### C. Christian Berg, PE

#### **Structural Engineer**

1126 Boxcar Way, Apex, NC 27502 919-623-7300

February 6, 2020

Mr. Shawn Spears S&J Construction of Raleigh

Re: Lot 1 – 2434 Neills Creek Road

Lillington, NC

Dear Mr. Spears:

At your request, I have reviewed the plans proposed for new construction at this address. These plans were purchased from Frank Betz Associates and are entitled "The Foxcrofte". The architectural plans are dated 8/9/02, and the structural plans are dated 5/12/03. I reviewed the following sheets:

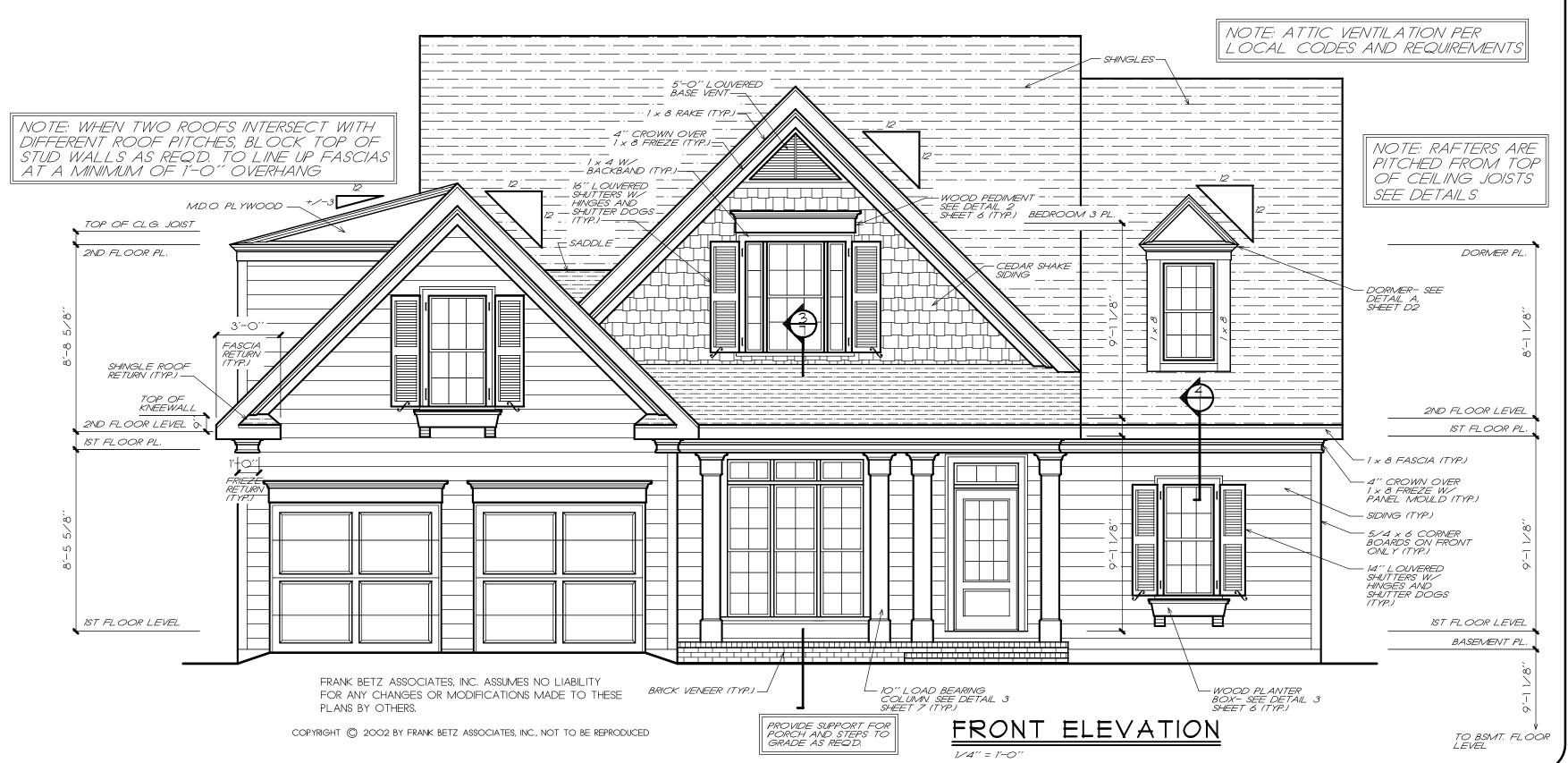
- Sheet 1 Elevations and Details
- Sheet 2 Elevations and Roof Plan
- Sheet 3 Crawlspace Foundation Plan
- Sheet 4 First Floor Plan
- Sheet 5 Second Floor Plan
- Sheet 6 Sections / Details
- Sheet 7 Kitchen and Bath Elevations and Details
- Sheet F1 First Floor Framing Plan
- Sheet F2 Second Floor Framing Plan
- Sheet F3 Ceiling Joist Framing Plan
- Sheet F4 Roof Framing Plan

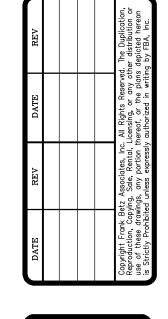
I have reviewed the drawings and noted all suggested modifications in red on the attached drawings.

It is my professional opinion that this home, constructed in accordance with the attached plans (including the red notations) will safely support all structural loads as required by the 2018 North Carolina State Building Code - Residential

Please let me know if you have any questions or require additional information.

Chris Berg, PE





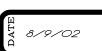
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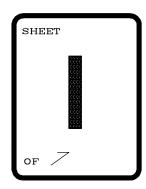
ELEVATION / DETAILS
THE FOXCROFTE

RANK BETZ
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SNERS OF CUSTOM AND STOCK HOMEPLANS
SUITE 190
SUITE 190

I WMB Y JCH

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ROOF PLAN

RIGHT ELEVATION

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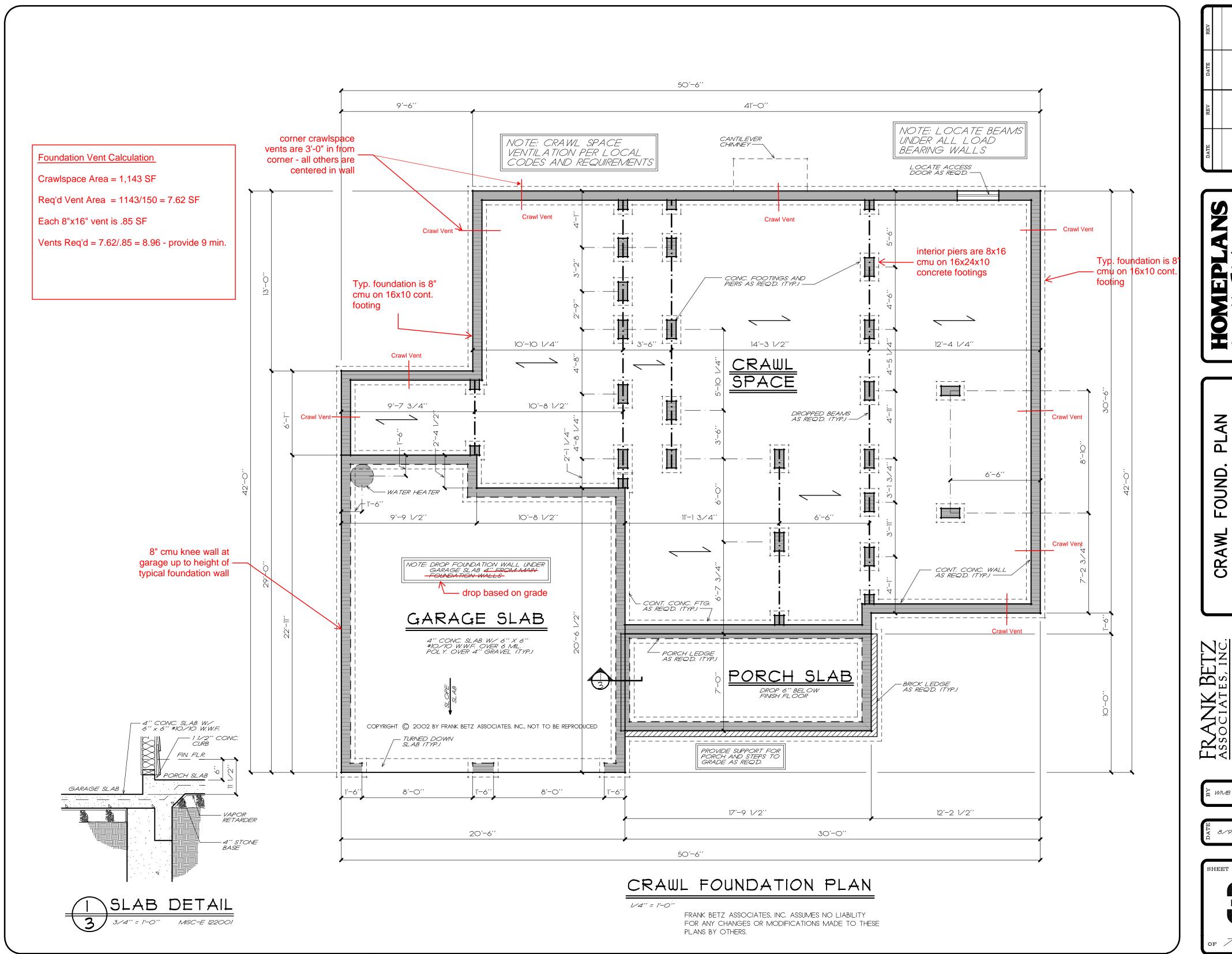
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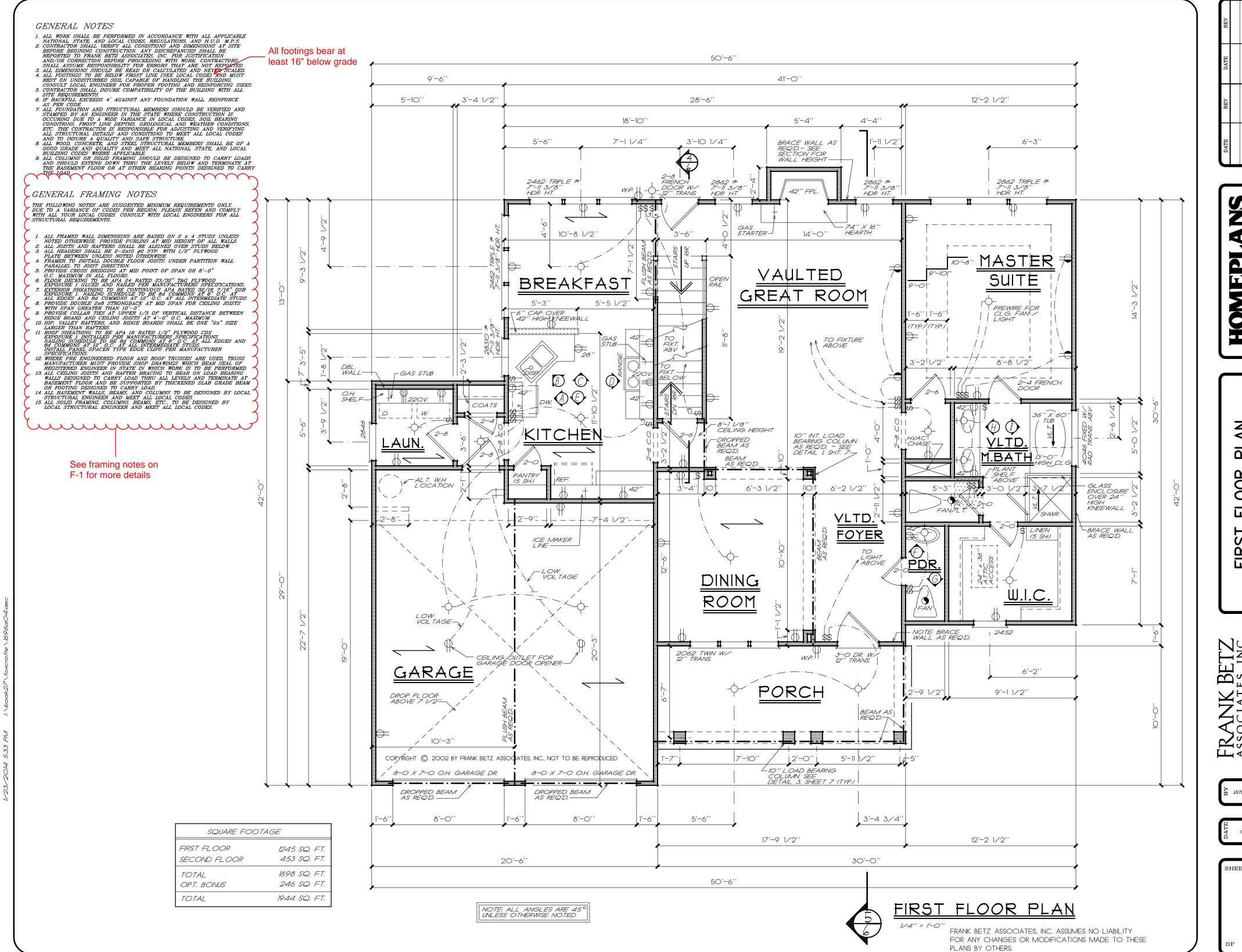


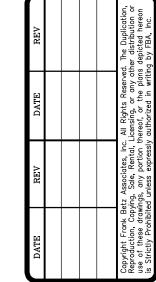


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RST FLOOR PLAN
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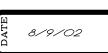
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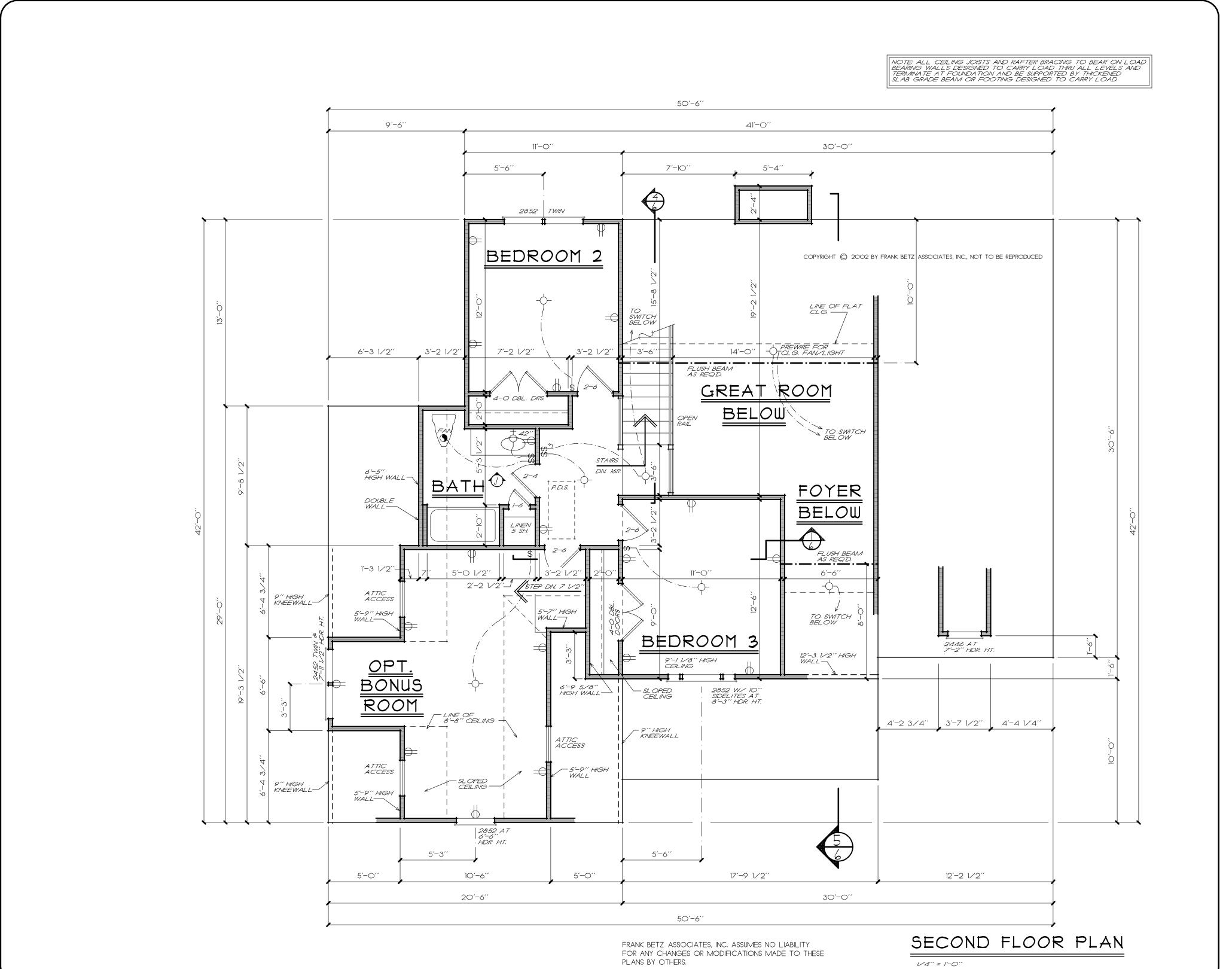
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SECOND FLOOR PLAN
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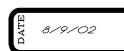
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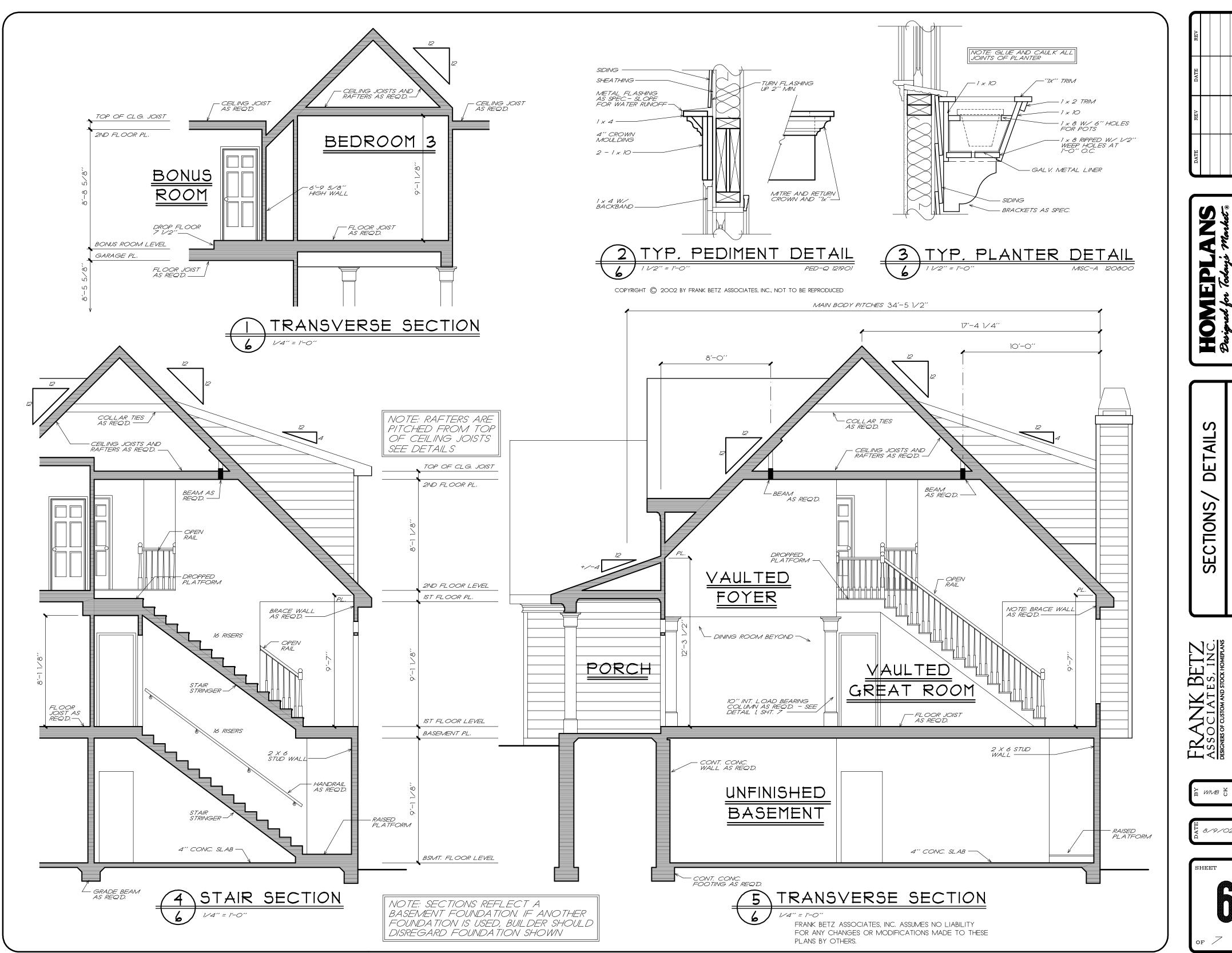
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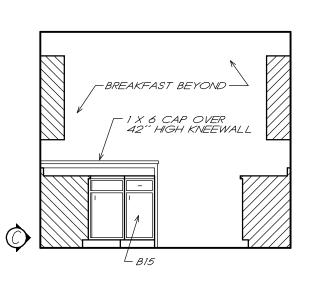
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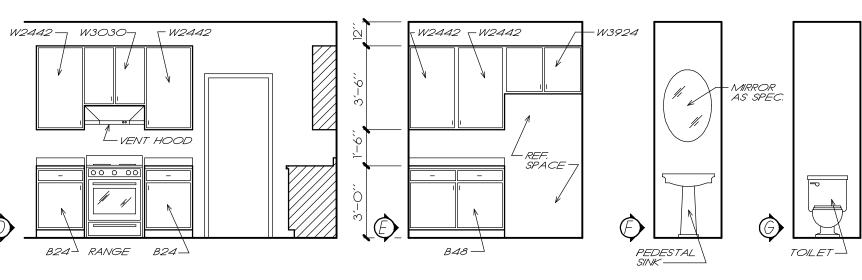
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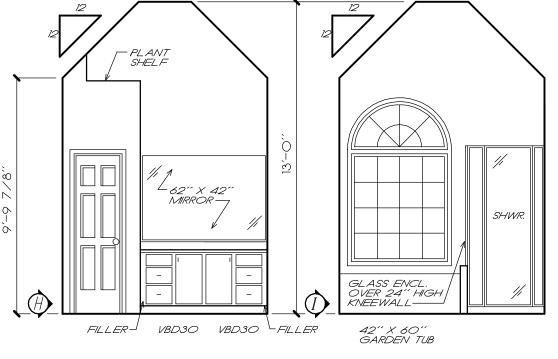
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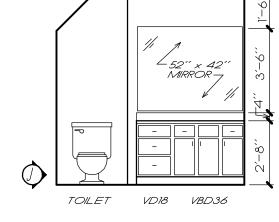
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### KITCHEN ELEVATIONS

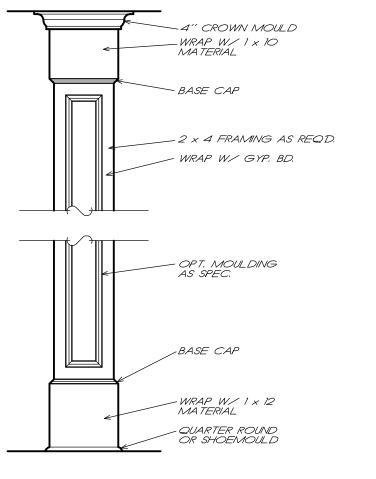


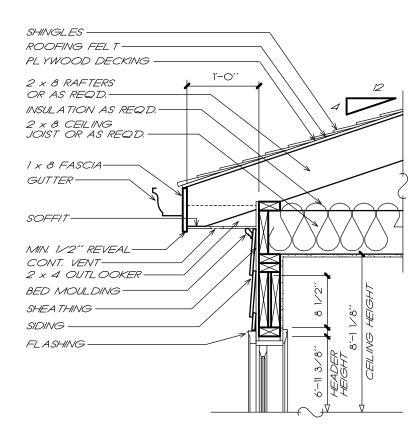


# BATH ELEV.

### MASTER BATH ELEVATIONS

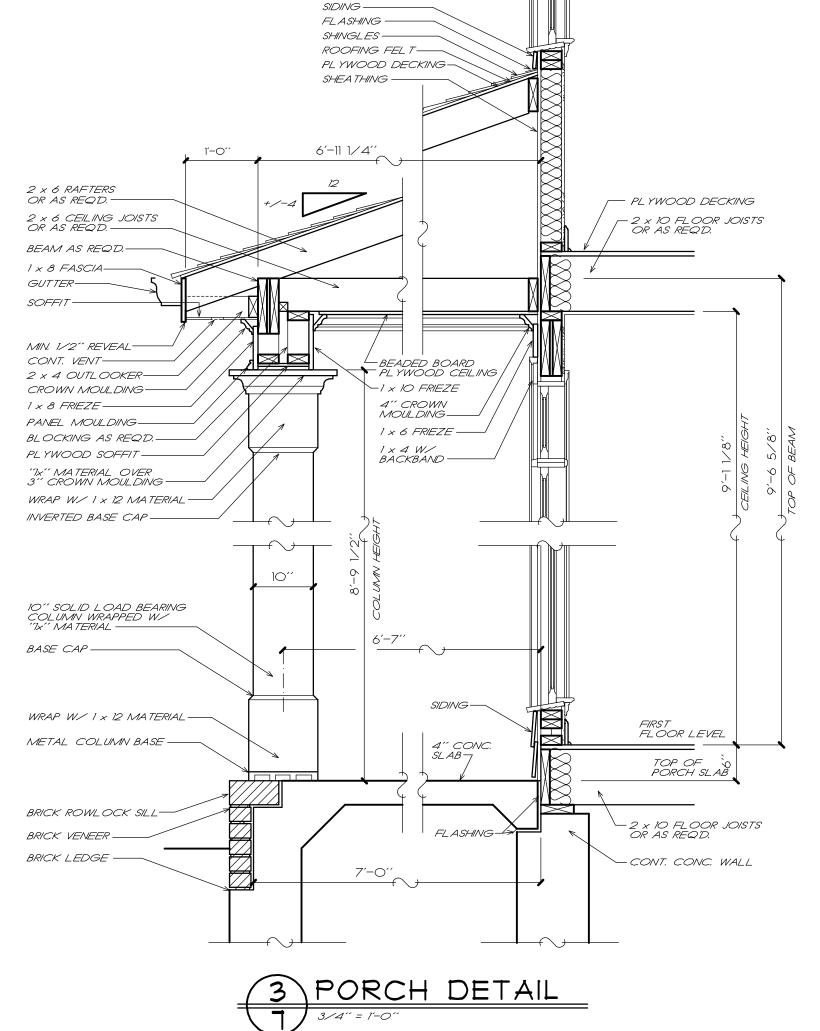
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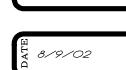




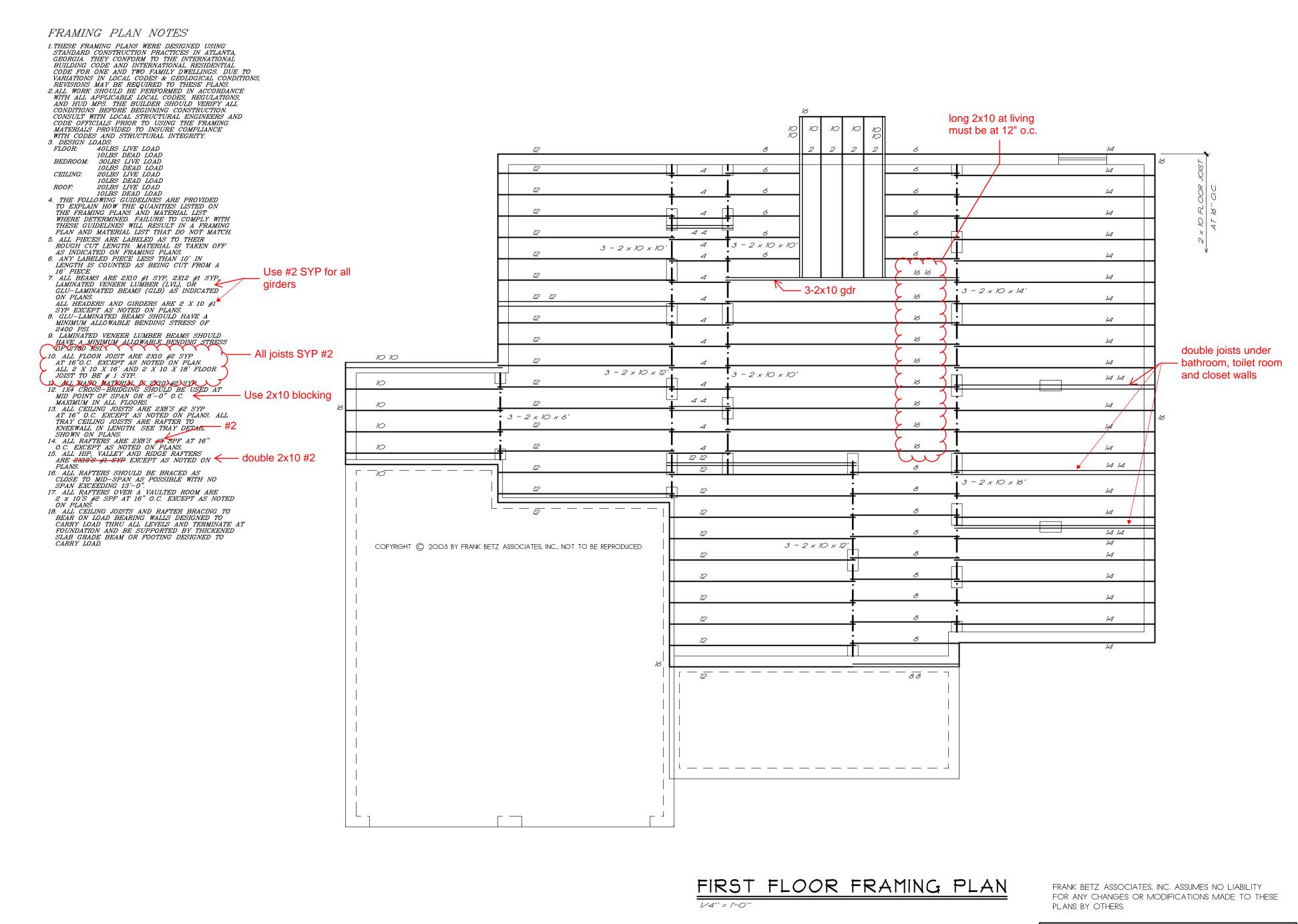
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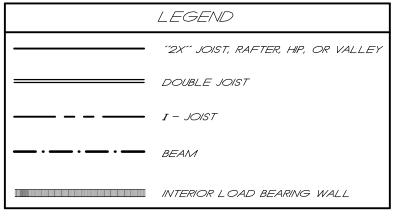




BEAM SCHEDULE

(A) NOT USED

QUANTITIES	
2 × 10 × 10	23
2 × 10 × 12	37
2 × 10 × 14	31
2 × 10 × 16	34



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OCLAR 33-B

ACOL'16

SPANS

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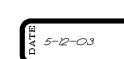
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CRAWL FLOOR FRAMING PLAN THE FOXCROFTE

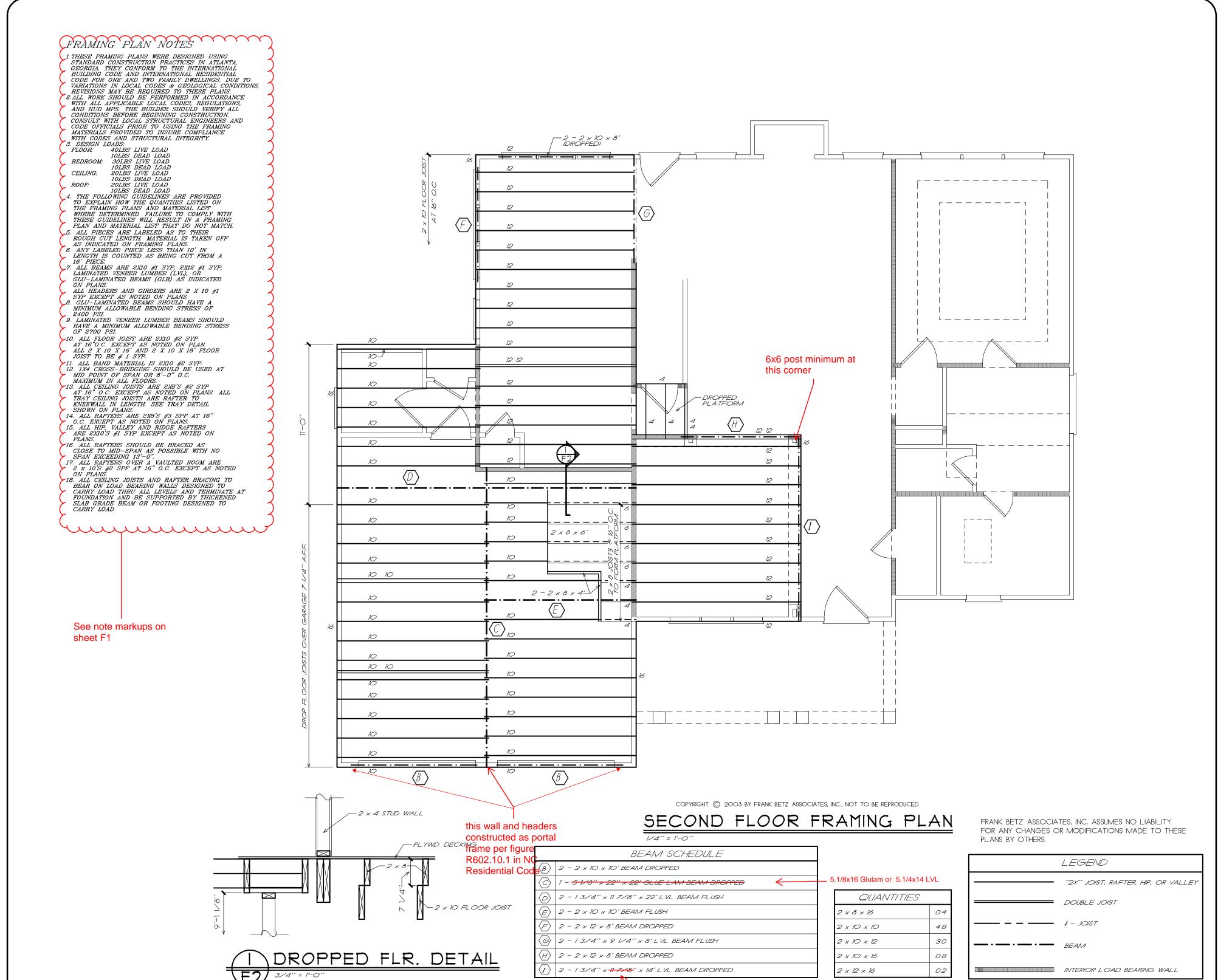
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3550 GEORGE BUSBEE PARKWAY
SUITE 190
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FLOOR FRAMING PLAN
THE FOXCROFTE

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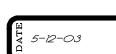
RS OF CUSTOM AND STOCK HOMEPLANS

3550 GEORGE BUSBEE PARKWAY

SUITE 190

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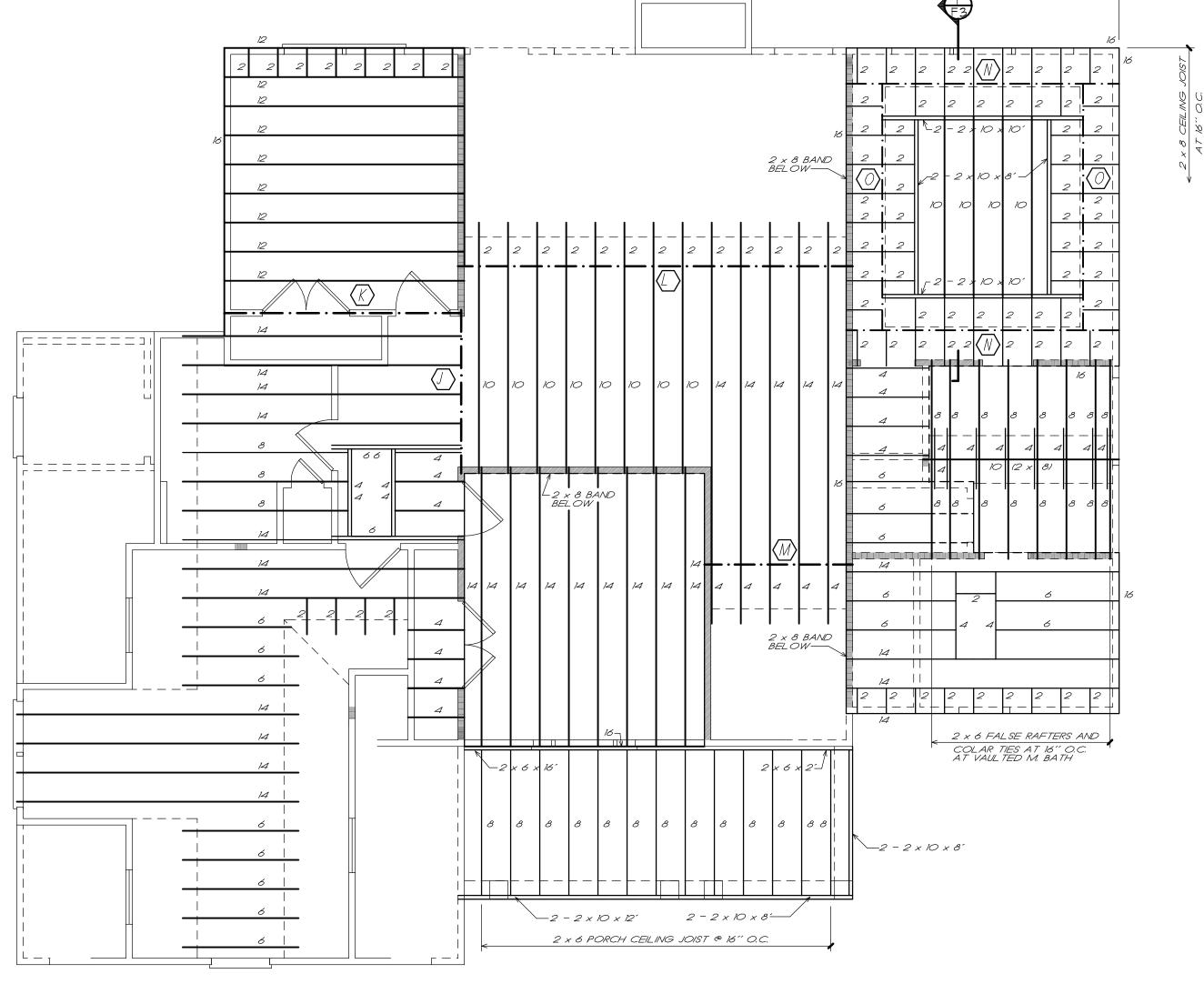


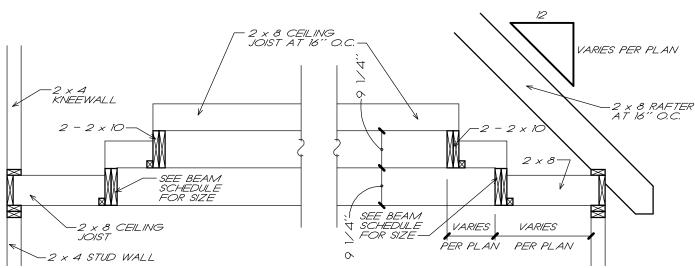


FRAMING PLAN NOTES

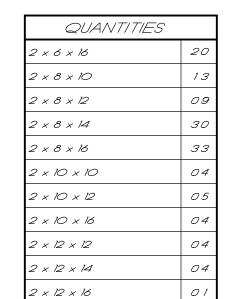
1. THESE FRAMING PLANS WERE DESIGNED USING STANDARD CONSTRUCTION PRACTICES IN ATLANTA, GEORGIA. THEY CONFORM TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL RESIDENTIAL

NOTE: ALL CEILING JOISTS AND RAFTER BRACING TO BEAR ON LOAD BEARING WALLS DESIGNED TO CARRY LOAD THRU ALL LEVELS AND TERMINATE AT FOUNDATION AND BE SUPPORTED BY THICKENED SLAB GRADE BEAM OR FOOTING DESIGNED TO CARRY LOAD.





TRAY CEILING DETAIL



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### CEILING JOIST FRAMING PLAN

BEAM SCHEDULE			
$\langle \mathcal{I} \rangle$	2 - 2 × 8 × 8' BEAM FLUSH		
$\langle \mathcal{K} \rangle$	3 - 2 <del>x 10 x 1</del> 2' BEAM FLUSH ← 3-2x12		
⟨∠⟩	2 - 1 3/4" x 18" x 18' L VL BEAM FLUSH - 2-1.3/4"x16" LVL		
$\langle M \rangle$	2 - 2 × 12 × 8′ BEAM FLUSH ← 2-1.3/4"x16" LVL		
$\langle v \rangle$	2 - 2 × 12 × 14' BEAM FLUSH		
	2 - 2 x 12 x 12' BEAM FLUSH		

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2 x 8 CEILING JOIST

AT 16" O.C.

LEGEND		
	"2X" JOIST, RAFTER, HIP, OR VALLEY	
	DOUBLE JOIST	
	I - JOIST	
	BEAM	
	INTERIOR LOAD BEARING WALL	

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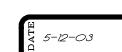
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FRAMING PLAN NOTES

1. THESE FRAMING PLANS WERE DESIGNED USING STANDARD CONSTRUCTION PRACTICES IN ATLANTA, GEORGIA. THEY CONFORM TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS. DUE TO VARIATIONS IN LOCAL CODES & GEOLOGICAL CONDITIONS, REVISIONS MAY BE REQUIRED TO THESE PLANS. 2. ALL WORK SHOULD BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODES, REGULATIONS,

WITH ALL APPLICABLE LOCAL CODES, REGULATIONS,
AND HUD MPS. THE BUILDER SHOULD VERIFY ALL
CONDITIONS BEFORE BEGINNING CONSTRUCTION.
CONSULT WITH LOCAL STRUCTURAL ENGINEERS AND
CODE OFFICIALS PRIOR TO USING THE FRAMING
MATERIALS PROVIDED TO INSURE COMPLIANCE WITH CODES AND STRUCTURAL INTEGRITY.
3. DESIGN LOADS:
FLOOR: 40LBS LIVE LOAD

10LBS DEAD LOAD 30LBS LIVE LOAD 10LBS DEAD LOAD BEDROOM:

CEILING: 10LBS DEAD LOAD 20LBS LIVE LOAD 10LBS DEAD LOAD ROOF:

4. THE FOLLOWING GUIDELINES ARE PROVIDED TO EXPLAIN HOW THE QUANITIES LISTED ON THE FRAMING PLANS AND MATERIAL LIST WHERE DETERMINED FAILURE TO COMPLY WITH THESE GUIDELINES WILL RESULT IN A FRAMING

THESE GUIDELINES WILL RESULT IN A FRAMING PLAN AND MATERIAL LIST THAT DO NOT MATCH.

5. ALL PIECES ARE LABELED AS TO THEIR ROUGH CUT LENGTH. MATERIAL IS TAKEN OFF AS INDICATED ON FRAMING PLANS.

6. ANY LABELED PIECE LESS THAN 10' IN LENGTH IS COUNTED AS BEING CUT FROM A 16' PIECE

16' PIECE. 7. ALL BEAMS ARE 2XIO #1 SYP, 2XI2 #1 SYP, LAMINATED VENEER LUMBER (LVL), OR GLU-LAMINATED BEAMS (GLB) AS INDICATED ON PLANS:
ALL HEADERS AND GIRDERS ARE 2 X 10 #1

SYP EXCEPT AS NOTED ON PLANS.

8. GLU-LAMINATED BEAMS SHOULD HAVE A
MINIMUM ALLOWABLE BENDING STRESS OF

2400 PSI. 9. LAMINATED VENEER LUMBER BEAMS SHOULD HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 2700 PSI.

10. ALL FLOOR JOIST ARE 2XIO #2 SYP
AT 16"O.C. EXCEPT AS NOTED ON PLAN.
ALL 2 X 10 X 16' AND 2 X 10 X 18' FLOOR
JOIST TO BE # 1 SYP.

11. ALL BAND MATERIAL IS 2X10 #2 SYP.
11. 1X4 CROSS-BRIDGING SHOULD BE USED AT
MID POINT OF SPAN OR 8'-0" O.C.
MAXIMUM IN ALL FLOORS.

MAXIMUM IN ALL FLOORS.

13. ALL CEILING JOISTS ARE 2X8'S #2 SYP
AT 16" O.C. EXCEPT AS NOTED ON PLANS. ALL
TRAY CEILING JOISTS ARE RAFTER TO
KNEEWALL IN LENGTH. SEE TRAY DETAIL
SHOWN ON PLANS.

14. ALL RAFTERS ARE 2X8'S #3 SPF AT 16" O.C. EXCEPT AS NOTED ON PLANS. 15. ALL HIP, VALLEY AND RIDGE RAFTERS ARE 2X10'S #1 SYP EXCEPT AS NOTED ON PLANS.

PLANS.

16. ALL RAFTERS SHOULD BE BRACED AS
CLOSE TO MID-SPAN AS POSSIBLE WITH NO
SPAN EXCEEDING 13'-0".

17. ALL RAFTERS OVER A VAULTED ROOM ARE
2 x 10'S #2 SPF AT 16" O.C. EXCEPT AS NOTED
ON PLANS.

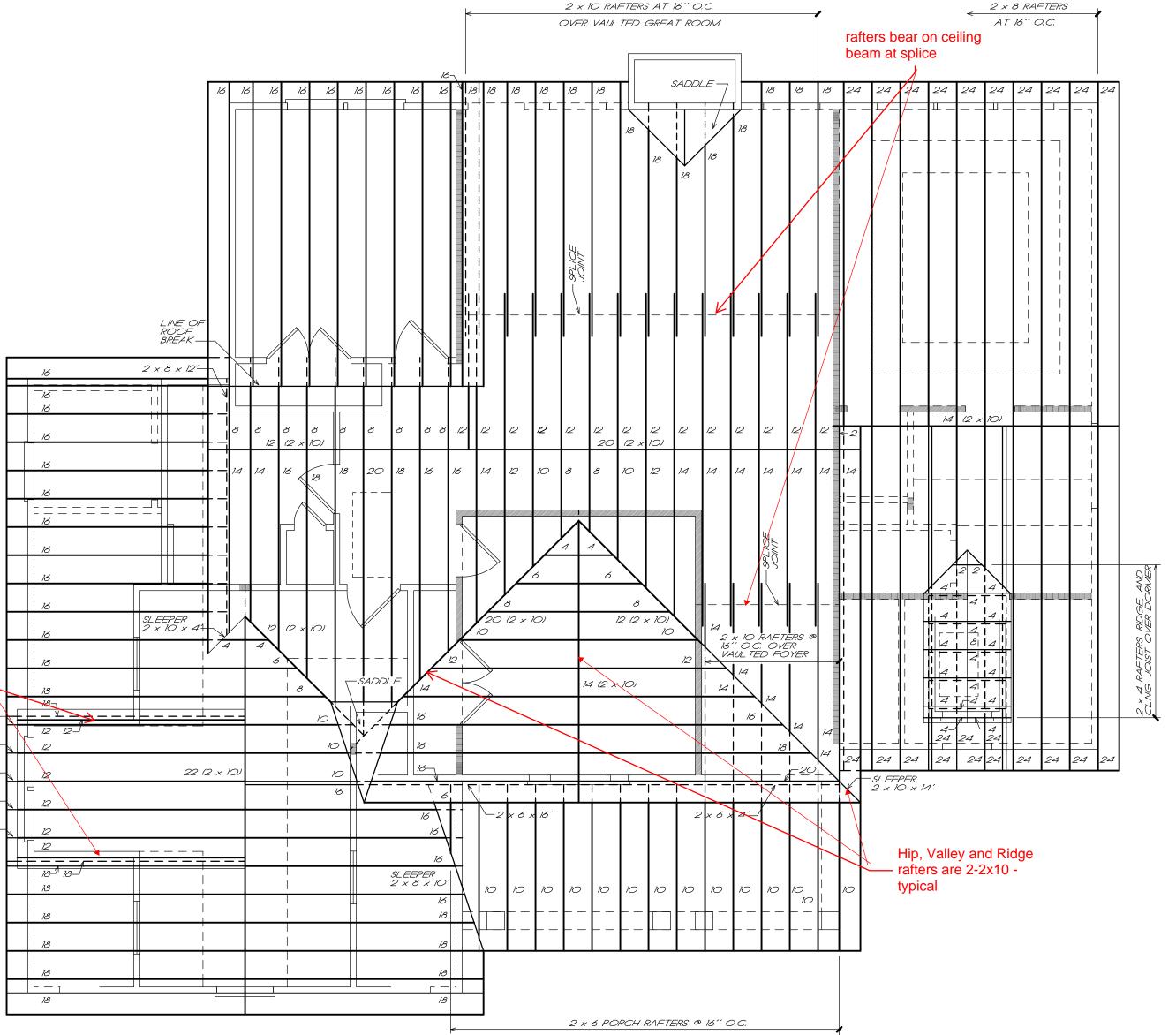
18. ALL CEILING JOISTS AND RAFTER BRACING TO
BEAR ON LOAD BEARING WALLS DESIGNED TO
CARRY LOAD THRU ALL LEVELS AND TERMINATE AT
FOUNDATION AND BE SUPPORTED BY THICKENED
SIAB GRADE BEAM OR FOOTING DESIGNED TO SLAB GRADE BEAM OR FOOTING DESIGNED TO CARRY LOAD.

Double joist each side of dormer

See marked up notes on sheet F-1

QUANTITIES	
2 x 4 x 16	05
2 x 6 x 10	14
2 x 6 x 16	02
2 x 8 x 10	08
2 x 8 x 12	26
2 x 8 x 14	12
2 x 8 x 16	44
2 x 8 x 18	18
2 x 8 x 20	02
2 x 8 x 24	23
2 × 10 × 12	03
2 x 10 x 14	09
2 x 10 x 16	01
2 x 10 x 18	14
2 x 10 x 20	02
2 x 10 x 22	01

NOTE: ALL CEILING JOISTS AND RAFTER BRACING TO BEAR ON LOAD BEARING WALLS DESIGNED TO CARRY LOAD THRU ALL LEVELS AND TERMINATE AT FOUNDATION AND BE SUPPORTED BY THICKENED SLAB GRADE BEAM OR FOOTING DESIGNED TO CARRY LOAD.



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## ROOF FRAMING PLAN

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TEANS BY OTHERS.	
	LEGEND
	"2X" JOIST, RAFTER, HIP, OR VALLEY
	DOUBLE JOIST
	I - JOIST
	BEAM
	INTERIOR LOAD BEARING WALL

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PLAN FOXCROF **FRAMING** THE 90F

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