2015 IBC LATERAL ENGINEERING

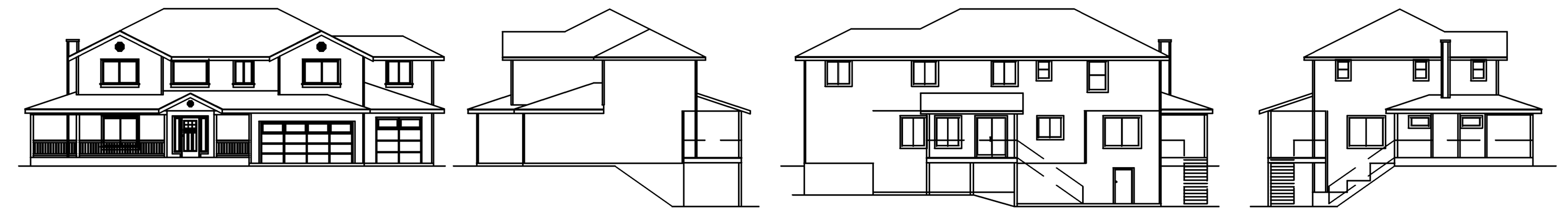
PROJECT NUMBER: 180558
FOR: FERGUSON & COLE, INC
PLAN: 2800

CHANGES
MUST BE APPROVED PRIOR
TO PERFORMING WORK
08/02/2018 11:56:17 AM
#[18-02763]

SITE CRITERIA

DESIGN ROOF SNOW LOAD	WIND SPEED (V-ULT)	WIND EXPOSURE	(IBC) SEISMIC DESIGN CATEGORY	SITE SOIL CLASS.	RISK CATEGORY	SLOPE PER OWNER	SPECIAL SITE CONDITIONS PER OWNER	GEOTECH REPORT PER OWNER	FROST DEPTH	SEISMIC SPECTRAL RESPONSE S1	SEISMIC SPECTRAL RESPONSE Ss	APPROX. ELEVATION
25 PSF	110 MPH	B	D	D	II	<15%	NONE	NONE	12"	0.60g	1.40g	280 FT

VALUES OBTAINED FROM JURISDICTION, STATE, AND NATIONAL AGENCIES



BASIC PERMIT PACKAGE
REVIEWED FOR CODE COMPLIANCE
WITH IRC 2015
KITSAP COUNTY BUILDING DEPARTMENT
08/02/2018 11:56:07 AM
#[18-02763]

ROOF SHEATHING SCHEDULE

SNOW LOAD (UP TO)	NOMINAL THICKNESS	SPAN RATING
40LBS	7/16"	24/16
70LBS	15/32",1/2"	32/16
130LBS	19/32",5/8"	40/20
175LBS	23/32",3/4"	48/24

LONG DIMENSIONS PERPENDICULAR TO ROOF JOIST WITH EDGE SUPPORT.
R503.2.1.1(1)

SHEARWALL / ANCHOR SCHEDULE

LABEL	APA RATED SHEATHING (1) (2) (4) (14) (21)	NAIL SIZE & SPACE @ EDGES (4) (5)	STUD AND BLOCKING SIZE@ ADJOINING EDGES (3)(6) (15)(16)	TO TOP PLATE TO RIM JOIST/ BIRD BLOCK/ BOTTOM CHORD (7) (8)	2X BOTTOM PLATE ATTACHMENT: NAILING TO WOOD BELOW (9)	SILL PLATE ATTACHMENT (NO 3x SILLS REQUIRED): ANCHOR BOLT TO CONCRETE BELOW (10) (20)(22)	SILL PLATE ATTACHMENT (NO 3x SILLS REQUIRED): PLACEMENT OF EDGE OF PLATE WASHER (19)	CAPACITY (PLF) SEISMIC/WIND (DF VALUES) (HF X .93)
SW1	7/16" OSB ONE SIDE	8d @ 6" O.C.	2x	16d @ 8" O.C.	16d @ 6" O.C.	5/8" @ 48" O.C. 1/2" @ 36" O.C.	CENTER	260/365
SW2	7/16" OSB ONE SIDE	8d @ 4" O.C.	3x	LTP4 @ 32" O.C.	16d @ 4" O.C.	5/8" @ 40" O.C. 1/2" @ 28" O.C.	1/2" FROM SHEATHING	380/532
SW3	7/16" OSB ONE SIDE	8d @ 3" O.C.	3x	LTP4 @ 12" O.C.	(2) ROWS 16d @ 6" O.C.	5/8" @ 24" O.C. 1/2" @ 17" O.C.	1/2" FROM SHEATHING	490/685
SW4	7/16" OSB ONE SIDE	8d @ 2" O.C.	3x	LTP4 @ 8" O.C.	(2) ROWS 16d @ 4" O.C.	5/8" @ 21" O.C. 1/2" @ 15" O.C.	1/2" FROM SHEATHING	640/895
SW5	7/16" OR 5/8"GWB	8d @ 7" O.C.	2x	6d COOLER @ 4" O.C.	16d @ 8"O.C.	5/8" @ 60" O.C. 5/8" @ 60" O.C.	CENTER	145/145
SW6	7/16" OSB BOTH SIDES	8d @ 3" O.C.	3x	LTP4 @ 6" O.C.	16d @ 4" O.C. & LTP5 @ 12" O.C.	5/8" @ 12" O.C. 1/2" @ 8" O.C.	4-1/2" WASHER REQUIRED	980/1370

SHEARWALL NOTES:

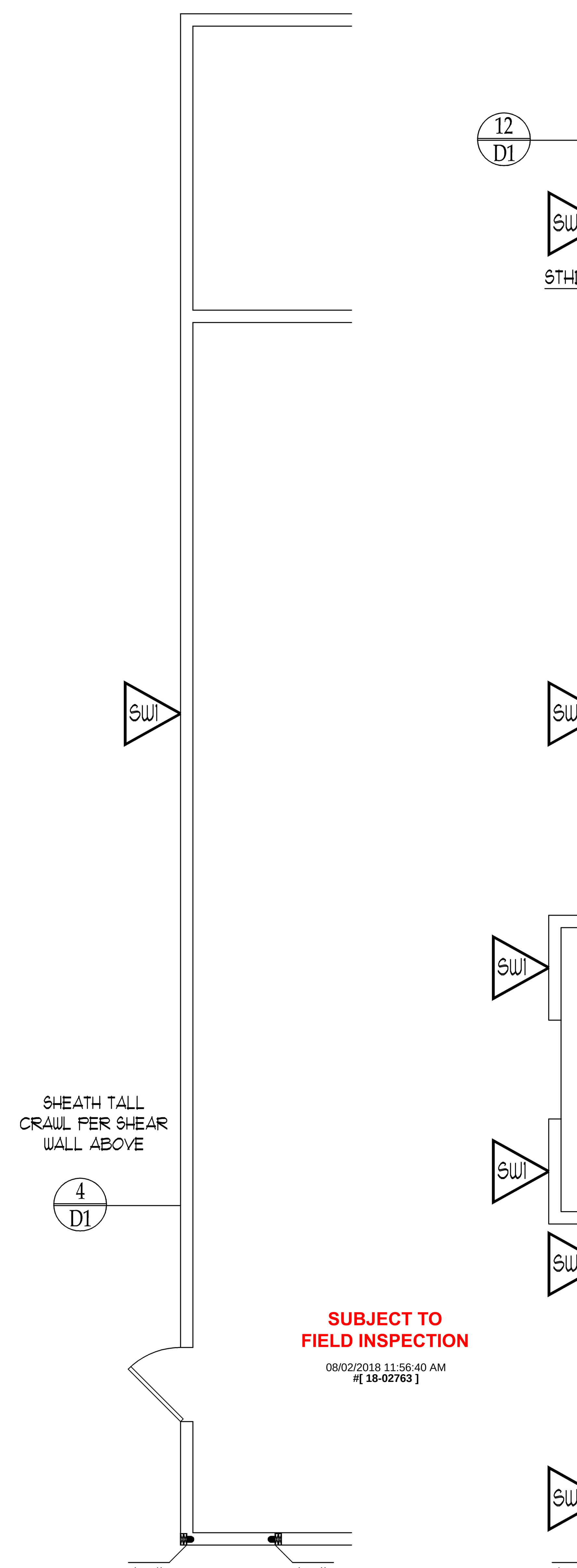
(1) INSTALL PANELS VERTICALLY - DO NOT BREAK AT RIM UNLESS STRUCTURAL RIM JOIST.
(2) WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2X FRAMING SHALL BE STAGGERED SO JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
(3) BLOCKING IS REQUIRED AT ALL PANEL EDGES.
(4) PROVIDE SHEARWALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY EXTERIOR OF THE BUILDING, CORRIDORS, WINDOWS, OR DOORWAYS OR AS DESIGNATED ON THE PLANS. SEE PLANS FOR HOLDOWN REQUIREMENTS.
(5) SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS.
(6) INTERMEDIATE FRAMING TO BE WITH 2X MINIMUM MEMBERS. FIELD NAILING IS 12" O.C. UNLESS NOTED OTHERWISE.
(7) BASED ON 0.131" x 1-1/2" LONG NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131" x 2-1/2" LONG NAILS WHEN NAILING THROUGH SHEATHING. USE A35 OR RBC CLIPS IN LIEU OF LTP'S FOR ROOF BLOCKING TO TOP PLATE (SPACE AT 48" O.C. FOR SW1 SHEARWALLS).
(8) 16d @ 4" O.C. TYP. UNLESS NOTED OTHERWISE
(9) WHERE PLATE ATTACHMENTS SPECIFY (2) ROWS OF NAILS, PROVIDE DOUBLE JOIST, RIM OR EQUAL. ATTACH PER DETAILS.
(10) ANCHOR BOLTS SHALL BE PROVIDED WITH STEEL PLATE WASHERS ¼" x3" x 3", EMBED ANCHORS A MINIMUM OF 7" INTO THE CONCRETE. MAX 1/2" FROM SHEATHING SIDE.
(11) PRESSURE TREATED MATERIALS CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO PLATING NOT PERMITTED) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS.
(12) NOT USED.
(13) 15/32" PLYWOOD SHEATHING MAY BE USED IN PLACE OF THE 7/16" OSB SHEATHING PROVIDED THAT ALL STUD SPACING IS 16" O.C. MAX.
(14) WHERE WOOD SHEATHING (W) IS APPLIED OVER GYPSUM SHEATHING (G) CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
(15) AT ADJOINING PANEL EDGES, (2) 2X STUDS NAILED TOGETHER MAY BE USED TOGETHER IN PLACE OF A SINGLE 3X STUD. DOUBLE 2X STUDS MAY BE CONNECTED TOGETHER BY NAILING WITH 3" LONG NAILS SPACED CONSISTENTLY WITH PLATE NAILING.
(16) CONTACT THE ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST IN PLACE ANCHOR BOLTS. (INSPECTION MAY BE REQUIRED)
(17) NOT USED
(18) NOT USED
(19) EDGE OF PLATE WASHER A MAXIMUM OF 1/2" FROM THE SHEATHED SIDE OF THE SHEAR WALL
(20) USE 5/8" GWB FOR SW5 WHERE SPECIFIED BY DESIGNER.
(21)SHEARWALL DESIGNATED WITH AN ASTERISK (*) MAY BE SHEATHED WITH 7/16 SMART PANEL OR 5/16 HARDIE PANEL
(22) SIMPSON MASAP (STANDARD INSTALLATION) MAY BE SUBSTITUTED FOR ANCHOR BOLT. USE 1/2" AB SPACING

HOLDOWN SCHEDULE

SIMPSON PRODUCT MODEL NUMBER (1,2,3) CAPACITY#	FASTENERS: NAILS	FASTENERS: SCREWS	ANCHOR BOLTS
HDU5 - HF MEMBER 4065# HDU5 - DF MEMBER 5645#	N/A	(14)-SDS ¼"x 2½" TO (2) STUDS MIN.	SB 5/8x24 U.N.O.
HDU8 - HF MEMBER 5655# HDU8 - DF MEMBER 7870#	N/A	(20)-SDS ¼"x 2½" TO (2) STUDS MIN.	SSTB28 OR SB 7/8"x24 U.N.O.
HDU11 - HF MEMBER 6865# HDU11 - DF MEMBER 9535#	N/A	(30)-SDS ¼"x2½" TO 6X6 MIN.	SB1x30" U.N.O.
HDU14 - HF MEMBER 10350# HDU14 - DF MEMBER 14445#	N/A	(36)-SDS ¼"x 2½" TO 6X6 MIN.	SB1x30" U.N.O.
STHD14/STHD14RJ - 3500#	(2) STUDS W/ (30) 16d	N/A	N/A
MSTC48B3 - 3420#	(2) STUDS W/ (20) 10d	N/A	N/A
MSTC66B3 - 3875#	(2) STUDS W/ (20) 10d	N/A	N/A
CS14 - 2490#	(18) 8d EACH SIDE	N/A	N/A

HOLDOWN NOTES:

(1) INSTALL ALL SHEAR ANCHORS PER MANUFACTURER INSTRUCTIONS
(2) ALL METAL CONNECTORS COMING IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE SIMPSON "Z-MAX", TRIPLE ZINC COATED, OR HOT DIPPED GALVANIZED FOR CORROSION PROTECTION.
(3) SUBSTITUTION WITH NON-SIMPSON ANCHORS WITH ENGINEER'S APPROVAL.
(4) STHD14RJ INSTALLATION AT RIM JOIST LOCATIONS ONLY (RJ=RIM JOIST)



TALL CRAWL SPACE LATERAL ENGINEERING
DO NOT SCALE(1/4"=1')

SHEATH ALL EXTERIOR WALLS AS SW1 UNLESS NOTED OTHERWISE.
ADJUST CRAWL SPACE VENTS TO BE 12" MINIMUM AWAY FROM HOLDOWNS

SUBJECT TO
FIELD INSPECTION
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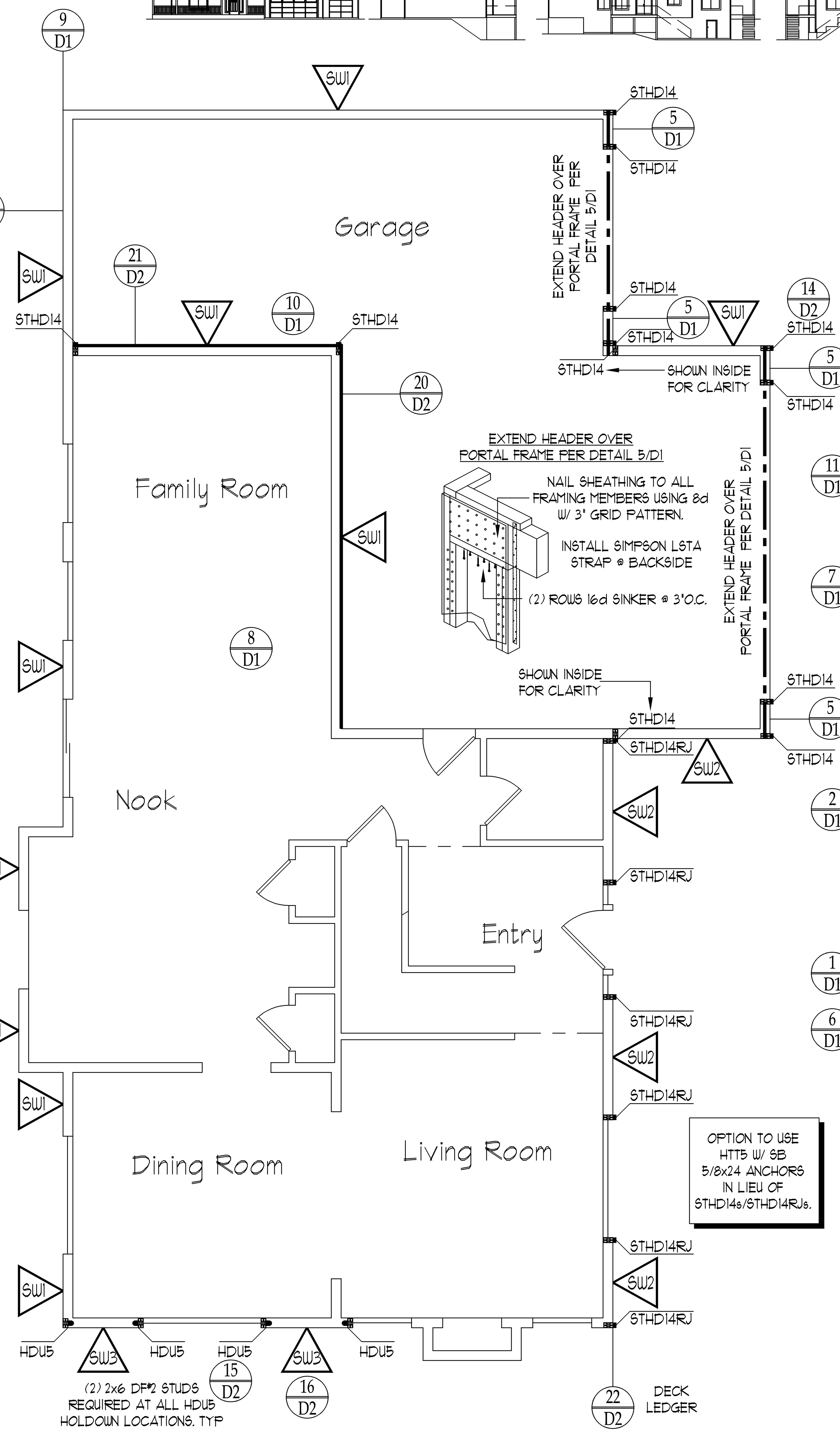
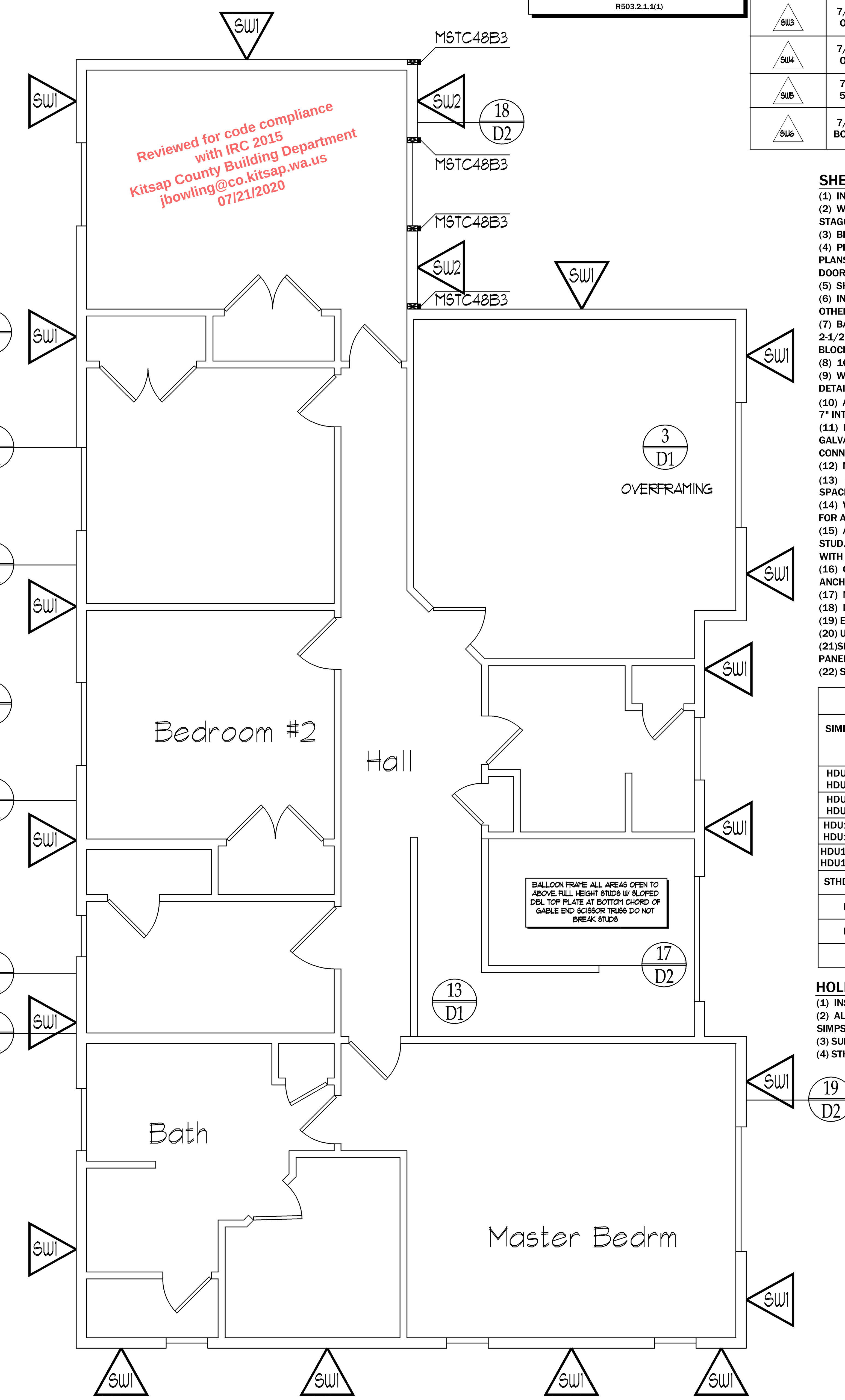


MAIN FLOOR LATERAL ENGINEERING
DO NOT SCALE(1/4"=1')

SHEATH ALL EXTERIOR WALLS AS SW1 UNLESS NOTED OTHERWISE.
ADJUST CRAWL SPACE VENTS TO BE 12" MINIMUM AWAY FROM HOLDOWNS

3"o.c. NAILING - SHEATHING TO MUD SILL TYPICAL ALL EXTERIOR WALLS

PROVIDE ALL FINAL SHOP DRAWINGS TO HODGE ENGINEERING AS SOON AS COMPLETED. IF DESIGNER'S DRAWINGS DIFFER STRUCTURALLY FROM SHOPS ADDITIONAL ENGINEERING WILL BE REQUIRED. INSTALL AND BRACE JOISTS AND TRUSSES PER MANUFACTURER



UPPER FLOOR LATERAL ENGINEERING
DO NOT SCALE(1/4"=1')

SHEATH ALL EXTERIOR WALLS AS SW1 UNLESS NOTED OTHERWISE.

MUST COMPLY WITH ALL
WASHINGTON STATE CODES
08/02/2018 11:56:23 AM
#[18-02763]

Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of the International Codes or any other ordinance of Kitsap County. Permits presuming to give authority to violate or cancel the provisions of the International Codes and ordinances of Kitsap County shall not be valid.
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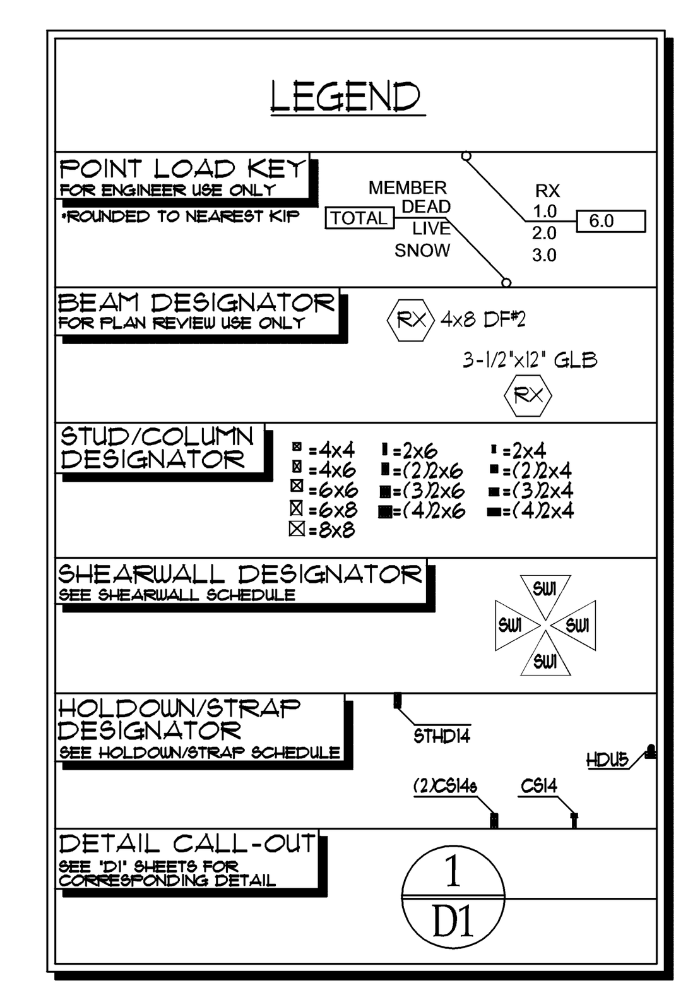

CONTRACTED FOR LATERAL ENGINEERING ONLY, ALL OTHER ENGINEERING INCLUDING GRAVITY LOAD ENGINEERING (BEAMS, FOUNDATION, ETC.) BY DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (IBC 107.3.4)

REVISIONS		
NO.	DATE	

Architectural plans carry all dimensions. This engineering is not to be scaled.
DO NOT SCALE
Any variations from conditions and dimensions shown on the engineering shall be reported to the designer and engineer for resolution prior to proceeding; otherwise the contractor shall be solely responsible for costs of any necessary remedial work.

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john@hodgeengineering.com

FERGUSON & COLE, INC
2800
SITE SPECIFIC LETTER REQUIRED FOR EACH USE

BUILDING CODE	2015 IBC
WIND EXP.	B 110 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

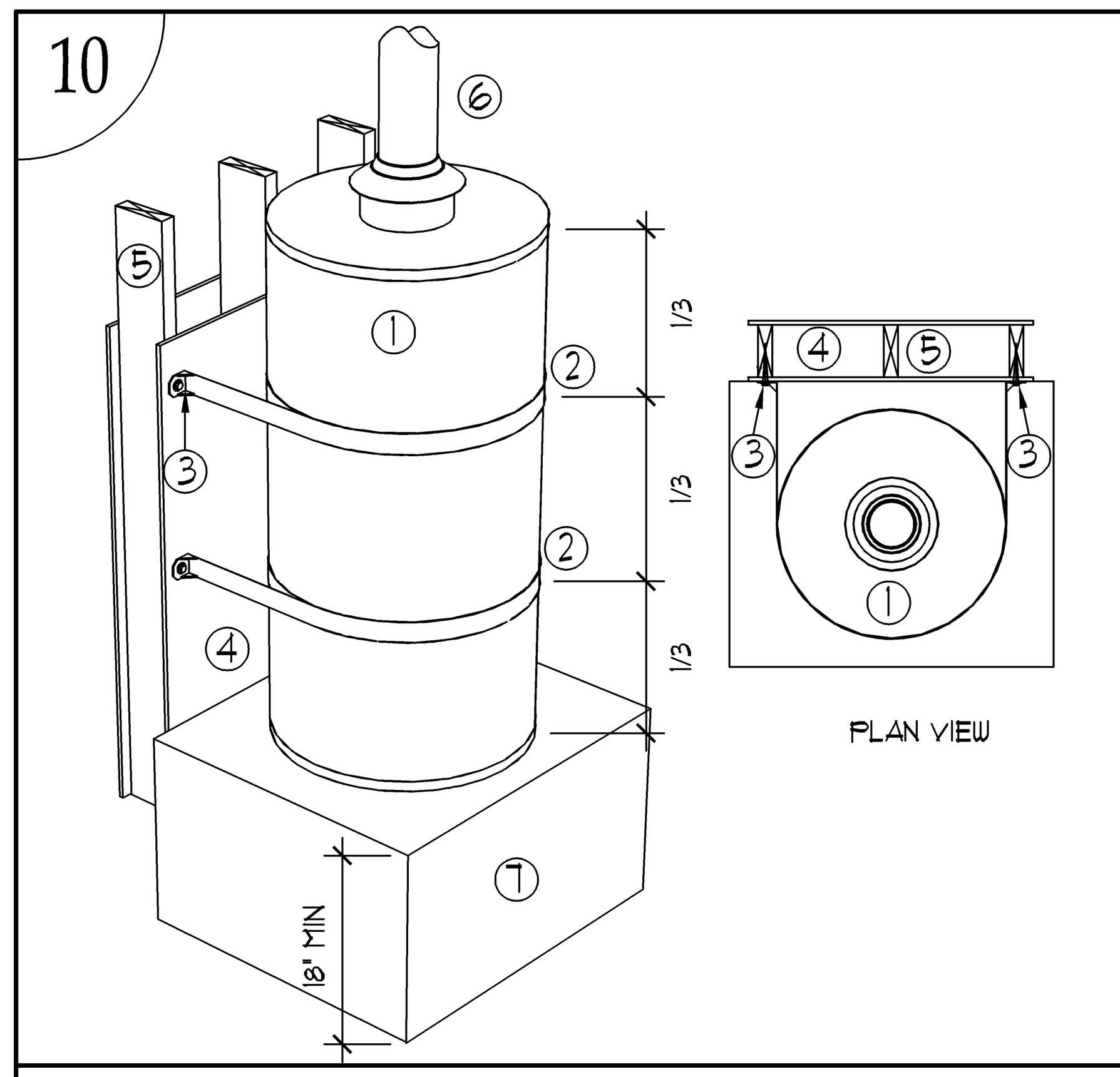
ENG. P.E.	JOHN H.
DATE	05.31.18
REVIEW	ZACK C.
ANALYST	ANNA N.
SHEET	L1

1 OF 4 SHEETS
PROJECT NUMBER
180558

JOHN E. HODGE, STATE OF WASHINGTON, 37886, REGISTERED PROFESSIONAL ENGINEER
06/04/2018
180558

Permit Number: 20-01956

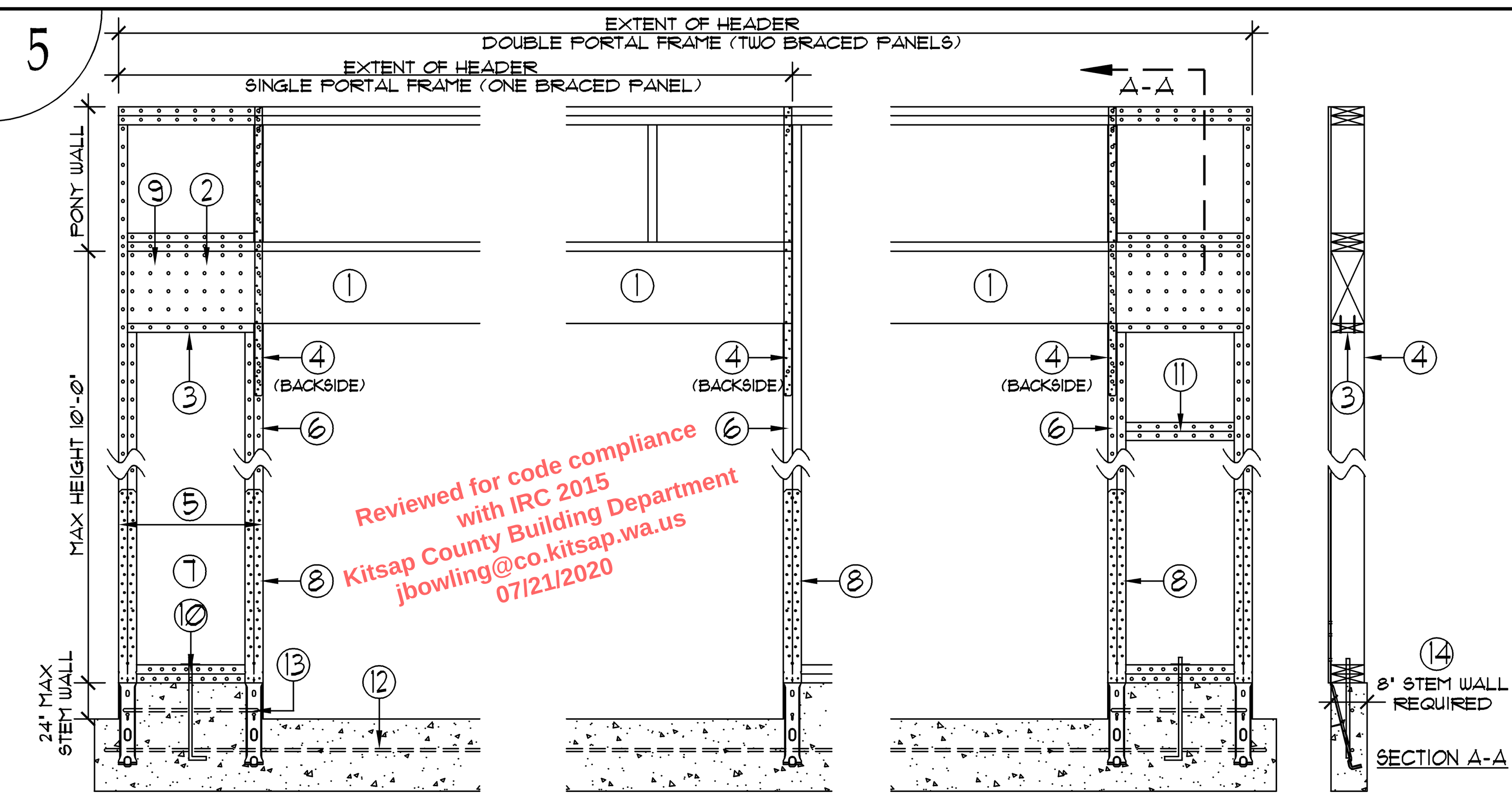
10 — WATER HEATER STRAPPING



1. WATER HEATER
2. WATER HEATER SEISMIC STRAPS LOCATED 1/3 AWAY FROM TANK CAP AND BASE.
3. LAG BOLT PER SEISMIC STRAP MFR ANCHOR INTO 2X STUD 4 PLACES
4. DRYWALL PER PLAN
5. 2X STUDWALL
6. VENT FLUTE
7. ANCHOR BASE TO WALL

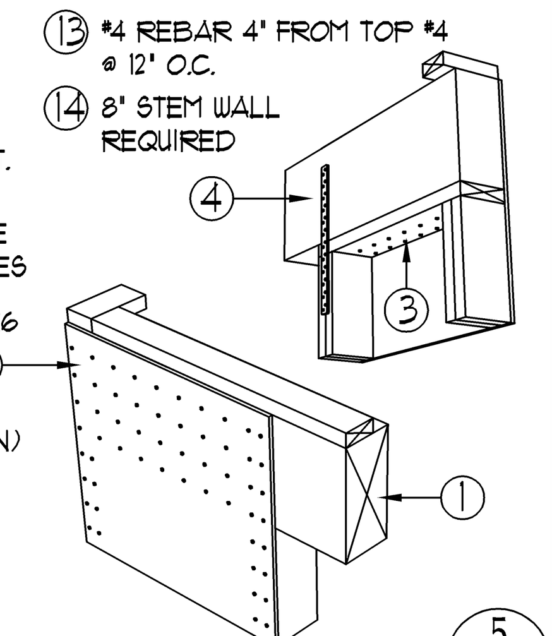
10 / D1

5 — PORTAL FRAME



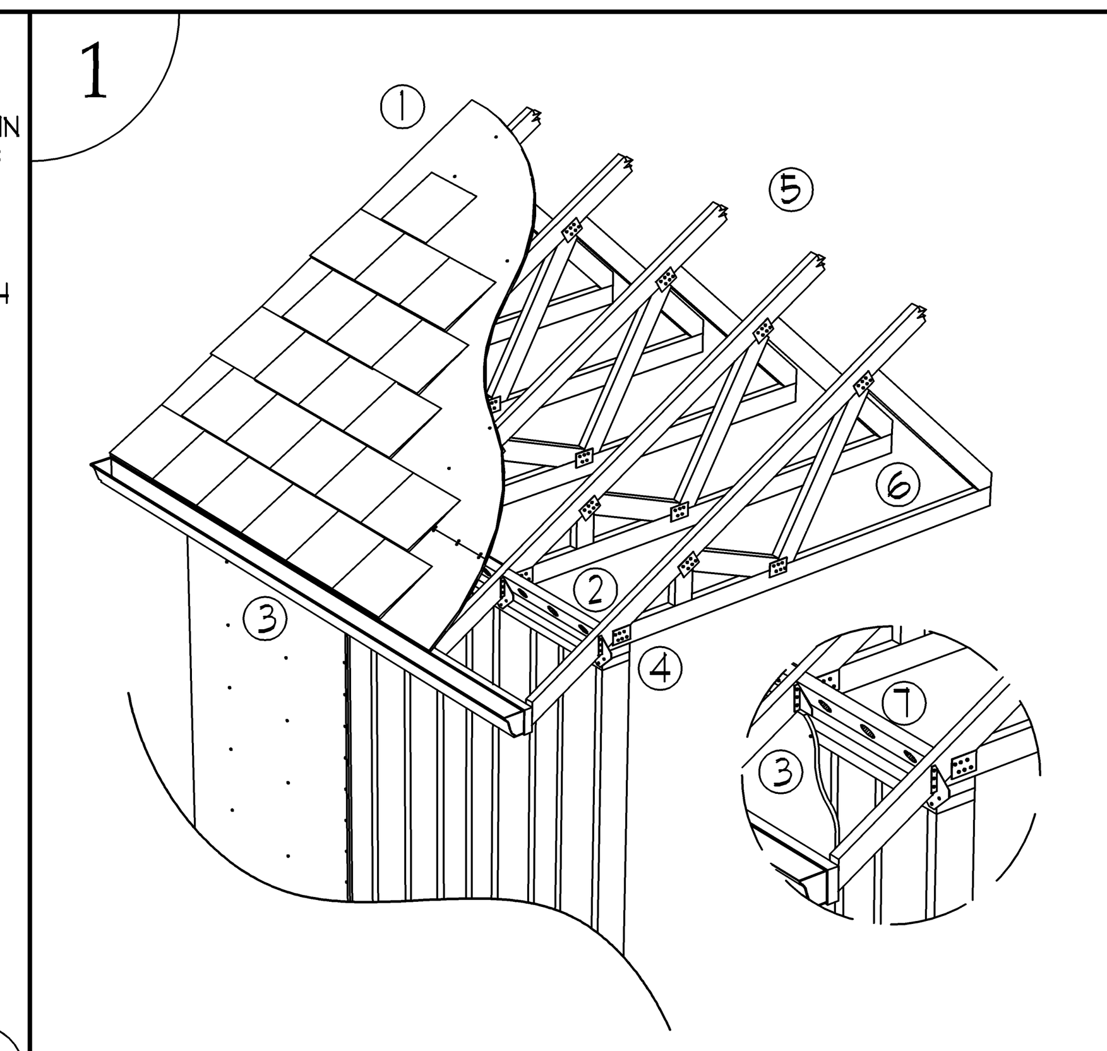
Reviewed for code compliance with IRC 2015 Kitsap County Building Department jbowling@co.kitsap.wa.us 07/21/2020

1. FOR SHEAR MIN. 3"X11¼" NET HEADER REQUIRED. (MAY BE LARGER)
2. FASTEN SHEATHING TO HEADER W/ 8d COMMON OR GALVANIZED BOX NAILS IN 3" GRID PATTERN AS SHOWN AND 3" O.C. IN ALL FRAMING (STUDS, BLOCKING, AND SILLS) TYP.
3. FASTEN TOP PLATE TO HEADER W/ TWO ROWS OF 16D SINKER NAILS AT 3" O.C. TYP.
4. LSTA18 STRAP (BACKSIDE). USE LONGER SERIES TO EXTEND TO TOP OF PONY WALL, IF PRESENT.
5. MIN. WIDTH=16" FOR ONE STORY STRUCTURES, 24" FOR USE IN THE FIRST OF TWO STORY STRUCTURES
6. MIN. (2) 2x4 (ALL DF#2) OR (2)2x6
7. 7/16" OSB SHEATHING MIN.
8. STHD14 OR HDU5 (U.N.O ON PLAN)
9. HEADER EXTENDED OVER SHEARWALL
10. 5/8" ANCHOR BOLT W/ MIN 3"x3"x.229" PLATE WASHER
11. FOR A PANEL SPLICE (IF NEEDED), PANEL EDGES SHALL BE BLOCKED, AND OCCUR WITHIN 24" OF MID-HEIGHT. ONE ROW OF TYP. SHEATHING TO FRAMING NAILING IS REQUIRED. IF 2x4 BLOCKING IS USED, THE 2x4'S MUST BE NAILED TOGETHER WITH (3) 16d SINKERS.
12. (2) CONTINUOUS #4 REBAR AT FOOTING.
13. #4 REBAR 4" FROM TOP #4 @ 12" O.C.
14. 8" STEM WALL REQUIRED



5 / D1

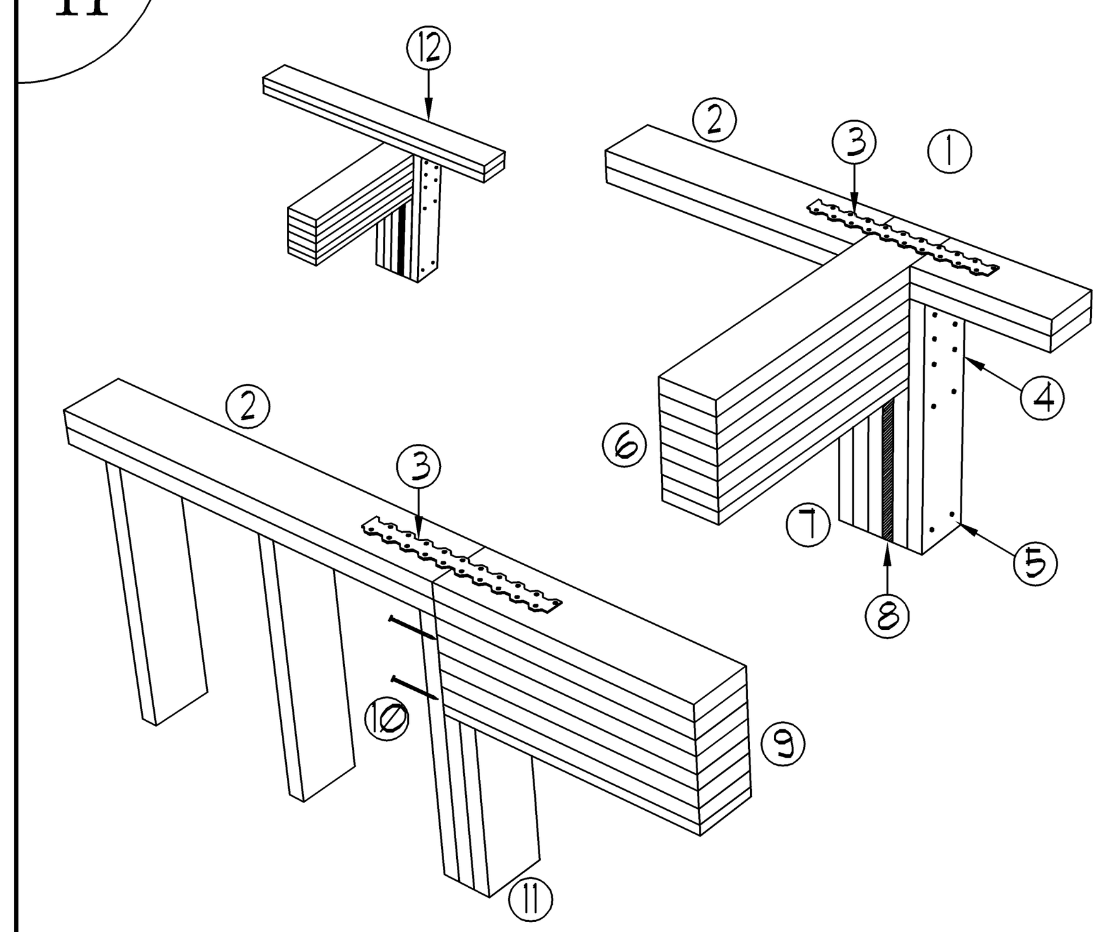
1 — ROOF SHEATHING



1. PER ENGINEERING STAGGER SHEATHING 1/8" GAP REQUIRED BETWEEN SHEETS
2. 8d NAILS @ 6" O.C. AT 'BIRD BLOCKING' SHEATHING BREAK
3. EXTEND WALL SHEATHING TO TOP OF DOUBLE TOP PLATE
4. SIMPSON H1, SDWC 6", OR TLOC06 @ EACH TRUSS TO RAFTER PERPENDICULAR TOP PLATE INTERSECTION U.N.O. (2) H2.5A FOR MULTI PLY OR MULTI SDWC OR TLOC06 U.N.O.
5. MFR TRUSSES @ 24" O.C. W/ PLAN ROOF SHEATHING NAIL W/ 8d @ 6" O.C. FOR PANEL EDGES AND 12 O.C. IN FIELD
6. SHEATH ALL GABLE ENDS
7. TOE NAIL BIRD BLOCKING W (2) 8d NAILS

1 / D1

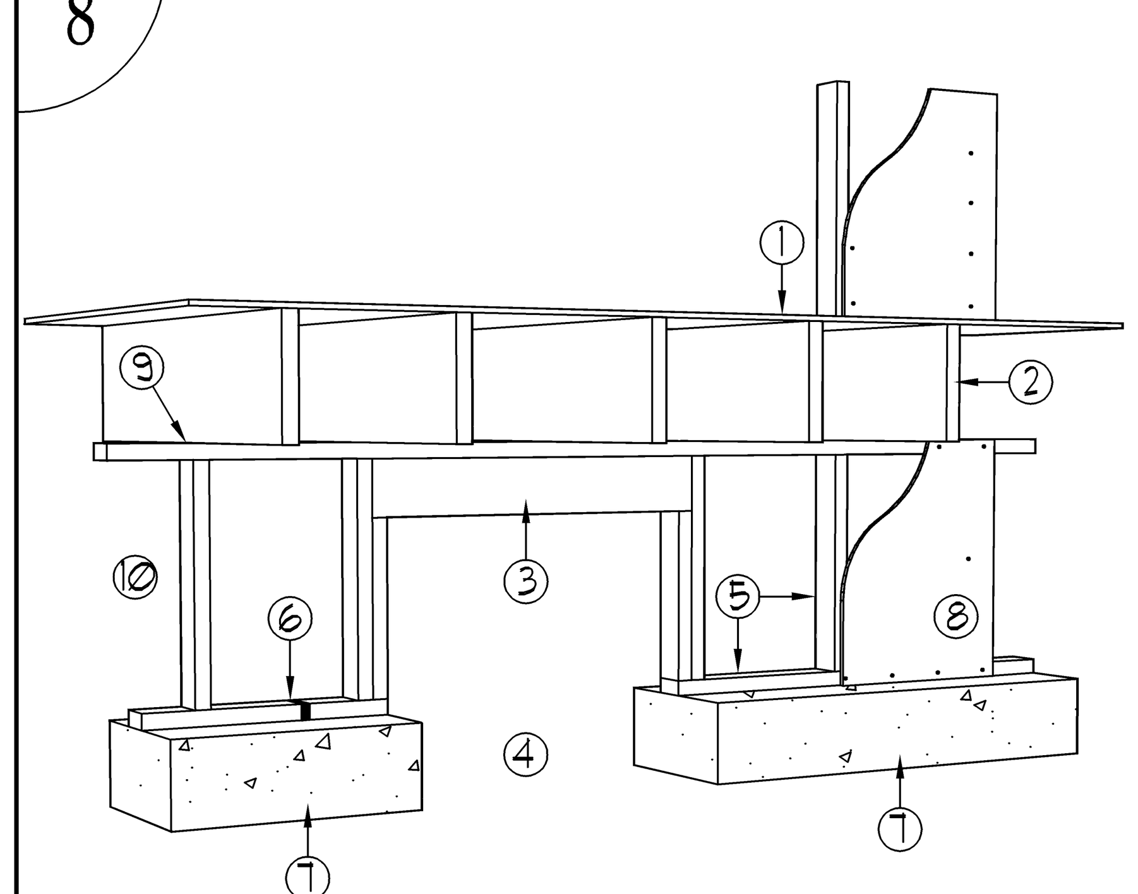
11 — BEAM AND HEADER END SUPPORT



1. CUT TOP PLATE OR DROP BEAM DO NOT CUT BEAM
2. DOUBLE TOP PLATE
3. SIMPSON 36" CS14 STRAP W/(36) 8d OR DROP BEAM W/ CONTINUOUS TOP PLATE. STRAP MAY BE PLACED ON SIDE OF TOP PLATE
4. (6) 16d NAILS
5. (2) 16d NAILS @ 16" O.C.
6. BEAM PER PLAN
7. 2X CRIPPLES
8. PLYWOOD FILLER (AS REQUIRED)
9. HEADER PER PLAN
10. (2) 16d NAILS
11. DOUBLE 2X TRIMMER STUDS MIN. FOR >6' OPENING U.N.O.
12. NO STRAP REQUIRED IF CONTINUOUS TOP PLATE

11 / D1

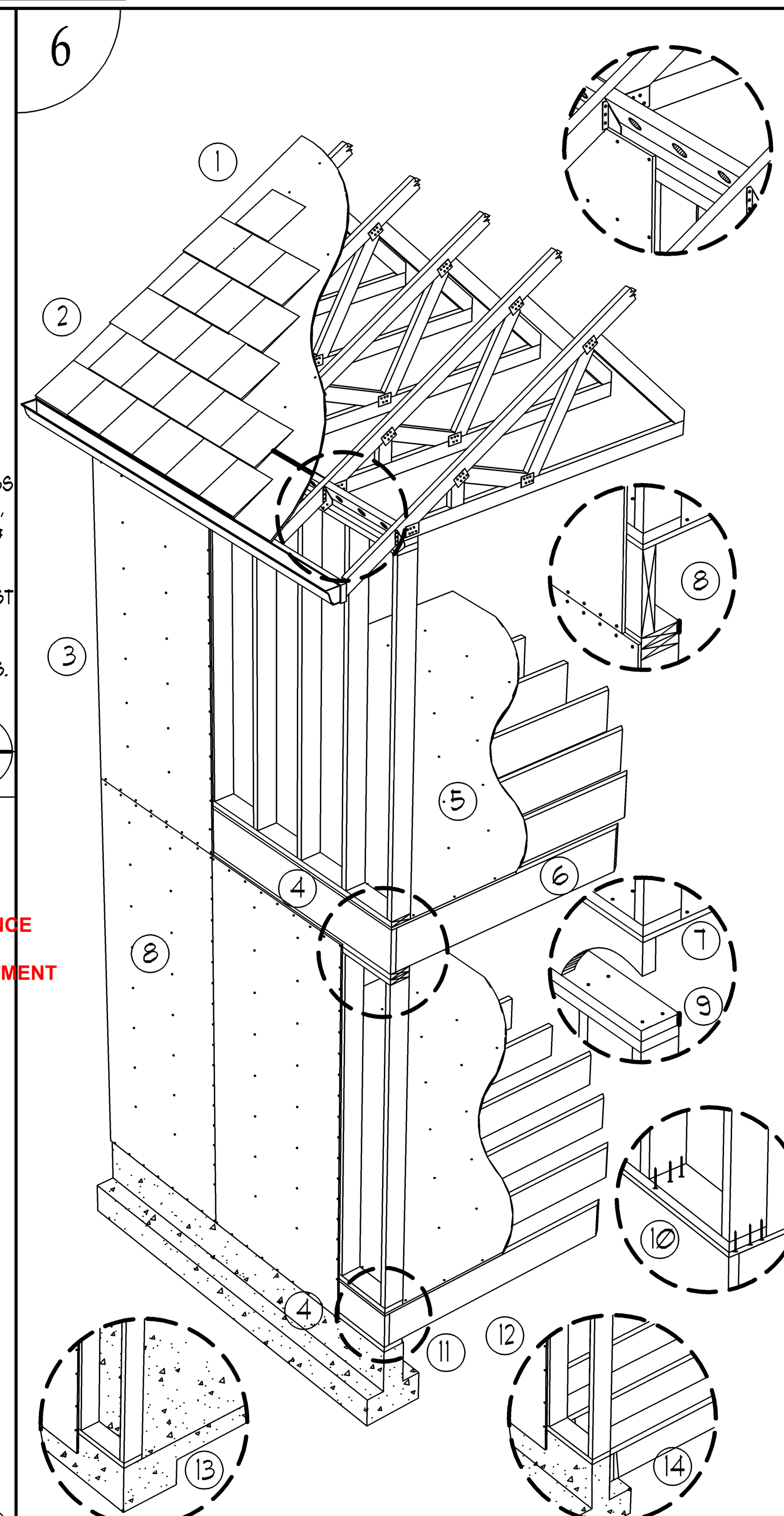
8 — STRIP FOOTING / PONY WALL



1. T&G FLOORING PER PLAN
2. FLOOR JOIST PER PLAN
3. 4x6 HEADER U.N.O
4. ACCESS PER PLAN U.N.O
5. 2x4 PONY WALL & P.T. SILL
6. SIMPSON MASA STRAPS @ 4'oc OR 1/2" OR 5/8" ANCHOR BOLTS AT 4'oc
7. 1 FLOOR: 12"x6" CONCRETE FOOTING W/ (2) #4 REBAR 2 FLOOR: 16"x8" CONCRETE FOOTING W/ (2) #4 REBAR
8. INTERIOR PONY WALLS LESS THAN 14" OR OVER 6' TALL, SHEATH W/ 7/16" SHEATHING & 8d NAILS @ 6:12
9. (3) 8d TOE NAIL EACH JOIST
10. ALIGN STUDS WITH JOISTS BLOCK AT BEARING WALLS.

8 / D1

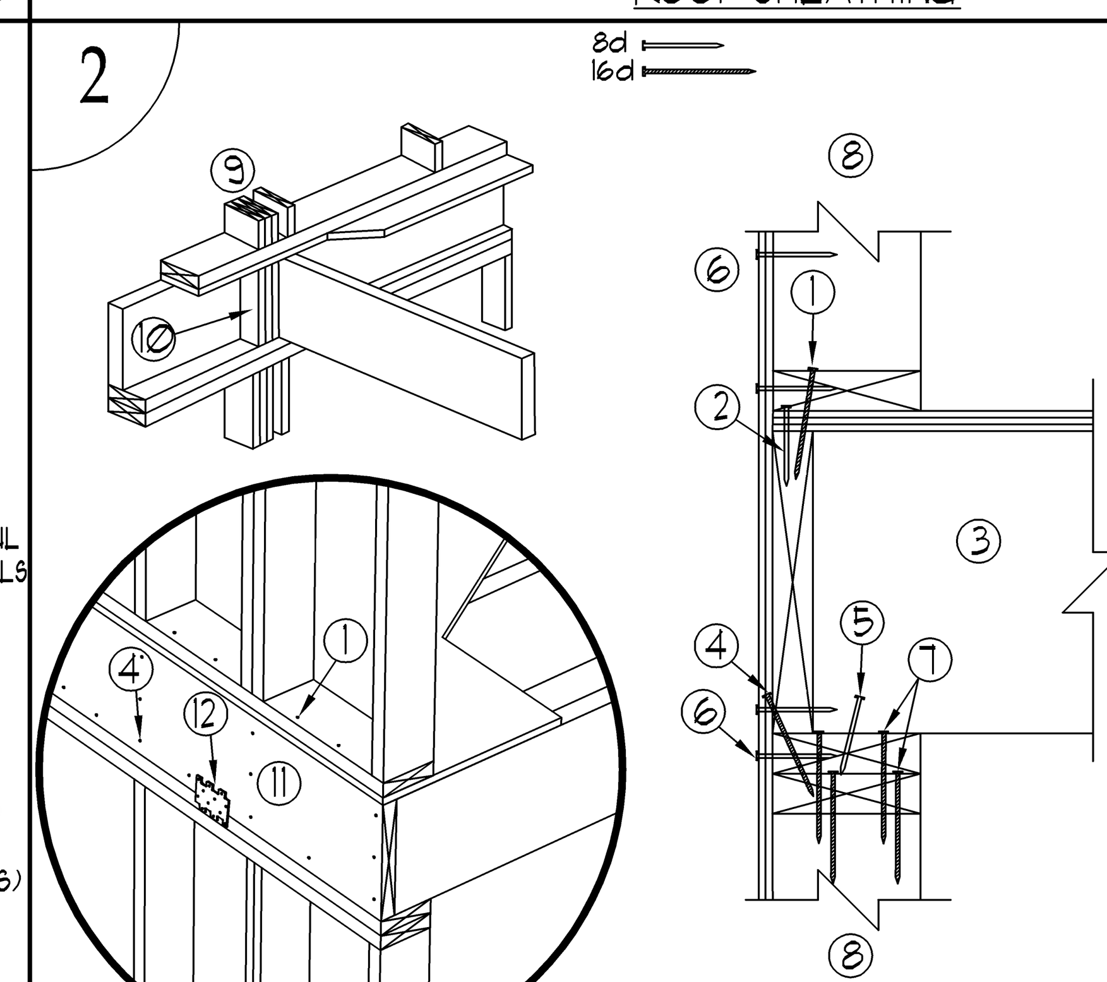
6 — SHEAR WALL NAILING & BUILDING SECTION



1. 30# FELT EA. COURSE OSB SHEATHING U.N.O. MANUFACTURED TRUSSES (OR 2X RAFTERS & CLG. JSTS.) BLOWN-IN INSUL (PER ARCH) 1/2" GWB CEILING
2. G.I. GUTTER ON FASCIA (PER PLAN)
3. SIDING (PER ARCH) 15# BLDG PAPER (OR TYVEK) 7/16" SHEATHING (PER PLAN) 2x6 HF #2 STUDS @ 16"O.C. BATT INSUL (PER ARCH) 1/2" GWB WALLS
4. STRUCTURAL 2X RIM OR 1-1/4" LVL (U.N.O. BY MFR)
5. FLOOR FINISH 3/4" T&G SUB FLOOR W/10d NAILS
6. FLOOR JOIST (PER PLAN) BATT INSUL. (PER ARCH) (OVER UNHEATED SPACES) 1/2" GWB CEILING
7. 2x BOTTOM PLATE ATTACHMENT TO STRUCTURAL RIM PER SHEAR WALL SCHEDULE
8. FULL HEIGHT OSB SHEATHING W/ LONG DIMENSION PARALLEL TO STUDS. ALL WALLS SW U.N.O. SHEATHING BREAK AT DBL TOP PLATES.
9. STRUCTURAL RIM ATTACHMENT TO TOP PLATE PER SHEAR WALL SCHEDULE
10. MUD SILL TO STUD WALL (2) 16d THRU NAIL TYP (3) 16d THRU NAIL FOR SW3 & SW4 SHEAR WALLS
11. 2X6 PT MUD SILL WITH ANCHOR BOLTS PER SHEAR WALL TABLE (MIN OF 2 PER PLATE& W/N 12" OF ANY CORNER) MIN 5" FROM EDGE
12. CRAWL SPACE
13. SLAB ON GRADE OPTION
14. DROPPED FLOOR JOISTS P.T. 2x12 HF LEDGER W/ 5/8"x6" AB @24 oc EPOXY W/ SIMPSON SET. LUS210 JOIST HANGER (U.N.O.)

6 / D1

2 — FLOOR TO FLOOR CONNECTION

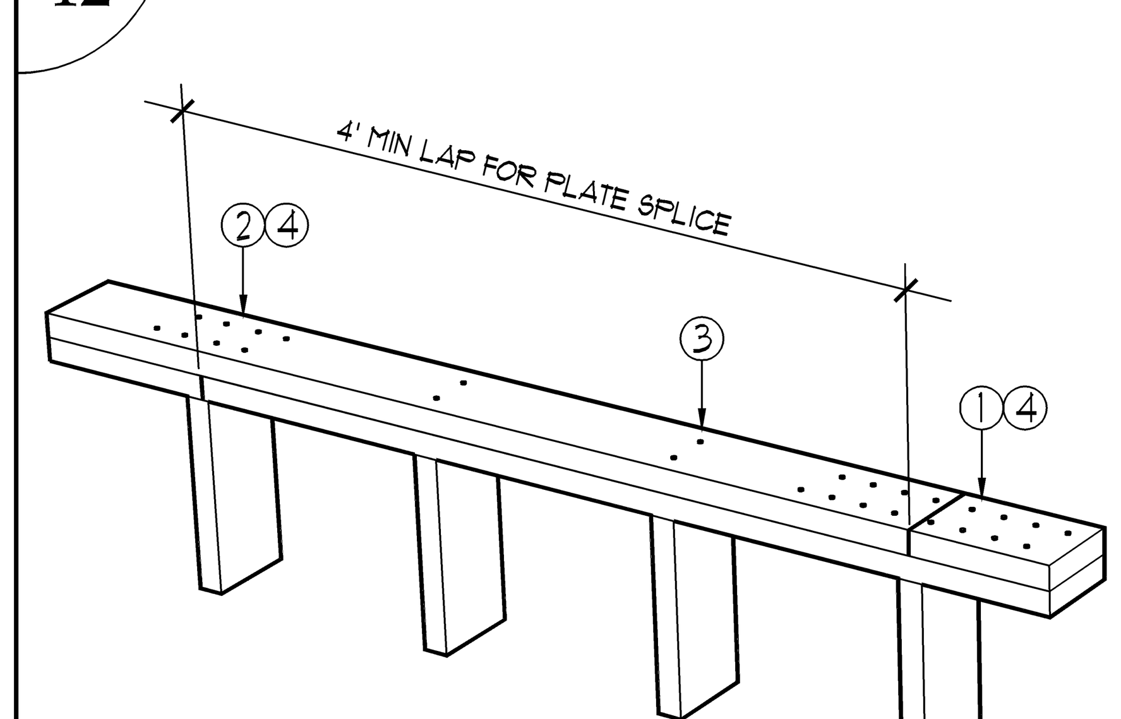


1. 2X SOLE PLATE TO RIM W/16d @ 6" O.C. U.N.O. *
2. 3/4 T&G TO RIM: 8d @ 6" O.C.
3. 2X OR MFR FLOOR JOIST
4. RIM TO TOP PLATE W/16d @ 4" O.C. U.N.O. *
5. JOIST TO TOP PLATE (3) 8d TOENAILED
6. SHEATHING TO STUD SEE SHEAR WALL SCHEDULE
7. DBL 2X TOP PLATE & TOP PLATE TO STUD W/(2) 16d @ 16" O.C.
8. 2X ALIGN STUD W/ FLOOR JOIST
9. MULTIPLE STUDS FOR POINT LOAD FROM ABOVE
10. SQUASH BLOCKS REQUIRED UNDER ALL POINT LOADS
11. RIM BOARD TO FLOOR JOIST W/(3) 16d
12. LTP4 PER SHEARWALL TABLE

* SEE SHEARWALL TABLE FOR ADDITIONAL NAILING

2 / D1

12 — PLATE SPLICE



1. (8) 16d NAILS STAGGERED AT EACH SIDE OF TOP PLATE SPLICE.
2. (3) 16d NAILS STAGGERED AT EACH SIDE OF BOTTOM PLATE SPLICE.
3. (2) 16d NAILS @ 16" oc INTO STUDS
4. SIMPSON 36" CS14 MAY BE USED IN LIEU OF NAILING AS INDICATED.(NOT SHOWN FOR CLARITY)

NOTE: PLATE SPLICE APPLIES WHEN NO OTHER SPLICE IS INDICATED.

12 / D1

Subject To Field Inspection

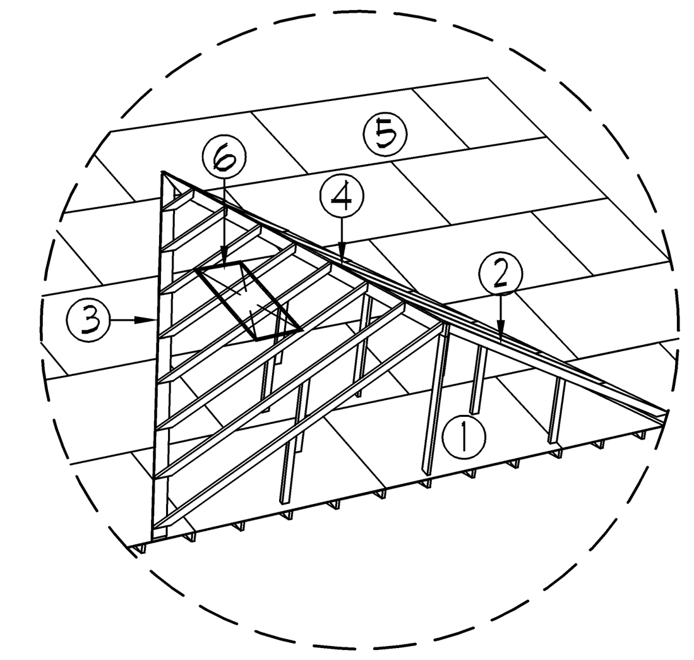
BASIC PERMIT PACKAGE
REVIEWED FOR CODE COMPLIANCE
WITH IRC 2015
KITSAP COUNTY BUILDING DEPARTMENT

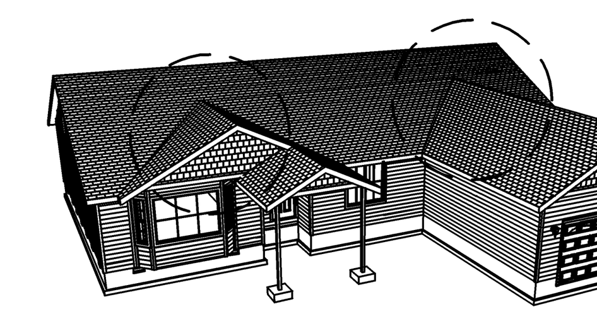
08/02/2018 11:56:07 AM
#[18-02763]

NOT USED

CHANGES
MUST Be Approved Prior
To Performing Work

3 — OVERFRAMING



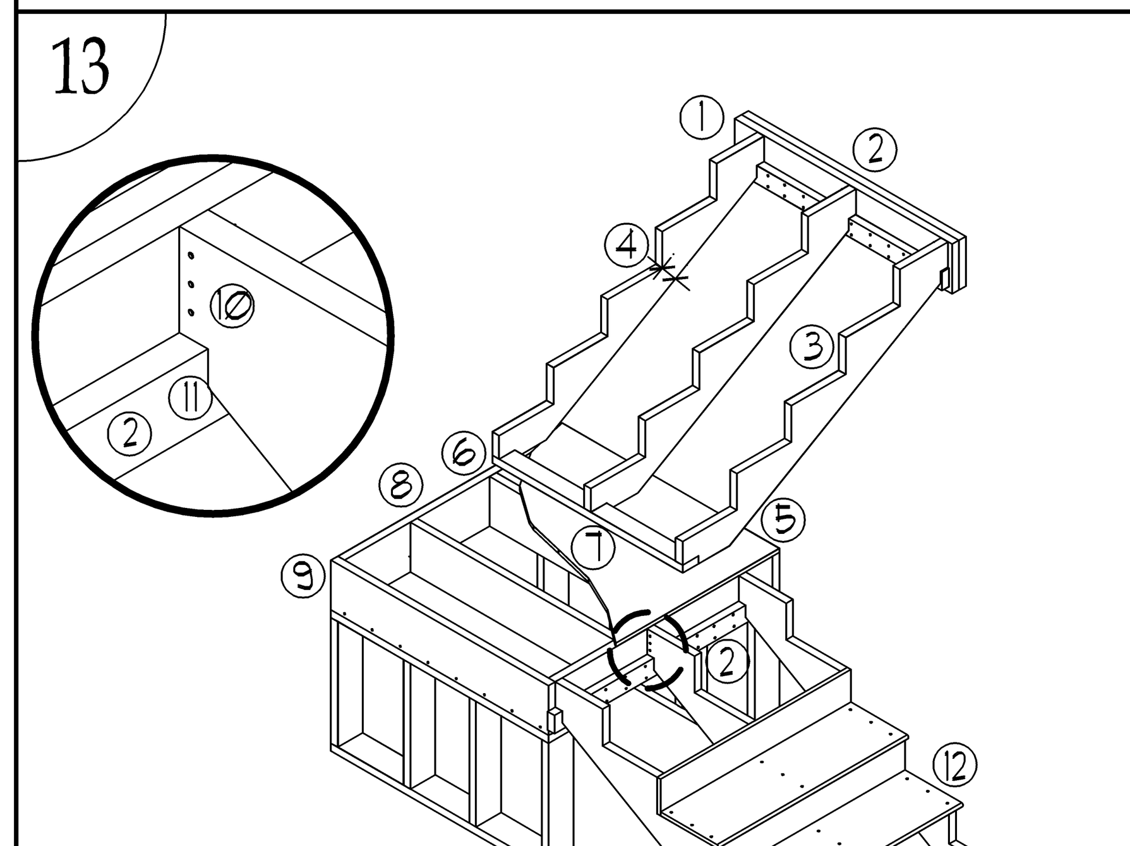


EXAMPLE RESIDENCE

1. SHEATH UNDER OVERFRAMING
2. 2x4 RAFTERS @ 24" oc SUPPORTED AT 6' oc MAX W/ 2x4s ON TRUSS CHORD. 2x6 RAFTERS @ 24" oc SUPPORTED AT 8' oc MAX W/ 2x6's ON TRUSS CHORD.
3. (2) 2x6 VALLEY BOARDS U.N.O. NAILED TO EACH TRUSS W/ (3) 16d NAILS.
4. 2x6 RIDGE BOARD U.N.O.
5. ROOF SHEATHING PER PLAN
6. VENTILATION ACCESS PER BUILDER. 22-1/2"x48" MAX DIMENSION.

3 / D1

13 — STAIR LANDING CONNECTION

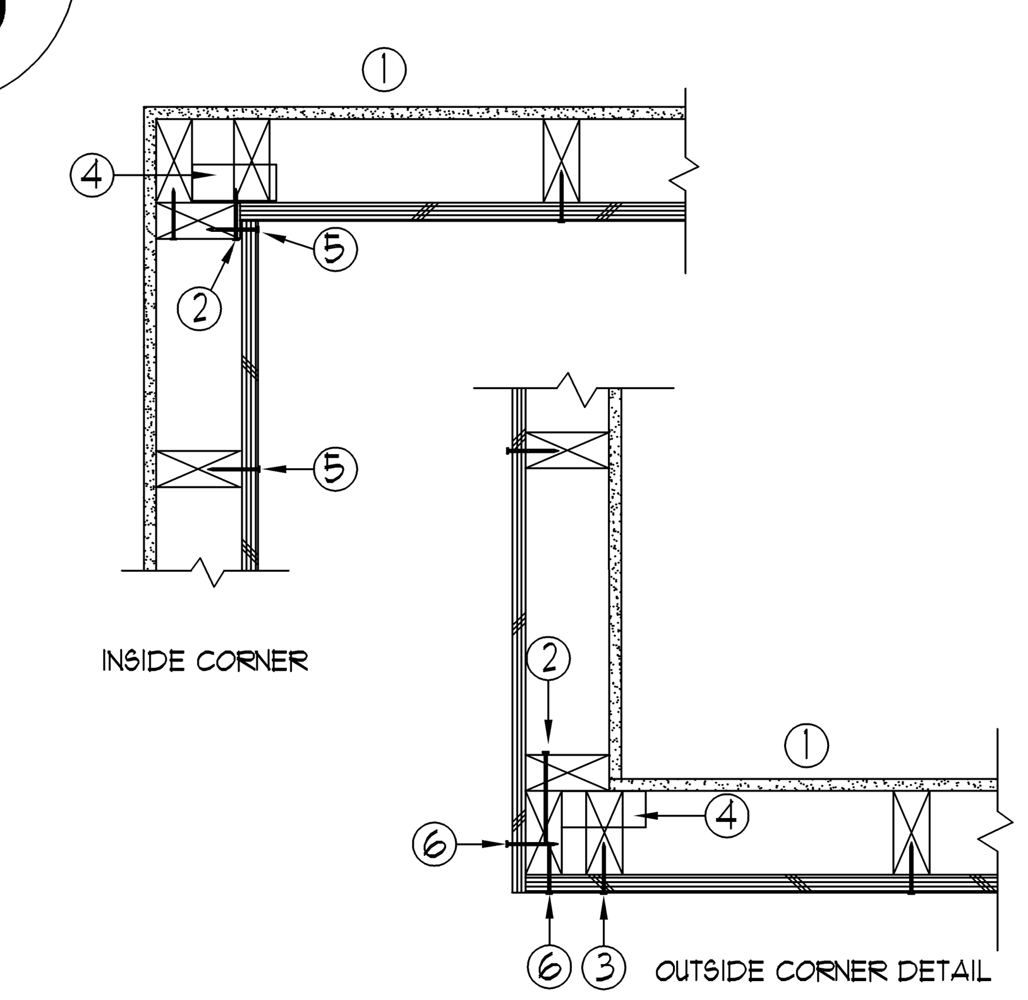


STRINGERS SPANNING OVER 6 STEPS MUST BE SUPPORTED W/4X6 BEAM ON 4X4 POSTS. POST TO 18" CONCRETE FOOTING OR STUDWALL

1. FLOOR JOIST OR LANDING
2. 2X4 LEDGER W/2) 10d @ 6" O.C.
3. (3) 2X12 STRINGERS
4. 5-1/2" MINIMUM MATERIAL @ DIAGONAL BETWEEN RISE AND RUN
5. UPPER FLIGHT OF STAIRS SUPPORTED ON 3/4 T&G 8d NAILED @ 6" O.C @ PANEL EDGES 12" O.C. FIELD
6. 2X4 THRUST BLOCK W/10d @ 6" O.C. NAIL TO LANDING JOIST
7. 3/4" T&G SUBFLOOR
8. 2X8 LANDING JOISTS
9. 10d @ 6" O.C. RIM TO TOP PLATE
10. (3) 10d TOE NAILS
11. NOTCH STRINGER TO REST ON LEDGER
12. 2X TREADS W/(3) 10d EACH STRINGER

13 / D1

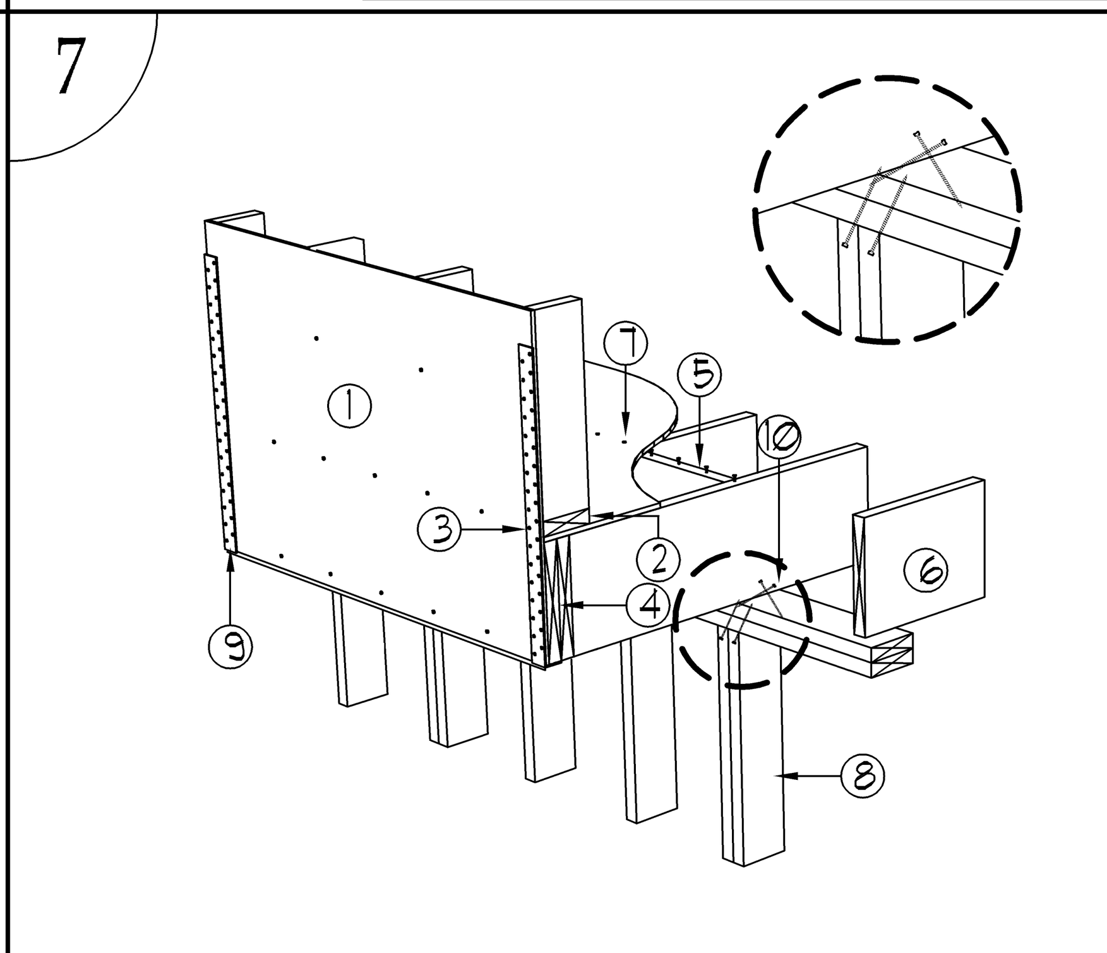
9 — INSIDE/OUTSIDE CORNER



1. GYPSUM WALL BOARD INSTALLED W/5d COOLER NAILS @ 8" O.C. OR TYPE S/W SCREWS @ 16" O.C.
2. 16d NAIL @ 12" O.C. (U.N.O.)
3. 8d NAIL @ 12"O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES (U.N.O)
4. ORIENTATION OF CORNER STUD MAY VARY
5. 8d NAIL @ 6" O.C. ALL FRAMING MEMBERS AT PANEL EDGES & 12" O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES
6. 8d NAIL @ 6" O.C. (ALL PANEL EDGES)(U.N.O)

9 / D1

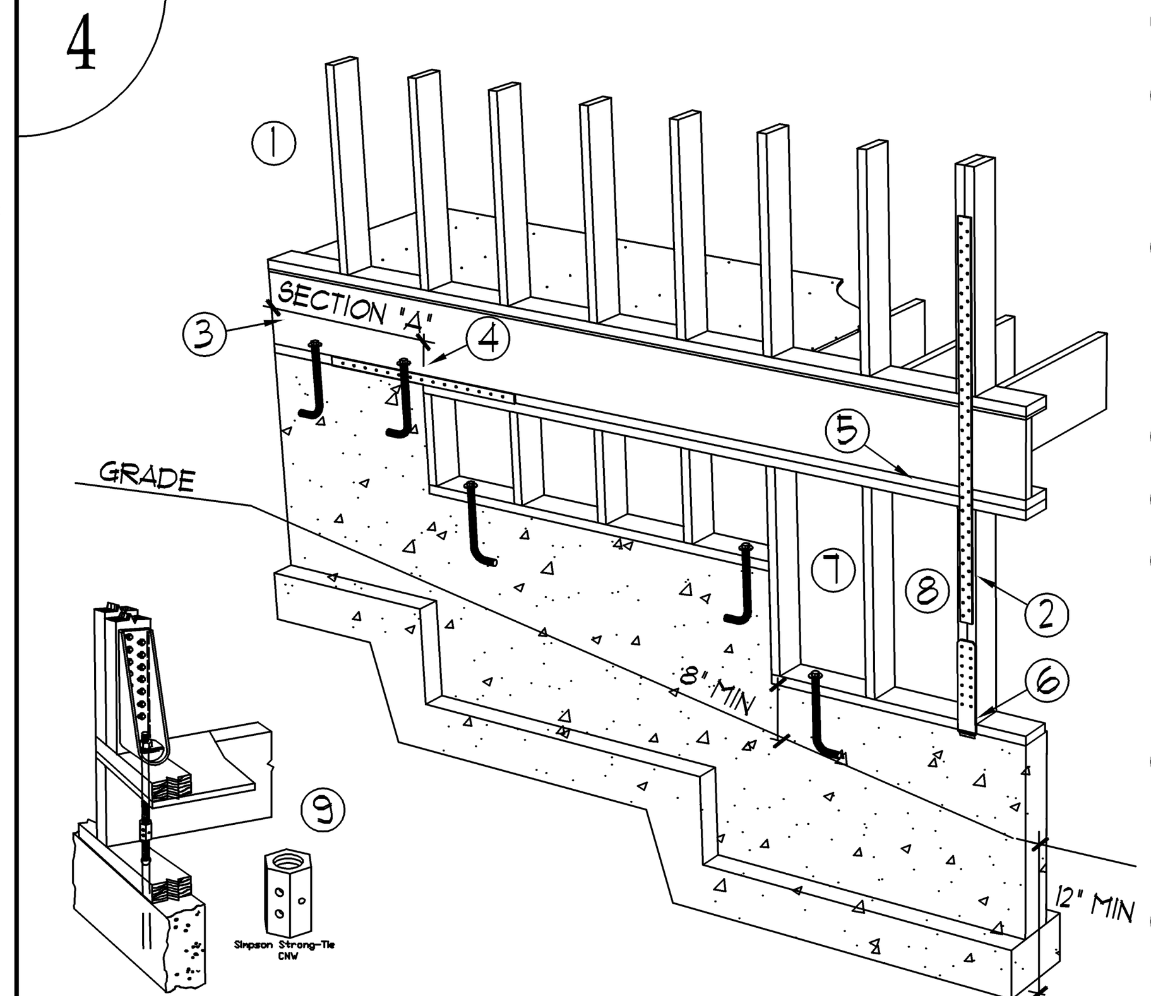
7 — CANTILEVERED SHEAR WALL



1. SHEAR WALL NAILING PER PLAN
2. SILL NAILING TO RIM 16d @ 4" O.C.
3. MSTC48B3 OR 36"CS14 (IF SPECIFIED ON ENGINEERING)
4. DOUBLE RIM JOIST REQUIRED FOR SW2 OR GREATER SHEARWALLS
5. ATTACH FULL DEPTH BLOCKING TO DOUBLE TOP PLATE W/ (2) 10d @ EACH BAY
6. FLOOR JOIST PER PLAN
7. NAIL SUBFLOOR TO BLOCKING W/ 10d @ 6" oc (U.N.O)
8. STUD WALL OR BEAM PER PLAN
9. 7/16" OSB SHEATHING TO UNDERSIDE OF FLOOR JOISTS
10. SDWC EACH STUD TO DBL TOP PLATE. SDWC FLOOR JOIST TO DBL TOP PLATE/BEAM. (4 SDWC TOTAL) WHEN HOLDOWN SPECIFIED

7 / D1

4 — STEP FOOTING & PONY WALL FRAMING



1. WALL FRAMING
2. MST60 OR (2) CS14 BETWEEN PONY WALL& WALL ABOVE WHEN FOUNDATION HOLDOWN SPECIFIED
3. WHERE FOOTING SECTION "A" IS MORE THAN 8" PROVIDE 4' CS16 EACH SIDE OF SPLICE W/8-16d COMMON NAILS
4. TOP PLATE SPLICE LINE
5. (2) 2X PLATE
6. HOLDOWN PER PLAN
7. PONY WALL SHEATHING & SHEAR NAILING TO MATCH WALL ABOVE
8. 6" MAX 14" MIN PONY WALL - PONY WALL>6' REQ. ENGINEERING FOR ADDITIONAL STORY
9. HDU HOLDOWN (WHEN SPECIFIED)

4 / D1

Permit Number: 20-01956

REVISIONS

NO.	DATE	

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john@hodgeengineering.com

FERGUSON & COLE, INC
2800
SITE SPECIFIC LETTER REQUIRED FOR EACH USE

BUILDING CODE	2015 IBC
WIND EXP.	B 110 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	05.31.18
REVIEW	ZACK C.
ANALYST	ANNA N.

SHEET
D1
2 OF **4** SHEETS

PROJECT NUMBER
180558

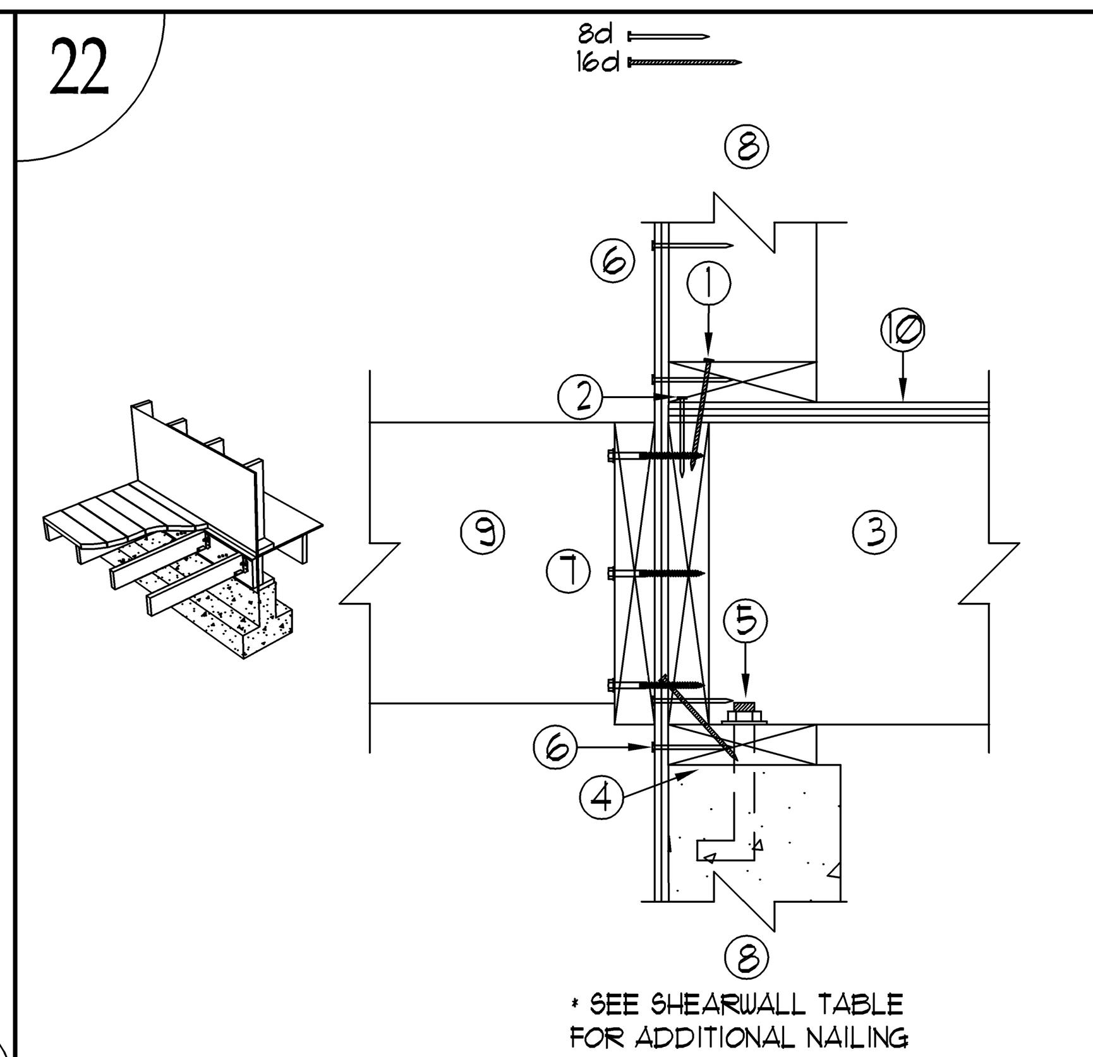
06/04/2018

26

NOT USED

26 D2

22



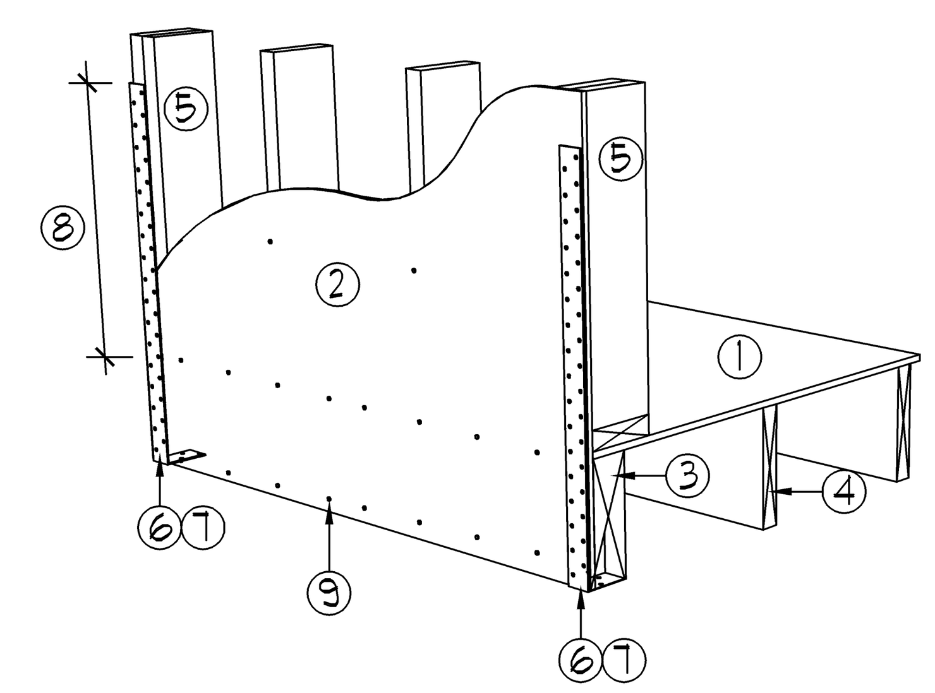
1. 2x SOLE PLATE TO RIM W/16d @ 6" O.C. U.N.O. *
2. 3/4 T&G TO RIM: 8d @ 6" O.C.
3. 2x OR MFR FLOOR JOIST
4. RIM TO MUD SILL W/16d @ 4" O.C. U.N.O. *
5. ANCHOR BOLT PER PLAN
6. SHEATHING TO STUD SEE SHEAR WALL SCHEDULE *
7. (3) SDWS22400DB SCREWS STAGGERED @ 16" O.C.
8. CONCRETE FOUNDATION
9. DECK JOISTS PER PLAN
10. 3/4" T& G FLOORING

* SEE SHEARWALL TABLE FOR ADDITIONAL NAILING

22 D2

DECK LEDGER CONNECTION

18

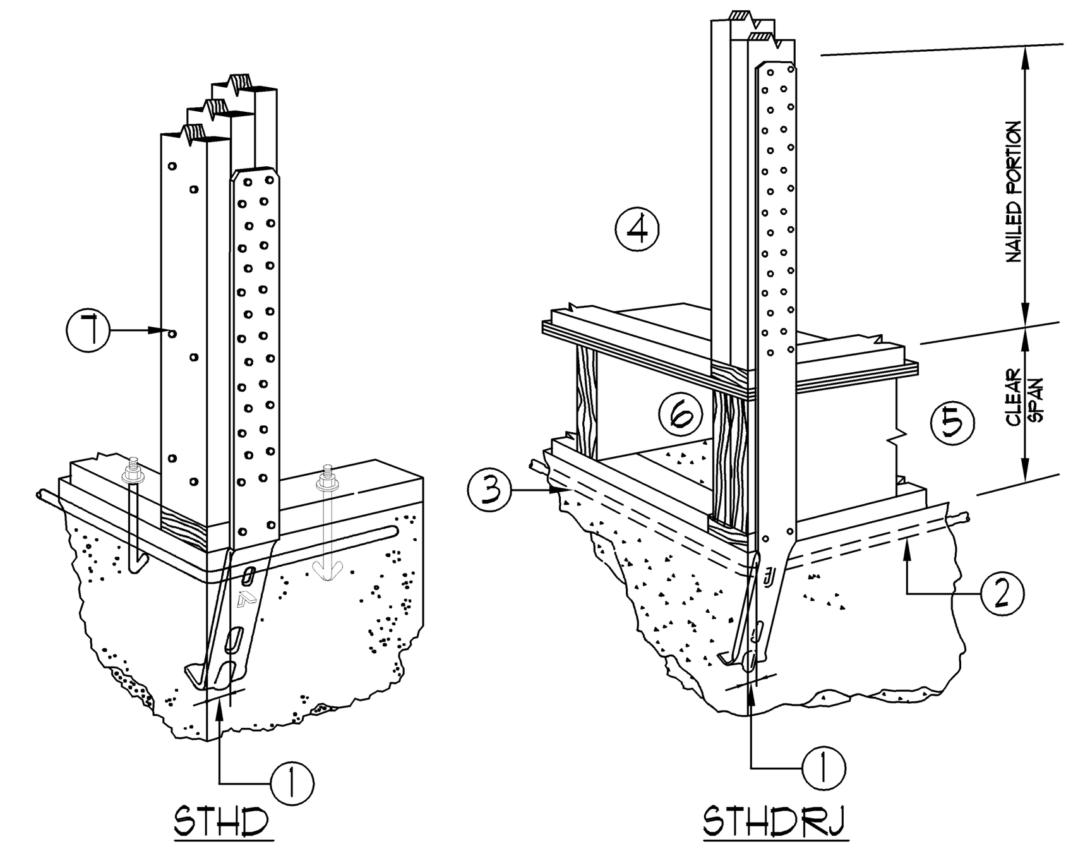


1. 3/4" T&G PLYWOOD SUBFLOOR
2. SHEAR WALL NAILING PER PLAN
3. FLUSH DOUBLE 2x JOIST OR MFR DOUBLE JOIST WITH WEB STIFFENERS OR BEAM PER PLAN
4. FLOOR JOIST PER PLAN
5. STUD/POST PER SHEAR WALL SCHEDULE
6. MSTC48B3 (WHEN SPECIFIED ON PLAN)
7. (2)CS14 OPTION (36" MIN LENGTH, WRAP AROUND BEAM)
8. 18" MIN TO STUD WALL (CS14 OPTION)
9. NAIL SHEATHING TO BEAM, DO NOT BREAK SHEATHING

18 D2

SHEAR WALL AT BEAM

14



1. 1/2" MIN FROM CORNER
2. (1) #4 REBAR. MAY BE FOUNDATION REBAR OR POST TENSION
3. 24" MIN REBAR LENGTH
4. NOTE: HOLDOWNS AT CORNER ARE SPACED 1-1/2" FROM EDGE. SPACE 1/2" WHEN 2x IS FLAT.
5. CLEAR SPAN 17" MAXIMUM, FOR TYPE RJ HOLDOWN Ø" FOR NON RJ HOLDOWNS
6. COMPRESSION BLOCKING
7. (2) 16d NAILS @ 12" oc

BUILDER TO DETERMINE IF STHD OR STHD/RJ IS APPROPRIATE.

14 D2

SIMPSON STHD

27

NOT USED

27 D2

23

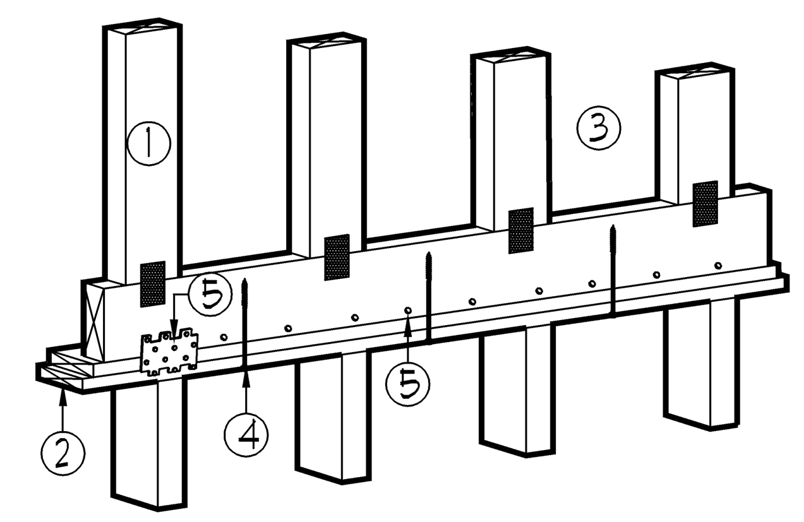
NOT USED

BASIC PERMIT PACKAGE
REVIEWED FOR CODE COMPLIANCE
WITH IRC 2015
KITSAP COUNTY BUILDING DEPARTMENT
08/02/2018 11:56:07 AM
#[18-02763]

Reviewed for code compliance
with IRC 2015
Kitsap County Building Department
jbowling@co.kitsap.wa.us
07/21/2020

23 D2

19



1. MFR GABLE END TRUSS
2. DOUBLE TOP PLATE (U.N.O. ON PLAN)
3. CONTINUOUS VERTICAL SHEATHING OVER GABLE FRAMING
4. 6" TIMBERLOK OR 6" SDWC AT 16" O.C.
5. TOP PLATE TO BOTTOM CHORD CONNECTION PER SHEARWALL SCHEDULE

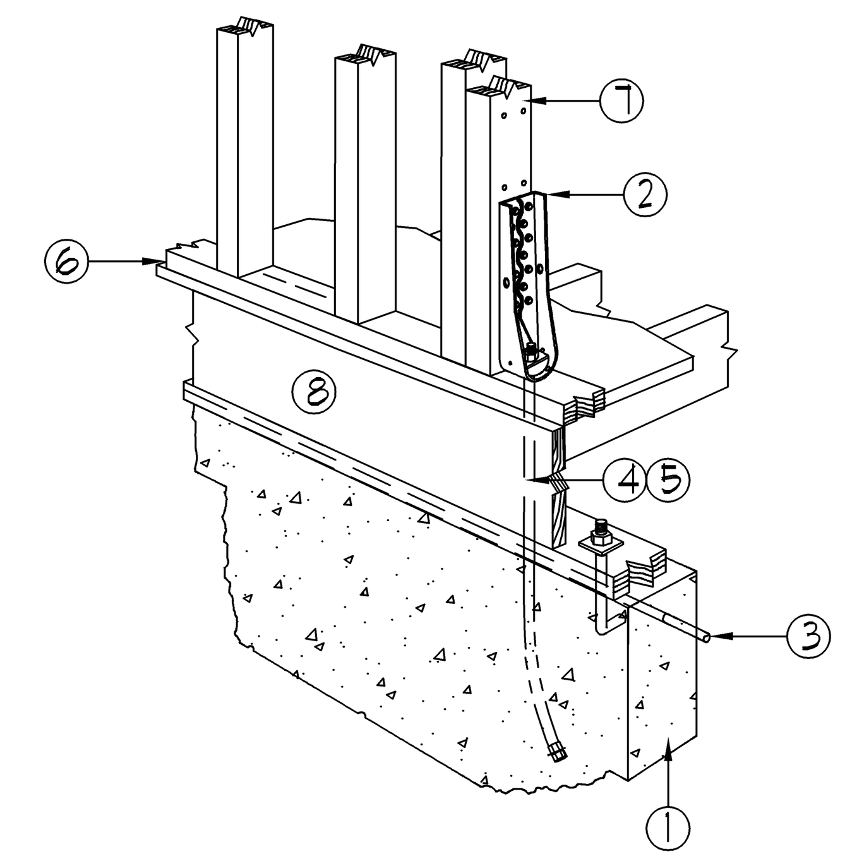
NOTES
-INSTALL SCREWS UPWARD THROUGH TOP PLATES INTO CENTER OF BOTTOM TRUSS CHORD.

-BRACE TRUSSES PER BCSI. CONSULT TRUSS MANUFACTURER FOR BRACING REQUIREMENTS.

19 D2

GABLE END TRUSS BRACING

15



1. CONCRETE STEM WALL PER PLAN
2. SIMPSON HDU2 OR HDU5 HOLDOWN PER PLAN
3. #4 REBAR FOR TOP REINFORCEMENT
4. SIMPSON SB5/8x24 ANCHOR
5. SIMPSON SSTB16 OPTION FOR HDU2 APPLICATIONS
6. MUDSILL W/ ANCHOR BOLTS PER PLAN
7. DOUBLE STUD W/ (2) 8d @ 8"oc
8. NO RIM REQUIRED WHEN SLAB ON GRADE

15 D2

HDU2 & HDU5 CONNECTION

28

NOT USED

28 D2

24

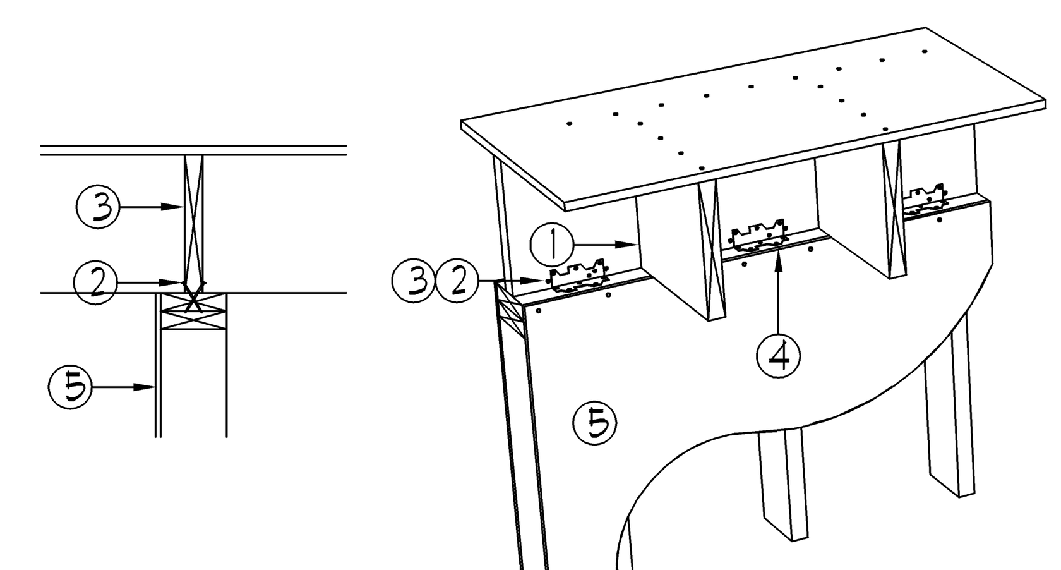
NOT USED

Subject To Field Inspection

CHANGES
MUST Be Approved Prior
To Performing Work

24 D2

20



SECTION VIEW

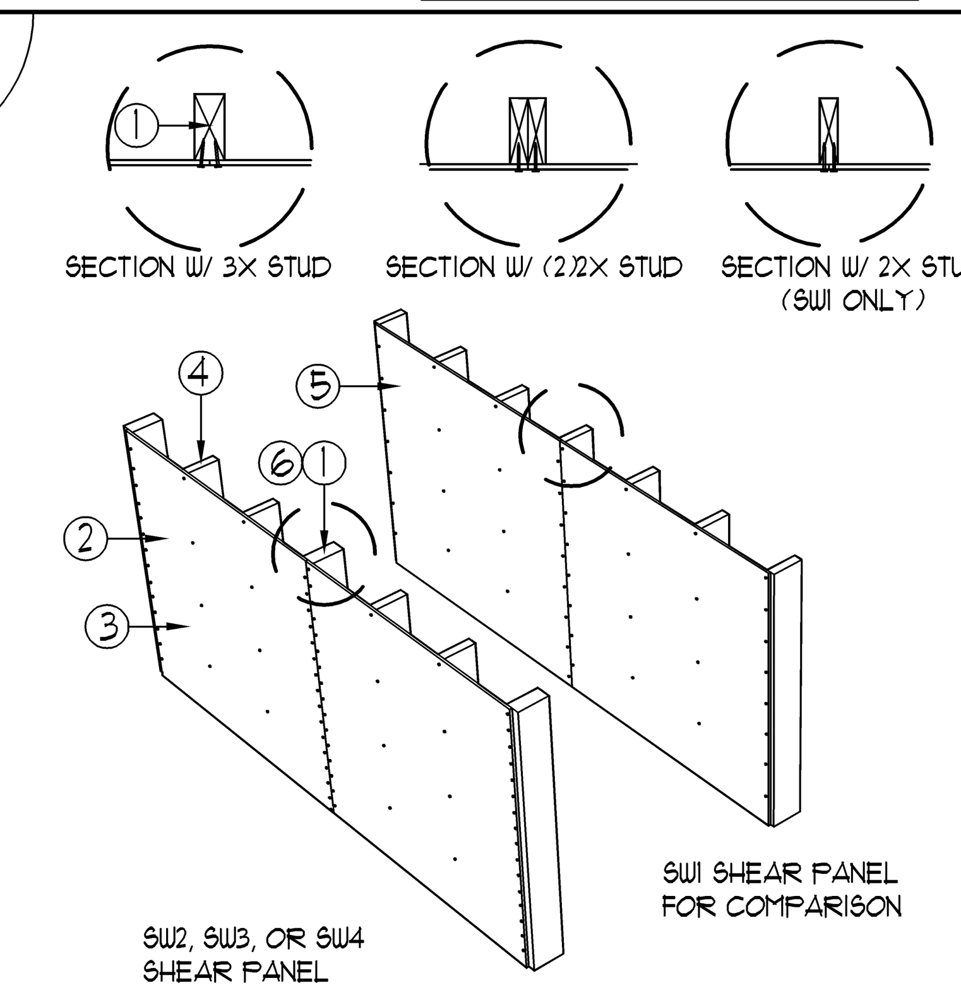
OVERALL PERSPECTIVE

1. 2x FLOOR JOIST OR MFR JOIST, SPACING & SIZE PER PLAN
2. (3) 8d TOE NAILS EACH SIDE EVERY 16" ON CENTER
3. 2x BLOCKING CENTERED ON DOUBLE TOP PLATE. FULL DEPTH
4. SIMPSON A35 REQUIRED FOR SW2 & SW3 SHEAR WALLS. (2) SIMPSON A35 AT SW4 & SW6 SHEAR WALLS (STAGGER AT EACH SIDE OF BLOCKING)
5. INTERIOR SHEAR WALL NAILING & SHEATHING PER PLAN.

20 D2

INTERIOR SHEARWALL TO PERPENDICULAR JOISTS ABOVE

16



1. 3x MEMBER AT ADJOINING PANEL EDGES FOR SW3 AND SW4 SHEAR WALL
2. SW2 SHEAR WALL 8d NAIL: 4" EDGE - 12" FIELD
SW3 SHEAR WALL 8d NAIL: 3" EDGE - 12" FIELD
SW4 SHEAR WALL 8D NAIL: 2" EDGE - 12" FIELD
3. 7/16" OSB SHEATHING
4. 2x MEMBER FOR SHEAR WALLS MID PANEL (FIELD)
5. SHEAR WALL PER PLAN
6. (2) 2X MAY BE USED IN PLACE OF 3X PER SHEAR WALL NOTES

16 D2

SW2, SW3, SW4 SHEAR WALL NAILING

29

NOT USED

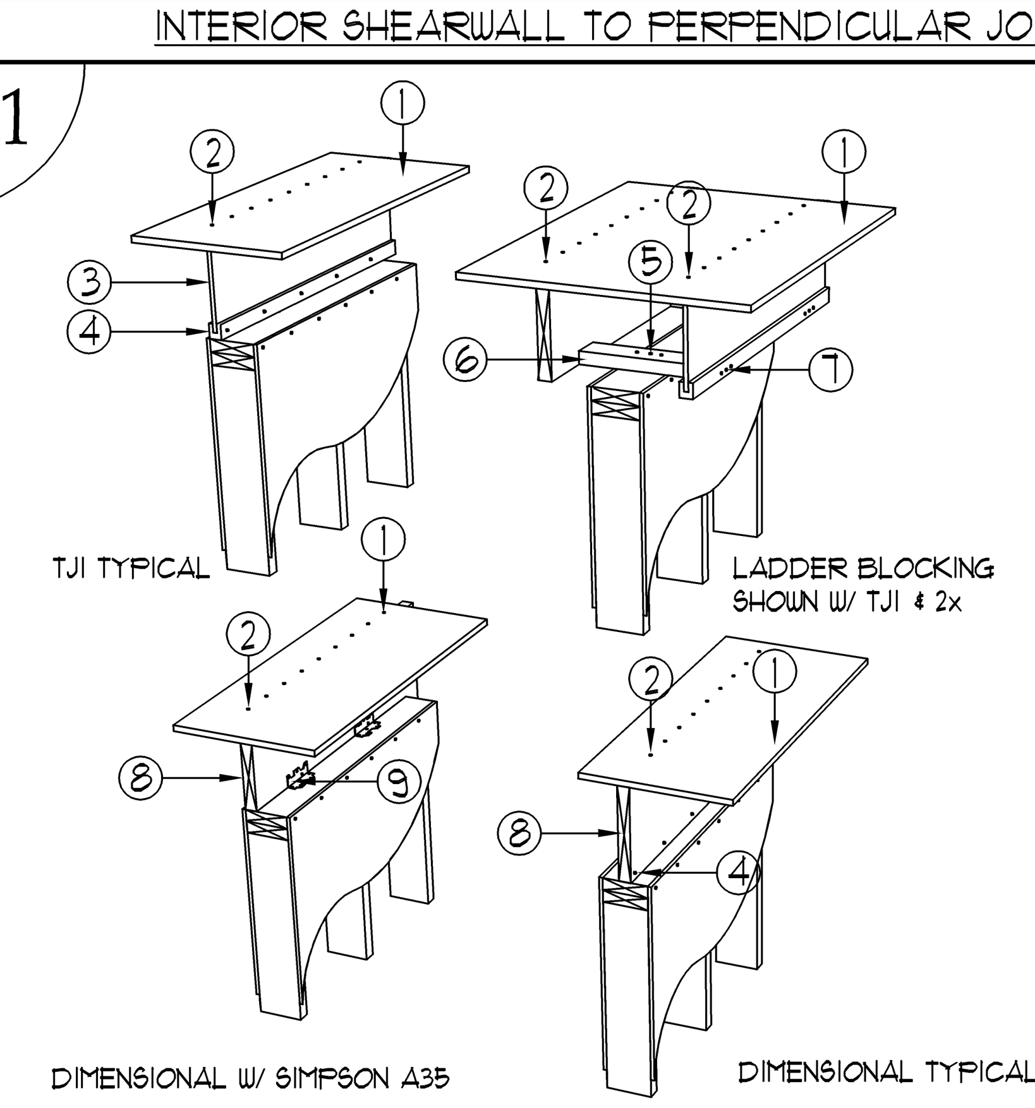
29 D2

25

NOT USED

25 D2

21

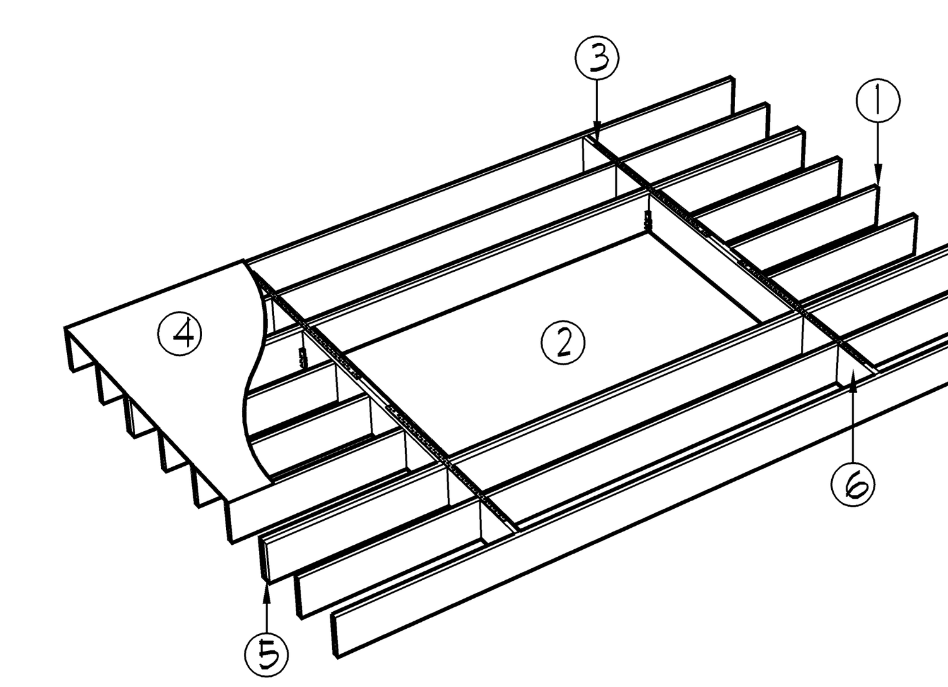


1. 3/4 T&G FLOOR
2. 8d @ 4"O.C.
3. TJI PARALLEL OR TJI BLOCKING
4. 8d @ 4" O.C. STAGGER SIDES. NAIL THROUGH TOP OF FLANGE. DO NOT TOE-NAIL
5. (3) 16d NAILS
6. 2X4 FLAT @ 16" O.C.
7. (3) 8d NAILS EACH END
8. FLOOR JOISTS OR SOLID BLOCKING
9. A35 @ 16" O.C. OPTION

21 D2

INTERIOR SHEAR WALL TO JOIST ABOVE CONNECTION

17



1. FLOOR JOIST PER PLAN
2. DIAPHRAGM OPENING PER PLAN
3. TIE & BLOCKING EQUAL TO WIDTH OF OPENING. CS14 OR SIMILAR.
4. SHEATHING PER PLAN
5. BEAM/DBL JOIST PER PLAN AROUND OPENING (TYPICAL 4 PLACES) (U.N.O. ON PLAN)
6. BLOCKING FOR STRAP

17 D2

LARGE DIAPHRAGM OPENING

Permit Number: 20-01956

REVISIONS		
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Hodge engineering inc.

FERGUSON & COLE, INC
2800
SITE SPECIFIC LETTER
REQUIRED FOR EACH USE

BUILDING CODE	2015 IBC
WIND EXP.	B 110 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	05.31.18
REVIEW	ZACK C.
ANALYST	ANNA N.
SHEET	D2
3 OF 4 SHEETS	
PROJECT NUMBER	180558

JOHN E. HODGE, REGISTERED PROFESSIONAL ENGINEER, 37886
06/04/2018

1. GENERAL STRUCTURAL NOTES

HODGE ENGINEERING HAS BEEN CONTRACTED TO PROVIDE LATERAL ENGINEER ONLY. HODGE ENGINEERING IS NOT THE ENGINEER OF RECORD. QUESTIONS FOR THE ENGINEER OF RECORD SHOULD BE DIRECTED TO THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. CONFLICTS BETWEEN THE LATERAL ENGINEERING, DETAILS, AND NOTES WITH THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE'S DRAWINGS, DETAILS, AND NOTES SHALL BE IDENTIFIED TO HODGE ENGINEERING AS SOON AS IDENTIFIED.

THIS LATERAL ENGINEERING HAS BEEN CALCULATED TO RESIST CODE SPECIFIED WIND & SEISMIC FORCES AFTER THE COMPLETION OF ALL STRUCTURAL ELEMENTS. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE STRUCTURAL STABILITY DURING CONSTRUCTION INCLUDING JOB SITE SAFETY; ERECTION METHODS; TEMPORARY SHORING, FORM WORK, AND BRACING; USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, ENGINEERING, AND/OR THE SITE CONDITIONS MUST BE REPORTED TO THE ARCHITECT AND ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO CONSTRUCTION. CONSTRUCTION OBSERVATION BY THE STRUCTURAL ENGINEER IS NOT PROVIDED. THIS ENGINEERING IS NOT INTENDED IN ANY WAY TO REVIEW OR APPROVE THE CONTRACTOR'S CONSTRUCTION PROCEDURES.

STANDARDS

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2015 INTERNATIONAL RESIDENTIAL CODE (IRC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION. THIS ENGINEERING IS TO THE 2015 INTERNATIONAL BUILDING CODE (IBC)

2. DESIGN CRITERIA

VERTICAL LOADS

IBC TABLE 1607.1	
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS	
USE	LIVE LOAD
ATTICS WITH STORAGE (UNINHABITABLE)	20 PSF
ATTICS WITHOUT STORAGE (UNINHABITABLE)	10 PSF
DECKS	60 PSF
EXTERIOR BALCONIES	60 PSF
FIRE ESCAPES	40 PSF
GUARD RAILS AND HAND RAILS	200 PSF
GUARD RAIL INFILL COMPONENTS	50 PSF
PASSENGER VEHICLE GARAGES	40 PSF
ROOMS OTHER THAN SLEEPING ROOMS	40 PSF
SLEEPING ROOMS	30 PSF
STAIRS	40 PSF

LATERAL FORCES

WIND:

ASCE 7-10 DIRECTIONAL PROCEDURE FOR BUILDINGS OF ALL HEIGHTS

SEISMIC:

SEISMIC IMPORTANCE FACTOR PER ASCE 7-10, IE = 1.00
BUILDING OCCUPANCY RISK CATEGORY PER ASCE 7-10 TABLE 1.5-1 = II
SOIL SITE CLASS PER ASCE 7-10 TABLE 20.3-1 = PER PLAN
SEISMIC DESIGN CATEGORY IBC TABLE 1613.3.5(1) & 1613.3.5(2) = PER PLAN
ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE ANALYSIS
RESPONSE MODIFICATION FACTOR R = 6.5

3. SOIL

HODGE ENGINEERING IS NOT THE ENGINEER OF RECORD. ALL SOIL REQUIREMENTS ARE TO BE DETERMINED BY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.

4. CONCRETE

HODGE ENGINEERING HAS BEEN CONTRACTED TO PROVIDE LATERAL ENGINEERING ONLY. THE CONCRETE FOUNDATION AND RETAINING WALLS IF REQUIRED ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.

CONCRETE: SHALL BE MADE WITH PORTLAND CEMENT ASTM C-150 TYPE II OR TYPE I AND SHALL BE READY MIXED PER ASTM C-94.

MIX DESIGNS: THE CONTRACTOR SHALL DESIGN CONCRETE MIXES THAT MEET THE REQUIREMENTS OF THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE MIX DESIGNS SHALL FACILITATE ANTICIPATED PLACEMENT METHODS, WEATHER, TEMPERATURE, REBAR CONGESTION, AND ALL OTHER FACTORS REQUIRED TO PROVIDE A STRUCTURALLY SOUND AND ACCEPTABLE FINISHED PRODUCT. WATER REDUCING ADMIXTURES MAY BE USED TO MEET THESE REQUIREMENTS. MAXIMUM SLUMP SHALL BE 5".

ADMIXTURES: ADMIXTURES SHALL BE BY MASTER BUILDERS, W.R. GRACE, OR PRE-APPROVED EQUAL. ALL MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.

WATER: SHALL BE CLEAN AND POTABLE

CONCRETE STRENGTH REQUIREMENTS ARE TO BE PROVIDED BY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THIS LATERAL ENGINEERING REQUIRES A MINIMUM OF 2500 PSI @ 28 DAYS.

REINFORCING STEEL: SHALL CONFORM TO ASTM A-706, GRADE 60. PLACE PER ACI 315 AND ACI 318. VERTICAL AND HORIZONTAL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY THE LENGTH OF LAP SPLICE SHALL BE A MINIMUM OF 30 INCHES FOR #4, 38 INCHES FOR #5, AND 45 INCHES FOR #6. THE MAXIMUM GAP BETWEEN NONCONTACT PARALLEL BARS AT A LAP SPLICE SHALL NOT EXCEED 5 INCHES. PROVIDE CORNER BARS AT ALL HORIZONTAL BARS IN FOOTING AND WALLS (1907).

CRACKS: UNREINFORCED CONCRETE WILL CRACK.

CONCRETE MINIMUM COVER OVER REINFORCEMENT:
CONCRETE CAST AGAINST EARTH = 3" EXPOSED TO WEATHER OR EARTH = 2"
WALLS AND SLABS NOT EXPOSED TO WEATHER = 3/4"

BOLTS

MACHINE BOLTS (M.B.): ASTM A-307, GRADE A
ANCHOR BOLTS (A.B.): ASTM F1554, GRADE 36, CLASS 2A

5. CARPENTRY

NAILS: CONNECTION DESIGNS ARE BASED ON "COMMON WIRE" NAILS WITH THE FOLLOWING PROPERTIES:

PENNYWEIGHT	DIAMETER (IN.)	LENGTH (IN.)
8d	0.131	2-1/2
10d	0.148	3
16d	0.162	3-1/2
20d	0.192	4

WOOD SHEATHING (STRUCTURAL): SHEATHING SHALL BE PLYWOOD (CDX) OR ORIENTED STRAND BOARD (OSB). PLYWOOD SHEATHING SHALL BE 5-PLY MINIMUM WHERE INDICATED AS 3/4" OR THICKER. WOOD SHEATHING SHALL BE "RATED SHEATHING" CONFORMING TO PS1-95 AND/OR PS2-92. ALL PANELS SHALL BEAR THE STAMP OF AN APPROVED GRADING AGENCY. SPAN RATING SHALL BE PROVIDED AS FOLLOWS: ROOF (32/16); WALLS (32/16); FLOORS (20" O.C.) UNLESS NOTED OTHERWISE. ALL WOOD SHEATHED WALLS SHALL BE BLOCKED AT ALL PANEL EDGES UNLESS NOTED OTHERWISE.

GLUE-LAMINATED MEMBERS: PER ANSI/AITC A190.1. MEMBERS SHALL BE COMBINATION 24F-V4 DOUGLAS FIR FOR SIMPLE SPANS AND 24F-V8 DOUGLAS FIR FOR CANTILEVERED SPANS AND TRUSS CHORDS (FB=2400 PSI, FV=240 PSI, E=1.8X10^6 PSI) AND DOUGLAS FIR COMBINATION 2 FOR COLUMNS AND TRUSS WEB MEMBERS, ALL WITH EXTERIOR GLUE. ALL MEMBERS TO HAVE AITC OR APA-EWS STAMP.

FRAMING LUMBER:
EACH PIECE SHALL BEAR THE GRADE TRADEMARK OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB), WESTERN WOOD PRODUCTS ASSOCIATION (WWPA), OR OTHER AGENCY ACCREDITED BY THE AMERICAN LUMBER STANDARD COMMITTEE (ALSC) TO GRADE UNDER ALSC CERTIFIED GRADING RULES.

EXPOSURE		APPLICATION	SPECIFIED MATERIAL	PRESERVATIVE TREATMENT (1)	CONNECTORS & FASTENERS (2)(3)
EXPOSURE	DRY	FOUNDATION SILL PLATES, TOP PLATES & LEDGERS ON CONCRETE OR MASONRY WALLS (4)	2X, 4X, 6X OR GLULAM (FIR)	SBX	GALV (G60)
				ACQ, CBA, CA	GALV (G185)
	WET	FRAMING, DECKING, POSTS & LEDGERS	2X, & 4X (FIR)	ACQ, CBA, CA	GALV (G185)
			2X, & 4X (CEDAR)	NONE	GALV (G90)
		BEAMS AND COLUMNS	6X OR GLULAM (FIR)	ACQ, CBA, CA	GALV (G185)
			6X OR GLULAM (CEDAR)	NONE	GALV (G90)

PRESERVATIVE TREATED WOOD FASTENER REQUIREMENTS:

ALL METAL CONNECTORS COMING IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE SIMPSON Z-MAX, TRIPLE ZINC COATED, OR HOT DIPPED GALVANIZED.
CCA: CHROMATED COPPER ARSENATE NOT PERMITTED.
SBX: DOT SODIUM BORATE
ACQ: ALKALINE COPPER QUAT
CBA AND CA: COPPER AZOLE

G60, G90, AND G185 PER ASTM A23 FOR CONNECTORS, AND ASTM A153 FOR FASTENERS. MECHANICALLY GALVANIZED FASTENERS PER ASTM B695, CLASS 55 OR GREATER.

POSITIVE CONNECTIONS SHALL BE PROVIDED AT POST-BEAM CONNECTIONS TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT.

BASIC PERMIT PACKAGE
REVIEWED FOR CODE COMPLIANCE
WITH IRC 2015
KITSAP COUNTY BUILDING DEPARTMENT
08/02/2018 11:56:07 AM
#[18-02763]

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with IRC 2015
Kitsap County Building Department
jbowling@co.kitsap.wa.us
07/21/2020

Subject To Field Inspection

CHANGES
MUST Be Approved Prior
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NO.	DATE	REVISIONS

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FERGUSON & COLE, INC
2800
SITE SPECIFIC LETTER
REQUIRED FOR EACH USE

BUILDING CODE 2015 IBC
WIND EXP. B 110 MPH
SEISMIC DESIGN CATEGORY D
ROOF SNOW LOAD 25 PSF

ENG. P.E. JOHN H.
DATE 05.31.18
REVIEW ZACK C.
ANALYST ANNA N.
SHEET

N1

4 OF 4 SHEETS

PROJECT NUMBER
180558

JOHN E. HODGE
STATE OF WASHINGTON
37886
REGISTERED
PROFESSIONAL ENGINEER
06/04/2018
180558

Permit Number: 20-01956