SELLER'S DISCLOSURE NOTICE

SUPPORTING AND ADDITIONAL MATERIAL FOR PROPERTY: 6541 ORIOLE Dr. Dallas, TX 75209

Section 1:

The house and property are being sold **AS-IS, WHERE-IS AND WITH ALL FAULTS**. This disclosure is being made to comport, as best as possible, with Texas law requiring disclosures, though the disclosures are not intended to impact or reduce the impact of an AS-IS, WHERE-IS, AND WITH ALL FAULTS sale. The prospective purchaser or actual purchaser hereby acknowledges that sellers do not intend for prospective purchaser or purchaser to rely on any representations contained in this disclosure or attached to it, and prospective purchaser or purchaser disclaims any and all reliance on any of the representations made on the disclosure statement or any attachments to it.

Section 3: See Engineer Report included.

Section 4: See Engineer Report included.

Section 5: See Engineer Report included.

Section 9:

"We resolved the dispute with the builder at mediation. We have decided not to proceed with repairing the house. The house and property are being sold AS-IS, WHERE-IS AND WITH ALL FAULTS. This disclosure is being made to comport, as best as possible, with Texas law requiring disclosures, though the disclosures are not intended to impact or reduce the impact of an AS-IS, WHERE-IS, AND WITH ALL FAULTS sale. The prospective purchaser or actual purchaser hereby acknowledges that sellers do not intend for prospective purchaser or purchaser to rely on any representations contained in this disclosure or attached to it, and prospective purchaser or purchaser disclaims any and all reliance on any of the representations made on the disclosure statement or any attachments to it."

6541 Oriole Disclosure Letter:

The situation with the home is as follows. In January 2020 the Cockrums hired a design-builder to add a 2nd story addition to the existing home in which the Cockrums had lived since 2011.

In August 2021, after GC completed installation of the framing, drywall and sheathing for the second level and installed the new roof, the pier-and-beam floor slab of the existing house buckled. The Cockrums asked GC to remedy the situation. GC underpinned a small portion of the floor slab and retained Nortex Foundation to evaluate the foundation, floor slab, and wood framing. The Cockrums retained Patrick Moore, PE to evaluate the same structural members and Nortex Foundation's proposed solution. The Parties were unable to reach agreement on the proper course of repair.

The project was abandoned in September 2021 and the site has remained untouched during the course of settling the dispute. Since then, the tarp protecting a portion of the roof ripped and subsequent leaking has resulted in mold formation in the room with the leak.

The structural engineers report, attached, shows what is in-frame. It also highlights the overloaded members and opines on the key framing errors needing remedy.

The subsequent dispute has been settled. There are no existing legal matters involving the home or the Cockrums.

Though stated elsewhere and though the following is not binding, it should be reiterated: the sale of this house, property and all improvement to or on the property is "as is, where is and with all faults". The Cockrums have disclosed the situation and attached expert analysis to complete it.

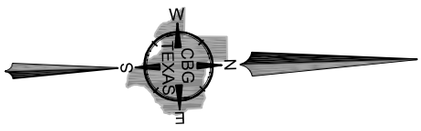
Sincerely,
Keith and Rachelle Cockrum
04/20/2023

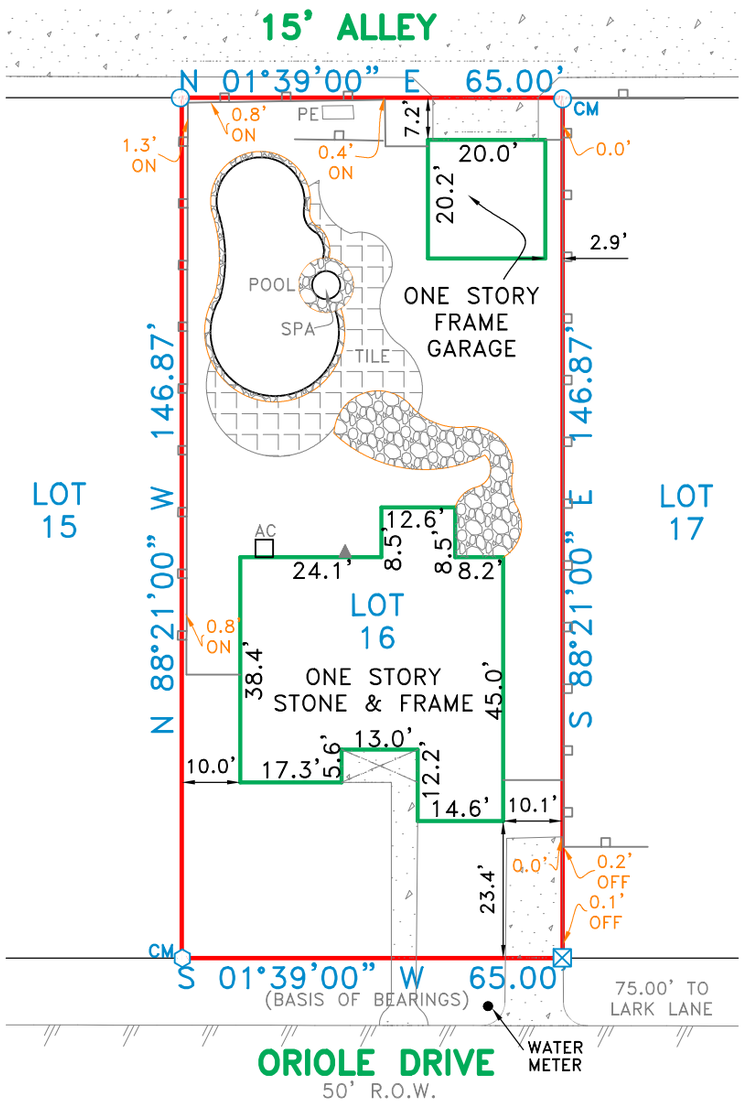
6541 Oriole Drive

Lot 16, in Block A/5699 of Shannon Estates No. 4, an addition to the City of Dallas, Dallas County, Texas, according to the Map thereof recorded in Volume 8, Page 441, Map Records, Dallas County, Texas.

LEGEND

- ○ 1/2" ROD FOUND
- ⊗ 1/2" ROD SET
- ⬡ 1/2" PIPE FOUND
- ⊠ "X" FOUND/SET
- ⊛ 5/8" ROD FOUND
- POINT FOR CORNER
- FENCE POST FOR CORNER
- CM CONTROLLING MONUMENT
- AC AIR CONDITIONER
- PE POOL EQUIPMENT
- TE TRANSFORMER PAD
- ■ COLUMN
- ● POWER POLE
- ▲ UNDERGROUND ELECTRIC
- △ OVERHEAD ELECTRIC
- —OHP— OVERHEAD ELECTRIC POWER
- —OES— OVERHEAD ELECTRIC SERVICE
- —⊙— CHAIN LINK
- WOOD FENCE 0.5' WIDE TYPICAL
- —⊓— IRON FENCE
- —×— BARBED WIRE
- —□— DOUBLE SIDED WOOD FENCE
- EDGE OF ASPHALT
- EDGE OF GRAVEL
- CONCRETE
- COVERED AREA
- BRICK
- STONE





EXCEPTIONS:

NOTE: This survey is made in conjunction with the information provided by the client. CBG Surveying Texas, LLC has not researched the land title records for the existence of easements, restrictive covenants or other encumbrances.

NOTES:

NOTE: BEARINGS, EASEMENTS AND BUILDING LINES ARE BY RECORDED PLAT UNLESS OTHERWISE NOTED.

FLOOD NOTE: According to the F.I.R.M. No. 48113C0330J, this property does lie in Zone X and DOES NOT lie within the 100 year flood zone.

This survey is made in conjunction with the information provided by Home Corporation. Use of this survey by any other parties and/or for other purposes shall be at user's own risk and any loss resulting from other use shall not be the responsibility of the undersigned. This is to certify that I have on this date made a careful and accurate survey on the ground of the subject property. The plat hereon is a correct and accurate representation of the property lines and dimensions are as indicated; location and type of buildings are as shown; and EXCEPT AS SHOWN, there are no visible and apparent encroachments or protrusions on the ground.

Accepted by: _____
Purchaser

Date: _____

_____
Purchaser

Drawn By: JAI/RL

Scale: 1" = 30'

Date: 09/29/2020

GF No.: 1978-6239

Job No. 2018474

CBG SURVEYING TEXAS LLC
PROFESSIONAL LAND SURVEYORS
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STATE OF TEXAS
REGISTERED
JONATHAN M. QUILL
5882
PROFESSIONAL LAND SURVEYOR

JONATHAN M. QUILL
R.P.L.S. NO. 5882

MOORE ENGINEERS INC.

2201 TUCKER STREET • SUITE 103 • DALLAS, TEXAS 75214 • 214-828-9400 • #F-12395

16 December 2021

Mr. Keith Cockrum
6541 Oriole Drive
Dallas, Texas 75209

STRUCTURAL INVESTIGATION & REPAIRS
PHASE 1

Dear Mr. Cockrum:

Thank you for asking us to review your residence's structure that is undergoing a second floor addition. These second floor additions can overload existing foundations, existing wall framing and existing floor framing.

Site visits were conducted over the past couple of months to identify hidden structural conditions. Initially we thought that the investigation could be conducted without removing architectural finishes. After some consideration an investigation program was developed that required limited removal of ceiling and wall drywall to expose hidden conditions to complete the phase 1 investigation and repairs. Not all hidden structural conditions have been uncovered and the remainder of the ceiling finishes and many wall finishes will require removal to complete the investigation and correct structural framing that is not code compliant or overloaded. Ductwork in the attic should also be removed to allow access to document hidden conditions.

As described below and as shown on the accompanying preliminary structural drawings the following items are of concern. This list and structural will change as other hidden existing conditions are uncovered. References to pertinent sections of the building code, the 2015 International Residential Code (IRC), are included. Some discussion of identified work that does not comply with the building code is included.

1. Roof rafters not fastened to ceiling joists per code. IRC R802.3.1, R802.3.2, Table 802.5.1(9) This condition cause the ridges, hips and valleys to support gravity and wind loads. The posts between the ridges, hips and valleys, and the ceiling framing and the second floor walls transfers concentrated gravity loads to the framing below. These concentrated gravity roof loads supported on the ceiling framing and second floor walls transfers onto the second framing overloading much of the second floor framing below such areas.
2. Some collar ties are installed but there is no evidence that ridge straps are installed where collar ties are missing. IRC R802.3.1 Collar ties or ridge straps tie the upper part of the rafters together and complete the connection of the rafter and ceiling joist members into a triangular unit. This triangular unit does not exist primarily because the rafters and ceiling framing is not attached per code.
3. No rafter ties were installed per code. IRC R802.3.1 Note that rafter ties are installed perpendicular to ceiling joists to tie where there are perpendicular roof rafters. These rafter ties and ceiling joists when installed per code resist the outward thrust of the roof rafters that in turn supports the ridges, hips and valleys.
4. Uplift resistance ceiling joist to top plate, and rafter to top plate may not meet code minimum? IRC Table R602.3(1). ***Requires further engineer investigation and review.***
5. Some purlins and posts have been installed. Not sure of their adequacy. See IRC Figure R802.5.1 ***Requires further engineer investigation and review.***
6. As framed without the roof rafter to ceiling joist connection the ceiling framing supports the roof framing. Because of this the ridges, valleys and hips are now structural members. ***Ridges, valleys, and hips require further engineer review because the central part of the attic space is obstructed by ductwork. This ductwork should be removed to allow access to investigate the hidden conditions. Additionally, gravity forces and wind uplift forces are supported by the ceiling framing. Review of the ceiling framing to transfer these uplift forces will be completed after access is provided to the hidden ceiling and roof framing.***
7. Posts below ridges, valleys and hips are supported on the ceiling joists and second floor walls. The loads from roof and ceiling framing transfers down to second floor framing. See IRC Figure R802.5.1 ***The second floor framing where supporting roof and attic framing is predominantly overloaded.***

8. Nails used throughout the project appears to be 3"x0.120" nails. Nail values for 1.5" side member & 1.5" main member are as follows:
   a. Face nail: 81# SP/DF & 69# HF/SPF
   b. Toe nail: 68# SP/DF & 58# HF/SPF. Withdrawal SP value = 37 lbs/in SP 25 lbs/in Toenail
   c. End nail: 55# SP/DF & 46# HF/SPF
9. Nailing where uncovered will be reviewed.
10. Added top plate should have been continuous and nailed per code. R602.3.2 ***The double flat 2x4 blocks below added second floor framing should be removed and replaced with a double top plate lapped and fastened as a unit and fastened to the existing top plate.***
11. Joist blocking missing throughout project. R502.7 ***After installing the double top plate on the existing wall's top plate install joist blocking per the building code.***
12. Joist bridging missing throughout project. R502.7.1 ***Install joist bridging per the building code.***
13. Posts at new concentrated loads missing throughout project. ***Install posts below the concentrated loads. The posts should match the width of beams supported and fastened per the building code.***
14. Floor joists with holes larger than 3 ¾" do not meet code. R502.8.1 ***All framing that is damaged by holes larger than code limits should be removed and replaced. We have only identified damaged framing that exists below the second floor bathrooms. Additionally, the plumbing below this bathroom will require rerouting to avoid cut these large holes in the floor framing.***
15. Some of the new ceiling framing is overloaded. ***See structural drawings for overloaded members and the replacement member sizes.***
16. Some of the new and existing 2nd Floor framing is overloaded. ***See structural drawings for overloaded members and the replacement member sizes.***
17. Some of the existing headers are overloaded. ***See structural drawings for overloaded members and the replacement member sizes.***
18. Outrigger joists are a huge problem at the west and north walls. The short outrigger joists do not meet building requirements and will require extensive work to remedy. ***Structural drawings indicate a framing solution only for the west wall overhang condition.***
19. Some of the existing 1st Floor framing is overloaded. ***The first floor framing replacement members and added foundations are being evaluated.***
20. Stair does not appear to meet code. Stair run is 39" wide. Intermediate landing 36" & 34.5" wide. The 34.5" landing in direction of travel violates code. The landing should be 36" in the direction of travel. R311.7.6.1. ***Stair should be removed and replaced to comply with the building code.***
21. Chimney does not meet code. Requirements are above roof 3' at roofline and 2' above roof at 10' distance. Chimney will need to be increased in height by 6 feet or so. Fig R1001.1 ***Add chimney height to comply with the building code.***
22. Exact information about the non-engineered fireplace and chimney underpinning work has not been completely supplied. ***Contractor should supply detailed information, including structural details and engineering calculations signed and sealed by a qualified structural engineer, about the chimney underpinning so that the adequacy of the underpinning can be evaluated.***
23. Gable end walls bear on the existing stone veneer. Veneer is intended to only support itself. This condition should have been corrected by adding ceiling framing to support the gable end walls. ***Ceiling framing and details to adequately support the gable end wall framing will be supplied at a later date.***

Other concerns not specifically outlined above include replacing the current carpentry and foundation subcontractors that possess the experience and capabilities to complete the work to your satisfaction. Some additional investigation and analysis is required to complete the investigation and design new, replacement and remedial framing.

All opinions, conclusions and recommendations expressed in this letter report are based on our ability to view, document, and measure the areas unobstructed by construction materials such as ductwork, partitions, and other

obstructions during our site visits. Structural testing was not done to make this list. This list is not intended to cover mechanical, electrical, architectural, maintenance, or environmental features. We retain the right to amend this list if we receive or develop unavailable information. All engineering and consulting services are performed to the best of our abilities and in accordance with generally accepted engineering principles and practices. We make no warranties express or implied about our site review or this report.

Regards.

MOORE ENGINEERS, INC.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY PATRICK J. MOORE, P.E. 70673 ON 16DEC21
ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

Patrick J. Moore, P.E.

2543 6541 oriole investigation letter.docx

MISCELLANEOUS:
1. VERIFY ALL DIMENSIONS AND CONDITIONS AT JOBSITE BEFORE MAKING FINAL MATERIAL ORDER AND FABRICATING MATERIALS. REPORT ANY DIMENSION, DRAWING AND CONDITION DISCREPANCIES TO ENGINEER.
2. EXISTING STRUCTURAL FRAMING AND CONSTRUCTION IS GENERALLY NOTED WITH THE SUFFIX(E).
3. THE CONTRACTOR SHOULD MAKE FIELD MEASUREMENTS OF IN-PLACE NEW CONSTRUCTION AND EXISTING CONSTRUCTION TO VERIFY DIMENSIONS TO ENSURE PROPER FIT OF NEW STRUCTURAL FRAMING.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LATEST CONTRACT DOCUMENTS AND ADDENDA AND SHALL SUBMIT SUCH TO ALL MATERIAL SUPPLIERS AND SUBCONTRACTORS BEFORE MAKING SHOP DRAWINGS, FABRICATING MATERIAL, AND BEFORE ERECTING THE WORK.
5. STRUCTURAL FRAMING SHALL BE INSTALLED WITH FULL CROSS SECTIONS INTACT. NOTCHING, CUTTING OR BORING STRUCTURAL FRAMING IS NOT ALLOWED EXCEPT WHERE DETAILED ON THESE DRAWINGS OR ON THE APPROVED SHOP DRAWINGS. IF THE OWNER OR CONTRACTOR NOTCHES, CUTS OR BORES THROUGH STRUCTURAL FRAMING AND COMPROMISES THE STRUCTURE, REPAIRS OR SUPPLEMENTAL STRUCTURAL FRAMING MAY BE REQUIRED. ANY SUCH REPAIRS OR SUPPLEMENTAL STRUCTURAL FRAMING RESULTING FROM NOTCHING, CUTTING OR BORING STRUCTURAL FRAMING SHALL BE APPROVED BY THE ENGINEER AND DESIGNED BY THE ENGINEER. THE PARTY MAKING THE NOTCHES, CUTS OR BORES SHALL COMPENSATE THE ENGINEER FOR REVIEWING THE CHANGE AND FOR MAKING THE CHANGE.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE FINAL LOCATIONS OF NEW CONSTRUCTION AND RELOCATING CONSTRUCTION, SUCH AS MEP SYSTEMS, PIPING, DUCTWORK, LIGHT FIXTURES, SECONDARY FRAMING AND ARCHITECTURAL ITEMS, ETC., TO AVOID THE STRUCTURAL FRAMING.
7. WOOD FLOOR FRAMING LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR TO AVOID MEP SYSTEMS, PIPING, DUCTWORK, LIGHT FIXTURES, SECONDARY FRAMING AND ARCHITECTURAL ITEMS, ETC., PROVIDED THE FRAMING SPACING IS EQUIVALENT TO LOCATONS NOTED ON THE DRAWINGS.
8. DIMENSIONS TO ROUGH WINDOW OPENINGS ARE BASED ON GAP DIMENSIONS ASSUMED TO BE 1/2" AT JAMBS, HEADS & SILLS.
9. DIMENSIONS TO ROUGH DOOR OPENINGS ARE BASED ON GAP DIMENSIONS ASSUMED TO BE 1 1/4" AT JAMBS AND 2 1/2" AT HEADS.
10. CONTRACTOR SHALL COORDINATE ROUGH OPENING DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND MANUFACTURERS WINDOW, DOOR, LOUVER AND OTHER OPENING ITEM ROUGH GAP REQUIREMENTS.
11. WALL OPENINGS ON ARCHITECTURAL AND MECHANICAL DRAWINGS SHALL BE VERIFIED BY CONTRACTOR TO ACCEPT DOORFRAMES, WINDOW FRAMES, LOUVERS, EQUIPMENT, DUCTWORK, ETC.
12. CONSTRUCTION SHALL COMPLY WITH THE 2015 INTERNATIONAL RESIDENTIAL CODE AND ANY LOCAL CODE AMENDMENTS.
13. DESIGN LOADS ARE BASED ON THE 2015 INTERNATIONAL RESIDENTIAL CODE.
14. FLOOR LIVE LOAD = 40 PSF
15. ROOF LIVE LOAD = 20 PSF
16. RESIDENTIAL UNINHABITABLE ATTICS WITHOUT STORAGE = 10 PSF (NON-CONCURRENT WITH OTHER LIVE LOADS), LESS THAN 42" CLEAR
17. RESIDENTIAL UNINHABITABLE ATTICS WITH STORAGE = 20 PSF, 42" AND GREATER CLEAR
18. WIND DESIGN SPEED = 115 MPH (3 SECOND GUST) ASCE 7-10 RISK CATEGORY 2 - DALLAS
19. WIND EXPOSURE CATEGORY B
20. WIND DESIGN TOPOGRAPHIC EFFECTS = NONE
21. BUILDING CATEGORY = II
22. INTERNAL PRESSURE COEFFICIENT = 0.18
23. ALL WIND FORCES AND PRESSURES NOTED ON THE DRAWINGS ARE ULTIMATE WIND LOADS. MULTIPLY THESE WIND FORCES AND PRESSURES BY 0.6 TO OBTAIN SERVICE LOAD VALUES.
24. C&C ROOF UPLIFT ZONE 1, PSF (ULTIMATE) = -21.8(10 sf) / -20.4(50 sf) / -19.8(100 to 500 sf)
25. C&C ROOF UPLIFT ZONE 2, PSF (ULTIMATE) = -37.9(10 sf) / -30.8(50 sf) / -27.8(100 to 500 sf)
26. C&C ROOF UPLIFT ZONE 3, PSF (ULTIMATE) = -56.0(10 sf) / -47.6(50 sf) / -44.0(100 to 500 sf)
27. C&C ROOF PRESSURE ALL ZONES, PSF (ULTIMATE) = 16 PSF
28. C&C WALL NEGATIVE ZONE 4, PSF (ULTIMATE) = -25.8(10 sf) / -23.3(50 sf) / -22.2(100 sf) / -21.2(200 sf) / -19.8(500 sf)
29. C&C WALL NEGATIVE ZONE 5, PSF (ULTIMATE) = -31.9(10 sf) / -26.9(50 sf) / -24.7(100 sf) / -22.6(200 sf) / -19.8(500 sf)
30. C&C WALL POSITIVE ZONE 4 & 5, PSF (ULTIMATE) = 23.8(10 sf) / 21.3(50 sf) / 20.2(100 sf) / 19.2(200 sf) / 17.7(500 sf)
31. WIND LOAD ON COMPONENTS AND CLADDING NOT DEFINED ON THE STRUCTURAL DRAWINGS = 25 PSF
32. ROOF SNOW LOADS, EARTHQUAKE LOADS, FLOOD LOADS AND OTHER SPECIAL LOADS DO NOT APPLY TO THIS WORK.
33. ALL LOADS ON THE DRAWINGS ARE SERVICE LOADS UNLESS OTHERWISE NOTED.
34. THE MEMBER SIZES AND GRADES ON THESE DRAWINGS ARE THE MINIMUM SIZES AND GRADES REQUIRED. LARGER MEMBER SIZES, STRONGER MEMBER GRADES AND CLOSER MEMBER SPACINGS MAY BE SUBSTITUTED.
35. DEAD LOADS FROM INTERIOR NON-BEARING PARTITIONS WERE INCLUDED IN THE LOADS TO DESIGN FRAMING.
36. WEIGHT OF WOOD FRAMED NON-BEARING PARTITIONS FACED WITH DRYWALL SHOULD BE 10 PSF. FOR EXAMPLE 8' WALLS = 80 PLF, 9' WALLS = 90 PLF, 10' WALLS = 100 PLF, ETC.
37. WEIGHT OF WOOD FRAMED NON-BEARING PARTITIONS FACED WITH TILE ON ONE FACE SHOULD BE 20 PSF. FOR EXAMPLE 8' WALLS = 160 PLF, 9' WALLS = 180 PLF, 10' WALLS = 200 PLF, ETC.
38. WEIGHT OF WOOD FRAMED NON-BEARING PARTITIONS FACED WITH TILE ON TWO FACES SHOULD BE 30 PSF. FOR EXAMPLE 8' WALLS = 240 PLF, 9' WALLS = 270 PLF, 10' WALLS = 300 PLF, ETC.

DEFLECTION CRITERIA:	L, Lr or S	W	D + L
ROOF MEMBERS: SUPPORTING GYPSUM CEILING	l/240	N/A	l/180
FLOOR MEMBERS: SUPPORTING GYPSUM CEILING	l/360	N/A	l/240
EXTERIOR WALLS: WITH GYPSUM BOARD FINISHES	N/A	l/180	N/A

CONTRACTOR RESPONSIBILITY FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION:
1. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED ONLY TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR ON THE FINAL COMPLETE STRUCTURE.
2. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY OR PERMANENT BRACING, SHORING AND SUPPORTS DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING CONSTRUCTION.
3. TEMPORARY BRACING, SHORING AND SUPPORTS SHOULD REMAIN IN PLACE UNTIL ALL OF THE GRAVITY LOAD RESISTING, LATERAL LOAD RESISTING AND STABILITY PROVIDING SYSTEMS ARE COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.
4. TEMPORARY SHORING AND SUPPORTS SHALL BE DESIGNED BY THE "SHORING ENGINEER".
5. THE SHORING ENGINEER SHALL BE ENGAGED BY THE CONTRACTOR AND REGISTERED IN THE STATE OF THE PROJECT WITH EXPERIENCE IN THE DESIGN OF THESE ELEMENTS. SHORING ENGINEER SHALL SUBMIT, FOR RECORD PURPOSES ONLY, SIGNED AND SEALED SHORING DRAWINGS AND CALCULATIONS TO THE OWNER, ARCHITECT AND STRUCTURAL ENGINEER.
6. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE ADEQUACY OF ALL TEMPORARY OR PERMANENT BRACING, SHORING AND SUPPORTS.
7. SHORING LOADS MAY BE POSTED ON THE STRUCTURAL DRAWINGS. IN THE EVENT THAT NO SHORING LOADS ARE POSTED ON THE STRUCTURAL DRAWINGS IT IS THE RESPONSIBILITY OF THE SHORING ENGINEER TO DEVELOP SHORING LOADS AND INCORPORATE THESE LOADS INTO THEIR SHORING DRAWINGS.

STRUCTURAL PENETRATIONS:
1. PENETRATIONS THROUGH STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO: COLUMNS, STUDS, WALLS, FLOORS, FRAMING, BEAMS, HEADERS, LINTELS, JOISTS, RAFTERS SHALL NOT BE MADE UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

EXISTING STRUCTURES:
1. THE EXISTING FOUNDATION MAY BE SUBJECT TO UNEVEN MOVEMENT RESULTING FROM THE ADDED LOADS AND COULD RESULT IN MINOR DAMAGE TO THE STRUCTURE, FINISHES AND ASSOCIATED CONSTRUCTION.
2. BY MAKING THE ADDITIONS TO THE EXISTING STRUCTURE, THE OWNER ACCEPTS ALL RISKS AND RESPONSIBILITY FOR THE PERFORMANCE OF THE EXISTING FOUNDATION AND EXISTING STRUCTURE INCLUDING ANY AND ALL DAMAGES THAT MAY RESULT FROM FOUNDATION MOVEMENT OR STRUCTURAL OVERLOAD.
3. NO ORIGINAL STRUCTURAL DRAWINGS WERE AVAILABLE FOR THE EXISTING STRUCTURE. ALL EXISTING MATERIAL, DIMENSIONS, ELEVATIONS, AND GENERAL CONDITIONS OF THE BUILDING SHALL BE VERIFIED BY THE CONTRACTOR BEFORE PURCHASE OF MATERIAL AND CONSTRUCTION.
4. STRUCTURAL INFORMATION USED TO EVALUATE THE EXISTING STRUCTURE IS BASED ON VISUAL OBSERVATION AND VERY LIMITED MEASUREMENTS.
5. NOTIFY STRUCTURAL ENGINEER OF DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS IMMEDIATELY.
6. FOUNDATIONS FOR THE EXISTING STRUCTURE ARE UNKNOWN.
7. NO TESTING OF THE EXISTING STRUCTURE WAS MADE.
8. NOTIFY STRUCTURAL ENGINEER IMMEDIATELY OF DEFICIENT STRUCTURAL CONDITIONS, SUCH AS CORROSION, DRY ROT OR DAMAGE TO THE STRUCTURAL FRAMING THAT COULD AFFECT THE RELIABILITY OF THE STRUCTURE. ENGINEER MAY PROVIDE CLARIFICATIONS AND POSSIBLY NEW STRUCTURAL FRAMING DESIGNS AND DETAILS TO ADDRESS SUCH DEFICIENT STRUCTURAL CONDITIONS.
9. HIDDEN EXISTING CONDITIONS HAVE NOT BEEN COMPLETELY REVIEWED. SOME HIDDEN EXISTING CONDITIONS REQUESTED TO BE UNCOVERED BY THE STRUCTURAL ENGINEER HAVE NOT BEEN UNCOVERED.
10. THE STRUCTURAL DRAWINGS PARTIALLY DOCUMENT THE EXISTING STRUCTURAL CONDITIONS AND DO NOT FULLY DESCRIBE THE EXISTING CONDITIONS. STRENGTH AND ADEQUACY OF EXISTING STRUCTURAL CONDITIONS ARE UNKNOWN.
11. CONTRACTOR SHOULD EXPECT TO FIND THAT EXISTING CONDITIONS MAY DIFFER FROM THOSE SHOWN ON THE STRUCTURAL DRAWINGS AND MAINTAIN A CONTINGENCY TO ACCOUNT FOR ANY ADDED COSTS RESULTING FROM THE EXISTING CONDITIONS.
12. A LIMITED REVIEW OF NEW LOADS ON THE EXISTING STRUCTURE HAS BEEN MADE BASED ON THE LIMITED VISUAL REVIEW OF EXISTING CONDITIONS.
13. WHERE ADDED GRAVITY LOADS FROM EQUIPMENT, ROOFING, MATERIALS, CHANGE OF USE AND RECONFIGURATION OF SPACES RESULTS IN ADDITIONAL STRESSES ON AN EXISTING STRUCTURAL ELEMENT SUPPORTING SUCH ADDED GRAVITY LOADS THE STRUCTURAL ELEMENT IS NOT REINFORCED IF THE STRESS INCREASE IS LESS THAN 5 PERCENT.
14. WHEN THE STRESS INCREASE ON AN EXISTING STRUCTURAL ELEMENT IS GREATER THAN 5 PERCENT FOR GRAVITY LOADS SUCH STRUCTURAL ELEMENT IS REINFORCED AS SHOWN OR HAS BEEN RE-EVALUATED.
15. WHERE WIND LOADS HAVE INCREASED FROM ADDED TALLER WALLS AND PARAPETS AND RESULTS IN ADDITIONAL STRESSES ON AN EXISTING STRUCTURAL ELEMENT SUPPORTING SUCH ADDED WIND LOADS THE STRUCTURAL ELEMENT IS NOT REINFORCED IF THE STRESS INCREASE IS LESS THAN 10 PERCENT.
16. WHEN THE STRESS INCREASE ON AN EXISTING STRUCTURAL ELEMENT IS GREATER THAN 10 PERCENT FOR WIND LOADS SUCH STRUCTURAL ELEMENT IS REINFORCED AS SHOWN OR HAS BEEN RE-EVALUATED.

TYPICAL DETAILS AND TYPICAL NOTATION:
1. "TYPICAL DETAILS" ON THE DRAWINGS DESCRIBE THE WORK THAT IS SIMILAR OR THE SAME THROUGH THE PROJECT.
2. APPLICABILITY OF SUCH DETAILS TO LOCATIONS IN THE DRAWINGS AND THE PROJECT CAN BE DETERMINED BY THE TITLE OF THE TYPICAL DETAIL.
3. THE PLANS AND SECTIONS MAY REFER TO TYPICAL CONDITIONS THAT SHOULD BE APPLIED TO SUBSEQUENT SIMILAR CONDITIONS.

CRAWL SPACES:
1. THE FINISHED GRADE OF UNDER-FLOOR SURFACE MAY BE LOCATED AT THE BOTTOM OF THE FOOTINGS; HOWEVER, WHERE THERE IS EVIDENCE THAT THE GROUNDWATER TABLE CAN RISE TO WITHIN 6 INCHES OF THE FINISHED FLOOR AT THE BUILDING PERIMETER OR WHERE THERE IS EVIDENCE THAT THE SURFACE WATER DOES NOT READILY DRAIN FROM THE BUILDING SITE AND THE CRAWLSPACE THE GRADE IN THE UNDER-FLOOR SPACE SHALL BE AS HIGH AS THE OUTSIDE FINISHED GRADE, UNLESS AN APPROVED DRAINAGE SYSTEM IS PROVIDED. R408.6 2012
2. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF CRAWL SPACE AREA.
3. LOCATE VENTILATION OPENINGS WITHIN 6' OF BUILDING CORNERS.
4. COVER VENTILATION OPENINGS WITH ANY OF THE FOLLOWING MATERIALS, PROVIDED THAT THE LEAST DIMENSION OF THE COVERING SHALL NOT BE GREATER THAN 1/4": PERFORATED SHEET METAL PLATES NOT LESS THAN 0.070" THICK, EXPANDED SHEET METAL PLATES NOT LESS THAN 0.047" THICK, CAST-IRON GRILLES OR GRATINGS, EXTRUDED LOAD BEARING VENTS, HARDWARE CLOTH OF 0.035" WIRE OR HEAVIER OR CORROSION RESISTANT WIRE MESH WITH LEAST DIMENSION NOT GREATER THAN 1/8".
5. VENTILATION OPENINGS SHALL BE PROVIDED ON AT LEAST THREE SIDES OF THE BUILDING. STRUCTURAL DRAWINGS ARE PREPARED WITH THIS CRITERIA. REFER TO ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS FOR ALL OTHER FOUNDATION AND CRAWL SPACE VENTILATION.
6. CRAWL SPACES SHALL BE PROVIDED WITH A MINIMUM OF ONE ACCESS OPENING NOT LESS THAN 18 INCHES BY 24 INCHES.
7. WHERE WARRANTED BY CLIMATIC CONDITIONS, VENTILATION OPENINGS TO THE OUTDOORS ARE NOT REQUIRED IF VENTILATION OPENINGS TO THE INTERIOR ARE PROVIDED.
8. THE TOTAL AREA OF VENTILATION OPENINGS IS PERMITTED TO BE REDUCED TO 1/1,500 OF THE UNDER-FLOOR AREA WHERE THE GROUND SURFACE IS COVERED WITH A CLASS I VAPOR RETARDER MATERIAL AND THE REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED.
9. VENTILATION OPENINGS ARE NOT REQUIRED WHERE CONTINUOUSLY OPERATED MECHANICAL VENTILATION IS PROVIDED AT A RATE OF 1.0 CUBIC FOOT PER MINUTE (CFM) FOR EACH 50 SQUARE FEET OF CRAWL SPACE FLOOR AREA AND THE GROUND SURFACE IS COVERED WITH A CLASS I VAPOR RETARDER.
10. VENTILATION OPENINGS ARE NOT REQUIRED WHERE THE GROUND SURFACE IS COVERED WITH A CLASS I VAPOR RETARDER, THE PERIMETER WALLS ARE INSULATED AND THE SPACE IS CONDITIONED IN ACCORDANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.
11. FOR BUILDINGS IN FLOOD HAZARD AREAS AS ESTABLISHED IN SECTION 1612.3, THE OPENINGS FOR UNDER-FLOOR VENTILATION SHALL BE DEEMED AS MEETING THE FLOOD OPENING REQUIREMENTS OF ASCE 24 PROVIDED THAT THE VENTILATION OPENINGS ARE DESIGNED AND INSTALLED IN ACCORDANCE WITH ASCE 24.

FOUNDATIONS - WITHOUT GEOTECHNICAL REPORT:
1. A SUBSURFACE EXPLORATION AND GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED. OWNER ASSUMES ALL RISKS AND RESPONSIBILITY FOR THE FOLLOWING ASSUMED FOUNDATION DESIGN PARAMETERS.
2. MAXIMUM ASSUMED ALLOWABLE BEARING PRESSURE FOR GRADE BEAMS AND FOOTINGS ON CLAY = 1,500 PSF.
3. GRADE BEAMS SHALL EXTEND A MINIMUM OF 18 INCHES BELOW FINISH GRADE.
4. FOOTINGS SHALL EXTEND A MINIMUM OF 18 INCHES BELOW FINISH GRADE.
5. MAXIMUM ASSUMED ALLOWABLE BEARING PRESSURE FOR DRILLED SHAFTS INTO AN UNFRACTURED TAN LIMESTONE BEARING STRATUM ASSUMED TO BE AT ABOUT 6 FEET BELOW EXISTING GRADE IS ASSUMED TO BE 8,000 PSF END BEARING AND 1,250 PSF SIDE FRICTION.
6. NOTIFY ENGINEER IF A SUBSURFACE EXPLORATION REPORT IS SUPPLIED BY OWNER.
7. PIER HOLES SHALL BE CLEANED OF DRILLING DEBRIS, DRY AND FREE OF WATER WHEN CONCRETE IS PLACED.
8. PROVIDE TEMPORARY CASING, PUMPS AND DEWATERING AS REQUIRED.
9. IF TEMPORARY CASING IS USED PENETRATION SHOULD BE COUNTED ONLY BELOW THE BOTTOM OF CASING.
10. CONCRETE SHALL BE PLACED IN DRILLED PIERS BEFORE THE END OF WORKDAY OR WITHIN 8 HOURS AFTER EXCAVATION TO PREVENT DETERIORATION OF THE BEARING MATERIAL.
11. A COLLECTION HOPPER SHOULD BE USED TO PLACE CONCRETE IN THE DRILLED SHAFTS TO AVOID SEGREGATION OF THE AGGREGATE.
12. IF DELAYS OCCUR, THE EXCAVATION SHOULD BE DEEPENED AS NECESSARY AND CLEANED IN ORDER TO PROVIDE A FRESH BEARING SURFACE.
13. AN EXPERIENCED CONTRACTOR USING HEAVY-DUTY DRILLING EQUIPMENT AND SPECIAL CORING BITS MAY BE REQUIRED FOR DRILLED SHAFT EXCAVATION.
14. DRILLED SHAFT EXTENSIONS SHOULD BE THE SAME DIAMETER OF THE SHAFTS AND THE CROSS SECTION OF THE SHAFT SHOULD NOT BE ALLOWED TO ENLARGE AT THE GROUND LEVEL.
15. REMOVE EXCESS CONCRETE AT THE TOP OF PIER SHAFTS.

CAST-IN-PLACE CONCRETE:
1. CAST-IN-PLACE CONCRETE SHALL CONFORM TO CURRENT (ACI 318) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. STEEL REINFORCEMENT SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE CURRENT (ACI 315) ACI DETAILING MANUAL.
3. CAST-IN-PLACE CONCRETE SHALL CONFORM TO THE CURRENT (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE.
4. EVEN WITH THE BEST DESIGNS AND PROPER CONSTRUCTION, IT IS UNREALISTIC TO EXPECT CRACK-FREE AND CURL-FREE CONCRETE. OWNER AND CONTRACTOR ARE ADVISED THAT IT IS NORMAL TO EXPECT SOME AMOUNT OF CRACKING AND CURLING ON EVERY PROJECT AND THAT SUCH OCCURENCES DO NOT NECESSARILY REFLECT ADVERSELY ON EITHER THE ADEQUACY OF THE CONCRETE DESIGN OR THE QUALITY OF ITS CONSTRUCTION.
5. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS WITH A MINIMUM OF 5 SACKS OF PORTLAND CEMENT PER CUBIC YARD.
6. THE MAXIMUM WATER CEMENT RATIO SHALL BE 0.50.
7. ALL CONCRETE SHALL BE PROPERLY CONSOLIDATED BY VIBRATION OR RODDING DURING CONCRETE PLACEMENT.
8. ALL CONCRETE SHALL BE AIR ENTRAINED, 6% +/- 1%.
9. CONCRETE SLUMP SHOULD BE 4 TO 6 INCHES, EXCEPT FOR DRILLED SHAFTS.
10. CONCRETE SLUMP FOR DRILLED SHAFTS SHOULD BE 5 TO 7 INCHES.
11. MILD STEEL REINFORCEMENT SHALL BE ASTM A615, GRADE 60.
12. DO NOT FIELD-BEND BARS. ALL BARS SHALL BE SHOP FABRICATED. COLD BEND ALL REINFORCEMENT.
13. ALL BENDS AND HOOKS SHALL CONFORM TO BEND STANDARDS NOTED IN CRSI'S MANUAL OF STANDARD PRACTICE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
14. ALUMINUM CONDUITS, PIPES OR SLEEVES ARE NOT PERMITTED IN CONCRETE.
15. ALL REINFORCEMENT, INCLUDING BUNDLED BARS, SHALL BE PLACED WITHIN REQUIRED TOLERANCES AND SUPPORTED TO PREVENT DISPLACEMENT BEYOND REQUIRED TOLERANCES DURING CONCRETE PLACEMENT.
16. ALL CONSTRUCTION JOINTS SHALL BE CLEANED FREE OF LAITANCE AND LOOSE MATERIALS PRIOR TO PLACING ADJOINING CONCRETE.
17. SAND CEMENT GROUT FOR CONCRETE 'BUGHOLES' OR MINOR 'HONEYCOMB' REPAIRS SHALL BE 1 PART PORTLAND CEMENT TO 3 PARTS CLEAN NATURAL SAND CONFORMING TO ASTM C330. WATER CONTENT SHALL BE THE MINIMUM AMOUNT REQUIRED FOR HYDRATION OF THE PORTLAND CEMENT AND SHALL BE A MAXIMUM OF 5.5 GALLONS PER 94 POUND SACK OF PORTLAND CEMENT.
18. MINIMUM CONCRETE COVER OVER REINFORCEMENT BARS SHALL BE:
    CONCRETE CAST AGAINST SOIL AND PERMANENTLY EXPOSED TO EARTH:
        ALL BARS = 3"
    CONCRETE EXPOSED TO EARTH OR WEATHER:
        #6 THROUGH #18 BARS = 2"
        #5 BAR, W31 OR D31 WIRE AND SMALLER = 1 1/2"

    CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
        SLABS, WALLS, JOISTS:
        #14 & #18 BARS = 1 1/2"
        #11 & SMALLER BARS = 3/4"
        BEAMS & COLUMNS:
        PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS = 1 1/2"

EPOXY GROUT:
1. EPOXY GROUT TO ANCHOR THREADED RODS IN CONCRETE SHALL BE HILTI "HIT-HY 200" OR HILTI "HIT-RE 500 V3" EPOXY ADHESIVE ANCHOR SYSTEM MANUFACTURED BY THE HILTI CORPORATION, SIMPSON "SET-3G" ANCHORING ADHESIVE AS MANUFACTURED BY SIMPSON STRONG TIE COMPANY INC., OR APPROVED EQUAL.
2. DIAMETER OF ANCHOR RODS AND DEPTH OF EMBEDMENT ARE INDICATED ON THE DRAWINGS.
3. EPOXY GROUT TO ANCHOR THREADED RODS IN MASONRY, BRICK AND CMU, SHALL BE HILTI "HY270" INJECTION ADHESIVE ANCHOR SYSTEM MANUFACTURED BY THE HILTI CORPORATION, SIMPSON "SET" ANCHORING ADHESIVE AS MANUFACTURED BY SIMPSON STRONG TIE COMPANY INC., OR APPROVED EQUAL. USE HILTI AND SIMPSON SCREENS IN ALL MASONRY CONSTRUCTION. DIAMETER OF ANCHOR RODS AND DEPTH OF EMBEDMENT ARE INDICATED ON THE DRAWINGS.
4. EPOXY GROUT TO ANCHOR REBAR SHALL BE HILTI "HIT-RE 500-SD" EPOXY ADHESIVE ANCHOR SYSTEM MANUFACTURED BY THE HILTI CORPORATION, SIMPSON "SET" ANCHORING ADHESIVE AS MANUFACTURED BY SIMPSON STRONG TIE COMPANY INC., OR APPROVED EQUAL. DIAMETER OF REBAR AND DEPTH OF EMBEDMENT ARE INDICATED ON THE DRAWINGS.
5. CLEAN ALL DRILLED HOLES AND INSTALL ADHESIVE AND EMBEDDED ITEMS PER THE MANUFACTURER'S RECOMMENDATIONS.
6. DO NOT CUT OR DAMAGE EXISTING REINFORCEMENT TO INSTALL EPOXY GROUTED RODS AND REBAR.
7. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED.
8. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
9. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

STRUCTURAL WOOD FRAMING:
1. WOOD CONSTRUCTION SHALL BE PLUMB, LEVEL AND TRUE.
2. WOOD FRAMING SPECIES ABBREVIATIONS USED ON THESE DRAWINGS ARE: SP = SOUTHERN PINE, DF = DOUGLAS FIR-LARCH, SPF = SPRUCE-PINE-FIR, HF = HEM-FIR, SP/DF = SOUTHERN PINE or DOUGLAS FIR-LARCH & SPF/HF = SPRUCE-PINE-FIR or HEM-FIR.
3. SPECIFIC GRAVITY OF WOOD FRAMING SPECIES ARE SOUTHERN PINE = 0.55, DOUGLAS FIR-LARCH = 0.5, SPRUCE-PINE-FIR = 0.43, HEM-FIR 0.42.
4. WOOD FRAMING SHALL COMPLY WITH THE FOLLOWING GRADES AND SPECIES SPECIFIED BELOW.
5. FLOOR FRAMING, ROOF FRAMING, HEADERS, OPENING HEAD PLATES, OPENING SILL PLATES, GIRTS, WALL TOP PLATES, WALL BOTTOM PLATES, FLOOR TRUSSES, ROOF TRUSSES AND BLOCKING: SOUTHERN PINE, NO. 2 OR STRONGER GRADE, KILN DRIED TO 19% MOISTURE CONTENT (M.C.) MAXIMUM WITH MINIMUM STRESS VALUES AS NOTED IN THE LATEST 'AFPA NDS SUPPLEMENT'. USE ENGINEERED LUMBER AS NOTED.
6. WALL FRAMING, POSTS AND WALL BLOCKING: HEM-FIR OR SPRUCE-PINE-FIR, STUD OR STRONGER GRADE, SURFACE DRY AT 19% MOISTURE CONTENT (M.C.) MAXIMUM WITH MINIMUM STRESS VALUES AS NOTED IN THE LATEST 'AFPA NDS SUPPLEMENT'. GRADE STAMPED END JOINTED LUMBER MARKED WITH "VERTICAL USE ONLY CERT GLUE JOINTS" MAY USED.
7. EXTERIOR LOCATIONS, AT CONCRETE, AT MASONRY AND WHERE NOTED ON THE PLANS: PRESSURE TREATED (PT), AWPA USE CATEGORY UC3B, SOUTHERN PINE, NO.2 OR BETTER, KILN DRIED TO 19% MOISTURE CONTENT (M.C.) MAXIMUM WITH MINIMUM STRESS VALUES AS NOTED IN THE LATEST 'AFPA NDS SUPPLEMENT'.
8. WOOD CONNECTORS SHALL HAVE A GALVANIZED COATING.
9. TIMBER CONNECTORS, JOIST HANGERS AND CONNECTOR FASTENERS SHALL BE AS MANUFACTURED BY 'SIMPSON STRONG TIE CO., INC.' OR APPROVED EQUAL.
10. FOLLOW MANUFACTURER'S RECOMMENDATIONS AND USE ALL SPECIFIED NAILS, SCREWS, BOLTS AND WELDS FOR SECURING TIMBER CONNECTORS AND JOIST HANGERS.
11. REFER TO MANUFACTURERS RECOMMENDATIONS FOR WELDABILITY, WELD SIZE AND WELD PLACEMENT.
12. ALL NAILING BETWEEN WOOD MEMBERS SHALL BE PERFORMED WITH COMMON NAILS AND CARE SHOULD BE TAKEN NOT TO SPLIT MEMBERS.
13. SPLIT MEMBERS ARE NOT ACCEPTABLE IN FINISHED STRUCTURE.
14. WHERE CONNECTORS ARE NOT NOTED, NAIL MEMBERS PER THE WOOD FRAME FASTENER SCHEDULE ON THE DRAWINGS AND IF WOOD FRAME FASTENER SCHEDULE IN NOT INCLUDED ON THE DRAWINGS FOLLOW THE CURRENT BUILDING CODE NAILING / FASTENING SCHEDULE WHICHEVER IS MORE RESTRICTIVE.
15. STRUCTURAL WOOD FRAMING SHALL NOT BE CUT FOR PIPES, CONDUIT, ETC. UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS. NOTCHING AND BORING OF STUDS AND TOP PLATES SHALL CONFORM TO THE BUILDING CODE. WHERE TOP PLATES OR BOTTOM PLATES ARE CUT FOR PIPES A GALVANIZED METAL TIE OR STRAP 1 1/2 INCHES WIDE AND 0.058 INCHES THICK SHALL BE FASTENED TO EACH PLATE ACROSS THE OPENING AT EACH SIDE OF OPENING WITH (6) 16d COMMON NAILS IN ACCORDANCE WITH THE BUILDING CODE.
16. BOLTS SHALL CONFORM TO ASTM A36 OR A307 WITH A STANDARD CUT WASHER BETWEEN WOOD & BOLT HEADS AND BETWEEN WOOD & NUTS.
17. BOLT HOLE DIAMETER DRILLED IN WOOD SHALL BE 1/32" MINIMUM TO 1/16" MAXIMUM LARGER THAN BOLT DIAMETER.
18. PRESSURE TREATED (P.T.) FRAMING CAN CAUSE EXCESSIVE CORROSION OF FASTENERS. PROVIDE HOT-DIP GALVANIZED NAILS, CONNECTOR PLATES, FRAMING ANGLES, BOLTS, FASTENERS AND ANY OTHER CONNECTIONS IN DIRECT CONTACT WITH P.T. FRAMING. (ELECTRO PLATE GALVANIZING IS NOT ACCEPTABLE.)
19. SECURE PRESSURE TREATED WOOD PLATES TO TOP OF FOUNDATION WALLS, CONCRETE SURFACES, AND FLOOR SLAB USING ½" DIAMETER ANCHOR RODS, AT 6'-0" O.C. MAXIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
20. SILL PLATE ANCHOR RODS SHALL BE 36 KSI ASTM F1554, UNLESS OTHERWISE NOTED.
21. PROVIDE DOUBLE JOISTS OR TRUSSES UNDER ALL PARTITIONS PARALLEL TO FLOOR JOISTS WHETHER SHOWN ON THE DRAWINGS OR NOT.
22. PROVIDE FULL BEARING FOR JOISTS WITH A 2x SOLID RIM JOIST AT SUPPORTS UNLESS OTHERWISE NOTED.
23. PROVIDE FULL BEARING FOR RAFTERS WITH A 2x SOLID BLOCKING BETWEEN RAFTERS AT SUPPORTS UNLESS OTHERWISE NOTED.
24. PROVIDE SOLID BLOCKING AT ALL INTERMEDIATE JOIST AND RAFTER SUPPORTS.
25. PROVIDE MAXIMUM BEARING LENGTH POSSIBLE AT JOIST ENDS AND INTERMEDIATE SUPPORTS.
26. CONTINUOUS ROWS OF BRIDGING OR SOLID BLOCKING SHALL BE PLACED IN ALL JOISTS AND RAFTER SPANS AT SPACING NOT TO EXCEED 8 FEET CENTER TO CENTER.
27. ALL HEADERS TO BE A MINIMUM OF (2)2X12 IN 2x4 WALLS AND (3)2x12 IN 2x6 WALLS UNLESS OTHERWISE NOTED.
28. PROVIDE ONE JACK STUD PLUS ONE KING STUD FOR HEADER SPANS 3'-6" OR LESS AND TWO JACK STUDS PLUS TWO KING STUDS FOR SPANS OVER 3'-6", UNLESS OTHERWISE NOTED ON THE DRAWINGS.
29. BUILT-UP WOOD STUDS AND POSTS SHALL BE LOCATED BELOW ALL SOLID LUMBER BEAM, BUILT-UP LUMBER BEAM, ENGINEERED LUMBER BEAM, GLULAM, MULTIPLE PLY TRUSS AND STRUCTURAL STEEL BEAM BEARING POINTS. WIDTH OF BUILT-UP WOOD STUDS SHALL EXCEED THE WIDTH OF THE SUPPORTED FRAMING MEMBER BY ONE STUD. CENTERLINES OF THE SUPPORTED FRAMING MEMBER AND THE BUILT-UP WOOD STUDS SHALL ALIGN. MININUM NUMBER OF STUDS BELOW ALL SUCH FRAMING MEMBERS SHALL BE 3 STUDS MINIMUM, UNLESS OTHERWISE NOTED ON THE PLANS. THESE BUILT-UP WOOD STUDS AND POSTS SHALL CONTINUE TO THE FOUNDATION WITH SQUASH BLOCKING BETWEEN FLOOR SHEATHING AND TOP PLATES.
30. INSTALL SOLID SQUASH BLOCKING AT ALL CONCENTRATED LOADS FROM BEAMS, GIRDERS, BUILT-UP WOOD STUDS AND POSTS IN BEARING WALLS TO FULLY TRANSFER LOADS THROUGH FLOOR THICKNESS. SQUASH BLOCKS SHALL CUT 1/16" TALLER THAN THE SPACE BETWEEN THE TOP PLATES AND BOTTOM OF FLOOR SHEATHING.
31. MULTIPLE PLY MEMBER HEADERS SHALL BE SHALL BE FASTENED TOGETHER AS ONE UNIT USING 1/2" THICK PLYWOOD SPACERS BETWEEN PLIES. NAIL TOP LOADED MULTIPLE MEMBER HEADERS OF 2&3 PLIES WITH 2 ROWS 16d COMMON NAILS AT 12"O.C. (2 SIDES). FOR SIDE LOADED MULTIPLE PLY HEADERS AND FOUR (4) PLY HEADERS SEE TYPICAL DETAILS FOR FASTENING.
32. MULTIPLE PLY MEMBERS SHALL BE FASTENED TOGETHER AS A SINGLE UNIT. NAIL TOP LOADED MULTIPLE PLY MEMBERS OF 2 PLIES WITH 2 ROWS 10d COMMON NAILS AT 12"O.C. (2 SIDES). NAIL TOP LOADED MULTIPLE PLY MEMBERS OF 3 PLIES WITH 2 ROWS 16d COMMON NAILS AT 12"O.C. (2 SIDES). FOR SIDE LOADED MULTIPLE PLY MEMBERS OR FOUR (4) PLY MEMBERS SEE TYPICAL DETAILS FOR FASTENING.

LAMINATED VENEER LUMBER FRAMING:
1. LAMINATED VENEER LUMBER (LVL) "MICROLLAMS" SHALL BE AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL
2. DO NOT CUT OR NOTCH MICROLLAMS EXCEPT WHERE ALLOWED BY MANUFACTURER.
3. APPLY MANUFACTURERS RECOMMENDED SEALER/COATING TO ALL END CUTS AND HOLES CUT IN LVL LUMBER.
4. MICROLLAMS SHALL BEAR FULLY OVER POSTS AND WALLS.
5. MINIMUM STRESS VALUES SHALL BE AS FOLLOWS: Fb = 2,600 PSI, Fc PERP = 750 PSI, Fc PAR = 2,510 PSI, Fv = 285 PSI, E = 2,000,000 PSI
6. MULTIPLE PLY MEMBER MICROLLAMS SHALL BE FASTENED TOGETHER AS ONE UNIT THUS:
    TOP LOADED MEMBERS ONLY:
        2&3 PLIES (<= 12" D)...2 ROWS 16d COMMON NAILS AT 12"O.C. EACH ROW (2 SIDES)
        2&3 PLIES (> 12" D)...3 ROWS 16d COMMON NAILS AT 12"O.C. EACH ROW (2 SIDES)
    FOR SIDE LOADED MULTIPLE PLY MEMBERS OR FOUR (4) PLY MEMBERS:
        <= 12" D, INSTALL 2 ROWS SIMPSON SDW SCREWS @ 12".O.C. EACH ROW (2 SIDES).
        >12" D, INSTALL 3 ROWS SIMPSON SDW SCREWS @ 12".O.C. EACH ROW (2 SIDES).
            USE 3 3/8" LONG SDW SCREWS FOR 2 PLY LVL.
            USE 5" LONG SDW SCREWS FOR 3 PLY LVL
            USE 6 3/4" LONG SDW SCREWS FOR 4 PLY LVL.
    FOR OTHER CONNECTION REQUIREMENTS SEE PLANS, SECTIONS, SCHEDULES & TYPICAL DETAILS FOR FASTENING.

PLYWOOD & OSB SHEATHING:
1. PLYWOOD AND OSB SHALL CONFORM TO THE LATEST APA PUBLICATIONS: PS1, PS2, PRP-108.
2. ROOF SHEATHING: 19/32" APA RATED SHEATHING, 40/20 SPAN RATING, EXPOSURE 1.
3. NAIL ROOF SHEATHING TO SUPPORTING MEMBERS WITH 8d COMMON NAILS AT 6" O.C. TO EDGE SUPPORTS AND AT 12" O.C. TO INTERMEDIATE SUPPORTS UNLESS OTHERWISE NOTED. USE TONGUE AND GROOVE ROOF SHEATHING OR BLOCK ROOF SHEATHING WITH ONE PANEL CLIP PER SPAN, STAGGER END JOINTS, TWO SPAN CONTINUOUS MINIMUM AND WITH LONG DIMENSION OR STRENGTH AXIS ACROSS SUPPORTS. PANEL CLIPS MAY BE OMITTED AT PANELS THICKER THAN 19/32" WITH A SPAN RATING GREATER THAN 40/20 AND 20 oc. INSTALL ONE PANEL CLIP IN SPANS 32" AND LESS AND TWO PANEL CLIPS IN SPANS GREATER THAN 32" AND LESS THAN 48".
4. FLOOR SHEATHING: 23/32" APA RATED SHEATHING, 48/24 SPAN RATING, EXPOSURE 1 WITH TONGUE AND GROOVE EDGES. STAGGER END JOINTS OF FLOOR SHEATHING, TWO SPAN CONTINUOUS MINIMUM AND WITH LONG DIMENSION OR STRENGTH AXIS ACROSS SUPPORTS.
5. NAIL 3/4" AND LESS FLOOR SHEATHING TO SUPPORTING MEMBERS WITH 8d COMMON NAILS AT 6" O.C. TO EDGE SUPPORTS AND AT 10" O.C. TO INTERMEDIATE SUPPORTS UNLESS OTHERWISE NOTED.
6. GLUE FLOOR SHEATHING TO ALL SUPPORTING MEMBERS, SOLID LUMBER BLOCKING AND TONGUE-GROOVE JOINTS WITH EXTERIOR ADHESIVE MEETING ASTM D-3498 (LIQUID NAILS FOR SUBFLOORS & DECKS OR APPROVED EQUAL). APPLY ADHESIVE PER MANUFACTURERS RECOMMENDATIONS.
7. PROVIDE SOLID LUMBER BLOCKING OR FRAMING UNDER ALL PANEL END AND EDGE JOINTS AT ALL AREAS RECEIVING CERAMIC OR STONE TILE.
8. WALL SHEATHING: 15/32" APA RATED SHEATHING, 32/16 SPAN RATING, EXPOSURE 1.
9. NAIL WALL SHEATHING TO SUPPORTING MEMBERS WITH 8d COMMON NAILS AT 6" O.C. TO EDGE SUPPORTS AND AT 12" O.C. TO INTERMEDIATE SUPPORTS.
10. INSTALL FLOOR, ROOF AND WALL SHEATHING WITH STRENGTH AXIS (LONG DIMENSION OF UNCUT PANEL) ACROSS SUPPORTS.
11. INSTALL SHEATHING SO THAT END JOINTS ARE STAGGERED 48".
12. MINIMUM PANEL WIDTH SHALL BE 24". WHERE PANEL JOINTS ARE LESS THAN 24" INSTALL PANEL CLIPS @ 12"o.c. OR PROVIDE SOLID BLOCKING ALONG NARROW PANEL EDGES.
13. PROVIDE 1/8" GAP MINIMUM AT EDGE JOINTS AND 1/8" GAP MINIMUM AT END JOINTS.

1 STRUCTURAL GENERAL NOTES

No.	Description	Date

6541 ORIOLE DRIVE, DALLAS, TEXAS

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FIRM # F-12395

Project number	2543
Date	12/16/21
Drawn by	
Checked by	

STRUCTURAL GENERAL NOTES

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Scale 12" = 1'-0"

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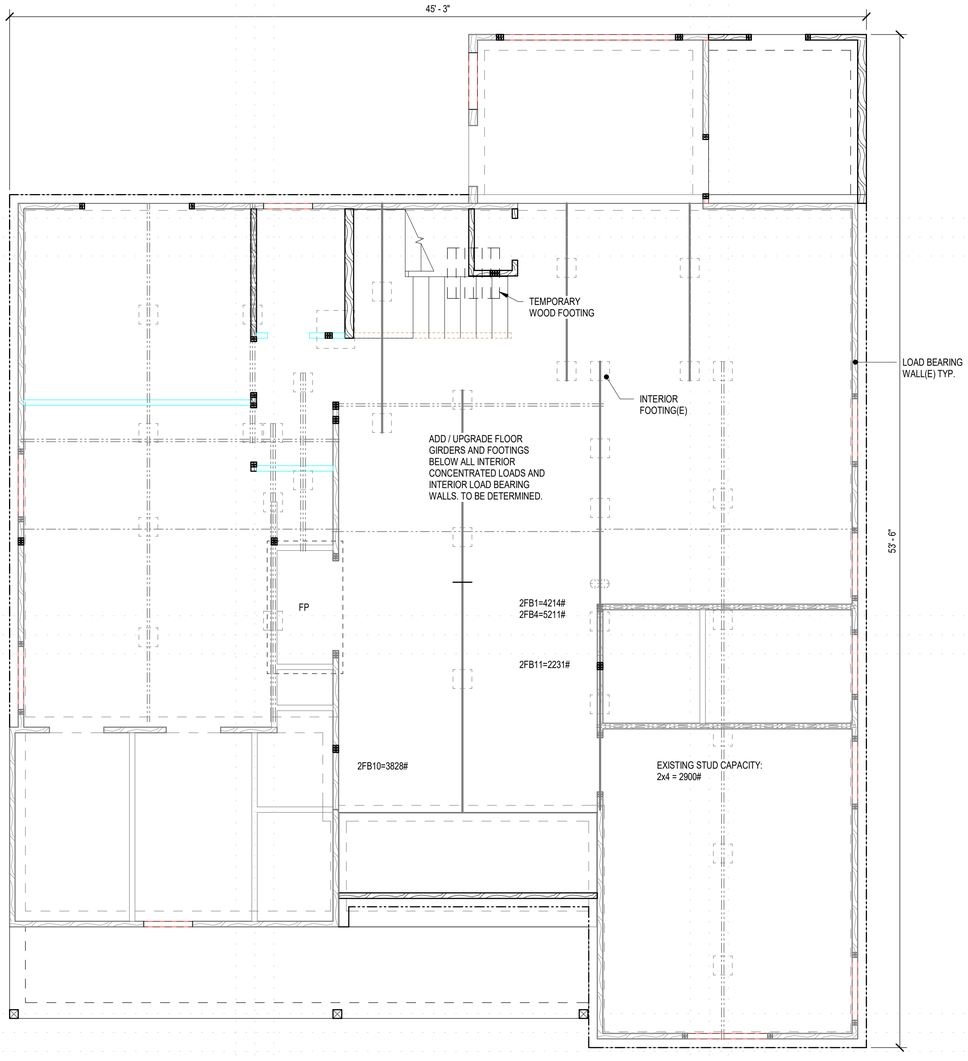
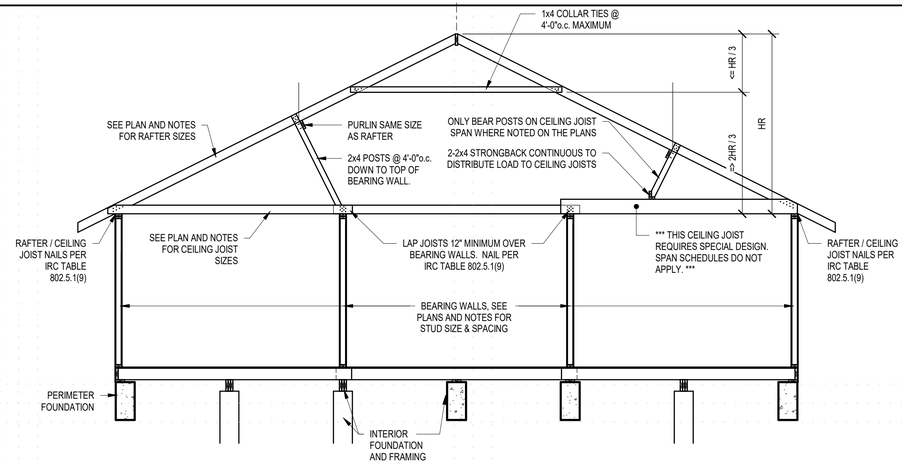


PLAN NOTES - INVESTIGATION, EVALUATION AND PRELIMINARY MEMBER SIZES

1. THIS DRAWING IS RELEASED FOR INFORMATION ONLY AND IS AN INSTRUMENT TO DOCUMENT THE STRUCTURAL INVESTIGATION OF EXISTING AND NEW IN PLACE FRAMING.
2. REFER TO THE FRAMING SCHEDULE - REMEDIAL FOR NEW AND REPLACEMENT FRAMING WHERE IN PLACE MEMBERS ARE OVERLOADED OR SUBSTANDARD.
3. FINAL MEMBER SIZES ARE BEING DEVELOPED.
4. NOTE THAT SOME STRUCTURAL FRAMING REMAINS HIDDEN AND A BEST GUESS WAS MADE ABOUT THESE HIDDEN ITEMS.
5. ANY STRUCTURAL FRAMING SHOWN ON THIS PLAN WITH A RED LINE IS SUBSTANDARD BASED ON CURRENT STRUCTURAL ANALYSIS.
6. NOTE THAT THE STRUCTURAL ANALYSIS IS ONGOING AND SUBSTANDARD STRUCTURAL FRAMING IS SUBJECT TO CHANGE AS THE ANALYSIS BECOMES MORE DETAILED.

(1) Level 1
1/4" = 1'-0"



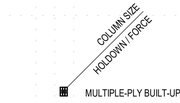
BRACED RAFTER CONSTRUCTION NOTES:

1. SPANS FOR RAFTERS AND CEILING JOISTS SHALL BE IN ACCORDANCE WITH THE TYPICAL CODE MINIMUM WOOD FRAMING SPAN SCHEDULE, TYPICAL WOOD FRAMING SPAN SCHEDULE, OR AS REQUIRED BY THE LATEST INTERNATIONAL BUILDING CODE UNLESS RAFTER AND CEILING JOIST SIZES ARE NOTED ON THE FRAMING PLANS.
2. INSTALLATION OF PURLINS TO REDUCE THE SPAN OF RAFTERS IS PERMITTED AS SHOWN. PURLINS SHALL BE SIZED NO LESS THAN THE REQUIRED SIZE OF RAFTERS THAT THEY SUPPORT. PURLINS SHALL BE CONTINUOUS AND SHALL BE SUPPORTED BY 2-INCH BY 4-INCH BRACES INSTALLED TO BEARING WALLS AT A SLOPE NOT LESS THAN 45 DEGREES FROM THE HORIZONTAL. THE BRACES SHALL BE SPACED NOT MORE THAN 4 FEET ON CENTER AND UNBRACED LENGTH OF BRACES SHALL NOT EXCEED 8 FEET.

(3) BRACED RAFTER CONSTRUCTION - WITH FOUNDATION
1/4" = 1'-0"

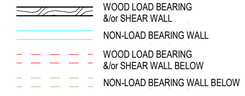
CODE MINIMUM WOOD FRAMING SPAN SCHEDULE

TYPE	SPACING	SPECIES	GRADE	FLOOR JOIST, CEILING JOIST & ROOF RAFTER MAXIMUM SPANS				
				2x4	2x6	2x8	2x10	2x12
RAFTER - NO CEILING DEAD LOAD = 10 PSF LIVE LOAD = 20 PSF ℓ /Δ = 180 (TABLE 44)	12"	SOUTHERN PINE	#2	10'-4"	15'-7"	19'-8"	23'-5"	N/A
	16"	SOUTHERN PINE	#2	9'-0"	13'-6"	17'-1"	20'-3"	N/A
	24"	SOUTHERN PINE	#2	7'-4"	11'-0"	13'-11"	16'-6"	N/A
RAFTER - CEILING DEAD LOAD = 20 PSF LIVE LOAD = 20 PSF ℓ /Δ = 240 (TABLE 43)	12"	SOUTHERN PINE	#2	N/A	13'-6"	17'-1"	20'-3"	23'-10"
	16"	SOUTHERN PINE	#2	N/A	11'-8"	14'-9"	17'-6"	20'-8"
	24"	SOUTHERN PINE	#2	N/A	9'-6"	12'-1"	14'-4"	16'-10"
RAFTER - NO CEILING DEAD LOAD = 20 PSF LIVE LOAD = 20 PSF ℓ /Δ = 180 (TABLE 46)	12"	SOUTHERN PINE	#2	9'-0"	13'-6"	17'-1"	20'-3"	N/A
	16"	SOUTHERN PINE	#2	7'-9"	11'-8"	14'-9"	17'-6"	N/A
	24"	SOUTHERN PINE	#2	6'-4"	9'-6"	12'-1"	14'-4"	N/A
CEILING JOIST NO STORAGE DEAD LOAD = 5 PSF LIVE LOAD = 10 PSF ℓ /Δ = 240 (TABLE 15)	12"	SOUTHERN PINE	#2	11'-10"	18'-8"	24'-7"	>26'-0"	N/A
	16"	SOUTHERN PINE	#2	10'-9"	16'-11"	21'-7"	25'-7"	N/A
	24"	SOUTHERN PINE	#2	9'-3"	13'-11"	17'-7"	20'-11"	N/A
CEILING JOIST LIMITED STORAGE DEAD LOAD = 10 LIVE LOAD = 20 PSF ℓ /Δ = 240 (TABLE 16)	12"	SOUTHERN PINE	#2	9'-3"	13'-11"	17'-7"	20'-11"	N/A
	16"	SOUTHERN PINE	#2	8'-0"	12'-0"	15'-3"	18'-1"	N/A
	24"	SOUTHERN PINE	#2	6'-7"	9'-10"	12'-6"	14'-9"	N/A
FLOOR JOIST DEAD LOAD = 10 PSF LIVE LOAD = 40 PSF ℓ /Δ = 360 (TABLE 2)	12"	SOUTHERN PINE	#2	N/A	10'-3"	13'-6"	16'-2"	19'-1"
	16"	SOUTHERN PINE	#2	N/A	9'-4"	11'-10"	14'-0"	16'-6"
	24"	SOUTHERN PINE	#2	N/A	7'-7"	9'-8"	11'-5"	13'-6"
FLOOR JOIST DEAD LOAD = 20 PSF LIVE LOAD = 40 PSF ℓ /Δ = 360 (TABLE 5)	12"	SOUTHERN PINE	#2	N/A	9'-10"	12'-6"	14'-9"	17'-5"
	16"	SOUTHERN PINE	#2	N/A	8'-6"	10'-10"	12'-10"	15'-1"
	24"	SOUTHERN PINE	#2	N/A	6'-11"	8'-10"	10'-5"	12'-4"
FLOOR JOIST DEAD LOAD = 10 PSF LIVE LOAD = 50 PSF ℓ /Δ = 360 (TABLE 3)	12"	SOUTHERN PINE	#2	N/A	9'-6"	12'-6"	14'-9"	17'-5"
	16"	SOUTHERN PINE	#2	N/A	8'-6"	10'-10"	12'-10"	15'-1"
	24"	SOUTHERN PINE	#2	N/A	6'-11"	8'-10"	10'-5"	12'-4"
FLOOR JOIST DEAD LOAD = 10 PSF LIVE LOAD = 100 PSF ℓ /Δ = 360 (TABLE 11)	12"	SOUTHERN PINE	#2	N/A	7'-3"	9'-2"	10'-11"	12'-10"
	16"	SOUTHERN PINE	#2	N/A	6'-3"	8'-0"	9'-5"	11'-2"
	24"	SOUTHERN PINE	#2	N/A	5'-2"	6'-6"	7'-9"	9'-1"



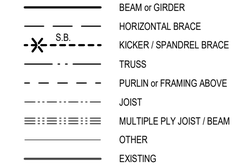
1. POSTS START AT THE LEVEL WHERE TAGGED AND EXTEND UP TO SUPPORT FRAMING ABOVE.
2. SEE SCHEDULES FOR POSTS NOT NOTED ON THE PLANS. SCHEDULED POSTS EXTEND FROM LEVEL NOTED TO SUPPORT SCHEDULED FRAMING ABOVE.
3. HOLDOWNS WHERE REQUIRED MAY BE NOTED IN POST TAG.
4. POSTS WITH AXIAL FORCE NOTED ARE MAXIMUM EXPECTED FORCE IN POUNDS.
5. BUILT-UP POSTS AT JAMBS DEFINED SUCH AS 2x4-2J+1K = 3-2x4 POST, 2-JACK STUDS (J) PLUS ONE KING STUD (K).
6. POSTS MAY BE NOTED WITH A DIFFERENT GRADE, SUCH AS 2x4(No.2)-2J+1K.

WOOD POST LEGEND



LBW = LOAD BEARING WALL
NON-LBW = NON-LOAD BEARING WALL

WALL LEGEND



EXISTING FRAMING MAY BE SHOWN WITH DIFFERENT LINE TYPES AND WEIGHTS

FRAMING LEGEND

No.	Description	Date

6541 ORIOLE DRIVE, DALLAS, TEXAS

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214-828-9400
FIRM # F-12395

Project number	2543
Date	12/16/21
Drawn by	
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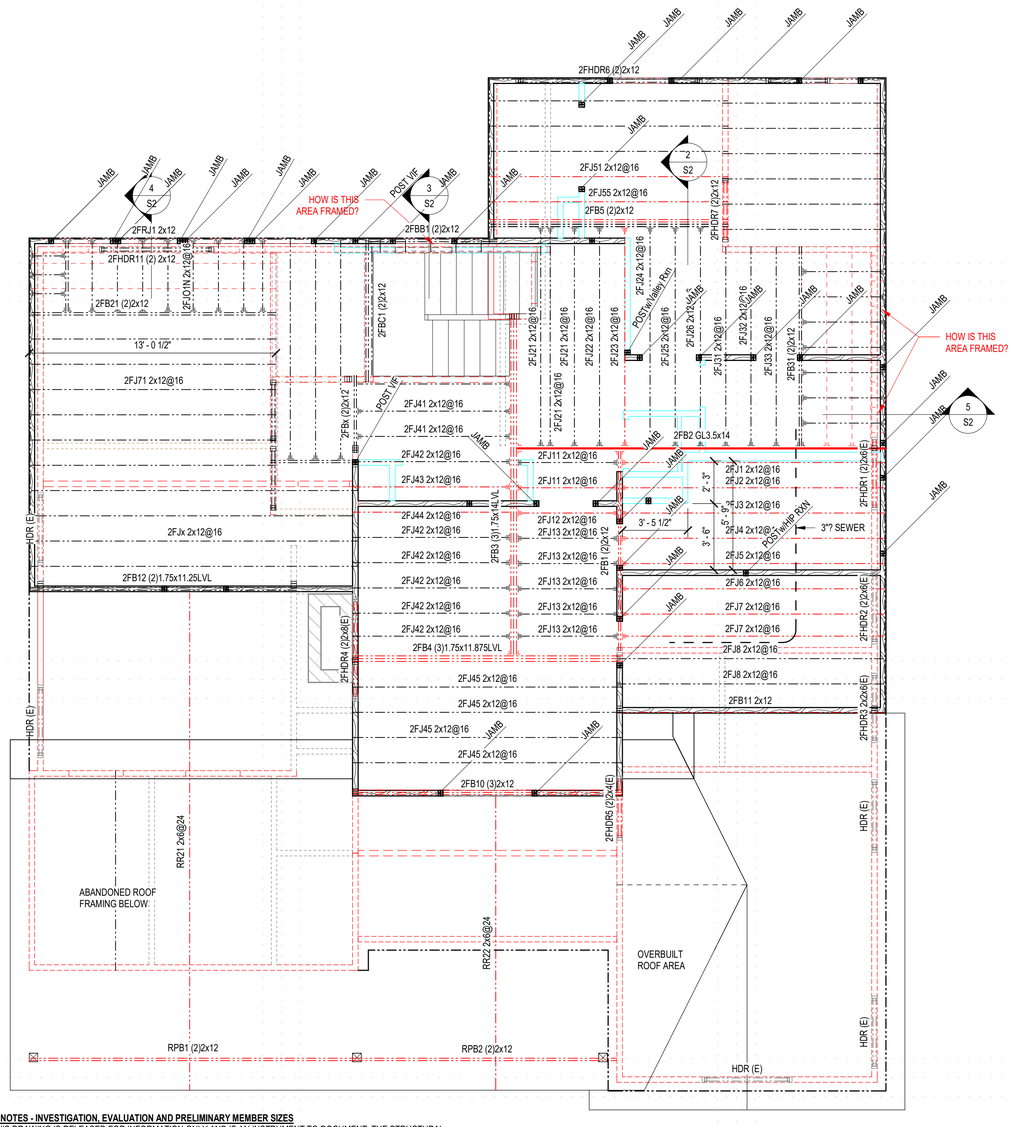
FOUNDATION & FIRST FLOOR FRAMING PLAN

S1

Scale: As indicated

12/16/2021 4:23:57 PM



PLAN NOTES - INVESTIGATION, EVALUATION AND PRELIMINARY MEMBER SIZES

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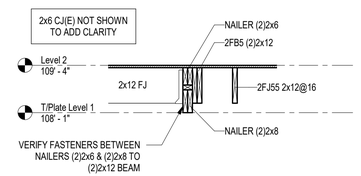
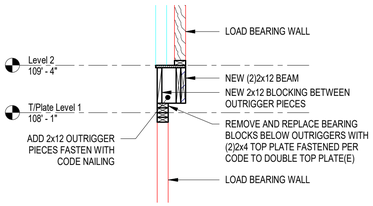
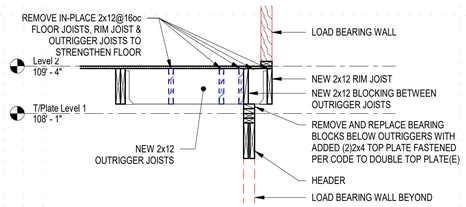
1 Level 2
1/4" = 1'-0"



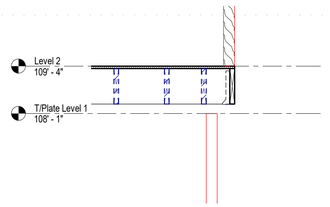
2 SECTION
1/2" = 1'-0"



3 SECTION
1/2" = 1'-0"



4 SECTION
1/2" = 1'-0"



5 SECTION
1/2" = 1'-0"

FRAMING SCHEDULE - REMEDIAL

MEMBER	REPLACE/ NEW	REPLACEMENT / REMEDIAL / NEW MEMBER	Comments	CONNECTOR L.E.	CONNECTOR R.E.	JST HANGER L.E.	JST HANGER R.E.
2FB1 (2)2x12	Yes	(2) 1.75X11.875 LVL	OVERLOADED BEAM				
2FB2 GL3.5x14	Yes	(3) 1.75X14 LVL	OVERLOADED & DAMAGED BEAM AND REROUTE PLUMBING				
2FB3 (3)1.75x14LVL	Yes	(4) 1.75X14 LVL	OVERLOADED BEAM				
2FB4 (3)1.75x11.875LVL	Yes	(3) 1.75X14 LVL	OVERLOADED FASTENERS & DAMAGE AT JOIST HANGER REQUIRES BEAM REPLACEMENT				
2FB5 (2)2x12	Yes	(2) 1.75X11.875 LVL	OVERLOADED BEAM				
2FB10 (3)2x12	Yes	(2) 1.75X11.875 LVL	OVERLOADED BEAM				
2FB11 2x12	Yes	(2) 1.75X11.875 LVL	OVERLOADED BEAM				
2FB21 (2)2x12	Yes		NEW BEAM	UPLIFT CONNECTOR TBD	UPLIFT CONNECTOR TBD		
2FB31 (2)2x12	Yes		NEW BEAM	UPLIFT CONNECTOR TBD	UPLIFT CONNECTOR TBD		
2FBB1 (2)2x12	Yes		NEW BEAM			HUC 210-2	
2FBC1 (2)2x12	Yes		NEW BEAM. FASTENERS @ HUC HANGER USE (6) SIMPSON SDW22300 SCREWS FAR SIDE OF BEAM	UPLIFT CONNECTOR TBD			
2FHDR1 (2)2x6(E)	Yes	(2) 1.75X7.25 LVL	OVERLOADED HEADER UPGRADE JAMB STUDS TBD				
2FJ1 2x12@16	Yes	(2) 2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			U210-2	
2FJ2 2x12@16	Yes	(2) 2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			U210-2	
2FJ3 2x12@16	Yes	(2) 2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			U210-2	
2FJ4 2x12@16	Yes	2x12@16	DAMAGED JOIST AND REROUTE PLUMBING			LU210	
2FJ5 2x12@16	Yes	(2) 2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			U210-2	
2FJ6 2x12@16	Yes	(2) 2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			U210-2	
2FJ7 2x12@16	Yes	2x12@16	OVERLOADED & DAMAGED JOIST AND REROUTE PLUMBING			LU210	
2FJ11 2x12@16	Yes	(2) 2x12@16	POSSIBLY OVERLOADED JOIST			U210-2	U210-2
2FJ12 2x12@16	Yes	(2) 2x12@16	POSSIBLY OVERLOADED JOIST			U210-2	U210-2
2FJ23 2x12@16	Yes	(2) 2x12@16	OVERLOADED JOIST			U210-2	U210-2
2FJ43 2x12@16	Yes	(2) 2x12@16	OVERLOADED JOIST				U210-2
2FJ44 2x12@16	Yes	(2) 2x12@16	OVERLOADED JOIST				U210-2
2FJ51 2x12@16	Yes	(2) 2x12@16	OVERLOADED JOIST				
2FJ55 2x12@16	Yes	(2) 2x12@16	OVERLOADED JOIST				
2FJO1N 2x12@16	Yes		NEW OUTRIGGER JOIST, INVERTED JOIST HANGER @ CANTILEVER END TO RIM JOIST			LU210	LU210
2FJO3 2x12@16	Yes	MODIFY	OVERLOADED FRAMING				
2FJO 2x12@16	Yes	REMOVE AND REPLACE	OVERLOADED FRAMING				
2FRJ1 2x12	Yes		NEW RIM JOIST				
CB1 (2)2x8	Yes	(3) 2x8	OVERLOADED BEAM				
CB2 (2)2x12	Yes	(2) 1.75X11.875 LVL	OVERLOADED BEAM				
CB3 (2)1.75x14LVL	Yes	VERIFY TAPERED END CUT	POSSIBLY OVERLOADED BEAM				
CB11 (2)2x8	Yes	(2) 1.75X9.25 LVL	OVERLOADED BEAM				
DBL 2FJO1N 2x12@16	Yes		NEW OUTRIGGER JOIST, INVERTED JOIST HANGER @ CANTILEVER END TO RIM JOIST			LU210	LU210
RPB1 (2)2x12	Yes	(3) 2x12 No.1 SP	OVERLOADED BEAM	UPLIFT CONNECTOR TBD	UPLIFT CONNECTOR TBD		
RPB2 (2)2x12	Yes	(3) 2x12	OVERLOADED BEAM	UPLIFT CONNECTOR TBD	UPLIFT CONNECTOR TBD		
RR21 2x6@24	Yes	ADD 2x6 SISTERS FULL LENGTH	OVERLOADED RAFTERS				
RR22 2x6@24	Yes	ADD 2x6 SISTERS FULL LENGTH	OVERLOADED RAFTERS				

No.	Description	Date

6541 ORIOLE DRIVE, DALLAS, TEXAS

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2201 TUCKER STREET
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214-828-9400
FIRM # F-12395

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SECOND FLOOR FRAMING PLAN

S2

Scale As indicated

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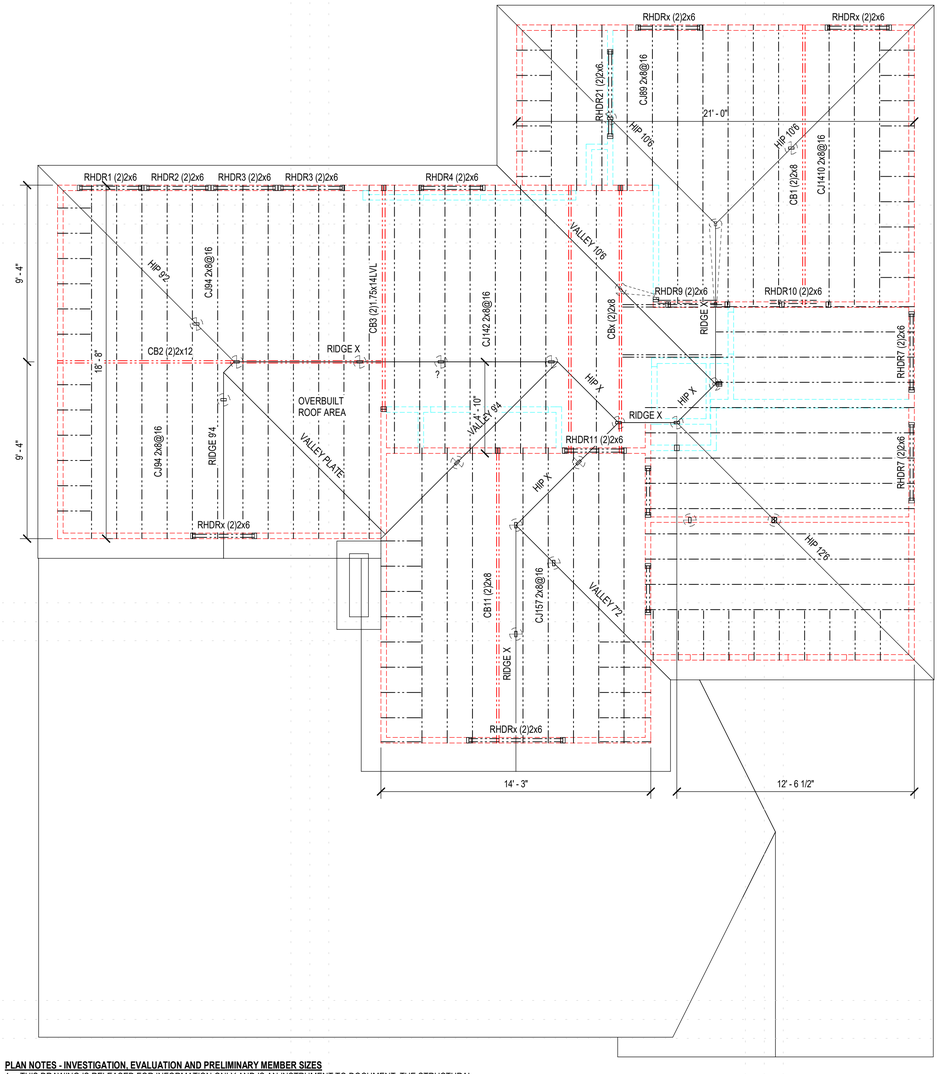

PLAN NOTES - INVESTIGATION, EVALUATION AND PRELIMINARY MEMBER SIZES

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1 Level 3
1/4" = 1'-0"

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No.	Description	Date

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Checked by	

ROOF FRAMING PLAN

S3

Scale 1/4" = 1'-0"

LAYMON
CONSULTING LLC
TX Firm #F-19205
PE #: 90800, Exp. Sept. 30, 2023

The Cockrum Residence

6541 Oriole Dr.
Dallas, TX 75209

Structural Review of Construction

(Photo prior to 2nd story addition from Google Maps Dec 2022. Image captures June 2015)

January 19, 2023

The following is a report by Laymon Consulting, LLC on the remodel construction at 6541 Oriole Dr. in Dallas, Texas. In particular, this report is an assessment on the lack of engineering and proper support for the second-floor construction.

I. DESCRIPTION AND BACKGROUND

The original residence is a single-family, wood-framed structure with brick, stone, and siding veneer and a composite shingle roof and constructed in 1947. The original foundation is a pier and beam foundation with wood floor joists spanning between wood beams resting on piers. Based on photos provided by the homeowner, the original piers appear to be stone blocks. During my visit, I noticed concrete cylinders also being used, which appear to have been added sometime in the past few decades to help support sagging joists, likely due to age. The cylindrical piers are supported on concrete pads. It is unknown if the stone blocks are supported directly on the ground, on a concrete spread footing, or on a wood or concrete pier embedded a certain depth below grade.

In my conversations with the homeowner, I was informed that the residence was remodeled once before in 2011. That remodel exposed all the studs and added a slab-on-grade portion to the back of the house creating a breakfast nook. The residence remained a one-story residence during this construction and no settlement issues occurred.

The current remodel began June 2020 with the meeting of the general contractor. Discussion of the floor plans began in July 2020 and continued through September 2020 when the construction documents were released. Those drawings were issued by Smith Custom Design and contained the architectural elevations, architectural floor plans and roof plan, and electrical layout.

The foundation engineer, Nortex Foundation Designs, visited the site in September 2020 and provided foundation plans for the slab-on-grade portions of the remodel on November 30, 2020. Foundation for any new interior point loads from new beams were not shown on these plans.

Demolition and framing of the new second floor and roof began in May 2021. Framing plans and interior foundation plans are nonexistent during this phase of construction. However, there are photos available showing a field construction set of City of Dallas Approved plans dated March 23, 2021, with hand drawn framing comments on them. I am informed by the homeowner that these are the drawings used to construct the second floor and roof frame of the remodel.

By August 2021, 3 months after framing began, the first floor was beginning to sag and was brought to the attention of the general contractor. A foundation repair company, H&H, provided a repair exhibit on September 14, 2021, showing recommended new pier locations to attempt to bring the house back to level. During my visit on June 10, 2022, it did not appear that any attempt was made to bring the house back to level in accordance with the H&H

exhibit. A mat of 6x6 pressure treated lumber was placed under a large new point load under the new stairs to stop the deflection and prevent any failures from occurring.

A third-party structural engineer, Patrick J. Moore, P.E., with Moore Engineers was hired by the homeowner on September 20, 2021, to begin a review of the framing and foundation and to provide feedback on his structural concerns. Mr. Moore provided his investigation and repair recommendations in a letter dated December 16, 2021, noting multiple framing deficiencies and foundation issues that were still being evaluated at that time. Nortex Foundation Design was hired by Homecorp to visit Mr. Moore at the site on January 4, 2022, to review the deficiencies in person with Mr. Moore and to propose solutions to those issues. Nortex provided a list of proposed corrective actions in a letter dated March 23, 2022. Mr. Moore responded on April 18, 2022, recommending Homecorp provide a complete signed and sealed set of structural repair drawings.

I was contacted in May 2022 to help supplement the work of Mr. Moore as he was having medical issues during this time. I visited the site on June 10, 2022, reviewed the framing and the first-floor deflection issues, and performed my own calculations as to the adequacy to the framing and foundation. I reviewed all the correspondence and drawings provided to me of Moore Engineers and Nortex Foundation Design and came to the same conclusion as Mr. Moore in terms of what the issues were with the framing.

II. THE ISSUE

There are two main issues with this remodel: one, the framing, particularly the main support beams for the second-floor framing, are not adequately sized to support the gravity loads; two, the builder did not give any regard to the foundation for the additional weight imposed upon it by the addition of a second floor. Thus, the new second floor framing has caused damage to the original foundation and first floor framing. Both issues appear to have been an afterthought and not considered before construction began. Also, Article 6.2 in the contract between HomeCorp and The Cockrums signed on January 26, 2021, states “all work shall be completed in a workman like manner, and shall comply with all applicable national, state and local building codes and laws.” Had this been done, the issues would not have materialized.

III. OBSERVATIONS AND RECOMMENDATIONS

My observations and recommendations will be organized from the roof framing down to the foundation. This is the load path of the structure and thus makes sense as to how to describe these issues and reasonable repairs.

The roof rafters are the sloped members of the roof. They are connected at the top of the rafter to the ridge and at the bottom of the rafter to the top plate of the wall. These members see the force of the wind and therefore must be attached to resist uplift caused by wind. To keep the top of the rafters from detaching from the ridge, a collar tie is used below the ridge that connects the rafters together that are mirrored each other on either side of the ridge.

These collar ties can be seen in **[Photo 1]**. However, not all rafters had collar ties and thus collar ties are to be added to the framing in the areas they were omitted as seen in **[Photo 2]**. See *Detail 1* for the recommended repair detail.

To keep the bottom of the rafters from uplifting off the wall, a metal clip is used attaching the rafter to the wall as can be seen in **[Photo 3]**. These clips were added after-the-fact as noted by the removal of the sheetrock and the attachment of the clips over the membrane instead of under it. However, it is not known whether these clips were added everywhere. For example, behind the shower wall as seen in **[Photo 4]**. These clips need to be in place prior to finishing construction.

The roof rafters also see the effects of gravity and objects, animals, and people on top of them. These forces and loads force the rafters down. As those rafters move down, because of their length and slope, they push the walls out. To counteract this outward force on the walls and downward force on the rafters, ceiling joists are nailed to the rafter ends at the top of the walls to act as tension members and completing a field-built truss. These ceiling joists ensure that everything stays in its place. **[Photo 3]** shows a good example of the ceiling joists framed to the roof rafters. **[Photo 5]**, on the other hand, shows ceiling joists not tied to the roof rafters. The repair for this condition will require additional ceiling joists placed adjacent to and nailed to the roof rafters as indicated in *Detail 2*.

Because this is a hipped roof, meaning the roof slopes go from the ridge to the walls in all directions, thus creating a hip when the wall turns ninety degrees, the outward push occurs on all walls. There will be some walls where the roof rafters are perpendicular to the main run of ceiling joists because of a turn in the wall. When that occurs, ceiling joists must also be turned ninety degrees to always be parallel with the rafters. The attached *Detail 3* shows that the last main ceiling joists must be tripled to help carry the load of the short perpendicular ceiling joists.

The roof rafters and ceiling joists are all supported of beams strategically placed throughout the ceiling joist framing. These supports are posts from the underside of the ridge, hip, or valley members to a beam within the ceiling joist framing. Several of those members have been checked with wood engineering standards and found to be lacking in either bending, deflection, or both. Some of these locations will require shoring of the joists to remove and replace the beams with the required size members. The locations of the beams as well as the required repair for those beams can be found in *Detail 5*. It should also be noted that all beams constructed with two or more members shall be attached mechanically with nails, screws, or bolts as shown in *Detail 4*. **[Photo 6]** shows an example in the existing framing as to what happens to the beam plies if they are not attached together. This will lead to a beam failure if not remedied properly.

The second-floor framing supports the gravity load for dead and live loads on the second floor as well as supports roof load in some locations. For the most part, the floor joists are adequately sized. However, some have been damaged with bored holes too large per code standards. See *Detail 6* for hole allowances and replace all joists that do not comply. This

typically occurs above the kitchen and below the second-floor bathrooms. It is my preference that no holes greater than one inch be bored through the framing and furrdowns be created to accommodate the mechanical and plumbing.

For floor joists to stay plumb and not "roll", blocking is typically used between the floor joists at the bearing ends of the joists. When a floor joist is attached to the face of a beam with hangers, that blocking is not required. However, when the floor joist rests on top of the wall, 2x blocking the same depth as the joists must be used between the joists to always keep them vertical. See **[Photo 7]** and **[Photo 8]** for examples. Install blocking between all joists over all bearing walls and attach them to the joists with two (2) eight penny nail toenails on each end of the blocking.

There are some floor joists that cantilever over the first-floor wall to provide a flush and smooth transition between the second-floor siding and first floor brick façade. To achieve this properly, framing must be turned perpendicular to one another, like the ceiling joist framing when the exterior wall turns ninety degrees. The location of this framing and their remedies can be found in the attached *Detail 7* and *Detail 8*.

The new front patio framing also has a couple of issues. One, the posts do not have any anchorage to the foundation. I would recommend using the Simpson retrofit post base, RPBZ, to provide the appropriate anchorage at each of the posts. The corner posts will require only one (1) RPBZ and the interior posts will require two (2) RPBZ. The second issue is the roof over the patio visually appears to be sloping downward from right to left. This slope was not present when I visited the residence in June last year and has been slowly increasing since then. This potentially points to an issue with the foundation, which will be discussed later in this report. A third patio framing issue concerns a lack of any connection between the front patio beams and the posts. Should the beams be lifted to level, a Simpson post cap, PCZ, can be installed between the top of the post and the bottom of the beam at that time. Use an EPCZ for the end posts and a PCZ for the interior posts. If the beams are not lifted, then Simpson SDWC15600 screws can be used to anchor the beams to the post per *Detail 19*.

The large open area above the kitchen and living room could not be achieved without the use of large beams supporting the floor joists. I have reviewed the engineering for each of these beams and have found most of them to be insufficient. There are repairs that can be made to each of these beams to provide the adequate framing necessary to support the second floor. The locations and repairs needed can be foundation in *Details 9 through 14*.

Furthermore, these beams all need proper support between the second- and first-floor framing. Currently, none of the beams have the proper post, or stud pack, needed to carry the loads down. The posts should be studs nailed together with eight penny nails spaced at twelve inches on center along the length of the studs. The number of plies needed shall be greater than or equal to the width of the beam supported by the posts. See *Detail 15* for the required locations.

With the roof and floor loads now supported down to the first-floor framing, those loads need to transfer into the ground. The existing first floor framing appears to be the original framing: 2x6 joists spaced at sixteen inches on center resting on triple 2x6 beams spanning between stone block piers **[Photo 9]**. It is unknown if those stone blocks bear directly on grade or are supported by a wood or concrete pier or a concrete spread footing below them. The original perimeter footing is poured concrete. There is one photo **[Photo 10]** taken by the homeowner which may suggest the perimeter grade beam is supported on a pier, although this cannot be confirmed without digging under the perimeter footing in several locations. There are also cylindrical concrete piers supported on concrete pads **[Photo 11],** suggesting that were likely added after the original construction. A new pad consisting or 6x6 timbers laid horizontally was added under the new beam at the stairwell **[Photo 12]** to stop the floor deflection due to a lack of foundation support prior to constructing the new framing.

No analysis was presented showing any thought was considered for supporting a new second floor on a foundation that was designed only for a single-story residence. The existing pier and beam foundation cannot be added upon without first considering the foundation and determining where new foundation supports need to be added prior to going up with new framing. Adding a second floor doubles the load on the existing foundation and framing, which were only designed for a single-story load. Adding a second floor without considering the existing foundation will lead to movements and damage to the original foundation.

There was a foundation design presented for the slab-on-grade foundations at the front and back of the residence. These foundation drawings did not take into account any of the interior changes in the residence. However, adding a slab-on-grade foundation to a pier and beam foundation is likely to cause future differential movements between those foundations and potential future structural issues.

I have followed the load path of the new framing down through the foundation and have developed a potential plan for supporting the new load. The attached *Detail 16* shows existing pier locations provided by the homeowner based on a survey personally done by the homeowner. I have also shown where new piers need to be constructed to support the new framing conditions as well as where existing joist framing needs reinforced to also support new bearing walls and loading conditions. The foundation system currently has three foundation types, thus providing differential movements between the different types of foundation. In an effort to reduce the foundation types and get the foundation to act more uniformly, I recommend adding piers around the perimeter of the original foundation as well as around the perimeters of the new slab-on-grade foundations. I also recommend that the existing interior piers be replaced to match the interior piers required for the new loads from the second floor. This will ensure a more uniform foundation without the differential movements, which is how the foundation performed for the homeowner prior to the addition of the second floor. *Detail 17* shows the new pier and footing construction to be used. This pier detail is based on the allowable bearing load of 1,500 psf per 2015 IRC Table R401.4.1 for CL, ML, MH and CH soils, which are abundant in the Dallas area. The new piers around the old and new foundation perimeters should be steel piles down to refusal.

There are two final items of note mentioned in the report provided by Mr. Moore on December 16, 2021. Those are the width of the stairs being out of compliance with the building code and the height of the chimney being out of compliance with the building code. While both items are architectural in nature and not structural, I did provide a ***Detail 18*** for extending the chimney brick to the required height. The stair width issue will need to be handled by an architect, a building designer, or through a variance with the city, but is not a structural issue unless it starts to interfere with the new framing installation.

IV. CONCLUSIONS

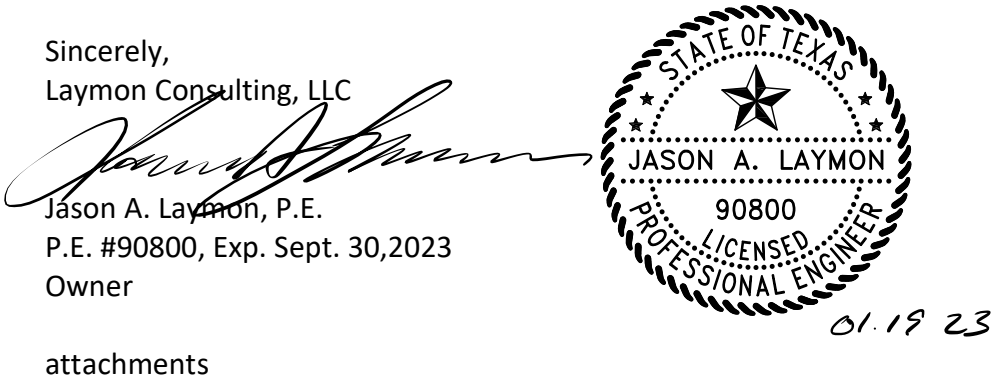
It is my professional opinion that the current framing and foundation conditions are in structural failure mode and render the residence not safe for habitation. Furthermore, I believe the repairs stated above are reasonable and necessary to bring the structure back into code compliance and to be deemed structurally sound.

I believe the general contractor proceeded with framing prior to accounting for the load paths and preparing the foundation to handle the new loading. I further believe that because the foundation was never thought through at the beginning of this project, nor taken into account until deflections, settlements, and sheetrock cracking started to show, that the new framing caused severe damage to the existing structure and foundation. It is my opinion, the general contractor's failure to consider the effects of the new framing on the existing foundation, along with the deficient size of the beam framing, has led to the structural failure, inadequacies, and damage currently existing in the structure and foundation.

I believe if the recommended repairs stated above are completed, the residence can be brought back into code compliance and be considered structurally stable.

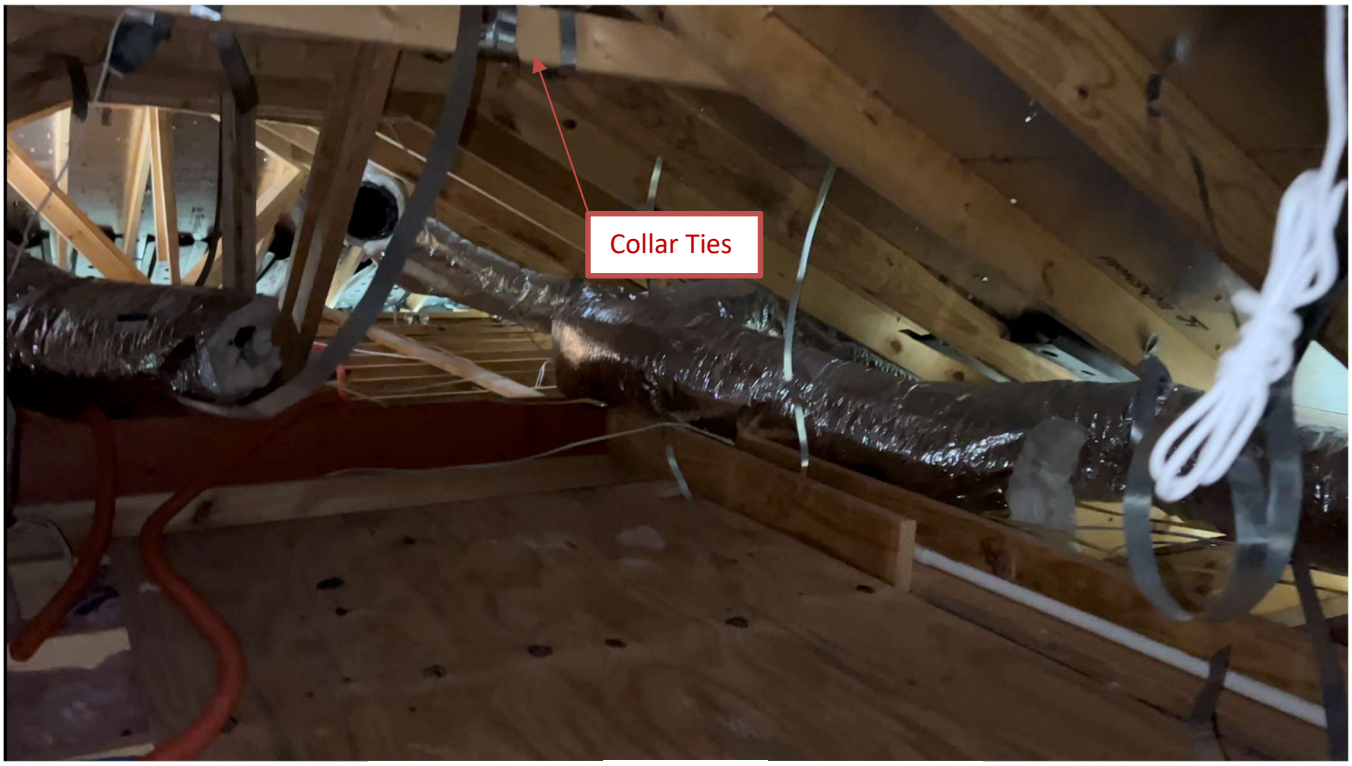
I trust the above is responsive to your needs. I will remain available to meet with you and to provide any additional assistance or review any other requests or ideas as may be required for you to restore this structure. I do reserve the right to append this report upon the availability of any additional information.

Sincerely,
Laymon Consulting, LLC



Jason A. Laymon, P.E.
P.E. #90800, Exp. Sept. 30,2023
Owner

attachments



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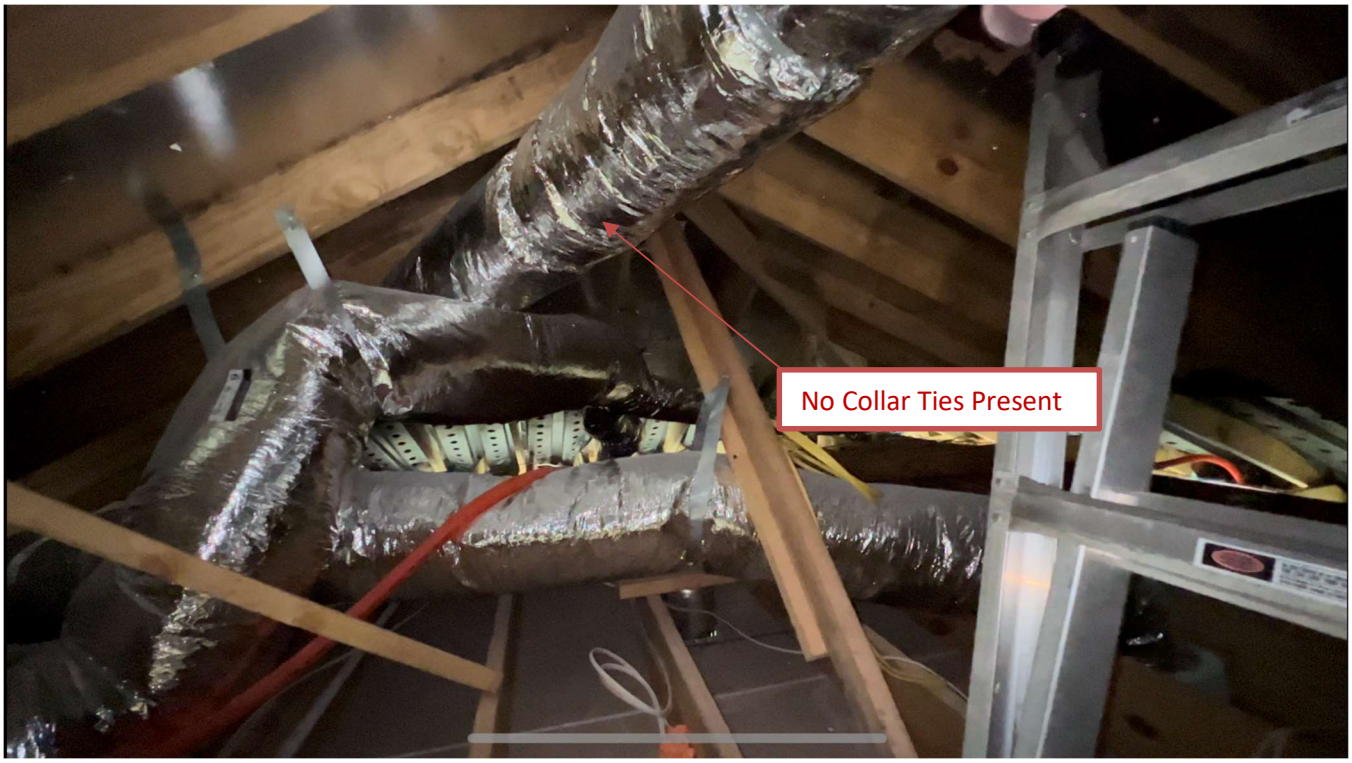

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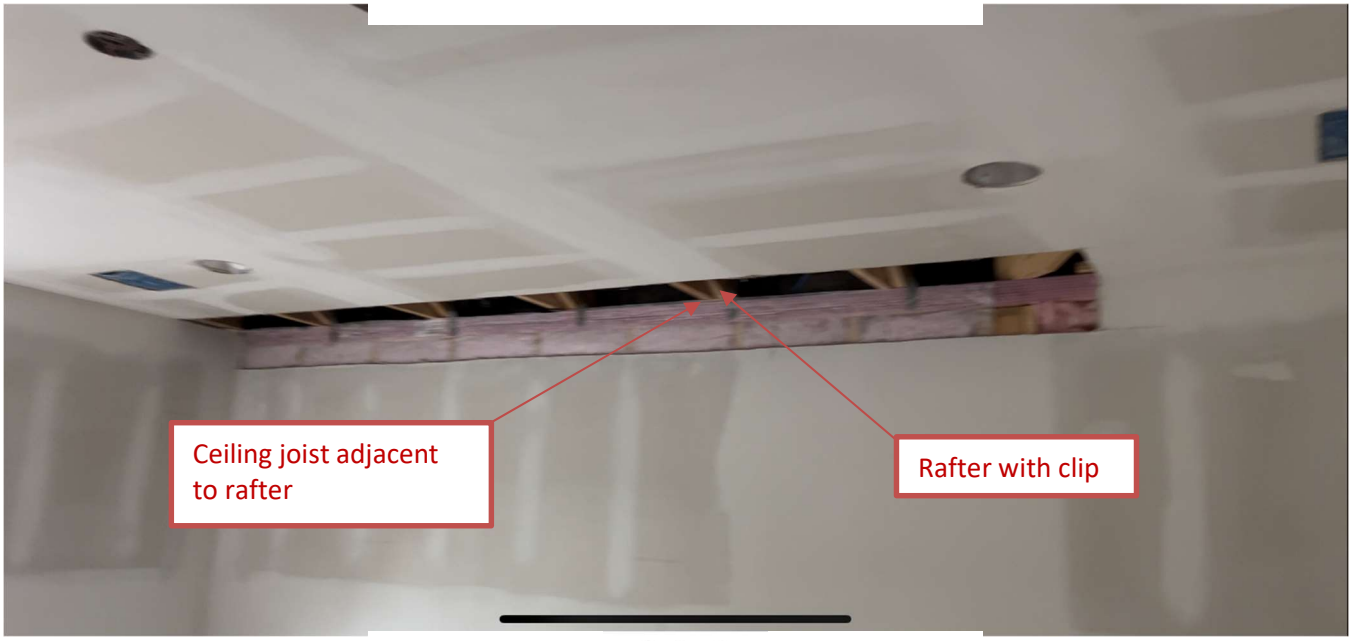
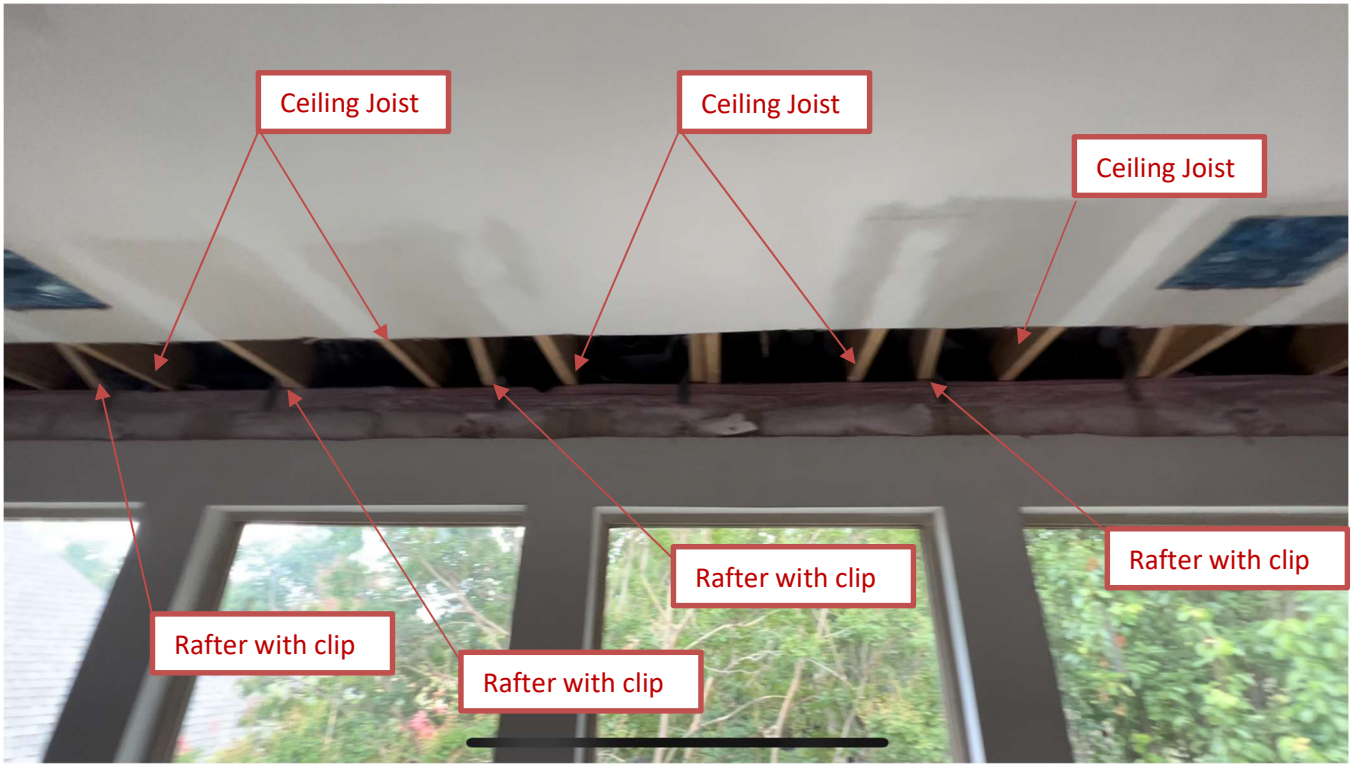


Photo 3

Photo 4



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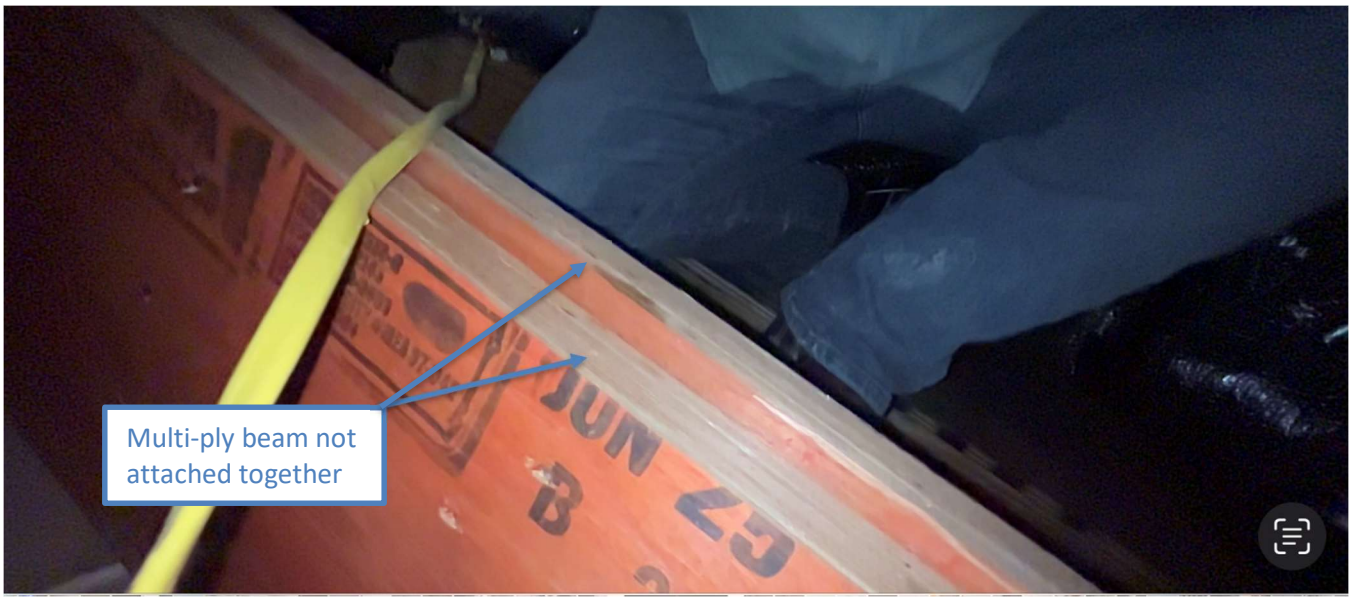
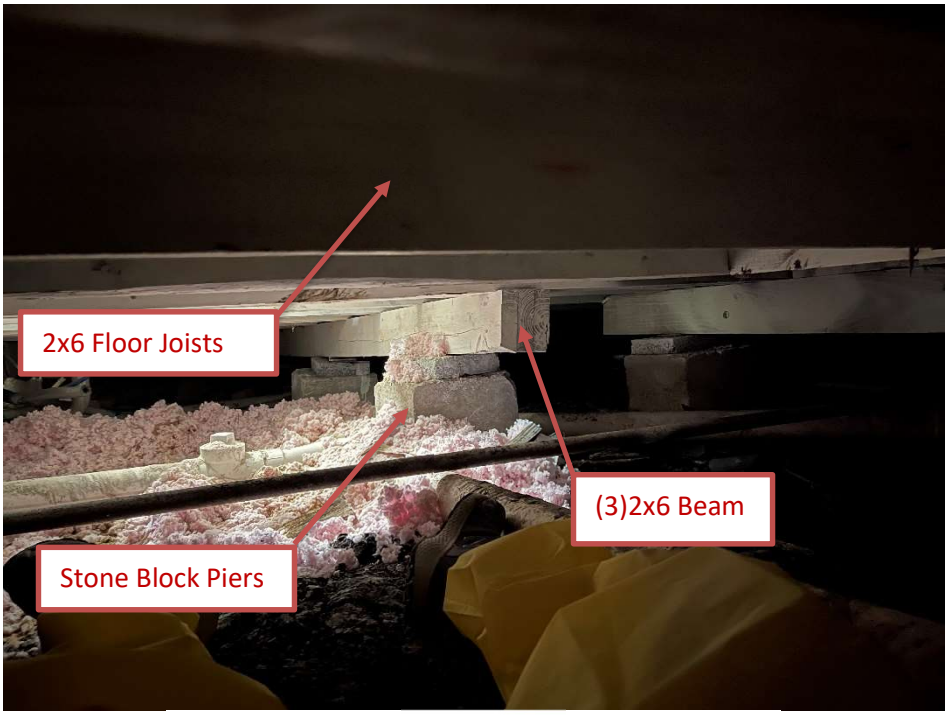


Photo 6

Photo 7

Photo 8



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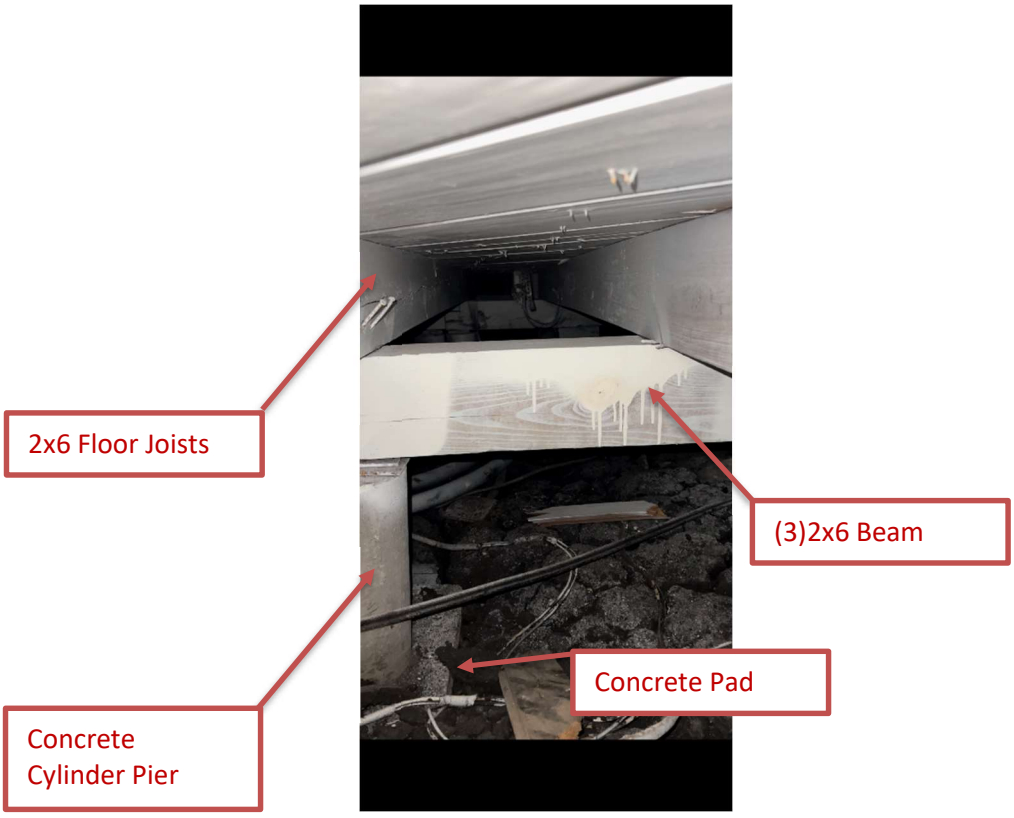

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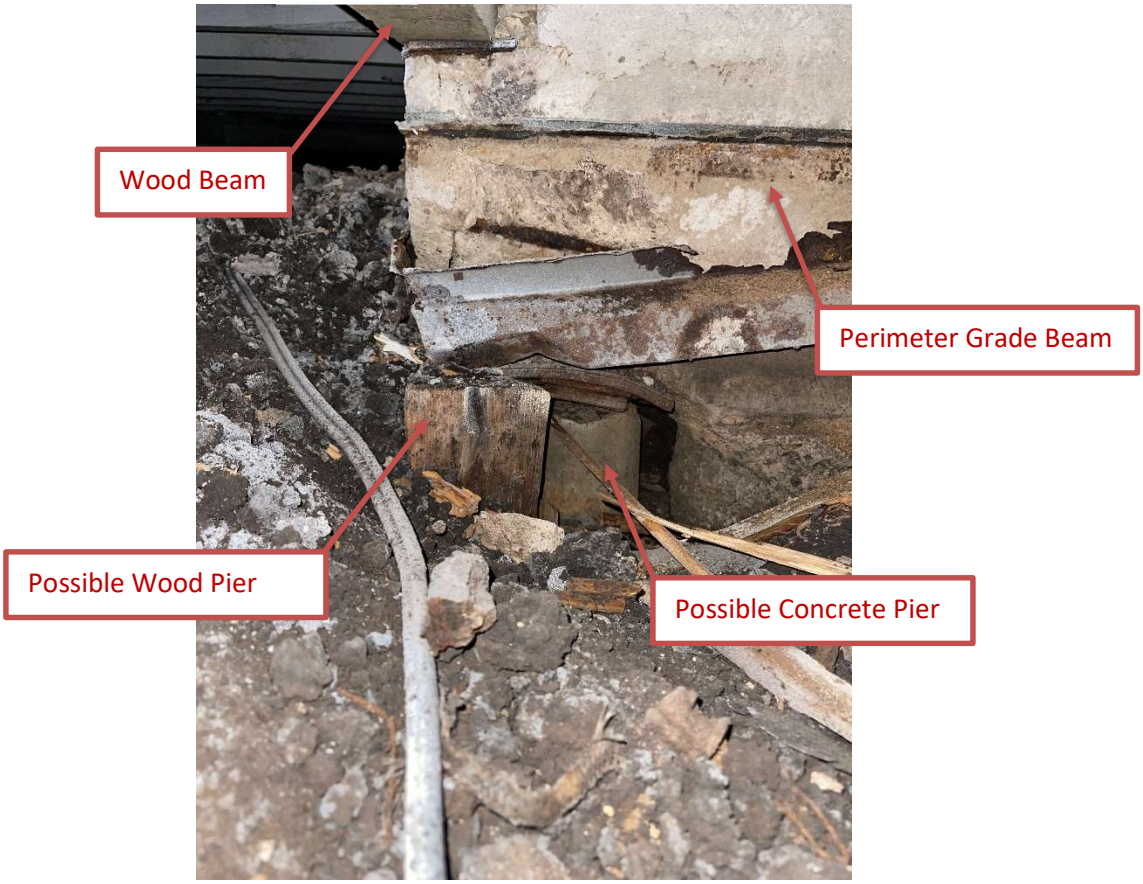

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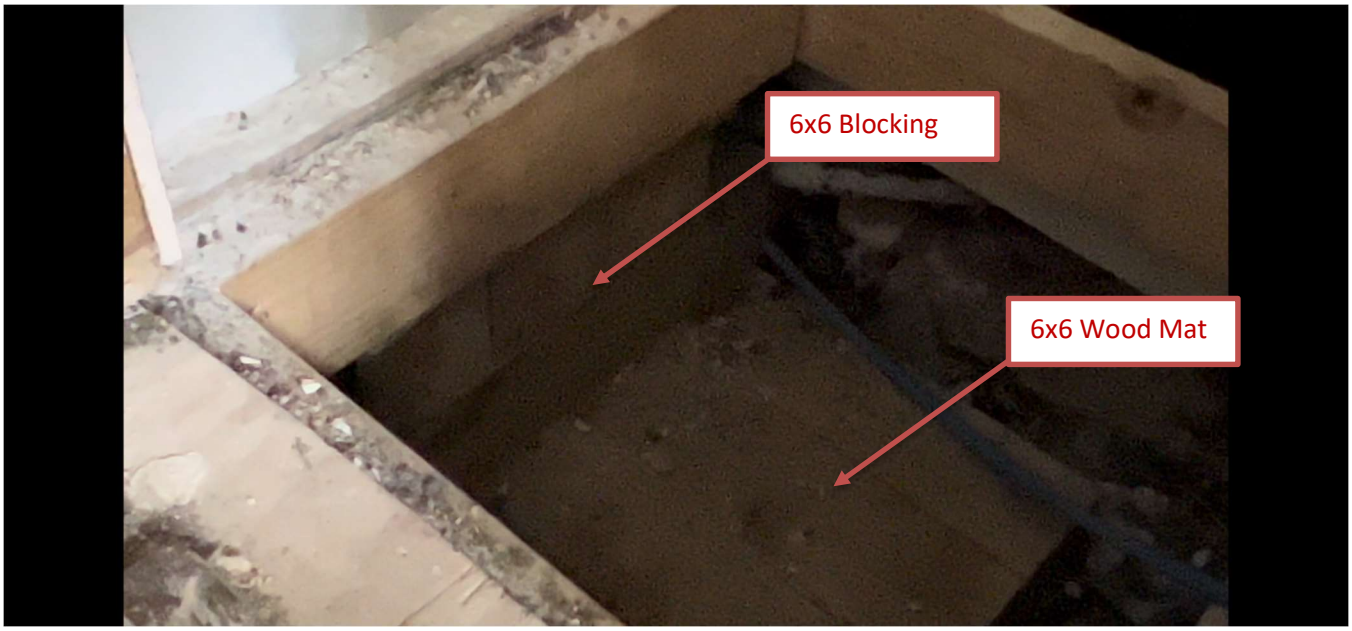

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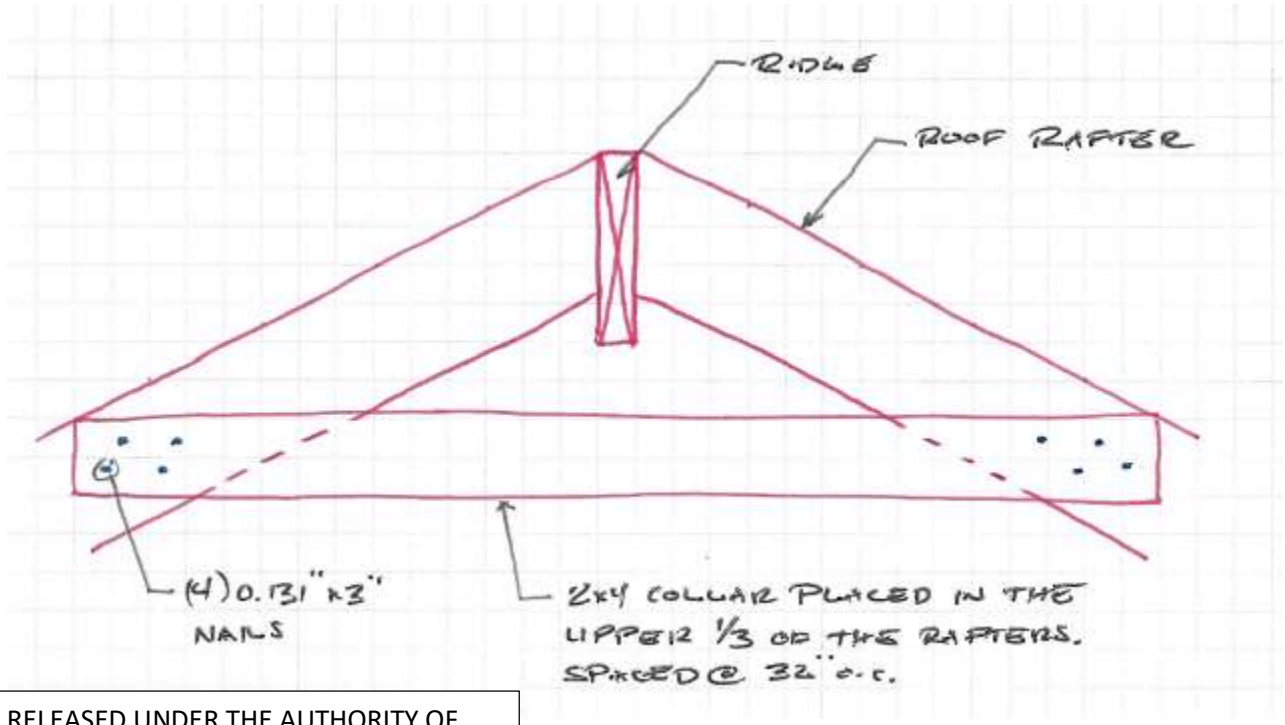

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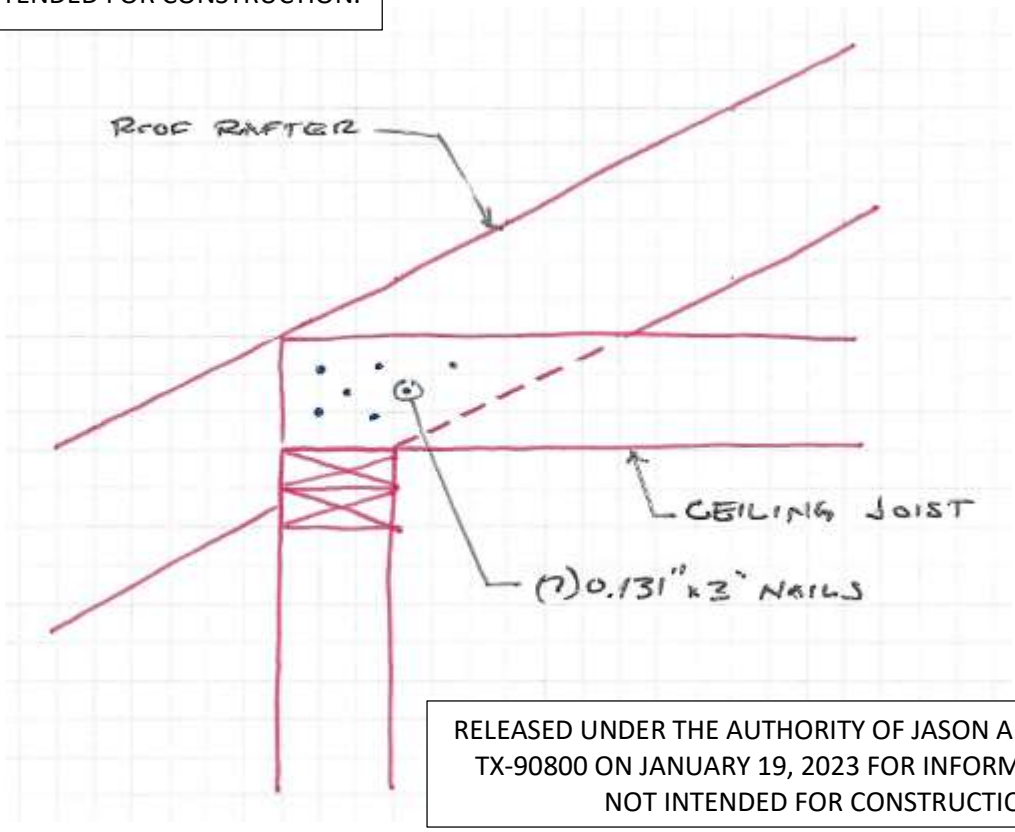

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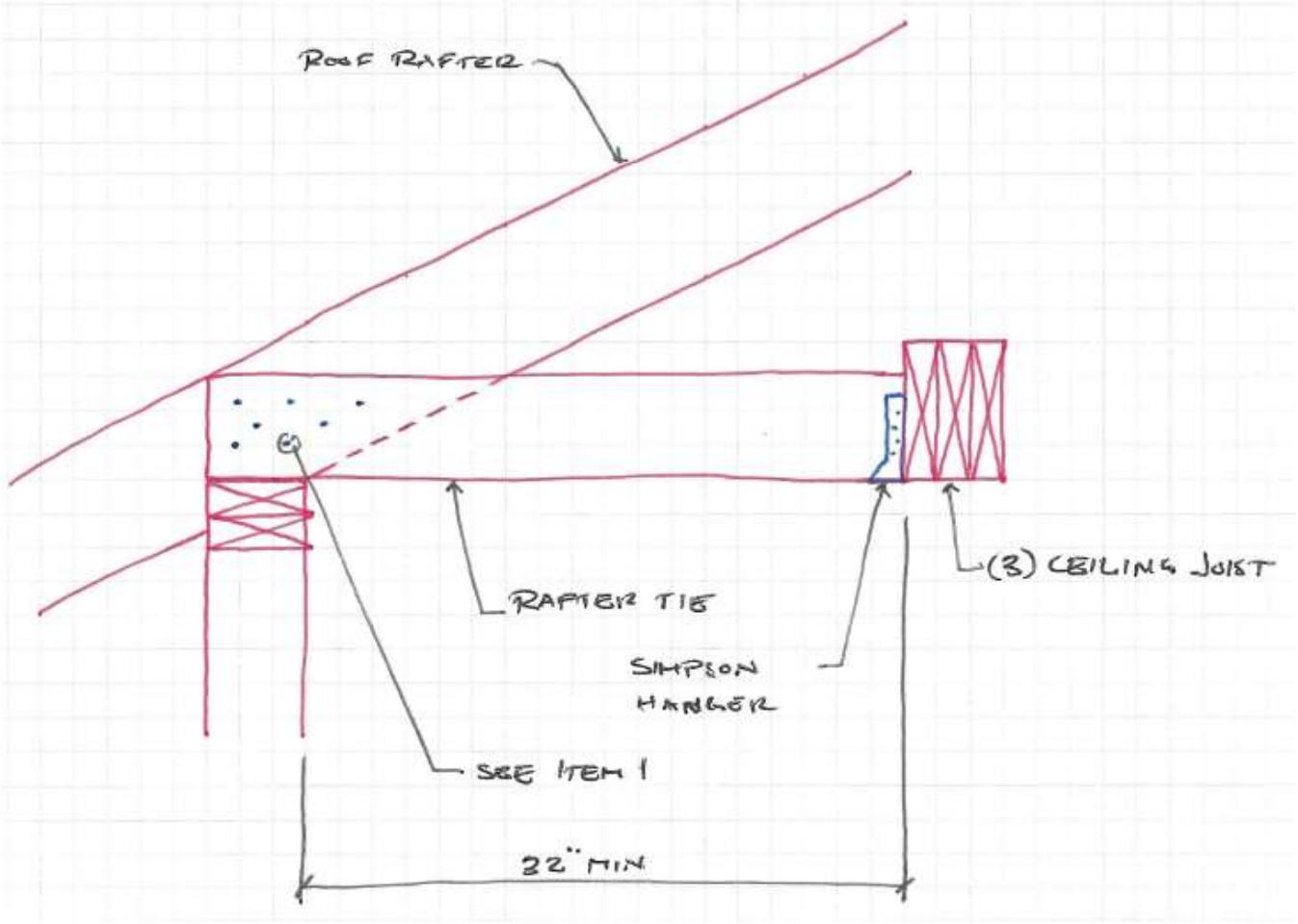

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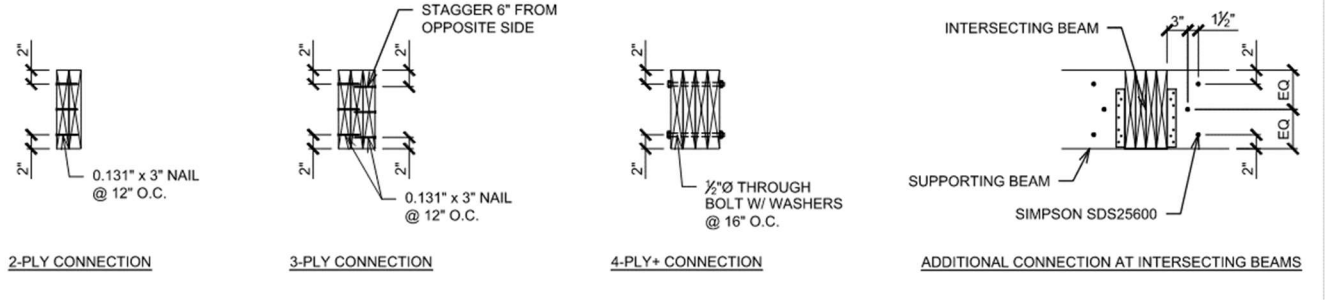

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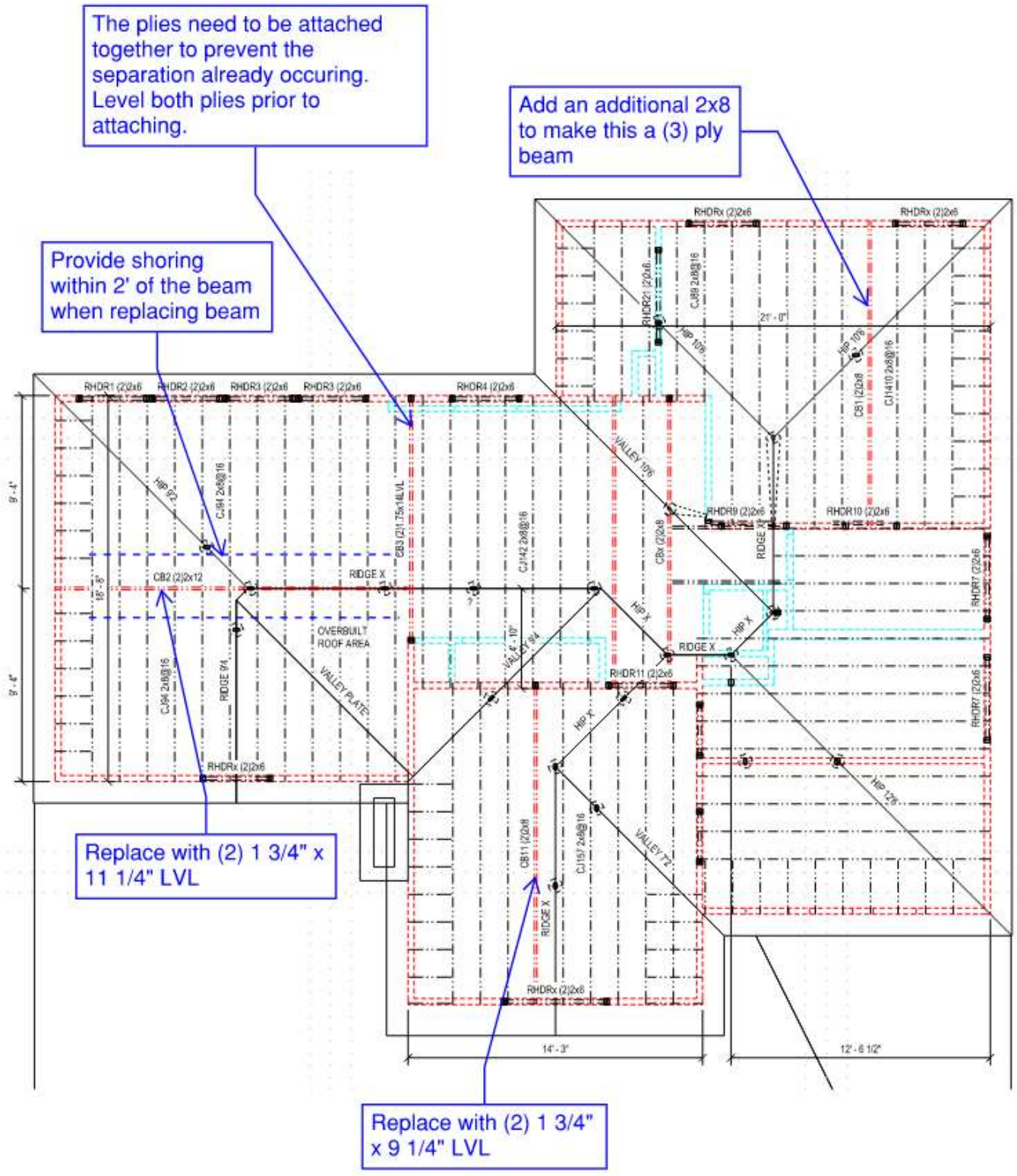

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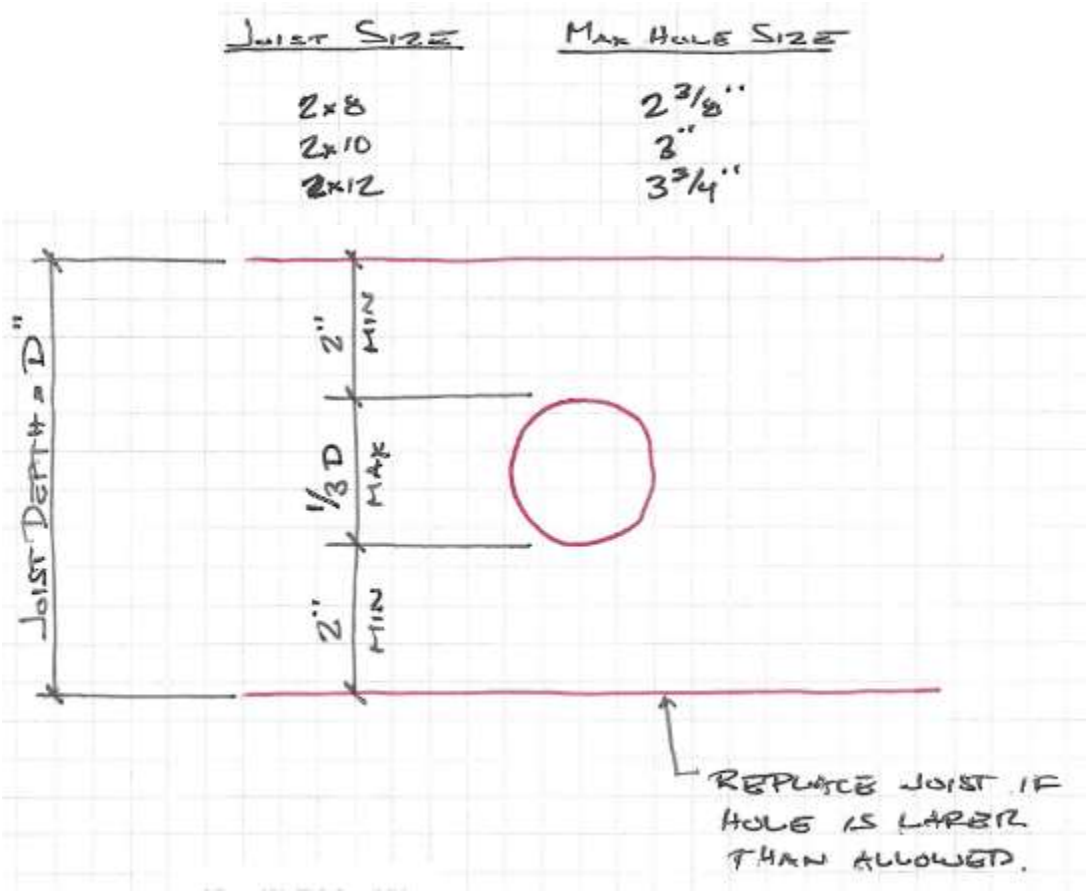

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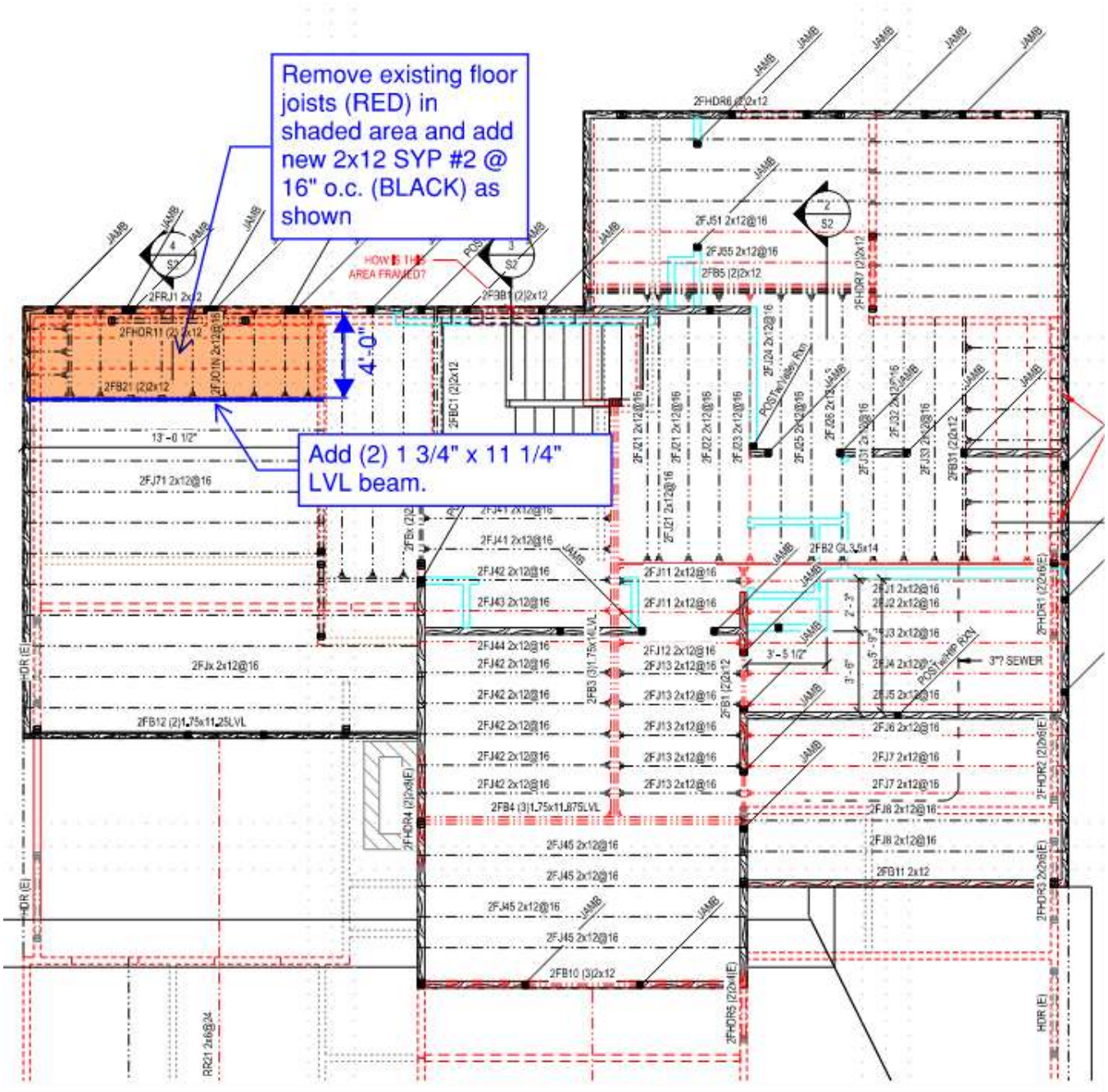

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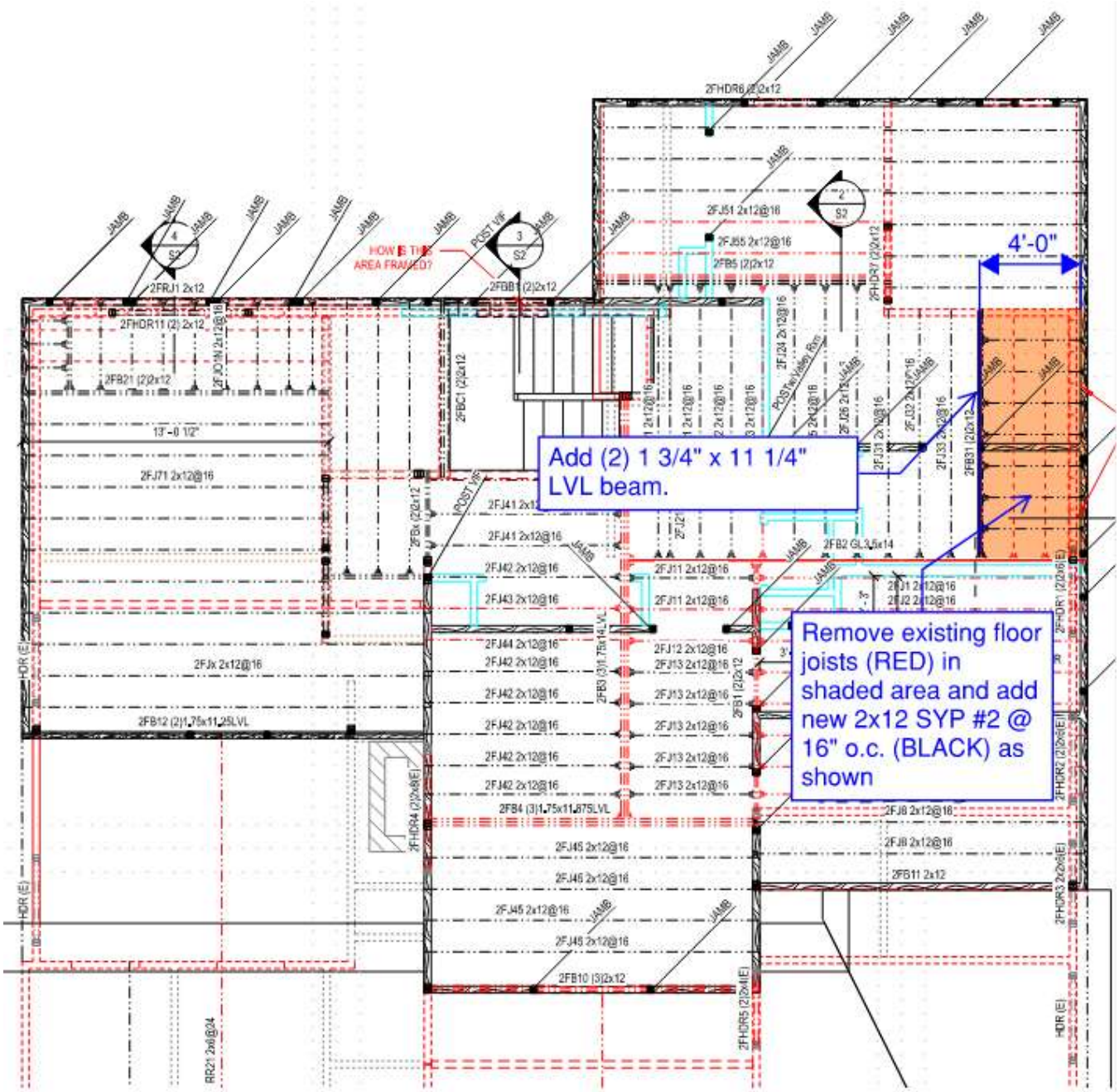

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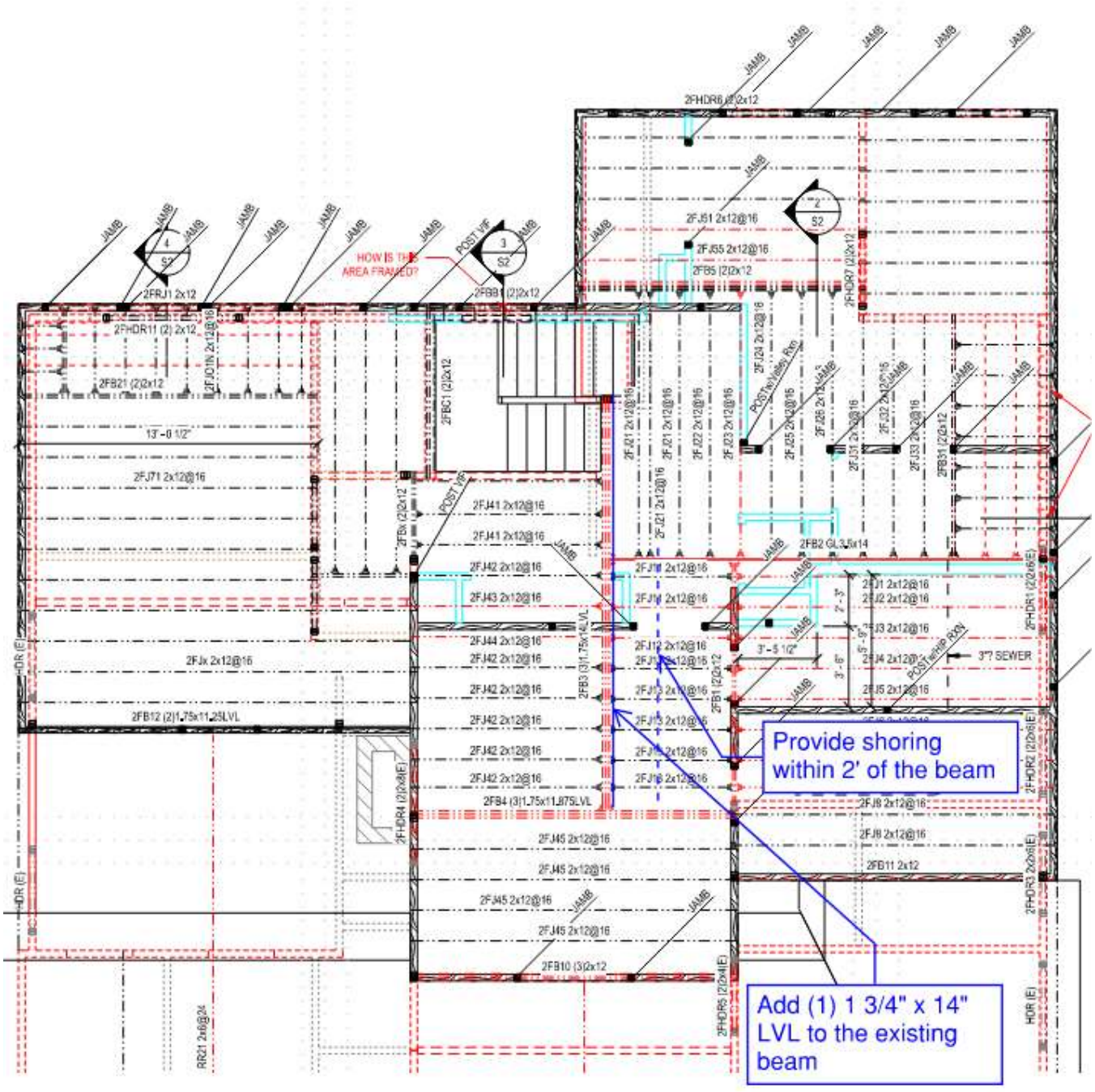

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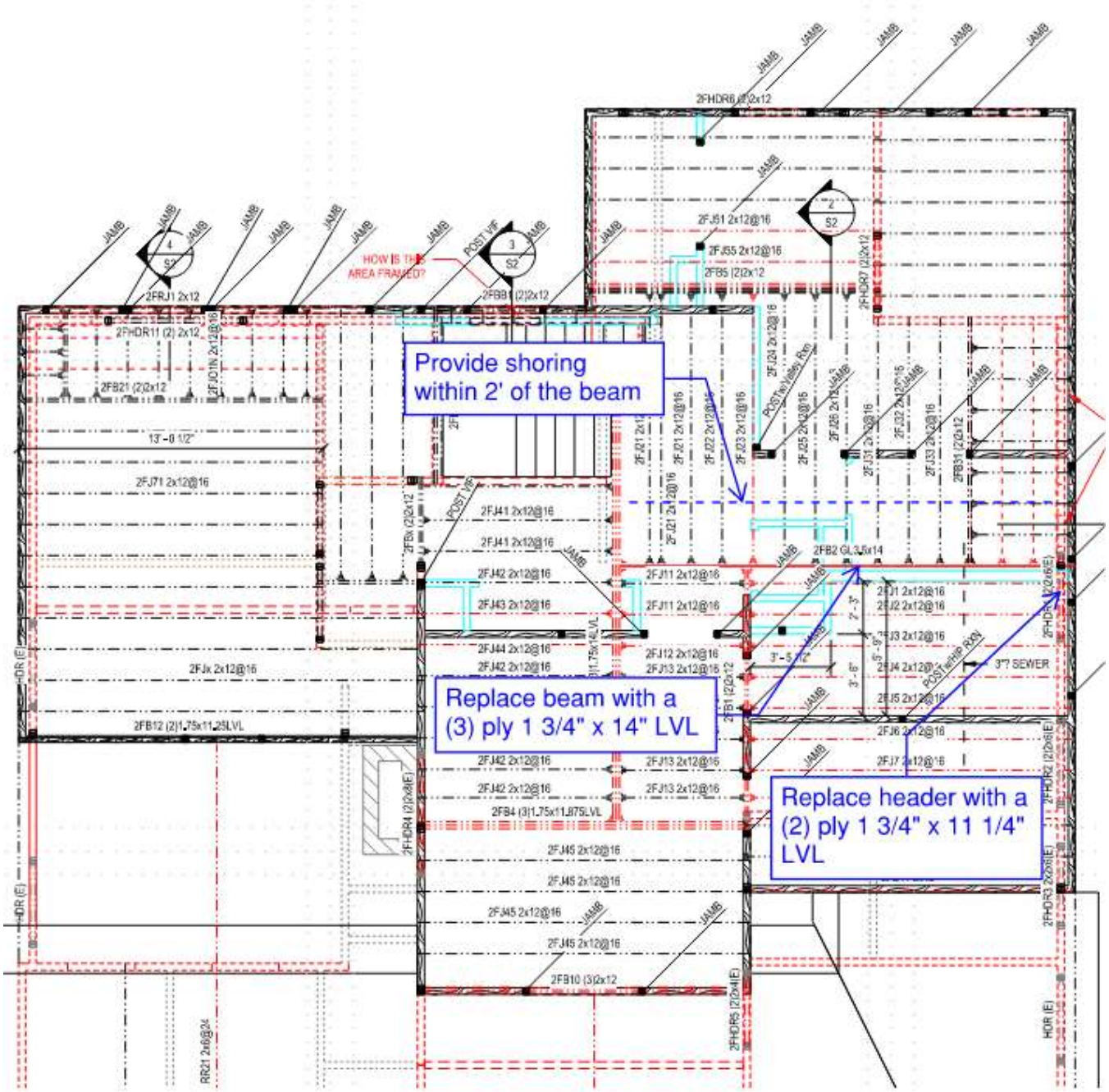

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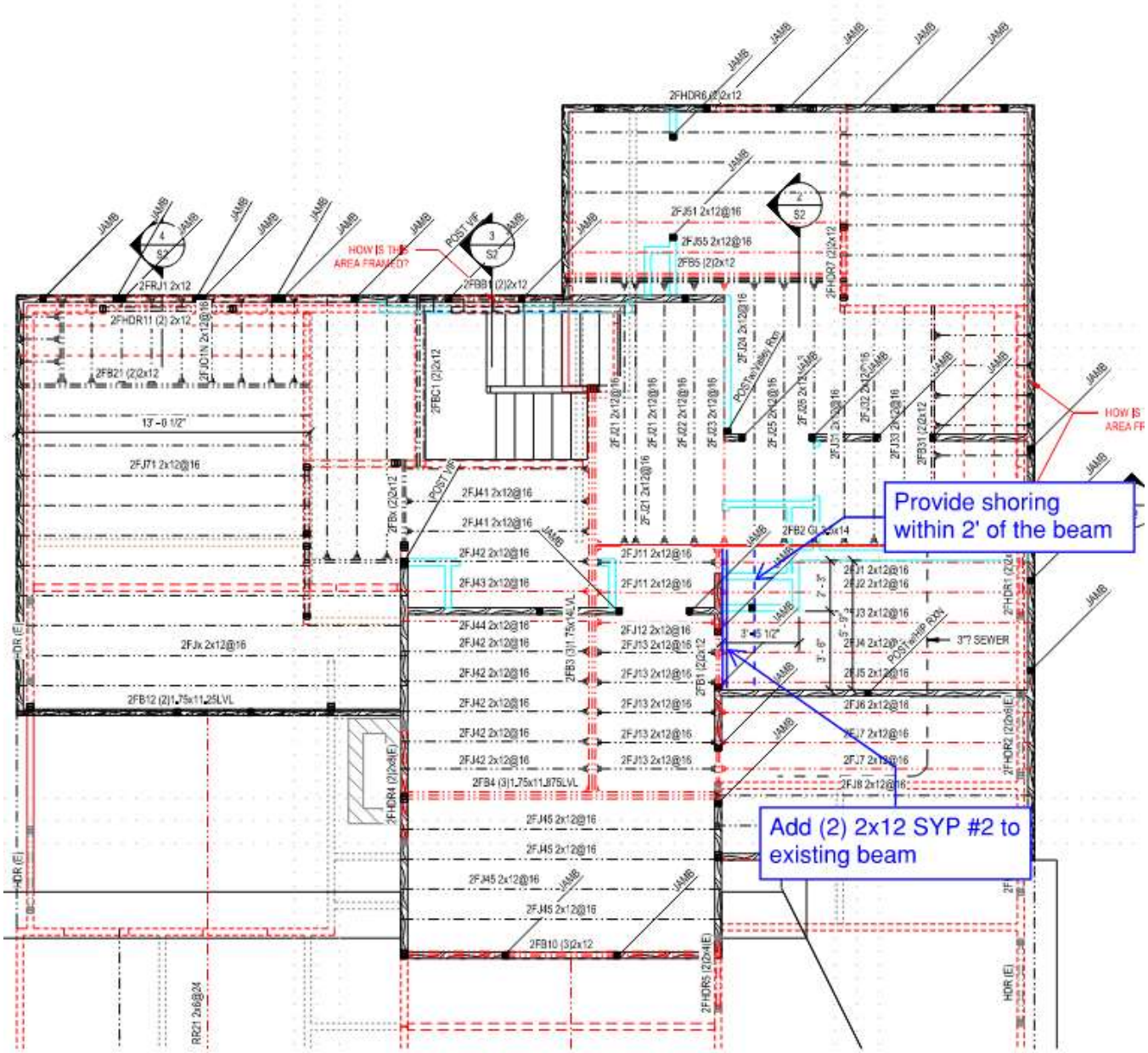

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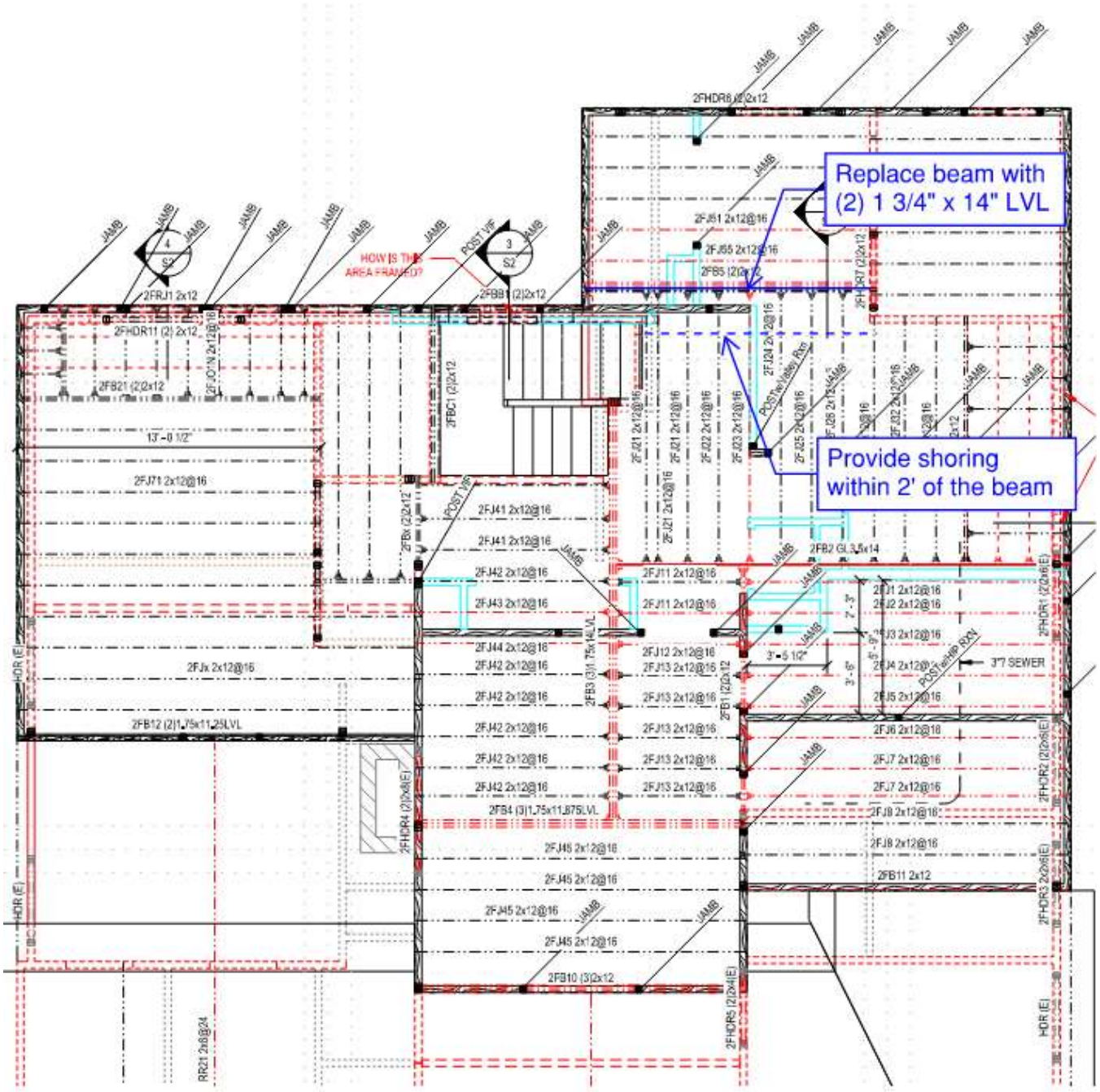

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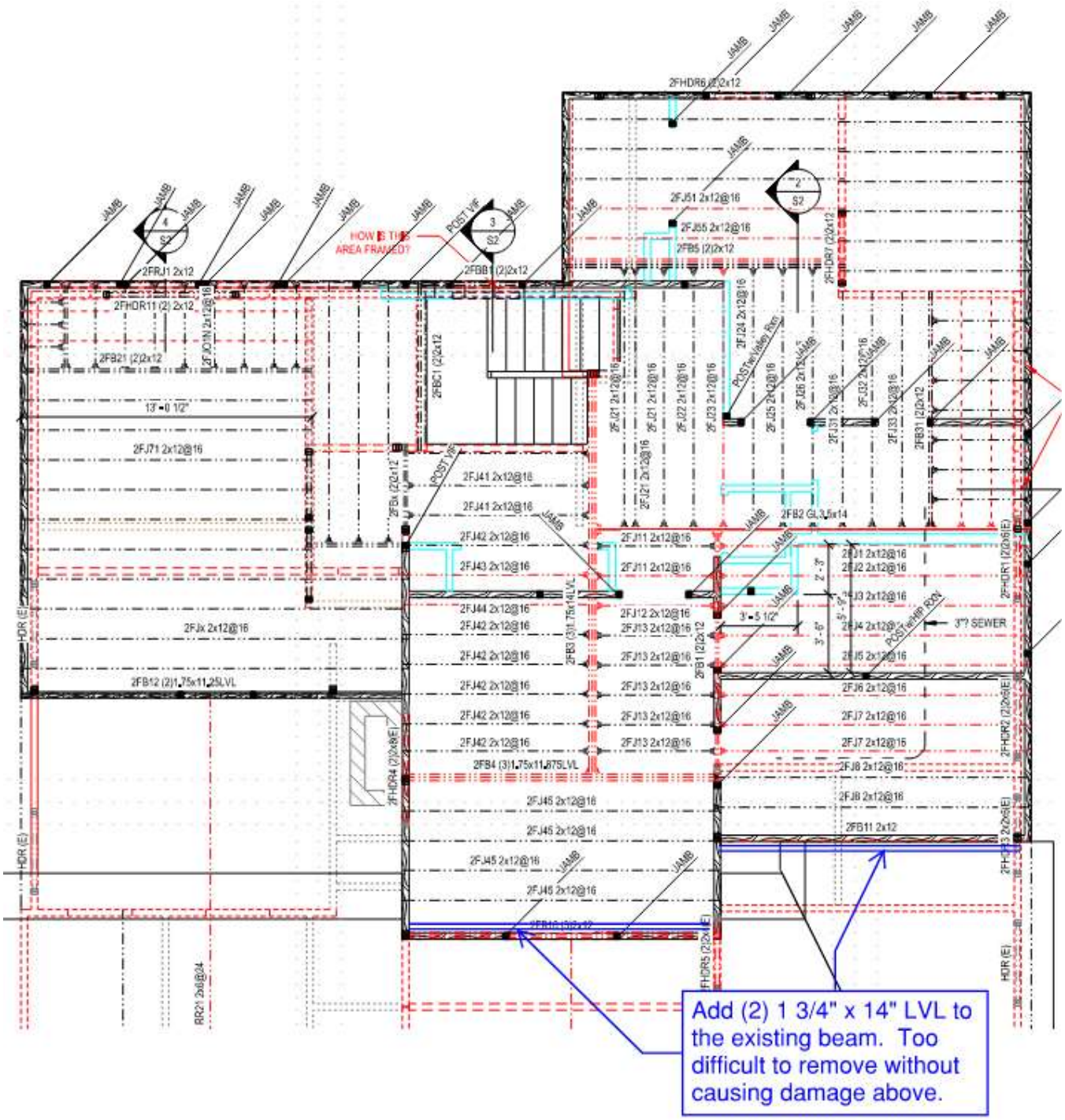

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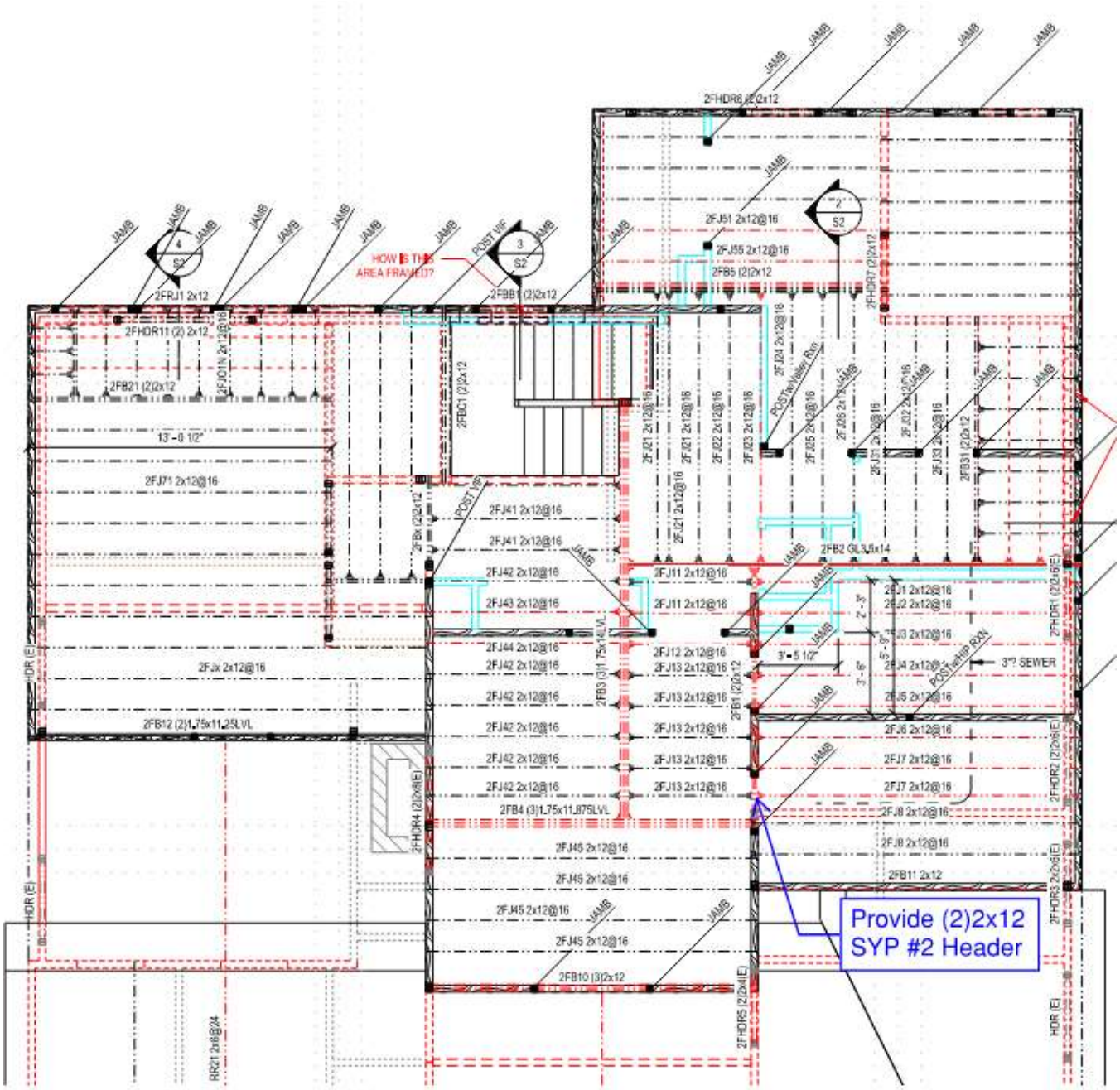

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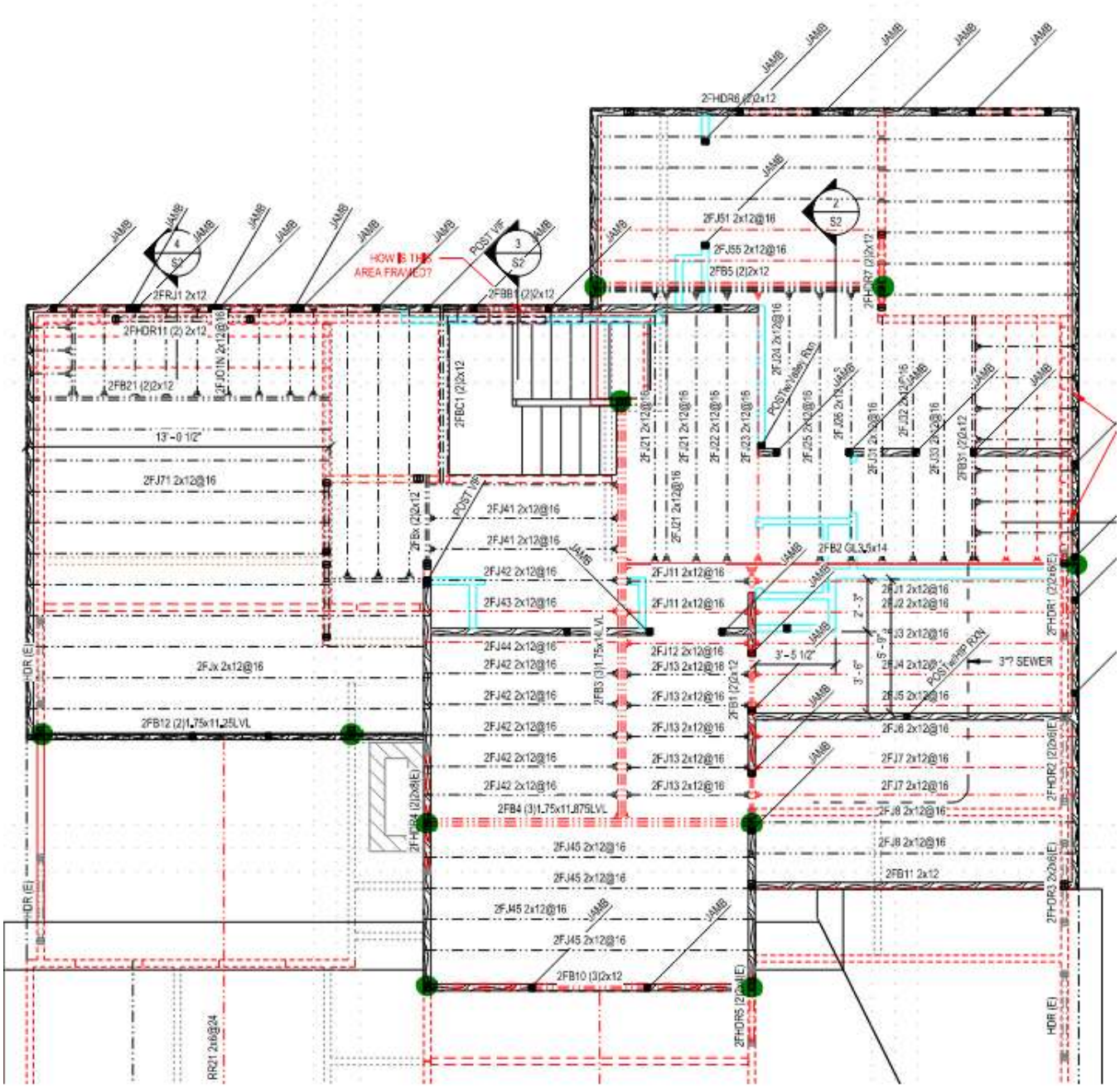

● Post locations

Detail 15

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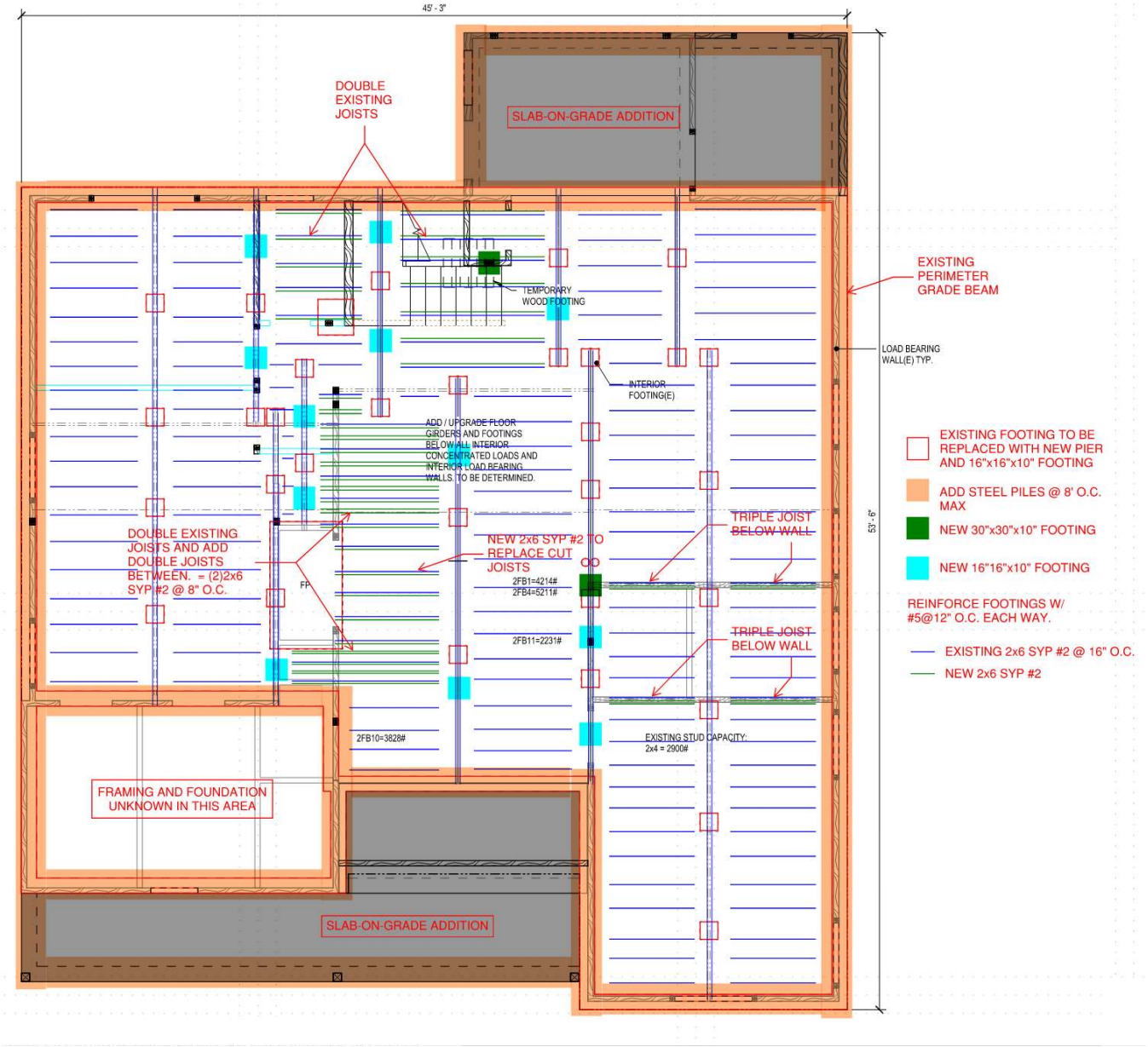

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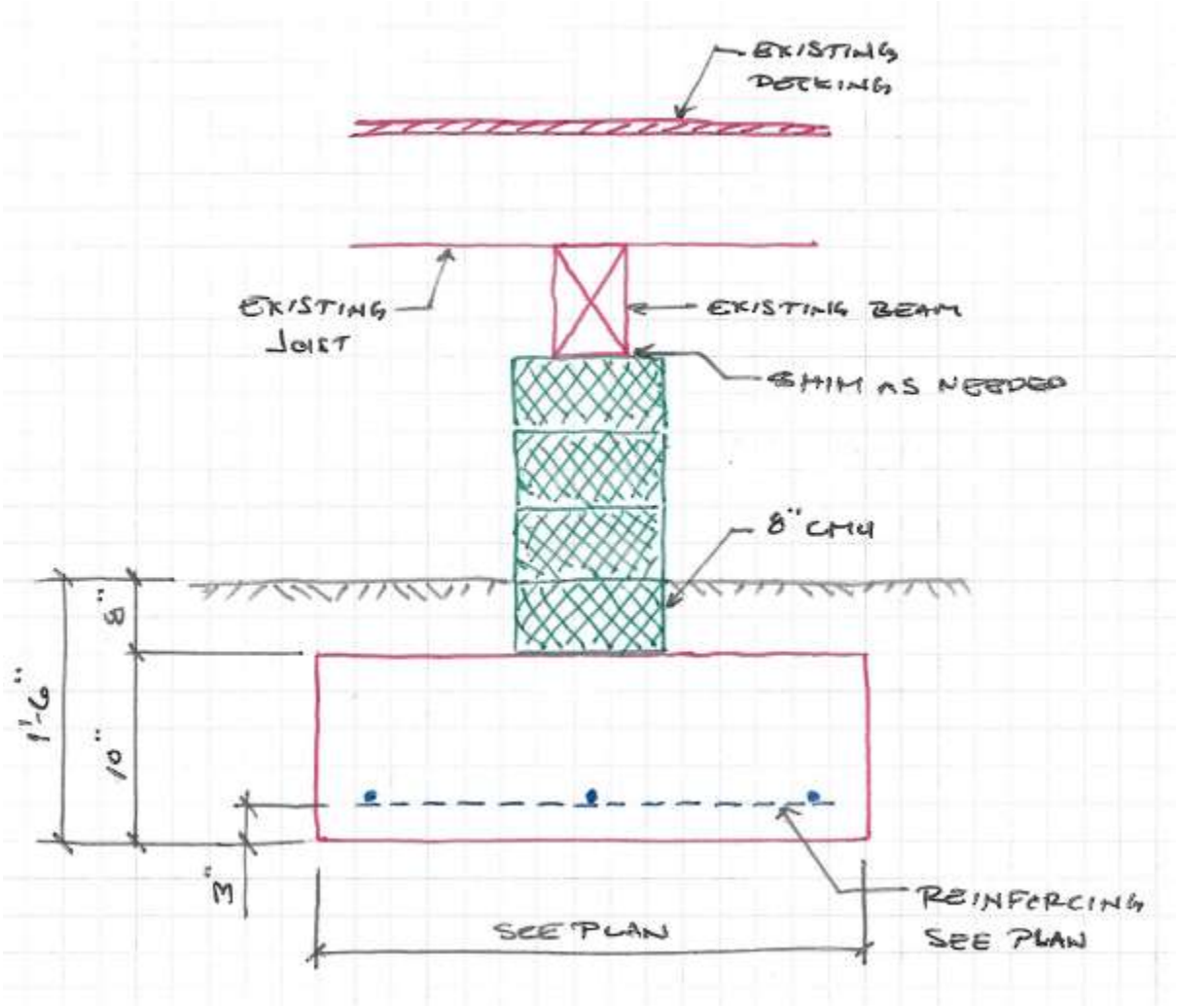

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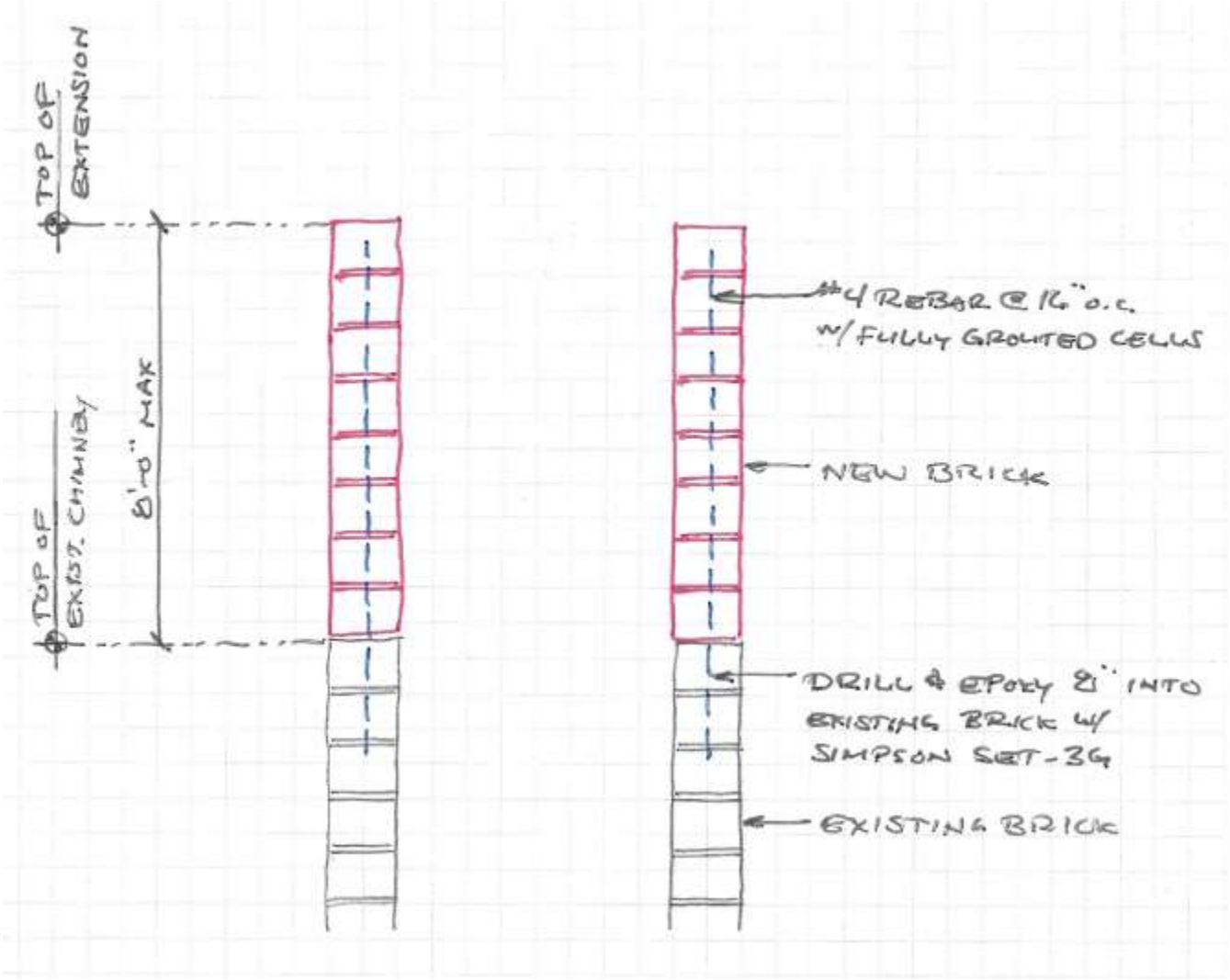

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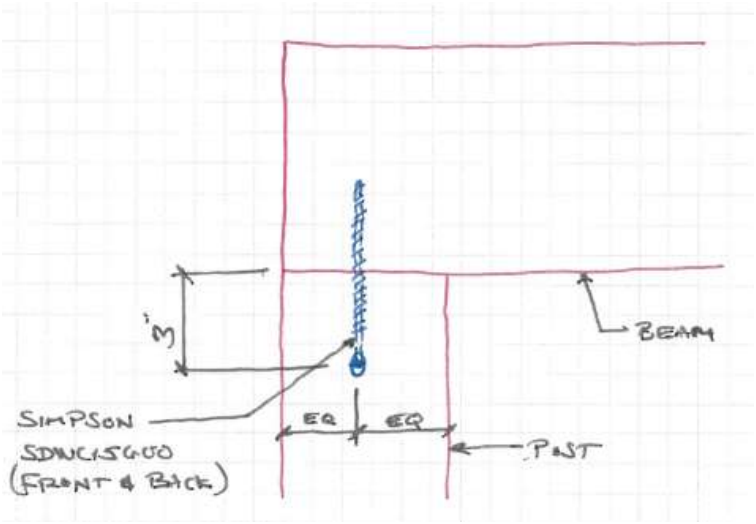

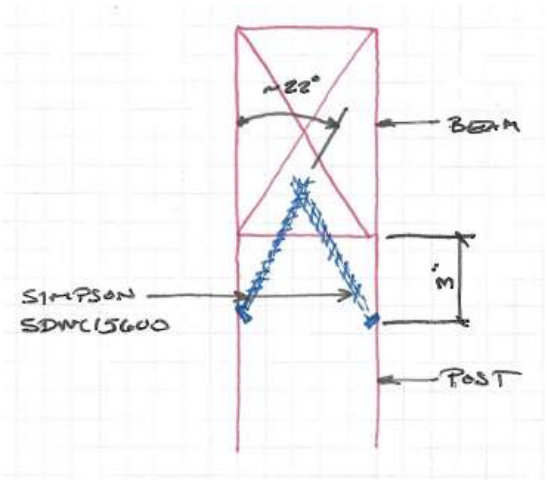

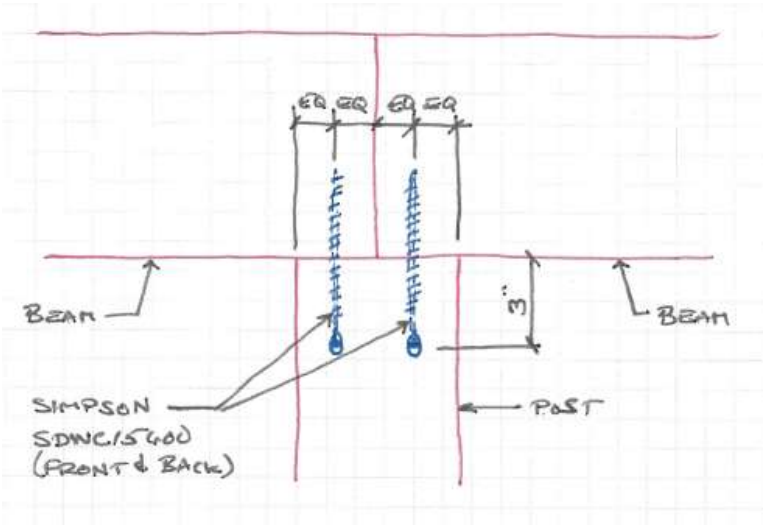

Detail 19

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