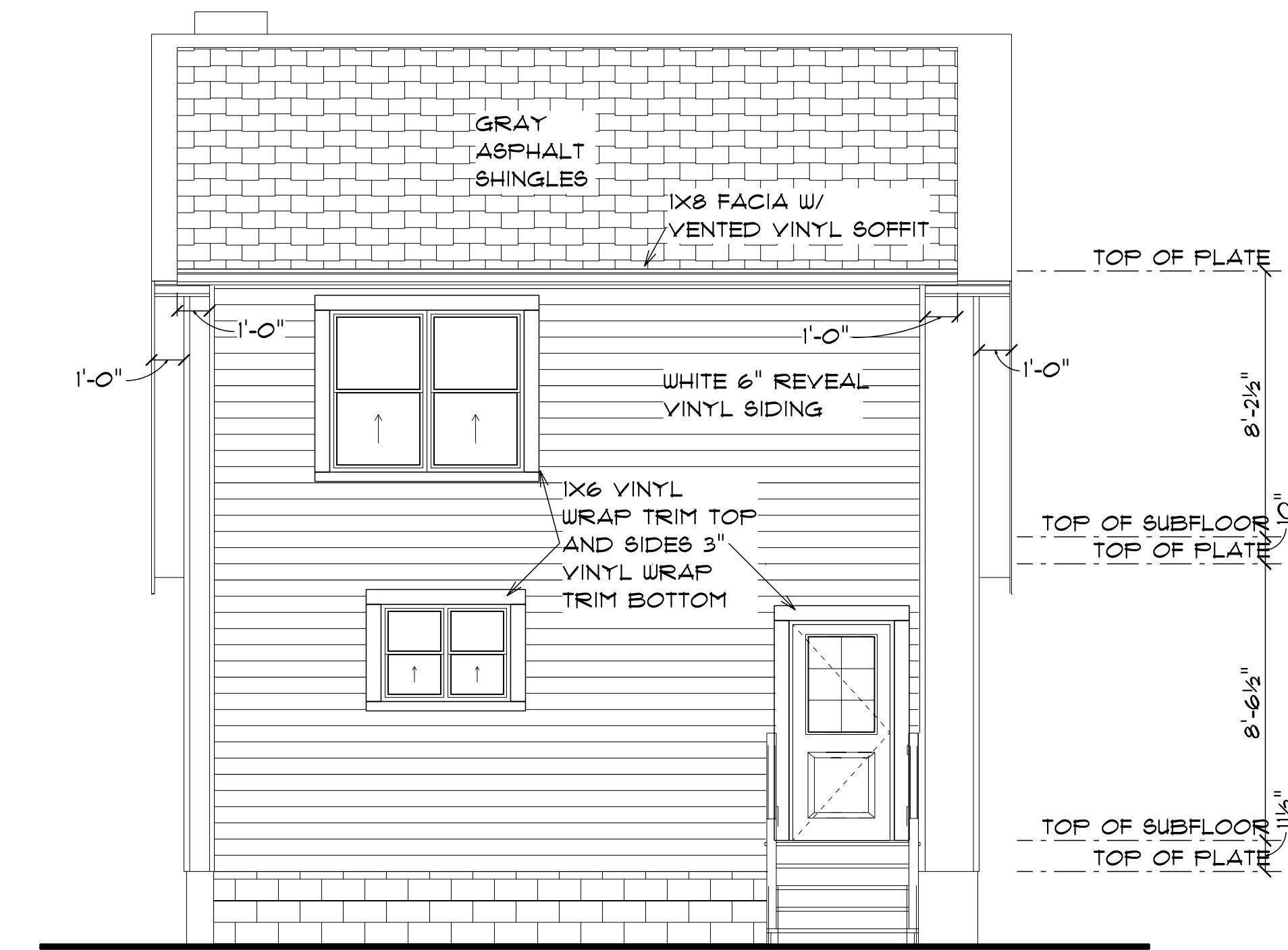


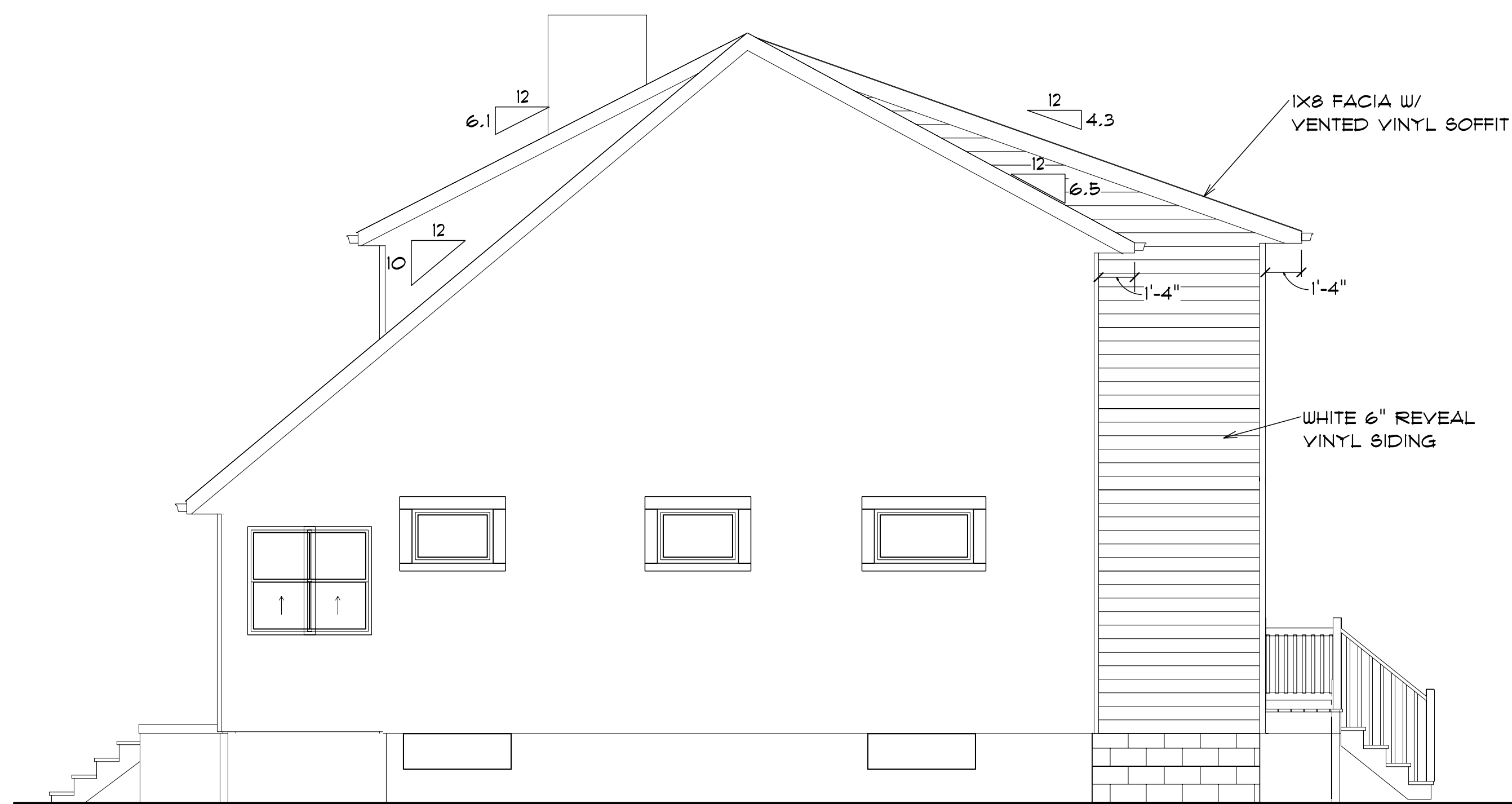
LEFT ELEVATION

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



REAR ELEVATION

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



RIGHT ELEVATION

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

Project: 752 VERNON AVE. ADDITION AND REMODEL
 Location: L.V.L. OVER KITCHEN BM. #1
 Uniformly Loaded Floor Beam
 [2015 International Building Code(2015 IBC)]
 (4.1.1.5.1a x 11.2.5.1a x 13.0.1.1)
 Vena-Lam Col 2650 Fb - Boise Cascade
 Section Adequate by 157.4%
 Controlling Factor: Deflection

StruCalc 9.8
 StruCalc Version 10.0.1.6 2/12/2020 8:32:05 AM

CAUTIONS
 *Laminations are to be fully connected to provide uniform transfer of loads to all members.

DEFLECTIONS		Center
Live Load	0.17	IN L927
Dead Load	0.05	in
Total Load	0.22	IN L706
Live Load Deflection Criteria: L/240		Total Load Deflection Criteria: L/240

REACTIONS		A	B
Live Load	2405 lb	2405 lb	
Dead Load	751 lb	751 lb	
Total Load	3156 lb	3156 lb	
Bearing Length	1.00 in	1.00 in	

BEAM DATA		Center
Span Length	13	ft
Unbraced Length Top	0	ft
Floor Duration Factor	1.00	
Notch Depth	0.00	

MATERIAL PROPERTIES			
Vena-Lam Col 2650 Fb - Boise Cascade			
	Base Values	Adjusted	
Bending Stress:	Fb = 2650 psi	Fb' = 2669 psi	
Shear Stress:	Fv = 285 psi	Fv' = 285 psi	
Modulus of Elasticity:	E = 1700 ksi	E = 1700 ksi	
Comp. A-to Grain:	Fc-A = 450 psi	Fc-A' = 450 psi	

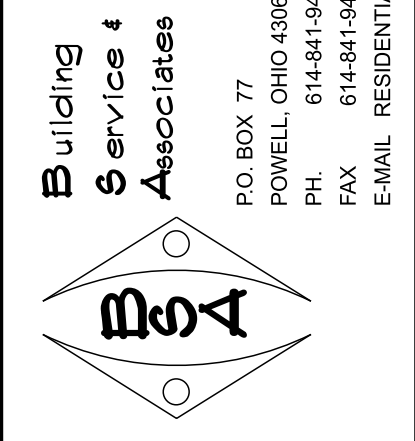
Controlling Moment: 10256 ft-lb
 2.5 ft from left support
 Created by combining all dead and live loads.
 Controlling Shear: 3156 lb
 At support.
 Created by combining all dead and live loads.

Comparisons with required sections:			
	Required	Provided	
Section Modulus:	46.11 in ³	147.66 in ³	
Area (Shear):	16.61 in ²	78.75 in ²	
Moment of Inertia (deflection):	322.71 in ⁴	830.57 in ⁴	
Moment:	10256 ft-lb	32842 ft-lb	
Shear:	3156 lb	14963 lb	

LOADING DIAGRAM		
Floor Live Load	FLL = 40 psf	40 psf
Floor Dead Load	FDL = 10 psf	10 psf
Floor Tributary Width	FTW = 3.3 ft	6 ft
Wall Load	WALL = 0 psf	

BEAM LOADINGS		
Beam Total Live Load:	wL = 370 psf	
Beam Total Dead Load:	wD = 93 psf	
Beam Self Weight:	BSW = 23 psf	
Total Maximum Load:	wT = 485 psf	

L.V.L. BM. OVER KITCHEN DESIGN CALCULATIONS



ADDITION AND RENOVATION OF 752 VERNON AVE.
 BEXLEY, OHIO 43209-2465

REVISION SCHEDULE	
DATE	REVISION NOTE
2/11/20	CONST. DOC.'S
3/10/20	REV. EXT. ELEV. DETAILS

DATE: 2/1/20
 DRAWN BY: JP