Project Summary

Project Scope

New single family detached dwelling and associated site work on newly platted undeveloped lo

Neighborhood:

Site Data: Street Address: See Title Block

Legal Description: See Title Block

RP-1 Planned Single Family District Minimum setbacks: Front:

Side:

Maximum height: 2 1/2 stories / 35'

Maximum driveway: 3-car garage = 32'

Code Authority:

City of Lee's Summit, MO

Applicable Codes: 2018 IRC, 2018 IECC, 2018 IBC, 2018 Existing Building Code, and local amendments.

Building Code Summary

2018 International Residential Code (IRC)

3 - Building Planning

301 Design Criteria

Wind, Seismic, Snow Loads: See Structural.

Live & Dead Loads:

Fire Resistant Construction

302.1 Exterior Walls > 5': 0 Hours.

302.6 Dwelling/Garage Separation:

From residence / attic: 1/2" gyp board From habitable rooms above: 5/8" Type X gyp board

Structure supporting separating floor/ceiling: 1/2" gyp board

Garages <3' from dwelling unit on same lot: 1/2" gyp board

302.7 Under stair protection: 1/2" gyp board

302.9 Wall and ceiling finishes: Flame spread index < 200; smoke developed index < 450.

302.10 Insulation, vapor retarders: Flame spread index < 25; smoke developed index < 450.

302.11 Fireblocking required between stories and between top story and roof. 302.12 Draftstopping required where concealed space exceeds 1,000 SF. 1/2"

gyp board or equivalent.

Garage floor shall slope to a drain or to the vehicle entrance.

Glazing in doors, showers, railings, transoms, skylights shall be safety glazing per code.

Basements, habitable attics and sleeping rooms shall have at least one approved emergency escape and rescue opening. Sill height max 44"; minimum clear opening 5.7 SF; minimum clear opening height 24"; minimum clear opening width 20".

310.2 Window wells: minimum horizontal area 9 SF; minimum projection and width 36"; permanent ladder required if depth > 44".

311 Means of Egress

311.2 At least one doorway side-hinged 32" minimum clear opening, with inside and outside landings minimum 36" in direction of travel. Outdoor landing elevation no more than 7 3/4" below top of threshold.

311.6 Hallways minimum width 36".

311.7 Stairways minimum width 36"; minimum headroom 80"; maximum riser 7 3/4"; minimum tread 10"; nosing minimum 3/4" & maximum 1 1/4"; railing on at least one side; railing height 34 – 38" above nosing.

312 Window fall protection is required at windows where sill is > 72" above grade and < 24" above floor.

Smoke alarms required in each sleeping room, outside each group of sleeping rooms, and on each additional story, including basements and habitable attics, but not in uninhabitable

attics nor crawl spaces. Smoke alarms shall be hard-wired and interconnected per code. Carbon monoxide alarms required outside each group of sleeping rooms in dwellings

with fuel-fired appliances or attached garage.

Foam plastics shall comply with R316. Thermal barrier minimum 1/2" gyp board.

317 Wood decay protection required

In crawl space for joists < 18" above exposed ground and girders < 12" above exposed

All wood framing in contact with concrete or masonry and < 8" above grade.

Sills and sleepers on concrete on masonry

Wood siding or sheathing < 6" above grade or < 2" above concrete paving

Wood framing supporting water-permeable decking

318 Termite protection required per R318.

4 thru 9 - Foundations, Floors, Walls, Roofs See Structural Notes and Framing Plans for joists, rafters, species & grade.

11 – Energy Efficiency

N1101 Climate Zone 4 N1102 Minimum building envelope:

Fenestration U = 0.35

 Skylight U = 0.55 SHGC = 0.40

Ceiling/roof R = 49

Wood framed walls R = 20 cavity (or R13 cavity + R5 continuous)

Mass walls R = 8 exterior (or R13 interior)

Floors above unconditioned space R = 19

Basement walls R = 10 continuous (or R13 cavity)

 Slabs (if < 12" below grade) R = 10 extending at least 24" vertically at the slab edge or horizontally under the slab

Crawl space walls R = 10 continuous (or R13 cavity)

N1102.4 Building thermal envelop shall limit air leakage per this section. Provide testing as required by local official.

12 thru 44 – Building Services (MEP)

See MEP drawings by others, who are responsible for code compliance for their portions of the

2018 International Building Code (IBC)

Occupancy Classification Group R-3 Residential

Construction Type V-B Unsprinklered

Fire resistance ratings = 0 hrs

Residential General Notes

It is the responsibility of the contractor to become fully aware of any and all conditions related to the site and existing conditions that may effect the cost or schedule of construction activities, prior to submitting a bid.

Contractor shall verify all dimensions and conditions at the job site including soil conditions, and conditions related to the existing utilities and services before commencing work and

be responsible for same. All discrepancies shall be reported to the owner immediately. 3. Do not scale drawings or details — Use given dimensions. Check details for location of all items not dimensioned on plans. Dimension on plans are to face of framing or center line of columns typically. Door and cased openings without dimensions are to be six (6) inches from face of adjacent wall or centered between walls.

The drawings indicate general and typical details of construction. Where conditions are not specifically indicated but are of similar character to details shown, similar details of construction shall be used, subject to review and approval by the architect and structural engineer.

5. Building systems and components not specifically detailed shall be installed, as per minimum manufacturers recommendations. Notify the architect of any resulting conflicts.

All work shall conform to applicable building codes and ordinances. In case of any conflict wherein the methods or standards of installation or the materials specified do no equal or exceed the requirements of the laws or ordinances, the laws or ordinances shall govern.

Install dust barriers and other protection as required to protect installed finishes and

Plumbing, mechanical and electrical drawings, etc. are supplementary to the architectural drawings. It shall be in the responsibility of each contractor to check with the architectural drawings before installation of their work. Any discrepancy between the architectural drawings and the consulting engineer(s) or other supplementary drawings shall be brought to the owner's attention in writing.

This project contains glazing that will be subject to federal and local glazing standards and the glazing subcontractor shall be responsible for adherence to these requirements. If the glazing subcontractor finds anything in the documents not in compliance with the standards, he/she shall bring discrepancies to the attention of the architect before proceeding.

10. All glazing in hazardous locations, defined by the IRC R308.4, shall by safety glazing, including but not limited to the safety glazing identified in the construction documents.

11. There shall be no exposed pipe, conduits, ducts, vents, etc. All such lines shall be concealed or furred and finished, unless noted as exposed construction on drawings. Offset studs where required, so that finished wall surface will be flush.

12. Contractor shall provide temporary bracing for the structure and structural components until all final connections have been completed in accordance with the plans.

13. Carry all footings to solid, undisturbed original earth. Remove all unsuitable material under footings and slab and replace with concrete or with compacted fill as directed by architect. 14. All wood framing details not shown otherwise shall be constructed to the minimum

standards of the IRC. 15. All wood in direct contact with concrete or exposed to weather shall be pressure treated with an approved preservative unless decay resistant heartwood of cedar or redwood is used. Fasteners for pressure treated wood shall be hot dipped galvanized steel, stainless steel, silicon

Nail gypsum wallboard to all studs, top and bottom plates and blocking with drywall nails @ 7 inches o.c. maximum spacing unless shown otherwise. Use 5d for 1/2 wallboard, 6d for 5/8

17. Provide galvanic separation between dissimilar metals.

The contractor is to verify the location of all utilities and services to the site prior to

beginning any site improvements. No materials from the work are to be stock piled on public rights-of-way. All rubbish and debris is to be removed from the site.

20. Adjacent properties, streets and walks are to be protected from damage at all times.

21. All downspouts and roof drains to be connected to drywells min 10' from foundation, or surface drainage min 3' from foundation unless noted otherwise in construction documents.

All dimensions are face of stud wall, centerline of column, or face of concrete unless noted otherwise. 23. The contractor shall secure permits required by the fire department prior to building

The contractor shall take all necessary precautions to ensure the safety of the occupants and workers at all times during the course of the project.

25. Approved plans shall be kept in a plan box and shall not be used by any workmen. All construction sets shall reflect the same information. The contractor shall also maintain in good condition, one complete set of plans with all revisions, addenda and changes orders on the

The contractor and/or the sub-contractors shall apply for, obtain and pay for all required permits and fees except for the building permit.

Construction hours, per jurisdiction, are to be observed for all phases of the project.

premises at all times. Said plans are to be under the care of the job superintendent.

Precautionary Notes

This drawing has been produced by the Architect or prepared under his direct supervision as an instrument of service and is intended for use only on this project. All Drawings, Specifications, ideas and designs, including the overall layout, form, arrangement and composition of spaces and elements portrayed, constitute the original unpublished Work of the Architect. Any reproduction, use or disclosure of the information contained herein without the written consent of the Architect is

© Bill Fowler Architect, Leawood, KS

Responsibilities. THE ARCHITECT DISCLAIMS responsibility for the existing building structure, site conditions, existing construction elements or any documents, drawings or other instruments used for any part of this Project which do not bear the Architect's seal. The Architect's services are undertaken only in the interest of the Project Owner. The Architect assumes no obligation for the benefit of any other entity.

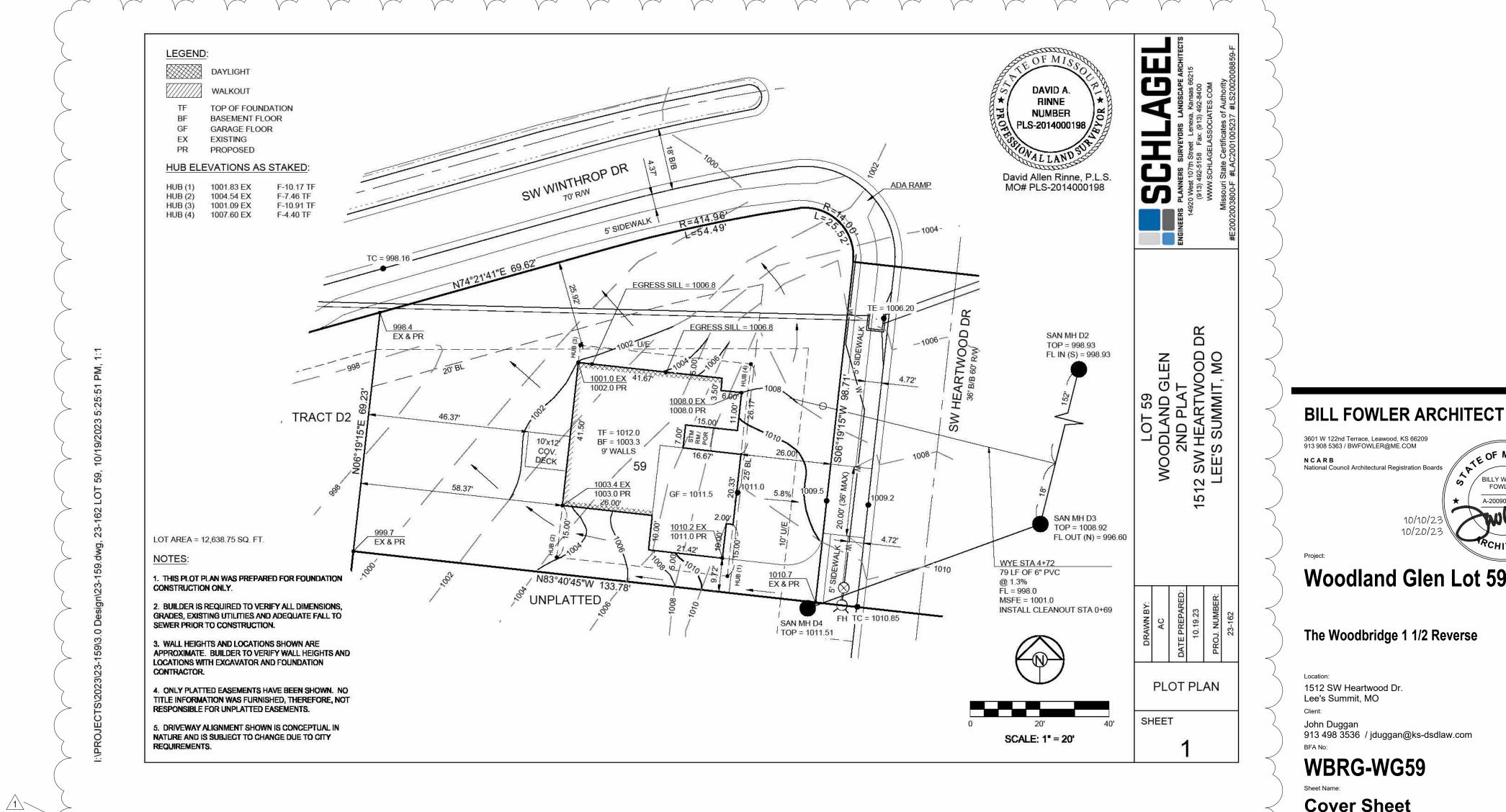
Related Documents. This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary Conditions of the Contract, General Requirements, Specifications and other Drawings also affect the Work described. Failure to review and integrate the design intent of the whole of the Construction Documents does not relieve the Contractor from providing a complete Project.

3. Codes and Ordinances. COMPLY WITH all laws, codes, ordinances and regulations of authorities having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained.

Verifying Conditions. VERIFY ALL CONDITIONS and dimensions prior to construction. Commencement of Work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work and assumption of responsibility for satisfactory installation.



S10 Structural S20 Structural S21 Structural S30 Structura S31 Structural S32 Structural S33 Structural S34 Structural Area Summary Finished Area 235 SF Mechanical Storage/Storm 2,153 SF Main Floor 134 SF Covered Deck Covered Front Porch 1,423 SF Main Floor 2,276 SF 4,429 SF Front View





913 498 3536 / jduggan@ks-dsdlaw.com

1512 SW Heartwood Dr.

Lee's Summit, MO

John Duggan

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National Council Architectural Registration Boards

Sheet List

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Cover Sheet

Basement Plan

Main Floor Plan

Furnishing Plans

Elevations

Structural

Architectural

A01

A11

A21

A22

AA2

S01

Structural

Project Issue | Current

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Cover Sheet

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10/10/23 Current Revision Date: 10/20/23

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Exterior Elevation Notes

Hold finish grade min 6" below bottom of siding or wood framing.

2 Left Elevation

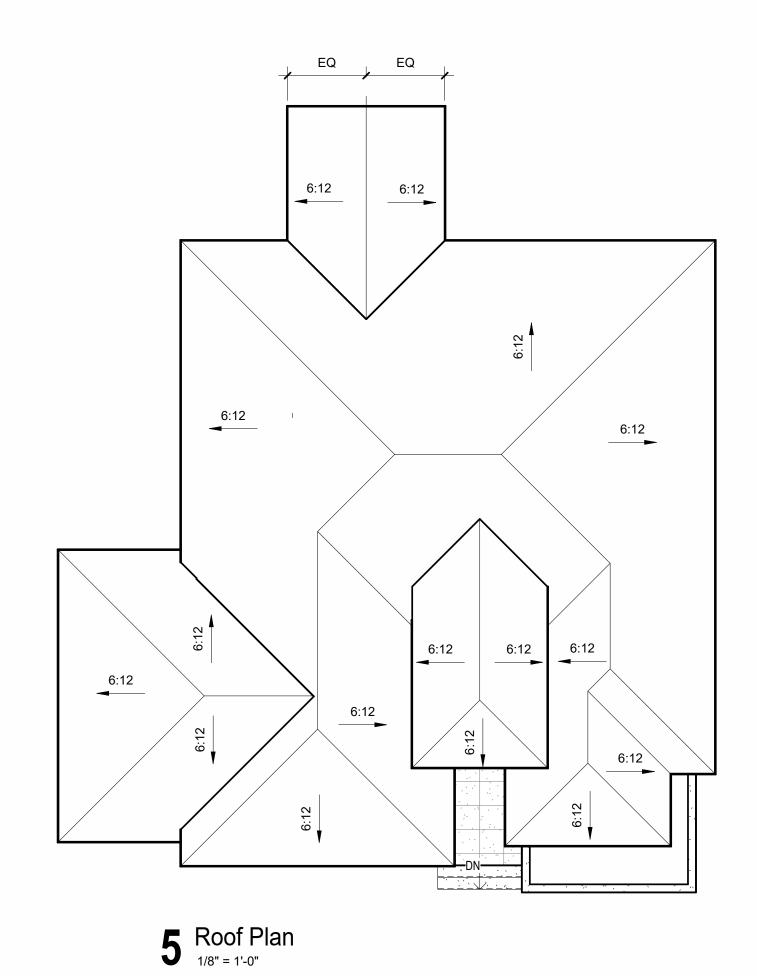
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__Composition shingles. Certainteed Presidential Weathered Wood.



4 Rear Elevation 1/8" = 1'-0"



Exterior Materials

Exterior Cement Stucco & siding: SW 7018 Dovetail

Stone Veneer: Roman Castle Suede-Drystack

Exterior Trim: SW 7005 Pure White

Garage Doors: SW 7020 Black Fox

Roof: Certainteed Presidential Weathered Wood

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| BILLY WAYNE FOWLER |
| A-2009030387 |
| 10/10/23 |
| 10/20/23 |

Project:

Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

Location: 1512 SW Heartwood Dr. Lee's Summit, MO

Client:
John Duggan
913 498 3536 / jduggan@ks-dsdlaw.com
BFA No:

WBRG-WG59

Elevations

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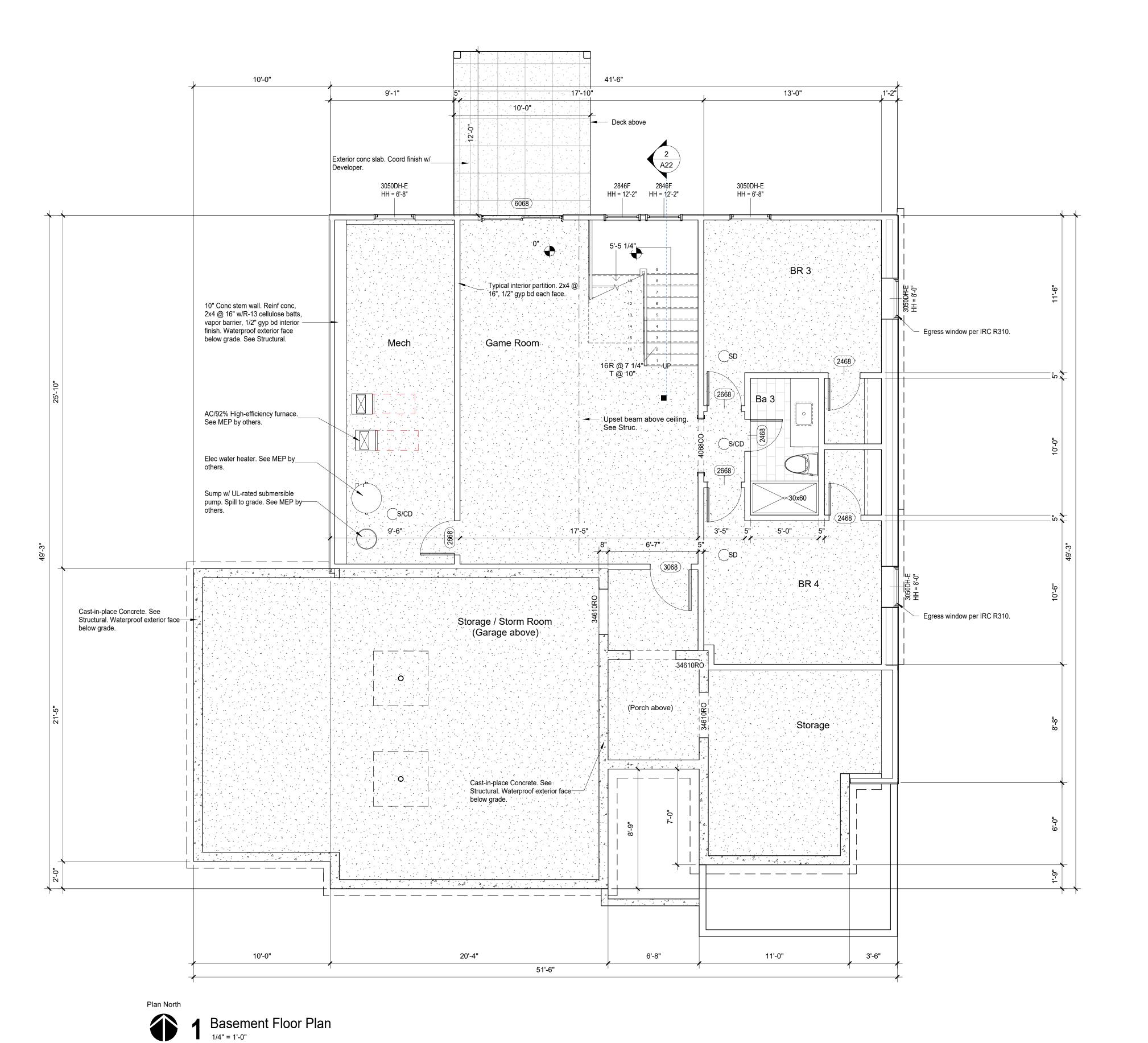
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Area Summary

Basement	
945 SF	Finished Area
235 SF	Mechanical
974 SF	Storage/Storm
2,153 SF	
Main Floor	
134 SF	Covered Deck
56 SF	Covered Front Porch
663 SF	Garage
1,423 SF	Main Floor

Floor Plan Notes

2,276 SF 4,429 SF

- Unless noted otherwise, exterior wall dimensions are to face of stud or concrete. Interior wall dimensions are to face of finish. Wall thickness dimensions are nominal. Coordinate precision with abutting
- elements.

 Window and door tags indicate nominal sizes.

 Example: 3068 = 3'-0" x 6'-8". Tag suffix as follows:

 C = Casement, F = Fixed, DH = Double-hung, SH = Single-hung, T = Transom, E = Egress, S = Slider.

 See Elevations for window and door types.
- 3. Field verify all existing conditions relevant to the
- Loose furnishings, if shown, are by Owner.
 Mechanical and electrical designs are by design-build contractors who are responsible for coordinating with Owner's requirements and code conformance.
- 6. All sleeping rooms shall have at least one egress window per IRC R310. See Project Notes and Window Schedule.
- Fire resistant construction, if required, shall comply with IRC R302. See Project Notes.
 Safety glazing, where required, shall comply with IRC
- 9. Garage floor slab shall comply with IRC R309.
 10. Emergency egress paths such as floors and landings at exterior doors, stairs, and hallways shall comply
- 11. Where window sills are 24" or lower, provide window fall protection per IRC R312.
- 12. Refer to IRC R317 for preservative treated wood requirements.
- 13. Refer to IRC R318 for termite protection requirements.
- requirements.

 4. Provide a smoke detector, hard-wired and
- interconnected, in each sleeping room per IRC 314.
 15. Provide a carbon monoxide detector, hard-wired and
- interconnected, outside each group of sleeping rooms and at interior garage door per IRC 315.

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WBRG-WG59

Basement Plan

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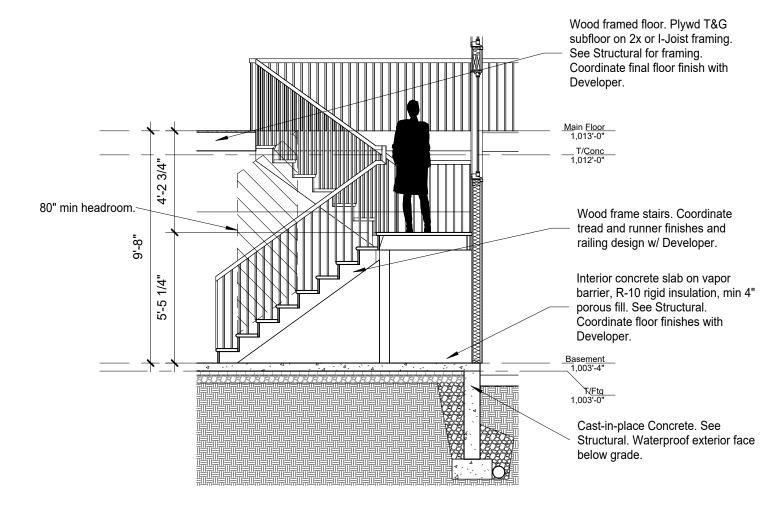
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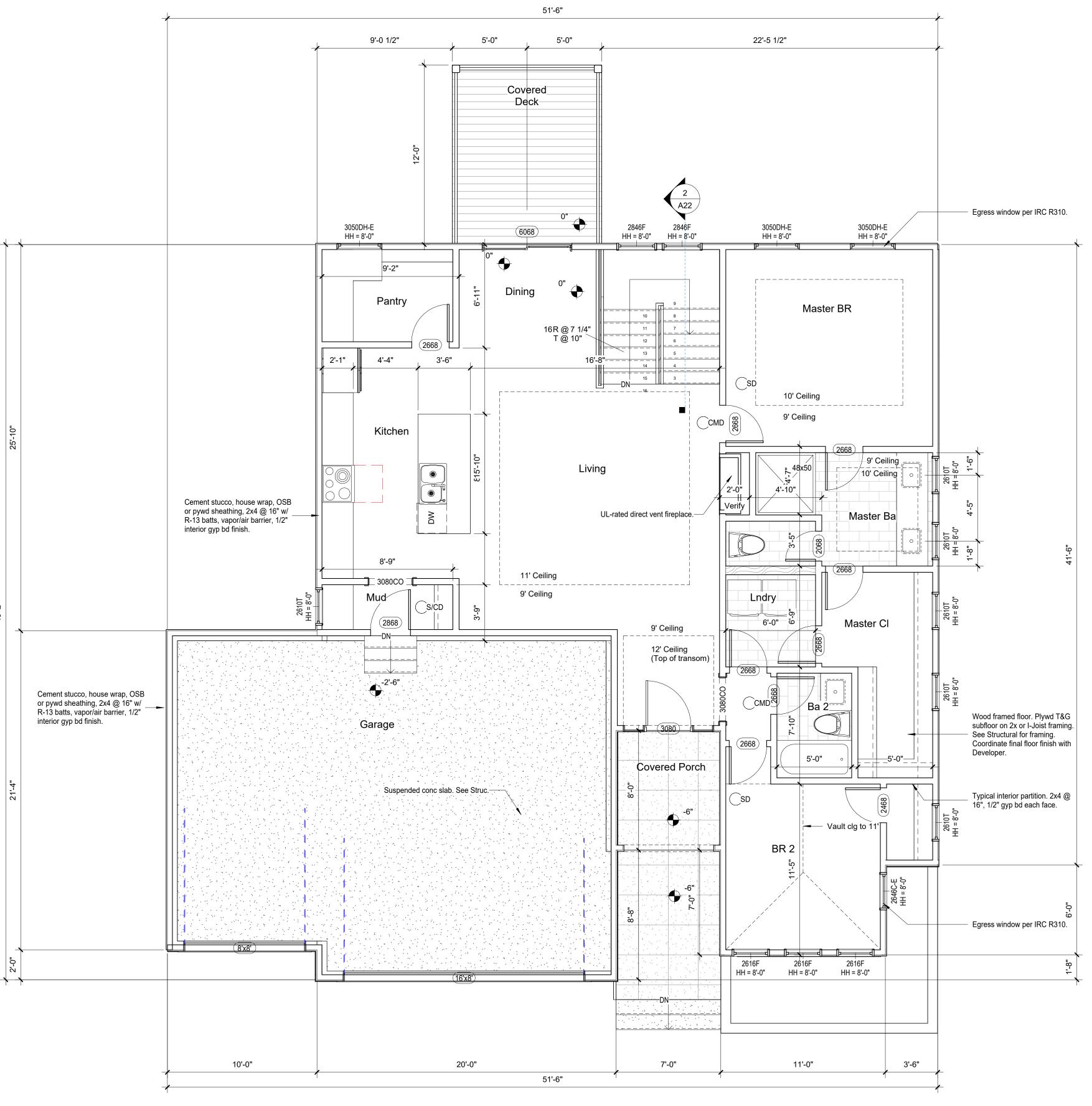
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2 Stair Section 1/4" = 1'-0"





First Floor Plan
1/4" = 1'-0"

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 Mechanical and electrical designs are by design-build contractors who are responsible for coordinating with Owner's requirements and code conformance.
- All sleeping rooms shall have at least one egress window per IRC R310. See Project Notes and Window Schedule.
- Fire resistant construction, if required, shall comply with IRC R302. See Project Notes.
 Safety glazing, where required, shall comply with IRC
- R308.

 9. Garage floor slab shall comply with IRC R309.

 10. Emergency egress paths such as floors and landings
- at exterior doors, stairs, and hallways shall comply with IRC R311.

 11. Where window sills are 24" or lower, provide window
- fall protection per IRC R312.

 12. Refer to IRC R317 for preservative treated wood requirements
- 13. Refer to IRC R318 for termite protection
- requirements.
- 14. Provide a smoke detector, hard-wired and interconnected, in each sleeping room per IRC 314.
- 15. Provide a carbon monoxide detector, hard-wired and interconnected, outside each group of sleeping
- interconnected, outside each group of sleeping rooms and at interior garage door per IRC 315.

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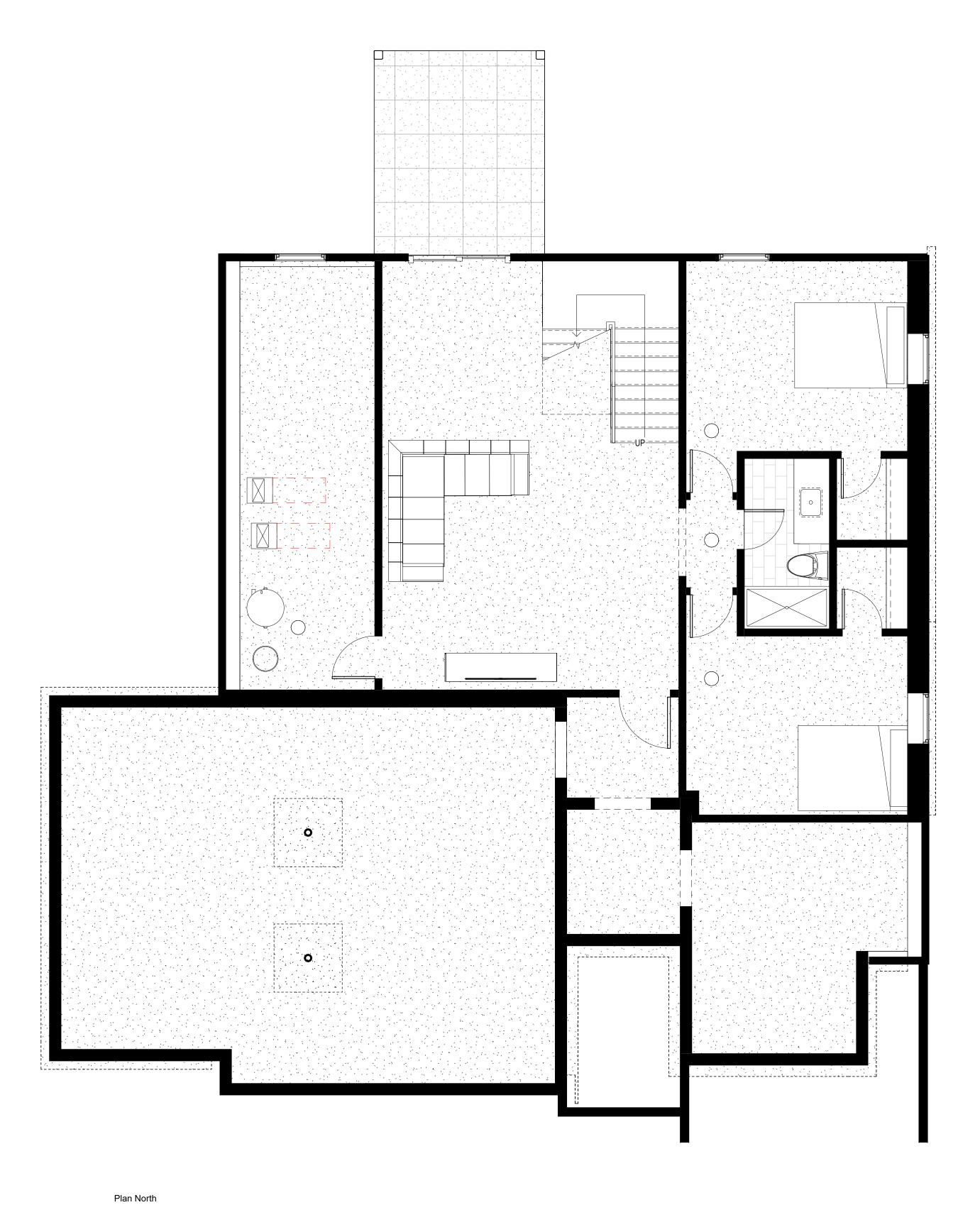
Main Floor Plan

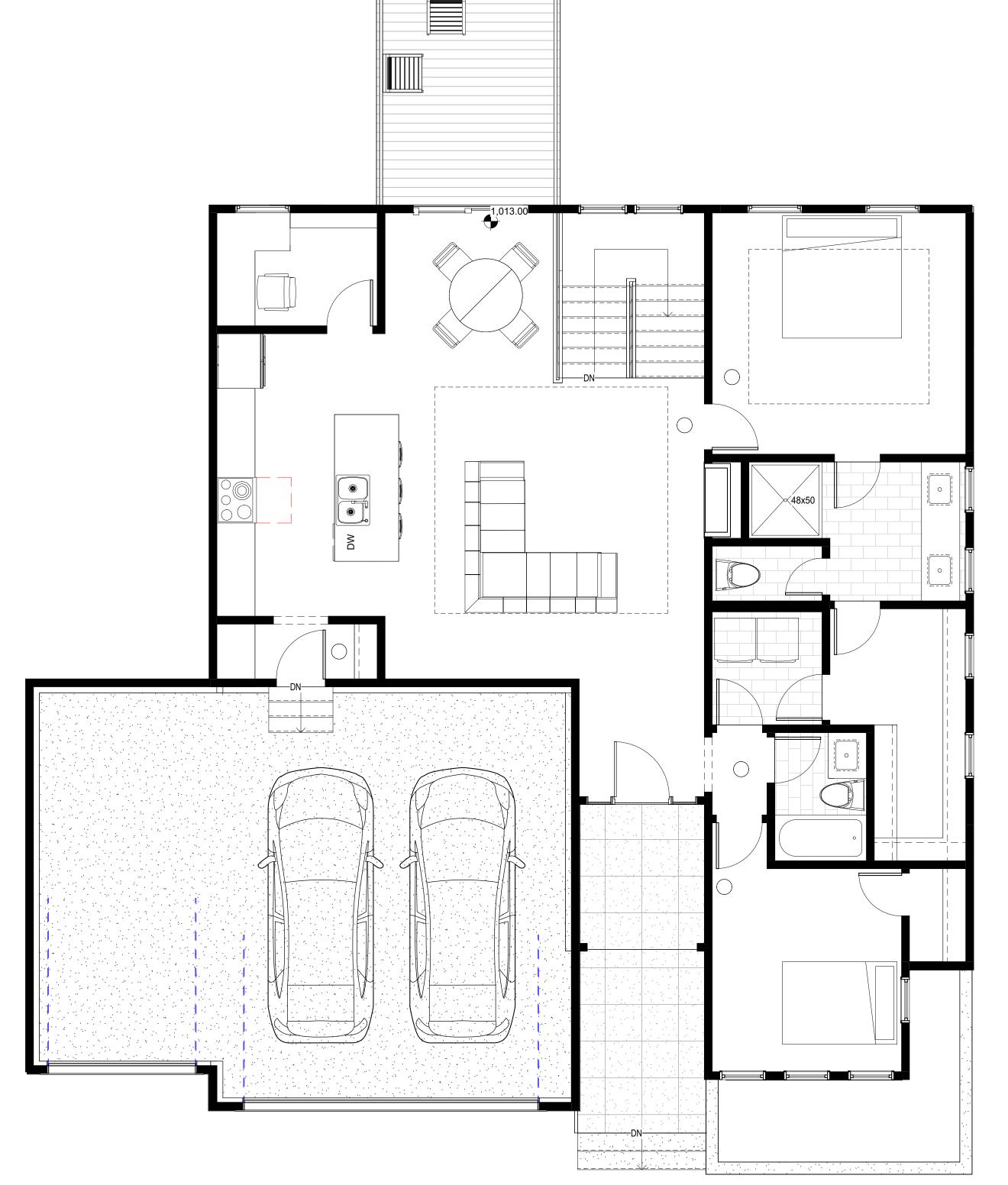
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Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

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Furnishing Plans

Date: **10/10/23** Current Revision Date:

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Basement Floor Plan

1/4" = 1'-0"

SCALE

2 0 2 4 6 8 10

SCALE

FEET

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GENERAL NOTES

2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND ITS APPROPRIATE GOVERNING BUILDING CODE: SUPPLEMENTS

DESIGN LOADS: ROOF DEAD LOAD: 15 psf ROOF LIVE LOAD: 20 psf FLOOR DEAD LOAD 10 psf FLOOR LIVE LOAD:

BEDROOMS: 30 psf ALL OTHER LIVING AREAS: 40 psf

Vasd=115 MPH, EXPOSURE C WIND LOADS: SITE CLASS "B" SEISMIC LOADS: ASSUMED ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF

- 1. FURNISH ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN OR INFERRED BY THESE DRAWINGS.
- 2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND FOR COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN WITH THE EXISTING CONDITIONS. IF ERRORS OR DISCREPANCIES IN THE DIMENSIONS OCCUR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- 3. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING AS REQUIRED DURING CONSTRUCTION TO ENSURE THE SAFETY OF ALL INDIVIDUALS INVOLVED.
- 4. ALL MECHANICAL, ELECTRICAL, AND PLUMBING ELEMENTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND THE LOCAL MUNICIPALITY.
- NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. HAS DESIGNED THE STRUCTURAL FLOOR FRAMING AND WALL BRACING SYSTEM OF THESE PLANS FOR THE CONSTRUCTION OF A RESIDENCE AT THE ADDRESS REFERENCED IN THE PLANS. NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. WILL NOT TAKE RESPONSIBILITY FOR ANY RE-USE OF ANY PORTION OF THE DESIGN, PLANS OR SPECIFICATIONS AT ANY OTHER PROPERTY OR ADDRESS WITHOUT OUR PRIOR WRITTEN CONSENT.

THE TERM "BUILDER'S PLANS" REFERS TO A CERTAIN LEVEL OF DEVELOPMENT OF THE DRAWINGS. AS THE NAME IMPLIES, THESE PLANS REQUIRE THAT THE CONTRACTOR POSSESSES COMPETENCE IN RESIDENTIAL CONSTRUCTION AND A THOROUGH UNDERSTANDING OF THE INTERNATIONAL RESIDENTIAL CODE (IRC). THE CONTRACTOR WARRANTS TO NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. THAT HE POSSESSES THE PARTICULAR COMPETENCE AND SKILL IN CONSTRUCTION NECESSARY TO BUILD THIS PROJECT WITHOUT FULL ENGINEERING AND DESIGN SERVICES, AND FOR THAT REASON THE CONTRACTOR OR HOME OWNER HAS RESTRICTED THE SCOPE OF PROFESSIONAL SERVICES. THE CONSTRUCTION DOCUMENTS PROVIDED BY THE LIMITED SERVICES SHALL BE TERMED "BUILDER'S PLANS" IN RECOGNITION OF THE CONTRACTOR'S SOPHISTICATION. ALTHOUGH NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. AND OUR CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, WE CANNOT GUARANTEE PERFECTION. ANY AMBIGUITY OR DISCREPANCY DISCOVERED BY THE USE OF THESE PLANS SHALL BE REPORTED IMMEDIATELY TO NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. CONSTRUCTION MAY REQUIRE THAT THE CONTRACTOR ADAPT THE "BUILDER'S PLANS" TO THE FIELD CONDITIONS ENCOUNTERED AND MAKE LOGICAL ADJUSTMENTS IN FIT FORM, DIMENSION AND QUANTITY. CHANGES MADE FROM THE PLANS WITHOUT THE CONSENT OF NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. ARE UNAUTHORIZED. IT IS ALSO UNDERSTOOD THAT THE CONTRACTOR WILL BE RESPONSIBLE FOR MEETING ALL APPLICABLE BUILDING CODES INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, AND PLUMBING CODE REQUIREMENTS (WHICH IS EXCLUDED FROM THESE PLANS). IN THE EVENT ADDITIONAL DETAIL OR GUIDANCE IS NEEDED BY THE CONTRACTOR OR HOMEOWNER FOR CONSTRUCTION OF ANY ASPECT OF THE PROJECT, NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. OR A QUALIFIED ARCHITECT/ENGINEER SHALL IMMEDIATELY BE RETAINED. FAILURE TO NOTIFY US OF THESE NEEDS OR OF CHANGES TO THE PLANS SHALL RELIEVE NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. OF ALL RESPONSIBILITIES OF THE CONSEQUENCES.

- WATER RESISTIVE EXTERIOR WALL COVERING, FREE FROM HOLES AND BREAKS, SHALL BE APPLIED TO STUDS OR SHEATHING OF ALL EXTERIOR WALLS. WRAP SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE IN COMPLIANCE WITH SECTION R703.2.
- 2. BUILDING SHALL COMPLY WITH IRC SECTION R802.5.2 FOR RAFTER AND CEILING JOIST CONNECTIONS.
- 3. "UFER" GROUND SHALL BE PROVIDED PER IRC SECTION E3608.1
- 4. GUTTERS, DOWNSPOUTS, AND SPLASH BLOCKS SHALL BE PROVIDED TO INSURE ALL ROOF DRAINAGE IS DIRECTED 5 FEET MINIMUM FROM HOUSE BEFORE TOUCHING SOIL.

- MAXIMUM RISER AT STAIRWAYS IS 7 3/4" AND MINIMUM TREAD IS 10" WITH A MINIMUM 6'-8" HEADROOM, PER IRC SECTION R311.7.
- 2. PLACE HANDRAILS ON ALL STAIRS AND/OR LEVELS THAT EXCEED 30" ABOVE THE FLOOR OR GRADE. RAILINGS TO BE MIN. 36" HIGH AND HAVE INTERMEDIATE RAILS THAT DO NOT ALLOW THE PASSAGE OF A 4" DIAMETER SPHERE AND SHALL COMPLY WITH IRC SECTIONS R311.7.8 & R312.
- 3. ENCLOSE ACCESSIBLE SPACE BENEATH STAIRS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH 1/2" GYPSUM BOARD ON ENCLOSURE SIDE PER SECTION
- 5. STAIRWAYS CONSISTING OF 3 OR MORE RISERS SHALL HAVE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE STAIR NOSINGS.
- 6. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1 1/4" MINIMUM TO 2" MAXIMUM OR OTHER APPROVED GRASPABLE SHAPER PER SECTION R311.7.8.5.
- 7. SPIRAL STAIRS SHALL BE CONSTRUCTED PER SECTION R311.7.10.1.

WINDOWS AND SAFETY GLAZING NOTES:

- GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC SECTION 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 IS WITHIN A 24" ARCH OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS WITHIN 60" OF THE FLOOR; WALLS ENCLOSING STAIRWAYS AND LANDINGS WHERE THE GLAZING IS WITHIN 60" OF THE TOP OR BOTTOM OF THE STAIR, ENCLOSURES FOR SPAS, TUBS, SHOWERS AND WHIRLPOOLS; GLAZING IN FIXED OR OPERABLE PANELS EXCEEDING 9 SQ. FT. AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36".
- 2. ALL WINDOWS SHALL MEET THE FALL PROTECTION REQUIREMENTS OF SECTION R312.2.

EMERGENCY EGRESS NOTES:

- 1. ALL SLEEPING ROOMS AND BASEMENT SHALL BE PROVIDED WITH PROPER EMERGENCY ESCAPE AND RESCUE OPENINGS PER IRC SECTION R310. PROVIDE (1) WINDOW IN EACH BEDROOM THAT HAS A MINIMUM OPERABLE AREA OF 5.7 SQ. FT. WITH A MINIMUM OPERABLE HEIGHT OF 24" AND WIDTH OF
- 2. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL FLOOR, INCLUDING BASEMENTS AND STAIRWAYS. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM ACTIVATES ALL OTHERS AND BE HARD WIRED WITH A BATTERY BACKUP, PER IRC
- SECTION R314 AND NFPA 72. 3. CARBON MONOXIDE DETECTORS SHALL BE PROVIDED PER R315.

- CONCRETE & REINFORCING NOTES: CONCRETE STRENGTH SHALL MEET THE FOLLOWING MINIMUM 28 DAY STRENGTH REQUIREMENTS
- (IRC R402.2): 1.1. 2,500 PSI FOR BASEMENT FLOOR SLABS ON UNDISTURBED GRADE.
- 1.2. 3,000 PSI FOR FOOTINGS, FOUNDATION WALLS, AND OTHER VERTICAL CONCRETE
- 1.3. 3,500 PSI FOR CARPORT AND GARAGE FLOOR SLABS ON UNDISTURBED GRADE. 1.4. 3,500 PSI FOR STRUCTURAL FLOOR SLABS.
- CONCRETE SHALL BE 6%±1% AIR ENTRAINED FOR GARAGE SLABS AND FOR ALL LOCATIONS (FOOTINGS, WALLS, FLATWORK, ETC.) EXPOSED TO WEATHER.
- 3. CONCRETE SHALL HAVE A SLUMP OF 4" ± 1". THE SLUMP CAN BE INCREASED THROUGH THE USE OF
- APPROVED ADDITIVES (NOT WATER). 4. THE REINFORCING STEEL SHALL BE ASTM A615, GRADE 40 MINIMUM UNLESS NOTED OTHERWISE ON
- THE DRAWINGS. ALL BARS SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS AND/OR CORNER BARS SHALL BE PROVIDED AT ALL FOOTING AND WALL CORNERS, AND FOOTING STEPS. 5. MINIMUM CONCRETE COVER SHALL BE AS FOLLOWS (ACI 318):
- 5.1. EARTH FORMED 3" 5.2. EXPOSED TO WEATHER - 1 1/2" FOR #5 BARS & SMALLER
- 5.3. NOT EXPOSED TO WEATHER 3/4" FOR SLABS.
- . NO WATER SHALL BE ADDED TO THE CONCRETE MIX AT THE SITE.
- ADDITION OF CALCIUM CHLORIDE TO CONCRETE IS NOT PERMITTED. 8. NO ALUMINUM SHALL BE EMBEDDED/PLACED IN CONCRETE.
- 9. CONCRETE PLACED IN COLD WEATHER SHALL COMPLY WITH ACI 306. CONCRETE PLACED IN HOT WEATHER SHALL COMPLY WITH ACI 305.

FLOOR JOISTS.

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

STRUCTURAL STEEL ASTM A992, Fy = 50 KSI ASTM A36 MISCELLANEOUS STEEL

ASTM A500, GRADE B HOLLOW STRUCTURAL STEEL (HSS) STEEL PIPE ASTM A53, GRADE B (SCHED 40 MIN) ALL BEAM CONNECTIONS SHALL BE DESIGNED BY THE STEEL FABRICATOR UNDER THE DIRECTION OF

- A REGISTERED PROFESSIONAL ENGINEER UNLESS SPECIFIC CONNECTIONS ARE SHOWN ON THE DRAWINGS. CONNECTIONS SHALL BE DESIGNED TO 50% U.D.L. OR THE REACTION PROVIDED ON THE DRAWINGS, WHICH EVER IS GREATER. CONNECTIONS SHALL BE WELDED OR BOLTED PER AISC STEEL CONSTRUCTION MANUAL 13TH EDITION. BOLTS SHALL BE ASTM A325N.
- 3. ALL COLUMN ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36.
- 4. WELDING SHALL CONFORM TO THE LATEST PUBLICATION OF APPLICABLE CODES SET FORTH BY THE AMERICAN WELDING SOCIETY. NO UNAUTHORIZED WELDS WILL BE ACCEPTED.
- PROVIDE 30# FELT BOND BREAK AROUND ALL STEEL COLUMNS WHERE IN CONTACT WITH SLAB-ON-GRADE
- ALL EXTERIOR STEEL EXPOSED TO THE ELEMENTS SHALL BE HOT DIPPED GALVANIZED UNLESS NOTED OTHERWISE 7. ALL STRUCTURAL STEEL SHALL HAVE ONE COAT OF RUST INHIBITIVE PRIMER CONFORMING TO

SPECIFICATIONS. FIELD TOUCHUP ALL UNPAINTED AREAS AND WELD AREAS.

- 1. ALL STRUCTURAL LUMBER (RAFTERS, CEILING JOISTS, PURLINS AND HEADERS) SHALL BE DOUGLAS FIR LARCH #2 OR BETTER UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL LOAD BEARING WALL STUDS AND PURLIN STRUTS SHALL BE DOUGLAS FIR STUD GRADE OR BETTER.
- 2. GLUE LAMINATED MEMBERS MARKED "LVL" (LAMINATED VENEER LUMBER) SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS (FB) OF 2950 PSI, A MINIMUM ALLOWABLE SHEAR STRESS (FV) OF 285 PSI. AND A MINIMUM MODULUS OF ELASTICITY (E) OF 2.000 KSI. ALL MANUFACTURER'S RECOMMENDATIONS FOR NAILING AND CONNECTIONS SHALL BE FOLLOWED.
- FLOOR JOISTS: SEE IRC TABLE R502.3.1(1) AND R502.3.1(2) FOR SPAN, SIZE, SPACING, AND GRADE OF
- FLOOR JOISTS BELOW PARTITION WALLS RUNNING PARALLEL TO THE JOIST SPAN SHALL BE DOUBLED. ALL DOUBLED MEMBERS SHALL BE NAILED TOGETHER WITH 16d NAILS 16" ON CENTER IN TWO ROWS STAGGERED OR PER MANUFACTURER SPECS
- SOLID BLOCKING BETWEEN FLOOR JOISTS SHALL BE INSTALLED WHERE JOISTS BEAR ON TOP OF BEAMS OR HEADERS AND BELOW POINT LOADS. ALL SOLID BLOCKING AND RIM JOIST MATERIAL SHALL BE THE SAME SIZE AND GRADE AS THE JOISTS
- 6. ALL FLOOR AND CEILING JOISTS THAT BUTT INTO THE SIDE OF A HEADER OR STEEL BEAM SHALL BE ANCHORED TO THE HEADER OR STEEL BEAM WITH STANDARD JOIST HANGERS.
- ALL SUPPORTS FOR WOOD TRUSSES, RAFTERS AND PURLINS, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, SHALL BEAR ON LOAD BEARING WALLS (WALLS LOCATED DIRECTLY ABOVE A BEAM LINE OR CONTINUOUS FOOTING)! ALL CONCENTRATED LOADS SHALL BE CARRIED THROUGH THE FLOOR SYSTEM THICKNESS WITH SOLID BLOCKING OR WITH 2x4 STUB COLUMNS (SQUASH BLOCKS) THAT
- TRANSFER THE LOAD DOWN TO THE SUPPORT WALL OR BEAM BELOW. ALL NAILING NOT INDICATED ON THE DRAWINGS SHALL CONFORM TO THE NAILING SCHEDULE OF THE GOVERNING BUILDING CODE. SPACING, END DISTANCES AND EDGE DISTANCES OF NAILS AND
- SPIKES SHALL BE SUCH AS TO AVOID THE UNUSUAL SPLITTING OF THE WOOD. ALL NON-LOADBEARING STUD WALLS IN THE BASEMENT SHALL BE PROVIDED WITH A 1" MINIMUM
- VERTICAL EXPANSION JOINT TO ALLOW FOR HEAVE IN THE FLOOR SLAB. WALLS SHALL NOT BE TIGHT BETWEEN THE SLAB AND THE FRAMING ABOVE! 10. SHEATHING FOR HORIZONTAL DIAPHRAGMS SHALL BE EXTERIOR GRADE, C/D, STRUCTURAL GROUP II
- OR BETTER. ROOF AND WALL FRAMING SHALL BE OF DOUGLAS FIR-LARCH OR SOUTHERN PINE. PROVIDE SOLID BLOCKING AT ALL PANEL EDGES UNLESS OTHERWISE NOTED. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT
- 11. ALL WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION (APA) AND SHALL MEET THE REQUIREMENTS OF PRODUCT STANDARD PS-1.
- 12. WOOD STRUCTURAL PANELS SHALL BE SET WITH FACE GRAIN PERPENDICULAR TO SUPPORTING MEMBERS AND STAGGER END JOINTS 4'-0".
- 13. STANDARD WASHERS SHALL BE USED WITH ALL BOLTS FASTENING WOOD MEMBERS. 14. ALL SAWN LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE
- PRESSURE TREATED. 15. ROOF FRAMING - RIDGE BEAMS, VALLEY AND HIP RAFTERS SHALL HAVE A MINIMUM NOMINAL
- THICKNESS OF 2" AND MINIMUM DEPTH NOT LESS THAN THE END CUT OF THE RAFTERS. HIP AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A 2x6 "TEE" BRACE TO A BEARING PARTITION. WHERE ROOF BRACING IS USED TO PERMIT LONGER RAFTERS SPAN, USE 2x6 "TEE" BRACES AT 4'-0" O.C. WITH CONTINUOUS 2x6 PURLIN UNDER THE RAFTERS. BRACE RAFTERS TO BEARING PARTITIONS.
- 16. PROVIDE CONTINUOUS STRONG BACKS FOR CEILING JOIST SPANS 12'-0" OR GREATER.
- 17. CEILING JOISTS: SEE IRC TABLE R802.5(1) AND R802.5(2) FOR SPAN, SIZE, SPACING, AND GRADE OF CEILING JOISTS.
- 18. ROOF RAFTERS: SEE IRC TABLE R802.4.1(1) THRU R802.4.1(8) FOR SPAN, SIZE, SPACING, AND GRADE OF ROOF RAFTERS.
- 19. BRACE THE COMPRESSION FLANGE OF ALL BEAMS UNLESS NOTED OTHERWISE.
- 20. ALL BEAMS OR HEADERS THAT BEAR ON WOOD FRAMING SHALL BE SUPPORTED BY ANOTHER BEAM OR HEADER OR A BUILT-UP (2) STUD MIN COLUMN THE FULL WIDTH OF THE BEAM CONTINUOUS TO THE FOUNDATION OR OTHER STRUCTURAL FRAMING MEMBER, U.N.O.
- 21. ALL LIGHT GAGE METAL FRAMING ACCESSORIES NOTED SHALL BE AS MANUFACTURED BY "SIMPSON STRONG TIE" OR APPROVED EQUAL, ATTACH FRAMING ACCESSORIES TO WOOD FRAMING IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 22. PROVIDE HEADERS AS SHOWN ON PLAN. FOR HEADERS NOT MARKED REFERENCE TYPICAL BEARING WALL HEADER SCHEDULE.
- 23. FLOOR SHEATHING SHALL BE 3/4" TONGUE & GROOVE WOOD STRUCTURAL PANEL. GLUE & NAIL TO FLOOR JOISTS WITH 8d NAILS AT 6" O.C. AT ALL PANEL EDGES AND AT 12" O.C. AT INTERMEDIATE
- 24. ALL EXTERIOR WOOD WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc, UNO.
- 25. ALL INTERIOR BEARING WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc, UNO. 26. MULTIPLE STUD MEMBERS CALLED OUT FOR SUPPORT OF LVL BEAMS AND HEADERS SHALL BE CARRIED DOWN TO TOP OF FOUNDATIONS OR SUPPORT BEAM(S).

- GARAGE FLOORS SHALL SLOPE TOWARDS THE GARAGE DOORWAYS.
- DOORS BETWEEN THE GARAGE AND THE DWELLING SHALL BE A MINIMUM 1-3/8" SOLID CORE OR HONEY COMBED STEEL DOOR OR A 20 MINUTE FIRE RATED DOOR PER IRC SECTION R302.5.1.
- THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS UNFINISHED ATTIC AREAS BY A MINIMUM 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE. WHERE UNFINISHED ATTIC AREAS ARE PROVIDED ABOVE THE GARAGE, THE SUPPORTING COLUMNS AND BEAMS SHALL ALSO BE PROTECTED WITH 1/2"GYPSUM BOARD OR EQUIVALENT. WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE THE FLOOR/CEILING ASSEMBLY SHALL BE PROTECTED WITH A MINIMUM 5/8" TYPE X
- GYPSUM BOARD ON THE GARAGE CEILING, SHALL COMPLY WITH IRC SECTION R309 GARAGE DOOR AND FRAME (H-FRAME) FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING: 2x6 VERTICAL JAMBS RUNNING FROM THE FLOOR TO CEILING ATTACHED WITH 1 3/4"x0.12" NAILS @ 7"oc STAGGERED WITH (7) 3 1/4"x0.102" NAILS THRU THE JAMB INTO THE HEADER, MINIMUM 2x8 HEADER FOR ATTACHMENT FOR COUNTER BALANCE SYSTEM.
- 5. BUILDING SHALL COMPLY WITH THE REQUIREMENTS FOR A SELF CLOSING DOOR BETWEEN RESIDENCE AND GARAGE.
- 6. GARAGE DOORS SHALL MEET THE REQUIREMENTS OF DASMA 115 MPH.

- WOOD DECK FRAMING NOTES ALL WOOD DECK FRAMING SHALL COMPLY WITH THE LATEST EDITION OF THE "RESIDENTIAL DECKS -PERMIT AND CONSTRUCTION GUIDELINES" AS PUBLISHED BY THE JOHNSON COUNTY CONTRACTOR LICENSING PROGRAM
- WOOD FRAMING FOR EXTERIOR DECKS SHALL BE PRESERVATIVE TREATED SOUTHERN PINE #2 OR BETTER.

- ALL FOUNDATIONS SHALL BEAR ON NATIVE, UNDISTURBED SOIL CAPABLE OF SUPPORTING THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE LISTED UNDER THE DESIGN LOADS ON THIS PAGE, UNLESS NOTED OTHERWISE, WITHOUT UNDUE SETTLEMENT OR HEAVING. NORTON & SCHMIDT IS NOT RESPONSIBLE FOR REVIEW OF THE SOIL CONDITIONS AT THE SITE, THE CONTRACTOR OR EXCAVATOR, IF APPROPRIATELY QUALIFIED AND EXPERIENCED OR A QUALIFIED TESTING LAB (APPROVED BY THE OWNER) SHALL FIELD VERIFY THE ACTUAL SOIL'S SUITABILITY, SOIL BEARING CAPACITY AND OTHER SOIL CONDITIONS (SUCH AS EXPANSIVE SOILS, COMPRESSIBLE SOILS, SHIFTING SOILS OR OTHER QUESTIONABLE SOIL CHARACTERISTICS). REFERENCE IRC R401.
- ALL EXTERIOR FOOTINGS SHALL BEAR A MIN. OF 36" BELOW FINISHED GRADE. IF THE EXISTING SITE TOPOGRAPHY OR SOIL CONDITIONS VARY FROM THE CONDITIONS SHOWN ON
- THE DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT/ENGINEER SO THAT A DESIGN THAT IS APPROPRIATE FOR THE SITE CAN BE GENERATED. FOOTINGS SHALL BE POURED CONTINUOUS AT FOOTING STEPS (SOLID JUMPS)
- ANY FILL THAT IS INSTALLED UNDER THE BASEMENT OR GARAGE FLOOR SLABS SHALL BE PROPERLY COMPACTED TO PREVENT SETTLEMENT OF THE FILL MATERIAL. PROPER COMPACTION IS WHERE THE SOIL IS PLACED IN 6" LIFTS AND EACH LIFT IS COMPACTED PRIOR TO INSTALLING MORE SOIL. THIS COMPACTED FILL SHALL THEN BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER. AT THE CONTRACTOR'S OPTION, A PROPERLY DESIGNED STRUCTURAL SLAB MAY BE INSTALLED OVER ANY FILL THAT HAS NOT BEEN PROPERLY COMPACTED. ALL EXTERIOR SLABS INSTALLED ADJACENT TO THE FOUNDATION SHALL BE DOWELED INTO THE FOUNDATION WITH #4 BARS AT 12" ON CENTER
- (GRADE 60 STEEL) DRILLED IN 6" MINIMUM AND EPOXIED. CONTROL JOINTS IN THE FLOOR SLABS SHALL BE INSTALLED AS TO MINIMIZE THE AMOUNT OF RANDOM CRACKING (12' INTERVALS MAXIMUM). THESE JOINTS SHALL BE SAWCUT 1-1/4" DEEP WITHIN 8 HOURS OF POURING THE SLAB OR MAY BE TOOLED INTO THE SLAB WHEN POURED. SAWCUTS SHALL BE IN APPROXIMATE SQUARE PATTERN WITH MAXIMUM ASPECT RATIO OF 1-1/2 TO 1.
- THE BUILDER SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE STEPS TO MINIMIZE THE EFFECTS OF EXPANSIVE SOIL ON THE FOUNDATION, SLABS, AND WOOD FRAMED PORTIONS OF THE HOUSE. THIS INCLUDES ISOLATING THE FLOOR SLAB AT ALL COLUMNS, INTERIOR BEARING WALLS, AND AT THE FOUNDATION WALLS WITH TWO LAYERS OF 15# FELT. PARTITION WALLS IN THE BASEMENT SHALL NOT BE CONSTRUCTED TIGHT AGAINST THE FRAMING ABOVE.
- INSTALL CONTINUOUS DRAIN TILE (4" DIAMETER MINIMUM) AROUND THE PERIMETER OF THE ENTIRE LOWER LEVEL AND COVER THE TILE WITH FILTER FABRIC AND COURSE. CLEAN ROCK. INSTALL VERTICAL DRAINS TO PERIMETER DRAIN TILE AT ALL WINDOW WELLS. THE DRAIN TILE SHALL BE CONNECTED TO A 40 GALLON (MINIMUM) SUMP PIT WITH SUFFICIENT DEPTH FOR PROPER SUMP PUMP OPERATION, OR SHALL BE DRAINED BY GRAVITY TO DAYLIGHT AT LEAST 10' FROM THE FOUNDATION. FOUNDATION DRAINAGE SHALL ALSO BE IN ACCORDANCE WITH IRC SECTION R-405.1
- 9. CONCRETE BASEMENT SLABS SHALL BE A MIN. OF 4" THICK OVER A MIN. OF 4" OF 1/2" TO 3/4" CLEAN. GRADED ROCK, U.N.O. OR IF SITE CONDITIONS REQUIRE OTHERWISE. MIN REINFORCING SHALL BE #4'S AT 24"oc OR EQUIVALENT.
- 10. PROVIDE A MIN. 6-MIL POLYETHYLENE MOISTURE BARRIER OVER GRAVEL BASE UNDER BASEMENT FLOOR SLABS (NOT REQUIRED FOR GARAGE SLABS) PER SECTION R405.2.2. LAP JOINTS A MIN. OF 6". ALL FOOTING AND SLAB REINFORCEMENT SHALL BE BLOCKED OFF SUBGRADE WITH CHAIRS OR
- RESIDENTIAL BASEMENT WALL NOTES:

VERTICAL REBAR SPACING FOR CONCRETE FOUNDATION WALLS SHALL BE PER THE TABLE BELOW

60 KSI REINFORCING					40 KSI REIN	IFORCING
WALL THICKNESS		8"	10"	12"	8"	10"
F	6' OR LESS	#4 @ 36" O.C.	#4 @ 36" O.C.		#4 @ 36" O.C.	#4 @ 36" O.C.
HEIGHT	7'	#4 @ 32" O.C.	#4 @ 36" O.C.		#4 @ 21" O.C.	#4 @ 36" O.C.
	8'	#4 @ 24" O.C.	#4 @ 36" O.C.		#4 @ 16" O.C.	#4 @ 36" O.C.
WALL	9'	#4 @ 16" O.C.	#4 @ 20" O.C.		#4 @ 12" O.C.	#4 @ 16" O.C.
	10'	#4 @ 12" O.C.	#4 @ 16" O.C.		#4 @ 8" O.C.	#4 @ 12" O.C.
	12'			#5 @ 12" O.C. EACH FACE		
	14'			#5 @ 8" O.C. EACH FACE		

- a. MINIMUM REQUIREMENT FOR VERTICAL REBAR IN PLAIN CONCRETE WALLS IS #4 BARS @
- b. VERTICAL BARS SHALL BE CONTINUED TO WITHIN 4" OF THE TOP OF THE WALL
- c. REBAR SHALL BE POSITIONED AT THE TENSION FACE OF THE WALL (2" FROM THE INSIDE
- FACE. d. REINFORCEMENT SHALL LAP A MINIMUM OF 24" AT ENDS, SPLICES, AND AROUND CORNERS. e. DESIGN BY A PROFESSIONAL ENGINEER IS REQUIRED FOR WALLS OVER 10' IN HEIGHT. f. HORIZONTAL REINFORCING SHALL MATCH THE SIZE OF THE VERTICAL REINFORCING. PROVIDE 1
- BAR WITHIN 12" OF THE TOP OF THE WALL WITH ADDITIONAL BARS SPACED AT 24" O.C. MAX. 2. BARS SHALL LAP A MINIMUM OF 48 BAR DIAMETERS AT ENDS, SPLICES AND AROUND CORNERS.
- UNLESS OTHERWISE NOTED ON THESE DRAWINGS. CONTINUOUS WALL FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND 8" DEEP WITH (2) #4 BARS CONTINUOUS WITH 3" CLEARANCE FROM SOIL FOR 8" THICK WALLS, U.N.O. CONTINUOUS WALL FOOTINGS SHALL BE A MINIMUM OF 24" WIDE AND 12" DEEP WITH (2) #4 BARS CONTINUOUS WITH 3"
- CLEARANCE FROM SOIL FOR 12" THICK WALLS. INSTALL 1/2"Ø x 1'-2" LONG ANCHOR BOLTS (7" EMBEDMENT) AT 2'-0" O.C. AND WITHIN 12" OF THE END OF EACH SILL MEMBER (2-BOLTS MIN PER PLATE SECTION). MINIMUM SILL PLATE TO BE 2x6 PRESSURE TREATED.
- 5. THE TOPS OF ALL BASEMENT (LOWER LEVEL) FOUNDATION WALLS SHALL BE CONNECTED TO THE FLOOR JOISTS. NAIL EACH FLOOR JOIST END AND END WALL BLOCKING TO THE WOOD SILL PLATE PER THE IRC NAILING SCHEDULE. WHERE FLOOR JOISTS RUN PARALLEL TO THE FOUNDATION WALLS, PROVIDE BLOCKING IN THE FIRST THREE JOIST SPACES AT 2'-0" O.C. OVER THE ENTIRE
- LENGTH OF THE FLOOR JOISTS. WALLS SHALL BE FULL HEIGHT FROM FOOTING TO FLOOR FRAMING. NO WOOD FRAMED CRIPPLE WALLS EXCEPT AS SPECIFICALLY NOTED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- FOUNDATION WALLS SHALL BE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE (EFP) 60 PSF. PROVIDE STEEL SHIMS IN BEAM POCKETS TO LEVEL BEAMS. BEAM POCKETS SHALL BE GROUTED SOLID WITH 4,000 PSI NON-SHRINK GROUT AFTER BEAMS ARE LOADED WITH FRAMING MEMBERS.
- REINFORCE AROUND BEAM POCKETS BY BENDING TOP CONTINUOUS HORIZONTAL BAR BELOW BEAM POCKET OR INSTALL SEPARATE BENT BAR LAPPED AND TIED MINIMUM 24" EACH SIDE. 10. PROVIDE TWO #4 X 4'-0" LONG DIAGONAL BARS AT THE CORNERS OF ALL OPENINGS IN CONCRETE WALLS AND AT FOOTING STEPS. ALSO PROVIDE 2 ADDITIONAL #4 ON ALL SIDES OF WALL OPENINGS.
- BARS SHALL BE 3'-0" LONGER THAN OPEN VERTICAL OR HORIZONTAL DIMENSION. 11. FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMP PROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE WITH A
- BITUMINOUS COATING IN ACCORDANCE WITH SECTION R406.1. 12. INSULATION SHALL BE INSTALLED FOR ALL BASEMENT WALLS AS REQUIRED PER SECTION N1102.1. 13. ALL SITE RETAINING WALLS GREATER THAN 4'-0" IN HEIGHT SHALL REQUIRE A DESIGN BY A
- PROFESSIONAL ENGINEER. 14. A CONCRETE ENCASED GROUNDING ELECTRODE CONNECTION SHALL BE PROVIDED TO THE **ELECTRICAL SERVICE PER SECTION E3608.1.**

ENERGY REQUIREMENTS

- 1. THE BUILDING THERMAL ENVELOPE SHALL BE SEALED WITH AN AIR BARRIER PER IRC SECTION
- 2. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER N1102.
- PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER N1103.1.1. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER N1103.3.2.1.
- BUILDING CAVITIES USED AS RETURN AIR PLENUMS SHALL BE SEALED TO PREVENT LEAKAGE ACROSS THE THERMAL ENVELOPE AS REQUIRED PER N1103 BUILDING CAVITIES IN A THERMAL ENVELOPE WALL SHALL NOT BE USED AS RETURN AIR PLENUMS
- HOT WATER PIPES SHALL BE INSULATED AS REQUIRED PER N1103.4.1. 8. ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR AS REQUIRED PER M1505.2. 9. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400

UNLESS THE REQUIRED INSULATION BARRIER IS MAINTAINED PER M1601.1.1.

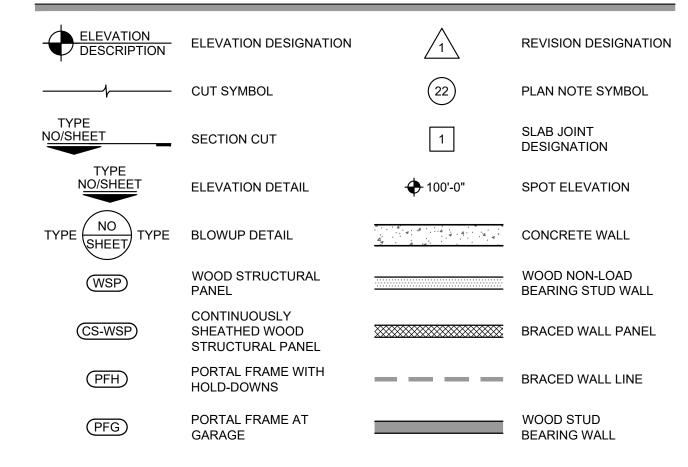
CFM AS REQUIRED PER M1503.6.

- 10. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER 11. MINIMUM MECHANICAL EFFICIENCY RATING FOR AC EQUIPMENT IS 13 SEER AS REQUIRED PER IRC. 12. MINIMUM MECHANICAL EFFICIENCY RATING FOR FORCED AIR FURNACE IS 78% AS REQUIRED PER
- 13. CONTRACTOR SHALL PROVIDE COMPLIANCE REPORT PER N1105.4.2 AND N1105.4.3 TO THE BUILDING OFFICIAL.

ABBREVIATIONS LEGEND

AB	ANCHOR BOLT	MECH	MECHANICAL
ACI	AMERICAN CONCRETE INSTITUTE	MFR	MANUFACTURER
AFF	ABOVE FINISH FLOOR	MIN	MINIMUM
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MISC	MISCELLANEOUS
AISI	AMERICAN IRON AND STEEL INSTITUTE	MTL	METAL
ARCH	ARCHITECTURAL	NO	NUMBER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	NS	NEAR SIDE
AWS	AMERICAN WELDING SOCIETY	NTS	NOT TO SCALE
BFF	BELOW FINISH FLOOR	OC	ON CENTER
BFS	BOTTOM OF FOOTING STEP	OH	OPPOSITE HAND
ВО	BOTTOM OF	PAF	POWDER ACTUATED FASTENER
BOS	BOTTOM OF STEEL	PCF	POUNDS PER CUBIC FEET
BRG	BEARING	PL	PLATE
BWP	BRACED WALL PANEL	PLF	POUNDS PER LINEAR FOOT
CIP	CAST-IN-PLACE CONCRETE	PSF	POUNDS PER SQUARE FOOT
CJ	CONTROL JOINT (WALL)	PSI	POUNDS PER SQUARE INCH
CL	CENTER LINE	QTY	QUANTITY
CLR	CLEAR	REF	REFERENCE
COL	COLUMN	REINF	REINFORCING
CONC	CONCRETE	REQD	REQUIRED
CONST	CONSTRUCTION	REV	REVERSE
CONT	CONTINUOUS	RO	ROUGH OPENING
DIA	DIAMETER	SIM	SIMILAR
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	T&B	TOP AND BOTTOM
EL	ELEVATION	TFS	TOP OF FOOTING STEP
ELEC	ELECTRICAL	THK	THICK
EQ	EQUAL	TO	TOP OF
EW	EACH WAY	TOC	TOP OF CONCRETE
FDN	FOUNDATION	TOF	TOP OF FOOTING
FF	FINISH FLOOR	TOP	TOP OF PAVING
FS	FAR SIDE	TOS	TOP OF STEEL
FTG	FOOTING	TRANS	TRANSVERSE
GA	GAGE	TYP	TYPICAL
GC	GENERAL CONTRACTOR	UNO	UNLESS NOTED OTHERWISE
	GYPSUM BOARD	VERT	VERTICAL
HORIZ	HORIZONTAL	W	WIDTH
HSA	HEADED STUD ANCHOR	WBM	WALL BRACE METHOD
INFO	INFORMATION	WP	WORK POINT
JST	JOIST	WS	WALL STEP
JT	JOINT	WWF	WELDED WIRE FABRIC
KSI	KIPS PER SQUARE INCH	V V V I	WELDED WINE I ADMO
LBS	POUNDS		
LONG	LONGITUDINAL		
MAY	MAYIMIIM		

SYMBOLS LEGEND



INSULATION AND FENESTRATION REQUIREMENTS - IRC TABLE N1102.1.2

REFERENCE IRC FOR DIFFERENT CLIMATE ZONE VALUES						
COMPONENT	VALUE					
FENESTRATION		U ≦ 0.32	(b)			
SKYLIGHT		U ≦ 0.55	(b)			
GLAZED FENESTRATION SHG	U ≦ 0.40	(b)(e)				
CEILING		R-49	R-49			
CEILING WITH ATTIC SPACES	R-38	R-38				
CEILING - VAULTED (500 SQ.F CEILING AREA, WHICHEVER IS	R-30					
WOOD FRAME WALL	R-20 or R-13 + 5	(h)				
MASS WALL		R-8 / R-13	(i)			
FLOOR		R-19				
BASEMENT WALL		R-10 / R-13	(c)			
SLAB (R VALUE/DEPTH)		R-10 / 2 FT	(d)			
CRAWLSPACE WALL		R-10 / R-13	(c)			
DUCTS OUTSIDE OF THE	SUPPLY AND RETURN	R-8				
CONDITIONED SPACE	IN FLOOR & CEILING ASSEMBLY	R-6				

a. R VALUES ARE MINIMUMS. U - FACTORS AND SHGC ARE MAXIMUMS. WHERE INSULATION IS INSTALLED IN A CAVITY THAT IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE

FENESTRATION.

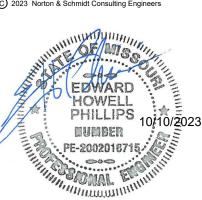
- R-VALUE SPECIFIED IN THE TABLE. b. THE FENESTRATION U - FACTOR EXCLUDES SKYLIGHTS. THE SHGC APPLIES TO ALL GLAZED
- c. "10/13" MEANS R-10 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL d. R - 5 SHALL BE PROVIDED UNDER THE FULL SLAB AREA OF A HEATED SLAB IN ADDITION TO THE REQUIRED SLAB EDGE INSULATION R-VALUE FOR SLABS, AS INDICATED IN THE TABLE. THE SLAB EDGE INSULATION FOR HEATED SLABS SHALL NOT BE REQUIRED TO EXTEND BELOW THE
- e. THERE ARE NO SHGC REQUIREMENTS IN THE MARINE ZONE.
- f. BASEMENT WALL INSULATION SHALL NOT BE REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.10 AND TABLE N1101.10. g. ALTERNATIVELY, INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY PROVIDING NOT LESS

i. MASS WALLS SHALL BE IN ACCORDANCE WITH SECTION N1102.2.5. THE SECOND R-VALUE

THAN AN R-VALUE OF R-19. h. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION. THEREFORE, AS AN EXAMPLE, "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 CONTINUOUS

APPLIES WHEN MORE THAN HALF OF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.

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Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

1512 SW Heartwood Dr.

Lee's Summit, MO

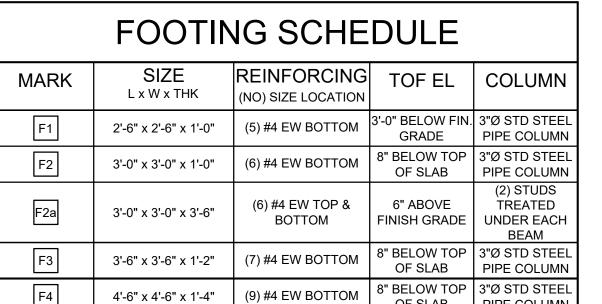
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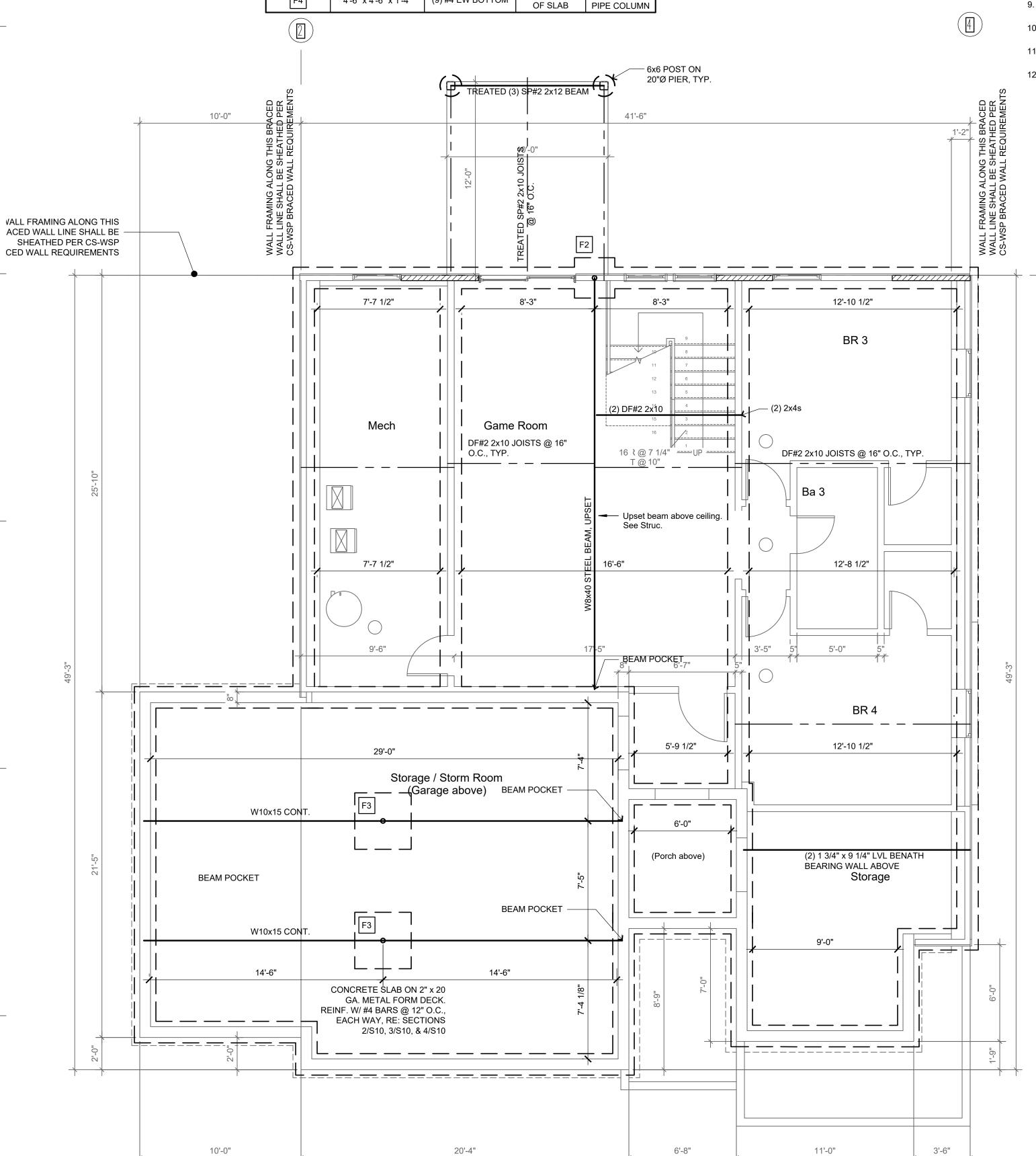
Revisions

WBRG-WG59

General Notes

DESCRIPTION





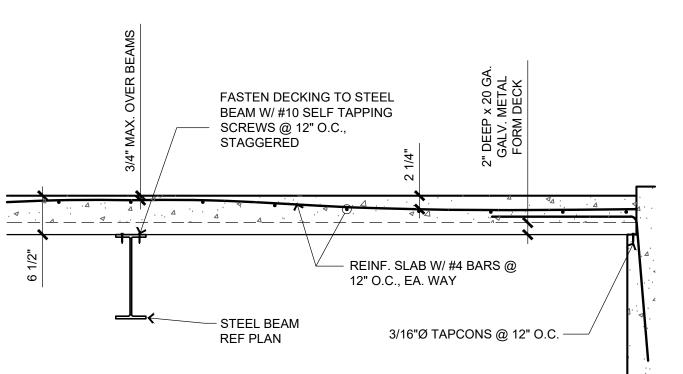
51'-6"

FOUNDATION/1ST FLOOR FRAMING PLAN

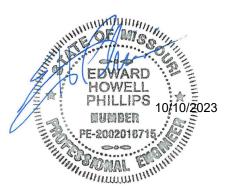
FLOOR FRAMING PLAN NOTES

NOTES ARE TYPICAL UNLESS NOTE NUMBER IS INSIDE OF CIRCLE, THEN THE NOTE REFERS TO A SPECIFIC LOCATION(S) MARKED ON THE PLAN.

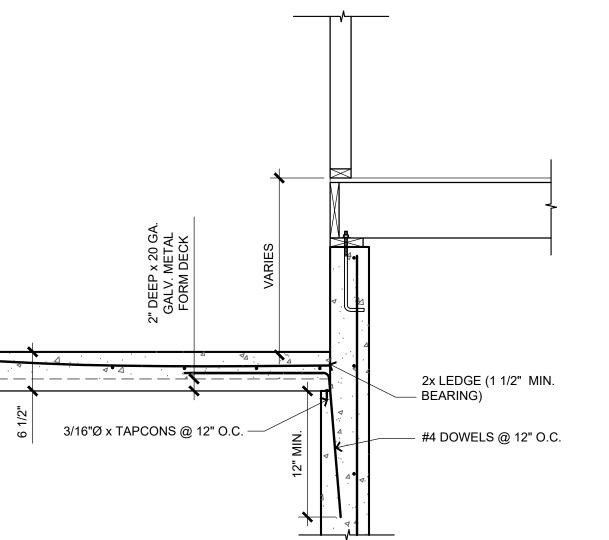
- 1. PROVIDE 3/4" TONGUE AND GROOVE WOOD STRUCTURAL PANEL SHEATHING FOR SUBFLOOR GLUED AND NAILED TO WOOD JOISTS WITH 8d NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT
- 2. ALL EXTERIOR WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc.
- 3. PROVIDE 1/2" EXTERIOR GRADE PLYWOOD SHEATHING NAILED TO WOOD STUDS WITH 8d NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT NON-PANEL EDGES.
- 4. ALL INTERIOR BEARING WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc. 5. DOUBLE FLOOR JOISTS UNDER ALL PARTITION WALLS RUNNING PARALLEL WITH JOISTS.
- 6. PROVIDE PROPER WALL INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
- 7. STAIRS SHALL HAVE A MAXIMUM RISE OF 7-3/4" AND MINIMUM TREAD OF 10". ALL RISERS AND TREADS TO BE EQUAL BETWEEN FLOORS.
- 8. PROVIDE WALL BRACING AS SHOWN ON PLAN.
- 9. PROVIDE HEADERS AS SHOWN ON PLAN, FOR HEADERS NOT MARKED REFERENCE TYPICAL BEARING WALL HEADER SCHEDULE.
- 10. FLOOR JOISTS: SEE IRC TABLE R502.3.1(1) AND R502.3.1(2) FOR SPAN, SIZE, SPACING, AND GRADE OF FLOOR JOISTS.
- 11. PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL BEAMS UNLESS NOTED OTHERWISE.
- 12. INTERIOR FOOTINGS OF LOAD BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM THE BASEMENT FLOOR SLAB.



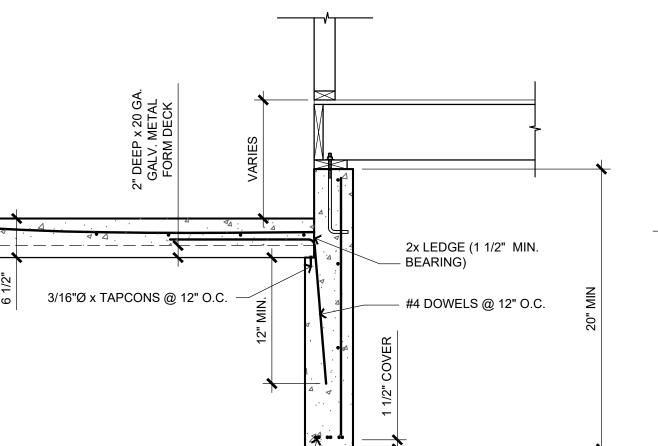
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2 SLAB OVER BEAM SCALE: 3/4" = 1'-0"



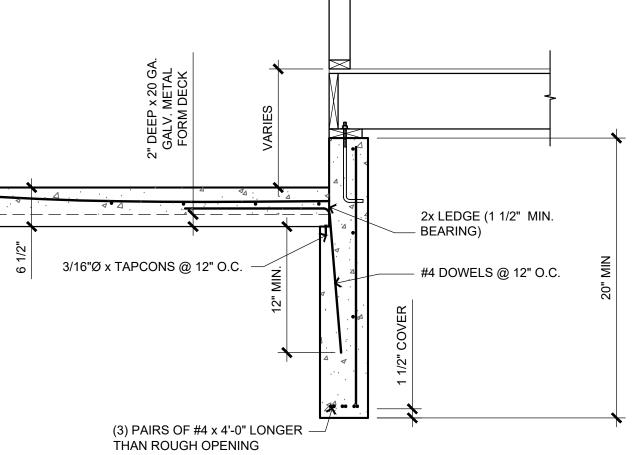
3 GARAGE SLAB ON FILL @ WALL



SUPPORTED GARAGE SLAB SCALE: 3/4" = 1'-0"

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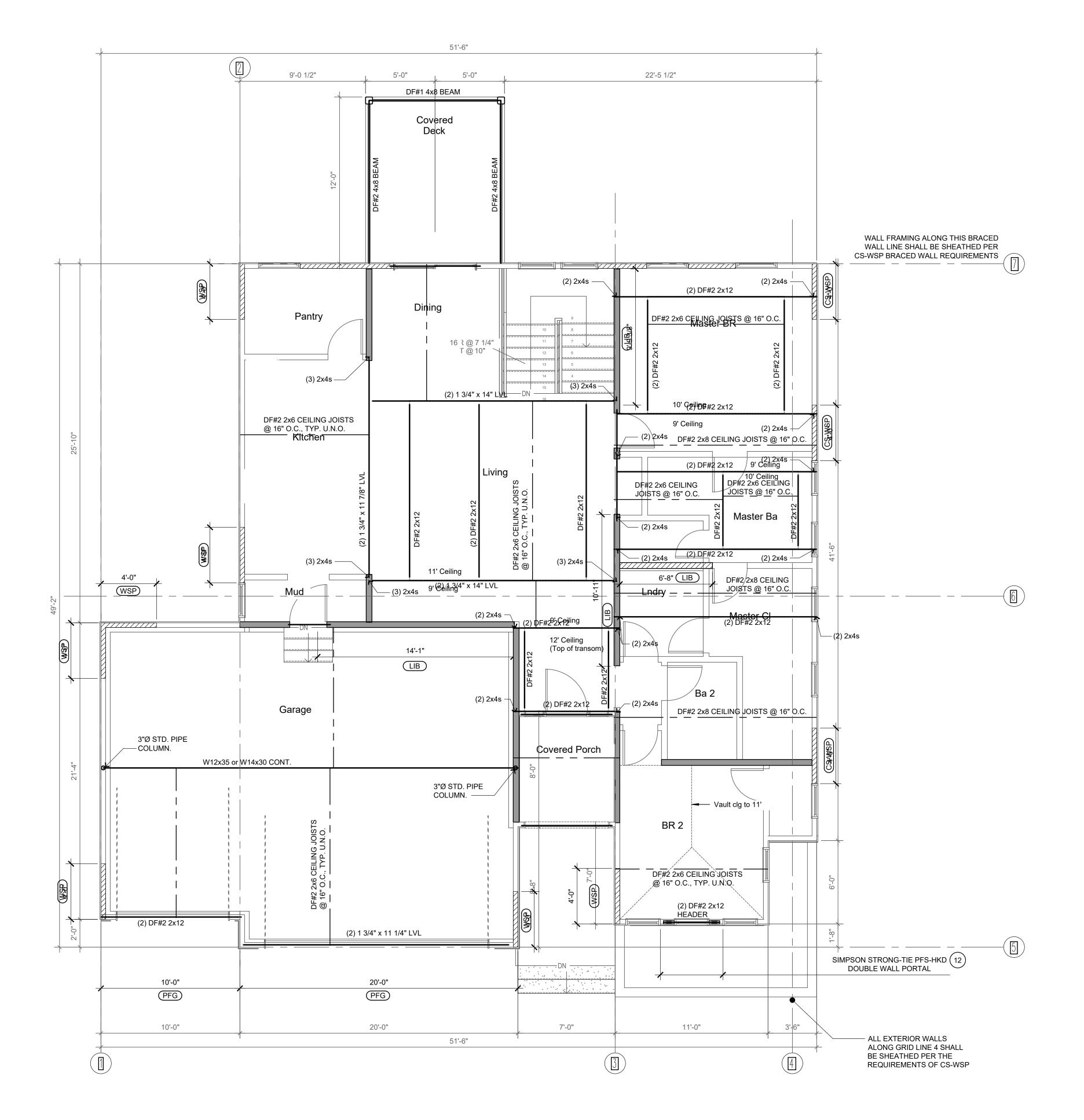
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Revisions

NO. DATE DESCRIPTION

Foundation & 1st Floor Framing Plan

S10





TYPICAL BRACED WALL METHOD

WSP - WOOD STRUCTURAL PANEL; WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" FOR 16" STUD SPACING, FASTEN WITH 6d COMMON NAILS (.131"Øx2" LONG) AT 6"oc ALONG EDGES AND 12"oc AT INTERMEDIATE SUPPORTS, WHERE SHOWN ON PLANS. UNLESS OTHERWISE NOTED, PANEL WIDTH = 4'-0".

CS-WSP - CONTINOUSLY SHEATHED WOOD STRUCTURAL PANEL; WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" FOR 16" STUD SPACING, FASTEN WITH 6d COMMON NAILS (.131"Øx2" LONG) AT 6"oc ALONG EDGES AND 12"oc AT INTERMEDIATE SUPPORTS, PLACED ON ALL SHEATHABLE SURFACES ON ONE SIDE OF THE BRACED WALL LINE INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS.

AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS.

GB - GYPSUM BOARD; 1/2" GYPSUM BOARD WITH 13 GAGE, 1 3/8" LONG, 19/64" HEAD; 0.098" DIA, 1 3/8" LONG, ANNULAR-RINGED; 6d COOLER NAIL, 0.092" DIA, 1 7/8" LONG, 1/4" HEAD; OR GYPSUM BOARD

NAIL, 0.0915" DIA, 1 7/8" LONG, 19/64' HEAD; TYPE W OR TYPE S SCREWS; AT 7"oc EDGES & 7"oc FIELD

PFH - PORTAL FRAME WITH HOLD-DOWNS; REF PORTAL FRAME WITH HOLD-DOWNS DETAIL

ABW - ALTERNATE BRACED WALL; REF ALTERNATE BRACED WALL DETAIL

PFG - PORTAL FRAME AT GARAGE; REF PORTAL FRAME AT GARAGE DETAIL

LIB - LET-IN BRACE; REF LET-IN BRACE DETAIL.

HPS - HARDBOARD PANEL SIDING; HARDBOARD PANEL SIDING WITH A 7/16" THICKNESS. FASTEN WITH 0.092" DIA, 0.225" DIA HEAD NAILS WITH LENGTH TO ACCOMMODATE 1 1/2" PENETRATION INTO STUDS AT 4"oc ALONG EDGES AND 8" AT INTERMEDIATE SUPPORTS.

FLOOR FRAMING PLAN NOTES

NOTES ARE TYPICAL UNLESS NOTE NUMBER IS INSIDE OF CIRCLE, THEN THE NOTE REFERS TO A SPECIFIC LOCATION(S) MARKED ON THE PLAN.

- PROVIDE 3/4" TONGUE AND GROOVE WOOD STRUCTURAL PANEL SHEATHING FOR SUBFLOOR GLUED AND NAILED TO WOOD JOISTS WITH 8d NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT NON-PANEL EDGES
- 2. ALL EXTERIOR WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc.
- 3. PROVIDE 1/2" EXTERIOR GRADE PLYWOOD SHEATHING NAILED TO WOOD STUDS WITH 8d NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT NON-PANEL EDGES.
- 4. ALL INTERIOR BEARING WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR STUD GRADE AT 16"oc.
- 5. DOUBLE FLOOR JOISTS UNDER ALL PARTITION WALLS RUNNING PARALLEL WITH JOISTS.
- PROVIDE PROPER WALL INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
 STAIRS SHALL HAVE A MAXIMUM RISE OF 7-3/4" AND MINIMUM TREAD OF 10". ALL RISERS AND TREADS TO BE EQUAL BETWEEN FLOORS.
- 8. PROVIDE WALL BRACING AS SHOWN ON PLAN.
- 9. PROVIDE HEADERS AS SHOWN ON PLAN, FOR HEADERS NOT MARKED REFERENCE TYPICAL BEARING WALL HEADER SCHEDULE.
- 10. FLOOR JOISTS: SEE IRC TABLE R502.3.1(1) AND R502.3.1(2) FOR SPAN, SIZE, SPACING, AND
- GRADE OF FLOOR JOISTS.

 11. PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL
- BEAMS UNLESS NOTED OTHERWISE.

 (12) SIMPSON STRONG-TIE PES-HKD DOUBLE WALL PORTAL WITH (2) DE#2 2x10 COLUMNS EACH E
- (12.) SIMPSON STRONG-TIE PFS-HKD DOUBLE WALL PORTAL WITH (2) DF#2 2x10 COLUMNS EACH END WITH HEADERS AS INDICATED ON THE PLAN AND SHIMS AS REQUIRED. COLUMNS SHALL BEAR DIRECTLY ON TOP OF FOUNDATION WALL.

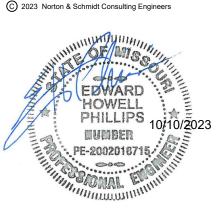
JOIST HANGER TABLE

(BASED ON SIMPSON STRONG-TIE WOOD CONSTRUCTION CONNECTORS 2021 CATALOG)

JOIST SIZE	MODEL NO.	FASTE	ENERS	DF/SP ALLOWABLE LOADS (lb.)		
SIZE		HEADER	JOIST	FLOOR (100)	SNOW (115)	
2x4	LU24	(4) 0.162 x 3-1/2	(2) 0.148 x 1-1/2	555	630	
DBL 2x4	LUS24-2	(4) 0.162 x 3-1/2	(2) 0.162 x 3-1/2	800	905	
2x6	LUS26	(4) 0.148 x 3	(4) 0.148 x 3	865	990	
DBL 2x6	LUS26-2	(4) 0.162 x 3-1/2	(4) 0.162 x 3-1/2	1,030	1,170	
2x8	LUS28	(6) 0.148 x 3	(4) 0.148 x 3	1,100	1,260	
DBL 2x8	LUS28-2	(6) 0.162 x 3-1/2	(4) 0.162 x 3-1/2	1,315	1,490	
2x10	LUS210	(8) 0.148 x 3	(4) 0.148 x 3	1,335	1,530	
DBL 2x10	LUS210-2	(8) 0.162 x 3-1/2	(6) 0.162 x 3-1/2	1,830	2,075	
2x12	LUS210	(8) 0.148 x 3	(4) 0.148 x 3	1,335	1,530	
DBL 2x12	LUS210-2	(8) 0.162 x 3-1/2	(6) 0.162 x 3-1/2	1,830	2,075	
(2) 1 3/4 x 9 1/2	HUS410	(8) 0.162 x 3-1/2	(8) 0.162 x 3-1/2	2,125	2,420	
1 3/4 x 11 1/4	HU11	(22) 0.162 x 3-1/2	(6) 0.148 x 1-1/2	3,275	3,695	
(2) 1 3/4 x 11 1/4	HHUS410	(30) 0.162 x 3-1/2	(10) 0.162 x 3-1/2	5,635	6,380	

- a. FOR MINIMUM NAILING QUANTITY AND LOAD VALUES, FILL ALL ROUND HOLES; FOR MAXIMUM NAILING QUANTITY AND LOAD VALUES, FILL ALL ROUND AND TRIANGULAR HOLES.
- b. FASTENERS: NAIL DIMENSIONS ARE LISTED DIAMETER BY LENGTH.

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Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

Location: 1512 SW Heartwood Dr. Lee's Summit, MO

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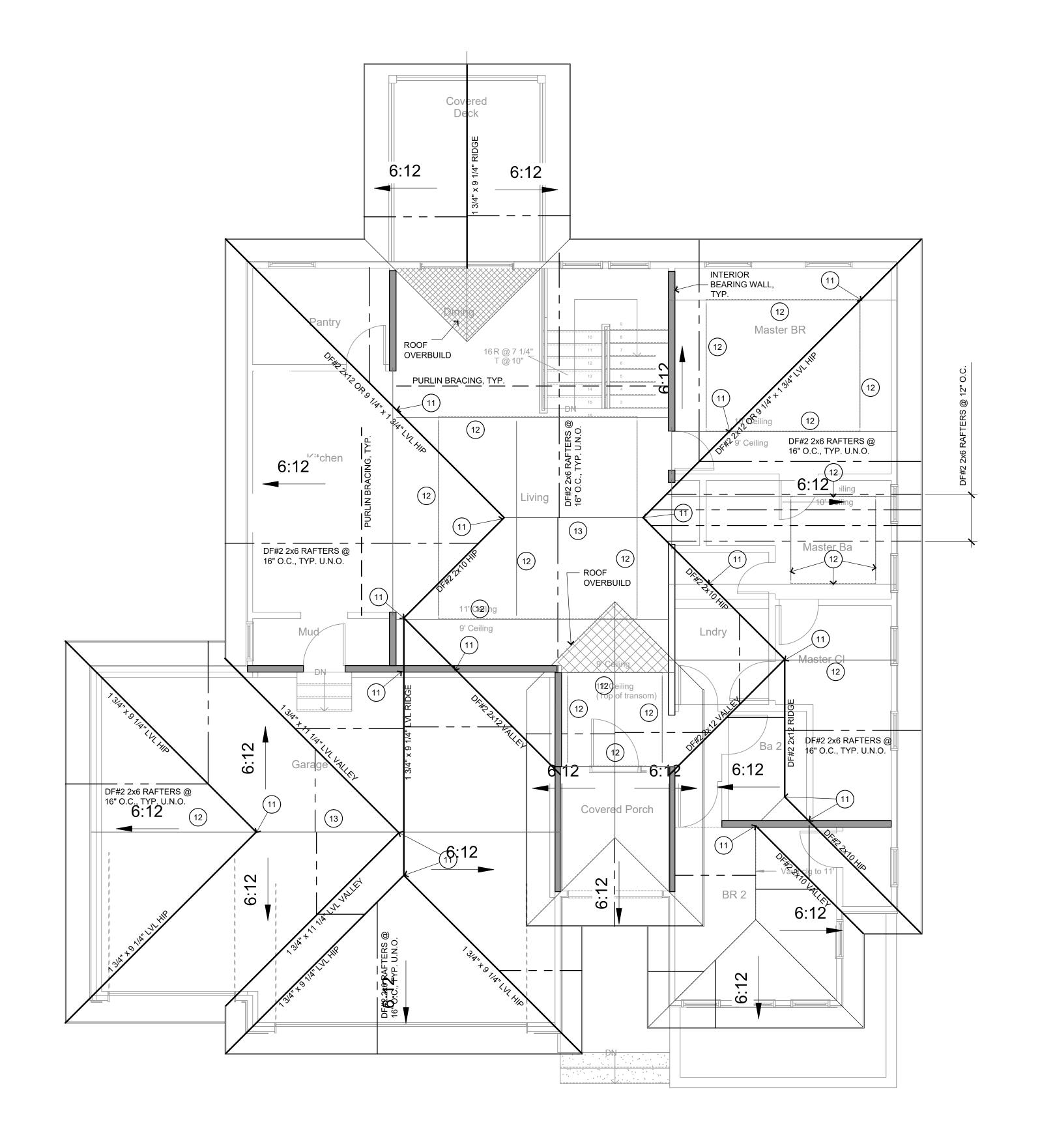
Revisions

NO. DATE DESCRIPTION

Main Floor Framing Plan

No:

10/10/23





ROOF FRAMING PLAN NOTES

NOTES ARE TYPICAL UNLESS NOTE NUMBER IS INSIDE OF CIRCLE, THEN THE NOTE REFERS TO A SPECIFIC LOCATION(S) MARKED ON THE PLAN.

- 1. PROVIDE 1/2" EXTERIOR GRADE PLYWOOD SHEATHING NAILED TO ROOF RAFTERS WITH 8d NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT NON-PANEL EDGES.
- 2. PROVIDE ADDITIONAL DEPTH TO JOISTS AS REQUIRED TO PROVIDE 1" AIR GAP TO PREVENT CONDENSATION PLUS 12" INSULATION TO PROVIDE R-38 INSULATION VALUE TO VAULTED CEILING AREA WHERE SHOWN ON PLAN WITH CROSS HATCH.
- 3. ALL RIDGE, VALLEY, AND HIP MEMBERS SHALL BE 2" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
- 4. HIP AND VALLEY MEMBERS SHALL BE SUPPORTED AT THE RIDGE WITH A 2x6 T-BRACE TO A BEARING WALL BELOW.
- 5. PROVIDE SOFFIT, RIDGE, AND GABLE END VENTS AS REQUIRED TO PROVIDE ADEQUATE VENTILATION FOR ROOF.
- 6. PROVIDE PROPER FLASHING AND BUILDING PAPER UNDER SHINGLES AS REQUIRED TO PROVIDE WATER TIGHT SEAL AT ALL ROOF PENETRATIONS, RIDGES, VALLEYS, HIPS AND/OR OTHER SLOPE CHANGES.
- 7. GUTTERS, DOWNSPOUTS, AND SPLASH BLOCKS SHALL BE PROVIDED TO INSURE ALL ROOF DRAINAGE IS DIRECTED 5 FEET MINIMUM FROM HOUSE BEFORE TOUCHING SOIL.
- 8. ALL GABLE END WALL FRAMING SHALL BE 2x4 DOUG-FIR STUD GRADE AT 16"oc.
- 9. PROVIDE PROPER CEILING INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
- 10. PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL BEAMS UNLESS NOTED OTHERWISE.
- (11.) BRACE RIDGES/HIPS DOWN TO BEAMS PROVIDED IN CEILING FRAMING OR BEARING WALLS BELOW. RE: CEILING FRAMING PLAN FOR BEAM SIZES.
- (12.) CEILING BEAM BELOW, RE: CEILING FRAMING PLAN.
- (13.) BRACE RIDGE TO BEAM BELOW WITH 2x4 T-BRACES @ 5'-0" O.C. MAX.

NOTE: ROOF HAS BEEN DESIGNED WITH STRUCTURAL HIPS & VALLEYS. ALL HIPS & VALLEYS TO BE BRACED PER HIP/VALLEY RAFTER TABLE. ALL HIPS & VALLEYS TO BE 2x10 MIN UNO.

NOTE: ALL HIPS, VALLEYS, RIDGES, AND ROOF BEAMS SHALL COMPLY WITH IRC R802.3 & R802.4.3 & HAVE (1) SIMPSON H2.5A AT EACH END TO RESIST UPLIFT. WHERE THE ROOF MEMBER IS SUPPORTED BY A STRUT, IN ADDITION TO THE ROOF MEMBER TO STRUT UPLIFT CONNECTION, THE STRUT SHALL ALSO BE CONNECTED TO A BEARING WALL OR BEAM BELOW WITH A SIMPSON

PURLIN SPAN TABLE MAX SPAN PURLIN (DF #2) * 2x6 | 2x8 | 2x10 | 2x12 2x6 RAFTERS AT 24"oc | 4'-3" | 5'-4" | 6'-4" | 7'-1" 2x6 RAFTERS AT 16"oc | 3'-11" | 4'-10" | 5'-10" | 6'-6"

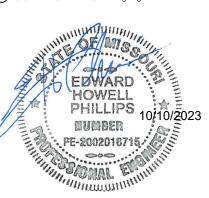
* BRACE PURLINS WITH 2x6 "T" BRACES.

FOR BRACE LENGTHS LESS THAN 6'-0", 2x4 "T" BRACES MAY BE USED.

FOR BRACE LENGTHS OVER 20', USE 2x8 "T" BRACES.

HIP/VALLEY RAFTER TABLE								
TYPE	MAX UNBRACED SPAN							
ITPE	2x6	2x8	2x10	2x12	1 ³ / ₄ "x9 ¹ / ₄ " LVL	1 ³ / ₄ "x11 ¹ / ₄ " LVI		
HIP RAFTERS	9'-6"	11'-2"	12'-9"	14'-1"	15'-8"	18'-2"		
VALLEY RAFTERS	7'-7"	8'-10"	10'-1"	11'-2"	13'-2"	15'-3"		





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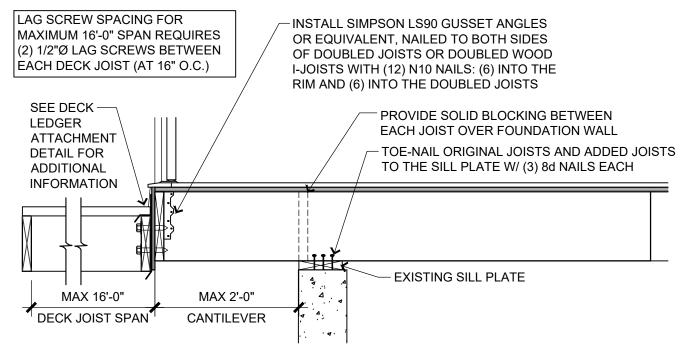
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Revisions

NO. DATE DESCRIPTION

Roof Framing Plan

10/10/23



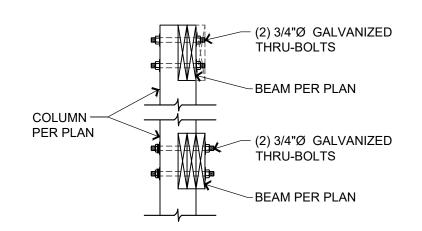
EXISTING JOISTS MUST BE 2x10'S (MIN) OR WOOD I-JOISTS @ 16" O.C. MAXIMUM DECK JOIST SPAN CONNECTING TO CANTILEVERED JOISTS IS 16'-0".

FOR 2'-0" CANTILEVER, EACH 2x10 MUST BE DOUBLED WITH AN ADDITIONAL 6'-0" LG 2x10 NAILED TOGETHER W/ 10d COMMON NAILS @ 16" O.C. STAGGERED. EACH I-JOIST MUST BE DOUBLED WITH 30" LONG WEB STIFFENERS ADDED. WEB STIFFENERS SHALL BE PLACED BETWEEN THE I-JOISTS ON THE OUTSIDE FLANGES OF EACH OF THE TWO I-JOISTS AND NAILED TOGETHER W/ A ROW OF (4) 10d NAILS EVERY 16".

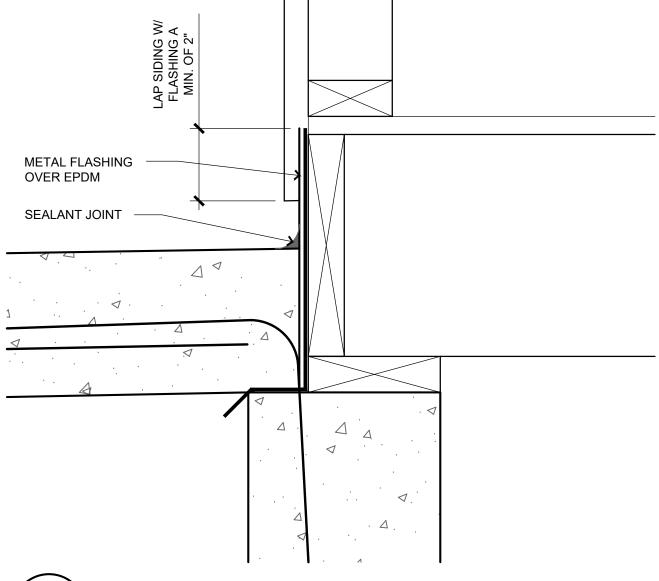
FOR 1'-0" CANTILEVER, EXISTING JOISTS DO NOT NEED TO BE DOUBLED.

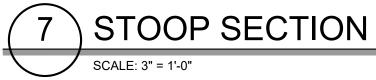


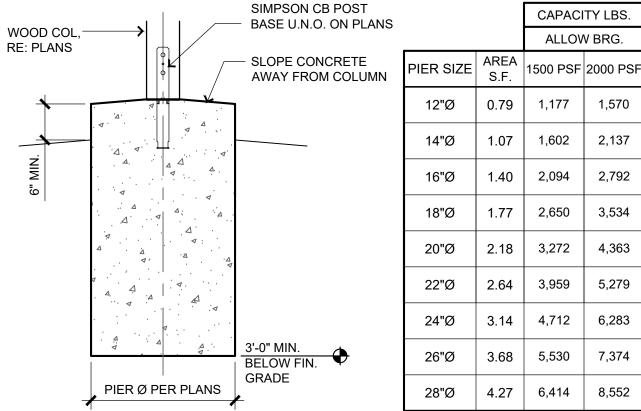
SCALE: 3/4" = 1'-0"



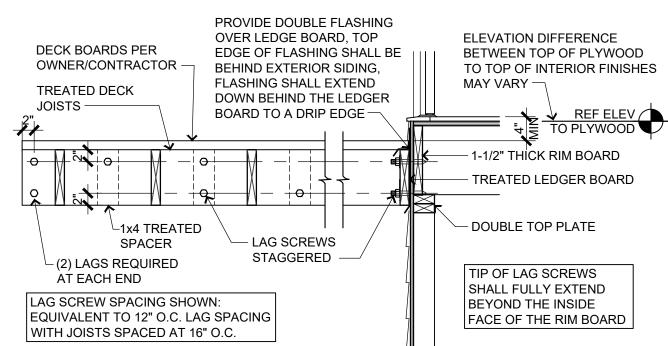
DECK BEAM TO COL CONN SCALE: 3/4" = 1'-0"





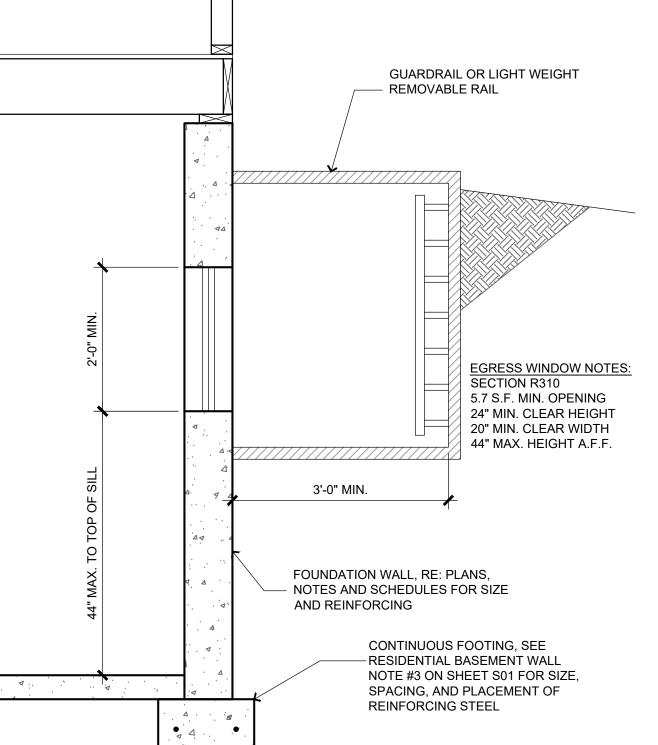




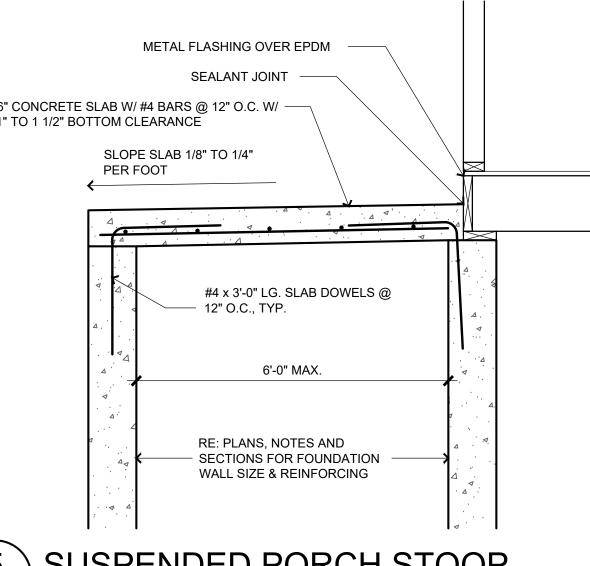


LEDGER FASTENER SCHEDULE								
CONNECTION				JOIST SPAN				
DETAILS	UP TO 6'	6'-1" TO 8'	8'-1" TO 10'	10'-1" TO 12'	12'-1" TO 14'	14'-1" TO 16'	16'-1" TO 18'	
1/2"Ø LAG SCREWS W/ 1/2" MAX SHEATHING		SPACING OF FASTENERS						
	30"oc	23"oc	18"oc	15"oc	13"oc	11"oc	10"oc	
EQUIVALENT LAG SPACING FOR JOISTS @ 16"oc (SEE ROW ABOVE)	EVERY OTHER JOIST SPACES	(2) EVERY THIRD JOIST SPACE	EACH JOIST SPACE		EACH JOIS (2) EVER SPA	(2) IN EACH JOIST SPACE		

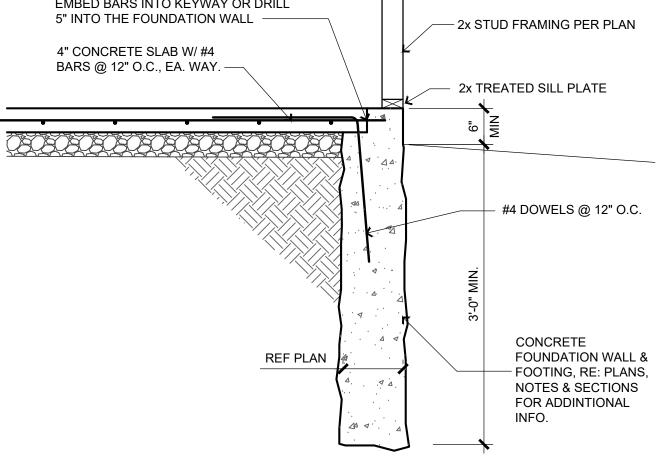




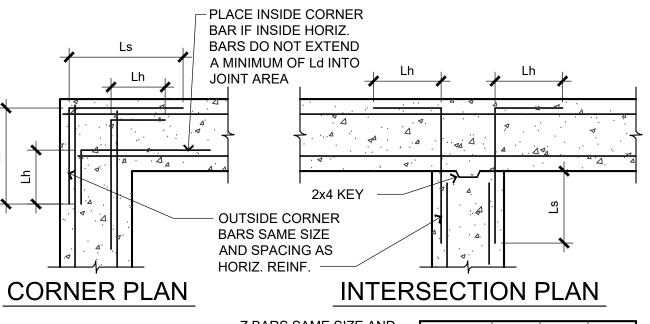






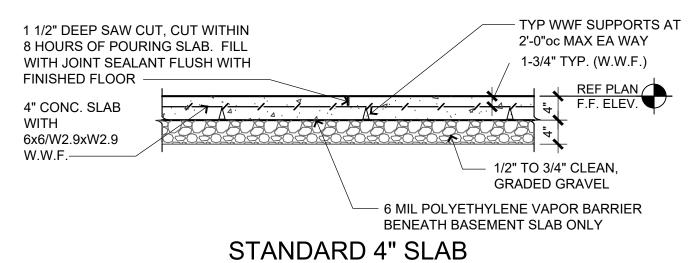






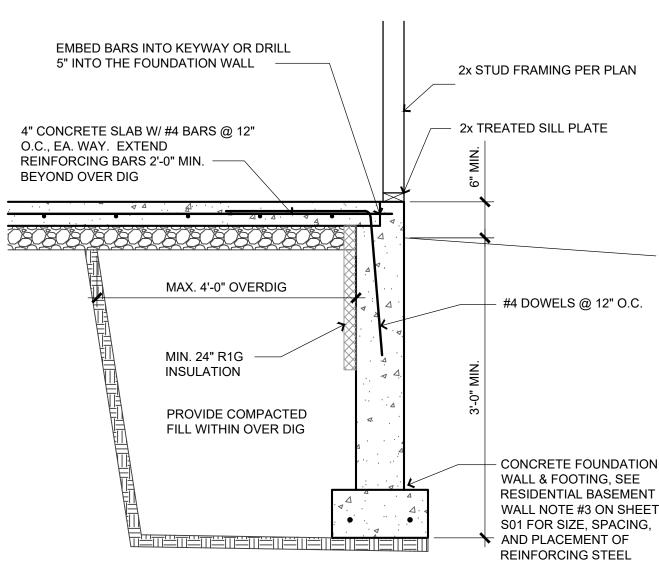
T Z BARS SAME SIZE AND NUMBER AS FTG. BAR SIZE Lh Ld Ls REINFORCEMENT 6" 14" 18" 8" 19" 25" CONT. BOTTOM 10" 23" 30" 1'-0" 28" 37" 1'-2" 42" 54" GRADE BEAM STEP ELEV.

1'-4" 48" 62" TYP WALL AND GRADE BEAM DTL'S SCALE: 3/4" = 1'-0"



STANDARD SLAB DETAILS

SCALE: 3/4" = 1'-0"



OVERDIG SECTION BSMT SLAB

SCALE: 3/4" = 1'-0"

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North Kansas City, MO 64116 Phone: (816) 421-4232

N&S JOB NUMBER: 2023-2170

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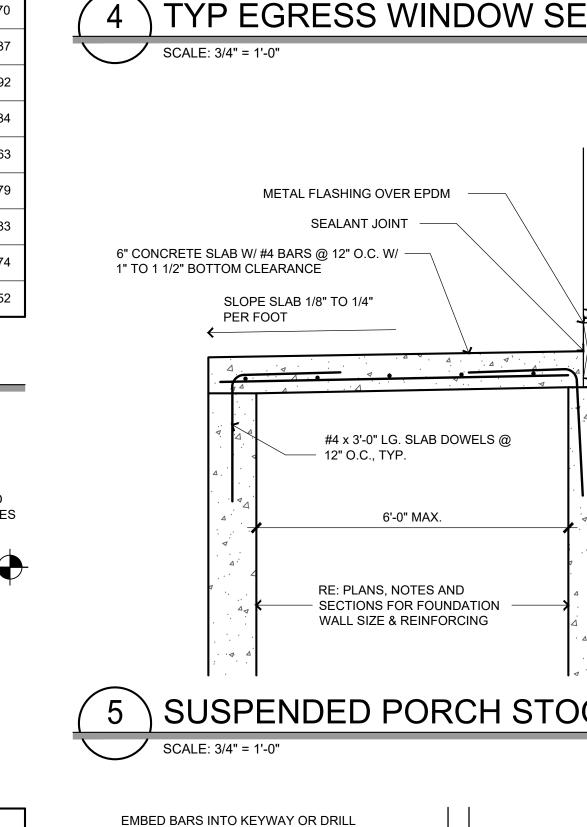
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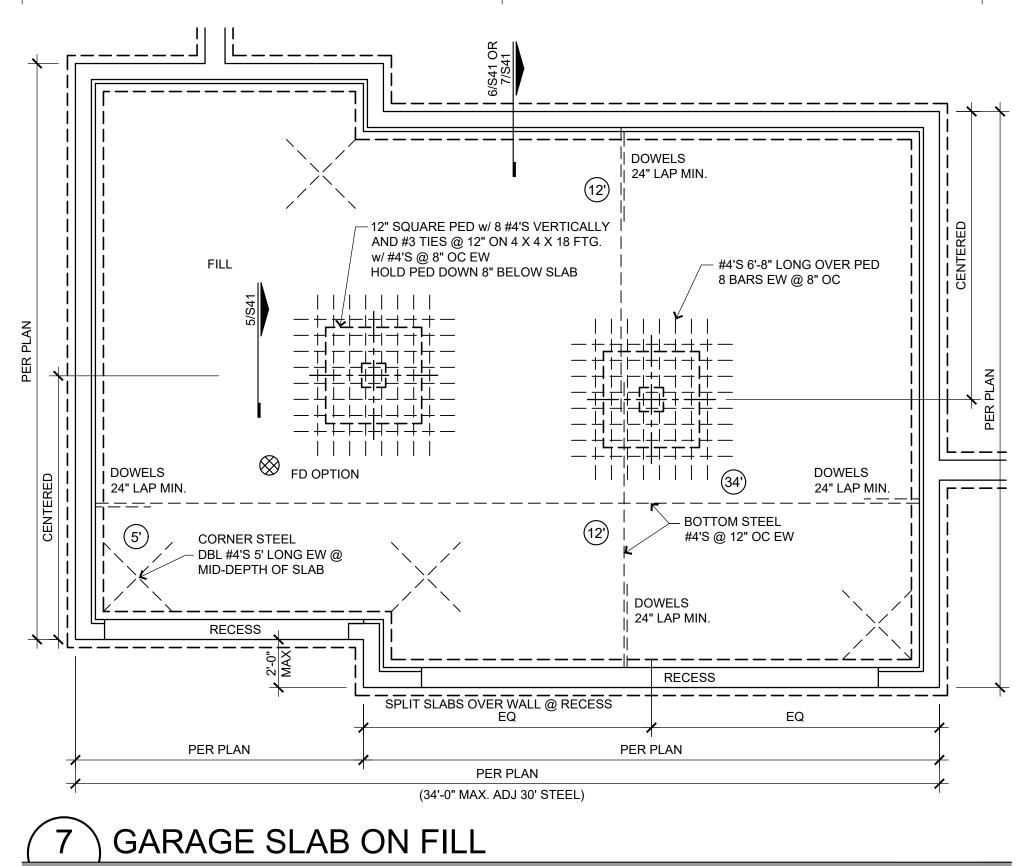
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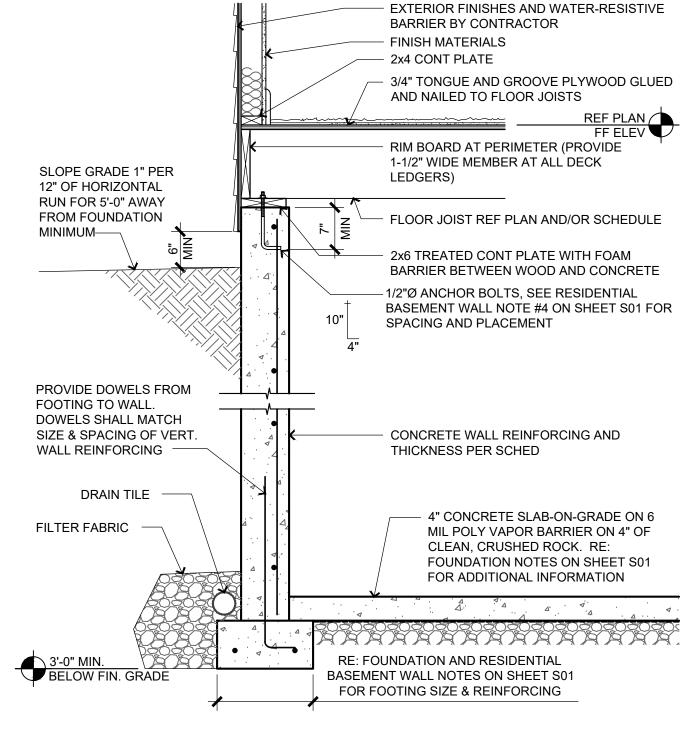
Revisions DESCRIPTION NO. DATE

Standard Details, Schedules, & Notes

S30







FOUNDATION BEARING WALL

JOISTS PARALLEL TO WALL

— FULL DEPTH 2X BLOCKING

PROVIDE SOLID BLOCKING FOR (3) JOIST

SPACES MIN AT 4'-0"oc WHERE JOISTS RUN PARALLEL TO FOUNDATION WALL FOR

IN THE FIRST ONE, TWO, OR THREE JOISTS

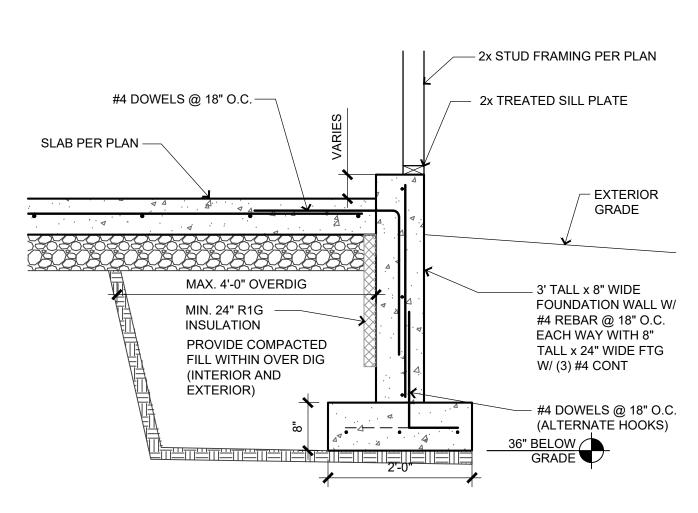
SPACES, NAIL 2x4's FLAT W/ (4)10d NAILS AT 4'-0"oc WITHIN THE JOIST SPACE AND THEN

PROVIDE SOLID BLOCKING IN THREE JOIST

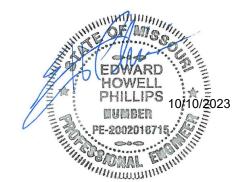
LATERAL SUPPORT, IF DUCTS ARE INSTALLED

SCALE: 3/4" = 1'-0"

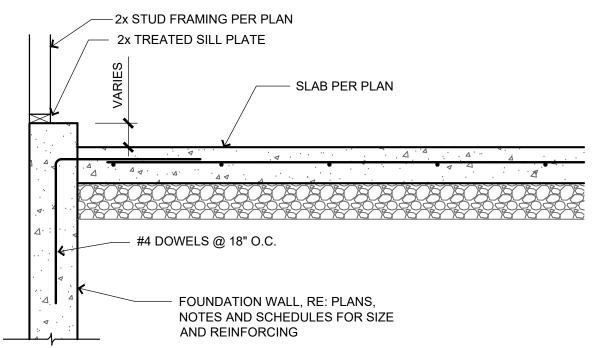
SCALE: 3/4" = 1'-0"

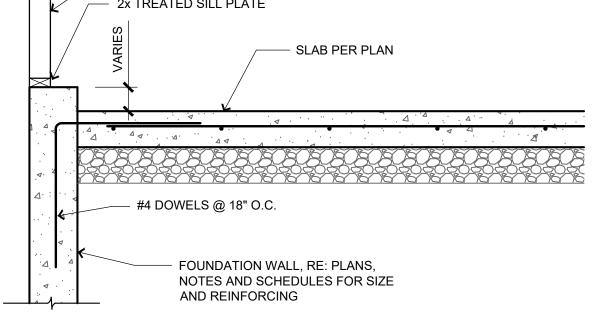


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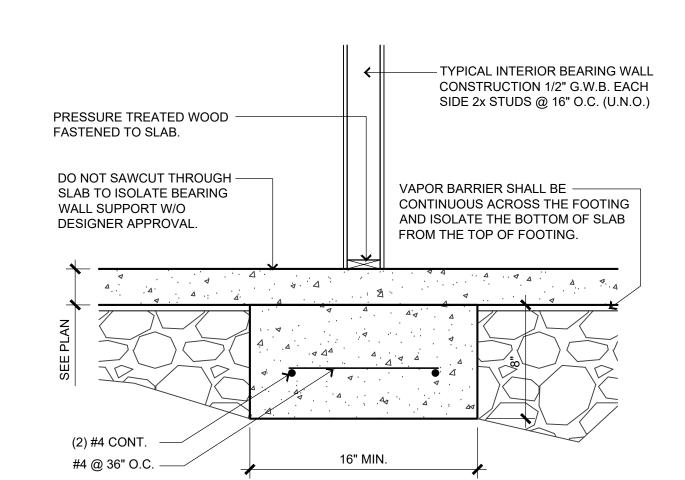


OVERDIG SLAB/WALL SECTION SCALE: 3/4" = 1'-0"











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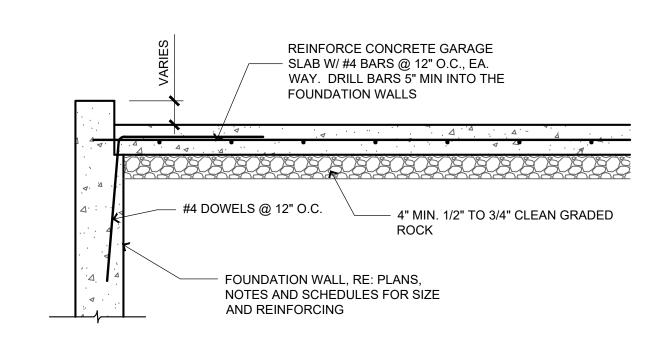
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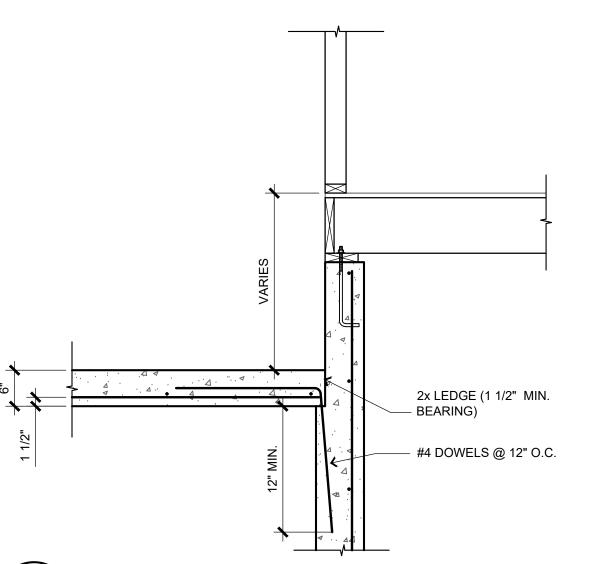
S31

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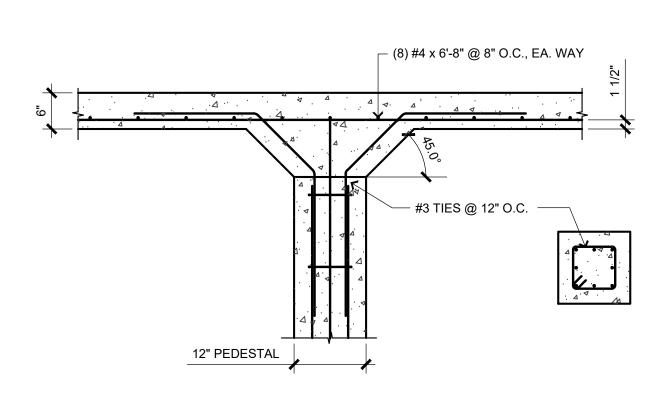


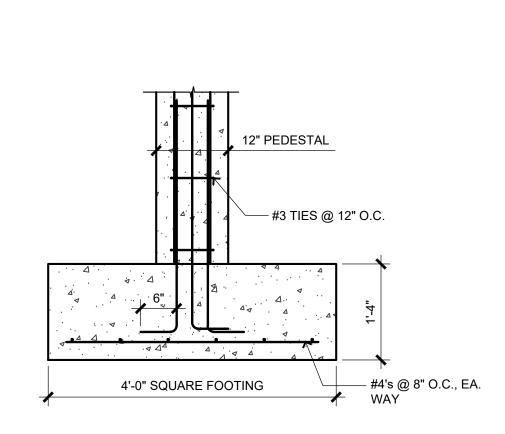
SCALE: NTS

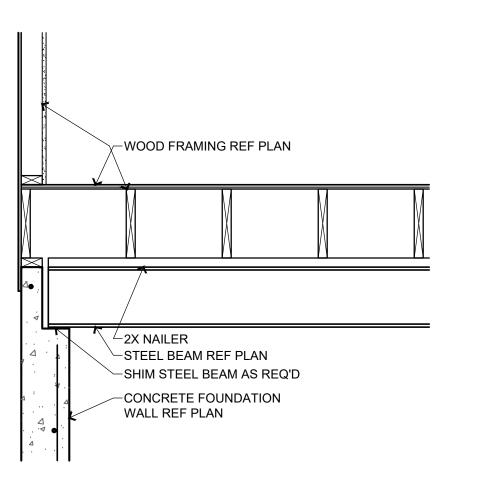
GARAGE SLAB/WALL SECTION SCALE: 3/4" = 1'-0"



GARAGE SLAB ON FILL @ WALL SCALE: 3/4" = 1'-0"

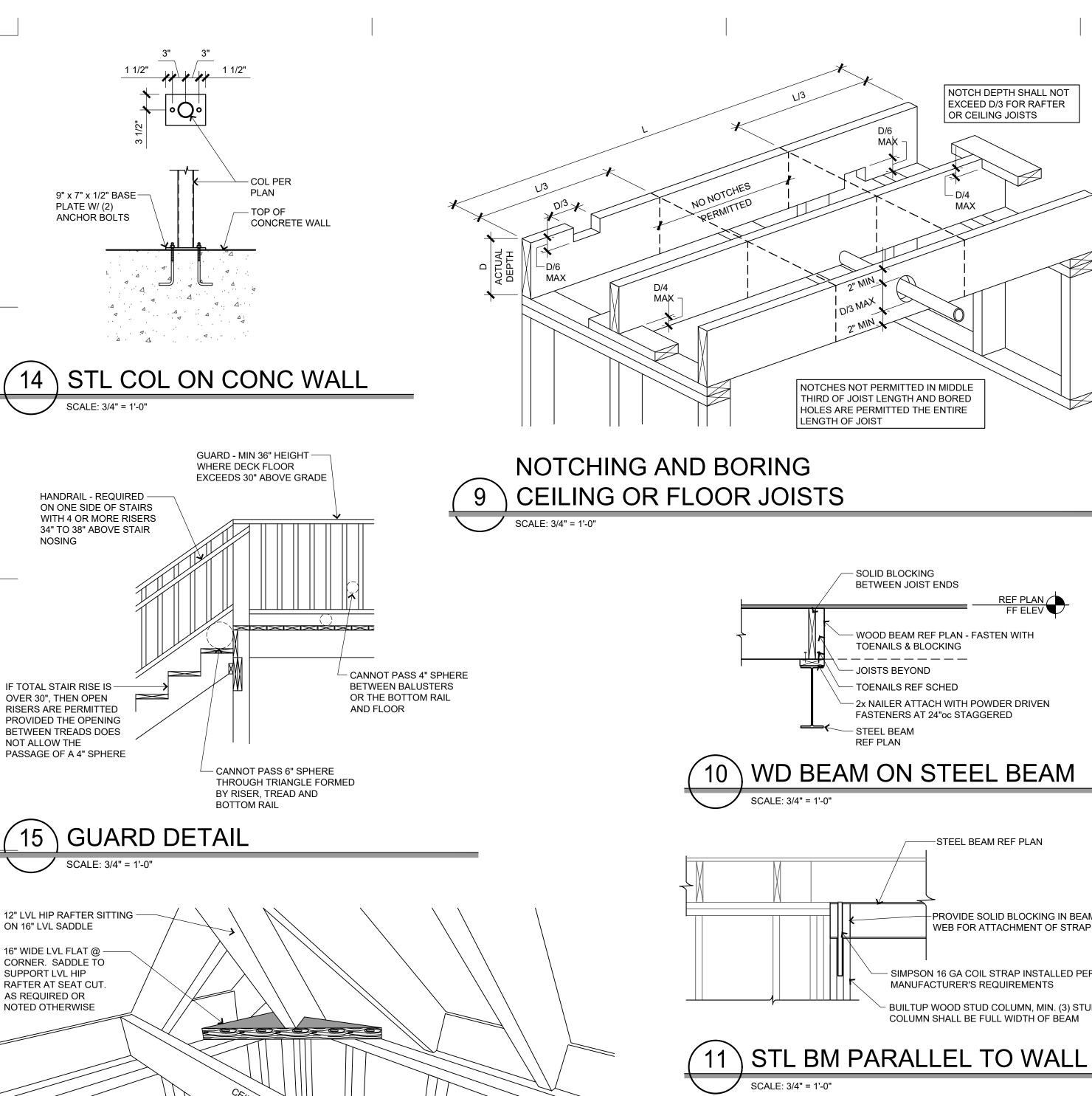






STL. BM. ON CONC. FNDN. WALL SCALE: 3/4" = 1'-0"

GARAGE SLAB PEDESTAL SCALE: 3/4" = 1'-0"



SPECIFICATIONS

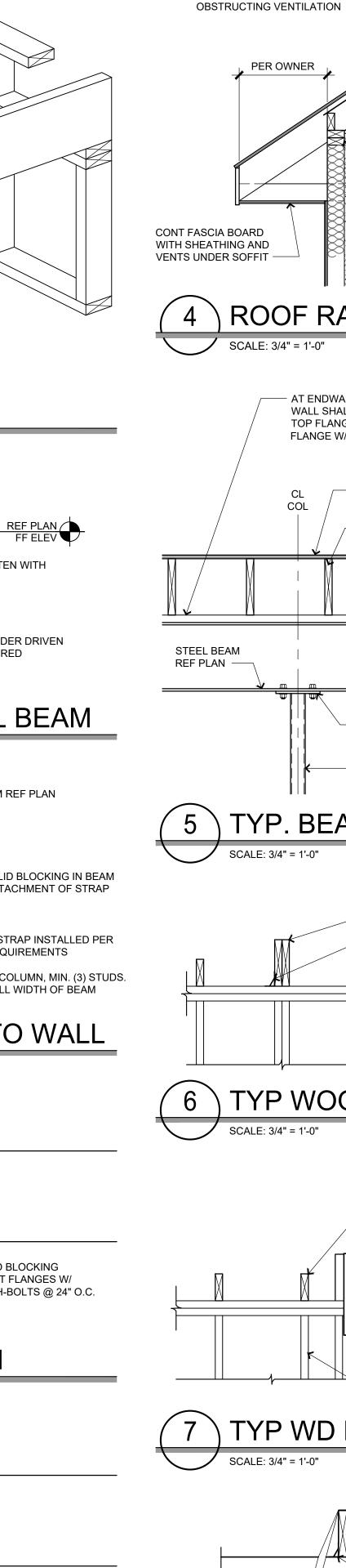
SCALE: 1 1/2" = 1'-0"

UPSET LVL BEAM

LVL HIP RAFTER BEARING ON

16" LVL FLAT AT CORNERS

SCALE: 1/2" = 1'-0"



1/2" NOMINAL EXTERIOR GRADE SHEATHING WITH ROOF FELT PAPER

VARIES

AND COMPOSITION SHINGLES

- AT ENDWALL CONDTION, TOP 2x PLATE OF

WALL SHALL BE CONTINUOUS OVER BEAM

FLANGE W/ (1) 1/2"Ø THRU-BOLT

TOP FLANGE, FASTEN PLATE TO BEAM TOP

-3/4" T/G PLYWOOD

SOLID BLOCKING

TOENAILS REF SCHED

STAGGERED

— STEEL BEAM

REF PLAN

-OPTION 2: SIMPSON HGA10 OR EQUAL

WD BM BEARING ON WD BM

SCALE: 3/4" = 1'-0"

- 2x NAILER ATTACH

WITH POWDER DRIVEN

FASTENERS (SIMPSON

PDPW x 2" LG.) OR 1/2"Ø

THRU-BOLTS AT 24"oc

BETWEEN JOIST ENDS

REF PLAN

REF PLAN

TOP PLATE

BOLTS

WITH (4) 1/2"Ø

COL REF PLAN

WOOD JOISTS

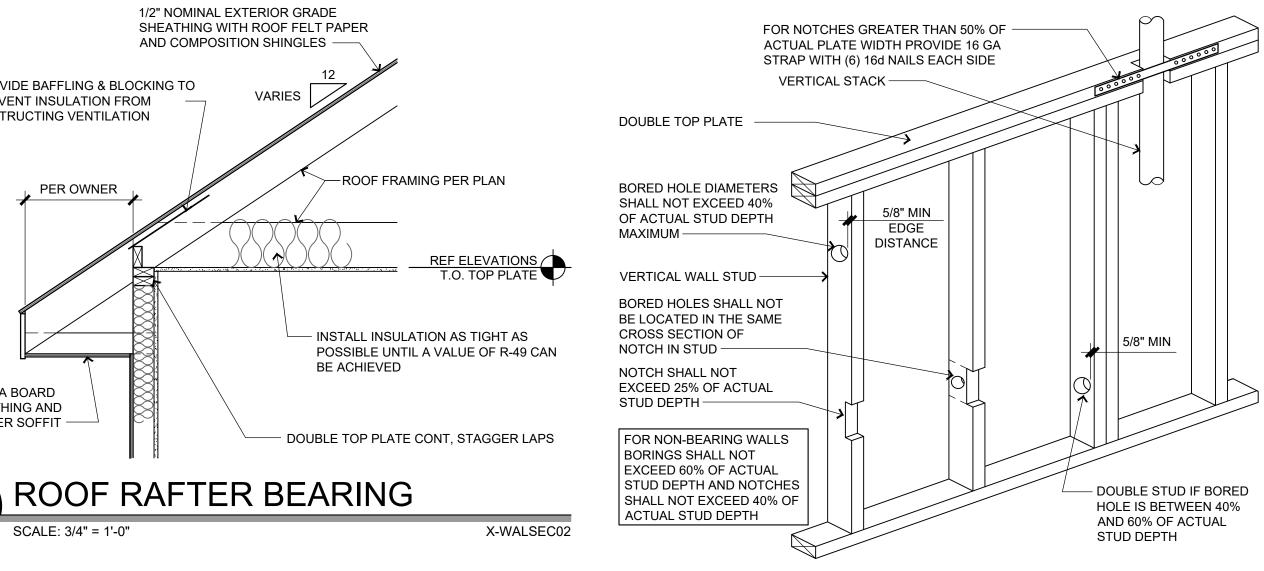
PROVIDE BAFFLING & BLOCKING TO

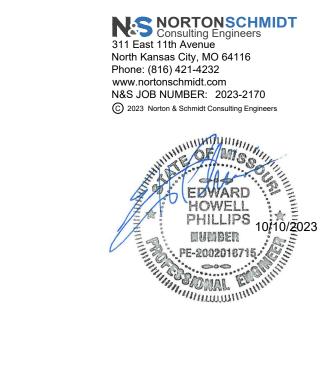
PER OWNER

SCALE: 3/4" = 1'-0"

CL COL

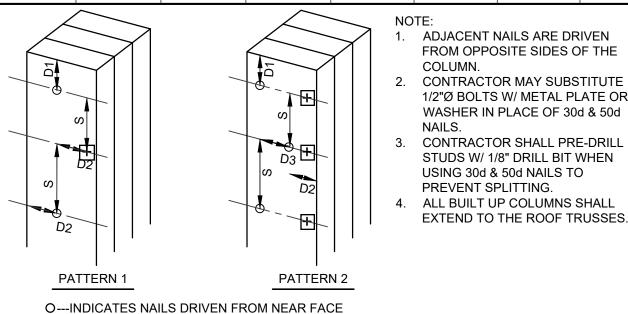
PREVENT INSULATION FROM





NOTCHING AND BORING WALLS SCALE: 3/4" = 1'-0"

	BUILT UP COLUMN NAILING SCHEDULE									
BUILT UF COLUMN		PATTERN	END DISTANCE	EDGE DISTANCE	ROW SPACING	NAIL SPACING	NAIL SIZE			
			D1	D2	D3	S				
BC1	(2) 2x6	2	2 1/2"	1 1/2"	2 1/2"	9"	10d			
BC2	(3) 2x6	2	3 1/2"	1 1/2"	2 1/2"	9"	30d			
BC3	(4) 2x6	2	4"	1 1/2"	2 1/2"	9"	50d			
BC4	(2) 2x4	1	2 1/2"	1"		6"	10d			
BC5	(3) 2x4	1	3 1/2"	1 1/2"		8"	30d			



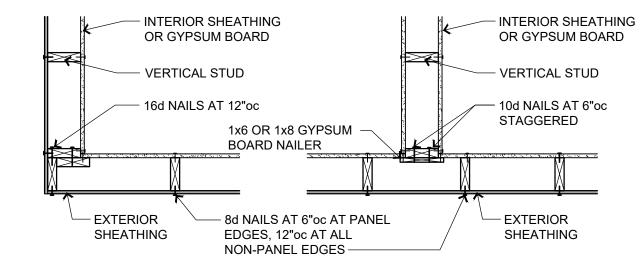
+--INDICATES NAILS DRIVEN FROM FAR FACE

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BUILT UP COLUMN SCHEDULE SCALE: 3/4" = 1'-0"



EXTERIOR —— 8d NAILS AT 6"oc AT PANEL —— EXTERIOR SHEATHING EDGES, 12"oc AT ALL SHEATHING NON-PANEL EDGES ————————————————————————————————————								
TYPICAL CORNER TYPICAL INTERSECTION								
BEARING WALL HEADERS (CENTER BEARING FLOOR)								
DOUBLE TOP	INTERIOR \	WALL (1 FL	00R) ₃	EXTERIOR V	WALL (ROC	F ONLY)		
PLATE	SPAN	SIZE	NO. J.S.	SPAN	SIZE	NO. J.S.		
├ └ ──FULL HEIGHT	0'-0" - 4'-5"	(2) 2x8	2	0'-0" - 5'-4"	(2) 2x8	2		
STŲD	4'-6" - 5'-5"	(2) 2x10	2	5'-5" - 6'-6"	(2) 2x10	2		
	5'-6" - 6'-3"	(2) 2x12	2	6'-7" - 7'-6"	(2) 2x12	2		
	INTERIOR V	VALL (2 FLC	OORS)3	EXT WALL (ROOF + FLOOR)				
	0'-0" - 3'-2"	(2) 2x8	2	0'-0" - 4'-6"	(2) 2x8	2		
\ HEADER	3'-3" - 3'-10"	(2) 2x10	3	4'-7" - 5'-6"	(2) 2x10	2		
│	3'-11" - 4'-5"	(2) 2x12	3	5'-7" - 6'-5"	(2) 2x12	2		
STUDS	NOTE:			EXT WALL (ROOF + 2 F	LOORS)		
(J.S.)	1. NOT FOR OF	PEN WEB T	RUSS	0'-0" - 3'-9"	(2) 2x8	2		
TYPICAL HEADER	SYSTEMS	NCT CDAN	∩E 10ET	3'-10" - 4'-7"	(2) 2x10	2		
· · · · · · · · · · · · · · · · · · ·	2. MAXIMUM JOIST SPAN OF 18FT			/! O" E! O"	(2) 2v12	2		

LOADS ONLY, NO ROOF LOADS TYP WALL FRAMING DETAILS SCALE: 3/4" = 1'-0"

Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

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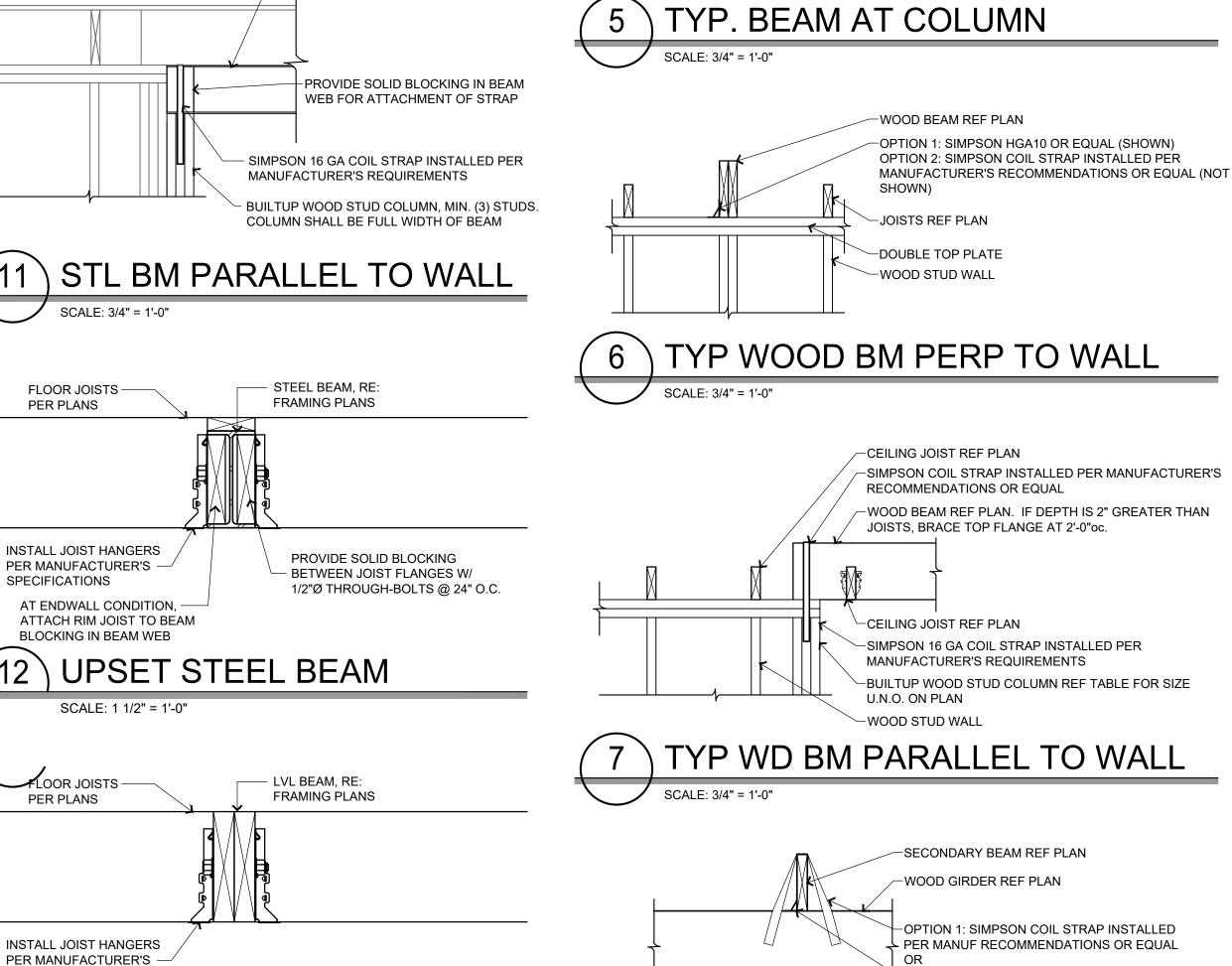
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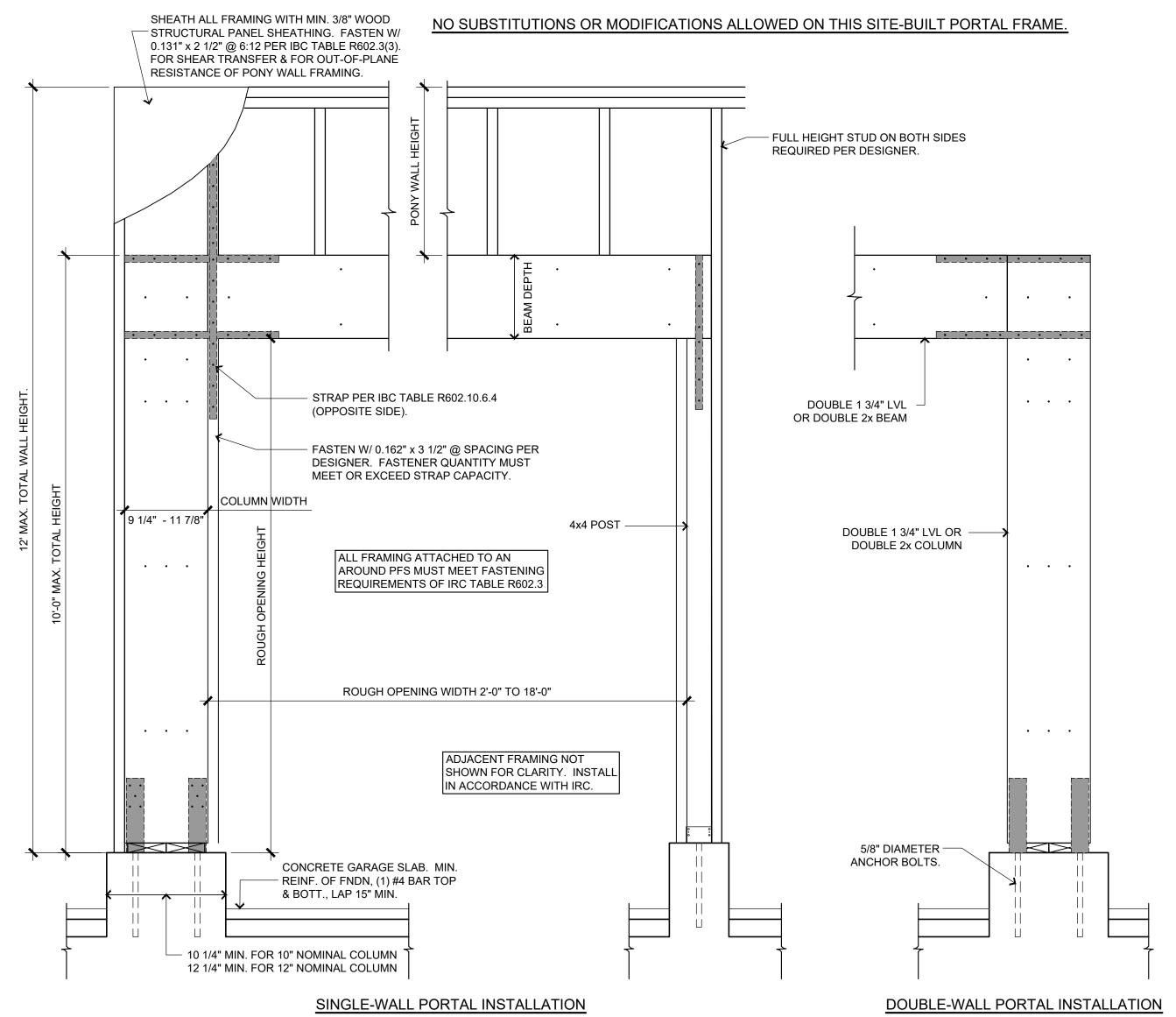
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EXTENT OF HEADER DOUBLE PORTAL FRAME (TWO BRACED WALL PANELS) EXTENT OF HEADER SINGLE PORTAL FRAME FASTEN KING STUD TO (ONE BRACED WALL PANEL) HEADER W/ (6) 16d SINKERS — 2' - 18' FIN WIDTH OF OPENING FOR SINGLE OR DOUBLE PORTAL _ __ __ __ _ HEADER (STÉEL HÉADER PROHIBITED)/IF 1/2" SPACER IS USED, PLACE . ON BACK SIDE OF HEADER - HEADER TO JACK-STUD TENSION STRAP PER -FASTEN TOP STRAP PER TABLE R602.10.6.4 TABLE R602.10.6.4 (ON PLATE TO ON BOTH SIDES OF OPENING OPPOSITE SIDE OF HEADER W/ (2) ----OPPOSITE SIDE OF SHEATING) ROWS OF 16d SHEATHING -SINKER NAILS @ - FASTEN TOP PLATE TO HEADER TYPICAL PORTAL FRAME 3" O.C. CONSTRUCTION -WITH (2) ROWS OF 16d SINKER NAILS AT 3"oc, TYP - MIN. DBL. 2x4 POST (KING & MIN. 7/16" WOOD JACK STUD) NUMBER OF STRUCTURAL FASTEN SHEATHING TO HEADER JACK STUDS PER TABLES PANEL WITH 8d COMMON OR GALV. BOX R602.7(1) & (2) SHEATHING NAILS IN 3" GRID PATTERN AS - INTERMITTENT BRACED WALL PANEL, PANEL REQUIRED FOR ADJACENT -MIN. DBL. 2x4 FRAMING COVERED OPENING FOR SINGLE W/ MIN. 7/16" WOOD STRUCTURAL PORTAL FRAME PANEL SHEATHING W/8d COMMON OR GALV. BOX NAILS @ 3" O.C. IN IF NEEDED, PANEL ALL FRAMING (STUDS & SILLS) AS SPLICE EDGES SHALL SHOWN TYP. OCCUR OVER AND BE NAILED TO COMMON MIN PANEL WIDTH **BLOCKING WITHIN THE** REF TABLE R602.10.5 MIDDLE 24" OF THE PORTAL-LEG HEIGHT. - MIN (2) 1/2"Ø ANCHOR BOLTS ONE ROW OF 3" O.C. INSTALLED PER SECTION R403.1.6 WITH 2" x 2" x 3/16" NAILING IS REQUIRED PLATE WASHER IN EACH PANEL EDGE CONCRETE GARAGE SLAB. MIN. ANCHOR BOLTS PER REINF. OF FNDN, (1) #4 BAR TOP SECTION R403.1.6 & BOTT., LAP 15" MIN. PORTAL FRAME AT GARAGE (PFG - R602.10.6.3)

SCALE: 1" = 1'-0"

WALL LENGTH PER PORTAL HEADER HEIGHT

8 FEET | 9 FEET | 10 FEET | 11 FEET | 12 FEET

30"

20"

24"

27"

18"

24"

(c)

(c)

(d)

(e)

TABLE R602.10.5 - MINIMUM LENGTH OF BRACED WALL PANELS

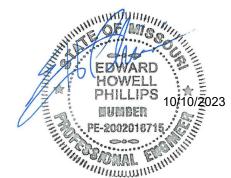
METHOD

SUPPORTING ONE STORY AND ROOF

SEISMIC DESIGN CATEGORY A, B, C

SUPPORTING ROOF ONLY

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NOTES:

1. THE STRONG-WALL SITE-BUILT PORTAL FRAME SYSTEM (PFS) IS APPLICABLE FOR USE UP TO A HEIGHT OF 10' MAX. THE HEIGHT IS PERMITTED TO BE INCREASED TO 12' WITH A 2' MAX PONY WALL.

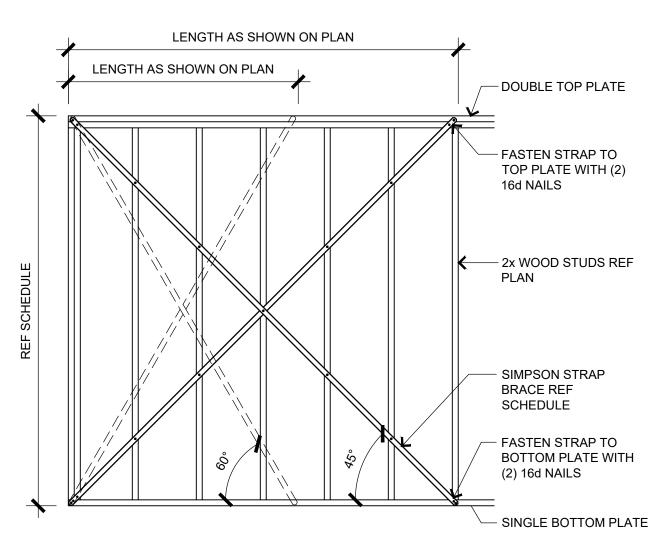
ALLOWABLE WALL-BRACING LENGTH MUST BE MULTIPLIED BY A 0.80 FACTOR. 2. MINIMUM HEADER DEPTHS FOR LVL AND SOLID SAWN ARE 11 7/8" AND 11 1/4" RESPECTIVELY.

3. SOLID SAWN COLUMNS MAY BE USED IN COMBINATION WITH LVL HEADER MATERIAL. WALL-BRACING LENGTH IS LIMITED TO THAT OF THE SOLID SAWN MATERIAL. SHIMS ILLUSTRATED IN LVL -

SOLID SAWN DETAIL BELOW MUST BE USED FOR PROPER FRAMING ALIGNMENT.

4. FOR 10" NOMINAL DF/SF AND SPF/HF SYSTEMS CONSTRUCTED WITH SHIM AT HOLDOWN ONLY, VERTICAL LOAD IS LIMITED TO 2,500 LB.

SITE-BUILT PORTAL FRAME SCALE: 1" = 1'-0"

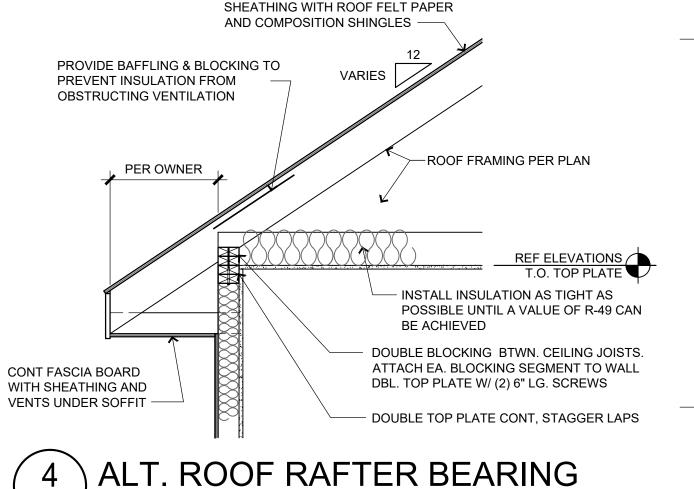


INTERIOR BRACED WAL

SCALE: N.T.S.

	CS-PF SFISMI	C DESIGN CATEG	GORY Do Do Do	16"	18"	20"	(e)
				10	10	20	(3)
	()	EADER HEIGHT F BUT WALL HEIGH					
	(d) MAXIMUM H	EADER HEIGHT F	OR PFG IS 10 FI	EET IN AC	CORDANG	E WITH F	IGURE
	,	BUT WALL HEIGH EADER HEIGHT F					
	R602.10.4, B	UT WALL HEIGHT	MAY BE INCRE	ASED TO	12 FEET W	/ITH PONY	′ WALL.
INITEDIOD DDA				7			
INTERIOR BRA	CED WALL	SCHEL	JULE				
OIMADOONI OTDAD MAALL DI	ANOLE	FASTE	NEDQ	┪			
SIMPSON STRAP WALL DI				-			
MODEL NO. LENGTH HEIGHT x WI	DTH FROM HORIZONTAL	PLATES	EA STUD				
WB106 9'-5 5/8" 8'-0" x 5'-0	o" 60°	(2) 16d	(1) 8d				

SC	CHEDULE									
00	FASTEN STRAP TO BOTTOM PLATE WITH (2) 16d NAILS	SIMPSON	STRAP	WALL DIM'S	ANGLE	FASTENERS				
		MODEL NO.	LENGTH	HEIGHT x WIDTH	FROM HORIZONTAL	PLATES	EA STUD			
		WB106	9'-5 5/8"	8'-0" x 5'-0"	60°	(2) 16d	(1) 8d			
= '— sı	NGLE BOTTOM PLATE	WB126	11'-4 3/8"	8'-0" x 8'-0"	45°	(2) 16d	(1) 8d			
		WB106C	9'-6"	8'-0" x 5'-0"	60°	(2) 16d	(1) 8d			
L	(LIB)	WB126C	11'-4 13/16"	8'-0" x 8'-0"	45°	(2) 16d	(1) 8d			
		WB143C	14'-3"	10'-0" x 10'-0"	45°	(2) 16d	(1) 8d			



SCALE: 3/4" = 1'-0"

1/2" NOMINAL EXTERIOR GRADE

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ROOF RAFTER SCHEDULE

GRADE	MEMBER SIZE / SPACING	MAX SPAN CEILING JSTS AT TOP PLATE	MAX SPAN H _C /H _R =0.16	MAX SPAN H _C /H _R =0.20	MAX SPAN H _C /H _R =0.25	$\begin{array}{c} \text{MAX SPAN} \\ \text{H}_{\text{C}}/\text{H}_{\text{R}} = 0.33 \end{array}$	
#2 DF/L 2x6 /24"oc		11'-9"	10'-6"	9'-9"	8'-11"	7'-10"	
#2 DF/L	#2 DF/L 2x6 / 16"oc 14'-1" #2 DF/L 2x8 / 16"oc 18'-2"		12'-8"	11'-8"	10'-8"	9'-5"	
#2 DF/L			16'-4"	15'-1"	13'-9"	12'-2"	
#2 DF/L	2x10 / 16"oc	22'-3"	20'-0"	18'-5"	16'-10"	14'-10"	
#2 DF/L	2x12 / 16"oc	25'-9"	23'-2"	21'-4"	19'-7"	17'-3"	

SPANS ABOVE ARE FOR ROOF LIVE LOAD OF 20 PSF AND DEAD LOAD OF 10 PSF WITH CEILINGS ATTACHED TO RAFTERS. RE: TABLES R802.4.1(1) THROUGH R802.4.1(8) FOR ADDITIONAL RAFTER SPAN INFORMATION.

THE ROOF FRAMING ON THIS HOME UTILIZES RAFTERS SPACED AT 16" ON CENTER IN EXPOSURE B WITH A ROOF SPAN LESS THAN 42' ON IN 90 MPH WIND ZONE. THEREFORE THE UPLIFT FORCE ON THE RAFTER IS LESS THAN 200 LBS. AND CAN BE CONNECTED PER TO THE WALL FRAMING PER TABLE R602.3(1).

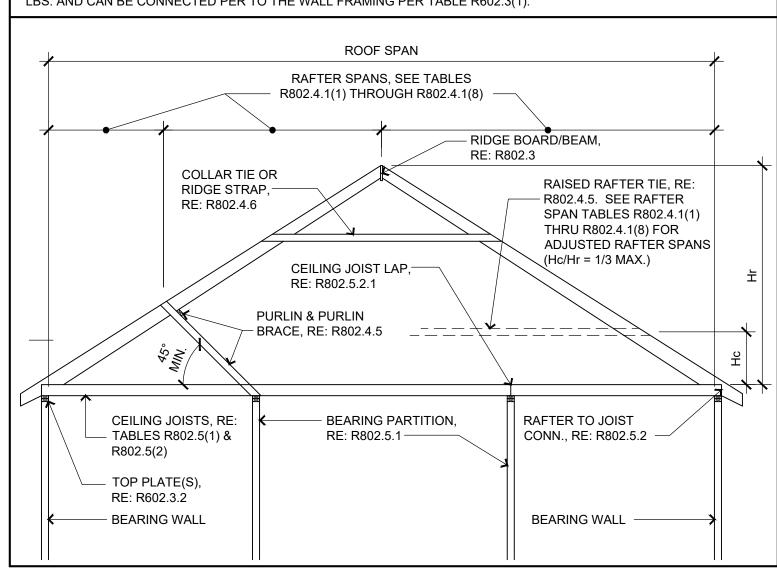


TABLE R802.5.2 RAFTER/CEILING JOIST HEEL JOINT CONNECTIONS (a,b,c,d,e,g)

		GROUND SNOW LOAD) (P	PSF)								
RAFTER SLOPE		20(f)			30			50			70						
SAFTEF SLOPE	RAFTER SPACING (inches)	ROOF SPAN (FEET)															
RA SL	RA SP/	12	20	28	36	12	20	28	36	12	20	28	36	12	20	28	36
	_ 0)		REC	UIRE	NUM	BER O	F 16d	COMM	ON NA	AILS(a,	b) PER	HEEL	JOIN	SPLI	CES (c	,d,e)	
3:12	12	4	6	8	10	4	6	8	11	5	8	12	15	6	11	15	20
	16	5	8	10	13	5	8	11	14	6	11	15	20	8	14	20	26
	24	7	11	15	19	7	11	16	21	9	16	23	30	12	21	30	39
4:12	12	3	5	6	8	3	5	6	8	4	6	9	11	5	8	12	15
	16	4	6	8	10	4	6	8	11	5	8	12	15	6	11	15	20
	24	5	8	12	15	5	9	12	16	7	12	17	22	9	16	23	29
5:12	12	3	4	5	6	3	4	5	7	3	5	7	9	4	7	9	12
	16	3	5	6	8	3	5	7	9	4	7	9	12	5	9	12	16
	24	4	7	9	12	4	7	10	13	6	10	14	18	7	13	18	23
7:12	12	3	4	4	5	3	3	4	5	3	4	5	7	3	5	7	9
	16	3	4	5	6	3	4	5	6	3	5	7	9	4	6	9	11
	24	3	5	7	9	3	5	7	9	4	7	10	13	5	9	13	17
9:12	12	3	3	4	4	3	3	3	4	3	3	4	5	3	4	5	7
	16	3	4	4	5	3	3	4	5	3	4	5	7	3	5	7	9
	24	3	4	6	7	3	4	6	7	3	6	8	10	4	7	10	13
12:12	12	3	3	3	3	3	3	3	3	3	3	3	4	3	3	4	5
	16	3	3	4	4	3	3	3	4	3	3	4	5	3	4	5	7
	24	3	4	4	5	3	3	4	6	3	4	6	8	3	6	8	10

- 40d BOX NAILS SHALL BE PERMITTED TO BE SUBSTITUTED FOR 16D COMMON NAILS NAILING REQUIREMENTS SHALL BE PERMITTED TO BE REDUCED 25% IF NAILS ARE CLINCHED.
- HEEL JOINT CONNECTIONS ARE NOT REQUIRED WHEN THE RIDGE IS SUPPORTED BY A LOAD-BEARING WHEN INTERMEDIATE SUPPORT OF THE RAFTER IS PROVIDED BY VERTICAL STRUTS OR PURLINS TO A
- LOAD-BEARING WALL, THE TABULATED HEEL JOINT CONNECTION REQUIREMENTS SHALL BE PERMITTED TO BE REDUCED PROPORTIONALLY TO THE REDUCTION IN SPAN. EQUIVALENT NAILING PATTERNS ARE REQUIRED FOR CEILING JOIST TO CEILING JOIST LAP SPLICES.
- APPLIES TO ROOF LIVE LOAD OF 20 psf OR LESS.

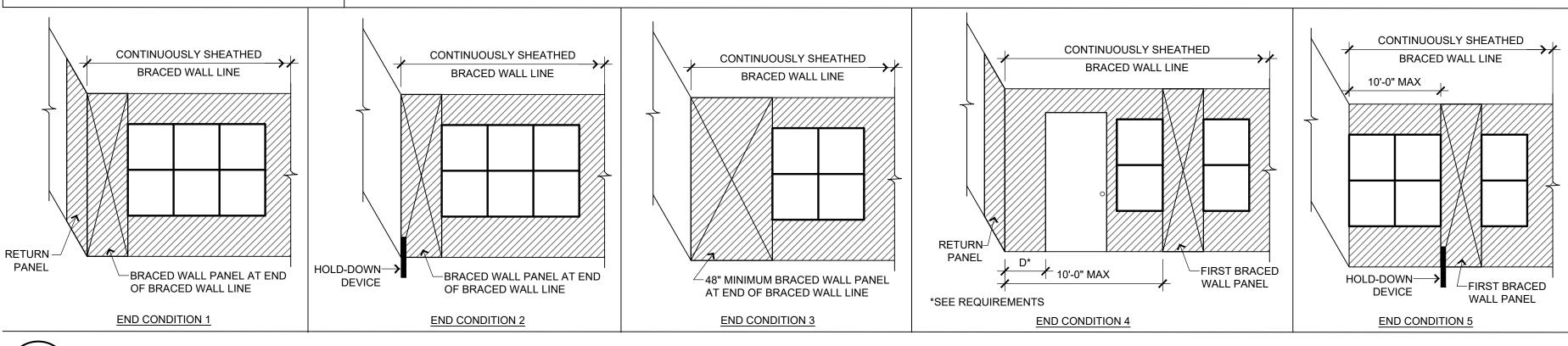
g. TABULATED HEEL JOINT CONNECTION REQUIREMENTS ASSUME THAT CEILING JOISTS OR RAFTER TIE ARE LOCATED AT THE BOTTOM OF THE ATTIC SPACE. WHEN CEILING JOISTS OR RAFTER TIES ARE LOCATED HIGHER IN THE ATTIC, HEEL JOINT CONNECTION REQUIREMENTS SHALL BE INCREASED BY THE FOLLOWING FACTORS:
LIEFT JOINT CONNECTION

Hc/Hr	ADJUSTMENT FACTOR	WHERE.			
1/3	1.5	WHERE: Hc= HEIGHT OF CEILING			
1/4	1.33	JOISTS OR RAFTER TIES MEASURED VERTICALLY			
1/5	1.25	ABOVE THE TOP OF THE RAFTER SUPPORT WALLS.			
1/6	1.2	Hr=HEIGHT OF ROOF RIDGE MEASURED VERTICALLY			
1/10 OR LESS	1.11	ABOVE THE TOP OF THE RAFTER SUPPORT WALLS.			

Floor 4-8d box $(2-1/2" \times 0.113")$; or ITEM DESCRIPTION OF BUILDING ELEMENTS SPACING AND LOCATION FASTENER (a)(b)(c) 3-8d common (2-1/2" × 0.131"); or Joist to sill, top plate or girder Toe nail 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails 4-8d box (2-1/2" × 0.113") or 8d box (2-1/2" × 0.113") Blocking between ceiling joists or rafters 3-8d common (2-1/2" \times 0.131"); or 4" o.c. toe nail Toe nail 3-10d box (3" × 0.128"); or Rim joist, band joist or blocking to sill 8d common (2-1/2" × 0.131"); or 3-3" × 0.131" nails or top plate (roof applications also) 10d box $(3" \times 0.128")$; or 6" o.c. toe nail 3" × 0.131" nails 4-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or $3-8d box (2-1/2" \times 0.113"); or$ Per joist, toe nail Ceiling joists to top plate 3-10d box (3" × 0.128"); or 2-8d common (2-1/2" × 0.131"); or 23 1" × 6" subfloor or less to each joist Face nail 3-3" × 0.131" nails $3-10d box (3" \times 0.128"); or$ 2 staples, 1" crown, 16 ga., 1-3/4" long Ceiling joist not attached to parallel rafter, 4-10d box (3" × 0.128"); or laps over partitions (see Section R802.5.2 3-16d box $(3-1/2" \times 0.135")$; or 3-16d common $(3-1/2" \times 0.162")$; or Face nail 24 2" subfloor to joist or girder Blind and face nail and Table R802.5.2) 4-3" × 0.131" nails 2-16d common (3-1/2" × 0.162") Ceiling joist attached to parallel rafter $3-16d box (3-1/2" \times 0.135"); or$ At each bearing, face nail 25 | 2" planks (plank & beam—floor & roof) Table R802.5.2 2-16d common (3-1/2" × 0.162") (heel joint) (see Section R802.5.2 and Face nail Table R802.5.2) 3-16d common (3-1/2" × 0.162") 4-10 box (3" × 0.128"), or 4-10d box (3" × 0.128"); or Collar tie to rafter, face nail or 11/4" × End nail Band or rim joist to joist Face nail each rafter 4-3" × 0.131" nails; or 3-10d common (3" \times 0.148"); or 20 ga. ridge strap to rafter 4-3" × 0.131" nails 4-3" × 14 ga. staples, 7/16" crown 3-16d box nails (3-1/2" × 0.135"); or Nail each layer as follows: 2 toe nails on one side and 20d common (4" × 0.192"); or 3-10d common nails (3" × 0.148"); or 32" o.c. at top and bottom Rafter or roof truss to plate 1 toe nail on opposite side 4-10d box (3" × 0.128"); or and staggered. of each rafter or truss(i) 4-3" × 0.131" nails 24" o.c. face nail at top 10d box $(3" \times 0.128")$; or Built-up girders and beams, and bottom staggered on 4-16d (3-1/2" × 0.135"); or 3" × 0.131" nails opposite sides 2-inch lumber layers 3-10d common (3" × 0.148"); or Toe nail 4-10d box (3" × 0.128"); or Roof rafters to ridge, valley 4-3" × 0.131" nails 2-20d common (4" × 0.192"); or Face nail at ends and at or hip rafters or roof rafter to 3-10d box (3" × 0.128"); or each splice 3-16d box $(3-1/2" \times 0.135")$; or minimum 2" ridge beam 3-3" × 0.131" nails 2-16d common (3-1/2" × 0.162"); or End nail 3-10d box (3" × 0.128"); or 4-16d box $(3-1/2" \times 0.135")$; or 3-3" × 0.131" nails 3-16d common (3-1/2" \times 0.162"); or At each joist or rafter, Ledger strip supporting joists or rafters 4-10d box (3" × 0.128"); or face nail Wall 4-3" × 0.131" nails 16d common (3-1/2" × 0.162") 24" o.c. face nail Stud to stud (not at 10d box $(3" \times 0.128")$; or $2-10d box (3" \times 0.128"), or$ braced wall panels) 16" o.c. face nail 3" × 0.131" nails 2-8d common (2-1/2" × 0.131"); or Bridging or blocking to joist Each end, toe nail 2-3" × 0.131") nails Stud to stud and abutting 16d box (3-1/2" × 0.135"); or 12" o.c. face nail studs at intersecting wall 3" × 0.131" nails SPACING OF FASTENERS corners (at braced wall panels) 16d common (3-1/2" × 0.162") NUMBER AND TYPE OF 16" o.c. face nail Intermediate EM DESCRIPTION OF BUILDING ELEMENTS FASTENER (a)(b)(c) Built-up header (2" to 2" header 16d common (3-1/2" × 0.162") supports(c)(e) 16" o.c. each edge face n (inches)(h) with 1/2" spacer) 16d box (3-1/2" × 0.135") 12" o.c. each edge face na 5-8d box (2-1/2" × 0.113"); or Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing 4-8d common (2-1/2" × 0.131"); or [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing] Continuous header to stud 4-10d box (3" × 0.128") 6d common (2" × 0.113") nail 16d common (3-1/2" × 0.162") (subfloor, wall)(i) 8d common (2-1/2" 16" o.c. face nail × 0.131") nail (roof); or RSRS-01 12 Top plate to top plate 10d box (3" × 0.128"); or 12" o.c. face nail $(2-3/8" \times 0.113")$ nail (roof)(j)3" × 0.131" nails 8-16d common (3-1/2" × 0.162"); or Face nail on each side of 8d common nail (21/2" × 0.131"); or 12-16d box (3-1/2" × 0.135"); or end joint (minimum 24" RSRS-01; (2-3/8" × 0.113") nail 19/32" – 1" 13 Double top plate splice 12-10d box (3" × 0.128"); or lap splice length each 12-3" × 0.131" nails side of end joint) 10d common (3" × 0.148") nail; or 1-1/8" — 1-1/4" 16d common (3-1/2" × 0.162") 8d (21/2" × 0.131") deformed nail 16" o.c. face nail Bottom plate to joist, rim joist, band joist Other wall sheathing(g) 16d box (3-1/2" × 0.135"); or or blocking (not at braced wall panels) 12" o.c. face nail 3" × 0.131" nails 1-1/2" galvanized roofing nail, 7/16" 1/2" structural cellulosic fiberboard head diameter, or 1-1/4" long 16 ga. 3-16d box (3-1/2" × 0.135"); or 3 each 16" o.c. face nail Bottom plate to joist, rim joist, band joist sheathing staple with 7/16" or 1" crown 2-16d common (3-1/2" \times 0.162"); or 2 each 16" o.c. face nail or blocking (at braced wall panel) 4-3" × 0.131" nails 4 each 16" o.c. face nail 1-3/4" galvanized roofing nail, 7/16" 25/32" structural cellulosic head diameter, or 1-1/2" long 16 ga. 4-8d box (2-1/2" × 0.113"); or fiberboard sheathing staple with 7/16" or 1" crown 3-16d box (3-1/2" × 0.135"); or 1-1/2" galvanized roofing nail; 4-8d common (2-1/2" × 0.131"); or Toe nail 4-10d box (3" × 0.128"); or 1/2" gypsum sheathing(d) staple galvanized, 1-1/2" long; 4-3" × 0.131" nails 16 Top or bottom plate to stud 1-1/4" screws, Type W or S 1-3/4" galvanized roofing nail; 3-16d box $(3-1/2" \times 0.135")$; or 2-16d common (3-1/2" × 0.162"); or 5/8" gypsum sheathing(d) staple galvanized, 1-5/8" long; End nail 3-10d box (3" × 0.128"); or 1-5/8" screws. Type W or S 3-3" × 0.131" nails Wood structural panels, combination subfloor underlayment to framing 3-10d box (3" × 0.128"); or 6d deformed (2" × 0.120") nail; or 3/4" and less 8d common (2-1/2" × 0.131") nail Top plates, laps at corners and intersections 2-16d common (3-1/2" × 0.162"); or Face nail 3-3" × 0.131" nails 8d common (2-1/2" × 0.131") nail; or 8d deformed (2-1/2" × 0.120") nail $3-8d box (2-1/2" \times 0.113"); or$ 2-8d common (2-1/2" × 0.131"); or 10d common (3" × 0.148") nail; or 39 | 1-1/8" – 1-1/4" Face nail 18 | 1" brace to each stud and plate 2-10d box (3" × 0.128"); or 8d deformed (2-1/2" × 0.120") nail 2 staples 1-3/4" Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and $3-8d box (2-1/2" \times 0.113"); or$ sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 2-8d common (2-1/2" × 0.131"); or 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 19 | 1" × 6" sheathing to each bearing Face nail 2-10d box (3" × 0.128"); or 100 ksi for shank diameters of 0.142 inch or less. 2 staples, 1" crown, 16 ga., 1-3/4" long Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. 3-8d box (2-1/2" × 0.113"); or Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically. 3-8d common (2-1/2" × 0.131"); or Spacing of fasteners not included in this table shall be based on Table R602.3(2). 3-10d box (3" × 0.128"); or For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 3 staples, 1" crown, 16 ga., 1-3/4" long inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is 20 1" × 8" and wider sheathing to each bearing Wider than 1" × 8" Face nail less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or 4-8d box $(2-1/2" \times 0.113")$; or greater but less than 140 mph. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or sheathing shall conform to ASTM C208. 4 staples, 1" crown, 16 ga., 1-3/4" long Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel (continued) edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code.

FASTENING SCHEDULE IRC 2018 TABLE R602.3(1)

REQUIREMENTS **RETURN PANEL:** 24" FOR BRACED WALL LINES SHEATHED WITH WOOD STRUCTURAL PANELS 32" FOR BRACED WALL LINES SHEATHED WITH STRUCTURAL FIBERBOARD 24" FOR BRACED WALL LINES SHEATHED WITH WOOD STRUCTURAL PANELS 32" FOR BRACED WALL LINES SHEATHED WITH STRUCTURAL FIBERBOARD HOLD-DOWN DEVICE: 800 lbs CAPACITY FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FLOOR FRAMING BELOW



NORTONSCHMIDT Consulting Engineers Consulting Engineers 311 East 11th Avenue North Kansas City, MO 64116 Phone: (816) 421-4232 www.nortonschmidt.com N&S JOB NUMBER: 2023-2170 © 2023 Norton & Schmidt Consulting Engineers

NUMBER AND TYPE OF

FASTENER (a)(b)(c)

SPACING AND LOCATION

(inches)

12(f)

12(f)

12

12

TEM DESCRIPTION OF BUILDING ELEMENTS

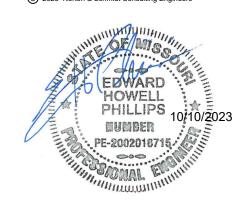
Floor perimeter shall be supported by framing members or solid blocking.

RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

on the opposite side of the rafter shall not be required.

Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails

on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail



BILL FOWLER ARCHITECT

3601 W 122nd Terrace, Leawood, KS 66209 913 908 5363 / BWFOWLER@ME.COM N C A R B National Council Architectural Registration Boards

Woodland Glen Lot 59

The Woodbridge 1 1/2 Reverse

1512 SW Heartwood Dr. Lee's Summit, MO

John Duggan 913 498 3536 / jduggan@ks-dsdlaw.com

WBRG-WG59

Revisions

Standard Details, Schedules, & Notes

PERMIT SET

END CONDITIONS FOR BRACED WALL LINES WITH CONTINUOUS SHEATHING R602.10.7