Project Summary

Project Scope

New two-family dwelling and associated site work on newly platted undeveloped lot. Site Data

Street Address: See Plot Plan

Neighborhood: See Plot Plan

Legal Description: See Plot Plan

Zoning: See Plot Plan

Minimum setbacks: See Plot Plan

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: See Structural.
- 302 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.

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

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

310 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.

314 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.

315 Carbon monoxide alarms required outside each group of sleeping rooms in dwellings with fuel-fired appliances or attached garage.

316 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 ground.
- 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)

N1102.4Building 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 work.

2018 International Building Code (IBC)

302 Occupancy Classification Group R-3 Residential

601 Construction Type V-B Unsprinklered Fire resistance ratings = 0 hrs

Residential General Notes

- 1. 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.
- 2. 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.
 Building systems and components not specifically detailed shall be
- installed, as per minimum manufacturers recommendations. Notify the architect of any resulting conflicts.6. 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.7. Install dust barriers and other protection as required to protect installed
- finishes and facilities.
 8. 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.
 9. 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.
- 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 bronze, or copper.
- 16. 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 inch wallboard.
- 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. 19. 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.
- 22. 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 occupation.
 24. The contractor shall take all pecessary precautions to ensure the safety.
- 24. 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 premises at all times. Said plans are to be under the care of the job superintendent.
- 26. The contractor and/or the sub-contractors shall apply for, obtain and pay for all required permits and fees except for the building permit.27. Construction hours, per jurisdiction, are to be observed for all phases of

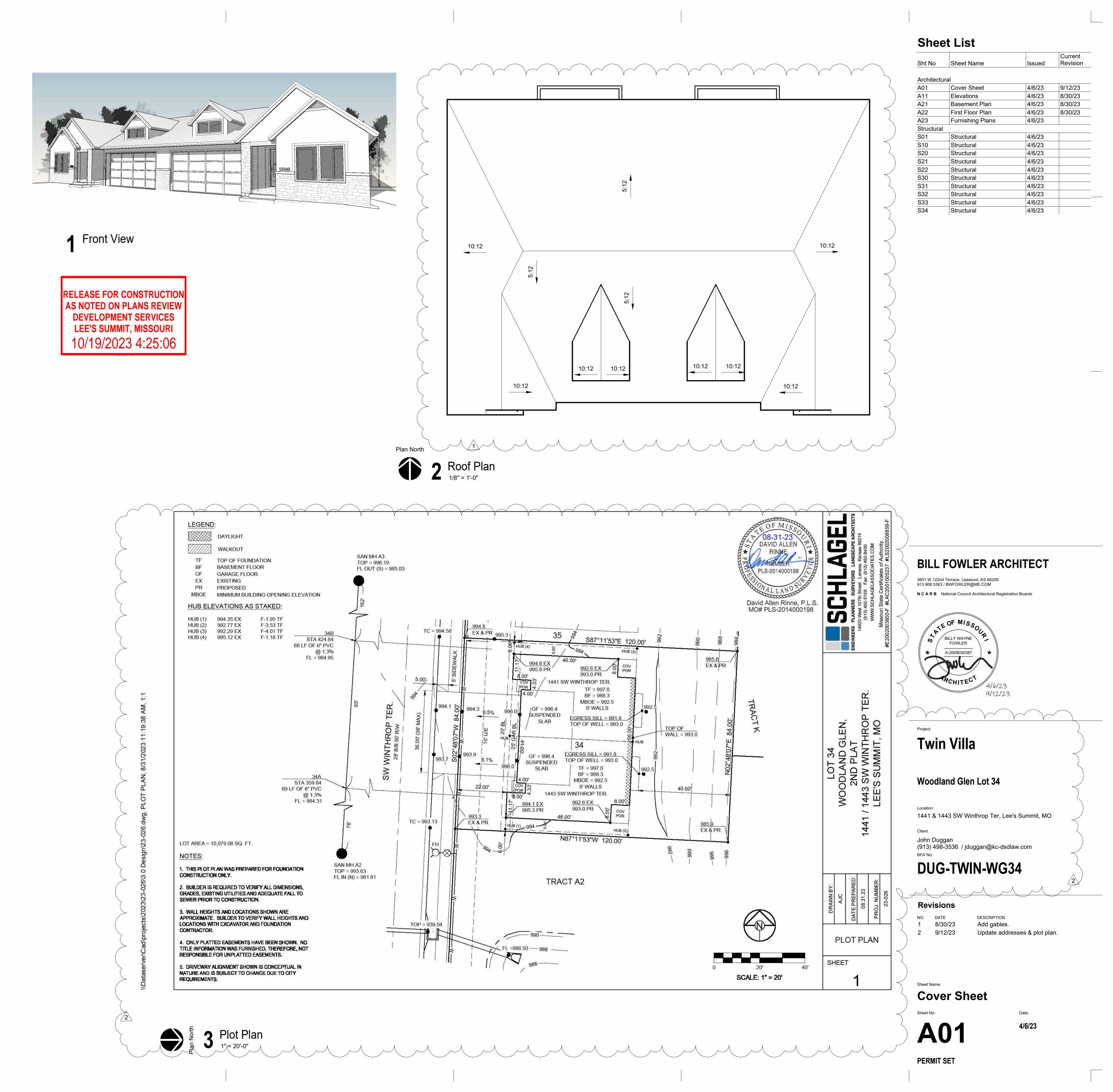
Precautionary Notes

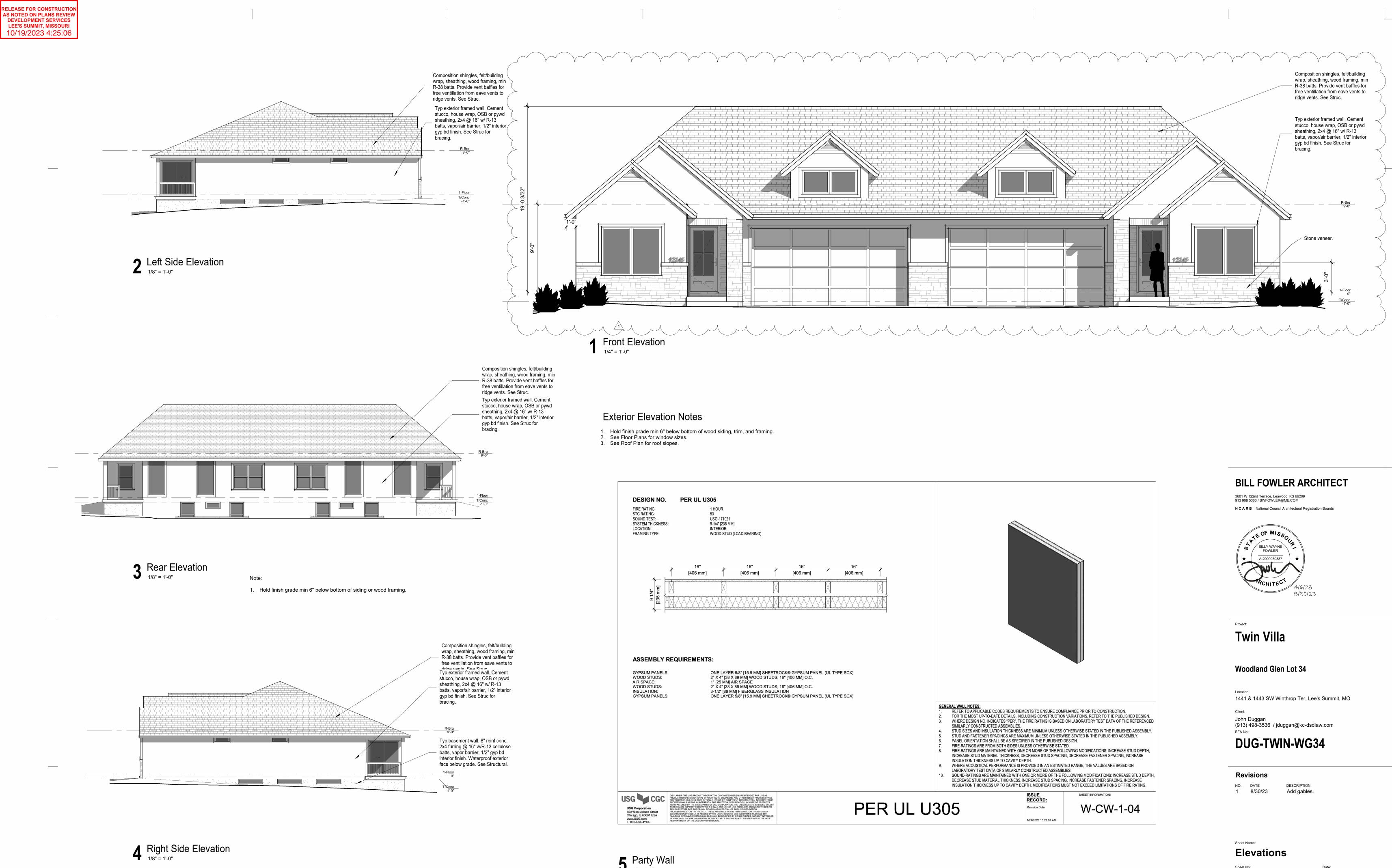
the project.

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 strictly prohibited.

© Bill Fowler Architect, Leawood, KS

- 1. 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.
- 2. 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.
- 4. 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.



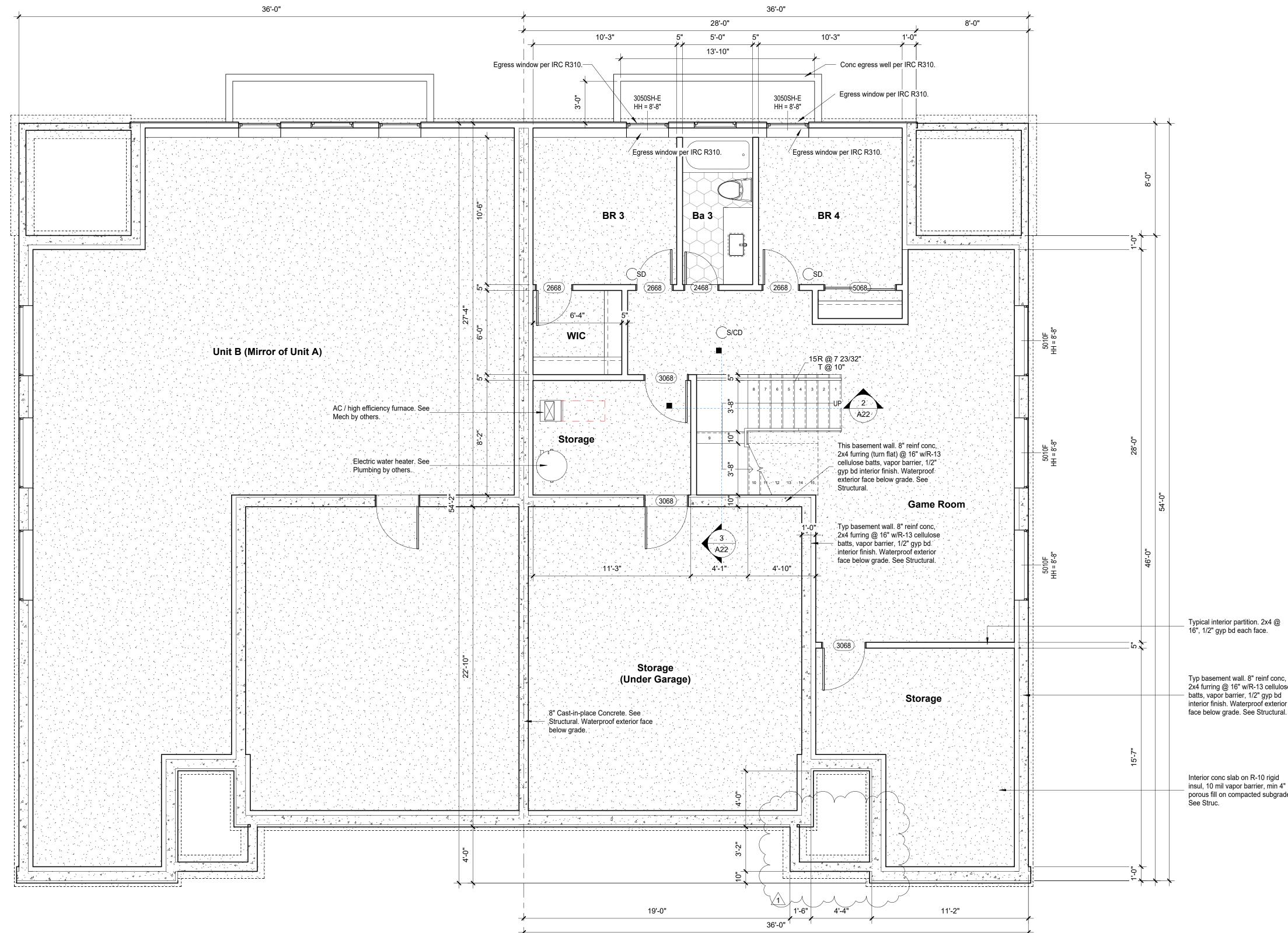


5 Party Wall

Sheet No: A11

Date: 4/6/23







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



Finished	
967 SF	0-Floor
1,311 SF	1-Floor
2,278 SF	
Garage	
452 SF	1-Floor
452 SF	
Storage	
797 SF	0-Floor
797 SF	

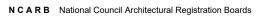
Floor Plan Notes

3,527 SF

- 1. 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.
- 2. Window and door tags indicate sash or leaf sizes. Example: $3068 = 3'-0'' \times 6'-8''$. Tag suffix as follows: C = Casement, F = Fixed, DH = Double-hung, SH = Singlehung, T = Transom, E = Egress, S = Slider. See Elevations for window and door types.
- 3. Field verify all existing conditions relevant to the work. 4. Loose furnishings, if shown, are by Owner.
- 5. 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.
- 7. Fire resistant construction, if required, shall comply with IRC R302. See Project Notes.
- 8. 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 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 smoke detector, hard-wired and interconnected, in each sleeping room per IRC 314.
- 15. Provide combination smoke/carbon monoxide detector, hard-wired and interconnected, outside each group of sleeping rooms and inside the interior garage door per IRC 315.

BILL FOWLER ARCHITECT

3601 W 122nd Terrace, Leawood, KS 66209 913 908 5363 / BWFOWLER@ME.COM







Woodland Glen Lot 34

Location 1441 & 1443 SW Winthrop Ter, Lee's Summit, MO

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

DUG-TWIN-WG34

Revisions

NO. DATE 1 8/30/23

DESCRIPTION Add gables.

Sheet Name: **Basement Plan**



PERMIT SET

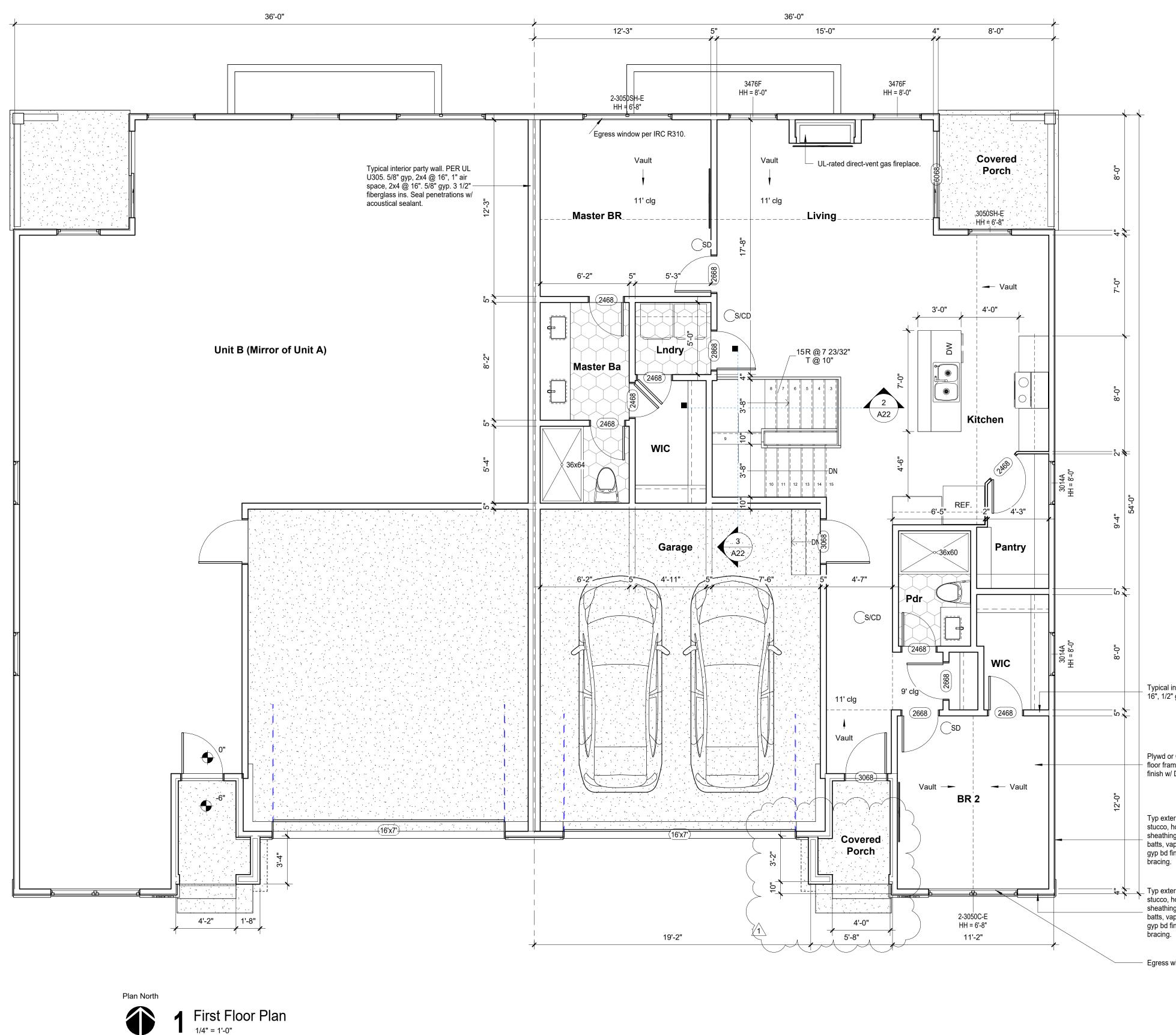
Date: 4/6/23

Typical interior partition. 2x4 @ 16", 1/2" gyp bd each face.

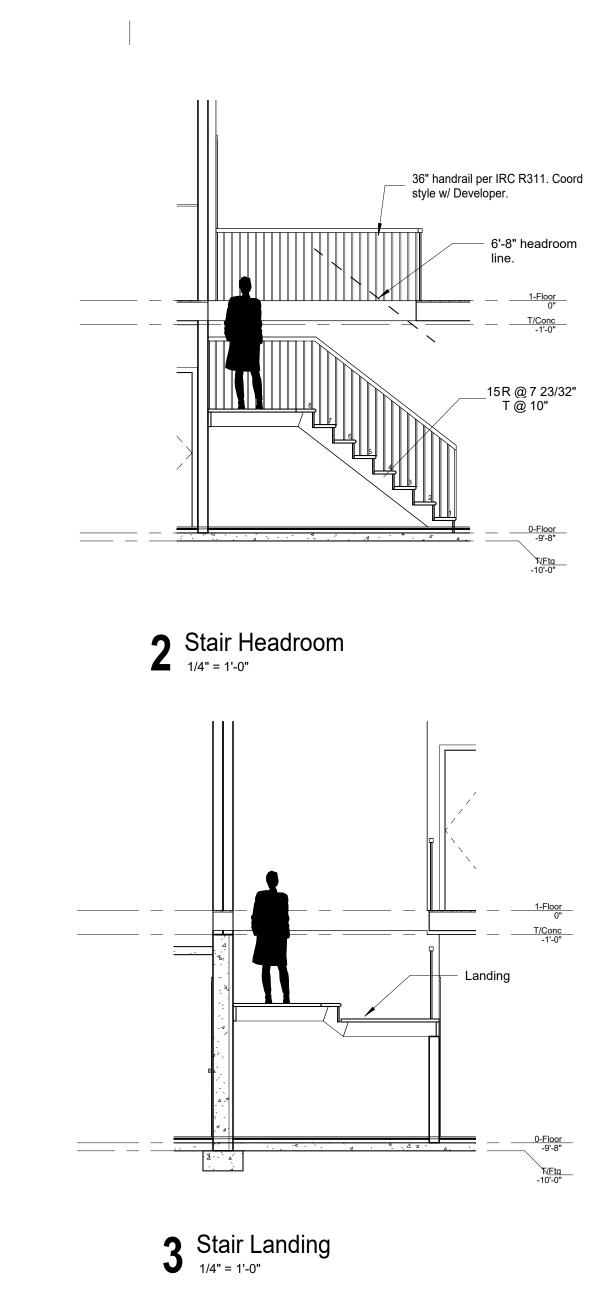
Typ basement wall. 8" reinf conc, 2x4 furring @ 16" w/R-13 cellulose batts, vapor barrier, 1/2" gyp bd interior finish. Waterproof exterior

Interior conc slab on R-10 rigid insul, 10 mil vapor barrier, min 4" porous fill on compacted subgrade.





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Typical interior partition. 2x4 @ 16", 1/2" gyp bd each face.

Plywd or OSB floor sheathing on 2x floor framing. See Struc. Coord finish w/ Developer.

Typ exterior framed wall. Cement stucco, house wrap, OSB or pywd sheathing, 2x4 @ 16" w/ R-13 batts, vapor/air barrier, 1/2" interior gyp bd finish. See Struc for bracing.

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Egress window per IRC R310.

Area Summary per Unit

Finished		
967 SF	0-Floor	
1,311 SF	1-Floor	
2,278 SF		
Garage		
452 SF	1-Floor	
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Storage		
797 SF	0-Floor	
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Floor Plan Notes

3,527 SF

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 Window and door tags indicate sash or leaf 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.
- Field verify all existing conditions relevant to the work.
 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.
- All sleeping rooms shall have at least one egress window per IRC R310. See Project Notes and Window Schedule.
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NCARB National Council Architectural Registration Boards





Woodland Glen Lot 34

Location: 1441 & 1443 SW Winthrop Ter, Lee's Summit, MO

^{Client:} John Duggan (913) 498-3536 /jduggan@kc-dsdlaw.com ^{BFA No:}

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Revisions

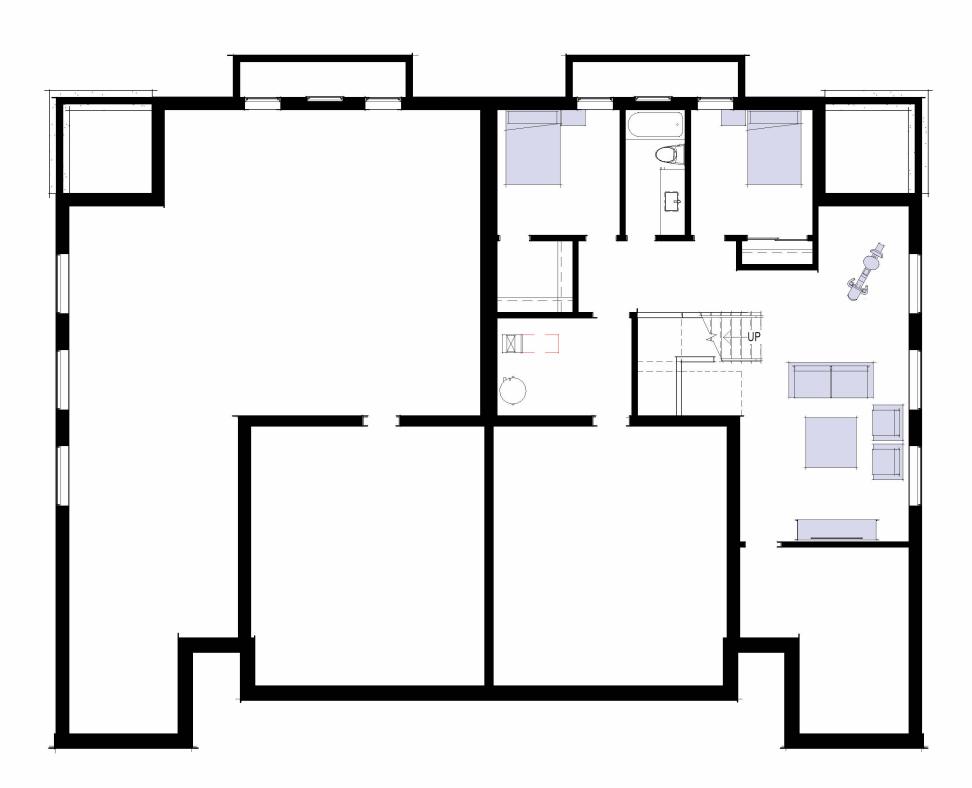
NO. DATE 1 8/30/23

DESCRIPTION Add gables.

Sheet Name: First Floor Plan



Date: **4/6/23**





Basement Floor Plan





2 First Floor Plan

Furnishing Plan Notes

- Loose furnishings are by others not in contract.
 Furnishing layout is preliminary and must be coordinated with Developer.
 Furnishing layout is provided as a suggestion to aid in locating electrical and media outlets.

BILL FOWLER ARCHITECT

3601 W 122nd Terrace, Leawood, KS 66209 913 908 5363 / BWFOWLER@ME.COM NCARB National Council Architectural Registration Boards





Woodland Glen Lot 34

Location: 1441 & 1443 SW Winthrop Ter, Lee's Summit, MO

^{Client:} John Duggan (913) 498-3536 / jduggan@kc-dsdlaw.com ^{BFA No:}

DUG-TWIN-WG34

Revisions

NO. DATE DESCRIPTION

Sheet Name: **Furnishing Plans**



Date: 4/6/23

AS NOTED ON PLANS R DEVELOPMENT SERVICES 10/19/2023 4 25 CT ERAL NOTES

GOVERNING BUILDING CODE:	2018 INTERNATIONAL RESIDENTI. SUPPLEMENTS	AL CODE (IRC) AND ITS APPROPRIATE
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
WIND LOADS:		Vasd=115 MPH, EXPOSURE C
SEISMIC LOADS:		SITE CLASS "B"
ASSUMED ALLOWABLE SOIL BEA	RING PRESSURE:	1,500 PSF

<u>GENERAL</u>

RELEASE FOR CONSTRUCTION

- 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.

BUILDER'S PLANS

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 R302.7 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:

- 1. 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 20".
- 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. 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. NO ALUMINUM SHALL BE EMBEDDED/PLACED IN CONCRETE.
- CONCRETE PLACED IN COLD WEATHER SHALL COMPLY WITH ACI 306. CONCRETE PLACED IN HOT WEATHER SHALL COMPLY WITH ACI 305.

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING: STRUCTURAL STEEL ASTM A992, Fy = 50 KSI
 - MISCELLANEOUS STEEL
 - 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.
- 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. WOOD FRAMING NOTES
- CONTROL JOINTS IN THE FLOOR SLABS SHALL BE INSTALLED AS TO MINIMIZE THE AMOUNT OF 1. ALL STRUCTURAL LUMBER (RAFTERS, CEILING JOISTS, PURLINS AND HEADERS) SHALL BE DOUGLAS RANDOM CRACKING (12' INTERVALS MAXIMUM). THESE JOINTS SHALL BE SAWCUT 1-1/4" DEEP WITHIN FIR LARCH #2 OR BETTER UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL LOAD BEARING WALL 8 HOURS OF POURING THE SLAB OR MAY BE TOOLED INTO THE SLAB WHEN POURED. SAWCUTS STUDS AND PURLIN STRUTS SHALL BE DOUGLAS FIR STUD GRADE OR BETTER. SHALL BE IN APPROXIMATE SQUARE PATTERN WITH MAXIMUM ASPECT RATIO OF 1-1/2 TO 1.
- 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. 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.
- ALL FLOOR AND CEILING JOISTS THAT BUTT INTO THE SIDE OF A HEADER OR STEEL BEAM SHALL BE 6. ANCHORED TO THE HEADER OR STEEL BEAM WITH STANDARD JOIST HANGERS
- ALL SUPPORTS FOR WOOD TRUSSES, RAFTERS AND PURLINS, UNLESS SHOWN OTHERWISE ON THE 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". 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 ALL FOOTING AND SLAB REINFORCEMENT SHALL BE BLOCKED OFF SUBGRADE WITH CHAIRS OR SYSTEM THICKNESS WITH SOLID BLOCKING OR WITH 2x4 STUB COLUMNS (SQUASH BLOCKS) THAT CONCRETE BRICKS. 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 FRAMING MEMBERS
- 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 /ALLEY 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 SUPPORTS.
- 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. THE LOADS STIPULATED ON THE DRAWINGS. SHOP DRAWINGS AND CALCULATIONS WITH AN PROVIDE TWO #4 X 4'-0" LONG DIAGONAL BARS AT THE CORNERS OF ALL OPENINGS IN CONCRETE ENGINEER'S SEAL FOR THE STATE OF THE RESIDENCE SHALL BE SUBMITTED FOR REVIEW PRIOR TO WALLS AND AT FOOTING STEPS. ALSO PROVIDE 2 ADDITIONAL #4 ON ALL SIDES OF WALL OPENINGS. FABRICATION. CONNECTION PLATES SHALL MEET THE REQUIREMENTS OF THE GOVERNING
- 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. WOOD TRUSSES AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR BARS SHALL BE 3'-0" LONGER THAN OPEN VERTICAL OR HORIZONTAL DIMENSION. BUILDING CODE. HURRICANE CLIPS, SIMPSON SDWC SCREWS OR SIMILAR SHALL BE USED TO RESIST 11. FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW UPLIFT PER IRC 802.11 GRADE SHALL BE DAMP PROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE WITH A TEMPORARY STABILITY OF WOOD TRUSSES DURING ERECTION SHALL BE THE RESPONSIBILITY OF BITUMINOUS COATING IN ACCORDANCE WITH SECTION R406.1.
- THE CONTRACTOR IN CONJUNCTION WITH ALL RECOMMENDATIONS OF THE MANUFACTURER. INSULATION SHALL BE INSTALLED FOR ALL BASEMENT WALLS AS REQUIRED PER SECTION N1102.1. FOLLOW BCSI GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING OF METAL PLATE CONNECTED ALL SITE RETAINING WALLS GREATER THAN 4'-0" IN HEIGHT SHALL REQUIRE A DESIGN BY A WOOD TRUSSES. PROFESSIONAL ENGINEER.
- 28. WOOD TRUSSES SHALL NOT BE FIELD CUT.
- 29. 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.
- 2. 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. 3. 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.

- ASTM A36
- ASTM A500, GRADE B

- FOUNDATION NOTES
- 1. 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. 4. FOOTINGS SHALL BE POURED CONTINUOUS AT FOOTING STEPS (SOLID JUMPS)
- 5. 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.
- 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.
- 8. 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

RESIDENTIAL BASEMENT WALL NOTES:

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

	_					
		60 KSI REI	NFORCING	40 KSI REINFORCING		
NA	L THICKNESS	8"	10"	12"	8"	10"
ΙT	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.
WALL HE	8'	#4 @ 24" O.C.	#4 @ 36" O.C.		#4 @ 16" O.C.	#4 @ 36" O.C.
	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 @
- 36" O.C. (ACI 332) 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. 3. 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.
- 14. A CONCRETE ENCASED GROUNDING ELECTRODE CONNECTION SHALL BE PROVIDED TO THE ELECTRICAL SERVICE PER SECTION E3608.1.

ENERGY REQUIREMENTS

- THE BUILDING THERMAL ENVELOPE SHALL BE SEALED WITH AN AIR BARRIER PER IRC SECTION N1102
- 2. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER N1102.
- L BE INSTALLED AS REQUIRED PER N1103.1.1. MAXIMUM 2% AIR LEAKAGE RATE PER N1103.3.2.1.
- AIR PLENUMS SHALL BE SEALED TO PREVENT LEAKAGE REQUIRED PER N1103.
- ELOPE WALL SHALL NOT BE USED AS RETURN AIR PLENUMS ARRIER IS MAINTAINED PER M1601.1.1. ED 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 CFM AS REQUIRED PER M1503.6.
- 10. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601 6 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

AВ	ANCHOR BOLT	MECH	MECHANICAL
ACI	AMERICAN CONCRETE INSTITUTE	MFR	MANUFACTURER
٩FF	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
30	BOTTOM OF	PAF	POWDER ACTUATED FASTENER
BOS	BOTTOM OF STEEL	PCF	POUNDS PER CUBIC FEET
BRG	BEARING	PL	PLATE
3WP	BRACED WALL PANEL	PLF	POUNDS PER LINEAR FOOT
	CAST-IN-PLACE CONCRETE	PSF	POUNDS PER SQUARE FOOT
CJ		PSI	POUNDS PER SQUARE INCH
CL	CONTROL JOINT (WALL)		
	CENTER LINE	QTY	QUANTITY
	CLEAR	REF	REFERENCE
	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
Q	EQUAL	ТО	TOP OF
EW	EACH WAY	TOC	TOP OF CONCRETE
DN	FOUNDATION	TOF	TOP OF FOOTING
F	FINISH FLOOR	TOP	TOP OF PAVING
S	FAR SIDE	TOS	TOP OF STEEL
TG	FOOTING	TRANS	TRANSVERSE
SA	GAGE	TYP	TYPICAL
ЭС	GENERAL CONTRACTOR	UNO	UNLESS NOTED OTHERWISE
GYP BD	GYPSUM BOARD	VERT	VERTICAL
IORIZ	HORIZONTAL	W	WIDTH
ISA	HEADED STUD ANCHOR	WBM	WALL BRACE METHOD
NFO	INFORMATION	WP	WORK POINT
IST	JOIST	WS	WALL STEP
IT	JOINT	WWF	WELDED WIRE FABRIC
(SI	KIPS PER SQUARE INCH		
	POUNDS		
RS .			
_BS _ONG	LONGITUDINAL		

SYMBOLS LEGEND

	ELEVATION DESIGNATION		REVISION DESIGNATION
	CUT SYMBOL	(22)	PLAN NOTE SYMBOL
TYPE NO/SHEET	SECTION CUT	1	SLAB JOINT DESIGNATION
TYPE NO/SHEET	ELEVATION DETAIL	- () -100'-0"	SPOT ELEVATION
	BLOWUP DETAIL		CONCRETE WALL
WSP	WOOD STRUCTURAL PANEL		WOOD NON-LOAD BEARING STUD WALL
(CS-WSP)	CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL		BRACED WALL PANEL
PFH	PORTAL FRAME WITH HOLD-DOWNS		BRACED WALL LINE
(PFG)	PORTAL FRAME AT GARAGE		WOOD STUD BEARING WALL

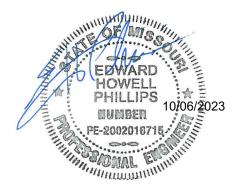
INSULATION AND FENESTRATION REQUIREMENTS - IRC TABLE N1102.1.2 THESE VALUES ARE BASED ON CLIMATE ZONE 4 PER IRC FIGURE N1101.7 OR TABLE N1101.7. REFERENCE IRC FOR DIFFERENT CLIMATE ZONE VALUES

COMPONENT	VALUE				
FENESTRATION	$U \leqq 0.32$	(b)			
SKYLIGHT		U ≦ 0.55	(b)		
GLAZED FENESTRATION SHGC	U ≦ 0.40	(b)(e)			
CEILING	R-49				
CEILING WITH ATTIC SPACES (O)	R-38				
CEILING - VAULTED (500 SQ.FT. C CEILING AREA, WHICHEVER IS LE	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	OUCTS OUTSIDE OF THE SUPPLY AND RETURN				
CONDITIONED SPACE	IN FLOOR & CEILING ASSEMBLY	R-6			

- R-VALUE SPECIFIED IN THE TABLE. b. THE FENESTRATION U - FACTOR EXCLUDES SKYLIGHTS. THE SHGC APPLIES TO ALL GLAZED
- FENESTRATION.
- SLAB. e. THERE ARE NO SHGC REQUIREMENTS IN THE MARINE ZONE.
- DEFINED BY FIGURE N1101.10 AND TABLE N1101.10.
- THAN AN R-VALUE OF R-19.
- INSULATION.

3.	PROGRAMMABLE THERMOSTATS SHALL
4.	AIR HANDLERS SHALL BE RATED FOR M
5.	BUILDING CAVITIES USED AS RETURN A
	ACROSS THE THERMAL ENVELOPE AS F
6.	BUILDING CAVITIES IN A THERMAL ENVE
	UNLESS THE REQUIRED INSULATION BA
7.	HOT WATER PIPES SHALL BE INSULATED

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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

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

f. BASEMENT WALL INSULATION SHALL NOT BE REQUIRED IN WARM-HUMID LOCATIONS AS

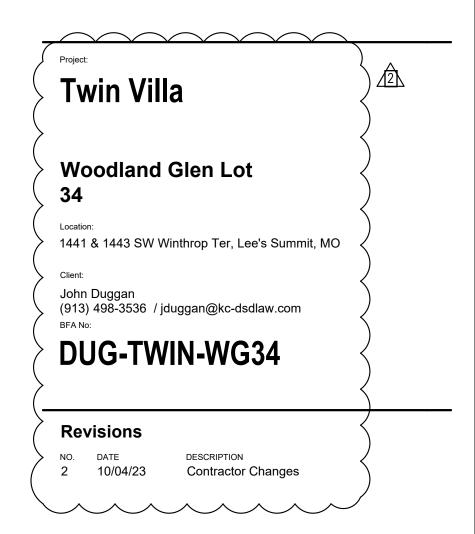
g. ALTERNATIVELY, INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY PROVIDING NOT LESS

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

MASS WALLS SHALL BE IN ACCORDANCE WITH SECTION N1102.2.5. THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF OF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.

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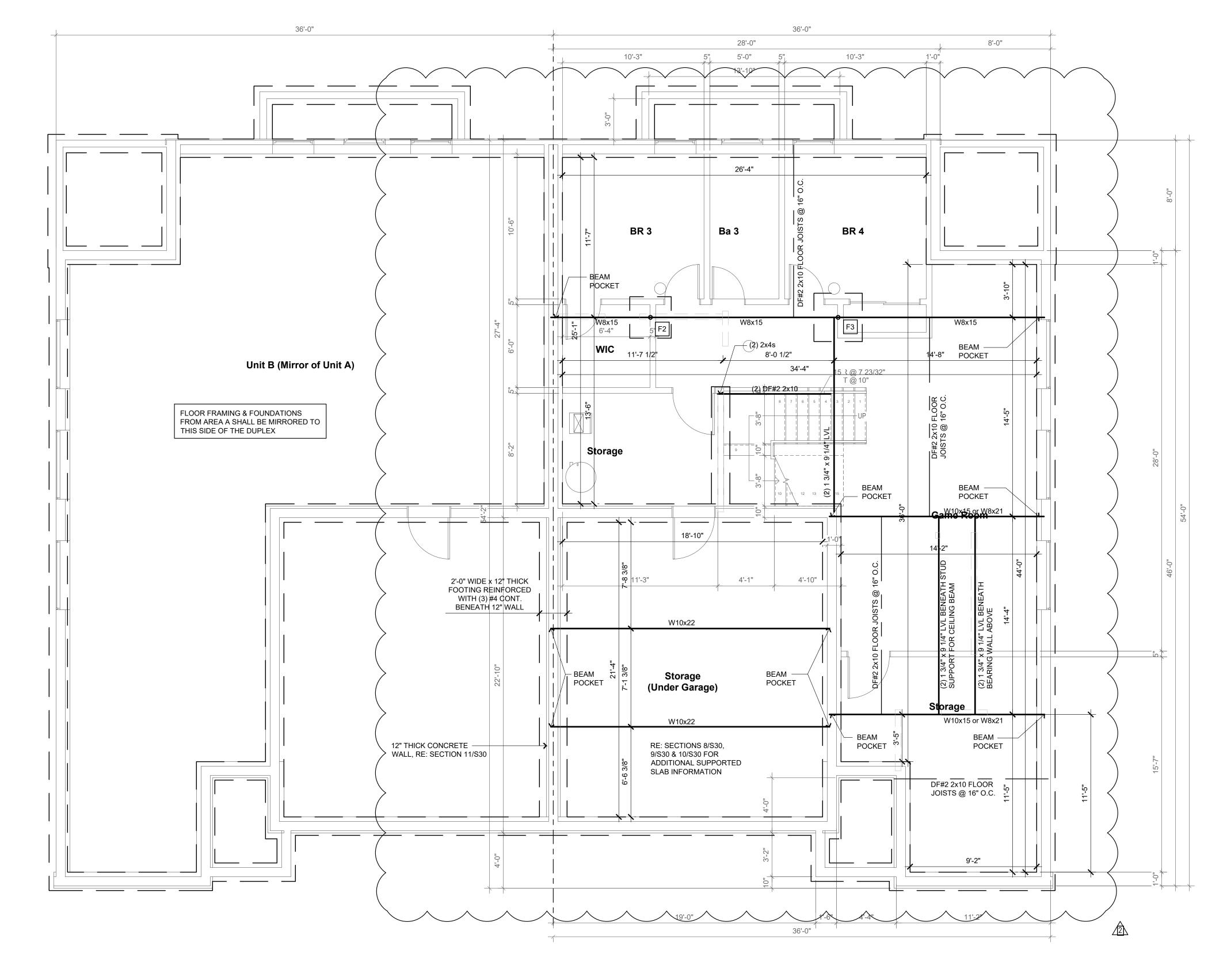


GENERAL NOTES

PERMIT SET

4/6/23

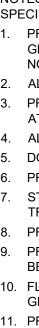




FOUNDATION/1ST FLOOR FRAMING PLAN

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







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 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. 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.

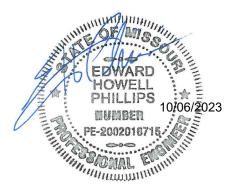
11. PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL BEAMS UNLESS NOTED OTHERWISE.

12. INTERIOR FOOTINGS OF LOAD BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM THE BASEMENT FLOOR SLAB.

FOOTING SCHEDULE

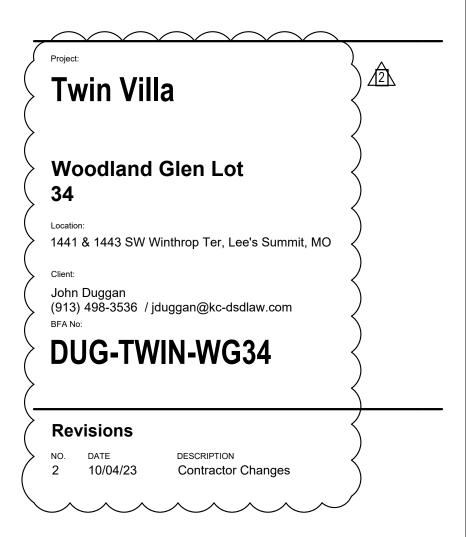
MARK	SIZE L x W x THK	REINFORCING (NO) SIZE LOCATION	TOF EL	COLUMN
F1	2'-0" x 2'-0" x 1'-0"	(4) #4 EW BOTTOM	8" BELOW TOP OF SLAB	3"Ø STD STEEL PIPE COLUMN
F2	3'-0" x 3'-0" x 1'-0"	(6) #4 EW BOTTOM	8" BELOW TOP OF SLAB	3"Ø STD STEEL PIPE COLUMN
F3	3'-6" x 3'-6" x 1'-4"	(8) #4 EW BOTTOM	8" BELOW TOP OF SLAB	3"Ø STD STEEL PIPE COLUMN
F4	4'-6" x 4'-6" x 1'-4"	(9) #4 EW BOTTOM	8" BELOW TOP OF SLAB	3"Ø STD STEEL PIPE COLUMN

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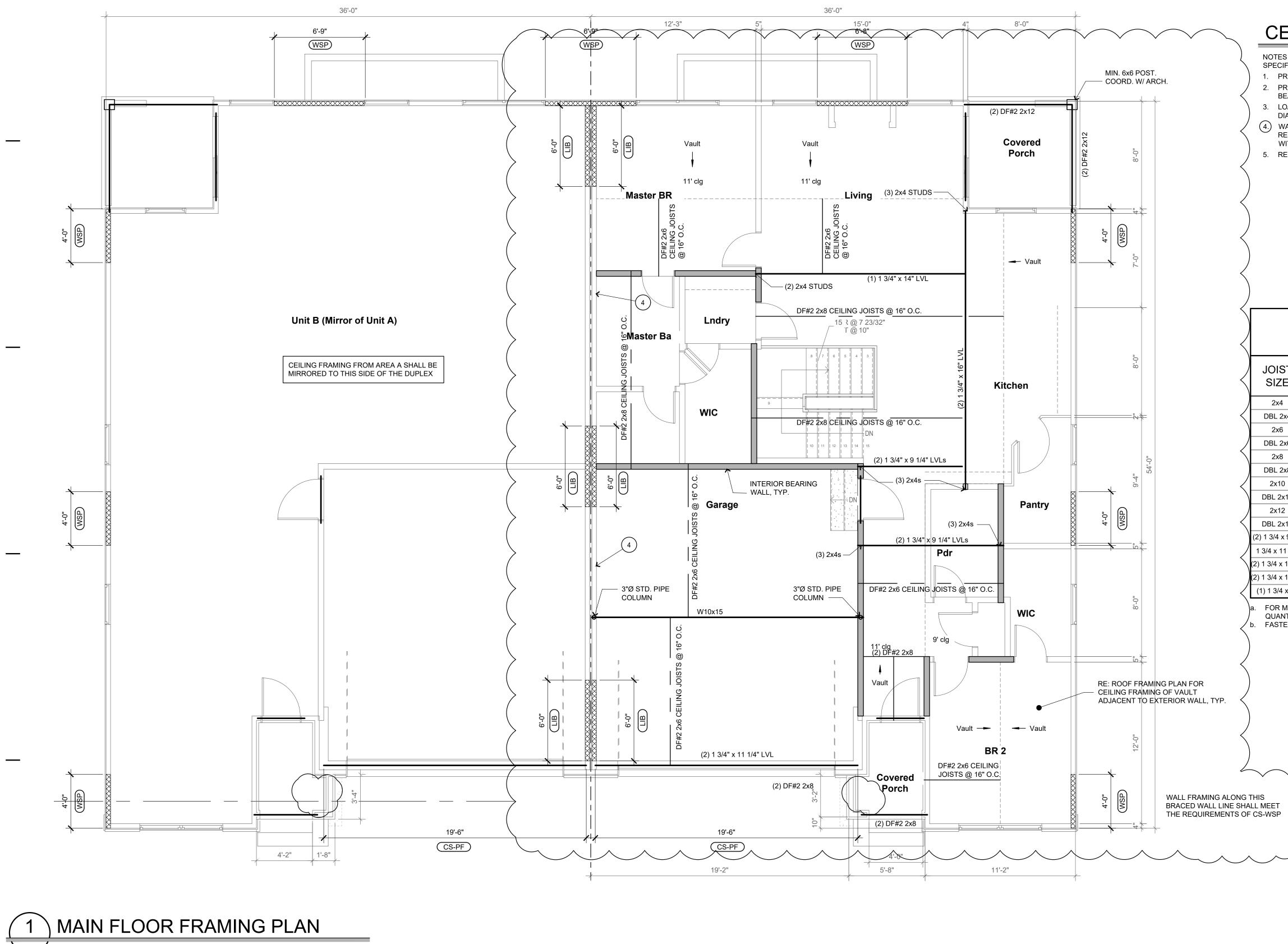
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CS-WSP - CONTINOUSLY SHEATHED WOOD STRUCTURAL PANEL; WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" FOR 16" STUD SPACING, FASTEN WITH 6d COMMON NAILS (.131"Øx2" LONG) AT 6"oc ALONG EDGES AND 12"oc AT INTERMEDIATE SUPPORTS, PLACED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

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

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.

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".

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

CEILING 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 PROPER CEILING INSULATION AS REQUIRED BY GOVERNING BUILDING CODE. 2. PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL BEAMS UNLESS NOTED OTHERWISE.

3. LOAD BEARING WALL STUDS SHALL BE CONTINUOUS FROM THE FLOOR TO THE ROOF/CEILING DIAPHRAGM PER IRC 602.3. 4.) WALL SHEATHING SHALL BE CONTINUOUS TO UNDERSIDE OF ROOF SHEATHING PER FIRE WALL

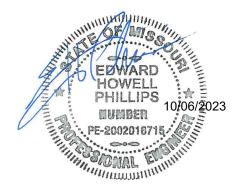
REQUIREMENTS. ATTACH CEILING JOIST ADJACENT TO WALL, THROUGH WALL SHEATHING, WITH (1) SIMPSON SDWS22600DB SCREW AT EACH STUD.

JOIST HANGER TABLE

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

5. REFERENCE ROOF FRAMING PLAN FOR FRAMING IN VAULTED AREAS.



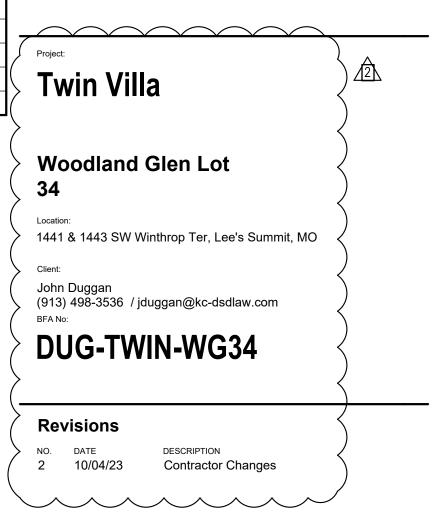


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ST		FASTE	INERS	DF/SP ALLOWABLE LOADS (lb.)		
Έ	MODEL NO.				()	
		HEADER	JOIST	FLOOR (100)	SNOW (115)	
4	LU24	(4) 0.162 x 3-1/2	(2) 0.148 x 1-1/2	555	630	
2x4	LUS24-2	(4) 0.162 x 3-1/2	(2) 0.162 x 3-1/2	800	905	
6	LUS26	(4) 0.148 x 3	(4) 0.148 x 3	865	990	
2x6	LUS26-2	(4) 0.162 x 3-1/2	(4) 0.162 x 3-1/2	1,030	1,170	
8	LUS28	(6) 0.148 x 3	(4) 0.148 x 3	1,100	1,260	
2x8	LUS28-2	(6) 0.162 x 3-1/2	(4) 0.162 x 3-1/2	1,315	1,490	
0	LUS210	(8) 0.148 x 3	(4) 0.148 x 3	1,335	1,530	
2x10	LUS210-2	(8) 0.162 x 3-1/2	(6) 0.162 x 3-1/2	1,830	2,075	
2	LUS210	(8) 0.148 x 3	(4) 0.148 x 3	1,335	1,530	
2x12	LUS210-2	(8) 0.162 x 3-1/2	(6) 0.162 x 3-1/2	1,830	2,075	
x 9 1/2	HUS410	(8) 0.162 x 3-1/2	(8) 0.162 x 3-1/2	2,125	2,420	
11 1/4	HU11	(22) 0.162 x 3-1/2	(6) 0.148 x 1-1/2	3,275	3,695	
x 11 1/4	HHUS410	(30) 0.162 x 3-1/2	(10) 0.162 x 3-1/2	5,635	6,380	
k 11 7/8	HHUS410	(30) 0.162 x 3-1/2	(10) 0.162 x 3-1/2	5,635	6,380	
4 x 14	HU14	(28) 0.162 x 3-1/2	(8) 0.148 x 1-1/2	4,165	4,420	

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



MAIN FLOOR FRAMING PLAN

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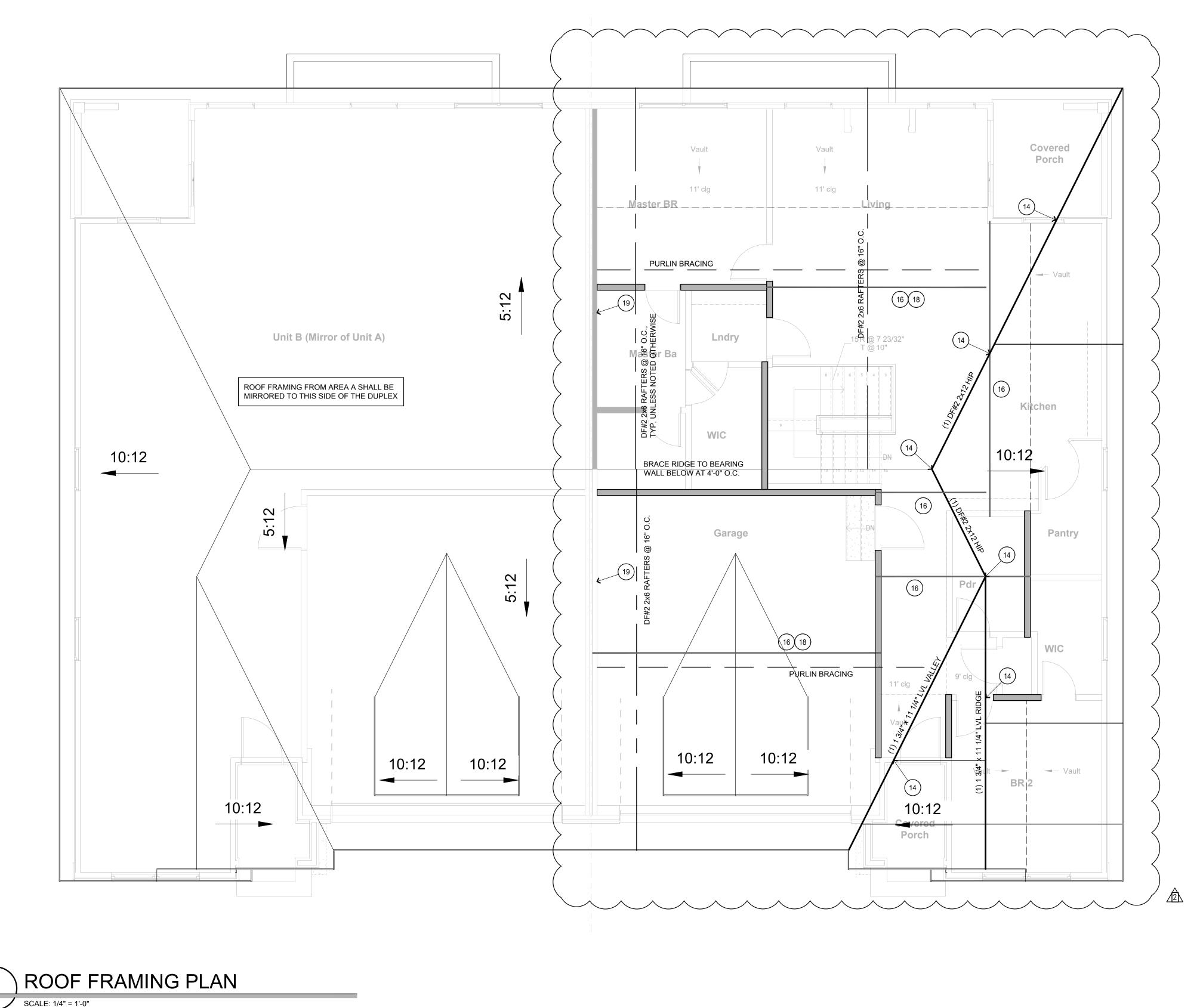
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Date 4/6/23

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NOTE: I BE BRA & HAVE SUPPO THE ST H2.5A.

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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.

 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.
 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

 ALL RIDGE, VALLEY, AND HIP MEMBERS SHALL BE 2"NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
 HIP AND VALLEY MEMBERS SHALL BE SUPPORTED AT THE RIDGE WITH A 2x6 T-BRACE TO A

 THE AND VALLET MEMBERS SHALL BE SOFFORTED AT THE RIDGE WITH 220 FORAGE TO P BEARING WALL BELOW.
 PROVIDE SOFFIT, RIDGE, AND GABLE END VENTS AS REQUIRED TO PROVIDE ADEQUATE VENTILATION FOR ROOF.

 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.

 GUTTERS, DOWNSPOUTS, AND SPLASH BLOCKS SHALL BE PROVIDED TO INSURE ALL ROOF DRAINAGE IS DIRECTED 5 FEET MINIMUM FROM HOUSE BEFORE TOUCHING SOIL.
 ALL GABLE END WALL FRAMING SHALL BE 2x4 DOUG-FIR STUD GRADE AT 16"oc.

 PROVIDE PROPER CEILING INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
 PROVIDE MIN (2) STUDS FULL WIDTH BEARING UNDER ALL WOOD BEAMS, LVL'S, AND STEEL BEAMS UNLESS NOTED OTHERWISE.

11. PROVIDE OVER-BUILD FRAMING AS REQUIRED TO ACHIEVE THE DESIRED ROOF SLOPES/PROFILES.

 LOAD BEARING WALL STUDS SHALL BE CONTINUOUS FROM THE FLOOR TO THE ROOF/CEILING DIAPHRAGM PER IRC 602.3.

13. ROOF RAFTERS DO NOT EXCEED 200 PLF OF UPLIFT. ATTACH ALL MEMBERS PER FASTENING SCHEDULE ON S33.

(14.) BRACE HIP/RIDGE/VALLEY DOWN TO BEARING WALL OR BEAM BELOW.
15. U.N.O. ALL HIPS/VALLEYS/RIDGES SHALL BE A MIN. OF DF#2 2x10 MEMBERS.

(16.) CEILING BEAM, REFERENCE CEILING FRAMING PLAN.

ALL ROOF RAFTER FRAMING SHALL BE DF#2 2x6 RAFTERS @ 16" O.C., UNLESS NOTED OTHERWISE. INCREASE DEPTH OF RAFTER AS REQUIRED AT VAULTED CEILING AREAS AS REQUIRED TO MEET INSULATION REQUIREMENTS.

 (18.) SUPPORT RAFTER FRAMING/PURLIN BRACING ON CEILING BEAM.
 (19.) WALL SHEATHING SHALL BE CONTINUOUS TO UNDERSIDE OF ROOF SHEATHING PER FIRE WALL REQUIREMENTS. ATTACH RAFTER ADJACENT TO WALL, THROUGH WALL SHEATHING, WITH (1) SIMPSON SDWS22600DB SCREW AT EACH STUD.

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

PURLIN (DF #2) *	MAX SPAN				
	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.

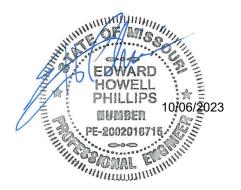
FOR BRACE LENGTHS LESS THAN 6'-0", 2x4 "T" BRACES MAY BE USED.

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

HIP/VALLEY RAFTER TABLE	
	MAX UNBRACED SPAN

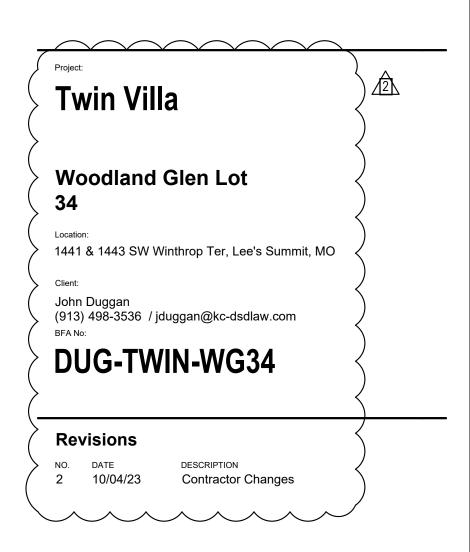
TYPE	MAX UNBRACED SPAN							
	2x6	2x8	2x10	2x12	1 ³ / ₄ "x9 ¹ / ₄ " LVL	1 ³ / ₄ "x11 ¹ / ₄ " LVL		
HIP RAFTERS	9'-6"	11'-2"	12'-9"	14'-1"	15'-8"	18'-2"		
VALLEY RAFTERS	7'-7"	8'-10"	10'-1"	11'-2"	13'-2"	15'-3"		

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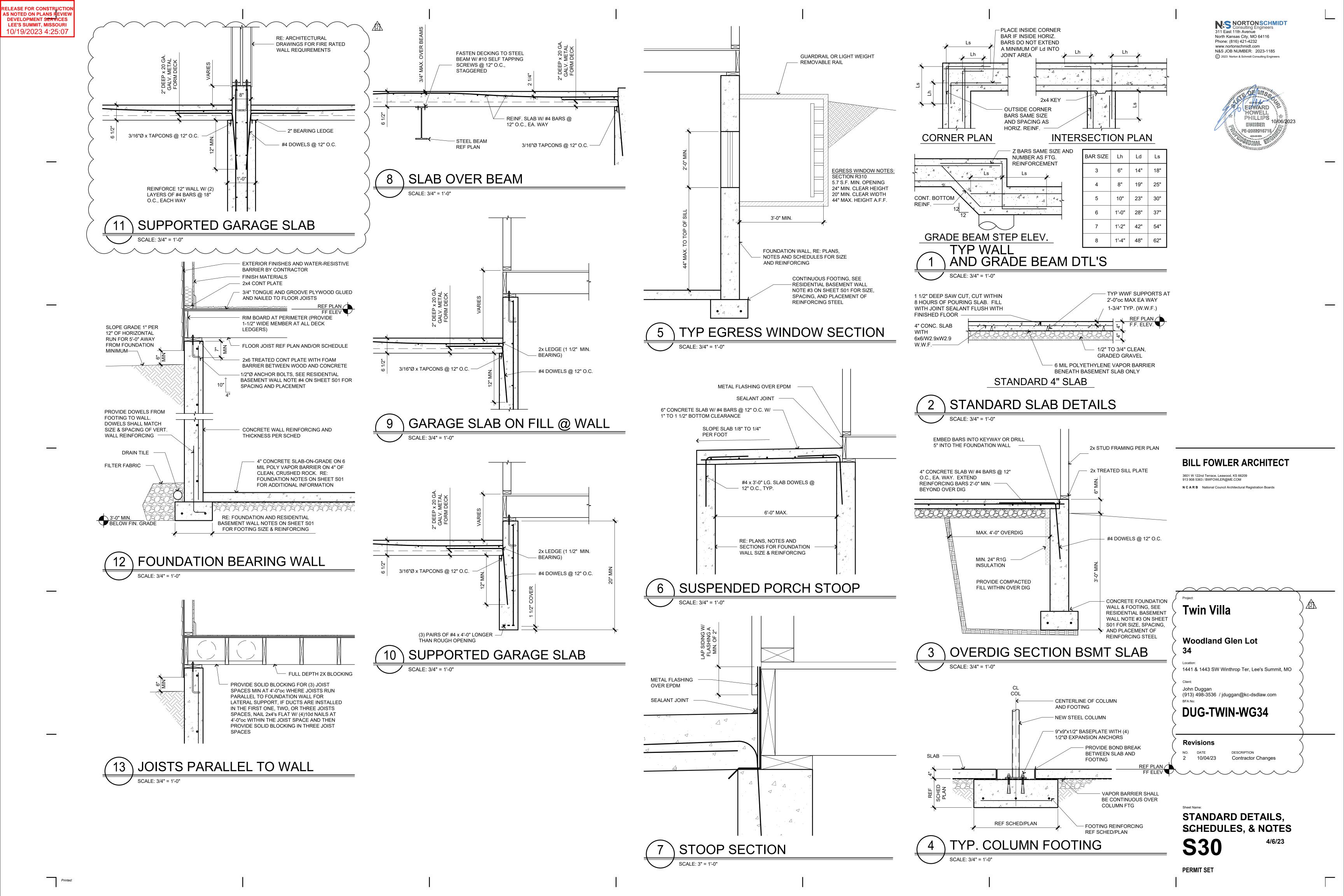
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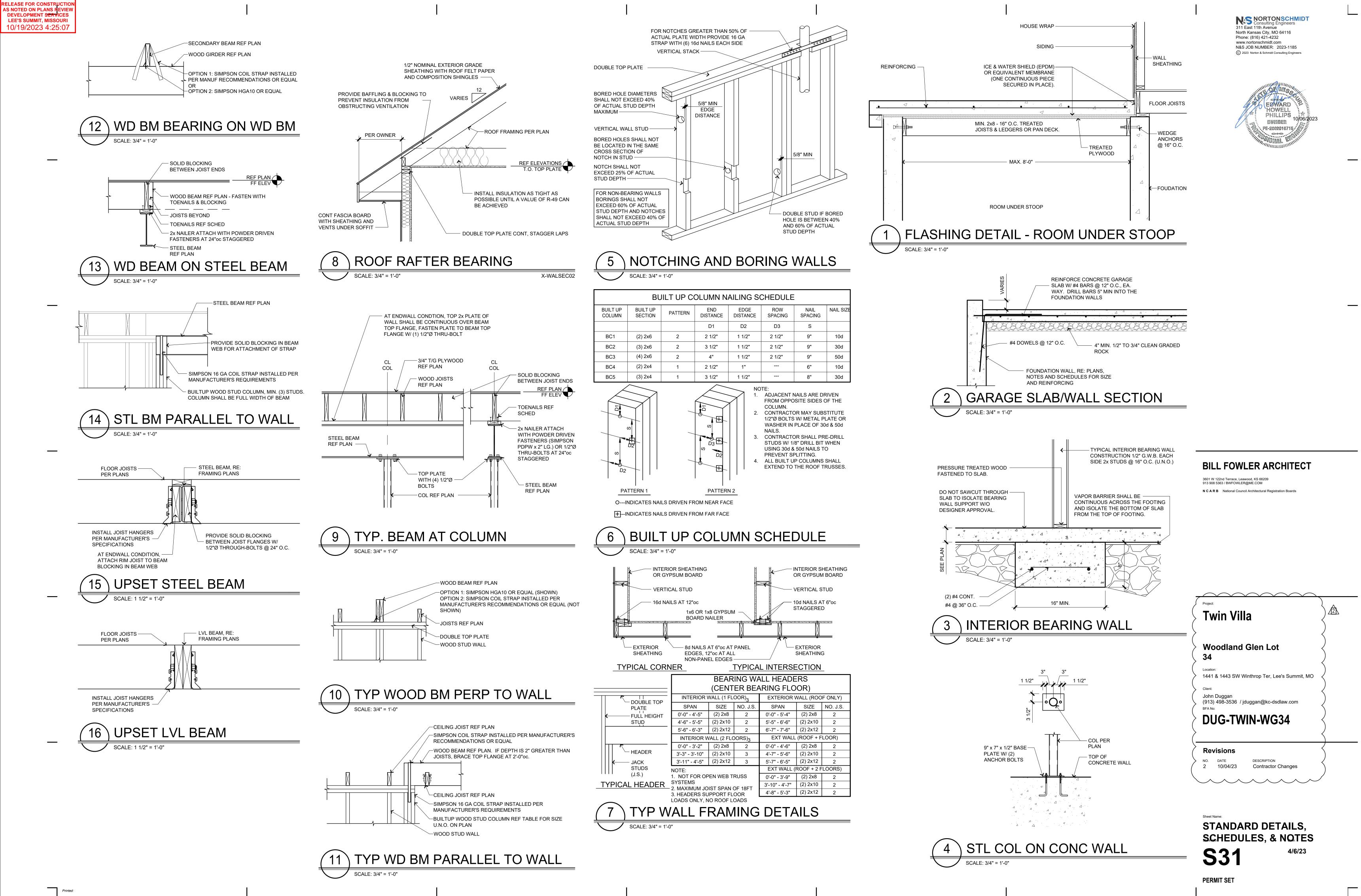


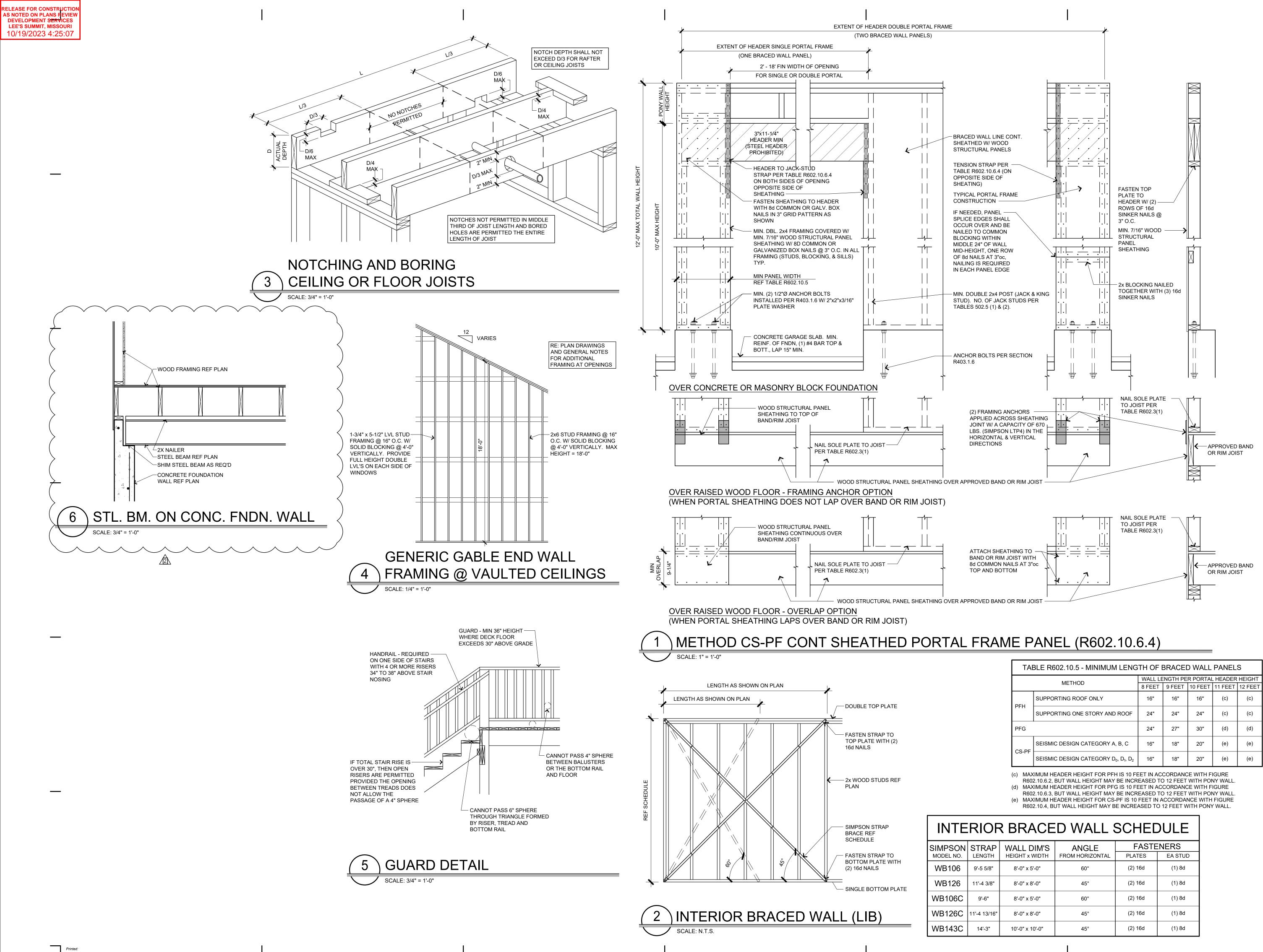
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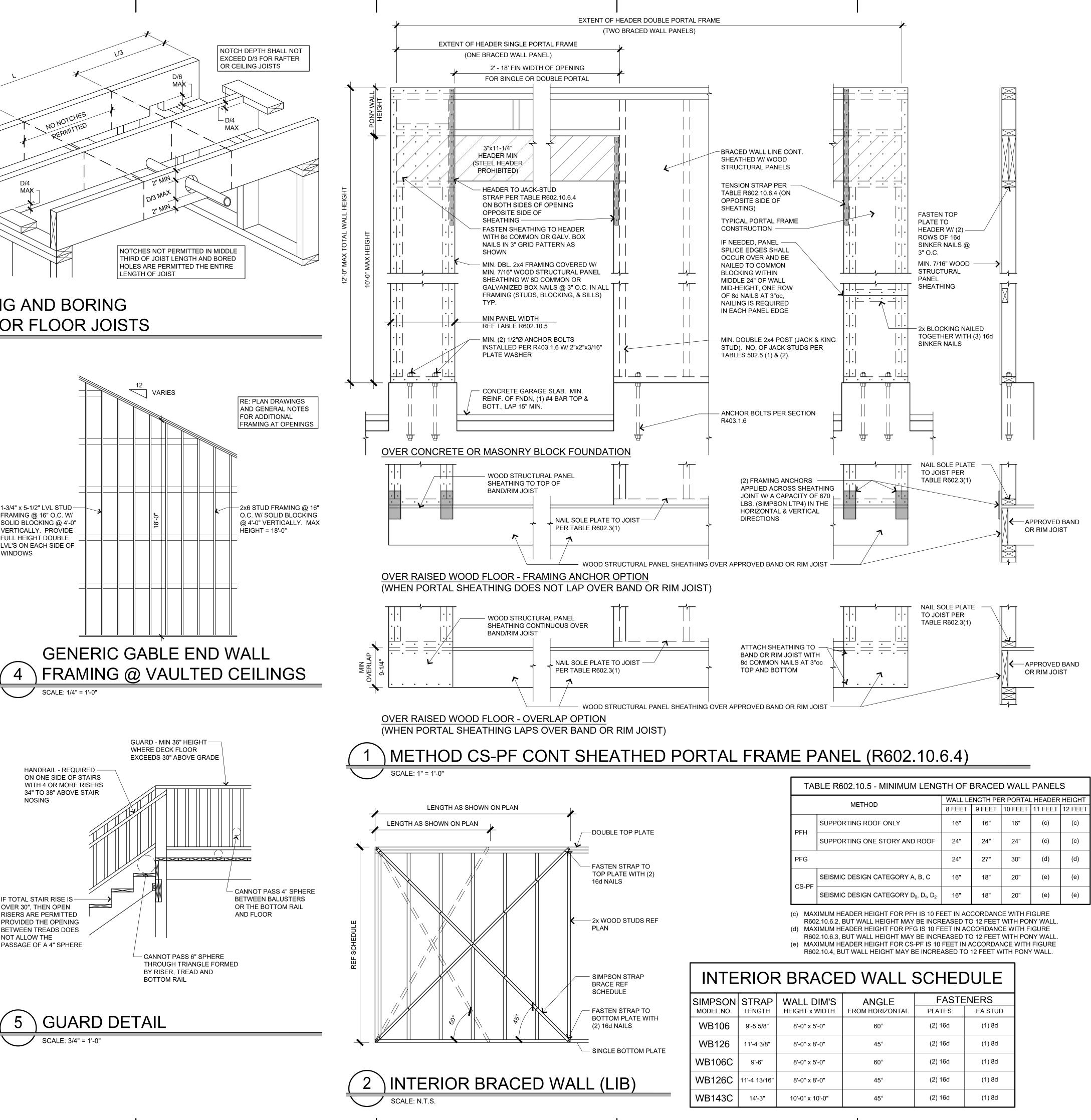












TA	TABLE R602.10.5 - MINIMUM LENGTH OF BRACED WALL PANELS									
	METHOD	WALL LENGTH PER PORTAL HEADER HEIGHT								
	METHOD	8 FEET	9 FEET	10 FEET	11 FEET	12 FEET				
PFH	SUPPORTING ROOF ONLY	16"	16"	16"	(c)	(c)				
PFN	SUPPORTING ONE STORY AND ROOF	24"	24"	24"	(c)	(c)				
PFG	PFG		27"	30"	(d)	(d)				
CS-PF	SEISMIC DESIGN CATEGORY A, B, C	16"	18"	20"	(e)	(e)				
C3-PF	SEISMIC DESIGN CATEGORY D ₀ , D ₁ , D ₂	16"	18"	20"	(e)	(e)				

WALL DIM'S	ANGLE	FASTENERS			
HEIGHT x WIDTH	FROM HORIZONTAL	PLATES	EA STUD		
8'-0" x 5'-0"	60°	(2) 16d	(1) 8d		
8'-0" x 8'-0"	45°	(2) 16d	(1) 8d		
8'-0" x 5'-0"	60°	(2) 16d	(1) 8d		
8'-0" x 8'-0"	45°	(2) 16d	(1) 8d		
10'-0" x 10'-0"	45°	(2) 16d	(1) 8d		

$\underline{\hspace{1.5cm}}$ Twin Villa Woodland Glen Lot 34 1441 & 1443 SW Winthrop Ter, Lee's Summit, MO Client: John Duggan (913) 498-3536 / jduggan@kc-dsdlaw.com BFA No: **DUG-TWIN-WG34** Revisions DESCRIPTION NO. DATE 2 10/04/23 Contractor Changes

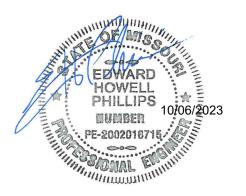


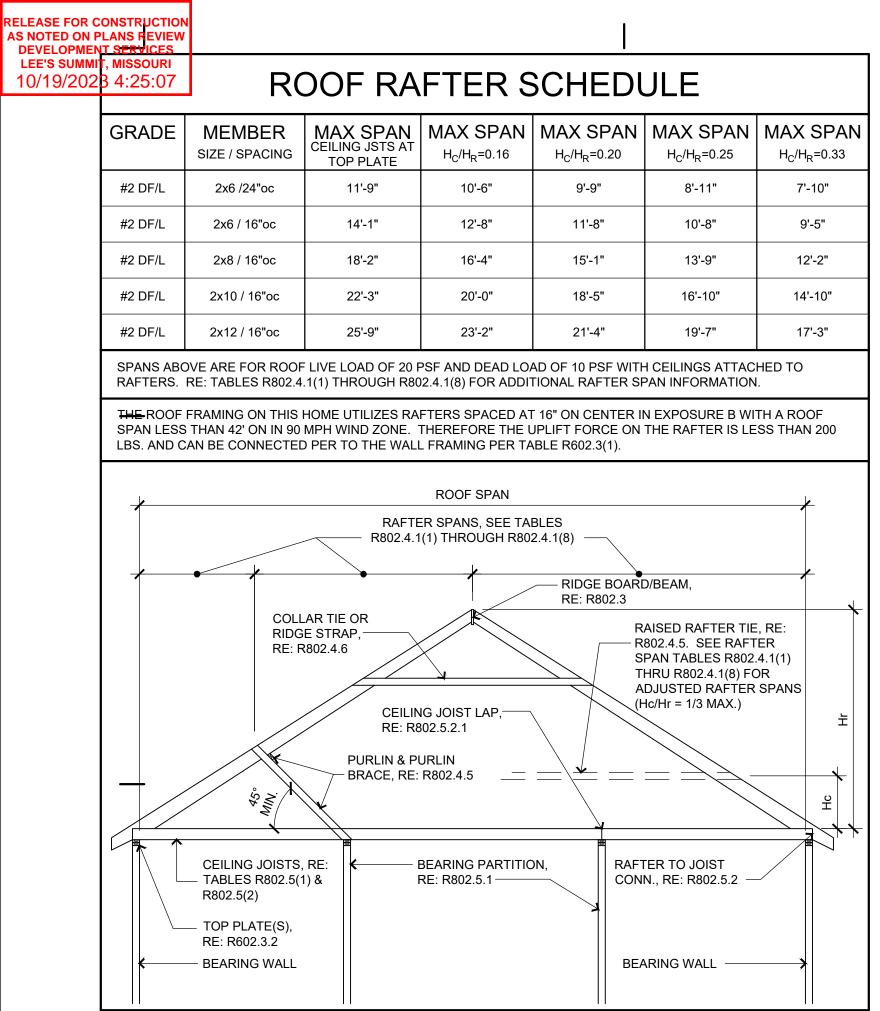
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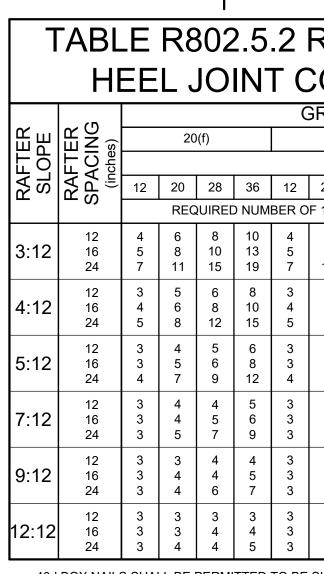
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40d BOX NAILS SHALL BE PERMITTED TO BE SUBSTITUTED FOR 16D COMMON NAILS. NAILING REQUIREMENTS SHALL BE PERMITTED TO BE REDUCED 25% IF NAILS ARE CLINCHED. b. HEEL JOINT CONNECTIONS ARE NOT REQUIRED WHEN THE RIDGE IS SUPPORTED BY A LOAD-BEARING С WALL, HEADER, OR RIDGE BEAM.

- 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.

	THE FOLLOWIN	G FACTORS:	
ſ	Hc/Hr	HEEL JOINT CONNECTION ADJUSTMENT FACTOR	
	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 RIDG MEASURED VERTICALLY
	1/10 OR LESS	1.11	ABOVE THE TOP OF THE RAFTER SUPPORT WALLS.

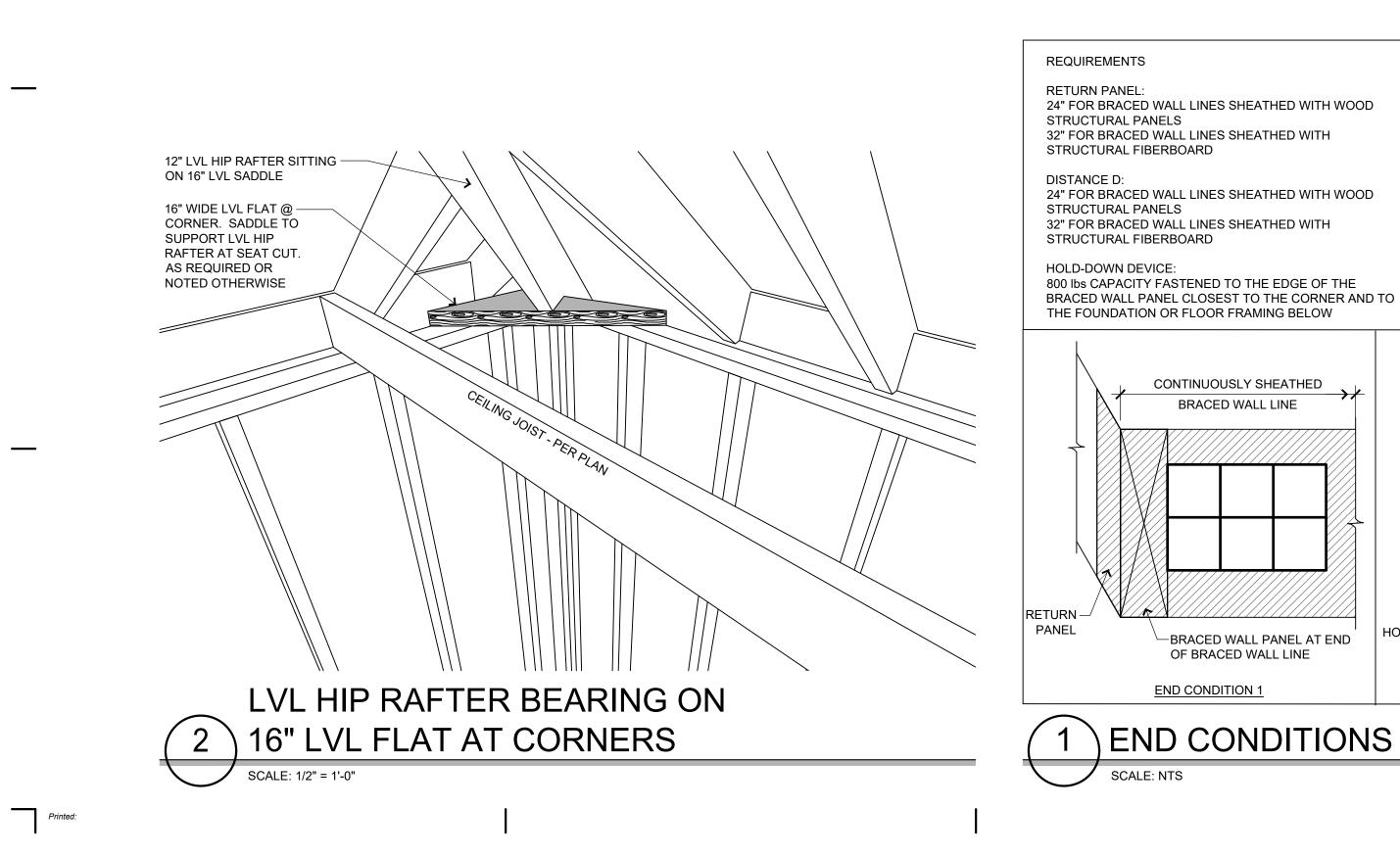


TABLE R802.5.2 RAFTER/CEILING JOIST

HEEL JOINT CONNECTIONS (a,b,c,d,e,g)

						•				
SROUND SNOW LOAD (PSF) 30 50 70 ROOF SPAN (FEET) 20 28 36 12 20 28 36 12 20 28 36 12 20 28 36 12 20 28 36 12 20 28 36 F IGCOMMON NAILS(a,b) PER HEEL JOINT SPLICES (c,d,e) 6 8 11 5 8 12 15 6 11 15 20 28 30 12 21 30 39 6 8 11 5 8 12 15 6 11 15 20 11 16 21 9 16 23 30 12 21 30 39 5 6 8 4 6 9 11 5 8 12 15 9 12 16 7 12 17 22 <										
3	0			5	0			7	0	
F	200	F SF	PAN	(FEE	ET)					
20	28	36	12	20	28	36	12	20	28	36
F 16d	СОММ	ION NA	AILS(a,	b) PEF	RHEEL	JOINT	r spli	CES (c	,d,e)	
8	11	14	6	11	15	20	8	14	20	26
6	8	11	5	8	12	15	6	11	15	20
5	7	9	4	7	9	12	5	9	12	16
4	5	6	3	5	7	9	4	6	9	11
3 3 4	3 4 6	4 5 7	3 3 3	3 4 6	4 5 8	5 7 10	3 3 4	4 5 7	5 7 10	7 9 13
3 3 3	3 3 4	3 4 6	3 3 3	3 3 4	3 4 6	4 5 8	3 3 3	3 4 6	4 5 8	5 7 10

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

TABULATED HEEL JOINT CONNECTION REQUIREMENTS ASSUME THAT CEILING JOISTS OR RAFTER TIES 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

F/	ASTENING SCHEDU	LE IRC 2018 TABLE R602.3(1)		ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a)(b)(c) Floor	SPACING A	AND LOCATION	
TEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a)(b)(c) Roof 4-8d box (2-1/2" × 0.113") or	SPACING AND LOCATION	- 21	Joist to sill, top plate or girder	4-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	т	oe nail	
1	Blocking between ceiling joists or rafters to top plate	3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail	22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box (2-1/2" × 0.113") 8d common (2-1/2" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails		c. toe nail c. toe nail	
2	Ceiling joists to top plate	4-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Per joist, toe nail	23	1" × 6" subfloor or less to each joist	3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1-3/4" long		ace nail	
3	Ceiling joist not attached to parallel rafter, laps over partitions (see Section R802.5.2 and Table R802.5.2)	4-10d box (3" × 0.128"); or 3-16d common (3-1/2" × 0.162"); or 4-3" × 0.131" nails	Face nail	24	2" subfloor to joist or girder	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162")	-	nd face nail	
4	Ceiling joist attached to parallel rafter (heel joint) (see Section R802.5.2 and Table R802.5.2)	Table R802.5.2	Face nail	25	2" planks (plank & beam—floor & roof)	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162") 3-16d common (3-1/2" × 0.162")	At each be	At each bearing, face nail	
5	Collar tie to rafter, face nail or 11/4" × 20 ga. ridge strap to rafter	4-10d box (3" × 0.128"); or 3-10d common (3" × 0.148"); or 4-3" × 0.131" nails	Face nail each rafter	26	Band or rim joist to joist	4-10 box (3" × 0.128"), or 4-3" × 0.131" nails; or 4-3" × 14 ga. staples, 7/16" crown		nd nail	
6	Rafter or roof truss to plate	3-16d box nails (3-1/2" × 0.135"); or 3-10d common nails (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss(i)			20d common (4" × 0.192"); or	32" o.c. at and stagger		
		4-16d (3-1/2" × 0.135"); or 3-10d common (3" × 0.148"); or 4-10d box (3" × 0.128"); or	Toe nail	27	Built-up girders and beams, 2-inch lumber layers	10d box (3" × 0.128"); or 3" × 0.131" nails And:	24" o.c. face and bottom opposite sid	staggered on	
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-3" × 0.131" nails 3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or				2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Face nail at ends and at each splice		
		3-10d box (3" × 0.128"); or 3-3" × 0.131" nails Wall	End nail	28	Ledger strip supporting joists or rafters	4-16d box (3-1/2" × 0.135"); or 3-16d common (3-1/2" × 0.162"); or 4-10d box (3" × 0.128"); or		At each joist or rafter, face nail	
8	Stud to stud (not at braced wall panels)	16d common (3-1/2" × 0.162") 10d box (3" × 0.128"); or 3" × 0.131" nails	24" o.c. face nail 16" o.c. face nail	29	Bridging or blocking to joist	4-3" × 0.131" nails 2-10d box (3" × 0.128"), or 2-8d common (2-1/2" × 0.131"); or 2-3" × 0.131") nails	Each e	end, toe nail	
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels) Built-up header (2" to 2" header	16d box (3-1/2" × 0.135"); or 3" × 0.131" nails 16d common (3-1/2" × 0.162") 16d common (3-1/2" × 0.162")	12" o.c. face nail 16" o.c. face nail 16" o.c. each edge face nail	- ITEM	1 DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a)(b)(c)	SPACING C Edges (inches)(h)	DF FASTENER Intermediate supports(c)(e	
	with 1/2" spacer)	16d box (3-1/2" × 0.135") 5-8d box (2-1/2" × 0.113"); or 4-8d common (2-1/2" × 0.131"); or	12" o.c. each edge face nail	Wa	bod structural panels, subfloor, roof and interior	wall sheathing to framing and particleboa ructural panel exterior wall sheathing to w	ard wall sheat	(inches) hing to framing	
11	Continuous header to stud	4-10d box (3" × 0.128")	Toe nail			6d common (2" × 0.113") nail			
12	Top plate to top plate	16d common (3-1/2" × 0.162") 10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail 12" o.c. face nail	- 30	3/8" – 1/2"	(subfloor, wall)(i) 8d common (2-1/2" × 0.131") nail (roof); or RSRS-01 (2-3/8" × 0.113") nail (roof)(j)	6	12(f)	
13	Double top plate splice	8-16d common (3-1/2" × 0.162"); or 12-16d box (3-1/2" × 0.135"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)	31	19/32" – 1"	8d common nail (21/2" × 0.131"); or RSRS-01; (2-3/8" × 0.113") nail (roof)(j) 10d common (3" × 0.148") nail; or	6	12(f)	
	Bottom plate to joist, rim joist, band joist	16d common (3-1/2" × 0.162")	16" o.c. face nail	32	1-1/8" – 1-1/4"	8d (21/2" × 0.131") deformed nail	6	12	
14	or blocking (not at braced wall panels)	16d box (3-1/2" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail			her wall sheathing(g)			
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or 4-3" × 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail	33	1/2" structural cellulosic fiberboard sheathing	head diameter, or 1-1/4" long 16 ga. staple with 7/16" or 1" crown 1-3/4" galvanized roofing nail, 7/16"	a. <u>3</u> 6		
16	Top or bottom plate to stud	4-8d box (2-1/2" × 0.113"); or 3-16d box (3-1/2" × 0.135"); or 4-8d common (2-1/2" × 0.131"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail	34 35	25/32" structural cellulosic fiberboard sheathing 1/2" gypsum sheathing(d)	 head diameter, or 1-1/2" long 16 ga. staple with 7/16" or 1" crown 1-1/2" galvanized roofing nail; staple galvanized, 1-1/2" long; 	3 7	6 7	
10		3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail	36	5/8" gypsum sheathing(d)	1-3/4" galvanized roofing nail; staple galvanized, 1-5/8" long; 1-5/8" screws, Type W or S ombination subfloor underlayment to fram	staple galvanized, 1-5/8" long; 7 I-5/8" screws, Type W or S		
17	Top plates, laps at corners and intersections	3-10d box (3" × 0.128"); or 2-16d common (3-1/2" × 0.162"); or	Face nail	37	3/4" and less	6d deformed (2" × 0.120") nail; or 8d common (2-1/2" × 0.131") nail	6	12	
		3-3" × 0.131" nails 3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or		- 38	7/8" – 1"	8d common (2-1/2" × 0.131") nail; or 8d deformed (2-1/2" × 0.120") nail 10d common (3" × 0.148") nail; or	6	12	
18	1" brace to each stud and plate	2-10d box (3" × 0.128"); or 2 staples 1-3/4"	Face nail	39 a.	1-1/8" – 1-1/4" Nails are smooth-common, box or deformed sh	8d deformed (2-1/2" × 0.120") nail	6 Is used for fra	12 aming and	
19	1" × 6" sheathing to each bearing	3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1-3/4" long	Face nail	 a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for fram sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.1 100 ksi for shank diameters of 0.142 inch or less. b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width. c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be based on Table R602.3(2). f. For wood structural panel roof sheathing attached to gable end roof framing and to intermediate suppor inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is 130 greater but less than 140 mph. 					
20	1" × 8" and wider sheathing to each bearing	3-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3 staples, 1" crown, 16 ga., 1-3/4" long Wider than 1" × 8" 4-8d box (2-1/2" × 0.113"); or	Face nail						

3-10d box (3" × 0.128"); or

(continued)

CONTINUOUSLY SHEATHED

BRACED WALL LINE

-BRACED WALL PANEL AT END

OF BRACED WALL LINE

END CONDITION 2

HOLD-DOWN->

DEVICE

3-8d common (2-1/2" × 0.131"); or

4 staples, 1" crown, 16 ga., 1-3/4" long

CONTINUOUSLY SHEATHED

BRACED WALL LINE

-48" MINIMUM BRACED WALL PANEL

AT END OF BRACED WALL LINE

END CONDITION 3

RETURN

PANEL

D*



24" FOR BRACED WALL LINES SHEATHED WITH WOOD STRUCTURAL PANELS

CONTINUOUSLY SHEATHED

BRACED WALL LINE

-BRACED WALL PANEL AT END

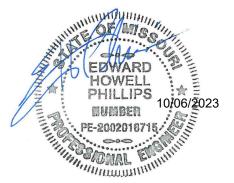
OF BRACED WALL LINE

END CONDITION 1

SCALE: NTS

RETURN PANEL:

NORTONSCHMIDT Consulting Engineers 311 East 11th Avenue North Kansas City, MO 64116 Phone: (816) 421-4232 www.nortonschmidt.com N&S JOB NUMBER: 2023-1185 C 2023 Norton & Schmidt Consulting Engineers



BILL FOWLER ARCHITECT

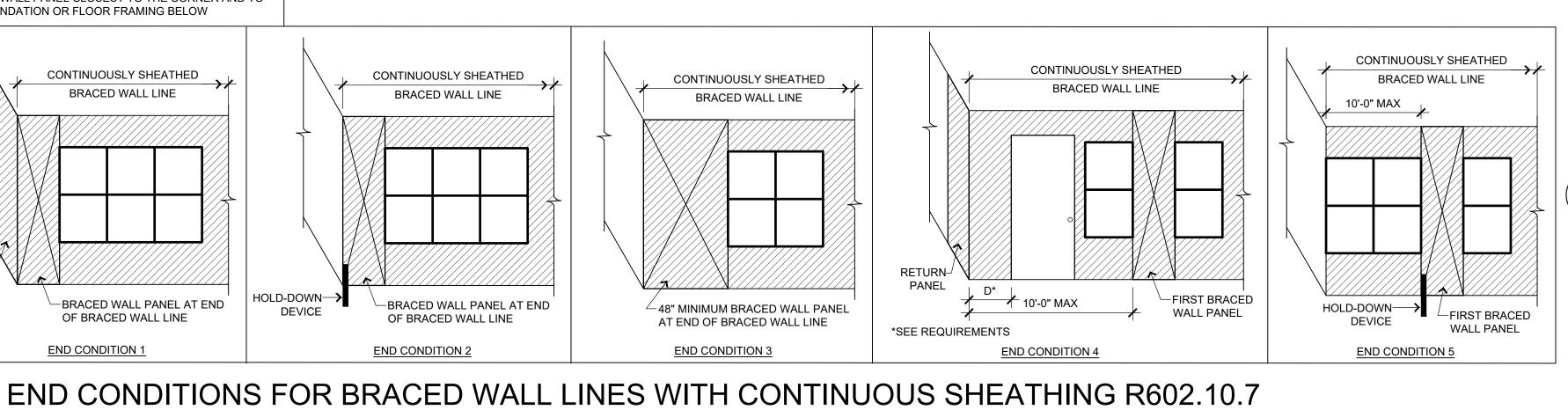
3601 W 122nd Terrace, Leawood, KS 66209 913 908 5363 / BWFOWLER@ME.COM NCARB National Council Architectural Registration Boards

Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.

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

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

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







PERMIT SET

STANDARD DETAILS,

SCHEDULES, & NOTES

4/6/23