

*SECTION 1

I. DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STRUCTURAL ENGINEER'S STAMP IS AFFIXED TO DRAWINGS.

II. ANY DISCREPANCIES IN THE DRAWINGS, NOTES AND SPECIFICATIONS, SHALL BE REPORTED TO OWNER'S REPRESENTATIVE FOR CLARIFICATION. THE CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.

III. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION.

IV. CONTRACTOR TO SUBMIT A REQUEST TO ENGINEER/ARCHITECT FOR ANY SUBSTITUTION OF MATERIALS OR PRODUCTS SPECIFIED ON THE DRAWINGS.

V. STRUCTURAL DESIGN PER 2012 INTERNATIONAL BUILDING CODE.

VI. ALL CONSTRUCTION TO CONFORM TO 2012 IBC.

VII. THE FOLLOWING NOTES APPLY UNLESS SHOWN OTHERWISE.

VIII. THESE DRAWINGS HAVE BEEN PREPARED SOLELY FOR THE USE IN THE CONSTRUCTION OF A PROPOSED BUILDING TO WHICH THESE NOTES ARE ATTACHED. THE DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART, FOR FABRICATION OR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

*SECTION 2

I. ROOF LOADING:

PITCHED ROOF:
LIVE LOAD (SNOW): 35 PSF
DEAD LOAD: 15 PSF
TOTAL LOAD: 50 PSF

II. FLOOR LOADING:
LIVE LOAD: 40 PSF
DEAD LOAD: 12 PSF
TOTAL LOAD: 52 PSF

III. WIND LOADING: 90 MPH, EXPOSURE C

IV. SEISMIC LOADING: S_s = 0.6, S₁ = 0.2

V. DESIGN SOIL PARAMETERS

1500 PSF BEARING PRESSURE ASSUMED WITH 45 PCF E.F.P. ACTIVE LATERAL EARTH PRESSURE IBC TABLE 1804.2 CLASS 4 MATERIAL(S)

*SECTION 3 - CONCRETE

I. GENERAL REQUIREMENTS

STRUCTURAL CONCRETE FOR FOOTING SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI. CONCRETE FOR SLABS ON GRADE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND A MAXIMUM WATER CEMENT RATIO OF 0.5. ALL OTHER CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. MINIMUM CEMENT CONTENT SHALL BE 5 SACKS/CU. YD. MAXIMUM SIZE AGGREGATE SHALL BE 3/4", SLUMP NOT TO EXCEED 4".

II. CAST IN PLACE CONCRETE

IF SOFT, SPONGY OR WET SOILS ARE ENCOUNTERED CONSTRUCTION IS TO BE STOPPED AND ENGINEER CONTACTED IMMEDIATELY.

A. CONCRETE FORM WORK TO BE OF ADEQUATE SIZE AND STRENGTH, PROPERLY BRACED TO PREVENT SAGGING OR BULGING. PROTECT ALL CONCRETE FROM FREEZING TEMPERATURES. REFER TO DRAWING FOR DIMENSIONS OF CONCRETE MEMBERS AND SIZE AND LOCATION OF ALL REINFORCEMENT.

B. FOOTINGS

NO FOOTING SHALL BE PLACED ON DISTURBED SOIL (IF DISTURBED, COMPACT SOIL IN 6" LIFTS TO 90% OF MAXIMUM DRY DENSITY PER ASTM D1557). FOOTINGS SHALL BE STEPPED DOWN ONE (1) VERTICALLY TO ONE AND ONE HALF (1-1/2) HORIZONTALLY.

C. FOUNDATION WALLS

REINFORCE PER DRAWINGS. DO NOT BACKFILL WALLS UNTIL MAIN FLOOR IS FRAMED AND SHEATHED AND CONCRETE HAS CURED A MINIMUM OF 7 DAYS. USE HAND OPERATED COMPACTION EQUIPMENT ADJACENT TO NEWLY PLACED CONCRETE BASEMENT WALLS.

D. CONCRETE PADS AND THICKENED SLABS

REFER TO DRAWINGS AS TO SIZE AND REINFORCEMENT.

E. CONCRETE SLABS

SLABS ON GRADE, AS NOTED ON THE DRAWINGS, TO BEAR ON 6" COMPACTED GRAVEL BASE. MINIMUM SLAB REINFORCEMENT TO BE #3 RE-BAR @ 18" o.c. BOTH WAYS, PLACED 1" CLEAR FROM TOP FACE (U.N.O. ON PLANS).

F. FIREPLACE FOOTINGS AND CMU WALLS

REFER TO DRAWINGS.

G. REINFORCEMENT

REINFORCEMENT SHALL BE ASTM A615, GRADE 60 FOR #5 BARS AND LARGER, GRADE 40 FOR #3 & #4 BARS. ALL REBAR LAPPED 30 TIMES DIAMETER, REBAR AT FOOTINGS TO HAVE 3" CLEAR COVER OF CONCRETE (U.N.O. ON DRAWINGS). PROVIDE CORNER BARS WITH 18" LEGS AT THE CORNERS OF ALL WALLS AND FOOTINGS. SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT.

H. *ANCHOR BOLTS

ANCHOR BOLTS TO BE ASTM A307, 1/2" DIA. x 10" EMBEDDED IN FOUNDATION WALLS @ 2'-8" o.c. (MAX) U.N.O. (SEE FOUNDATION PLAN FOR REQUIREMENTS AT SHEARWALLS). BOLTS TO BE WITHIN 1'-0" OF ENDS OF SILL PLATES (COORDINATE WITH GENERAL CONTRACTOR). MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE.

ALL POSTS SUPPORTED BY ISOLATED FOOTINGS TO HAVE POST ANCHORS UNLESS BRACED IN STUD WALLS.

REFER TO DRAWINGS FOR HOLDDOWN REQUIREMENTS. INSTALL REQUIRED EMBEDDED ITEMS PER MANUFACTURER'S CATALOG TO ENGAGE HOLDDOWNS.

I. CONSTRUCTION AND CRACK CONTROL JOINTS

ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS AND OTHER FOREIGN MATERIAL PRIOR TO PLACING ADJACENT CONCRETE. CRACK CONTROL JOINTS IN SLABS SHALL HAVE A MAXIMUM SPACING OF 15'-0" IN BOTH DIRECTIONS. THE CONTRACTOR SHALL SUBMIT THE DETAILS AND PROPOSED LOCATIONS OF CONSTRUCTION JOINTS AND CRACK CONTROL JOINTS FOR REVIEW BEFORE STARTING CONSTRUCTION.

J. VAPOR BARRIER

VAPOR BARRIER TO BE 4 MIL POLYETHYLENE SHEET PLACED ON UNDISTURBED SOIL. VAPOR BARRIER UNDER SLAB ON GRADE, IF REQUIRED, PLACED ON COMPACTED GRAVEL WITH 1" OF DAMP SAND BETWEEN POLYETHYLENE VAPOR BARRIER AND CONCRETE.

K. EMBEDDED ITEMS FOR HD TYPE HOLDDOWNS TO BE ASTM A307 HEX HEADED BOLT IN THE DIAMETER AS SPECIFIED BY THE MANUFACTURER FOR THE HD. ALL BOLTS TO HAVE 3" MIN. CONCRETE SIDE COVER. EMBEDMENT DEPTHS ARE 15" FOR BOLTS UP TO AND INCLUDING 1" DIA., 24" DEPTH FOR BOLTS OVER 1". TYPICAL REINFORCEMENT TO PASS UNINTERRUPTED ALONGSIDE HOLDDOWN AS APPLICABLE. COUPLER NUTS MAY BE USED TO EXTEND THE HOLDDOWN ANCHOR THROUGH THE FLOOR PLATE TO THE SHEAR WALL CHORD.

III. *EPOXY ANCHORS

EPOXY GROUTED ANCHORS, IF USED, SHALL CONFORM TO HILTI HIT OR HILTI HVA EPOXY SYSTEM OR ENGINEER APPROVED EQUIVALENT. INSTALL PER MANUFACTURER'S INSTRUCTIONS. WIRE BRUSH AND BLOW OUT HOLES.

*SECTION 4 - REINFORCED CONCRETE MASONRY UNITS (CMU)

I. GENERAL REQUIREMENTS

A. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI (MASONRY FM-1500 PSI). USE TYPE M MORTAR WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI. GROUT SHALL BE A PEA GRAVEL CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI AND A MINIMUM SLUMP OF 6 INCHES.

B. INSTALL CMU OF SIZE AND ARCHITECTURAL TYPE SPECIFIED. REINFORCE PER DRAWINGS. SOLID GROUT ALL CELLS BELOW GRADE, ALL REINFORCED CELLS, AND AS SPECIFIED IN DRAWINGS. ALL 8" CMU AT FIREPLACES TO BE SOLID GROUTED. MAXIMUM HEIGHT FOR GROUT LIFTS TO BE 4'-0" UNLESS CLEAN OUTS ARE USED.

C. MASONRY WALLS TO BE LAID IN RUNNING BOND. REINFORCE THE WALLS HORIZONTALLY WITH (2) #4 BAR IN AN 8" HIGH BOND BEAM AT EACH FLOOR AND ROOF LEVEL. AT THE TOP AND BOTTOM OF WALLS, AND @ 4'-0" o.c. (MAX) BETWEEN. REINFORCE THE WALLS VERTICALLY WITH (1) #5 @ 4'-0" o.c. (MAX) FOR FULL HEIGHT OF THE WALL, PLUS ONE #5 VERTICAL AT EACH JAMB, CORNER AND DISCONTINUOUS END (U.N.O. ON DRAWINGS). LAP REINFORCEMENT 40 BAR DIAMETERS AT SPLICES. REFER TO DRAWINGS FOR LINTEL DETAILS AT FIREPLACES.

D. PROVIDE DOWELS WITH STANDARD HOOKS BETWEEN FOUNDATIONS AND ALL CMU, DOWELS DRILLED AFTER THE FACT ARE NOT ACCEPTABLE UNLESS APPROVED BY THE ENGINEER. SIZE AND SPACING OF DOWELS TO MATCH VERTICAL REINFORCEMENT OF CMU. DOWELS TO PROJECT A MINIMUM OF 2'-0" INTO CMU AND 17 BAR DIAMETERS INTO FOUNDATION (U.N.O.)

II. VENEER ANCHORAGE

PROVIDE VENEER ANCHORAGE PER IBC 3006(D)1. ANCHOR TIES TO BE NOT LESS THAN 9 GA. GALVANIZED WIRE OR 22 GA. BY 1" GALVANIZED SHEET METAL. ANCHOR TIES SHALL BE SPACED NOT MORE THAN 24" o.c. AND SUPPORT NO MORE THAN 2 SQ. FEET OF VENEER. TIES SHALL BE PROVIDED TO HORIZONTAL JOINT REINFORCEMENT WIRE OF 9 GA. OR EQUIVALENT. JOINT REINFORCEMENT TO BE CONTINUOUS WITH BUTT SPLICES BETWEEN TIES.

*SECTION 5 - FRAMING LUMBER

I. SAWN STRUCTURAL LUMBER

A. SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH (DF-L) NO. 2 OR BETTER FOR ALL 2 INCH AND 4 INCH NOMINAL LUMBER AND DF-L NO. 1 OR BETTER FOR 6 INCH NOMINAL AND LARGER STRUCTURAL MEMBERS (U.N.O.)

B. WOOD BEARING ON OR INSTALLED WITHIN 1" OF MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE. PROVIDE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD.

C. ALL FRAMING DETAILS SHALL BE IN ACCORDANCE WITH CHAPTER 23 OF THE 2006 EDITION, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL FRAMING NAILING SHALL CONFORM TO TABLE 2304.9.1 OF THE IBC UNLESS OTHERWISE SHOWN. PROVIDE STEEL STRAPS AT PIPES IN STUD WALLS AS REQUIRED BY IBC CHAPTER 23. PLUMBING AND ELECTRICAL RUNS IN STUD WALLS SHALL CONFORM TO CHAPTER 23. BOLTS SHALL BE STANDARD MACHINE BOLTS (A307). ALL NAILS SHALL BE COMMON WIRE OR GALVANIZED BOX NAILS. IF PNEUMATIC NAILERS ARE TO BE USED, CONTRACTOR MUST SUBMIT A SCHEDULE OF NAILS DESIRED AS SUBSTITUTION TO THE ARCHITECT OR ENGINEER FOR REVIEW. A CHANGE IN THE NUMBER OF NAILS OR A CLOSER NAIL SPACING MAY BE REQUIRED.

D. METAL HANGERS AND CONNECTORS SHALL BE FULLY NAILED OR BOLTED UNLESS OTHERWISE NOTED ON THE DRAWINGS. METAL HANGERS OR CONNECTORS SHOWN ON THE DRAWINGS SHALL BE MANUFACTURED BY SIMPSON COMPANY. METAL HANGERS OR CONNECTORS BY OTHER MANUFACTURERS MAY BE CONSIDERED WHERE LOAD CAPACITY AND DIMENSIONS ARE EQUAL OR BETTER. ALL SUBSTITUTIONS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.

E. PROVIDE SOLID BLOCKING BELOW ALL BEARING WALLS. PROVIDE SOLID VERTICAL BLOCKING IN FLOOR SPACE TO MATCH STUD BUNDLE OR SOLID COLUMN ABOVE AND BELOW. VERTICAL BLOCKING AT WOOD "I" JOISTS SHALL BE 1/16" LONGER THAN JOIST IS DEEP. MINIMUM POST TO BE TWO 2x STUDS BEARING AT EACH END OF HEADER U.N.O. FOR BEAMS FRAMING PERPENDICULAR TO BEARING WALLS PROVIDE FULL WIDTH BEAM POCKET WITH FILLER AS REQUIRED AND KING STUD BOTH SIDES. STITCH STUD BUNDLES TOGETHER WITH 16d COMMON @ 18" o.c. MAXIMUM (U.N.O.) WHERE FLOOR BEAMS ARE FRAMED FLUSH WITHIN FLOOR AND TOP FLANGE HANGERS ARE SPECIFIED, BEAMS ARE TO BE BLOCKED UP TO JOIST HEIGHT WITH FULL WIDTH DF-L SPACER AS REQUIRED.

II. STRUCTURAL GLUED-LAMINATED TIMBER

ALL GLUED-LAMINATED TIMBER SHALL BE COMBINATION 24F-V4 FOR SIMPLY SUPPORTED BEAMS, COMBINATION 24F-V8 FOR BEAMS CONTINUOUS OVER SUPPORTS, AND COMBINATION L2 FOR COLUMNS (U.N.O.) FABRICATION TO BE IN ACCORDANCE WITH AITC 117. PROVIDE WET-USE ADHESIVES. MAXIMUM MOISTURE CONTENT SHALL BE 15%. PROVIDE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD. WOOD BEARING ON OR WITHIN 1" OF MASONRY OR CONCRETE SHALL BE TREATED WITH AN APPROVED PRESERVATIVE. SEAL END GRAIN OF ALL EXTERIOR, EXPOSED BEAMS INCLUDING NON-LOAD BEARING ARCHITECTURAL BEAMS.

III. MANUFACTURED WOOD "I" JOISTS

WOOD "I" JOISTS AS MANUFACTURED BY THE TRUSS JOIST MacMILLAN CORPORATION SHALL BE DESIGNED AND CERTIFIED BY MANUFACTURER TO SUPPORT LOADINGS AS SHOWN ON THE DRAWINGS. SUBSTITUTION OF PRODUCTS BY OTHER MANUFACTURERS REQUIRES APPROVAL OF ENGINEER OF RECORD. JOISTS SHALL BE ERECTED, INSTALLED, AND BRACED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

IV. LAMINATED VENEER LUMBER (LVL)

PRODUCTS SPECIFIED HEREIN AS ML OR M-L AND PL SHALL CONFORM TO THE PERFORMANCE CRITERIA OF LVL AND PSL PRODUCTS AS MANUFACTURED BY TRUSS JOIST MacMILLAN AS MICROLLAM AND PARALLAM. SUBSTITUTES ARE ACCEPTABLE PROVIDED THEY HAVE THE SAME STRUCTURAL VALUES AS ML AND PL. ANY SUBSTITUTIONS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.

V. WOOD SHEATHING

A. ALL WOOD SHEATHING SHALL BE APA RATED EXPOSURE 1 PLYWOOD OR OSB WITH THICKNESS, VENEER GRADES AND SPAN RATING AS NOTED HEREIN OR ON DRAWINGS.

ROOF SHEATHING
5/8" WITH MINIMUM (40/20) SPAN RATING.

FLOOR SHEATHING
3/4" T&G APA SPAN RATED TO 24".

EXTERIOR WALL AND SHEAR WALL SHEATHING
7/16" WITH MINIMUM (24/0) SPAN RATING.

B. ROOF AND FLOOR SHEATHING TO BE LAID UP WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS STAGGERED 4'-0" INSTALL ROOF SHEATHING WITH " " SPACE AT ALL PANEL EDGES. NAIL ROOF SHEATHING WITH 8d @ 6" o.c. AT SUPPORTED PANEL AND 12" o.c. AT INTERMEDIATE FRAMING. FLOOR SHEATHING WITH 10d @ 6" o.c. AT SUPPORTED PANEL. EDGES AND 10" o.c. FIELD, U.N.O. HOLES ARE NOT PERMITTED IN DIAPHRAGMS UNLESS REVIEWED BY ENGINEER.

C. NAIL EXTERIOR WALL SHEATHING WITH 8d @ 6" o.c. EDGES AND 12" o.c. FIELD, U.N.O. IN SHEARWALL SCHEDULE. OFFSET VERTICAL JOINTS 4'-0" INSTALL WITH " " GAP AT BUTT ENDS.

VI. WOOD SHEARWALLS

A. WHERE PLYWOOD PANELS ARE APPLIED TO BOTH SIDES OF SHEARWALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING MEMBERS SHALL BE 3" (NOMINAL) WIDE AND NAILS ON EACH SIDE SHALL BE STAGGERED.

B. ALLOWABLE SHEAR VALUES IN SHEARWALL TABLE ARE FOR DOUGLAS FIR FRAMING MEMBERS (GROUP II). NO SUBSTITUTION OF LESSER GROUPS WILL BE ALLOWED. FASTENERS EXPOSED TO WEATHER SHALL BE ZINC COATED BY HOT DIP GALVANIZING, MECHANICALLY DEPOSITED, OR ELECTRO-DEPOSITED.

VII. PRE-MANUFACTURED WOOD TRUSSES

WOOD TRUSSES SHALL BE FACTORY ASSEMBLED USING STRESS RATED MATERIALS DESIGNED TO SUPPORT LOADING SHOWN ON DRAWINGS. INSTALL AND BRACE PER MANUFACTURER. MANUFACTURER IS RESPONSIBLE FOR REVIEWING ALL CONNECTIONS AND FRAMING IN TRUSSED ROOF SYSTEMS ABOVE PLATE HEIGHT FOR COMPLETENESS AND COMPATIBILITY WITH TRUSS DESIGNS. THIS INCLUDES ALL EAVE OVERHANGS AND OVER-FRAMES. SHOP DRAWINGS, DETAILS AND DESIGN CALCULATIONS OF TRUSSED ROOF SYSTEM MUST BE STAMPED BY A LICENSED CIVIL ENGINEER AND SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION.

*SECTION 6 - STRUCTURAL STEEL AND MISCELLANEOUS METALS

STEEL SHALL CONFORM TO ASTM A992 UNLESS OTHERWISE NOTED. SQUARE OR RECTANGULAR STRUCTURAL STEEL TUBES SHALL CONFORM TO ASTM A500, GRADE B (FY=48ksi). ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". SHOP DRAWINGS SHALL BE SUBMITTED FOR THE OWNER'S REPRESENTATIVES REVIEW BEFORE COMMENCING FABRICATION. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. ALL WELDING SHALL BE DONE BY STRUCTURAL WELDING CODE, AWS D1.1. ALL FIELD WELDING TO BE ACCOMPLISHED BY AWS CERTIFIED WELDERS. ALL STEEL ANCHORS, TIES AND OTHER MEMBERS TO BE EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED. ALL MACHINE BOLTS SHALL BE ASTM A307 U.N.O. AND SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF LOCKING NUTS. ALL NUTS, BOLTS, WASHERS AND MISC. STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED.

*SECTION 7 - JOB SAFETY

THE ENGINEER HAS NOT BEEN RETAINED NOR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISITS, USE WORK, OR OCCUPANCY BY ANY PERSON.

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NO.	DESCRIPTION	BY	DATE
1	Construction Set	BIC	11/9/2017

SHEET TITLE:
Structural Notes

PROJECT DESCRIPTION:
Huber Home
3062 Edwards Drive
Idaho Falls, Idaho

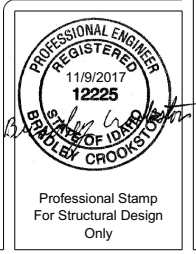
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Crookston Custom Designs
1712 East 2450 North
North Logan, Utah 84341
Phone: 435-757-2906

JOB #
17065

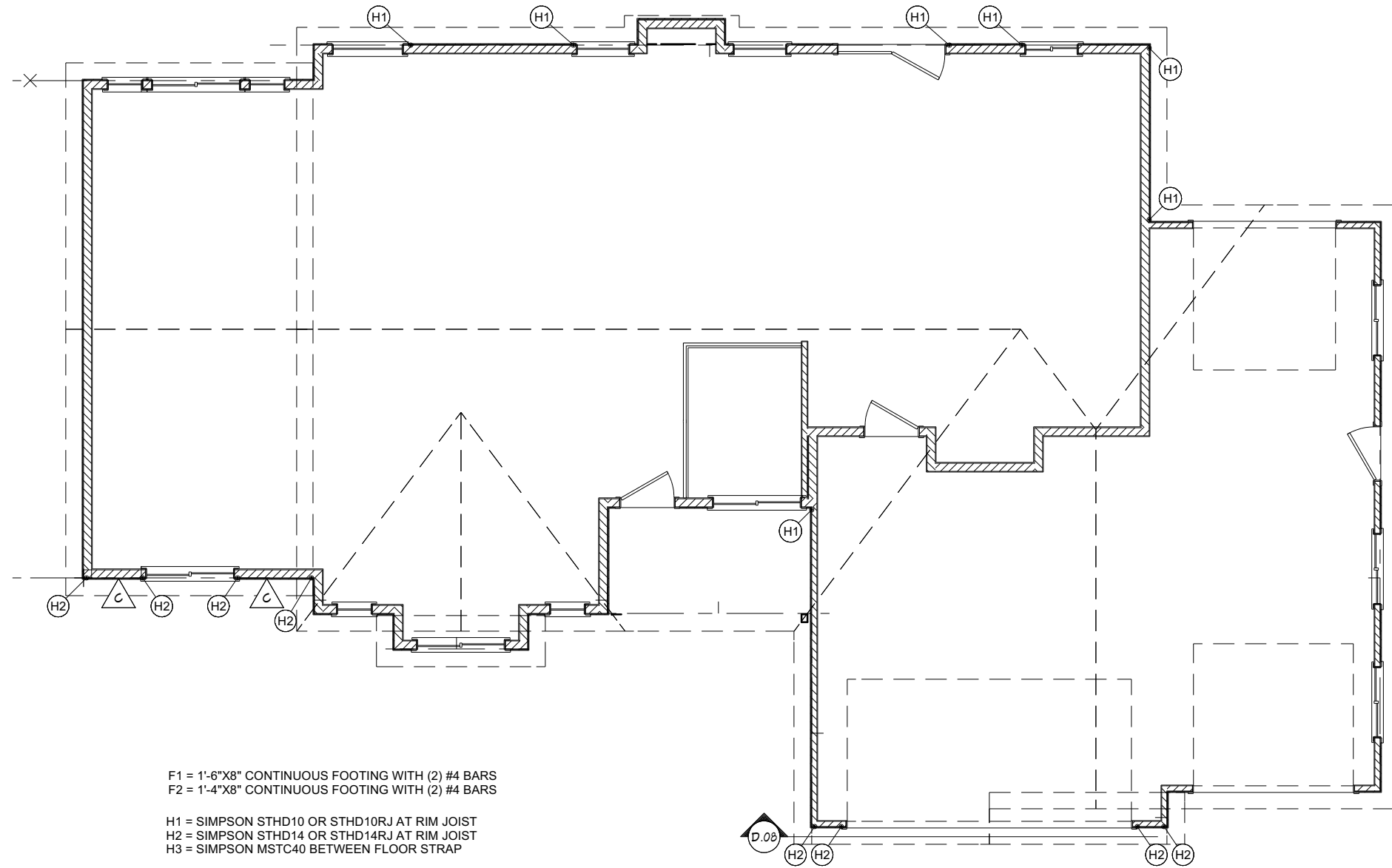
SCALE:
1/4" = 1'

SHEET:
S-1





NO.	DESCRIPTION	BY	DATE
1	Construction Set	BIC	11/9/2017



F1 = 1'-6"X8" CONTINUOUS FOOTING WITH (2) #4 BARS
 F2 = 1'-4"X8" CONTINUOUS FOOTING WITH (2) #4 BARS
 H1 = SIMPSON STHD10 OR STHD10RJ AT RIM JOIST
 H2 = SIMPSON STHD14 OR STHD14RJ AT RIM JOIST
 H3 = SIMPSON MSTC40 BETWEEN FLOOR STRAP

SHEAR WALL SCHEDULE

TYPE	EDGE NAIL SPACING	FIELD NAIL SPACING	EDGE STAPLE SPACING	FIELD STAPLE SPACING
A	6"	12"	3"	12"
B	4"	12"	2"	12"
C	3"	12"	NOT PERMITTED	NOT PERMITTED
D	2"	12"	NOT PERMITTED	NOT PERMITTED

NOTES:

- 1) SHEETING NAILS ARE TO BE 8d COMMON NAILS
- 2) ALL PANEL EDGES ARE TO HAVE BLOCKING WITH EDGE NAILING
- 3) TYPE C AND D WALLS ARE TO HAVE 3" NOMINAL FRAMING AT ALL PANEL EDGES.
- 4) UNLESS NOTED OTHERWISE SHEET ALL EXTERIOR WALLS AS TYPE "A" WALLS
- 5) STAPLES SHALL BE 16 GAGE AND HAVE A MINIMUM CROWN WIDTH OF 7/16" AND SHALL BE INSTALLED WITH THEIR CROWN PARALLEL TO THE LONG DIMENSION OF THE FRAMING MEMBERS.
- 6) STAPLES SHALL HAVE 1" MINIMUM PENETRATION IN FRAMING

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 Shear Wall Plan
PROJECT DESCRIPTION:
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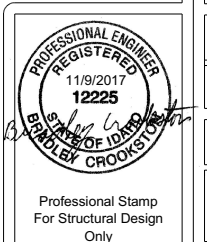
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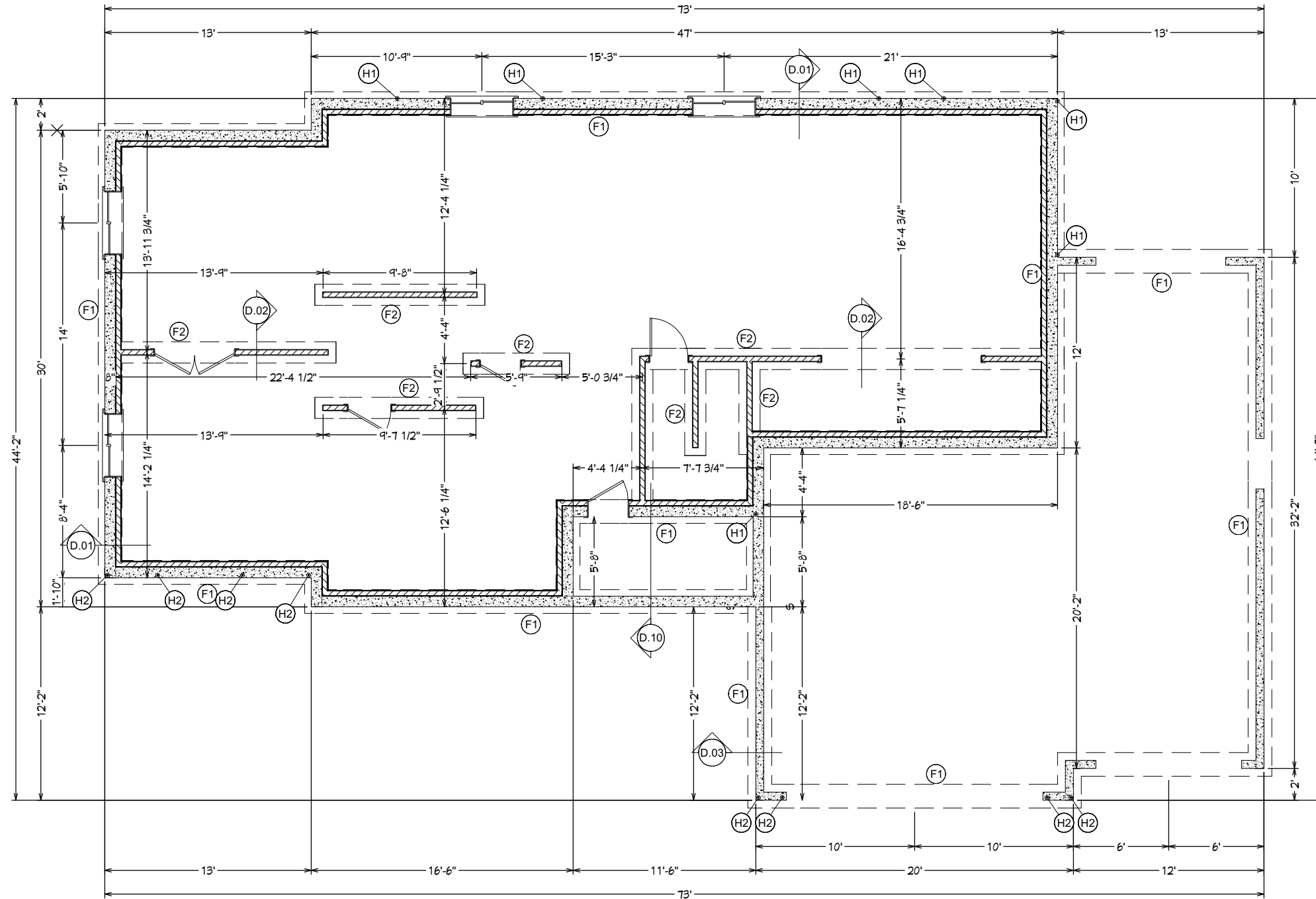
SCALE:
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SHEET:
S-2





NO.	DESCRIPTION	BY	DATE
1	Construction Set	BIC	11/9/2017



FOUNDATION PLAN

F1 = 1'-6"x8" CONTINUOUS FOOTING WITH (2) #4 BARS
 F2 = 1'-4"x8" CONTINUOUS FOOTING WITH (2) #4 BARS

H1 = SIMPSON STHD10 OR STHD10RJ AT RIM JOIST
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 Foundation Plan
PROJECT DESCRIPTION:
 Huber Home
 3062 Edwards Drive
 Idaho Falls, Idaho

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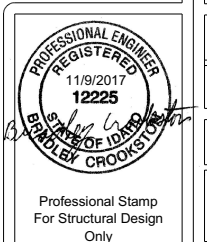
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SCALE:
 1/4" = 1'

SHEET:

S-3



Professional Stamp
 For Structural Design
 Only



NO.	DESCRIPTION	BY	DATE
1	Construction Set	BIC	11/9/2017

SHEET TITLE:
Sections & Details

PROJECT DESCRIPTION:
Huber Home
3062 Edwards Drive
Idaho Falls, Idaho

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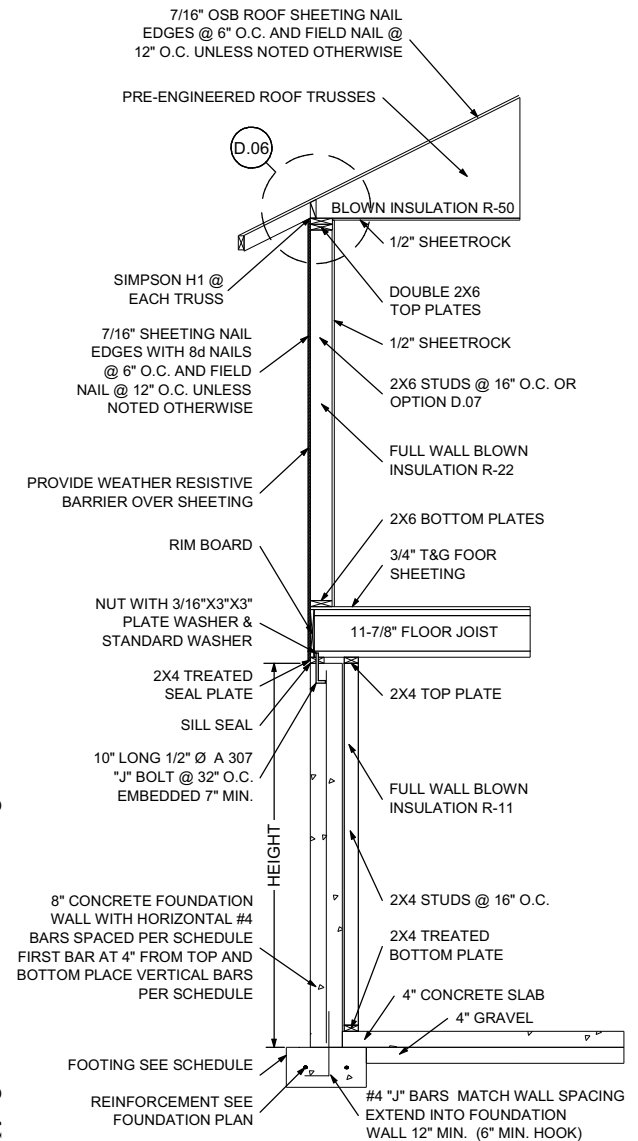
SCALE:
1/4" = 1'

SHEET:
S-4

- F1 = 10" LONG 1/2" Ø A 307 "J" BOLT @ 32" O.C. EMBEDDED 7" MIN.
- F2 = NUT WITH 3/16"x3"x3" PLATE WASHER & STANDARD WASHER
- F3 = 2X4 TREATED SEAL PLATE
- F4 = SILL SEAL
- F5 = RIM BOARD
- F6 = 8" CONCRETE FOUNDATION WALL WITH HORIZONTAL #4 BARS SPACED PER SCHEDULE
- F7 = FOOTING SEE SCHEDULE
- F8 = REINFORCEMENT SEE SCHEDULE
- F9 = #4 "J" BARS MATCH WALL SPACING EXTEND INTO FOUNDATION WALL 12" MIN. (6" MIN. HOOK)
- F10 = 4" CONCRETE SLAB
- F11 = 4" GRAVEL
- F12 = #4 BENT DOWELS @ 16" O.C. EXTEND INTO WALL AND SLAB 16" MINIMUM
- F13 = SLAB REINFORCEMENT PER FRAMING PLAN SET BARS AT 1-1/2" OFF BOTTOM OF SLAB MINIMUM LAP DISTANCE 16"
- F14 = MINIMUM SLAB THICKNESS PER FRAMING PLAN
- F15 = 3" MINIMUM SLAB SUPPORT EDGE
- F16 = CONCRETE SLAB PER FRAMING PLAN PROVIDE (4000 PSI MIN COMPRESSIVE STRENGTH) DESIGNED FOR 100 PSF LIVE LOAD

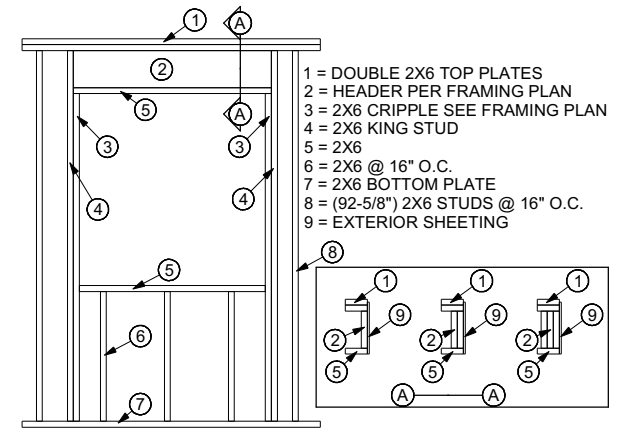
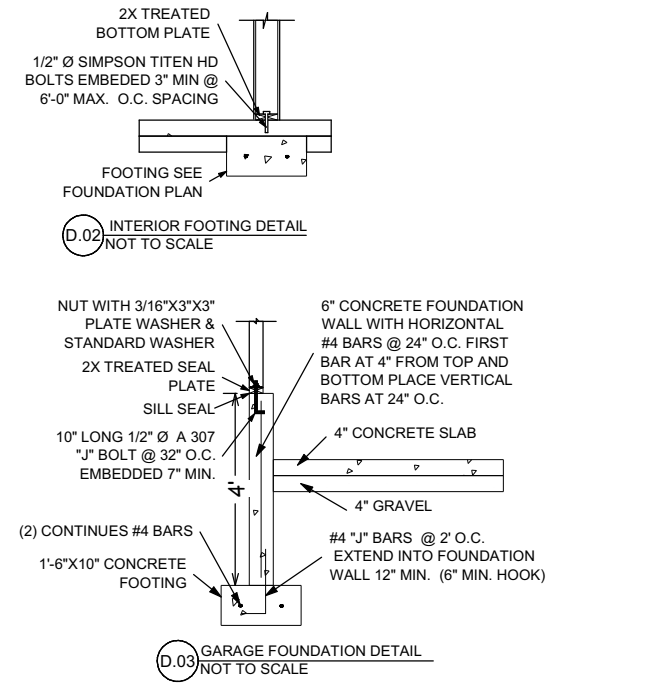
- W1 = 7/16" SHEETING NAIL EDGES WITH 8d NAILS @ 6" O.C. AND FIELD NAIL @ 12" O.C. UNLESS NOTED OTHERWISE
- W2 = DOUBLE 2X6 TOP PLATES
- W3 = 2X6 STUDS @ 16" O.C.
- W4 = 2X6 TREATED BOTTOM PLATE
- W5 = 2X4 TOP PLATES
- W6 = 2X4 BOTTOM PLATE
- W7 = 2X4 STUDS @ 16" O.C.
- W8 = 2X4 TREATED BOTTOM PLATE
- W9 = 2X4 TREATED BOTTOM PLATE
- W10 = 3/4" T&G FLOOR SHEETING
- W11 = 11-7/8" FLOOR JOIST
- W12 = FULL WALL BLOWN INSULATION R-22
- W13 = WALL INSULATION R-11
- W14 = MOISTURE PROTECTION PER CODE

FOUNDATION WALL			FOOTING		
H	VERTICAL	HORIZONTAL	WIDTH	HEIGHT	#4 BARS
8'-0"	24" O.C.	24" O.C.	1'-6"	10"	2
9'-0"	18" O.C.	18" O.C.	2'-0"	11"	3
10'-0"	16" O.C.	18" O.C.	2'-6"	12"	4
11'-0"	10" O.C.	18" O.C.	3'-0"	12"	4
12'-0"	8" O.C.	18" O.C.	4'-0"	12"	6

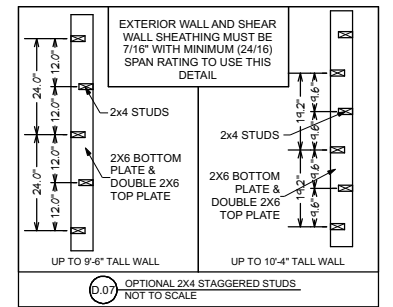


FOUNDATION WALL			FOOTING		
H	VERTICAL	HORIZONTAL	WIDTH	HEIGHT	#4 BARS
8'-0"	24" O.C.	24" O.C.	1'-6"	8"	2
9'-0"	18" O.C.	18" O.C.	2'-0"	11"	3
10'-0"	16" O.C.	18" O.C.	2'-6"	12"	4
11'-0"	10" O.C.	18" O.C.	3'-0"	12"	4
12'-0"	8" O.C.	18" O.C.	4'-0"	12"	6

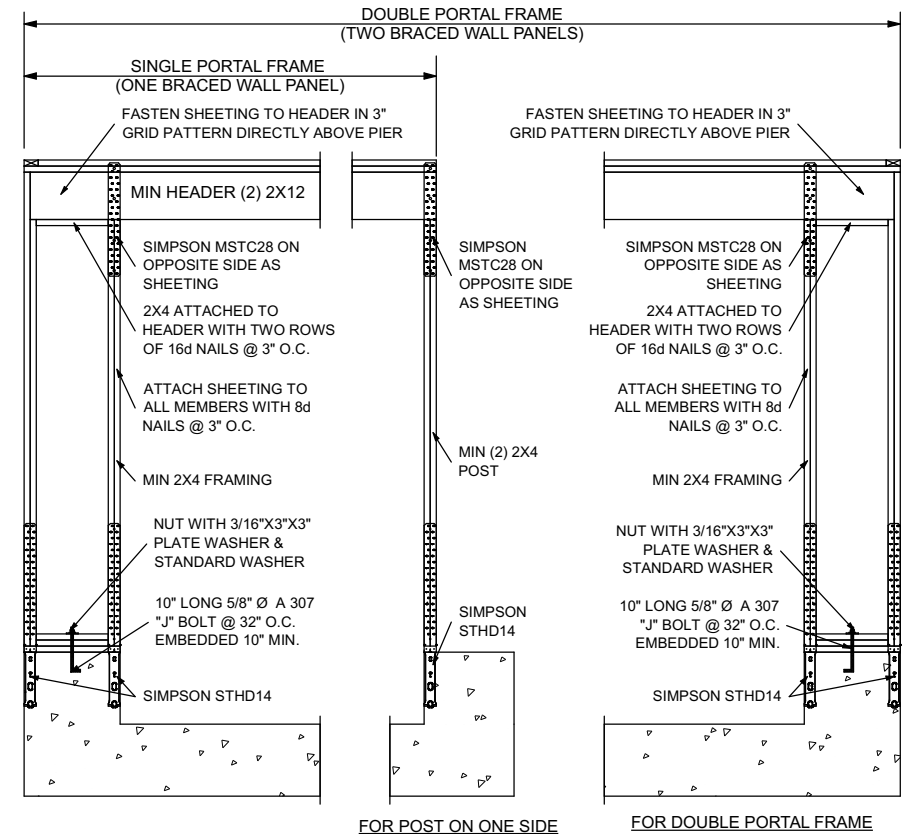
D.01 WALL SECTION NOT TO SCALE



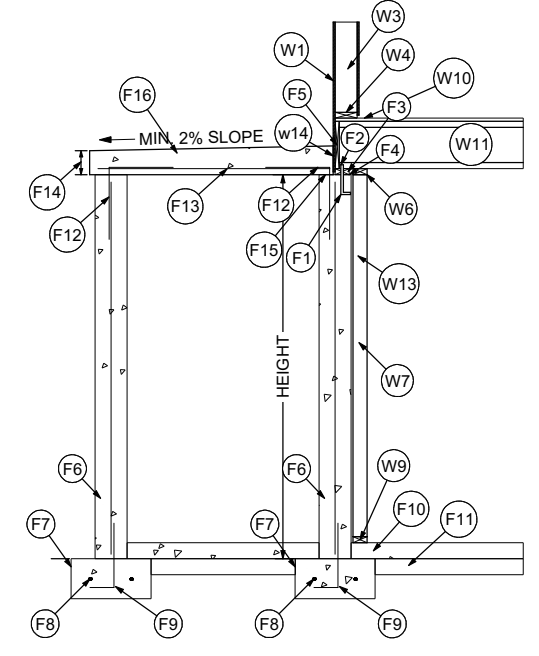
D.04 8' WALL WINDOW OPENING



D.07 OPTIONAL 2X4 STAGGERED STUDS NOT TO SCALE



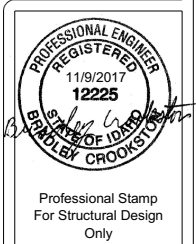
D.08 PORTAL FRAME SYSTEM NOT TO SCALE



D.10 WALL SECTION NOT TO SCALE

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FASTENING SCHEDULE

CONNECTION	FASTENING (a), (m)	LOCATION
1. Joist to sill or girder	3 - 8d common (2-1/2" x 0.131") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail
2. Bridging to joist	2 - 8d common (2-1/2" x 0.131") 2 - 3" x 0.131" nails 2 - 3" 14 gage staples	toenail each end
3. 1" x 6" subfloor or less to each joist	2 - 8d common (2-1/2" x 0.131")	face nail
4. Wider than 1" x 6" subfloor to each joist	3 - 8d common (2-1/2" x 0.131")	face nail
5. 2" subfloor to joist or girder	2 - 16d common (3-1/2" x 0.162")	blind and face nail
6. Sole plate to joist or blocking	16d (3-1/2" x 0.135") at 16" o.c. 3" x 0.131" nails at 8" o.c. 3" 14 gage staples at 12" o.c.	typical face nail
Sole plate to joist or blocking at braced Wall panel	3 - 16d (3-1/2" x 0.135") at 16" o.c. 4 - 3" x 0.131" nails at 16" o.c. 4 - 3" 14 gage staples at 16" o.c.	braced wall panels
7. Top plate to stud	2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	end nail
8. Stud to sole plate	4 - 8d common (2-1/2" x 0.131") 4 - 3" x 0.131" nails 3 - 3" 14 gage staples 2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail end nail
9. Double studs	16d (3-1/2" x 0.135") at 24" o.c. 3" x 0.131" nail at 8" o.c. 3" 14 gage staple at 8" o.c.	face nail
10. Double top plates	16d (3-1/2" x 0.135") at 16" o.c. 3" x 0.131" nail at 12" o.c. 3" 14 gage staple at 12" o.c.	typical face nail
Double top plates	8 - 16d common (3-1/2" x 0.162") 12 - 3" x 0.131" nails 12 - 3" 14 gage staples	lap splice
11. Blocking between joists or rafters to top plate	3 - 8d common (2-1/2" x 0.131") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail
12. Rim joist to top plate	8d (2-1/2" x 0.131") at 6" o.c. 3" x 0.131" nail at 6" o.c. 3" 14 gage staple at 6" o.c.	toenail
13. Top plates, laps and intersections	2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	face nail
14. Continuous header, two pieces	16d common (3-1/2" x 0.162")	16" o.c. along edge
15. Ceiling joists to plate	3 - 8d common (2-1/2" x 0.131") 5 - 3" x 0.131" nails 5 - 3" 14 gage staples	toenail
16. Continuous header to stud	4 - 8d common (2-1/2" x 0.131")	toenail
17. Ceiling joists, laps over partitions (see Section 2308.10.4.1, Table 2308.10.4.1)	3 - 16d common (3-1/2" x 0.162") min., Table 2308.10.4.1 4 - 3" x 0.131" nails 4 - 3" 14 gage staples	face nail
18. Ceiling joists to parallel rafters (see Section 2308.10.4.1, Table 2308.10.4.1)	3 - 16d common (3-1/2" x 0.162") minimum, Table 2308.10.4.1 4 - 3" x 0.131" nails 4 - 3" 14 gage staples	face nail
19. Rafter to plate (see Section 2308.10.1, Table 2308.10.1)	3 - 8d common (2-1/2" x 0.131") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail

CONNECTION	FASTENING (a), (m)	LOCATION
20. 1" diagonal brace to each stud and plate	2 - 8d common (2-1/2" x 0.131") 2 - 3" x 0.131" nails 3 - 3" 14 gage staples	face nail
21. 1" x 8" sheathing to each bearing	3 - 8d common (2-1/2" x 0.131")	face nail
22. Wider than 1" x 8" sheathing to each bearing	3 - 8d common (2-1/2" x 0.131")	face nail
23. Built-up corner studs	16d common (3-1/2" x 0.162") 3" x 0.131" nails 3" 14 gage staples	24" o.c. 16" o.c. 16" o.c.
24. Built-up girder and beams	20d common (4" x 0.192") 32" o.c. 3" x 0.131" nail at 24" o.c. 3" 14 gage staple at 24" o.c. 2 - 20d common (4" x 0.192") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	face nail at top and bottom staggered on opposite sides face nail at ends and at each splice
25. 2" planks	16d common (3-1/2" x 0.162")	at each bearing
26. Collar tie to rafter	3 - 10d common (3" x 0.148") 4 - 3" x 0.131" nails 4 - 3" 14 gage staples	face nail
27. Jack rafter to hip	3 - 10d common (3" x 0.148") 4 - 3" x 0.131" nails 4 - 3" 14 gage staples 2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail face nail
28. Roof rafter to 2-by ridge beam	2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples 2 - 16d common (3-1/2" x 0.162") 3 - 3" x 0.131" nails 3 - 3" 14 gage staples	toenail face nail
29. Joist to band joist	3 - 16d common (3-1/2" x 0.162") 4 - 3" x 0.131" nails 4 - 3" 14 gage staples	face nail
30. Ledger strip	3 - 16d common (3-1/2" x 0.162") 4 - 3" x 0.131" nails 4 - 3" 14 gage staples	face nail at each joist
31. Wood structural panels and particleboard (b) Subfloor, roof and wall sheathing (to framing)	1/2" and less 19/32" to 3/4" 7/8" to 1" 11/8" to 1 1/4" 3/4" and less 7/8" to 1" 11/8" to 1 1/4"	6d (c), 1 2-3/8" x 0.113" nail (n) 1-3/4" 16 gage (o) 8d (d) or 6d (e) 2-3/8" x 0.113" nail (p) 2" 16 gage staple (p) 8d (c) 10d (d) or 8d (e) 6d (e) 8d (e) 10d (d) or 8d (e)
Single floor (combination subfloor-underlayment to framing)	7/8" to 1" 11/8" to 1 1/4" 3/4" and less 7/8" to 1" 11/8" to 1 1/4"	8d (c) 10d (d) or 8d (e) 6d (e) 8d (e) 10d (d) or 8d (e)
32. Panel siding (to framing)	1/2" or less 5/8"	6d (f) 8d (f)
33. Fiberboard sheathing (g)	1/2" 25/32"	No. 11 gage roofing nail (h) 6d common nail (2" x 0.113") No. 16 gage staple (i) No. 11 gage roofing nail (h) 8d common nail (2-1/2" x 0.131") No. 16 gage staple (i)
34. Interior paneling	1/4" 3/8"	4d (j) 6d (k)

- a. Common or box nails are permitted to be used except where otherwise stated.
- b. Nails spaced at 6 inches on center at edges, 12 inches at intermediate supports except 6 inches at supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
- c. Common or deformed shank (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
- d. Common (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
- e. Deformed shank (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
- f. Corrosion-resistant siding (6d - 17/8" x 0.106"; 8d - 23/8" x 0.128") or casing (6d - 2" x 0.099"; 8d - 2 1/2" x 0.113") nail.
- g. Fasteners spaced 3 inches on center at exterior edges and 6 inches on center at intermediate supports, when used as structural sheathing. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications.
- h. Corrosion-resistant roofing nails with 7/16-inch-diameter head and 1-1/2-inch length for 1/2-inch sheathing and 1-3/4-inch length for 25/32-inch sheathing.

- i. Corrosion-resistant staples with nominal 7/16-inch crown or 1-inch crown and 1-1/4-inch length for 1/2-inch sheathing and 1-inch length for 25/32-inch sheathing. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
- j. Casing (1-1/2" x 0.080") or finish (1-1/2" x 0.072") nails spaced 6 inches on panel edges, 12 inches at intermediate supports.
- k. Panel supports at 24 inches. Casing or finish nails spaced 6 inches on panel edges, 12 inches at intermediate supports.
- l. For roof sheathing applications, 8d nails (2 1/2" x 0.113") are the minimum required for wood structural panels.
- m. Staples shall have a minimum crown width of 7/16 inch.
- n. For roof sheathing applications, fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.
- o. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports for subfloor and wall sheathing and 3 inches on center at edges, 6 inches at intermediate supports for roof sheathing.
- p. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.

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NO.	DESCRIPTION	BY	DATE
1	Construction Set	B/C	11/9/2017

SHEET TITLE:
Nailing Schedule

PROJECT DESCRIPTION:
Huber Home
3062 Edwards Drive
Idaho Falls, Idaho

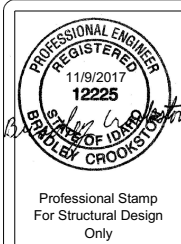
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Crookston Custom Designs
1712 East 2450 North
North Logan, Utah 84341
Phone: 435-757-2906

JOB #
17065

SCALE:
1/4" = 1'

SHEET:
S-5

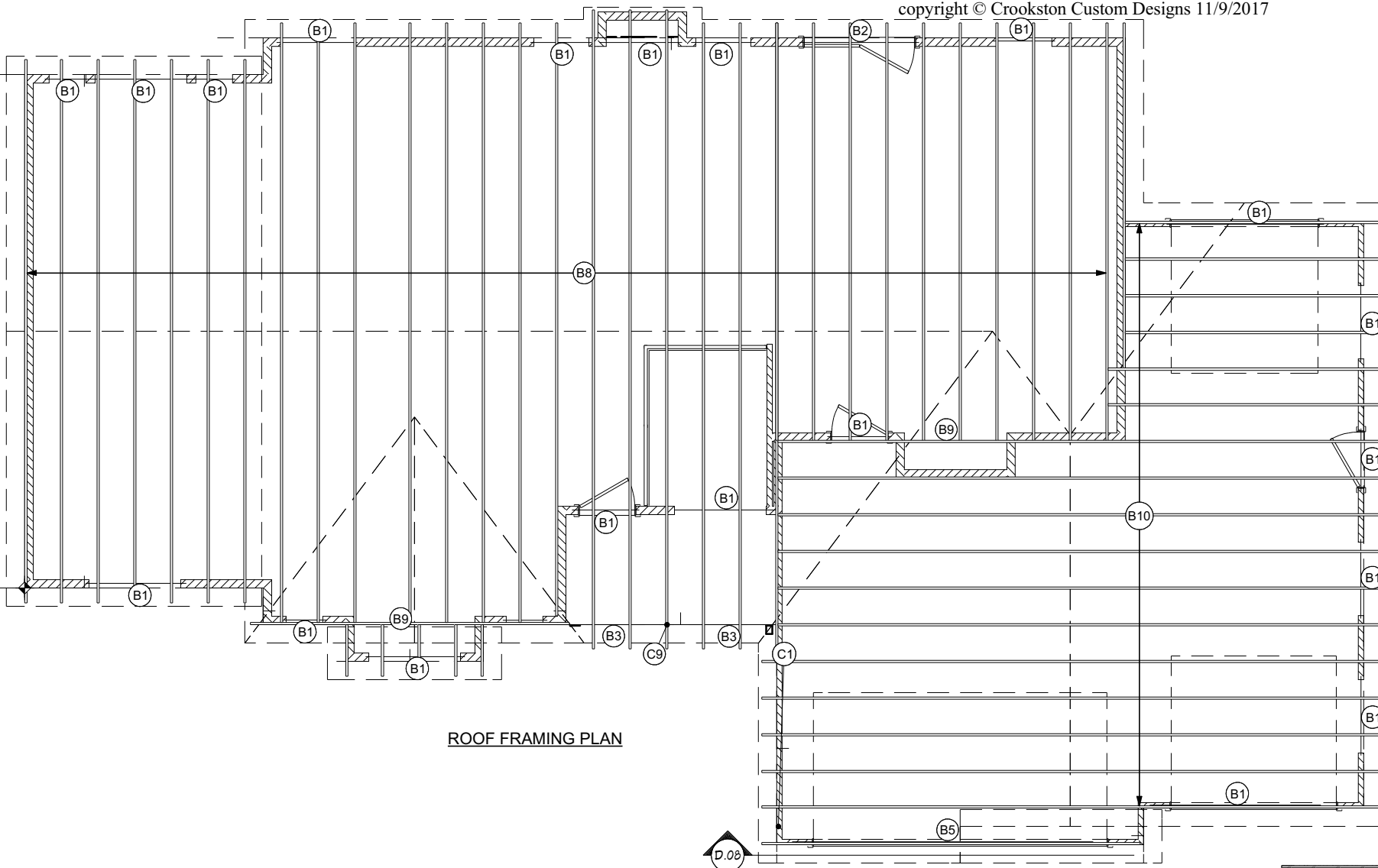


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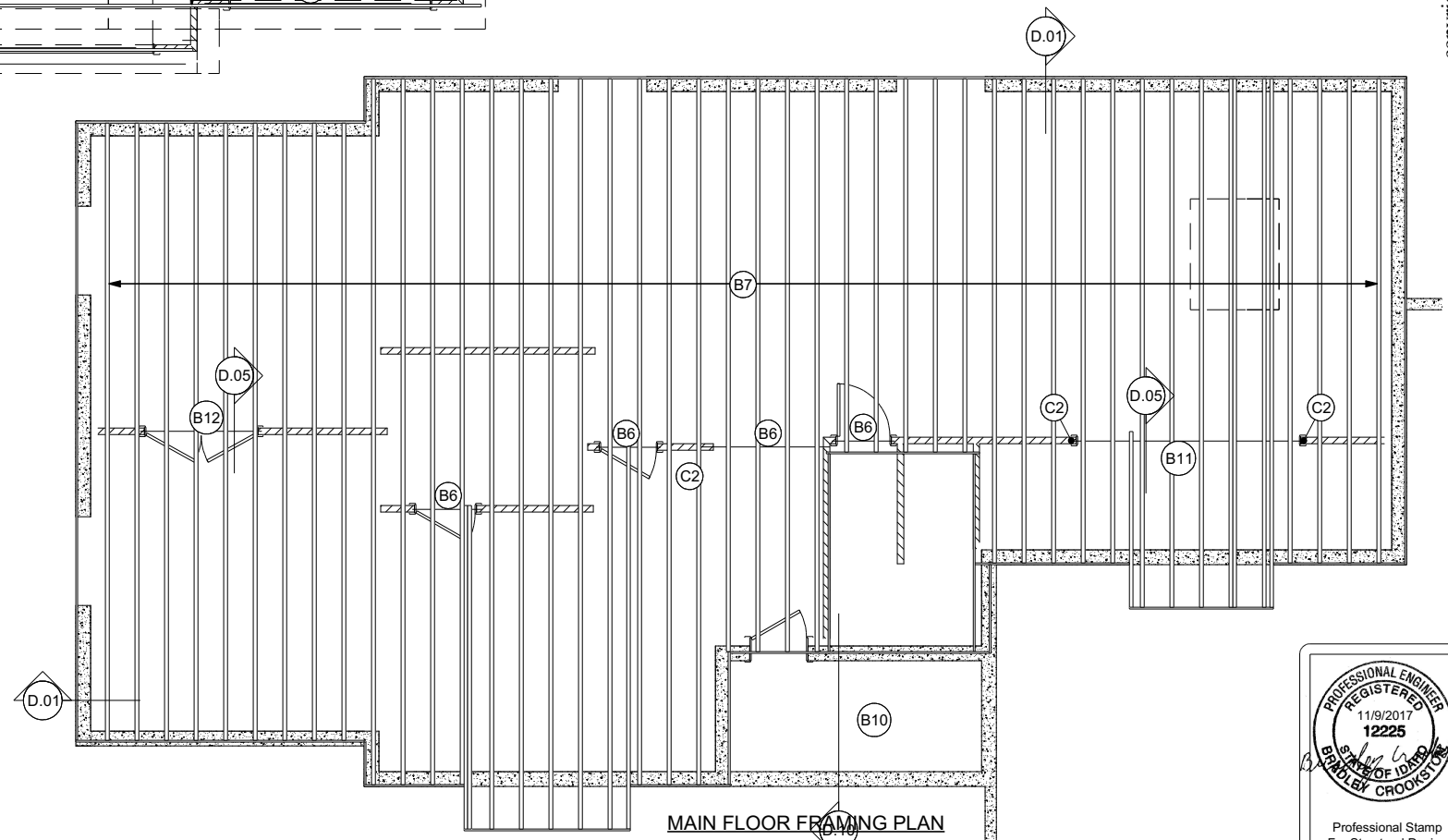
NO.	DESCRIPTION	BY	DATE
1	Construction Set	BIC	11/9/2017

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ROOF FRAMING PLAN

- B1 = (2) 2X10
 - B2 = (3) 2X10
 - B3 = (2) 2X10
 - B4 = NOT USED
 - B5 = (2) 1-3/4"X11-7/8" LVL
 - B6 = (2) 2X8
 - B7 = 11-7/8" TJI 210 @ 16" O.C.
 - B8 = PRE-ENGINEERED TRUSSES @ 24" O.C. DESIGNED BY TRUSS MANUFACTURER
 - B9 = PRE-ENGINEERED GIRDER TRUSS DESIGNED BY TRUSS MANUFACTURER
 - B10 = 6" THICK CONCRETE SLAB WITH #4 BARS @ 16" O.C. EACH DIRECTION
 - B11 = (2) 1-3/4"X9-1/2" LVL
 - B12 = (2) 1-3/4"X7-1/4" LVL
- | | |
|----|---------|
| C1 | (2) 2X4 |
| C2 | (3) 2X4 |
| C3 | (4) 2X4 |
| C4 | (5) 2X4 |
| C5 | (2) 2X6 |
| C6 | (3) 2X6 |
| C7 | (4) 2X6 |
| C8 | (5) 2X6 |



MAIN FLOOR FRAMING PLAN

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SHEET TITLE:
Framing Plans

PROJECT DESCRIPTION:
Huber Home
3002 Edwards Drive
Idaho Falls, Idaho

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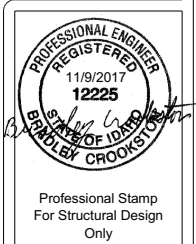
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North Logan, Utah 84341
Phone: 435-757-2906

JOB #
17065

SCALE:
1/4" = 1'

SHEET:

S-6



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