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## JSM ENGINEERING STANDARD NOTES:

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- 2. THE DESIGN PROFESSIONAL WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE OWNER OF JSM ENGINEERING PLLC. NO OTHER PARTY MAY REVISE, ALTER, OR DELETE THESE DRAWINGS WITHOUT WRITTEN PERMISSION FROM JSM ENGINEERING PLLC.
- 3. THIS DETAILED STRUCTURES WITHIN THESE DRAWINGS ARE ONLY STRUCTURALLY STABLE IN THEIR COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION TO STABILIZE THE DETAILED STRUCTURES. TEMPORARY SHORING AND BRACING METHODS ARE NOT THE RESPONSIBILITY OF JSM ENGINEERING PLLC AND ARE BEYOND THE SCOPE OF THESE DRAWINGS AND CONTRACTUAL AGREEMENT BETWEEN JSM ENGINEERING PLLC AND AUTHORIZED CLIENT.
- 4. JSM ENGINEERING PLLC IS NOT RESPONSIBLE FOR SEQUENCES, METHODS, OR TECHNIQUES IN CONNECTION WITH THE CONSTRUCTION OF THESE DETAILED DRAWINGS. JSM ENGINEERING PLLC WILL NOT BE HELD RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CONFORM TO THE CONSTRUCTION DOCUMENTS, SHOULD ANY NON—CONFORMITIES OCCUR.
- 5. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH ANY OTHER CONSTRUCTION CONTRACT DRAWINGS. THIS COORDINATION IS NOT THE RESPONSIBILITY OF JSM ENGINEERING PLLC. SHOULD ANY DISCREPANCIES BECOME APPARENT THE CONTRACTOR SHALL NOTIFY JSM ENGINEERING PLLC BEFORE ANY CONSTRUCTION BEGINS.
- 6. VERIFICATION OF ASSUMED FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF JSM ENGINEERING PLLC. THE CONTRACTOR SHALL VERIFY THE FIELD CONDITIONS FOR ACCURACY AND REPORT ANY DISCREPANCIES TO JSM ENGINEERING PLLC BEFORE CONSTRUCTION BEGINS.
- 7. JSM ENGINEERING PLLC IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL ELEMENTS OR NON-STRUCTURAL ELEMENTS; EXCEPT FOR THE ELEMENTS SPECIFICALLY NOTED ON THESE DRAWINGS.
- 8. THESE DRAWINGS SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND ANY LOCAL LAWS WHERE THE STRUCTURE IS TO BE CONSTRUCTED.

# ATE BUILDING CODE

# ENGINEERING DESIGN LOADS:

- 1. BUILDING CODES
  - A. 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE
  - B. IBC 2018
  - C. ACI 318-41, ACI 530.13
- 2. DEAD LOADS:
  - A. ROOF 20 PSF B. FLOORS 8 PSF

8 PSF

- C. WALLS
- D. 8 INCH WALL 53 PSF
- 3. LIVE LOADS:
  - A. BEDROOMS 30 PSF
  - B. OTHER ROOMS 40 PSFC. GARAGES 50 PSF
  - D. DECKS 40 PSF
  - E. ROOF 20 PSF
- 4. WIND LOAD 20 PSF
- 5. SNOW LOAD 20 PSF

# PROJECT INFORMATION:

PROJECT NO.: 20.046

PROJECT ADDRESS: 510 LAKESIDE DRIVE

SANFORD, NC

PROJECT CLIENT: CONNIE

BROOKS-FERNANDEZ

PROJECT COUNTY: HARNETT

## DRAWING APPENDIX:

DWG 001	JSM ENGINEERING COVER SHEET
DWG 002	JSM ENGINEERING GENERAL NOTES
DWG 003	EXISTING HOUSE LAYOUT PLAN
DWG 004	PROPOSED HOUSE LAYOUT PLAN
DWG 005	EXISTING HOUSE DEMOLITION PLAN
DWG 006	HOUSE RENOVATION FOUNDATION PLAN
DWG 007	HOUSE RENOVATION FLOOR FRAMING PLAN
DWG 008	HOUSE RENOVATION WALL FRAMING PLAN
DWG 009	HOUSE RENOVATION CEILING FRAMING PLAN
DWG 010	HOUSE RENOVATION ROOF FRAMING PLAN

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JSM ENGINEERING COVER SHEET

#### FOUNDATIONS:

1. THE SCOPE OF SERVICES FOR THIS DESIGN PROVIDED BY JSM ENGINEERING PLLC BEGINS FROM THE BOTTOM OF THE FOUNDATION ELEMENTS. SUBSURFACE INVESTIGATIONS ARE BEYOND THE SCOPE OF THE STRUCTURAL SERVICES PROVIDED. THE FOUNDATION SYSTEM SHOWN ON THESE DRAWINGS ARE BASED UPON THE SOIL PROPERTIES LISTED BELOW. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, OWNER OR OWNER'S AGENT TO CONTACT JSM ENGINEERING PLLC IF ANY ADVERSE SOIL CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION. VERIFICATION OF THESE ASSUMED VALUES ARE ALSO THE RESPONSIBILITY OF THE CONTRACTOR, OWNER OR OWNER'S AGENT:

ALLOWABLE SOIL BEARING PRESSURE	2000	PSF
SUB GRADE MODULUS (k)	100	PCI
ULTIMATE FRICTION COEFFICIENT BETWEEN CONCRETE FOUNDATIONS AND SOIL	0.40	
UNIT WEIGHT OF SOIL	120	PCF
ACTIVE LATERAL EARTH PRESSURE, Ka	34	PSF/FT
PASSIVE LATERAL EARTH PRESSURE, Kp	250	PSF/FT
MINIMUM INTERNAL ANGLE OF FRICTION	32	DEGREE

- 2. ALL MAIN LOAD BEARING FOUNDATIONS FOR THIS DESIGN WERE ANTICIPATED TO BE CONSTRUCTED ON SUBGRADE SOILS WHICH HAVE BEEN AGGRESSIVELY COMPACTED TO OBTAIN THE PROPER BEARING CAPACITY.
- 3. THE BOTTOM OF ALL FOOTINGS SHALL EXTEND BELOW THE FROST LINE FOR THE REGION IN WHICH THE STRUCTURE IS TO BE CONSTRUCTED. HOWEVER THE BOTTOM OF FOOTING SHALL BE A MINIMUM OF 12" BELOW GRADE.
- 4. EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS WITHIN A TOLERANCE OF +/- 1". IF APPLICABLE, EXTEND EXCAVATIONS A SUFFICIENT DISTANCE FROM STRUCTURES FOR PLACING AND REMOVING CONCRETE FORMWORK FOR INSTALLING SERVICES AND OTHER CONSTRUCTION AND FOR INSPECTIONS DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE PLACING CONCRETE REINFORCEMENT. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.
- 5. ANY FILL SHALL BE PLACED UNDER THE DIRECTION OR RECOMMENDATION OF A LICENSED PROFESSIONAL ENGINEER USING SUITABLE SOILS OR ENGINEERED FILL. PLOW, SCARIFY, BENCH, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING MATERIAL. PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND—OPERATED TAMPERS. COMPACT SOIL MATERIALS TO NOT LESS THAN 95% OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D698, UNLESS A HIGHER PERCENTAGE IS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- 6. INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER, AND AT FOOTING SUBGRADES. PERFORM TESTING TO VERIFY DESIGN BEARING CAPACITIES. IN ACCORDANCE WITH THE PROGRAM OF SPECIAL INSPECTIONS.
- 7. EXCAVATION FOR FOOTINGS SHALL BE LINED TEMPORARILY WITH A 6 MIL POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF EXCAVATION.
- 8. CONCRETE SHALL NOT BE POURED AGAINST ANY SUB GRADE CONTAINING WATER, ICE, FROST, OR LOOSE MATERIAL.

### UNIT MASONRY:

- 1. BRICK MASONRY ON THIS PROJECT IS A NON-STRUCTURAL VENEER. REFER TO DRAWINGS AND SPECIFICATIONS FOR ALL MASONRY VENEER PRODUCTS. REFER TO THESE DRAWINGS FOR EXPANSION JOINT LOCATIONS AND DETAILS.
- 2. PROVIDE MORTAR AND GROUT MATERIALS CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS.
  - a. MORTAR FOR MASONRY ASSEMBLIES SHALL BE TYPE S CONFORMING TO ASTM C270
- 3. LAY SOLID MASONRY UNITS WITHIN COMPLETELY FILLED BED AND HEAD JOINTS; BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. DO NOT DEEPLY FURROW BED JOINTS OR SLUSH HEAD JOINTS.
- 4. PROVIDE CONTROL AND EXPANSION JOINTS AS NOTED ON THESE DRAWINGS, BUT NOT GREATER THAN 20'-0" O.C. INSTALL CONTROL AND EXPANSION JOINT MATERIALS IN UNIT MASONRY AS MASONRY PROGRESSES. DO NOT ALLOW MATERIALS TO SPAN CONTROL AND EXPANSION JOINTS WITHOUT PROVISION TO ALLOW FOR IN-PLANE WALL OR PARTITION MOVEMENT.
- 5. DURING CONSTRUCTION, COVER TOPS OF WALLS, PROJECTIONS, AND SILLS WITH WATERPROOF SHEETING AT THE END OF EACH DAY'S WORK. COVER PARTIALLY COMPLETED MASONRY WHEN CONSTRUCTION IS NOT IN PROGRESS.
- 6. DO NOT USE FROZEN MATERIALS OR MATERIALS MIXED OR COATED WITH ICE OR FROST. DO NOT BUILD ON FROZEN SUBSTRATES. REMOVE AND REPLACE UNIT MASONRY DAMAGED BY FROST OR FREEZING CONDITIONS. COMPLY WITH COLD—WEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1.
- 7. COMPLY WITH HOT-WIEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1.

#### CONCRETE:

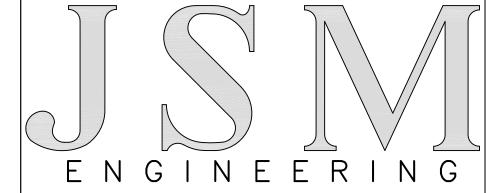
- 1. PROPORTIONED, MIXED, PLACED, AND TESTED IN ACCORDANCE WITH THE ACI MANUAL OF CONCRETE PRACTICE INCLUDING BUT NOT LIMITED TO ACI 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-05 "SPECIFICATIONS FOR STRUCTURAL CONCRETE." COMPLY WITH ACI 117-90 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS."
- 2. STEEL REINFORCEMENT SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
  - a. REINFORCING BARS
    b. PLAIN—STEEL WIRE
    c. EPOXY COATED BARS
    ASTM A615, GRADE 60, DEFORMED
    ASTM A82, AS DRAWN
    ASTM A775
    - d. PLAIN-STEEL WIELDED WIRE REINFORCEMENT ASTM A185, FLAT SHEETS ONLY
- 3. NO ADMIXTURES SHALL BE ADDED TO ANY STRUCTURAL CONCRETE WITHOUT THE EXPRESS WRITTEN PERMISSION OF JSM ENGINEERING PLLC. THE ADMIXTURE MUST BE CERTIFIED BY THE MANUFACTURER THAT IT IS COMPARABLE TO OTHER ADMIXTURES AND DOES NOT CONTRIBUTE TO WATER—SOLUBLE CHLORIDE IONS EXCEEDING THOSE PERMITTED IN HARDENED CONCRETE. DO NOT USE CALCIUM CHLORIDE OR ANY ADMIXTURE CONTAINING CALCIUM CHLORIDE.
- 4. NORMAL-WEIGHT CONCRETE MIXTURES SHALL HAVE THE FOLLOWING PROPERTIES:

	MINIMUM COMPRESSIVE STRENGTH	MAXIMUM WATER— CEMENT	SLUMP	AIR CONTENT
RESIDENTIAL FOOTINGS		0.45	4"	0.0%
COMMERCIAL FOOTINGS		0.45	4"	0.0%
RETAINING WALLS		0.45	4"	4.5%

- 5. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.
- 6. COMPLY WITH THE MINIMUM CONCRETE COVER FOR REINFORCEMENT AS FOLLOWS:

a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSE	ED TO EARTH 2
b. CONCRETE EXPOSED TO EARTH OR WEATHER:	
i. No. 5 BARS AND SMALLER	
ii. No. 6 BARS AND LARGER	

- 7. FIELD BENDING OF REINFORCING PARTIALLY EMBEDDED IN CONCRETE IS NOT PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- 8. CHAMFER EXPOSED CONCRETE CORNERS 3" x 3" MINIMUM; UNLESS OTHERWISE NOTED
- 9. COMPLY WITH ACI 301 FOR MEASURING, BATCHING, MIXING, TRANSPORTING, AND PLACING CONCRETE, BEFORE TEST SAMPLING AND PLACING CONCRETE. WATER MAY BE ADDED AT THE PROJECT SITE, SUBJECT TO LIMITATIONS OF ACI 301.
- 10. CURE FORMED AND UNFORMED CONCRETE FOR AT LEAST SEVEN DAYS BY ONE OF THE FOLLOWING METHODS: MOISTURE CURING, MOISTURE—RETAINING—COVIER CURING, APPLICATION OF A CURING COMPOUND, OR BY APPLICATION OF A CURING AND SEALING COMPOUND.
- 11. SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT REPORTS DURING CONCRETE PLACEMENT ACCORDING TO ACI 301 AND SECTION 1905.6 OF THE NC STATE BUILDING CODE AND IN ACCORDANCE WITH THE PROGRAM OF SPECIAL INSPECTIONS; WHERE APPLICABLE.



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ISSUED DATE: 03.19.20

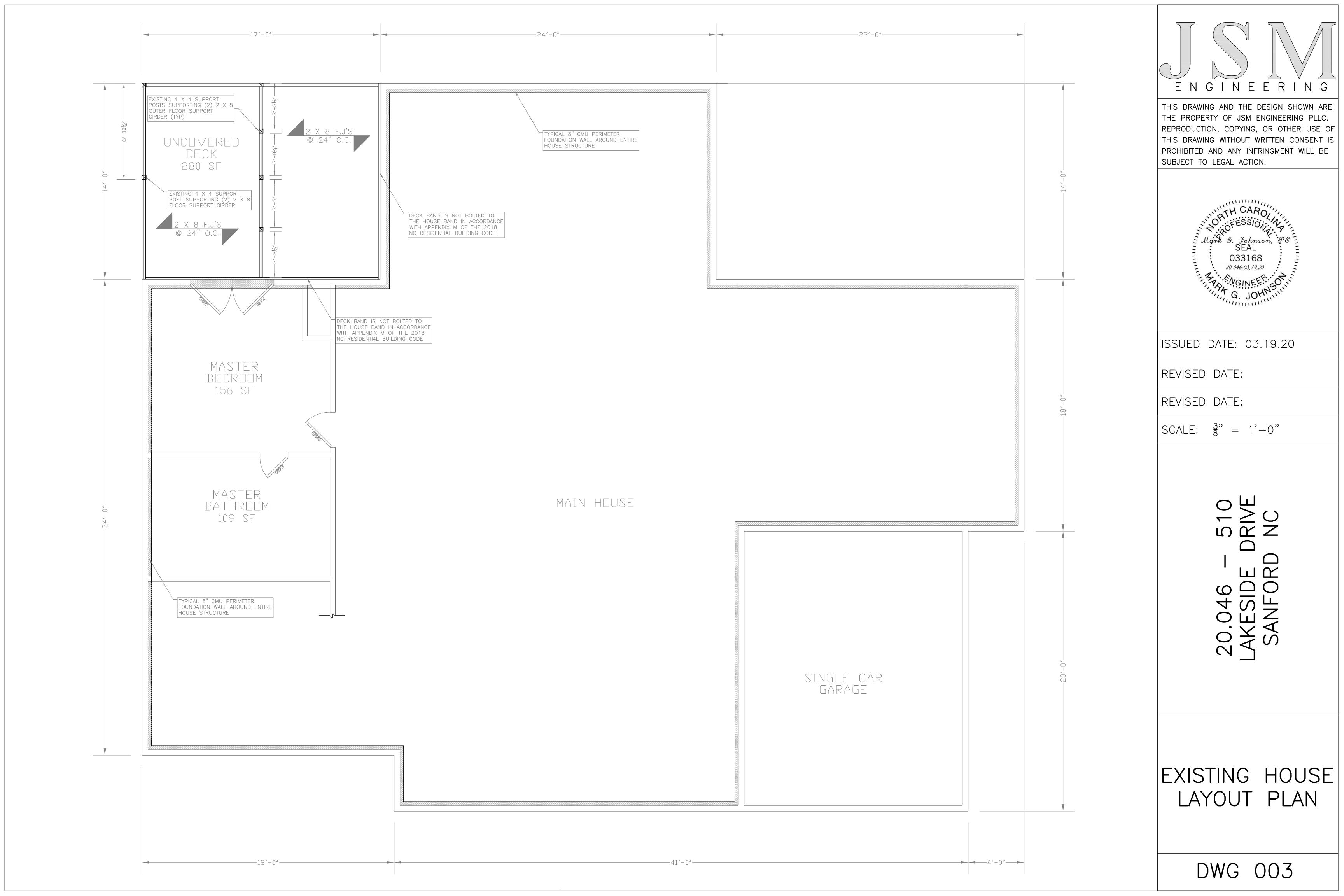
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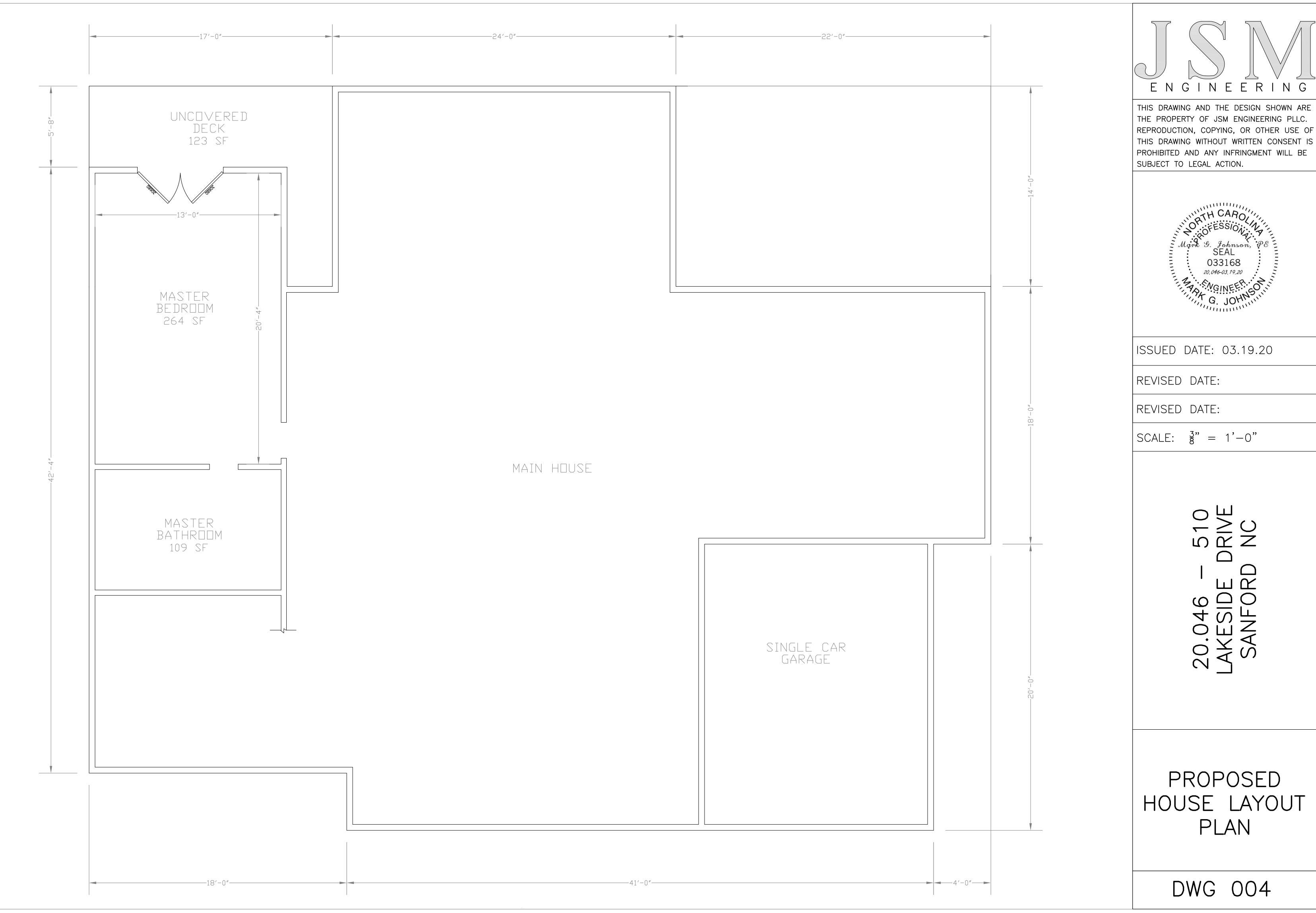
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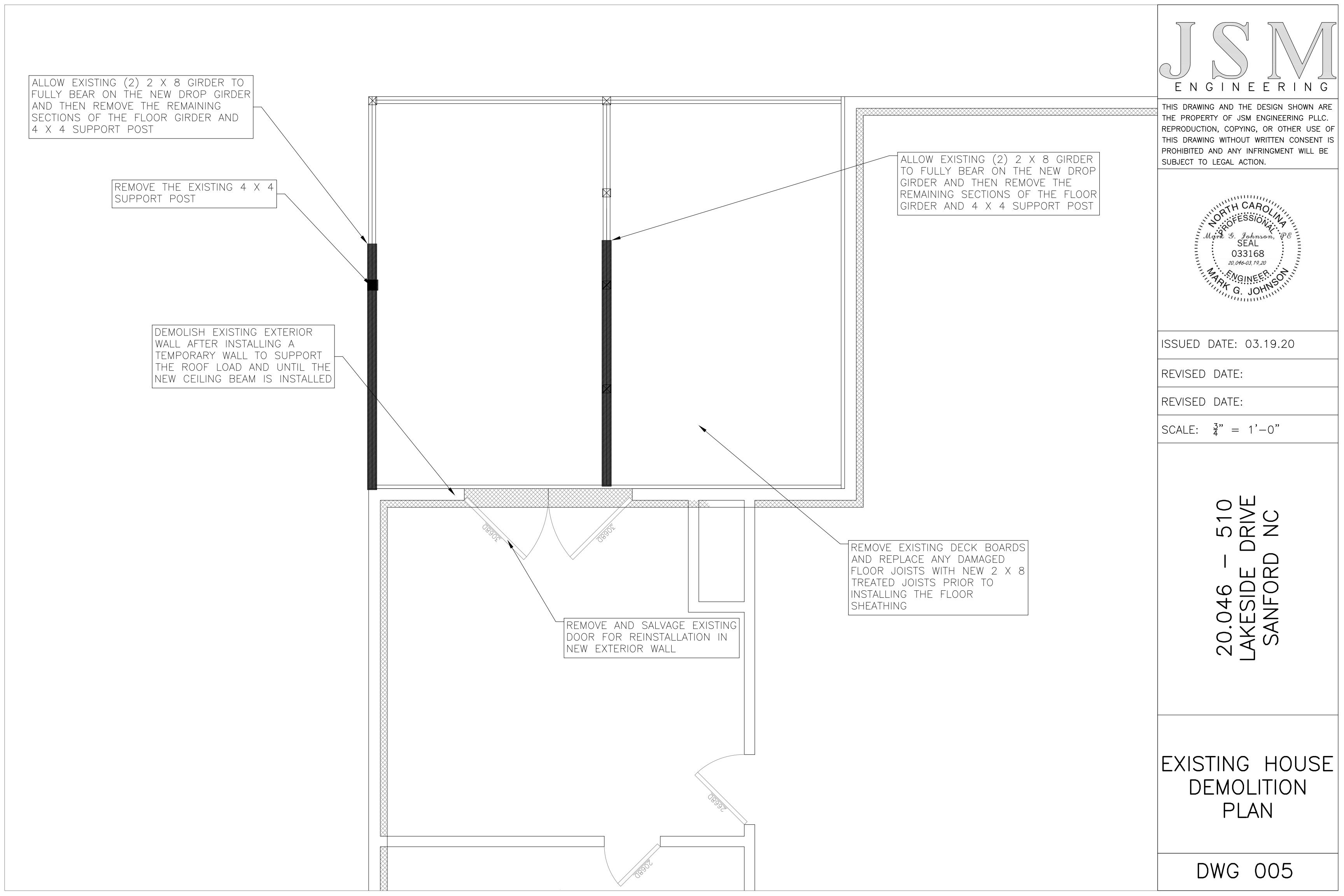
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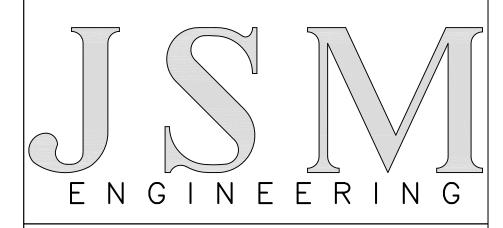
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JSM ENGINEERING GENERAL NOTES











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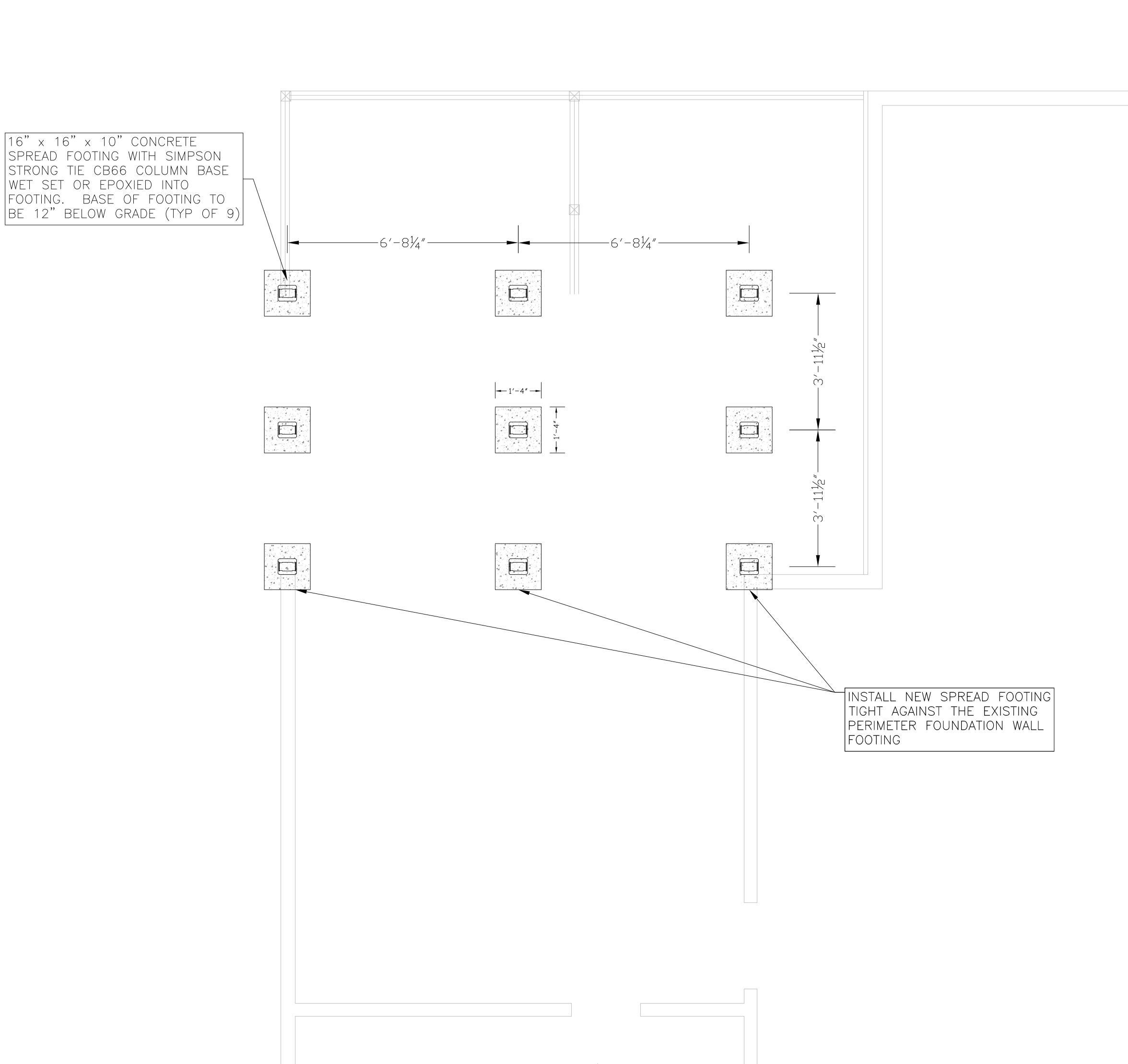
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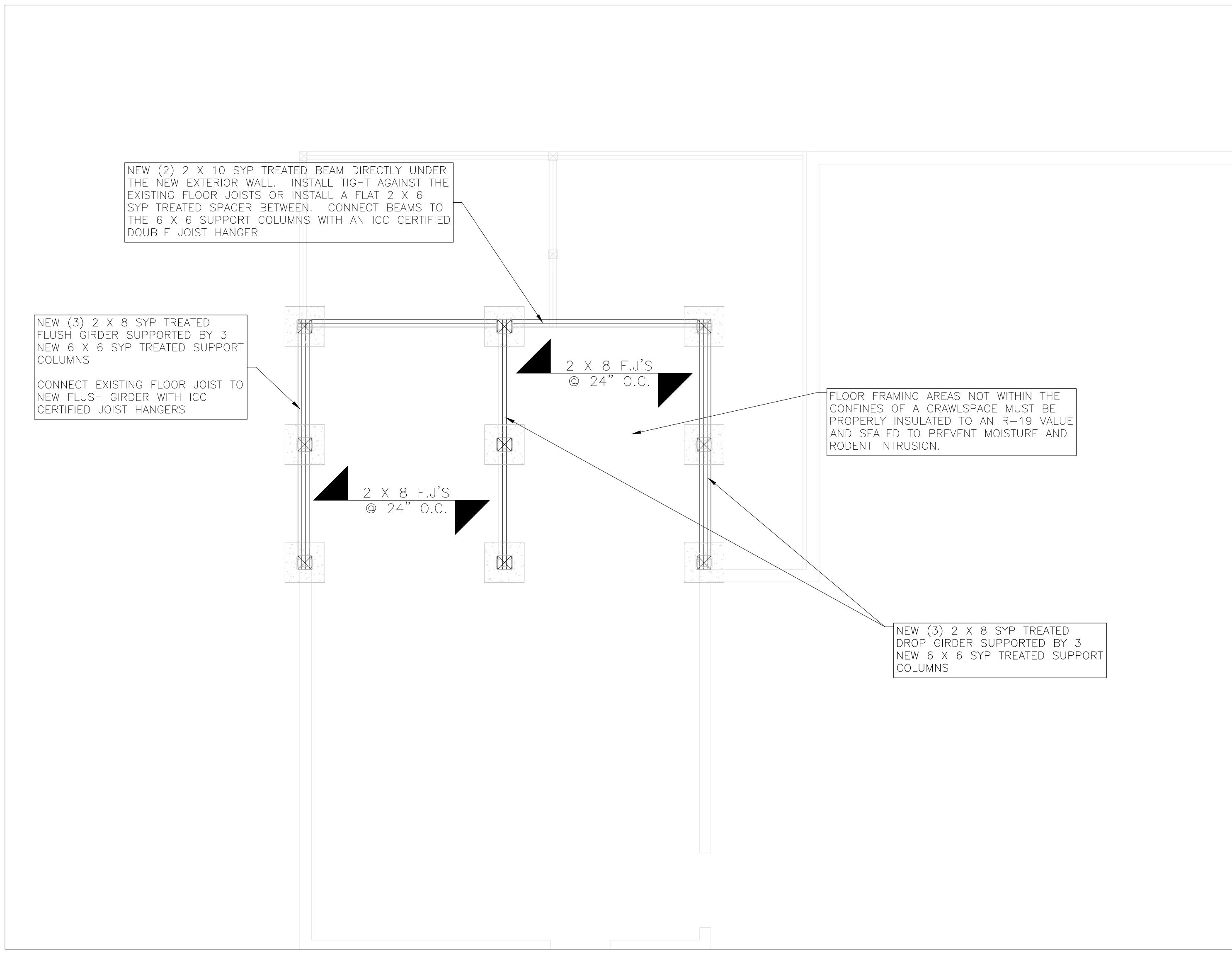
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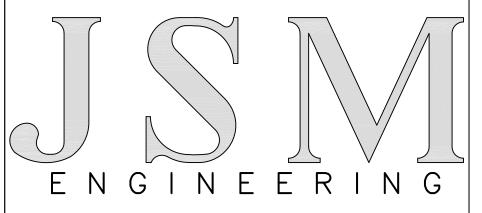
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HOUSE RENOVATION FOUNDATION PLAN









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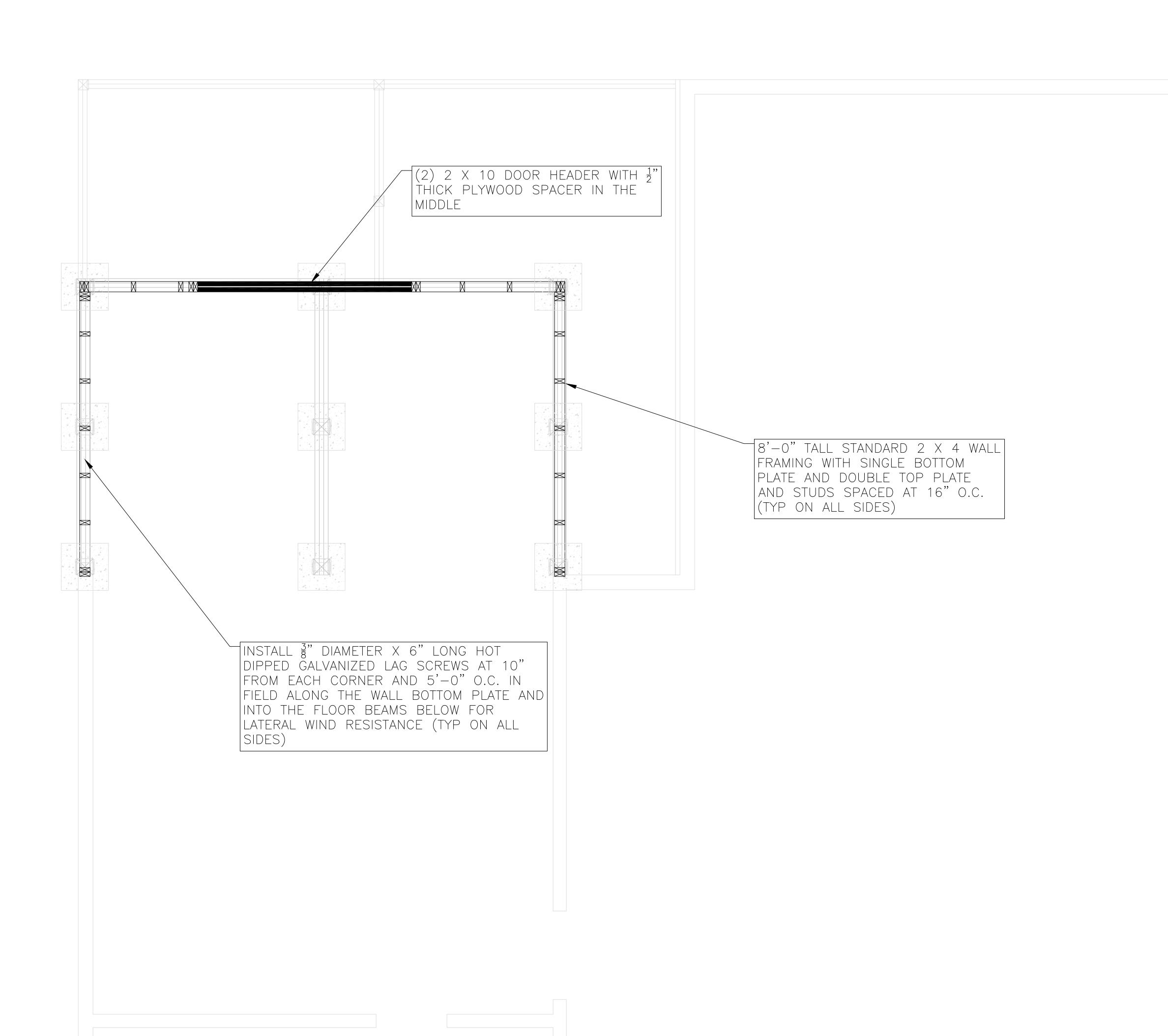
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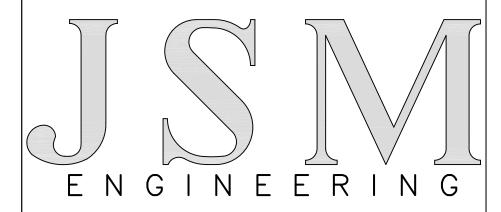
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HOUSE RENOVATION FLOOR FRAMING PLAN







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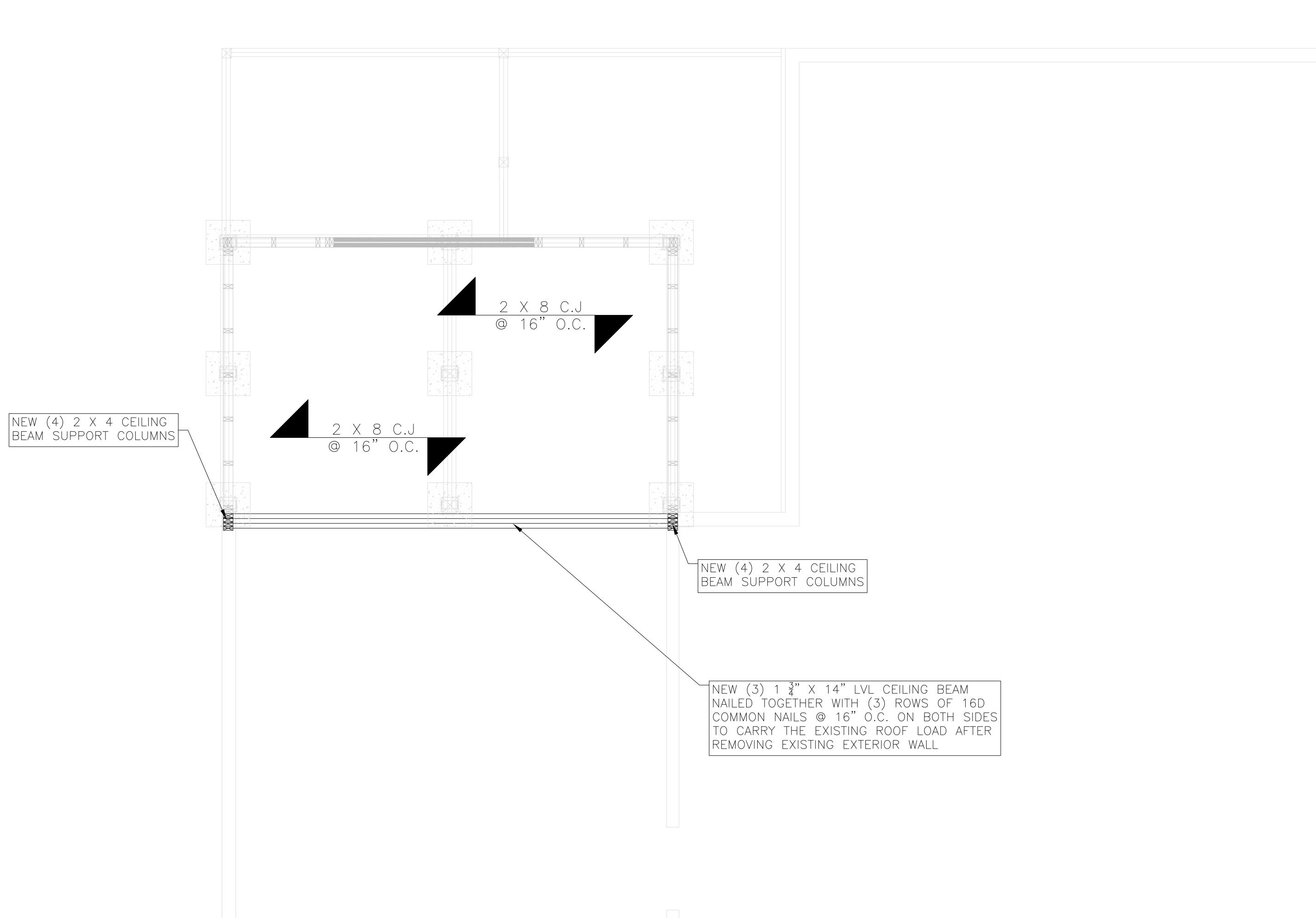
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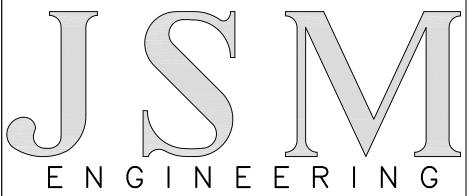
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HOUSE RENOVATION WALL FRAMING PLAN







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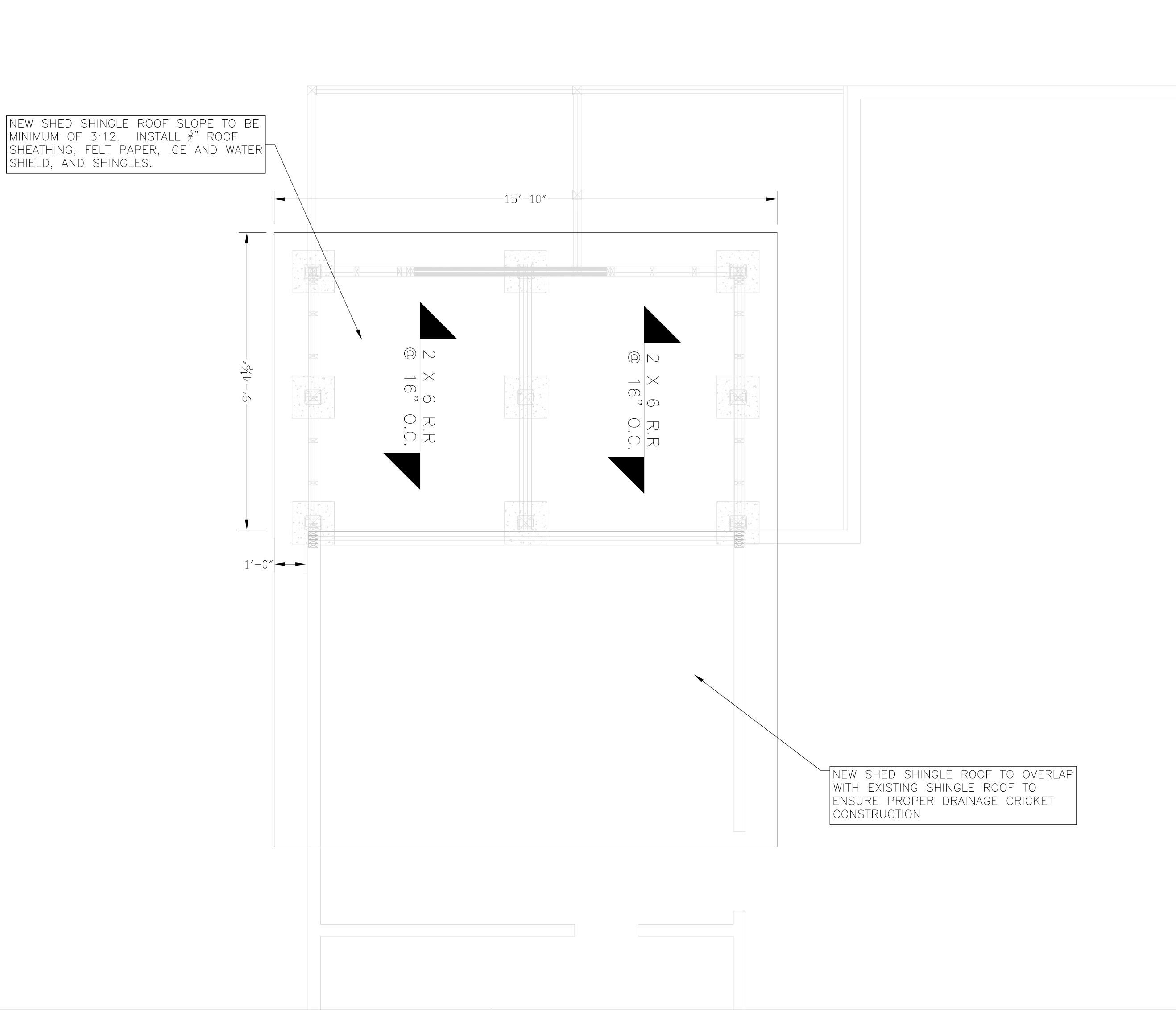
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HOUSE RENOVATION CEILING FRAMING PLAN



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HOUSE RENOVATION ROOF FRAMING PLAN