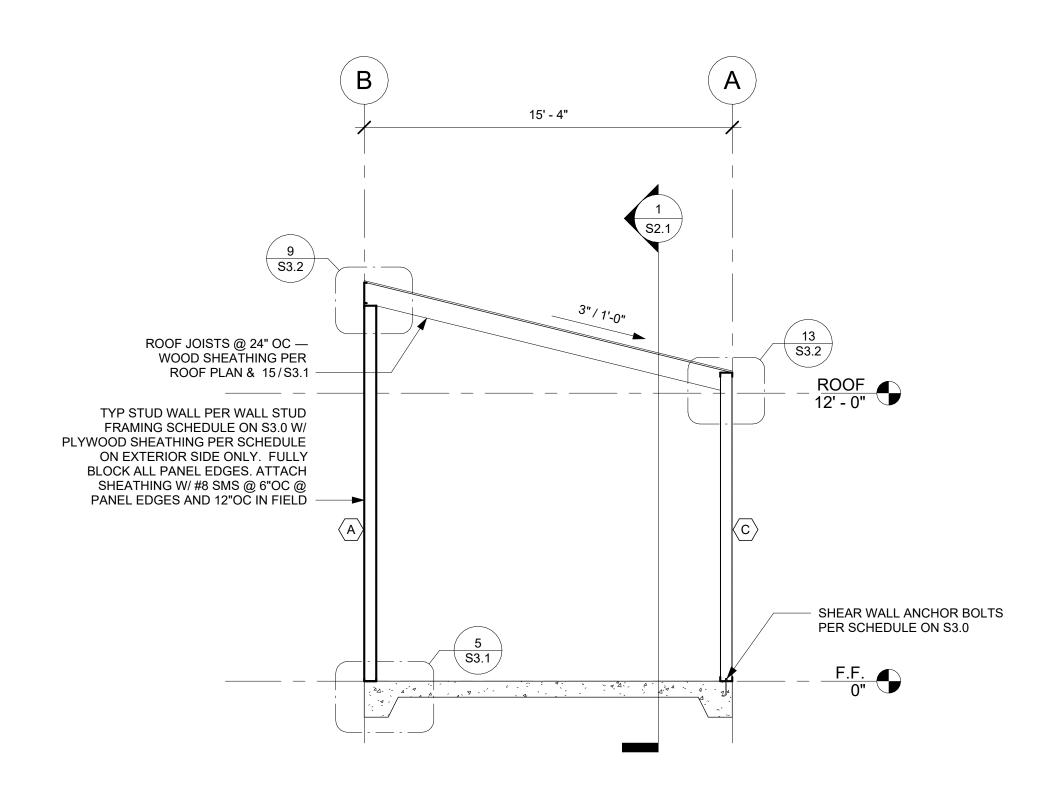
Δ Issue Date
Permit Submittal 11/08/2024

Job # 24201.5

Drawn RRS
Checked BJB

BUILDING ELEVATIONS

\$2.0



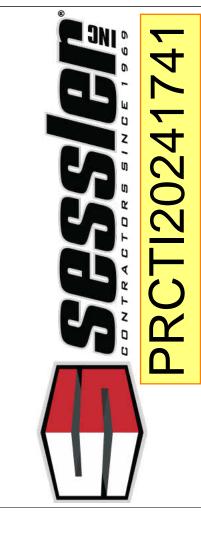
2 NORTH-SOUTH SECTION
1/4" = 1'-0"

City of Puyallup
Development & Permitting Services
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Building Planning
Engineering Public Works
Fire Traffic

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CENTERIS SOUTH UTILITY YARD SWITCHGEAR BUILDING 1023 39TH AVENUE SOUTH EAST PUYALLUP, WA 98374

Δ	Issue	Dat
	Permit Submittal	11/08/202
	,	0.400.4
J	ob #	24201.
)rawn	RRS
C	Checked	BJE

BUILDING SECTIONS

32.1

EXTERIOR METAL STUD WALL FRAMING SCHEDULE								
WALL TYPE	STUD TYPE	CDACING	TRACKS			STUD-TO-TRACK CONNECTION		
WALLITPE	SIUDITPE	SPACING	BOTTOM	ТОР	воттом	ТОР		
A	600S200-54	24" OC	600T125-54	600T250-54	A	B		
B	600S200-54	24" OC	600T125-54	600T250-54	A	B		
©	600S200-54	24" OC	600T125-54	600T350-68	A	B		

EXTERIOR METAL STUD WALL FRAMING SCHEDULE NOTES

- FULLY-SHEATHE FACE OF STUDS AS NOTED ON PLANS FULL-HEIGHT OR PROVIDE BRIDGING OR SOLID BLOCKING AT 4'-0" OC MAX UNLESS NOTED OTHERWISE
- 2. ALL STUDS SHALL FULLY BEAR AT TOP AND BOTTOM TRACK -- SHIM WHERE NECESSARY. WEB STIFFENERS ARE NOT REQUIRED UNLESS OTHERWISE SPECIFIED.
- 3. TOP/BOTTOM TRACK PENETRATIONS OR FLANGE CLIPS UP TO 2/3 (TRACK WIDTH) ARE STRUCTURALLY ACCEPTABLE 16" CLEAR FROM ANY JAMB STUDS ADD ANCHOR ON EACH SIDE OF OPENING.
- 4. WALL STUDS, CRIPPLE STUDS, JAMBS, HEADERS AND SILLS SHALL NOT BE SPLICED.
- ALL COLD-FORMED STEEL STUDS, TRACKS AND LIGHT GAUGE ANGLES SHALL CONFORM TO ASTM A653 SS GRADE 50 (Fy=50KSI) FOR 118, 97, 68 AND 54 MILS MEMBERS AND ASTM 653 SS GRADE 33 (Fy=33KSI) FOR 43 MILS AND LIGHTER MEMBERS.
- 6. BLOCKING SHALL MATCH GAUGE OF WALL STUD AND 1 1/2" WIDE, MINIMUM.
- 7. CONCRETE SCREWS SHALL BE HILTI KH-EZ SCREW-TYPE CONCRETE ANCHOR OR SIMPSON TITEN HD. SEE DETAILS FOR REQUIRED DIAMETERS AND EMBEDMENTS. ALL DRILLING IN CONCRETE SHALL CONFORM TO REQUIREMENTS IN GENERAL NOTES. DO NOT DAMAGE REINFORCING IN CONCRETE SLAB OR FOUNDATION.
- 8. SHEET-METAL SCREWS (SMS) SHALL BE SELF-TAPPING, SELF-DRILLING FASTENERS IN COMPLIANCE WITH ASTM C1513 AND SHALL HAVE A TYPE II COATING IN ACCORDANCE WITH ASTM B633.
- 9. IT IS STRUCTURALLY ACCEPTABLE TO USE A THICKER FRAMING MEMBER PROVIDED THE WEB SIZE REMAINS UNCHANGED AND FLANGE SIZE REMAINS UNCHANGED OR IS INCREASED.

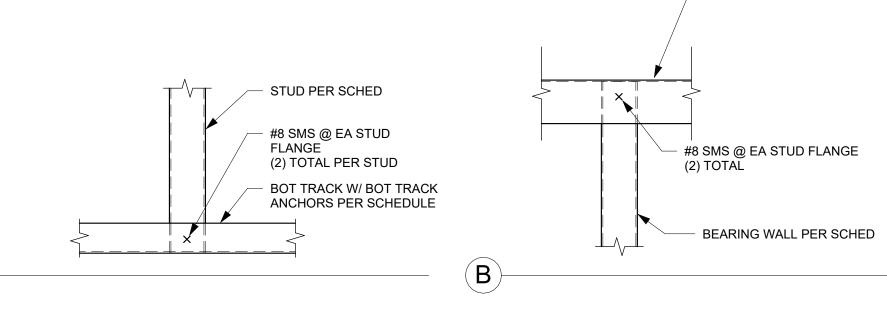
	SPECIAL CFS FRAMING SHEAR WALL W/ PLYWOOD					
	SHEAR WALL REQUIREMENTS					
MARK	STRUCTURAL PANEL REQ'MENTS	EDGE SCREWS (NOTES 2, 4)	BOTTOM TRACK ANCHORS (NOTE 6)			
A	(1) SIDE 7/16" WOOD SHT'G	#8 @ 6" OC	5/8"Ø ANCHOR @ 32" OC - EMBED 7" UNO			
B	(2) SIDE 7/16" WOOD SHT'G	#8 @ 4" OC	5/8"Ø ANCHOR @ 32" OC - EMBED 7" UNO			
B	(1) SIDE 7/16" WOOD SHT'G	#8 @ 6" OC	5/8"Ø ANCHOR @ 32" OC - EMBED 7" UNO			

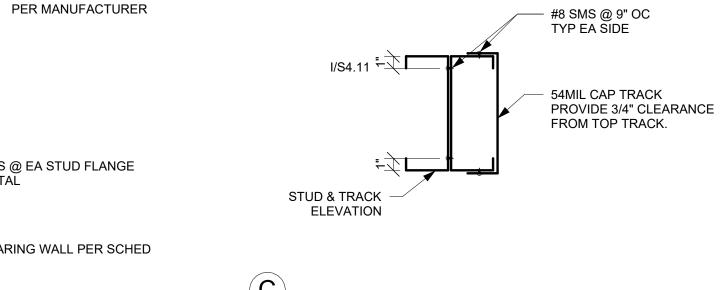
SHEAR WALL FRAMING NOTES:

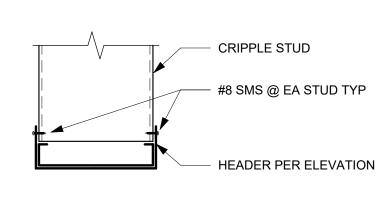
- INDICATES STRUCTURAL WALL MARK. STUDS SHALL ALIGN WITH JOISTS AND STUDS ABOVE. FOR NUMBER OF STUDS REQUIRED BELOW JOIST/STUD ABOVE SEE SCHEDULE. FOR TYPICAL WALL STUD
- BRIDGING DETAIL AND ADDITIONAL WALL FRAMING REQUIREMENTS SEE 2/S3.2

 2. ALL EXTERIOR AND INTERIOR WALLS DESIGNATED AS SHEAR WALLS SHALL BE BLOCKED AT ALL UNSUPPORTED PANEL EDGES. EDGE SCREW SPACING APPLIES TO TOP AND BOTTOM TRACK, PANEL VERTICAL AND HORIZONTAL JOINTS, WALL CORNERS, HOLDOWN ANCHOR STUDS, AND WALL END STUDS. SHEAR WALL STUD FLANGE WIDTH SHALL BE S162 MINIMUM. BLOCKING SHALL MATCH GAUGE OF WALL STUD x 1 1/2" WIDE MINIMUM.
- SHEATHING PANELS MAY BE INSTALLED PARALLEL OR PERPENDICULAR TO FRAMING.
 SCREWS SHALL BE SELF-DRILLING, SELF-TAPPING FLAT HEAD SCREWS WITH MINIMUM 0.292" HEAD DIAMETER.
 PROVIDE 3"x3"x1/4" PLATE WASHER AT EACH ANCHOR BOLT WELD PLATE WASHER TO TRACK WITH FILLET
- WELD ALL AROUND. DISTANCE FROM ANCHOR TO END OF TRACK TO BE 3" MIN AND 6" MAX.

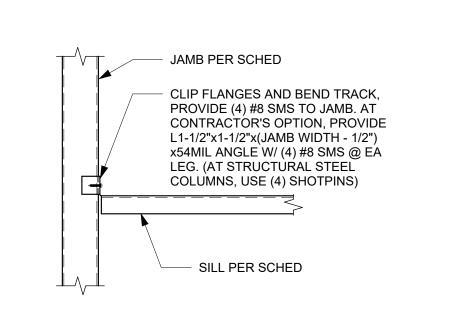
 ACCEPTABLE TO USE 5/8"Ø HILTI HUS-EZ SCREW ANCHORS WITH 3-1/2" EMBED AS AN ALTERNATE TO THE



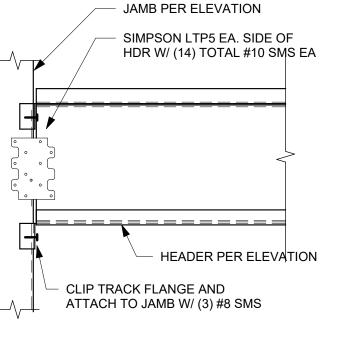












- ATTACH TOP TRACK TO METAL ROOF TRUSSES

#8 SMS @ EA STUD TYP

HEADER PER
WALL ELEVATION

#8 SMS @ 12" OC
(4) PLACES

JAMB PER SCHED

- HEADER PER SCHED

- CLIP FLANGES AND BEND TRACK,

PROVIDE (4) #8 SMS TO JAMB. AT CONTRACTOR'S OPTION, PROVIDE

L1-1/2"x1-1/2"x(JAMB WIDTH - 1/2")

x54MIL ANGLE W/ (4) #8 SMS @ EA LEG. (AT STRUCTURAL STEEL COLUMNS, USE (4) SHOTPINS)

- CRIPPLE STUD PER

ELEVATION

J

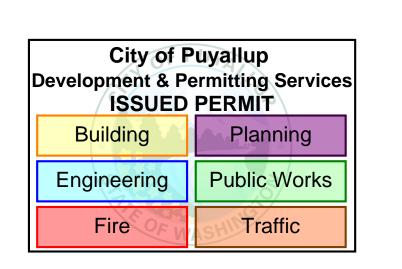
SILL PER ELEVATION -

#8 SMS @ EA STUD TYP -

CRIPPLE STUD

1 EXTERIOR METAL STUD WALL SCHEDULES AND DETAILS

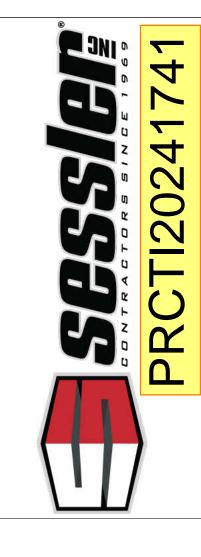
CAST-IN-PLACE ANCHOR SHOWN IN THE SCHEDULE.



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CENTERIS SOUTH UTILITY YARD SWITCHGEAR BUILDING 1023 39TH AVENUE SOUTH EAST PUYALLUP, WA 98374

Issue	Date
Permit Submittal	11/08/2024
ob#	24201.5
rawn	RRS
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EXTERI	OR
WALI SCHEDU	
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DETAILS

CFS SHEAR WALL PER PLANS

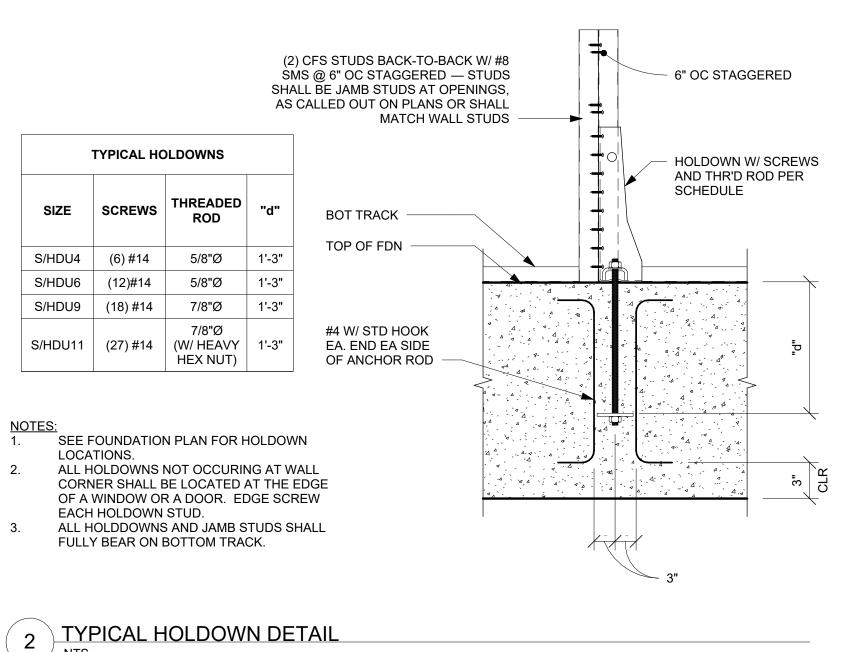
CFS SHEAR WALL ANCHORS PER PLANS AND DETAILS

SLAB ON GRADE BY OTHERS

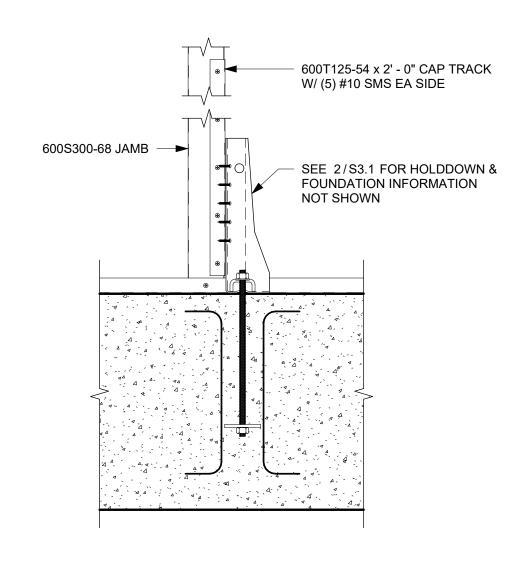
CONCRETE FOUNDATION

5 THICKENED SLAB EDGE DETAIL
NTS

13 TYPICAL SHEARWALL DETAIL AROUND OPENING

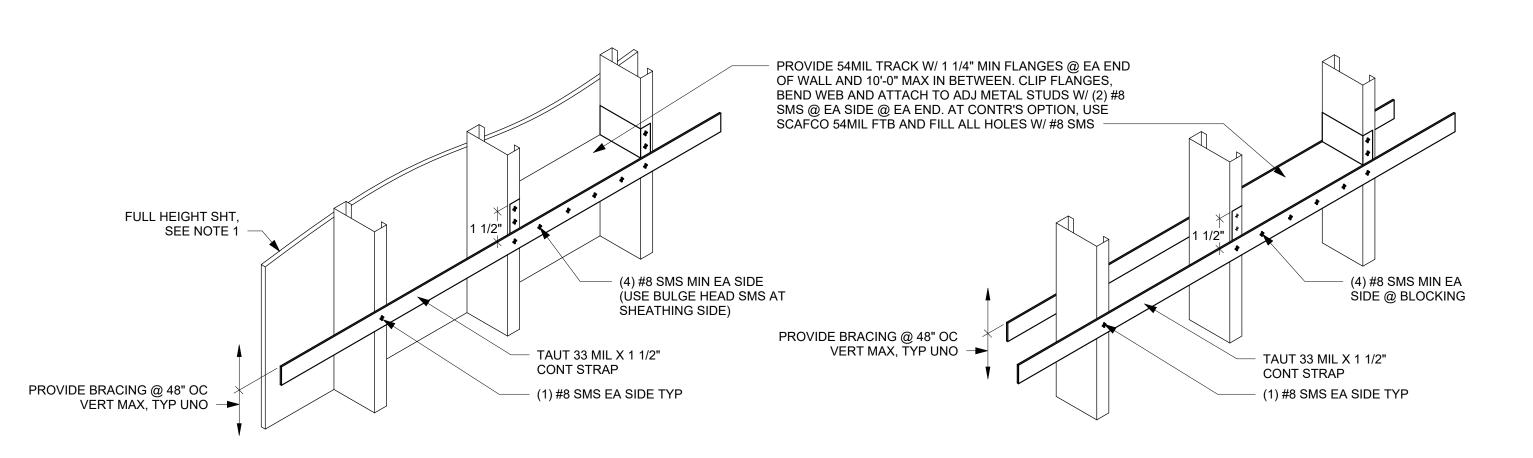


INTERIOR SIDING PER (2) FULL HEIGHT STUDS W/ (1) CÓVER TRACK - ATTACH W/#8 ARCH -SMS @ 6" OC WALL STUDS PER SCHED -====== SHEAR WALL EDGE ATTACHMENT PLYWOOD SHEATHING FULL HT OF STUDS -ON EXTERIOR SIDE ONLY — STAGG @ EDGE SCREW SPACING EA STUD SHEAR WALL HOLDOWN PER PLANS AND DETAIL 2/S3.1



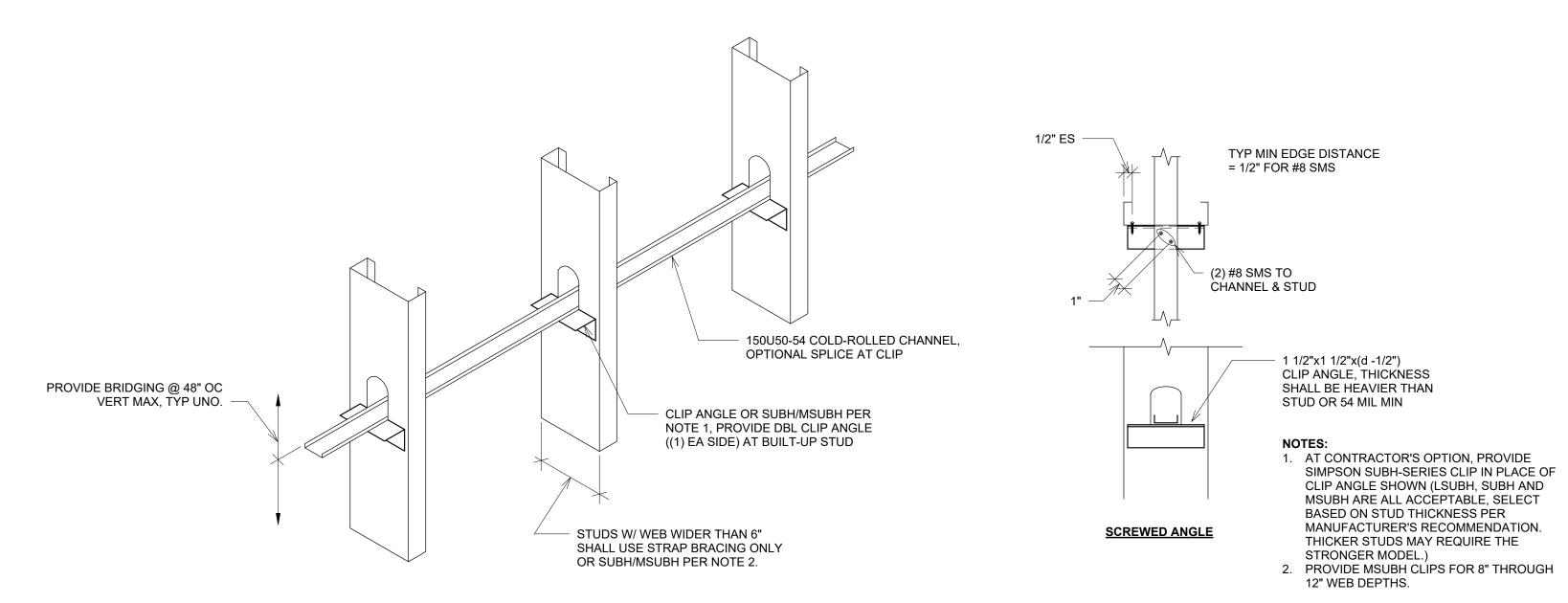
3 TYPICAL HOLDOWN DETAIL @ CORNER

4 HOLDOWN DETAIL @ GARAGE JAMBS

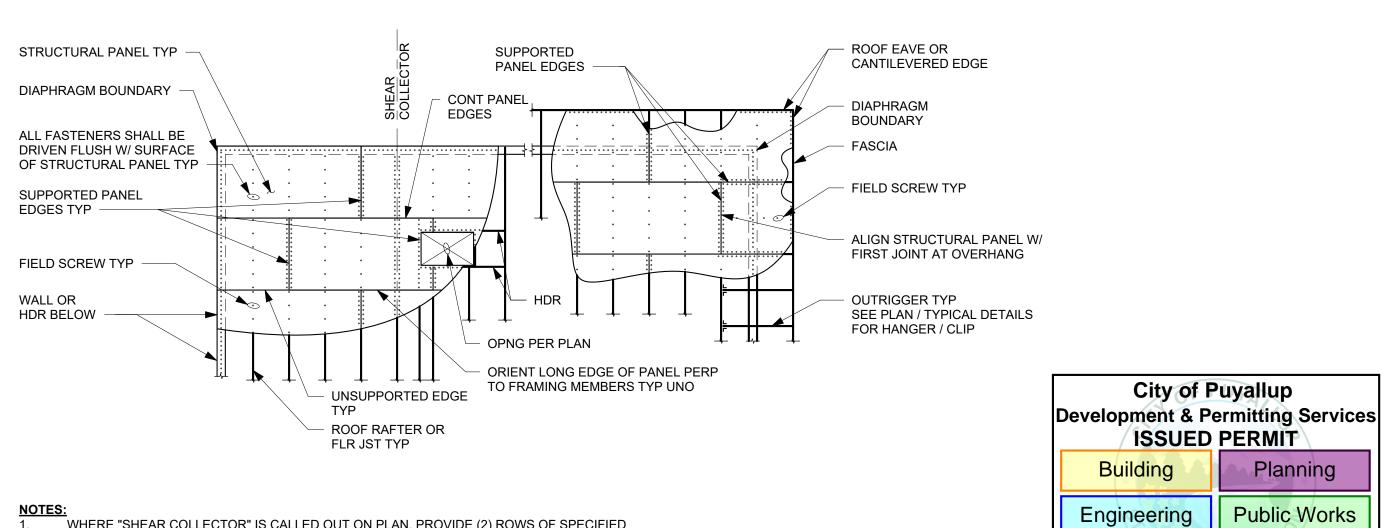


1. QUALIFIED SHEATHING SHALL BE GWB, GYPSHEATHING, PLYWOOD, OR OSB ONLY AND SHALL OCCUR FULL HEIGHT OF WALL. PROVIDE STRAP BRACINGS AT EACH FACE OF WALL IF SHEATHING TERMINATES AT PARTIAL HEIGHT. 2. ALTERNATIVELY, PROVIDE BRIDGING PER TYPICAL DETAILS.

7 TYPICAL STRAP BRACING WHEN PARTITION IS NOT FULLY SHEATHED Copy 1



11 TYPICAL BRIDGING AT PARTITIONS
NTS



1. WHERE "SHEAR COLLECTOR" IS CALLED OUT ON PLAN, PROVIDE (2) ROWS OF SPECIFIED DIAPHRAGM BOUNDARY NAILING INDICATED IN THE NAILING SCHEDULE.

TYPICAL ROOF DIAPHRAGM NAILING
NTS

_______ ADD TRACK BLOCKING **ELEVATION** PER DETAIL 2/S3.2 BEHIND STRAP TYP 1' - 4" MIN 1' - 4" MIN CS16 STRAP W/ (18) # UNO 10 SMS FASTENÈRS **INSTALLED OVER** SHEATHING TYP EA OPENING CORNER OPENING SILL PER **ELEVATION** 1. TYPICAL WALL STUDS AND SILL ANCHORS NOT SHOWN FOR CLARITY. SHEARWALL PER PLAN

Brienen **S**tructural

Engineers 1316 Central Ave. S., Suite 200 Kent, WA 98032 (206) 397-0000 ~ www.bse-ps.com





TH UTILITY YARD AR BUILDING OUTH 98374

Issue	Date
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lob#	24201.5
Drawn	RRS
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FRAMING **DETAILS**

City of Puyallup

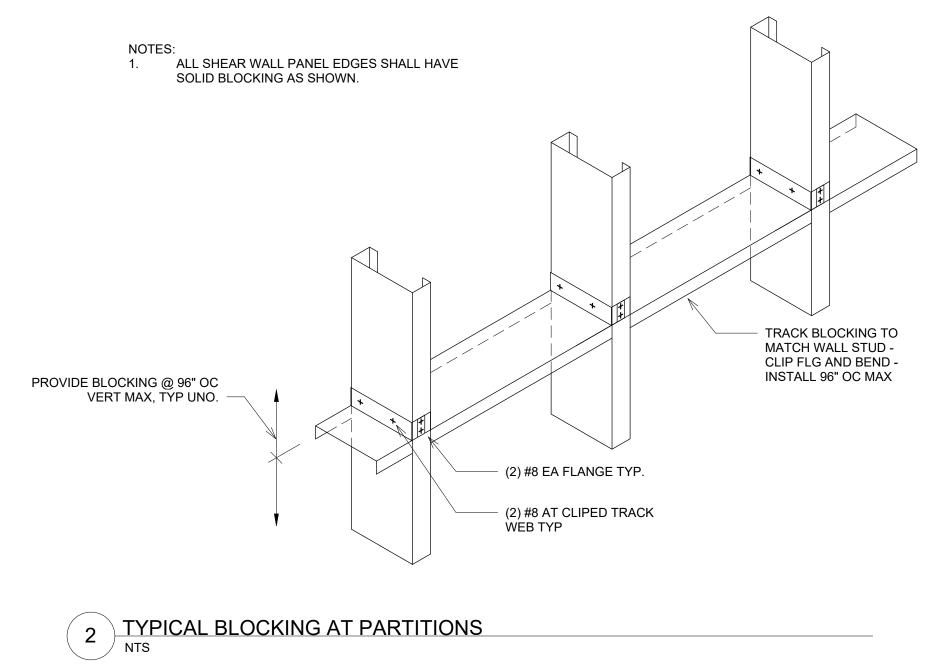
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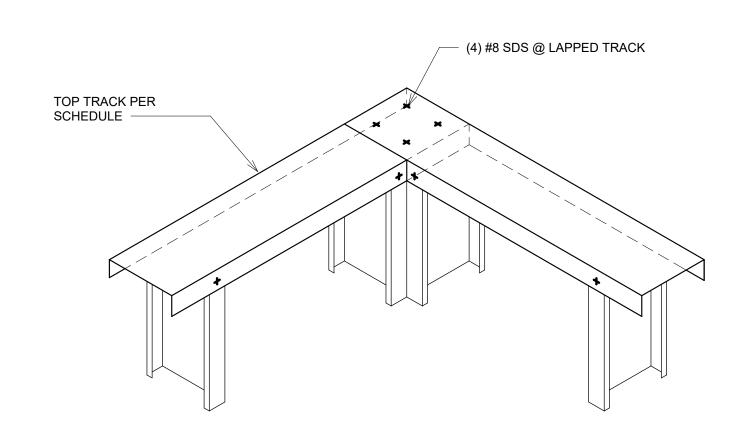
Fire

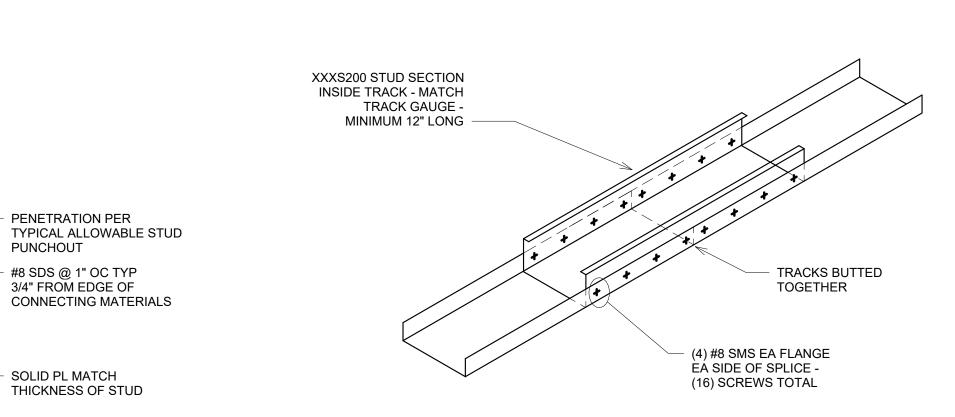
Planning

Public Works

Traffic







- #8 SDS @ 24" OC CONNECTING CORNER STUDS #8 SDS @ 24" OC CONNECTING CORNER STUDS **PLAN VIEW**

TYPICAL INFILL OF FACTORY STUD PUNCHOUT TYPICAL ALLOWABLE STUD PUNCHOUT

3/4" MAX WHEN STUD WIDTH <= 2 1/2"

1 1/2" MAX WHEN STUD WIDTH > 2 1/2"

PENETRATION (HOLE, PUNCHOUT)

CL STUD & PUNCHOUT

5 TYPICAL METAL STUD PUNCHOUT

STUD WIDTH, VARIES

STUD WIDTH,

PUNCHOUT

#8 SDS @ 1" OC TYP

3/4" FROM EDGE OF

SOLID PL MATCH

THICKNESS OF STUD

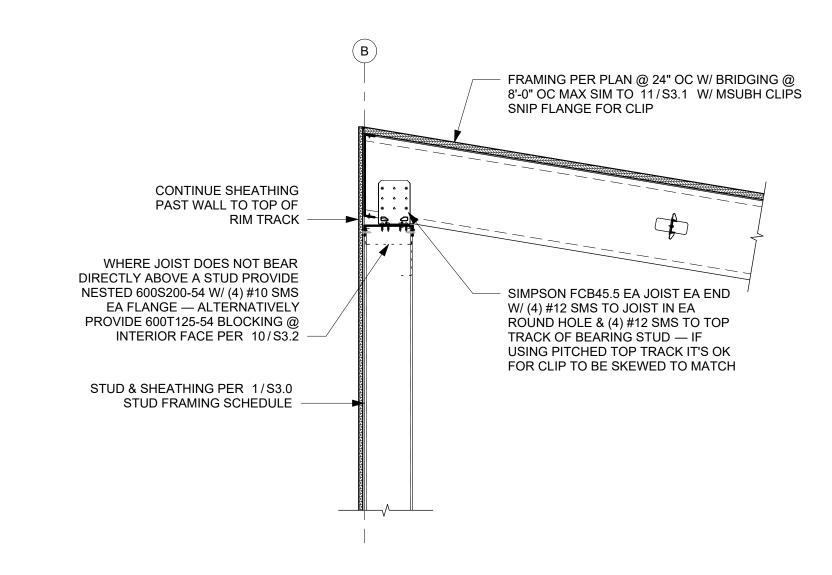
SPLICE TRACK 6" CLEAR FROM VERTICAL STUDS TYPICAL.

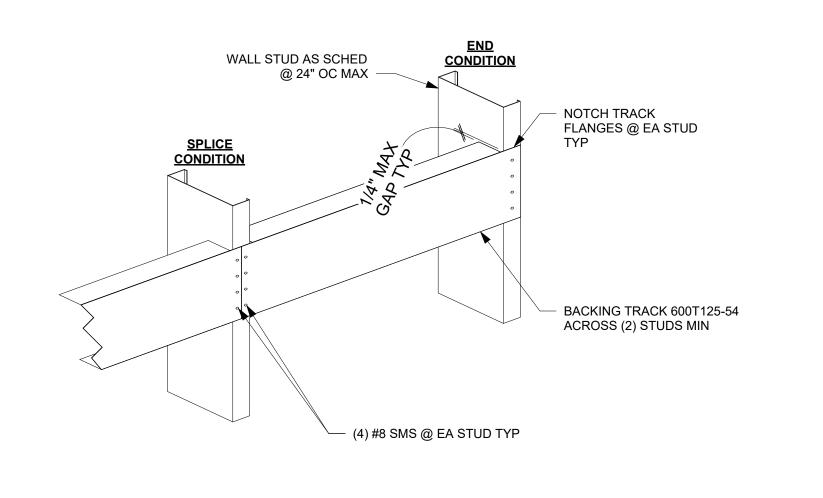
DO NOT SPLICE IN WALLS ADJACENT TO JAMBS. SEE WALL SCHEDULE NOTES FOR BOT TRACK ANCHORS.

6 TYPICAL TRACK SPLICE
NTS









9 TYP ROOF JOIST CONNECTION NTS

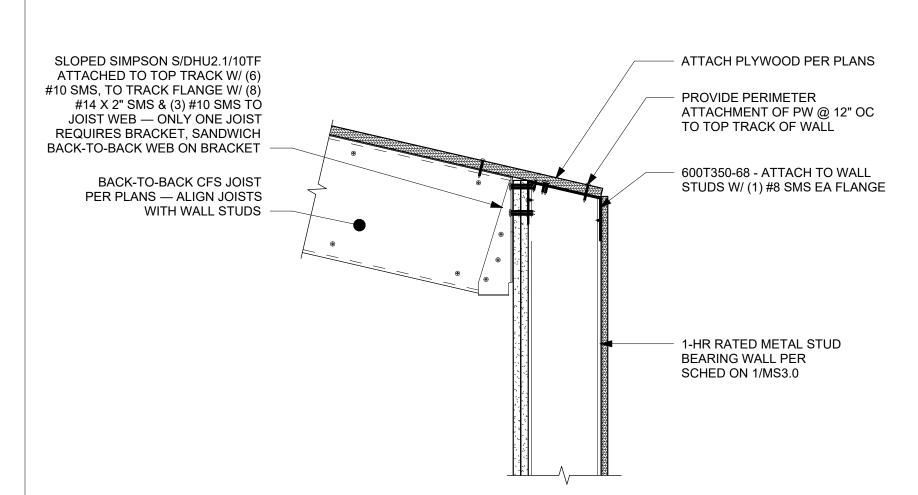
13 JOIST PERP TO PERIMETER BRG WALL

10" MIN *—*

(SIM @ BOT)

24" OC MIN

10 54MIL TRACK BACKING



City of Puyallup **Development & Permitting Services** ISSUED PERMIT Building Planning Public Works Engineering Traffic Fire





CENTERIS SOUTH UTILITY YARD SWITCHGEAR BUILDING OUTH 98374

Job# 24201.5 RRS Drawn BJB Checked FRAMING **DETAILS**

Permit Submittal