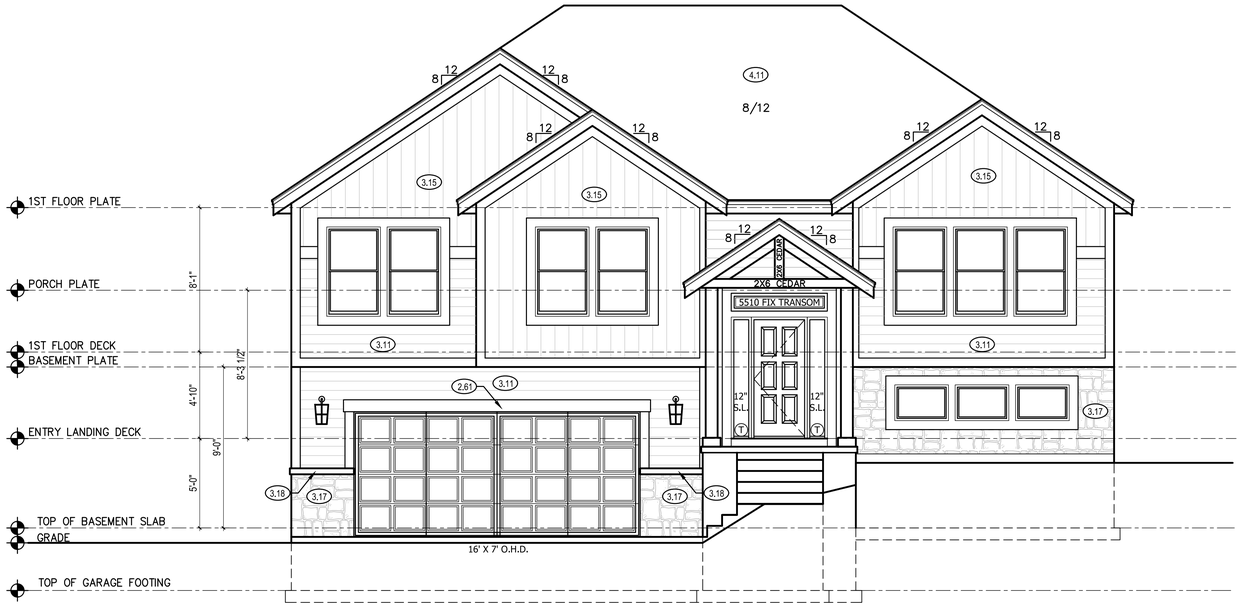
NOTE:

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

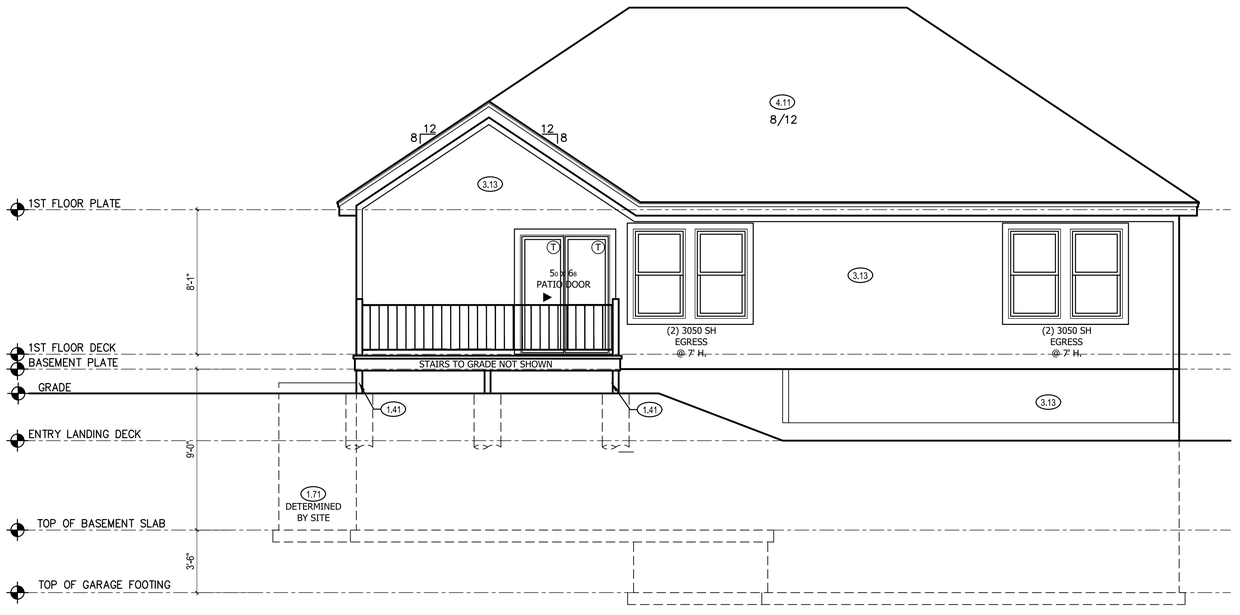
ELEVATIONS:
GARAGE DOORS SHALL MEET DASMA FOR ULTIMATE DESIGN WIND SPEED OF 115 MPH REQUIREMENTS.
WALL FRAMING SHALL BE DOUGLAS FIR LARCH #2 UNLESS OTHERWISE NOTED.
IN BEARING WALLS, STUDS WHICH ARE NOT MORE THAN TEN FEET IN LENGTH SHALL BE SPACED NOT MORE THAN IS SPECIFIED BY IRC TABLE R602.3(5) FOR CORRESPONDING STUD SIZE.
WATER-RESISTIVE EXTERIOR WALL BARRIER IN WALL SECTION SHALL COMPLY WITH IRC R703.2.
WHEN APPLICABLE, CONTINUOUS STUDS BETWEEN FLOOR AND ROOF/CEILING DIAPHRAGM SHALL COMPLY WITH IRC R602.3.

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

SHIPLAP SIDING MUST BE FASTENED AT BOTH UNDERLAP AND OVERLAP.




FRONT ELEVATION 1 (2)
SCALE: 1/4" = 1'-0"




REAR ELEVATION (2)
SCALE: 1/4" = 1'-0"

**FRONT & REAR ELEVATION NOTES**

| | |
|---|---|
| 1.12 | TOP OF FOOTING DEPTH DETERMINED PER SITE. |
| 1.71 | CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION. |
| 2.61 | 5/4"X8" TRIM. 1 1/2" ARCH ON GARAGE DOOR TRIM UNLESS NOTED OTHERWISE ON ELEVATION. |
| 2.62 | DOUBLED 1X8" LP SMART TRIM. 1 1/2" ARCH ON GARAGE DOOR TRIM UNLESS NOTED OTHERWISE ON ELEVATION. |
| 3.11 | LP SMART LAP SIDING WITH 5/4X6 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. |
| 3.13 | LP SMART PANEL SIDING WITH 3/4X4 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. BOTTOM OF SIDING SHALL BE A MINIMUM OF 6" ABOVE GRADE. |
| 3.15 | LP SMART BOARD AND BATTEN. |
| 3.17 | MANUFACTURED STONE VENEER. |
| 3.18 | CAST STONE CAP |
| 3.57 | 26"X6" CEDAR BRACKET, RE: 3/A1 |
| 4.11 | MINIMUM ROOFING COMPOSITION– 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE. |
| 4.31 | BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. |

**GENERAL NOTES**

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARD. EX: 3050SH= 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX= 3'-0" X 6'-6" FIXED

**SHEET INDEX**



| FINISHED | |
|---|---|
| MAIN LEVEL | 1416 |
| LOWER LEVEL | 448 |
| TOTAL | 1864 |
| | |
| | |
| **UNFINISHED** | |
| LOWER LEVEL - UNFINISHED | 59 |
| DECK | 120 |
| GARAGE | 573 |

| ENGINEER | TRUSS | I-JOIST |
|---|---|---|
| EVERSTEAD | PREMIER | NA |

| REVISIONS | | |
|---|---|---|
| NO. | DATE | DESCRIPTION |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |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clover & hive
120 SE 30TH ST.
LEE'S SUMMIT, MO 64082
816-246-6700




ADDRESS:
3513 SE CORBIN DR

# CHERRY BLOSSOM
FARM HOUSE
COBEY CREEK #149

PROFESSIONAL SEAL:


EVERSTEAD IS RESPONSIBLE FOR STRUCTURAL SPECIFICATIONS ONLY. ARCHITECTURAL PLANS WERE PRODUCED BY OTHERS.


EVERSTEAD
3741 NE TROON DRIVE
SUITE 200
LEE'S SUMMIT, MO 64064
816-399-4901


DRAWN BY:
S.E.S

ISSUE DATE:
07.10.2023

SHEET NUMBER:
**A1.0**

NOTE:

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

ELEVATIONS:
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WALL FRAMING SHALL BE DOUGLAS FIR LARCH #2 UNLESS OTHERWISE NOTED.
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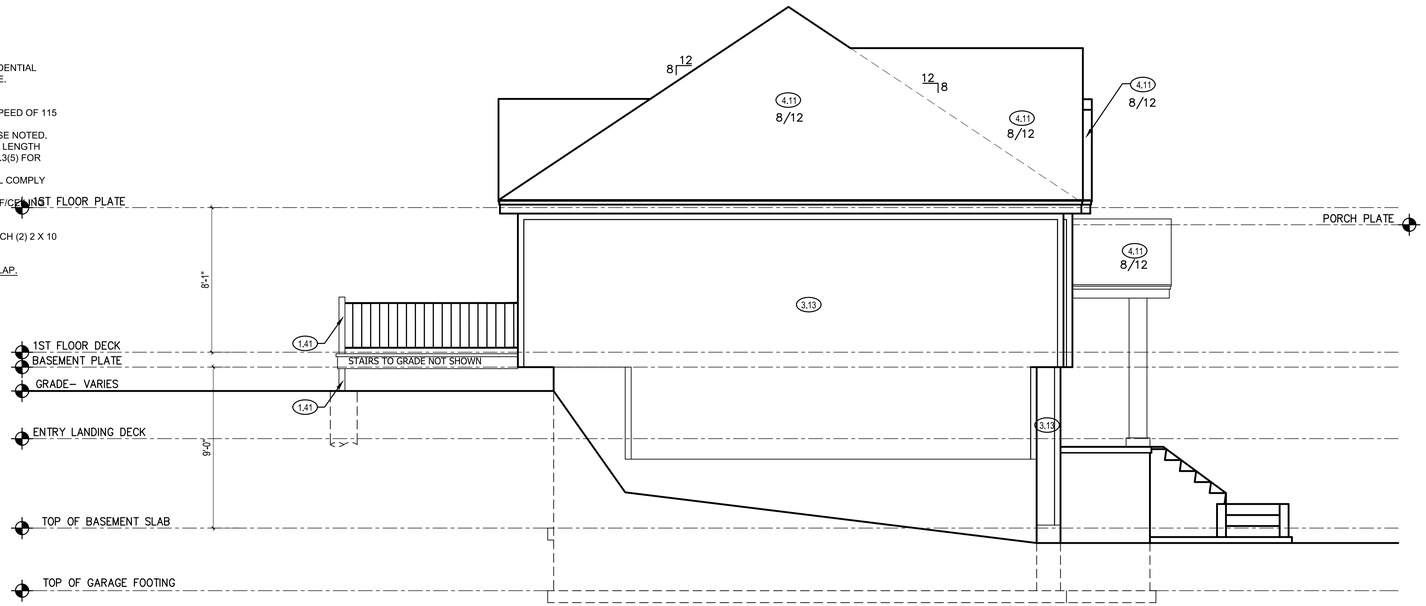
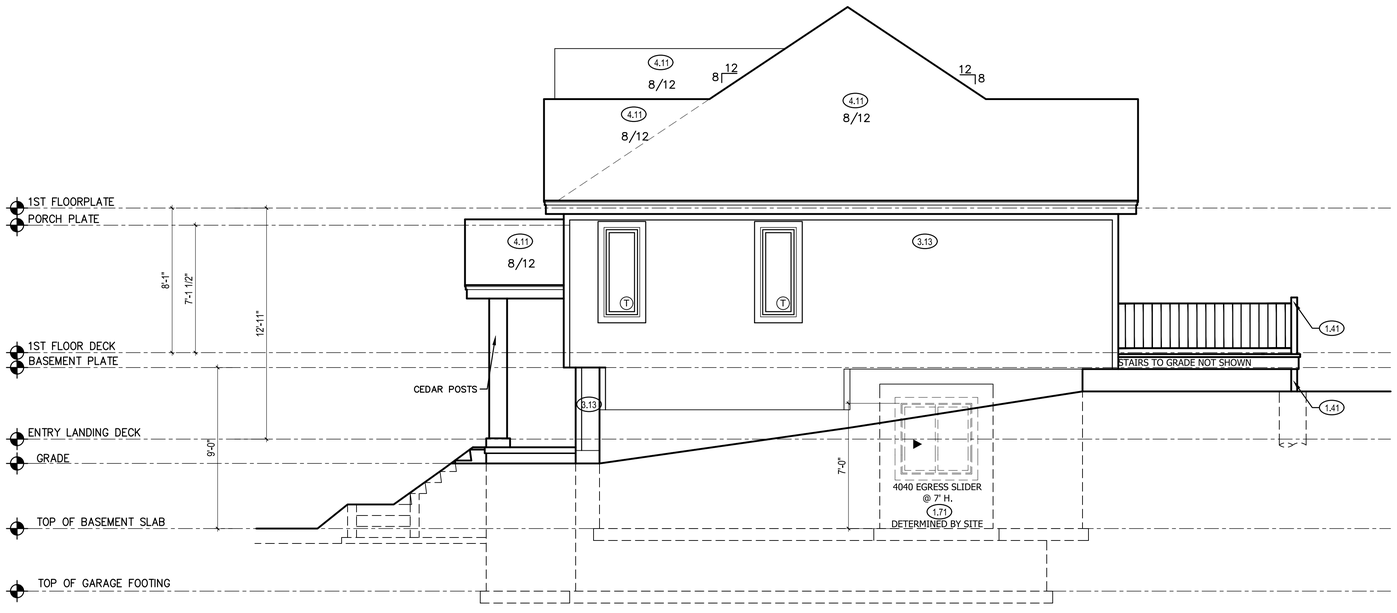
ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

SHIPLAP SIDING MUST BE FASTENED AT BOTH UNDERLAP AND OVERLAP.




LEFT ELEVATION (2)
SCALE: 1/4" = 1'-0"




RIGHT ELEVATION (1)
SCALE: 1/4" = 1'-0"

**LEFT & RIGHT SIDE ELEVATION NOTES**

| | |
|---|---|
| 1.12 | TOP OF FOOTING DEPTH DETERMINED PER SITE. |
| 1.23 | STEP FOUNDATION TO BELOW FROST LINE AS REQUIRED PER SITE |
| 1.41 | 4X4 CEDAR POST |
| 1.71 | CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION. |
| 3.11 | LP SMART PANEL LAP SIDING WITH 5/4X6 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. |
| 3.13 | LP SMART PANEL SIDING WITH 3/4X4 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. |
| 3.38 | 12"X12" BOX COLUMN WITH 1X8 PANEL WRAP. 1X6 TRIM AT BASE. 1X4 TRIM AT TOP. 1X2 VERTICAL TRIM ALL SIDES. |
| 4.11 | MINIMUM ROOFING COMPOSITION– 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE. |
| 4.31 | BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. |
| 7.67 | BACK WALL OF GARAGE. |

**GENERAL NOTES**

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARD. EX: 3050SH= 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX= 3'-0" X 6'-6" FIXED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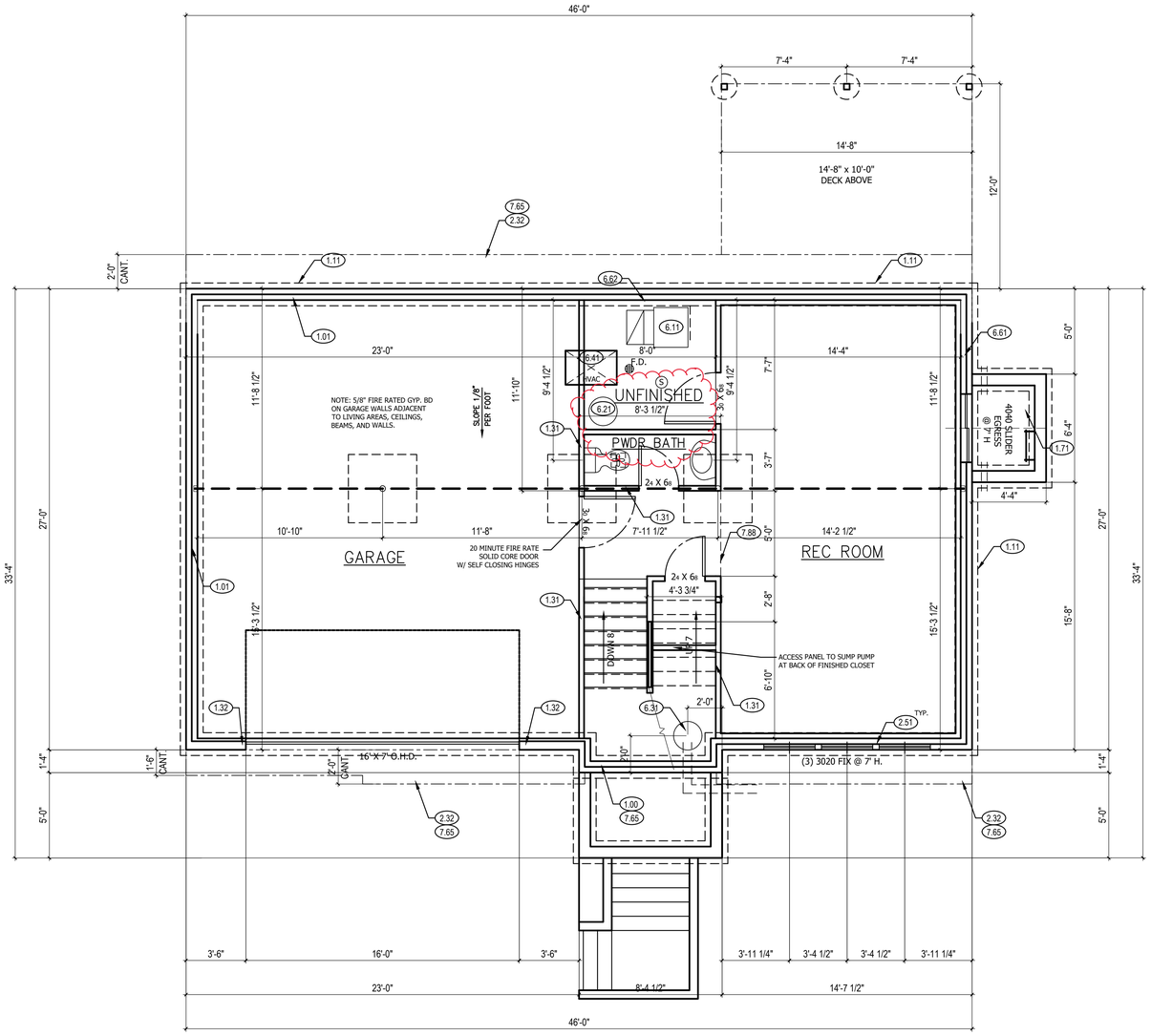


FOUNDATION PLAN 1

SCALE: 1/4" = 1'-0"

**FOUNDATION PLAN NOTES**

| | |
|---|---|
| 1.00 | HOLD SILL PLATE BACK 2" |
| 1.01 | HOLD SILL PLATE BACK 4" |
| 1.11 | CONTINUOUS CONCRETE FOOTING |
| 1.21 | RECESS TOP OF FOUNDATION WALL |
| 1.31 | 2X4 STUD WALL WITH TREATED SILL PLATE |
| 1.32 | 2X6 STUD WALL WITH TREATED SILL PLATE |
| 1.71 | CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION. |
| 2.32 | INSULATE CANTILEVER AS REQUIRED PRIOR TO BLOCKING |
| 2.34 | PROVIDE ADDITIONAL BRACING FOR ISLAND ABOVE. |
| 6.11 | DIRECT FURNACE. FUEL BURNING APPLIANCES SHALL BE DIRECT VENTED TO EXTERIOR FOR COMBUSTION AIR. |
| 6.21 | HOT WATER HEATER WITH THERMAL EXPANSION CONTROL DEVICE |
| 6.31 | SUMP PIT AND PUMP. PROVIDE ELECTRICAL GFCI PROTECTION. PROVIDE SLEEVE THROUGH FOOTING. |
| 6.41 | HVAC CHASE ABOVE |
| 6.61 | 200 AMP ELECTRICAL PANEL. LOCATION TO BE DETERMINED ON SITE. |
| 6.62 | UFER GROUND– VERIFY LOCATION WITH PROJECT MANAGER. |
| 7.61 | DASHED LINE REPRESENTS STAIRS ABOVE |
| 7.65 | LINE OF FLOOR ABOVE |

**GENERAL NOTES**

BACK WATER VALVES REQUIRED ON ALL BASEMENT PLUMBING FIXTURES. PROVIDE MEANS OF CONTROLLING PRESSURE CAUSED BY THERMAL EXPANSION.

ALL SILLS & SLEEPERS SUPPORTED ON CONCRETE OR MASONRY SHALL BE OF DECAY-RESISTANT MATERIALS.

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.

SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL PLACEMENT IS TO BE DETERMINED BY MUNICIPAL REQUIREMENTS.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARD. EX: 3050SH= 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX= 3'-0" X 6'-6" FIXED


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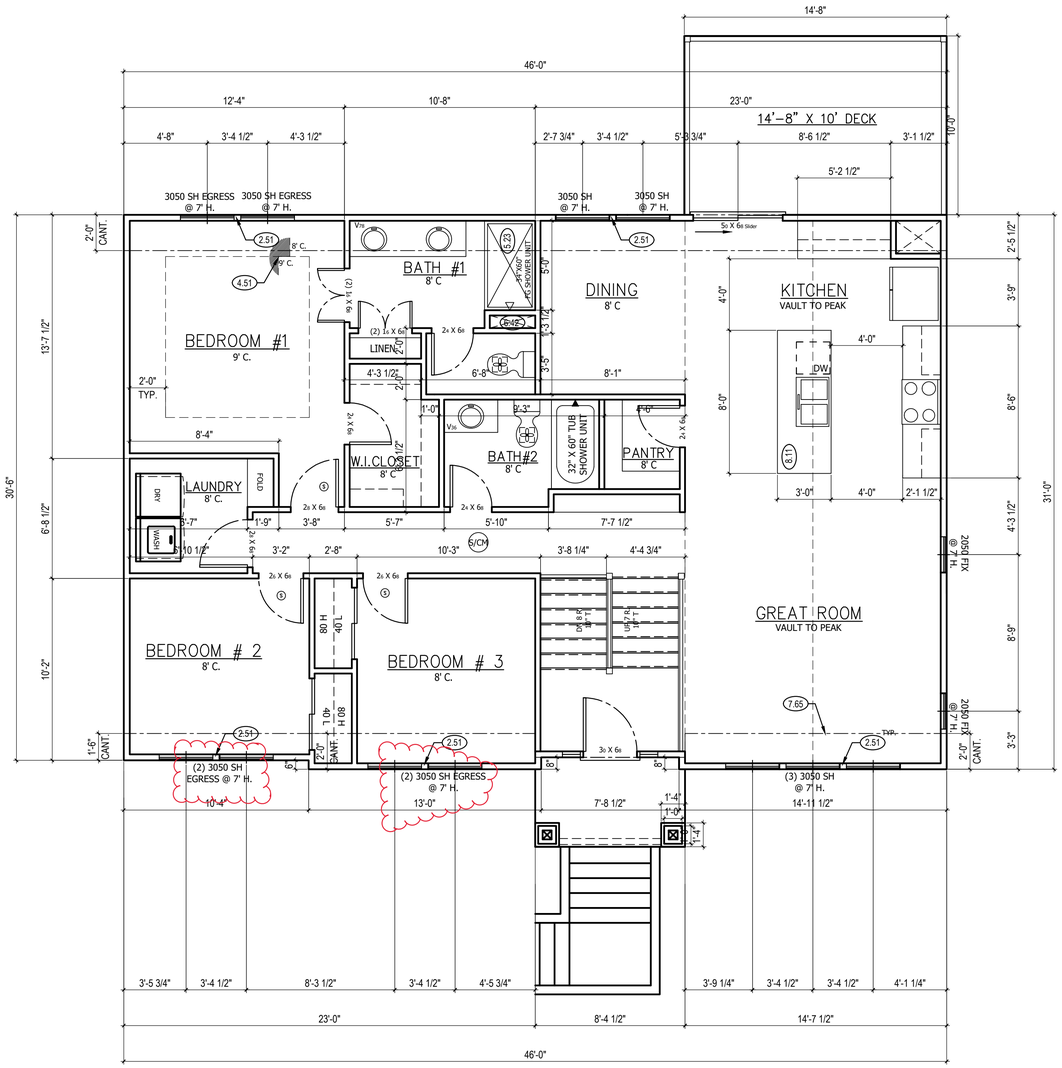


MAIN FLOOR PLAN 1

SCALE: 1/4" = 1'-0"

**MAIN FLOOR PLAN NOTES**

| | |
|---|---|
| 1.22 | EXPOSED TOP OF FOUNDATION WALL. |
| 2.11 | DOUBLE 2X4 STUD WALL |
| 2.12 | 2X6 STUD WALL |
| 2.31 | SIX SIDED TUB/SHOWER ASSEMBLY INCLUDING THERMOPLY ON EXTERIOR WALL TO 2" ABOVE TOP OF TUB DECK OR TUB/SHOWER UNIT |
| 2.32 | INSULATE CANTILEVER AS REQUIRED PRIOR TO BLOCKING |
| 7.41 | OPEN HANDRAILS |
| 2.41 | CURB STAIR SYSTEM WITH OPEN HANDRAILS |
| 2.45 | STAIRS TO LOWER LEVEL UNFINISHED |
| 2.51 | 3 STUDS BETWEEN WINDOW UNITS |
| 3.38 | 12"X12" BOX COLUMN WITH 1X8 PANEL WRAP. 1X6 TRIM AT BASE. 1X4 TRIM AT TOP. 1X2 VERTICAL TRIM ALL SIDES. |
| 5.05 | HOSE BIBB |
| 5.23 | FIBERGLASS UNIT: SEE DETAIL |
| 6.42 | HVAC FLOOR OPENING. HEADER OFF FLOOR JOISTS AS REQUIRED. BUMP TRUSSES AS NECESSARY FOR HVAC ACCESS. |
| 7.65 | LINE OF FLOOR ABOVE |
| 7.66 | LINE OF FLOOR BELOW |
| 7.71 | 20 MINUTE FIRE RATED SOLID CORE WITH SELF-CLOSING HINGES |
| 7.88 | CHANGE IN FLOORING MATERIAL |
| 8.11 | 24" CABINET + 12" OVERHANG FLAT ISLAND. VERIFY LOCATION WITH PERSONAL BUILDER. |

**GENERAL NOTES**

WINDOWS TO COMPLY WITH IRC R312.2 FOR FALL PROTECTION.

ALL EXTERIOR WALLS, INTERIOR BEARING WALLS, AND INTERIOR BRACED WALLS ARE AT 16" O.C. UNLESS NOTED OTHERWISE.

ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.

ROOF AND CEILING FRAMING ARE PRE-ENGINEERED WOOD TRUSSES UNLESS NOTED OTHERWISE.

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

HVAC DUCTWORK RUNNING THROUGH THE ATTIC SPACE SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE INSULATION SURROUND.

PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION.

2X6 EXTERIOR WALL OVER 12' SHALL BE DOUGLAS FIR #2.

SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL PLACEMENT IS TO BE DETERMINED BY MUNICIPAL REQUIREMENTS.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARD. EX: 3050SH= 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX= 3'-0" X 6'-6" FIXED


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TRUSS ROOF NOTES: (BY OTHERS)

1) DESIGNED FOR LIGHT ROOF COVERING
   TOP CHORD:
   LIVE LOAD/SNOW LOAD (PSF): 25
   DEAD LOAD (PSF): 10
   BOTTOM CHORD:
   DEAD LOAD(PSF): 10
2) ALL EXTERIOR AND/OR LOAD BEARING WALL HEADERS SHALL BE MIN. (2) #2 2 x 10 UNLESS OTHERWISE NOTED.
3) CONSULT ENGINEER IF TRUSSES BEAR ON INTERIOR WALLS SHOWN AS NON-LOAD BEARING ON APPROVED PRINTS.
4) ROOF IS ENGINEERED TO COMPLY WITH IRC 802

= ROOF TRUSS FRAMING DIRECTION
"G.T." = GIRDER TRUSS LOCATION
= INTERIOR LOAD BEARING WALL

NOTE:

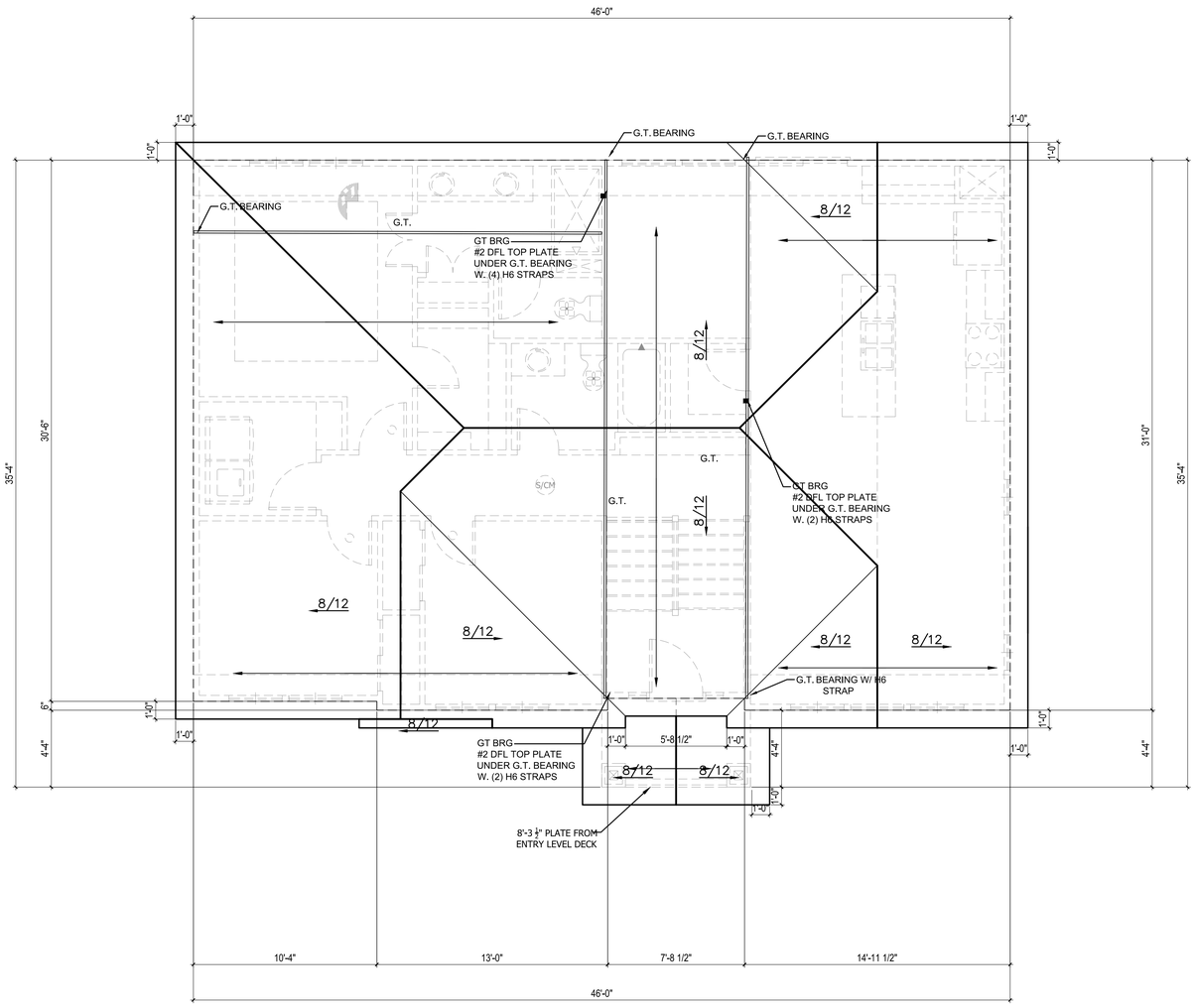
ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

ROOF:
ROOF IS DESIGNED FOR 20 PSF SNOW LOAD.
WOOD TRUSSES SHALL BE IN ACCORDANCE WITH IRC SECTION R802.10.
CEILING JOIST OR RAFTER TIE CONNECTIONS BETWEEN RAFTERS, RIDGE BEAM, REQUIRED COLLAR TIES OR RIDGE STRAPS SHALL COMPLY WITH DETAILS AND IRC SECTION R802, R802.3, R802.3.1, R802.11.

GIRDER TRUSS BEARING:
MIN. STUD PACK OF (4) 2 x 4 OR (4) 2 x 6 DOUGLAS FIR LARCH #2 (DEPENDING ON WALL THICKNESS) BELOW EACH BEARING POINT OF EACH GIRDER TRUSS, UNLESS OTHERWISE NOTED. STUD PACKS SHALL BE CARRIED DOWN TO FOUNDATION OR LOAD SUPPORTING MEMBER.

PROVIDE 2X SOLID BLOCKING SUPPORT BELOW ALL POINT LOADS CONTINUOUS TO BEARING STRUCTURE AND/OR FOUNDATION BELOW.

H6 HURRICANE STRAPS SHALL BE ATTACHED FROM TRUSS TO TOP PLATE AND TOP PLATE TO STUD PACK. CONTINUE ATTACHMENT OF SPECIFIED NUMBER OF H6 STRAPS FROM STUD TO FLOOR JOIST/RIM.




ROOF PLAN 1
SCALE: 1/4" = 1'-0"

**ROOF PLAN NOTES**

4.11 MINIMUM ROOFING COMPOSITION– 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE.

4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE.

**GENERAL NOTES**

ROOF AND CEILING FRAMING ARE PRE-ENGINEERED ROOF TRUSSES.

ASPHALT SHINGLES MIN 2/12. FLASH ALL PENETRATIONS AND INTERSECTIONS.

VENT EACH ENCLOSED ATTIC SPACE. NET AREA OPENING = 1/50TH OF VENTED AREA OR 1/300TH IF 580% OF VENTING NEAR TOP.

BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. SEE FRAMING SPECIFICATIONS FOR DETAILS.

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

HVAC DUCTWORK RUNNING THROUGH ATTIC SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE INSULATION SURROUND.

PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION.

PROVIDE FOAM INSULATION AT EXTERIOR WHERE MAIN LEVEL ROOF LINE MEETS UPPER LEVEL WALLS.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## A. GENERAL NOTES IRC 2018

**A.1** PLANS SHALL COMPLY WITH 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH AMENDMENTS AS ADOPTED BY THE APPROPRIATE GOVERNING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CHANGES OR DEVIATIONS FROM THE PLAN ARE MADE DURING CONSTRUCTION. THE ENGINEER OF RECORD MAY REQUIRE REVISED DRAWING OR CALCULATIONS AT ITS DISCRETION. IF DISCREPANCIES ARE IDENTIFIED THE MOST CONSERVATIVE SPECIFICATION SHALL APPLY.

**A.2 LOADING ASSUMPTIONS**

**DEAD**

| | |
|---|---|
| ROOF | 10 PSF UNO |
| ROOF + CEILING (NO STORAGE) | 15 PSF |
| ROOF + CEILING (STORAGE) | 20 PSF |
| CEILING JOISTS (STORAGE) | 10 PSF |
| EXTERIOR BALCONY / DECK | 10 PSF |
| INTERIOR FLOOR (MAIN FLOOR) | 15 PSF |
| INTERIOR FLOOR (UPPER FLOORS) | 10 PSF |
| 8" THICK MASONRY WALL | 96 PSF |
| 6" THICK MASONRY WALL | 72 PSF |
| EXTERIOR LIGHT FRAMED WOOD WALLS | 15 PSF |
| INTERIOR LIGHT FRAMED WOOD WALLS | 10 PSF |
| (INTERIOR WALLS INCLUDED IN 15 PSF DEAD LOAD) | |

**LIVE**

| | |
|---|---|
| ROOF LIVE LOAD | 20 PSF |
| FLOOR LIVE LOAD | 40 PSF (HABITABLE) |
| GARAGE | 50 PSF WITH 2000 LB POINT LOAD |
| STORAGE | 20 PSF (UNINHABITABLE) |
| GUARDRAIL: | |
| CONTINUOUS LINEAR | 50 PLF |
| MAXIMUM POINT | 200 LBS |

**SNOW**

| | |
|---|---|
| GROUND SNOW LOAD | 20 PSF |

**WIND**

| | |
|---|---|
| VELOCITY | 115 MPH |
| EXPOSURE CATEGORY | B |

## B. SOIL AND SITE ASSUMPTIONS

**B.1** FOUNDATION DESIGN ASSUMES MINIMUM SOIL BEARING FOR THE SITE OF 1,500 PSF (2,000 PSF FOR KANSAS CITY, MO) UNLESS OTHERWISE NOTED. CONTRACTOR TO VISUALLY INSPECT THE SITE OR PROVIDE GEOTECHNICAL INVESTIGATION TO VERIFY MINIMUM ACCEPTABLE SOIL CONDITIONS FOR CL (SILTY CLAY) AS DEFINED BY 2018 IRC. THE CONTRACTOR IS RESPONSIBLE FOR ANY SOIL CONDITION THAT DOES NOT MEET THE MINIMUM REQUIREMENTS AND FOR CONTACTING THE ENGINEER OF RECORD.

**B.2** ACCESSORY STRUCTURES WITH AN EAVE HEIGHT LESS THAN 10'-0" AND AN AREA LESS THAN 600 FT MAT PROVIDE A MINIMUM SOIL COVER OF 12 INCHES MEASURED FROM THE BOTTOM OF CONCRETE.

**B.3** LATERAL SOIL PRESSURES UNLESS OTHERWISE NOTED

| | |
|---|---|
| ACTIVE | 60 PSF |
| AT REST | 100 PSF |

**B.4** SITE GRADING SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE AT A MINIMUM OF 0.5% (6" IN THE FIRST 10'-0"). ALTERNATE APPROACHES MAY BE APPROVED IF THE ALTERNATE DESIGN IS EQUIVALENT IN EFFECTIVENESS AND PERFORMANCE, AND PROVIDES FOR POSITIVE SITE DRAINAGE.

## C. FOUNDATION NOTES

**C.1 FOUNDATION ANCHORAGE (IRC R403.1.6)**

- SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WALL WITH A MINIMUM ½" DIAMETER ANCHOR BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE.
- BOLTS SHALL BE SPACED NO GREATER THAN 6'-0" O.C.
- THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION, WITH A BOLT PLACED WITHIN 12" AND NOT CLOSER THAN 7 BOLT DIAMETERS OF THE END OF EACH PLATE SECTION.
- A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE, (NOTE: 7" EMBEDMENT + 1-1/2" SILL PLATE + 3/4" FOR NUT AND WASHER EQUALS A 9-1/4" LONG BOLT).
- WALL BRACING METHODS (IRC R602) MAY REQUIRE ADDITIONAL ANCHORAGE.

**C.2 CONCRETE SLABS**

- CONCRETE SLABS PLACED ON FILL MATERIAL WHICH SHALL BE COMPARED TO ENSURE UNIFORM SUPPORT OF THE SLAB AND SHALL NOT EXCEED 24" OF COMPACTED GRANULATED MATERIAL (SAND OR GRAVEL) OR 8" OF EARTH:
  - THIS MAY OCCUR AT GARAGE FLOOR FILLS, OR OVER EXCAVATED AREAS UNDER FLOOR SLABS.
  - THE DESIGN AND INSTALLATION DETAILS IN THIS DOCUMENT (WHERE APPLICABLE BASED ON SIZE AND SPACING LIMITATIONS) MAY BE USED IN LIEU OF PROVIDING A SEPARATE DESIGN.
  - STRUCTURAL SLABS EXCEEDING THE SPANS AND CONDITIONS OF THE APPROVED DETAILS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.
- SLABS AT MAX 4'-0" OVER-DIG ADJACENT T0 FOUNDATION WALL:
  - WHERE SOIL IS EXCAVATED FOR A MAXIMUM DIMENSION OF 4'-0" HORIZONTALLY ADJACENT TO A FOUNDATION WALL, THE STANDARD OVER-DIG DETAIL MAY BE USED IN LIEU OF A COMPLETE STRUCTURAL SLAB.
  - SEE "TYPICAL FOOTING/FOUNDATION WALL/STANDARD SLAB AT MAX 4'-0" OVER-DIG" DETAIL.

**C.3 VAPOR RETARDER / BARRIER (IRC R506.2.3)**

- A 6 MILLIMETER POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED A MINIMUM OF 6" IS REQUIRED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR PREPARED SUBGRADE, (NOT REQUIRED FOR GARAGE SLABS OR DETACHED UNHEATED ACCESSORY BUILDINGS).

**C.4 FOOTINGS**

- THE BOTTOM OF ALL FOOTINGS SHALL EXTEND NOT LESS THAN 36" BELOW GRADE FOR FROST PROTECTION (IRC R403.1.4).
- FOOTINGS FOR FREESTANDING ACCESSORY STRUCTURES WITH AN AREA OF 600 SQ. FT. OR LESS AND AN EAVE HEIGHT OF 10'-0" OR LESS SHALL EXTEND BELOW GRADE A MINIMUM OF 12".
- EXTERIOR WALLS, BEARING WALLS, COLUMNS AND PIERS SHALL BE SUPPORTED ON CONTINUOUS SOLID MASONRY OR CONCRETE FOOTINGS, OR APPROVED STRUCTURAL SYSTEM TO SAFELY SUPPORT THE IMPOSED LOADS AND SHALL BE SIZED AND REINFORCED IN ACCORDANCE WITH THIS STANDARD OR SHALL BE ENGINEERED DESIGN.
- FOOTINGS UNDER FOUNDATION WALLS SHALL BE CONTINUOUS AROUND THE STRUCTURE AND FROM ONE LEVEL TO THE NEXT.
- THE CONTINUOUS TRANSITIONS BETWEEN FOOTINGS AT DIFFERENT LEVELS ENCLOSING USABLE SPACE SHALL BE MADE BY APPROVED SOLID JUMPS OR SUPPORT SYSTEMS TO PROVIDE SAFE SUPPORT OF THE STRUCTURE.
- SEE "TYPICAL FOOTING/FOUNDATION WALLS/STANDARD SLAB AT MAXIMUM 4" OVER-DIG" AND "FOOTING JUMP" DETAILS.

**C.5 CONCRETE**

- ALL CONCRETE CONSTRUCTION SHOULD CONFORM TO ACI 318-14 (OR ACI 332) OR 2018 IRC.
- THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE R402.2.

**C.5 CONCRETE (CONT.)**

- CONCRETE MIX TO UTILIZE A MAXIMUM WATER-CEMENT MATERIALS RATIO OF 0.45 FOR ALL APPLICATIONS. ADMIXTURES SHALL NOT CONTAIN ANY CHLORIDES.
- CONCRETE POURED AGAINST AN EXISTING SURFACE SHOULD BE ROUGHENED TO A MINIMUM OF 1/4 INCH AMPLITUDE.
- REBAR PLACEMENT SHALL BE AS FOLLOWS:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3.0 IN CLR
  - CONCRETE EXPOSED TO EARTH OR WEATHER 1.5 IN CLR
  - NOT EXPOSED TO WEATHER OR GROUND
    - 1) SLABS, WALLS, JOISTS 3/4 IN CLR
    - 2) BEAMS, COLUMNS 1.5 IN CLR
- CONCRETE MIX DESIGN SHALL BE 6% (±1%) AIR-ENTRAINED FOR GARAGE SLABS, FOOTINGS, WALLS, OR FLATWORK EXPOSED TO WEATHER
- SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH REACHES 70% OF STRENGTH DETERMINED BY CYLINDERS OR 28 DAYS.
- ALL FOUNDATION WALLS ENCLOSING BELOW GRADE SPACE SHALL BE DAMPPROOFED. THE DAMPPROOFING SHALL EXTEND FROM THE EDGE OF THE FOOTING TO THE FINISHED GRADE. (IRC R406.1)

**C.6 CONCRETE WALLS WITH REINFORCEMENT STEEL**

- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40.
- SMOOTH BARS OR WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185.
- 90 DEG. HOOK SHOWN IN DRAWINGS SHALL BE STANDARD PER ACI 318-14.
  - STRAIGHT EXTENSION LENGTH = 12X BAR DIA.
  - BEND DIAMETER = 12X BAR DIA.
- HOOKED DOWELS:
  - HOOKED DOWELS FROM FOUNDATIONS TO WALL SHALL BE PROVIDED TO MATCH VERTICAL WALL REINFORCING AND EXTENDED TO 3" CLEAR FROM BOTTOM OF FOUNDATION.
  - HOOKED DOWELS MATCH SLAB REINFORCING FROM SLAB TO WALLS OR SLAB TO FOUNDATION.
- PROVIDE (2) - #5 BARS AROUND PERIMETER OF ALL SUSPENDED SLABS.
- WHERE SPLICES ARE NECESSARY IN REINFORCEMENT, THE LENGTH OF LAP SPLICE SHALL BE IN ACCORDANCE WITH TABLE R608.5.4(1) AND FIGURE R608.5.4(1). THE MAXIMUM GAP BETWEEN NONCONTACT PARALLEL BARS AT A LAP SPLICE SHALL NOT EXCEED THE SMALLER OF ONE-FIFTH THE REQUIRED LAP LENGTH AND 6 INCHES (152MM) [SEE FIGURE R608.5.4.(1)].
- TOP HORIZONTAL REINFORCEMENT SHALL BE PLACED WITHIN 12" FROM THE TOP OF THE WALL.
- HORIZONTAL WALL REINFORCEMENT SHALL TERMINATE AT THE END OF THE WALL WITH A STANDARD HOOK

**C.7 COLD WEATHER CONCRETE**

- COLD WEATHER IS DEFINED AS THREE CONSECUTIVE DAYS WHERE THE AVERAGE DAILY TEMPERATURE DROPS BELOW 40 DEGREES FAHRENHEIT AND NOT ABOVE 50 DEGREES FAHRENHEIT FOR MORE THAN HALF OF ANY ONE OF THOSE THREE DAYS.
- COLD WEATHER CONCRETE WORK SHALL CONFORM TO ACI 306.
- ALL MATERIALS AND EQUIPMENT REQUIRED FOR PROTECTION SHALL BE AVAILABLE AT THE PROJECT SITE BEFORE COLD WEATHER CONCRETING BEGINS.
- THE CONCRETE MIX DESIGN PROVIDED BY THE SUPPLIER SHALL AT A MINIMUM REACH THE AVERAGE 28 DAY MIX DESIGN COMPRESSIVE STRENGTH IN MINIMUM 72 HOURS OR 2000 PSI – WHICHEVER IS GREATER.
- THE TEMPERATURE OF CONCRETE AT PLACEMENT SHALL BE A MINIMUM OF 55 DEGREES FAHRENHEIT .
- THE MINIMUM CONCRETE TEMPERATURE AT THE TIME OF MIXING SHALL NOT BE BELOW 65 DEGREES FAHRENHEIT.
- ALL SNOW, ICE AND FROST MUST BE REMOVED PRIOR TO PLACING CONCRETE.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR CONCRETE AGAINST FREEZING AND MAINTAIN A CONCRETE TEMPERATURE OF 55 DEGREES FAHRENHEIT FOR A 72 HOUR PERIOD AFTER CONCRETE PLACEMENT. THIS MAY BE ACHIEVED WITH THE USE OF INSULATING BLANKETS AND/OR THE USE OF TEMPORARY HEATERS.
- GROUND TEMPERATURE AT THE TIME OF PLACEMENT OF SLAB OR FOOTINGS SHALL NOT BE LESS THAN 35 DEGREES FAHRENHEIT.
- INSULATION, FORMS AND HEATERS MAY BE REMOVED AFTER 72 HOURS .
- MAINTAIN ADEQUATE PROTECTION OF SUB GRADE AND ADEQUATE DRAINAGE AWAY FROM EXPOSED CONCRETE ELEMENT TO PREVENT FREEZING.

**C.8 FOOTNOTES**

- VERTICAL REINFORCEMENT FOR CONCRETE WALLS THAT ARE NOT FULL HEIGHT AND FOR REINFORCEMENT SPACED 24" O.C. MAY BE PLACED IN THE MIDDLE OF THE WALL. OTHER WALLS SHALL HAVE VERTICAL REINFORCEMENT PLACED AS FOLLOWS:
  - 8" WALL – MINIMUM 2" FROM TENSION FACE
  - 10" WALL – MINIMUM 6-3/4" FROM THE OUTSIDE FACE
  - EXTEND BARS TO WITHIN 8" OF THE TOP OF THE WALL
- HORIZONTAL REINFORCEMENT:
  - ONE BAR SHALL BE PLACED WITHIN 12" OF THE TOP OF THE WALL
  - OTHER BARS SHALL BE EQUALLY SPACED WITH SPACING NOT TO EXCEED 24" O.C.
  - HORIZONTAL BARS SHOULD BE AS CLOSE TO THE TENSION FACE AS POSSIBLE (INTERIOR); AND BEHIND THE VERTICAL REINFORCEMENT (I.E. 2" FROM INSIDE FACE)
  - SUPPLEMENTAL REINFORCEMENT AT CORNERS – PLACE 1 #4 REBAR 48" LONG AT 45 DEGREE ANGLE AT CORNERS OF OPENINGS. PLACE REINFORCEMENT WITHIN 6" OF THE EDGE OF INSIDE CORNERS.
- AT MASONRY LEDGES THE MINIMUM WALL THICKNESS SHALL BE 3-1/2". LEDGES SHALL NOT EXCEED A DEPTH OF MORE THAN 24" BELOW THE TOP OF THE WALL FOR WALL THICKNESS LESS THAN 4". PROVIDE #4 BARS AT MAXIMUM 24" O.C. TO WITHIN 8" OF THE TOP OF THE WALL.
- STRAIGHT WALLS MORE THAN 5'-0" TALL AND MORE THAN 16-0"' LONG SHALL BE PROVIDED WITH EXTERIOR BRACED RETURN WALLS. WALL LENGTH SHALL BE MEASURED USING INSIDE THE SHORTEST DIMENSION BETWEEN INTERSECTING WALLS (SEE TYPICAL DEAD MAN SECTION).

**MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE PER TABLE R402.2**

| TYPE OR LOCATION OF CONCRETE CONSTRUCTION | MINIMUM SPECIFIED COMPRESSIVE STRENGTH (f'c) FOR SEVER WEATHERING POTENTIAL |
|---|---|
| BASEMENT WALLS, FOUNDATIONS AND OTHER CONCRETE NOT EXPOSED TO THE WEATHER | 2,500 |
| BASEMENT SLABS AND INTERIOR SLABS ON GRADE, EXCEPT GARAGE FLOOR SLABS | 2,500 |
| BASEMENT WALLS, FOUNDATION WALLS, EXTERIOR WALLS AND OTHER VERTICAL CONCRETE WORK EXPOSED TO THE WEATHER | 3,000 |
| PORCHES, CARPORT SLABS AND STEPS EXPOSED TO THE WEATHER,AND GARAGE FLOOR SLABS | 3,500 |
| SUSPENDED SLABS | 4,000 |

## D. FRAMING/STRUCTURE

**D.1 FRAMING NOTES**

- ALL TREATED LUMBER SIZES ARE DOUGLAS FIR-LARCH #2 UNLESS OTHERWISE NOTED.
- ALL NON TREATED LUMBER OR ROT RESISTANT SIZES ARE #2 TREATED SOUTHERN YELLOW PINE UNLESS OTHERWISE NOTED.
- ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR-LARCH (2) 2X10 ON LOAD BEARING WALLS.
- ALL HEADERS/BEAMS TO BEAR ON A MINIMUM OF (2) 2X4 JACK STUDS UNO. KING STUDS SHALL BE PROVIDED AT ALL HEADERS IN ACCORDANCE WITH IRC TABLE R602.7.5.
- DOUBLE JOIST UNDER PARALLEL INTERIOR NON-LOAD BEARING WALLS.
- CANTILEVERS, OVER BEAMS AND DOOR JAMBS SHALL BE BLOCKED.
- ANY WOOD MEMBER IN CONTACT WITH CONCRETE OR MASONRY (OR THE FURRING THEY ARE ATTACHED TO) SHALL BE OF DECAY RESISTANT MATERIAL.
- IN BEARING WALLS, STUDS WHICH ARE NOT MORE THAN 10'-0" FEET IN LENGTH SHALL BE SPACED NOT MORE THAN IS SPECIFIED IN IRC TABLE R602.3(5) FOR THE CORRESPONDING STUD SIZE, THOSE STUDS GREATER THAN 10'-0" FEET IN LENGTH SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.
- ALL WOOD STRUCTUAL PANELS SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATION AND SUPPLEMENTS OF THE APA OR EQUIVALENT. ALL PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS. PROVIDE 1/8" INCH SPACE AT PANEL ENDS. WOOD STRUCTURAL PANEL MOISTURE CONTENT SHALL BE LESS THEN OR EQUAL TO 16%.
- ALL STRUCTURAL FRAMING MEMBERS SHALL BE AS FOLLOWS UNO:
  - 2X4 OR 2X6 EXTERIOR WALLS AS PERMITTED BY CODE: DOUGLAS FIR-LARCH #2 (DF-L #2) OR BETTER.
  - EXTERIOR WALLS TO BE CONTINUOUSLY SHEATHED WITH MIN. 7/16" OSB
  - EXTERIOR OSB SHEATHING TO BE FASTENED WITH 8D COMMON NAILS; 6" O. C. AT PANEL EDGES, 12" O. C. IN THE FIELD.
  - 2X4 OR 2X6 INTERIOR LOAD BEARING WALLS DF-L #2 OR BETTER.
  - LOAD BEARING, BRACED, AND SHEAR WALLS, REQUIRE A DOUBLE TOP PLATE. THE TOP PLY BEING FIELD APPLIED WITH A MIN. 24" LAP SPLICE
  - FIELD APPLIED LAP SPLICED TOP PLATE: DF-L #2 OR BETTER
  - LOAD BEARING HEADERS PER HEADER SCHEDULE OR AS SHOWN ON FRAMING PLANS.
  - LOAD BEARING HEADERS TO BE FABRICATED WITH THE HEADER AT THE UNDER SIDE OF THE TOP PLATE WITH CRIPPLE FRAMING BELOW AS NEEDED UNO.
  - INTERIOR NON LOAD BEARING WALLS: DF-L #2 STUD GRADE OR BETTER
  - DOUBLE TOP PLATE IS NOT REQUIRED FOR INTERIOR NON LOAD BEARING WALLS
  - HEADER CRIPPLE SPACING CAN BE 24" O. C. REGARDLESS OF WALL STUD SPACING FOR NON LOAD BEARING WALLS
  - CRIPPLE FRAMING NOT REQUIRED ABOVE OR BELOW OPENINGS WHERE THE VERTICAL CLEAR HEIGHT IS 22" OR LESS FOR NON-LOAD BEARING WALLS.
- ALL LUMBER IN CONTACT WITH MASONRY OR OTHERWISE EXPOSED TO WEATHERING TO BE PRESSURE TREATED (PT).
  - FIELD APPLIED SILL PLATE: PT DF-L #2
  - BOTTOM (SOLE) PLATE IN CONTACT WITH MASONRY: PT DF-L #2
- ALL PRESSURE TREATED WOOD SHALL BE PRESSURE TREATED WITH WATER-BORNE PRESERVATIVES. PRESSURE TREATMENT SHALL COMPLY WITH THE REQUIREMENTS OF AWPB, C2, LP-22, AND IRC SECTION R317. ALL LUMBER < 8" ABOVE THE FINISHED GRADE SHALL BE PRESSURE TREATED.
- FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESSURE TREATED WOOD SHALL BE HOT-DIPPED, ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. COATING TYPES AND WEIGHTS FOR CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE IN ACCORDANCE WITH THE CONNECTOR MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, A MIN. OF ASTM A653 TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED. FOR EXCEPTIONS, RE-ENGINEERED LUMBER MIIMUM DESIGN REQUIREMENTS

| | $F_b$ (PSI) | E (PSI) | $F_v$ (PSI) |
|---|---|---|---|
| LVL | 3100 | $1.9X10^6$ | 285 |
| DOUGLAS FIR-LARCH | 900 | $1.6X10^6$ | 180 |
| GLU-LAM | 2400 | $1.8X10^6$ | 230 |

**D.2 STRUCTURAL STEEL**

- STEEL DESIGN, FABRICATION, AND ERECTION SHALL CONFORM WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- STEEL PIPE COLUMNS SHALL BE A MINIMUM OF SCHEDULE 40.
- STEEL GRADE AND SPECIFICATION SHALL BE AS FOLLOWS:
  - HOLLOW STRUCTURAL SECTIONS: ASTM A500 ($F_Y$ = 46 KSI)
  - CHANNELS, PLATES, ANGLES, AND COLUMNS: ASTM A36 ($F_Y$ = 36 KSI)
  - WIDE FLANGES: ASTM A992 ($F_Y$ = 50 KSI)
  - STEEL PIPE COLUMN ASTM A53 GR.B ($F_Y$ = 35 KSI)
  - ANCHOR RODS: ASTM F1554 ($F_Y$ = 36 KSI)
- BOLTS SHALL CONFORM TO ASTM A307
- WELDING SHALL CONFORM TO THE AWS CODES FOR BUILDING CONSTRUCTION, WELDING SHALL BE PERFORMED IN ACCORDANCE TO WELDING PROCEDURE SPECIFICATIONS (WPS) AS REQUIRED IN AWS D1.1. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
- WELDS SHALL USE E70XX ELECTRODES AND A MINIMUM OF 3/16" SIZE UNLESS NOTED OTHERWISE.
- ALL WELDS SPECIFIED AS FIELD WELDS MAY BE SHOP WELDED AT THE CONTRACTOR'S OPTION IF ERECTION CAN STILL BE EXECUTED.

## E. GLAZING

- GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS.
  - GLASS IN STORM DOORS: INDIVIDUAL FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE FLOOR.
  - GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF THE STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60 IN HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED A HAZARDOUS LOCATION.
  - GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS, AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
- WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH IRC R312.2.

## F. STAIRWAYS

- STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4" RISE AND A MINIMUM 10" RUN.
- REQUIRED GUARD RAILS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES, OR LANDINGS, SHALL NOT BE LESS THAN 36" HIGH MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE.
  - EXCEPTION (1): GUARD RAILS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT NOT LESS THAN 34" MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.
  - EXCEPTION (2): WHERE THE TOP OF THE GUARD ALSO SERVES AS A HANDRAIL ON THE OPEN SIDES OF STAIRS, THE TOP OF THE GUARD SHALL NOT BE LESS THAN 34" AND NOT MORE THAN 38" MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.
- GUARD RAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OF ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER.
- EACH STAIRWAY OF FOUR OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE TREADS.
- HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4" TO 2" OR OTHER APPROVED GRASPABLE SHAPE PER IRC R311.7.8.5.
- MINIMUM 6'-8" OF HEADROOM CLEARANCE IS REQUIRED IN STAIRWAYS.
- ENCLOSED ACCESSIBLE SPACE UNDER STAIRWAYS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH ½" GYPSUM BOARD ON ENCLOSURE PER IRC R302.7.

## G. GARAGES

- THE GARAGE FLOOR SHALL SLOPE 1/8" PER 12" TO DRAIN OR VEHICLE ENTRY DOORWAYS.
- DOORS BETWEEN THE GARAGE AND THE DWELLING TO BE: SELF CLOSING, MINIMUM 1-3/8" SOLID CORE OR HONEYCOMBED STEEL DOOR, AND AT LEAST 20 MINUTE FIRE RATED.
- THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS ATTIC AREAS BY A MINIMUM 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE WHERE A FLOOR/CEILING SPACE IS PROVIDED ABOVE.
- THE GARAGE COLUMNS AND BEAMS SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED WITH 1/2" GYPSUM BOARD OR EQUIVALENT.
- WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE FLOOR/CEILING ASSEMBLY SHALL BE PROTECTED WITH A MINIMUM 5/8" TYPE "X" GYPSUM BOARD ON THE GARAGE CEILING.
- GARAGE DOOR AND FRAME – THE "H" FRAME FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING: 2X6 VERTICAL JAMBS RUNNING FROM THE FLOOR TO CEILINGS, ATTACHED WITH 1-3/4" X 0.120" NAILS AT 7" O.C. STAGGERED WITH (7) 3-1/4" X 0.120" NAILS THROUGH THE JAMB INTO THE HEADER, 2X8 HEADER (MINIMUM) FOR ATTACHMENT OF COUNTER BALANCE SYSTEM.
- GARAGE VEHICLE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 115 MPH WIND LOAD REQUIREMENT OF DASMA 108 AND ASTM E330-96 (IRC R301.2.1).

## H. ROOF

- THE ROOF IS DESIGNED FOR 20 PSF GROUND SNOW LOAD (MINIMUM).
- PROVIDE 2X SOLID BLOCKING SUPPORT BELOW ALL POINT LOADS CONTINUOUS TO BEARING STRUCTURE AND/OR FOUNDATION BELOW.
- ROOF IS ENGINEERED TO COMPLY WITH IRC R802.
- ROOF TO BE ASPHALT SHINGLES UNO AND SHALL COMPLY WITH IRC 2018 SECT. R905.2
- MINIMUM ROOF SLOPE FOR ASPHALT SHINGLES SHALL BE 2:12.
- ROOF SLOPES IN BETWEEN 2:12 AND 4:12 SHALL REQUIRE DOUBLE UNDERLAYMENT IN ACCORDANCE WITH IRC 2018 SECTION R905.2.2:

  "APPLY A 19-INCH (483MM) STRIP OF UNDERLAYMENT FELT PARALLEL TO AND STARTING AT THE EAVES, FASTENED SUFFICIENTLY TO HOLD IN PLACE. STARTING AT THE EAVE, APPLY 36-INCH-WIDE (914 MM) SHEETS OF UNDERLAYMENT, OVERLAPPING SUCCESSIVE SHEETS 19 INCHES (483MM), AND FASTENED SUFFICIENTLY TO HOLD IN PLACE. END LAPS SHALL BE 4-INCH (102MM) AND SHALL BE OFFSET BY 6 FEET (1829 MM). DISTORTIONS IN THE UNDERLAYMENT SHALL NOT INTERFERE WITH THE ABILITY OF THE SHINGLES TO SEAL."

## I. SAFETY REQUIREMENTS

**I.1 EMERGENCY EGRESS AND RESCUE**

- PROVIDE ONE WINDOW FROM EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SQ. FT. WITH A MINIMUM OPENABLE HEIGHT OF 24" AND WIDTH OF 20".
- BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC R310.

**I.2 SMOKE AND CARBON MONOXIDE SAFETY (PER IRC R314)**

- PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA AND ON EACH FLOOR INCLUDING BASEMENTS.
- SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.
- CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED PER IRC R315.

## J. ENERGY REQUIREMENTS

- LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER IRC N1102.4.5.
- PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER IRC N1103.1.1.
- AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER IRC N1103.3.2.1.
- *BUILDING* FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.
- HOT WATER PIPES SHALL BE INSULATED AS REQUIRED PER IRC N1103.4.
- ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR AS REQUIRED PER IRC M1504.3.
- MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM AS REQUIRED PER IRC M1503.6.
- AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER IRC M1601.6 ENERGY CONSERVATION.

## K. ABBREVIATIONS

- AFF: ABOVE FINISHED FLOOR
- CLR: CLEAR
- EFF: EFFECTIVE
- EFP: EQUIV FLUID PRESSURE
- EOR: ENGINEER OF RECORD
- EQUIV: EQUIVALENT
- MAX: MAXIMUM
- MIN: MINIMUM
- NTS: NOT TO SCALE
- O.C.: ON CENTER
- PCF: POUNDS PER CUBIC FOOT
- PLF: POUNDS PER LINER FOOT
- PSF: POUNDS PER SQUARE FOOT
- PSI: POUNDS PER SQUARE INCH
- UNO: UNLESS NOTED OTHERWISE
- FV: FIELD VERIFY


EVERSTEAD ENGINEERING & DESIGN

STATE OF MISSOURI
CHRISTOPHER PAUL DAVIS
NUMBER PE-2015016986
09/14/2023
PROFESSIONAL ENGINEER

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# SUMMIT HOMES

REVISIONS

# GENERAL NOTES

# S000

DATE 8/8/2023 1:08:19 PM
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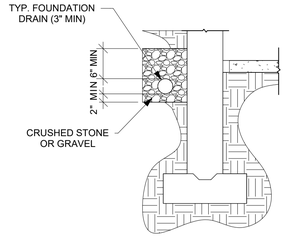
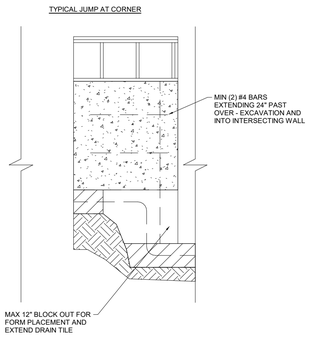
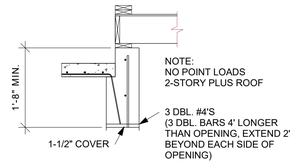



INSTALLATION OF A CONTINUOUS FOUNDATION DRAIN IS REQUIRED WHERE HABITABLE OR USABLE SPACE FOR ANY PORTION OF THE STRUCTURE IS LOCATED BELOW GRADE. THE FOUNDATION DRAIN SHALL BE AT OR BELOW THE AREA BEING PROTECTED. DRAINAGE TILE SHALL BE PLACED WITH POSITIVE OR NEUTRAL SLOPE TO MINIMIZE THE ACCUMULATION OF DEPOSITS IN THE DRAINAGE PIPE. PLACEMENT OF DRAIN TILE DIRECTLY ON TOP OF THE FOOTING IS ACCEPTABLE. [IRC R405], SEE "TYPICAL FOOTING/FOUNDATION WALL/STANDARD SLAB AT MAXIMUM 4' OVERDIG" AND "FOUNDATION DRAIN DETAIL AT RAISED SLAB" DIAGRAMS FOR DETAILS.

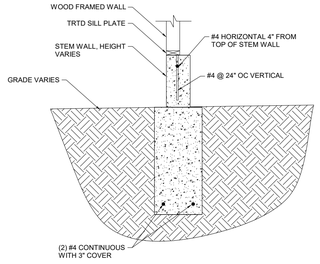
1 FOUNDATION DRAIN AND RAISED SLAB DETAIL
NTS



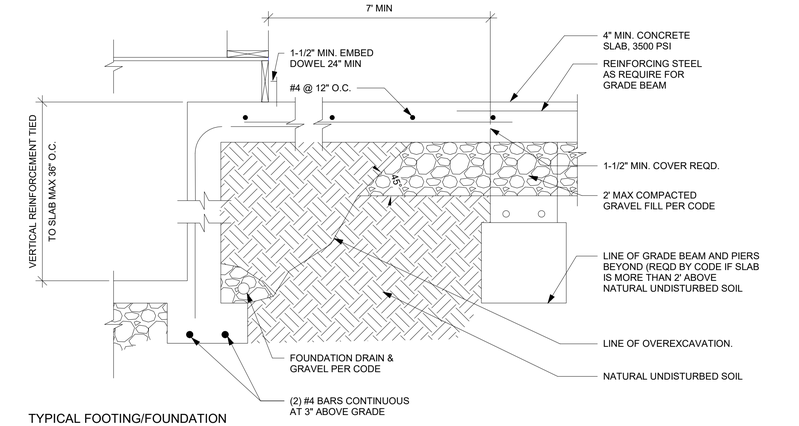

4 FOUNDATION WALL JUMP DETAIL 2
NTS



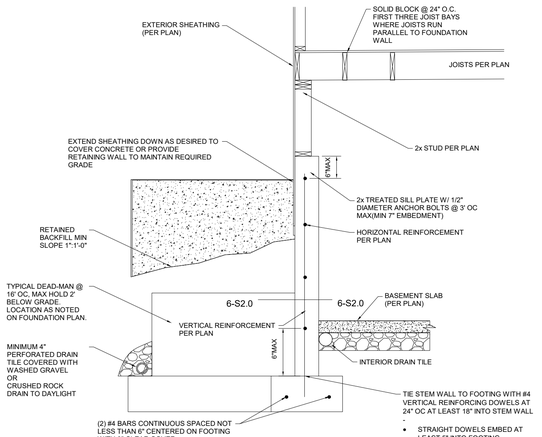

3 6' MAXIMUM OPENING HEADER DETAIL
NTS




12 TRENCH FOOTING WITH STEM WALL
NTS




5 TYPICAL FOOTING/FOUNDATION WALL/STANDARD SLAB AT MAX 4 OVERDIG
NTS




| CONCRETE DIMENSIONS | | | |
|---|---|---|---|
| "A" | "B" | "C" | "D" |
| 4'-0" | 1'-4" | 4" | 3'-4" |
| 6'-0" | 1'-4" | 4" | 4'-4" |
| 9'-0" | 1'-8" | 5" | 4'-4" |

DIMENSIONS SHOWN ARE FOR THE MAXIMUM UNINTERRUPTED WALL PANEL LENGTH BEFORE DEAD-MAN INSTALLATION. A MINIMUM 2' RETURN OR OFFSET IN THE FOUNDATION WALL SHALL SUBSTITUTE AS DEAD-MAN AND/OR BREAK IN THE WALL PANEL LENGTH.

VERTICAL REINFORCING STEEL TO EXTEND TO WITHIN 8" OF TOP WALL. MINIMUM (1) #4 HORIZONTAL BAR WITHIN 12" OF TOP AND BOTTOM OF WALL.

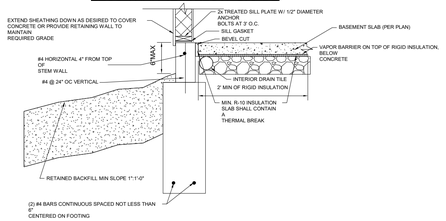
THE BASEMENT SLAB IS AN INTEGRAL PART OF THE "UNRESTRAINED" FOUNDATION WALL DESIGN. THEREFORE IF THE WALL IS BACKFILLED PRIOR TO PLACEMENT OF THE BASEMENT SLAB, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY BRACING THE WALL UNTIL THE BASEMENT SLAB HAS BEEN PLACED.

2 TYPICAL "UNRESTRAINED" FOUNDATION WALL DETAIL
NTS

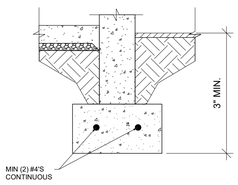



6 TYPICAL WALL SECTION DETAIL
NTS

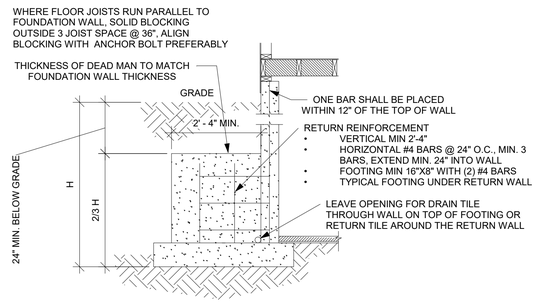
APPLIES TO BASEMENT SLABS WITH FLOOR SURFACE LESS THAN 12" BELOW GRADE



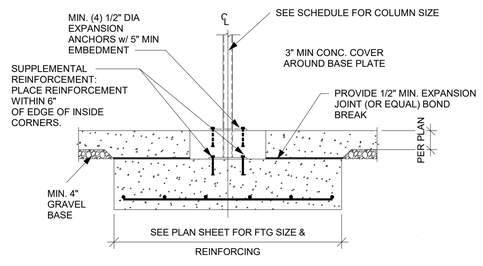

7 SLAB INSULATION DETAIL FOR TRENCH FOOTING WITH STEM WALL
NTS



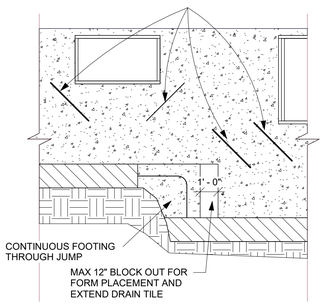

13 FOOTING DETAIL
NTS




9 TYPICAL DEAD MAN DETAIL
NTS

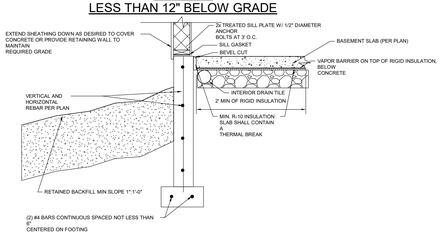



10 TYPICAL COLUMN PAD DETAIL
NTS




11 FOUNDATION WALL JUMP DETAIL
NTS

APPLIES TO BASEMENT SLABS WITH FLOOR SURFACE LESS THAN 12" BELOW GRADE




8 SLAB INSULATION DETAIL FOR STEM WALL AND FOOTING
NTS

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S101

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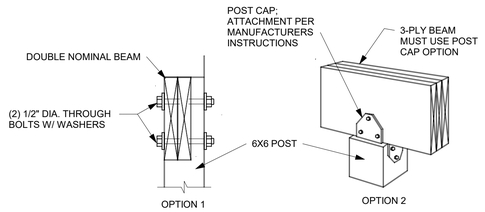
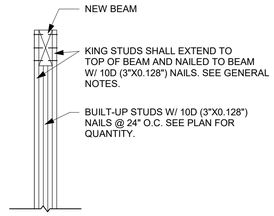
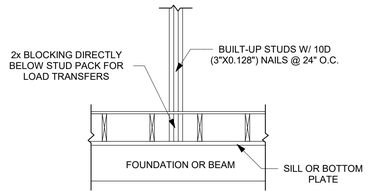


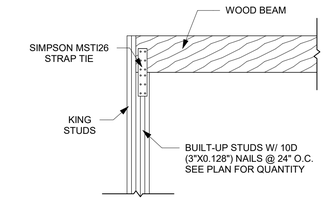

TYPICAL POST TO BEAM ATTACHMENTS DETAIL
1 NTS



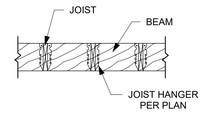

BEAM TO STUD PACK PERPENDICULAR TO WALL DETAIL
2 NTS



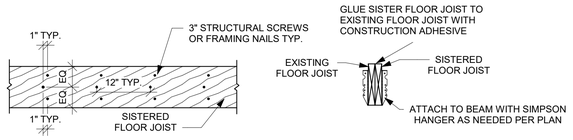

BLOCKING DETAIL
3 NTS



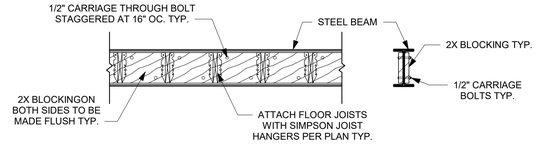

BEAM TO STUD PACK PARALLEL TO WALL DETAIL
4 NTS



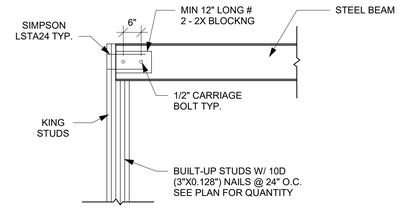

UPSET BEAM DETAIL
8 NTS



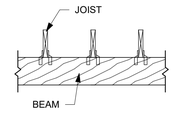

SISTERED FLOOR JOISTS DETAIL
5 NTS




FLOOR JOIST TO STEEL BEAM DETAIL
6 NTS

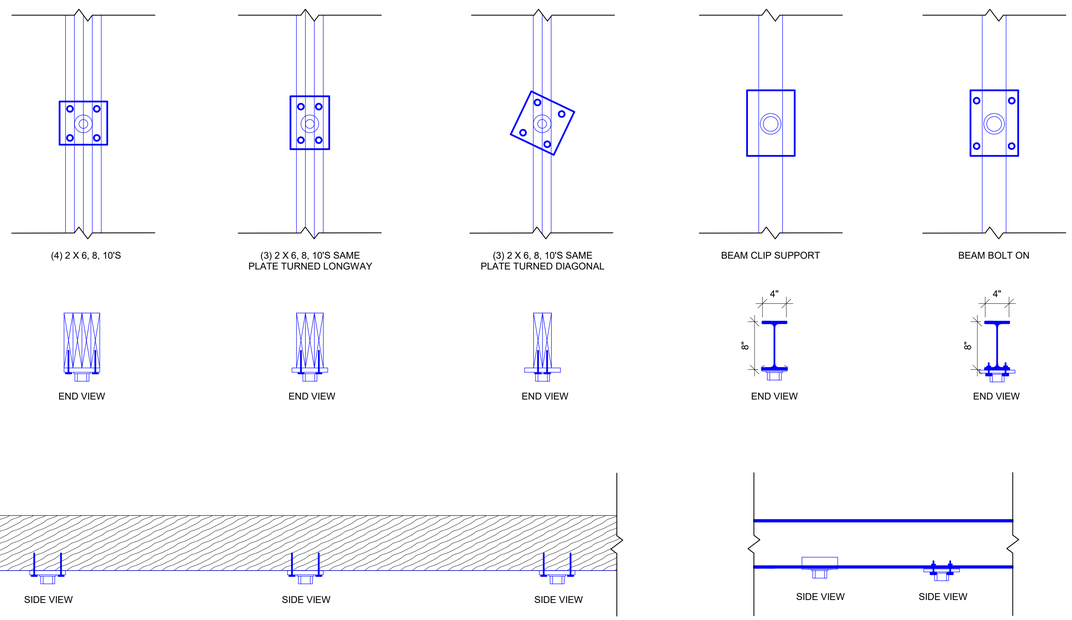



STEEL BEAM TO STUD PACK DETAIL
7 NTS

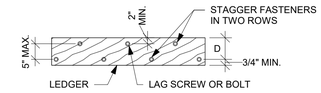



DROPPED BEAM DETAIL
9 NTS

## TOP MOUNTING OPTIONS




POST/BEAM CONNECTION DETAIL
11 NTS




D = 5.5" MIN. FOR 2x8*
D = 6.5" MIN. FOR 2x10
D = 7.5" MIN. FOR 2X12

*DISTANCE SHALL BE PERMITTED TO BE REDUCED TO 4.5" IF LAG SCREWS ARE USED OR BOLT SPACING IS REDUCED TO THAT OF LAG SCREWS TO ATTACH 2x8 LEDGERS TO 2X8 BAND JOISTS

LEDGER DIMENSION DETAIL
10 NTS

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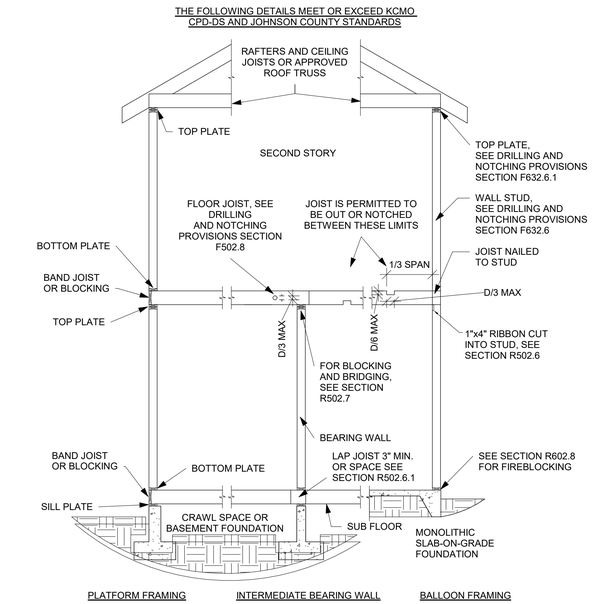
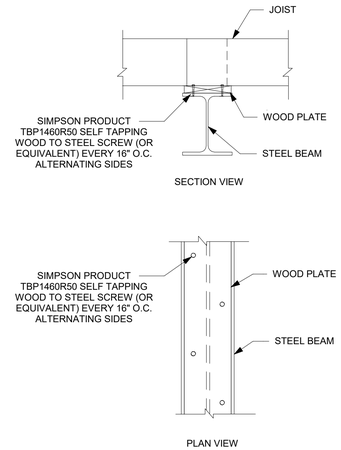
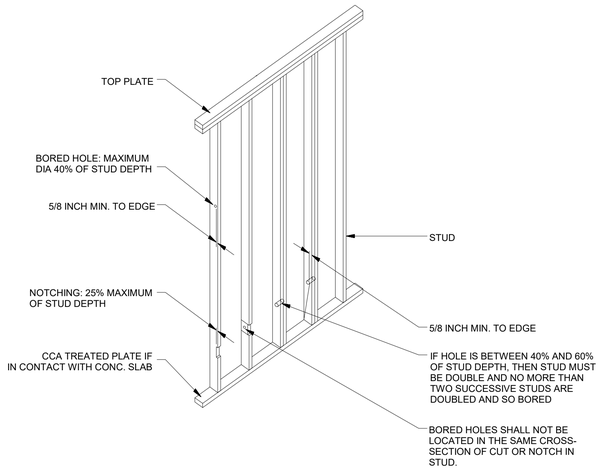


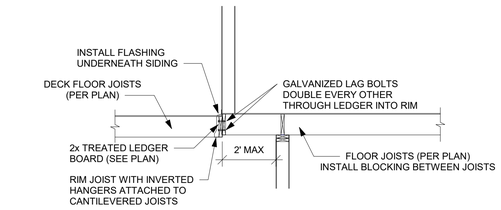

7 TYPICAL WALL, FLOOR, AND ROOF FRAMING DETAIL
NTS




8 WOOD PLATE TO STEEL BEAM CONNECTION DETAIL
NTS




6 TYPICAL WALL NOTCHING DETAIL
NTS




1 CANTILEVERED LEDGER DETAIL
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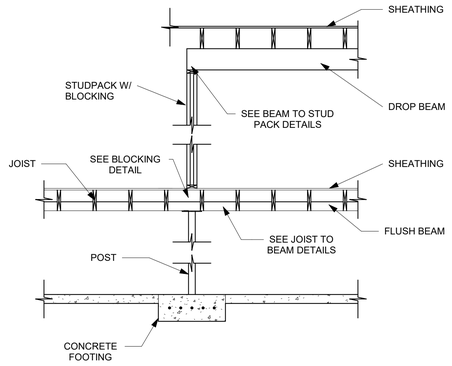


2 POST TO BEAM DETAIL
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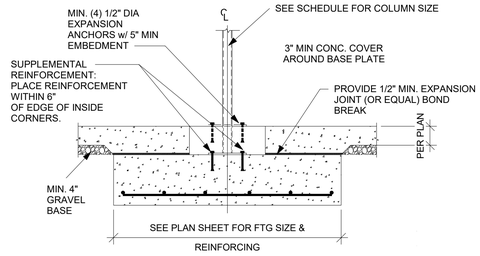
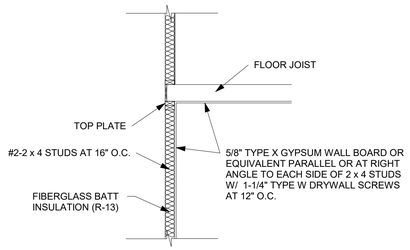
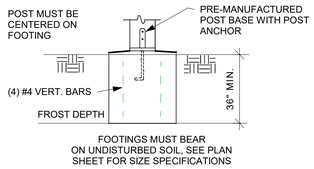



4 TYPICAL COLUMN PAD DETAIL1
NTS




3 GARAGE FIRE SEPERATION DETAIL
NTS




5 DECK PIER FOOTING DETAIL 1
NTS

REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES IRC TABLE 602.3(3) (PARTIAL)

| MINIMUM NAIL | | MINIMUM WOOD STRUCTURAL PANEL SPAN RATING | MINIMUM NOMINAL PANEL THICKNESS (IN) | MAX WALL STUD SPACING | PANEL NAIL SPACING | | ULTIMATE DESIGN WIND SPEED, V ULT (MPH) |
|---|---|---|---|---|---|---|---|
| SIZE | PENETRATION (IN) | | | | EDGES (IN O.C.) | FIELD (IN O.C.) | B |
| 6d COMMON | 1.5 | 24/0 | 3/8 | 16 | 6 | 12 | 140 |
| 8d COMMON | 1.75 | 24/16 | 7/16 | 16 | 6 | 12 | 170 |
| | | | | 24 | 6 | 12 | 140 |

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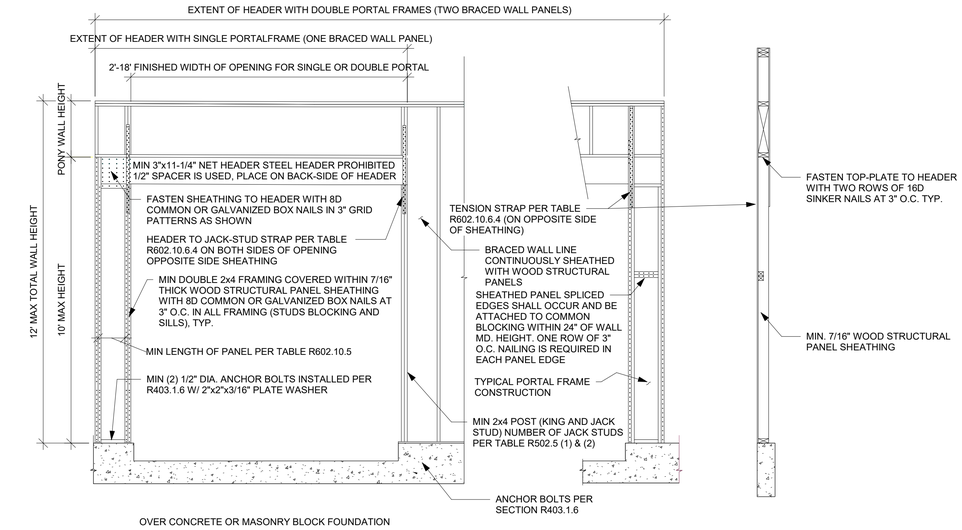
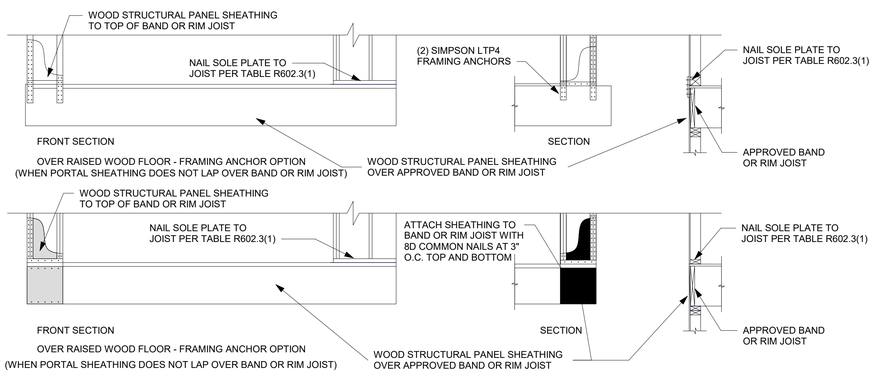
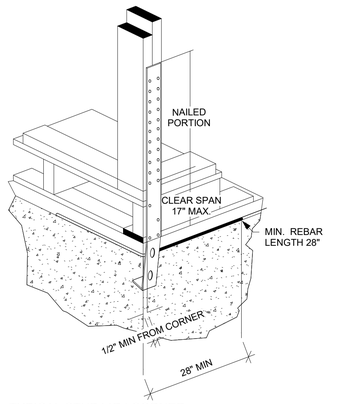
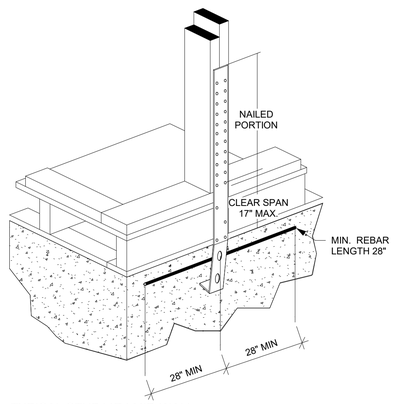


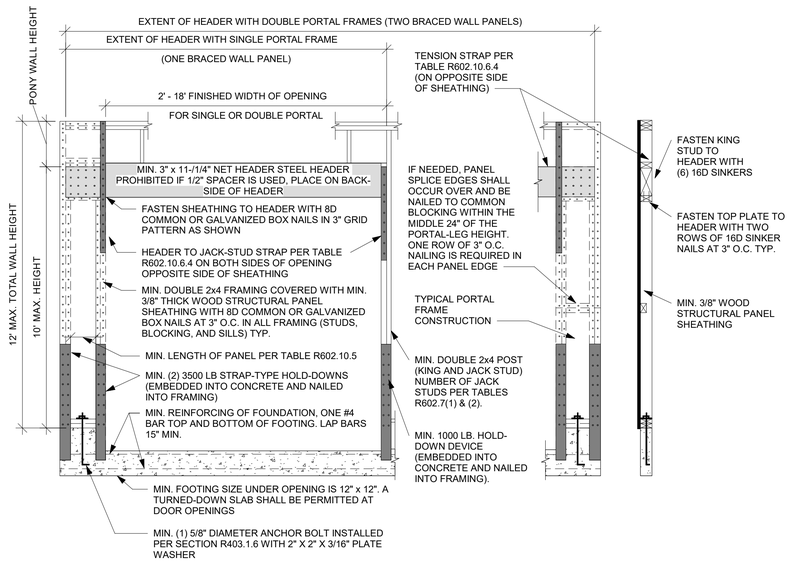

BRACING METHOD CS-PF - CONTINUOUSLY SHEATHED PORTAL FRAME PANEL DETAIL 1
1 NTS



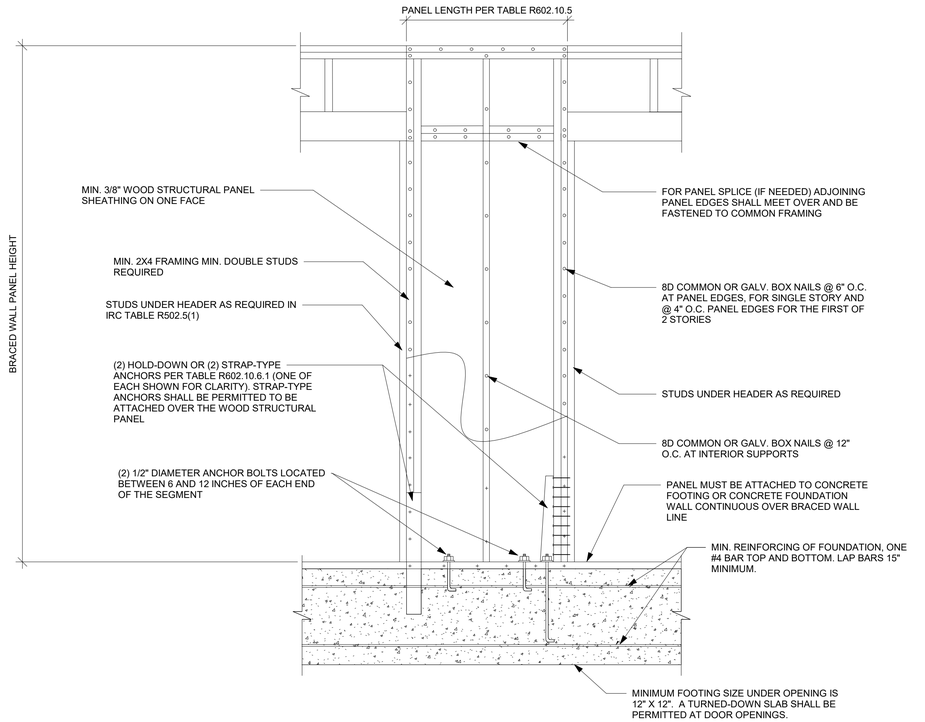

TYPICAL STHD14RJ CORNER INSTALLATION DETAIL 1
2 NTS




TYPICAL STHD14RJ MID-WALL INSTALLATION DETAIL 1
3 NTS




BRACING METHOD PFH - PORTAL FRAME WITH HOLD DOWNS DETAIL 1
4 NTS




BRACING METHOD ABW - ALTERNATE BRACED WALL PANEL DETAIL 1
5 NTS

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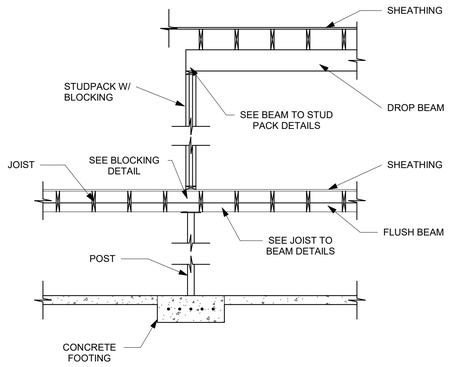
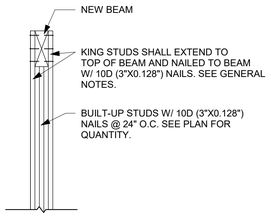
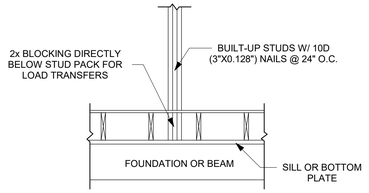


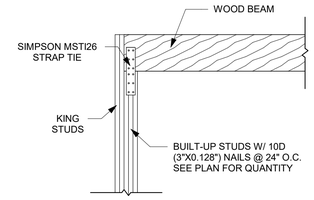

1 POST TO BEAM DETAIL 1
NTS



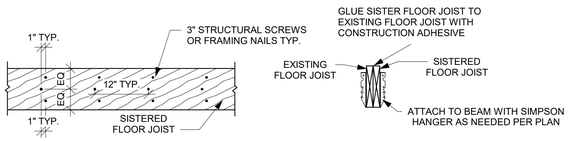

2 BEAM TO STUD PACK PERPENDICULAR TO WALL DETAIL 1
NTS



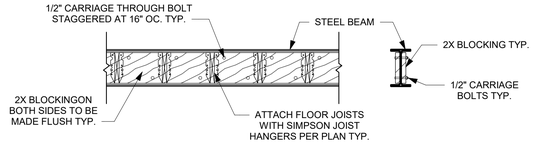

3 BLOCKING DETAIL 1
NTS



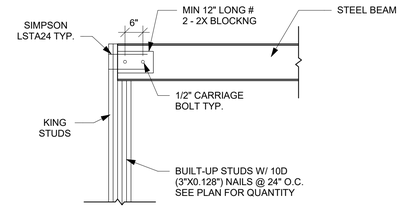

4 BEAM TO STUD PACK PARALLEL TO WALL DETAIL 1
NTS



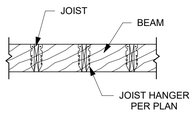

5 SISTERED FLOOR JOISTS DETAIL 1
NTS



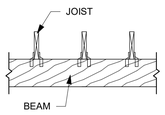

6 FLOOR JOIST TO STEEL BEAM DETAIL 1
NTS



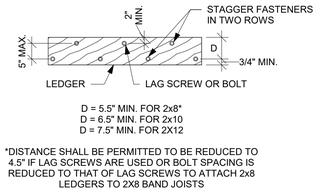

7 STEEL BEAM TO STUD PACK DETAIL 1
NTS



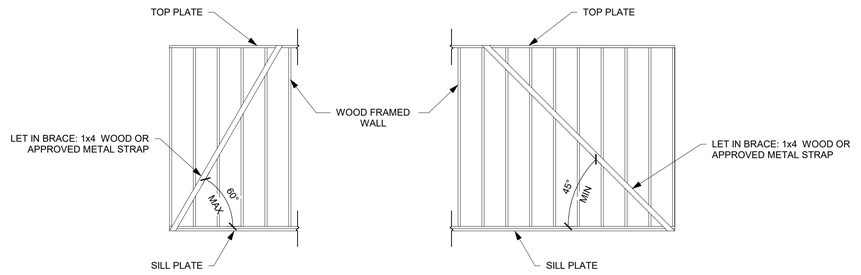

8 UPSET BEAM DETAIL 1
NTS




9 DROPPED BEAM DETAIL 1
NTS




10 LEDGER DIMENSION DETAIL 1
NTS




11 LET IN BRACING DETAIL
NTS

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| BRACING METHODS TABLE R602.10.4 (PARTIAL) | | | |
|---|---|---|---|
| METHODS, MATERIAL | MINIMUM THICKNESS | CONNECTION CRITERIA | |
| | | FASTENERS | SPACING |
| WSP - WOOD STRUCTURAL PANEL AND CS-WSP CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL | 3/8" PANEL W/ MINIMUM 24/0 STRUCTURAL PANEL SPAN RATING | 6d COMMON NAILS (2.0" x .113") W/ MINIMUM 1.5" PENETRATION | 6" EDGES, 12" FIELD |
| | 7/16" PANEL W/ MINIMUM 24/16 STRUCTURAL PANEL SPAN RATING | 8d COMMON NAILS (2.5" x .131") W/ MINIMUM 1.75" PENETRATION | 6" EDGES, 12" FIELD |
| PFH - PORTAL FRAME WITH HOLD-DOWNS | 3/8" | SEE DETAIL ON THIS PAGE | SEE DETAIL ON THIS PAGE |
| PFG - PORTAL FRAME AT GARAGE | 3/8" | SEE IRC SECTION R602.10.6.3 | SEE IRC SECTION R602.10.6.3 |
| LIB LET-IN-BRACING | 1x4 WOOD OR APPROVED METAL STRAPS AT 45 TO 60 DEGREE ANGLES FOR MAX 16" STUD SPACING | WOOD: 2-8d COMMON NAILS OR 3-8d (2-1/2" LONG x .113" DIA.) NAILS | WOOD: PER STUD AND TOP AND BOTTOM PLATES |
| | | SIMPSON WB/WBC INSTALLED IN "X" PAIRS OR IN OPPOSING "V" FASHION AND FASTENED W/ (2) 16d COMMON NAILS FOR PLATE AND (1) 8d COMMON NAIL FOR STUDS | METAL: PER STUD AND TOP AND BOTTOM PLATES |
| GB-GYPSUM BOARD | 1/2" | 1/2" INTERIOR SHEATHING W/ STUDS AT 16" O.C.: 13 GAGE, 1-3/8" LONG, 19/64" HEAD;. 098" DIA., 1-1/4" LONG, ANNULAR-RINGED; 5d COOLER NAIL, .086" DIA., 1-5/8" LONG, 15/64" HEAD; OR GYPSUM BOARD NAIL, .086" DIA. 1-5/8" LONG, 9/32" HEAD PER TABLE R702.3.5 (SEE TABLE FOR OTHER PANEL THICKNESS OPTIONS) | FOR ALL BRACED WALL PANEL LOCATIONS: 7" EDGES (INCLUDING TOP AND BOTTOM PLATES) 7" FIELD |
| | | EXTERIOR 1/2" SHEATHING: 1-1/2" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-1/2" LONG; 1-1/4" SCREWS, TYPE W OR S PER TABLE R602.3(1) | |
| | | EXTERIOR 5/8" SHEATHING: 1-3/4" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS, TYPE W OR S PER TABLE R602.3(1) | |

| TABLE R507.9.1.3(2) PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS | | | | |
|---|---|---|---|---|
| MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS (INCHES) | | | | |
| | TOP EDGE | BOTTOM EDGE | ENDS | ROW SPACING |
| LEDGER | 2 | 3/4 | 2 | 1-5/8 MIN. 5 MAX |
| BAND JOIST | 3/4 | 2 | 2 | 1-5/8 MIN 5 MAX |

| TABLE R507/2 FASTENER SPACING FOR A SOUTHERN PINE OR HEM-FIR DECK LEDGER 2" NOMINAL SOLID SAWN SPRUCE-PINE-FIR BAND JOIST (DECK LIVE LOAD = 40PSF, DECK DEAD LOAD = 10 PSF) | | | | | | | |
|---|---|---|---|---|---|---|---|
| JOIST SPAN | 6' AND LESS | 6'1 TO 8' | 8'1 TO 10' | 10'1 TO 12' | 12'1 TO 14' | 14'1 TO 16' | 16'1 TO 18' |
| CONNECTION DETAILS | ON CENTER SPACING OF FASTENERS | | | | | | |
| 1/2" DIAMETER LAG SCREW WITH 15/32" MAX SHEATHING | 30 | 23 | 18 | 15 | 13 | 11 | 10 |
| 1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING | 36 | 36 | 34 | 29 | 24 | 21 | 19 |
| 1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING AND 1/2" STACKED WASHERS | 36 | 36 | 29 | 24 | 21 | 18 | 16 |

| DESCRIPTION OF BUILDING MATERIALS | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION OF FASTENERS |
|---|---|---|
| ROOF | | |
| BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE | 4-8d BOX (2-1/2"x0.113") OR 3-8d COMMON (2-1/2"x0.131") OR 3-10d BOX (3"x0.128") OR 3-3"x0.131" NAILS | TOE NAIL |
| CEILING JOISTS TO PLATE | 4-8d BOX (2-1/2"x0.131") OR 3-8d COMMON (2-1/2"x0.131") OR 3-10 BOX (3"x0.128") OR 3-3"x0.131" NAILS | TOE NAIL |
| CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER LAPS OVER PARTITIONS | 4-10d BOX (3"x0.128") OR 3-16d COMMON (3-1/2"x0.162") OR 4-3"x0.131" NAILS | FACE NAIL |
| COLLAR TIE TO RAFTER, FACE NAIL OR 1-1/4"x20 GAGE RIDGE STRAP | 4-10d BOX (3"x0.128") OR 3-10d COMMON (3"x0.148") OR 4-3"x0.131" NAILS | FACE NAIL EACH RAFTER |
| RAFTER OR ROOF TRUSS TO TOP PLATE, TOE NAIL | 4-16d BOX (3-1/2"x0.135") OR 3-10d COMMON (3"x0.148") OR 4-10d BOX (3"x0.128") OR 4-3"x0.131" NAILS | 2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS |
| ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS | 4-16d BOX (3-1/2"x0.135") OR 3-10d COMMON (3"x0.148") OR 4-10d BOX (3"x0.128") OR 4-3"x0.131" NAILS | TOE NAIL |
| | 3-16d BOX (3-1/2"x0.135") OR 2-16d COMMON (3-1/2"x0.162") OR 3-10d BOX (3"x0.128") OR 3-3"x0.131" NAILS | END NAIL |
| WALL | | |
| STUD TO STUD (NOT AT BRACED WALL PANELS) | 16d COMMON (3-1/2"x0.162") | 24" O.C. FACE NAIL |
| | 10d BOX (3"x0.128") OR 3"x0.131" NAIL | 16" O.C. FACE NAIL |
| STUD TO STUD AND ABUTTING STUDS AT INTERSECTION WALL CORNERS (AT BRACED WALL PANELS) | 16d BOX (3-1/2"x0.135") OR 3"x0.131" NAIL | 12" O.C. FACE NAIL |
| | 16d COMMON (3-1/2"x0.162") | 16" O.C. FACE NAIL |
| BUILT-UP HEADER, TWO PIECES WITH 1/2" SPACER | 16d COMMON (3-1/2"x0.162") | 16" O.C. EACH EDGE FACE NAIL |
| | 16d BOX (3-1/2"x0.135") | 12" O.C. EACH EDGE FACE NAIL |
| CONTINUOUS HEADER TO STUD | 5-8d BOX (2-1/2"x0.113") OR 4-8d COMMON (2-1/2"x0.131") OR 4-10d BOX (3"x0.128") | TOE NAIL |
| TOP PLATE TO TOP PLATE | 16d COMMON (3-1/2"x0.162") | 16" O.C. FACE NAIL |
| | 10d BOX (3"x0.128") OR 3"x0.131" NAIL | 12" O.C. FACE NAIL |
| DOUBLE TOP PLATE SPLICE | 8-16d COMMON (3-1/2"x0.162") OR 12-16d BOX (3-1/2"x0.135") OR 12-10d BOX (3"x0.128") OR 12-3"x0.131" NAILS | FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT) |
| BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING (NOT BRACED WALL PANELS) | 16d COMMON (3-1/2"x0.162") | 16" O.C. FACE NAIL |
| | -16d BOX (3-1/2"x0.135") OR 3"x0.131" NAIL | 12" O.C. FACE NAIL |
| BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING (AT BRACED WALL PANELS) | 3-16d BOX (3-1/2"x0.135") OR 2-16d COMMON (3-1/2"x0.162") OR 4-3"x0.131" NAILS | 3 EACH 16" O.C. FACE NAIL 2 EACH 16" O.C. FACE NAIL 4 EACH 16" O.C. FACE NAIL |
| TOP OR BOTTOM PLATE TO STUD | 4-8d BOX (2-1/2"x0.113") OR 3-16d BOX (3-1/2"x0.135") OR 4-8d COMMON (2-1/2"x0.131") OR 4-10d BOX (3"x0.128") OR 4-3"x0.131" NAILS | TOE NAIL |
| | 3-16d BOX (3-1/2"x0.135") OR 2-16d COMMON (3-1/2"x0.162") OR 3-10d BOX (3"x0.128") OR 3-3"x0.131" NAILS | END NAIL |
| TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS | 3-10d BOX (3"x0.128") OR 2-16d COMMON (3-1/2"x0.162") OR 3-3"x0.131" NAILS | FACE NAIL |
| 1" BRACE TO EACH STUD AND PLATE | 3-8d BOX (2-1/2"x0.113") OR 2-8d COMMON (2-1/2"x0.131") OR 2-10d BOX (3"x0.128") OR 2 STAPLES 1-3/4" | FACE NAIL |
| 1"x6" SHEATHING TO EACH BEARING | 3-8d BOX (2-1/2"x0.113") OR 2-8d COMMON (2-1/2"x0.131") OR 2-10d BOX (3"x0.128") OR 2 STAPLES, 1" CROWN, 16 GA., 1-3/4" LONG | FACE NAIL |
| 1"x8" AND WIDER SHEATHINGTO EACH BEARING | 3-8d BOX (2-1/2"x0.113") OR 3-8d COMMON (2-1/2"x0.131") OR 3-10d BOX (3"x0.128") OR 3 STAPLES, 1" CROWN, 16 GA., 1-3/4" LONG | FACE NAIL |
| | WIDER THAN 1"x8": 4-8d BOX (2-1/2"x0.113") OR 3-8d COMMON (2-1/2"x0.131") OR 3-10d BOX (3"x0.128") OR 4 STAPLES, 1" CROWN, 16 GA., 1-3/4" LONG | |

| DESCRIPTION OF BUILDING MATERIALS | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION OF FASTENERS |
|---|---|---|
| FLOOR | | |
| JOIST TO SILL, TOP PLATE, OR GIRDER | 4-8d BOX (2-1/2"x0.113") OR 3-8d COMMON (2-1/2"x0.131") OR 3-10d BOX (3"x0.128") OR 3-3"x0.131" NAILS | TOE NAIL |
| RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO) | 8d BOX (2-1/2"x0.113") | 4" O.C. TOE NAIL |
| | 8d COMMON (2-1/2"x0.131") OR 10d BOX (3"x0.128") OR 3"x0.131" NAIL | 6" O.C. TOE NAIL |
| 1"x6" SUBFLOOR OR LESS TO EACH JOIST | 3-8d BOX (2-1/2"x0.113") OR 2-8d COMMON (2-1/2"x0.131") OR 3-10d BOX (3"x0.128") OR 2 STAPLES, 1" CROWN, 16 GA., 1-3/4" LONG | FACE NAIL |
| 2" SUBFLOOR TO JOIST OR GIRDER | 3-16d BOX (3-1/2"x0.135") OR 2-16d COMMON (3-1/2"x0.162") | BLIND AND FACE NAIL |
| 2" PLANKS (PLANK & BEAM-FLOOR & ROOF) | 3-16d BOX (3-1/2"x0.135") OR 2-16d COMMON (3-1/2"x0.162") | AT EACH BEARING FACE NAIL |
| BAND OR RIM JOIST TO JOIST | 3-16d COMMON (3-1/2"x0.162") OR 4-10d BOX (3"x0.128") OR 4-3"x0.131" NAILS OR 4 3"x14 GA. STAPLES, 7/16" CROWN | END NAIL |
| BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS | 20d COMMON (3"x0.128") | NAIL EACH LAYER AS FOLLOWS: 32" O.C AT TOP END AND BOTTOM AND STAGGERED. |
| | 10d BOX (3"x0.128") OR 3"x0.131" NAIL | 24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES |
| | AND: 2-20d COMMON (4"x0.192") OR 3-10d BOX (3"x0.128") OR 3-3"x0.131" NAILS | FACE NAIL AT ENDS AND AT EACH SPLICE |
| LEDGER STRIP SUPPORTING JOISTS OR RAFTERS | 4-16d BOX (3-1/2"x0.135") OR 3-16d COMMON (3-1/2"x0.162") OR 4-10d BOX (3"x0.128") OR 4-3"x0.131" NAILS | AT EACH JOIST OR RAFTER, FACE NAIL |
| BRIDGING OR BLOCKING TO JOIST | 2-10d BOX (3"x0.128") OR 2-8d COMMON (2-1/2"x0.131") OR 2-3"x0.131" NAILS | EACH END, TOE NAIL |

| DESCRIPTION OF BUILDING MATERIALS | NUMBER AND TYPE OF FASTENER | EDGES (IN) | INTERMEDIATE SUPPORTS (IN) |
|---|---|---|---|
| WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING [SEE TABLE R602.3(3) FOR WOOD STRUCTURAL PANEL EXTERIOR WALL SHEATHING TO WALL FRAMING] | | | |
| 3/8" - 1/2" | 6d COMMON (2"x0.113") NAIL (SUBFLOOR, WALL) OR 8d COMMON (2-1/2"x0.131") NAILS (ROOF) OR RSRS-01 (2-3/8"x0.113") NAIL (ROOF) | 6 | 12 |
| 19/32" - 1" | 8d COMMON NAIL (2-1/2"x0.131") OR RSRS-01 (2-3/8"x0.113") NAIL (ROOF) | 6 | 12 |
| 1-1/8" - 1-1.4" | 10d COMMON (3"x0.148") NAIL OR 8d (2-1/2"x0.131") DEFORMED NAIL | 6 | 12 |
| OTHER WALL SHEATHING | | | |
| 1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING | 1-1/2" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAMETER OR 1-1/4" LONG 16 GA. STAPLE WITH 7/16" OR 1" CROWN | 3 | 6 |
| 25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING | 1-3/4" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAMETER OR 1-1/2" LONG 16 GA. STAPLE WITH 7/16" OR 1" CROWN | 3 | 6 |
| 1/2" GYPSUM INTERIOR COVERING (R702.3.5) | 1-1/2" GALVANIZED ROOFING NAIL: STAPLE GALVANIZED, 1-1/2" LONG; 1-1/4" SCREWS, TYPE "W" OR "S" | 7 | 7 |
| 5/8" GYPSUM INTERIOR COVERING (R702.3.5) | 1-3/4" GALVANIZED ROOFING NAIL: STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS, TYPE "W" OR "S" | 7 | 7 |
| WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING | | | |
| 3/4" AND LESS | 6d DEFORMED (2"x0.120") NAIL OR 8d COMMON (2-1/2"x0.131") NAIL | 6 | 12 |
| 7/8" - 1" | 8d COMMON (2-1/2"x0.131") NAIL OR 8d DEFORMED (2-1/2"x0.120") NAIL | 6 | 12 |
| 1-1/8" - 1-1/4" | 10d COMMON (3"x0.148") NAIL OR 8d DEFORMED (2-1/2"x0.120") NAIL | 6 | 12 |


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## FASTENING SCHEDULE

## S403

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