BEFORE THE ZONING COMMISSION AND
BOARD OF ZONING ADJUSTMENT OF THE DISTRICT OF COLUMBIA

FORM 129 – ADVISORY NEIGHBORHOOD COMMISSION (ANC) REPORT

Before completing this form, please review the instructions on the reverse side.

Pursuant to Subtitle Z § 406.2 and Subtitle Y § 406.2 of Title 11 DCMR Zoning Regulations, the written report of the Advisory Neighborhood Commission (ANC) shall contain the following information:

IDENTIFICATION OF APPEAL, PETITION, OR APPLICATION:

Case No.:	20380	**Case Name:**	Polygon Holdings, LLC
Address or Square/Lot(s) of Property:	4457 MacArthur Boulevard, NW		
Relief Requested:	Special Exception: The new residential development requirements of Subtitle U § 421; and side yard requirements of Subtitle F § 306.2(a) Pursuant to: Subtitle F § 5201 and Subtitle X § 901.2		

ANC MEETING INFORMATION

Date of ANC Public Meeting:	0	7	/	0	4	/	2	1	**Was proper notice given?:**	**Yes**	☒	**No**	☐	

Description of how notice was given: On ANC 3D's website, www.anc3d.org, and local listservs.

Number of members that constitutes a quorum:	6	**Number of members present at the meeting:**	9

MATERIAL SUBSTANCE

The issues and concerns of the ANC about the appeal, petition, or application as related to the standards of the Zoning Regulations against which the appeal, petition, or application must be judged (*a separate sheet of paper may be used*):

See attached resolution.

The recommendation, if any, of the ANC as to the disposition of the appeal, petition, or application (*a separate sheet of paper may be used*):

That the BZA reject the application for a special exception. See attached resolution.

AUTHORIZATION

ANC	3	D	**Recorded vote on the motion to adopt the report (i.e. 4-1-1):**	9-0-0

Name of the person authorized by the ANC to present the report:	J.P. Szymkowicz, 3D09 Commissioner
Name of the Chairperson or Vice-Chairperson authorized to sign the report:	Paige Ela, Chairperson ANC 3D
Signature of Chairperson/ Vice-Chairperson:	Paige K. Ela
Date:	4/7/2021

ANY APPLICATION THAT IS FOUND TO BE INCOMPLETE MAY NOT BE ACCORDED "GREAT WEIGHT" PURSUANT TO 11 DCMR SUBTITLE Z § 406 AND SUBTITLE Y § 406.

April 7, 2021

Board of Zoning Adjustment
District of Columbia Office of Zoning
441 4th Street N.W.
Washington, DC 20001

Re: Case Number: 20380
Property Address: 4457 MacArthur Boulevard N.W.
Applicant: Polygon Holdings LLC

To the Members of the Board of Zoning Adjustment:

We write to request that you reject the pending application for a special exception submitted by Polygon Holdings LLC ("Polygon"). As detailed further below, Advisory Neighborhood Commission 3D ("ANC 3D") believes the proposed project will have a substantially adverse effect on the use and enjoyment of neighboring properties, most especially 4459 MacArthur Boulevard N.W.

ANC 3D is also deeply troubled by the dismissive and combative approach that Polygon has adopted, both towards ANC 3D and the community, throughout this process. Polygon has largely refused to respond to legitimate concerns raised by commissioners and community members about the potential negative impacts that Polygon's proposed project might have on the adjacent homeowner and other community members, including the possibility that the project might threaten the physical structure of the neighboring property. Polygon has also neither attempted nor succeeded in articulating compelling reasons why the community should support this project in spite of any negative impacts on neighboring property owners.

* * *

At its regularly scheduled and publicly noticed monthly virtual meeting on April 7, 2021, with a quorum present, Advisory Neighborhood Commission 3D voted to send this letter to the Board of Zoning Adjustment requesting that it reject Polygon's application for a special exception with regard to 4457 MacArthur Boulevard N.W. (Case No. 20380).

ANC3D devoted significant time to discussing this project at its January 6, 2021 meeting, including extensive time for questions and comments from commissioners, Polygon's representatives, and interested community members.[1] The project was

[1] Transcripts of ANC 3D's January and February 2021 meetings are available at www.anc3d.org. When completed, a transcript of the April 7, 2021 meeting will be available at www.anc3d.org.

further discussed at ANC 3D's February 3, 2021 meeting, although this discussion did not focus on the merits of the proposal.[2] Before and after these meetings, ANC 3D also solicited and received written submissions and comments from Polygon, the neighboring property owner, and members of the community.

Analysis

Polygon proposes to replace a single-family home that makes up one-half of a duplex-style building with an 8-unit multifamily building. Polygon's property, 4457 MacArthur Boulevard, is located in an RA-1 zone. The property, together with the adjoining home, 4459 MacArthur Boulevard N.W., is shown in the photograph below:

Dr. Dawn Lea, the owner of the adjoining property has raised significant and compelling concerns about the impact of Polygon's plans on the structural integrity of her home, which shares an undivided front porch, common roof, common attic and common basement with Polygon's 4457 MacArthur Boulevard. Other community members, as well as Dr. Lea, also noted the potential, if not properly mitigated, for increased noise, traffic, and other nuisances.

In our judgment, Polygon has not addressed these concerns in a good faith manner, despite being given multiple opportunities to do so orally and in writing. In fact, at times Polygon's representatives were overtly dismissive and disdainful when pressed about concerns raised by Dr. Lea or another community member. In other instances, Polygon simply refused to provide an answer, repeatedly chastising commissioners and community members for asking about topics that Polygon's representatives viewed as beyond the scope of the ANC's review.[3] Most notably,

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[2] *See* ANC 3D, Ltr. to Attorney General Racine and Acting Director Palacio regarding Alleged Fair Housing Violations, Feb. 3, 2021, https://resolutions.anc.dc.gov/AttachmentsFiles/13/OAG_OHR%20Letter%20-%20Final_TM_20210302052732PM.pdf.

[3] ANC 3D strongly rejects the notion that questions about the impact of proposed project on the structural integrity of the neighboring structure should simply be left to the "permitting process"

Polygon has declined to address a structural analysis report submitted by Dr. Lea in advance of ANC 3D's April 7th meeting. Prepared at Dr. Lea's request by Yahya Aliabadi, PhD, P.E., a Licensed Professional Engineer in the District of Columbia affiliated with A & A Structures LLC, the report concluded that the "roof structure [on the 4459 "side" of the duplex] will not be able to carry the future increased snow load and must be reinforced and strengthened if any additional load will be added." (Ex. A.)

In considering the applicable zoning regulations,[4] ANC 3D is persuaded that the proposed special exception will have a substantially adverse effect on the use and enjoyment of the neighboring property, 4459 MacArthur Boulevard, both during and after construction of the proposed project.

First, ANC 3D is concerned about the construction-related impacts on the adjoining property. As noted, Dr. Lea submitted a structural analysis report prepared by Dr. Aliabadi of A & A Structures LLC that concluded that her portion of the shared roof cannot handle the increased snow load without, at a minimum, reinforcement and strengthening. In addition, Stephen Dupont, an architect retained by Dr. Lea, testified at ANC 3D's January 6, 2021 meeting that construction of the proposed development would have significant negative effects on the physical structure of Dr. Lea's home, absent significant modifications, and would necessarily impact her use and enjoyment of the property. In our judgment, Polygon did not sufficiently address or rebut these concerns, nor did Polygon adequately explain how the issues identified by Mr. Dupon, Dr. Aliabdi, and others would be mitigated by Polygon.

Second, given that the properties are separated by mere inches and share an undivided front porch, common roof, common attic and common basement, ANC 3D is persuaded that—absent mitigation—there is a much greater likelihood that the redevelopment of 4457 MacArthur as a multifamily property will result in objectionable impacts for the neighboring property owner, particularly with respect to noise, than if Polygon was seeking to redevelop a standalone single-family home. Polygon did not seriously dispute the increased likelihood of objectionable impacts on the owner of 4459 MacArthur due to nature of the duplex-style building. We also note that Polygon did not adequately explain how these impacts, which we are persuaded are likely to occur, would be mitigated.

We are not in a position to evaluate the technical claims made by Stephen Dupont, an architect retained by Dr. Lea, or Dr. Aliabadi, author of the structural analysis report discussed above. However, we take their conclusions very seriously. If correct, it is indisputable that the proposed project will have a substantially adverse

[4] Section F-5201 of the Zoning Regulations provides that an application for a special exception "shall not have a substantially adverse effect on the use or enjoyment of any abutting or adjacent dwelling or property, in particular: . . . the privacy of use and enjoyment of neighboring properties shall not be unduly compromised."

effect on the neighboring property owner. In our opinion, Polygon's silence—despite repeated requests to address these issues—speaks volumes.

In addition, we note that Polygon has also not made any meaningful attempts to articulate compelling reasons why the community should welcome this project *despite* any negative impacts it may have. We can only conclude that Polygon made a tactical decision to write off ANC 3D and to simply "go through the motions" with the ANC before proceeding to the BZA. Engaging with community members and the relevant ANC when seeking a special exception should not simply be a hoop that a developer must go through or a box they must check before heading before the "real" decision makers. Regardless of whether an ANC ultimately endorses a project, developers should be expected to *meaningfully* engage with ANCs before seeking an exception at the BZA. We request that the Board consider Polygon's failure to do so as you consider the pending application.

Findings

Based on our review of the proposed project, ANC 3D finds that, if granted, the special exception requested by Polygon will have "a substantially adverse effect on the use or enjoyment of . . . [the] abutting or adjacent dwelling or property," i.e., the owner of 4459 MacArthur Boulevard NW, the other half of the duplex. Specifically, ANC 3D finds that:

(a) "the light and air available" to the owner of 4459 MacArthur will "be unduly compromised;"

(b) "the privacy of use and enjoyment" for the owner of 4459 MacArthur will "be unduly compromised;" and

(c) "the proposed addition or accessory structure, together with the original building, or the new building, as viewed from the street, alley, and other public way, shall" "substantially visually intrude upon the character, scale, and pattern" of the adjoining home, 4459 MacArthur Boulevard.

While satisfying all quorum requirements, ANC 3D voted to approve this letter and to designate Commissioner J.P. Szymkowicz to testify before any hearing on this issue.

Sincerely yours,

_____

Paige Ela, Chair

EXHIBIT A

A & A Structures LLC
22 Holly Leaf Ct. Bethesda MD 20817
Tell: 240-678-5399
aastructure@gmail.com

March 28, 2021

Ms. Dawn Lea
4459 MacArthur Blvd NW, Washington, DC 20007

Re: Existing roof structure check

Dear Ms. Lea,

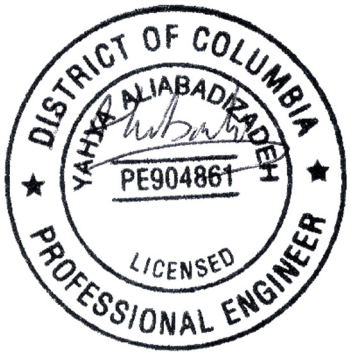
Further to your request, I visited your property located at 4459 MacArthur Blvd NW, Washington, DC 20007. I checked the existing structure for applicable loads. Per my observation, the existing roof of the building is constructed with 2x6 @ 24" O.C. joists. The joists span approximately 14 ft between the supports.

Per my attached calculations, the joists can barely carry the existing applicable snow load. The future development on the neighboring property will certainly add more snowdrift load to the roof which will be beyond the roof structural capacity.

Therefore, the roof structure will not be able to carry the future increased snow load and must be reinforced and strengthened if any additional load will be added.

Thank you for providing us with the opportunity to be of service.

Sincerely,



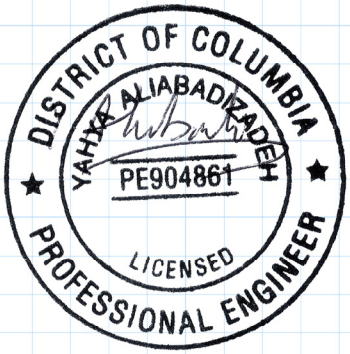
Yahya Aliabadi, PhD, PE
A & A Structures LLC

Structural Calculations

for

Roof joist check for snow load

4459 MacArthur Blvd NW
Washington, DC 20007



Prepared By:

Y. Aliabadi, PhD, PE

E-Mail Address: aastructure@gmail.com

A & A Structures LLC - Structural Calculation Sheets

PROJECT: 4459 MacArthur Blvd NW, Washington, DC 20007 By : YA , Date: 03/28/2021

SUBJECT: Roof Joist check

1 - Objective or Purpose

The following calculation is for Snow Load calculation and Roof Joist check on property located at 4459 MacArthur Blvd NW, Washington, DC 20007

2 - References

2-1 - ASCE 7-10 Minimum design Load for Buildings and other structures.
2-2 - IBC 2013, International Building Code
2-3 - NDS 2009, National Design Specification for Wood construction
2-4 - Field measurments

3 - Calculation basis

Sructural calculation is performed per Reference 2-1 to 2-4.

4 - Assumptions

There is no unverified assumtion in this calculation. Any assumption made in the body of this calculation will be justified in the same section where assumption is made.

5 - Inputs

Snow Load	ASCE 7-10	(Ref. 2-1)
Building Geometry	Field Measurements	(Ref. 2-4)

6 - Methodology

Roof Structure is checked for applicable Dead , Live , Snow loads.

7 - Limitations or restrictions on calculation applicability

This calculation is only applicable for residential building located at 4459 MacArthur Blvd NW, Washington, DC 20007

Snow load :

Caclulate Flat Roof Snow Load :

Ground Snow Load from for District of Columbia region : $p_g := 30\ psf$ (Fig. 7-1, Ref 2-1)

Terrain category for open terrain with scattered obstructions having heights less than 30 ft : Exposure Category = C (26.7.2, Ref 2-1)

Exposure factor for partially exposed roof : $C_e := 1.0$ (Table 7-2, Ref 2-1)

Thermal factor for unheated structures : $C_t := 1.1$ (Table 7-3, Ref 2-1)

Risk category of building : $Risk\_Cat := \text{“II”}$ (Table 1.5-1, Ref 2-1)

Snow Importance factor :

$$I_s := \begin{cases} 0.8 & \text{if } Risk\_Cat = \text{“I”} \\ 1.0 & \text{else if } Risk\_Cat = \text{“II”} \\ 1.1 & \text{else if } Risk\_Cat = \text{“III”} \\ 1.2 & \text{else} \end{cases} \qquad I_s = 1$$ (Table 1.5-2, Ref. 2-1)

Flat roof snow load: $p_{flat} := \max\left(20\ psf \cdot I_s, 0.7 \cdot C_e \cdot C_t \cdot I_s \cdot p_g\right) = 23.1\ psf$ (Eq. 7.3-1, Ref. 2-1)

Minimum flat roof snow load :

$$p_{min} := \begin{cases} I_s \cdot p_g & \text{if } p_g \le 20\ psf \\ I_s \cdot (20\ psf) & \text{else} \end{cases} \qquad = 20\ psf$$ (7.3.4, Ref. 2-1)

Flat roof snow load after minimum snow load is considered: $p_f := \max\left(p_{min}, p_{flat}\right) = 23.1\ psf$

Roof slope factor : $C_s := 1.0$ (Fig. 7-2b, Ref. 2-1)

Sloped roof : $p_s := C_s \cdot p_f = 23.1\ psf$ (Eq. 7.4-1, Ref. 2-1)

Snow density : $\gamma_{snow} := min\left(\left(0.13 \cdot \frac{p_g}{ft} + 14 \cdot pcf\right), 30\ pcf\right) = 17.9\ pcf$ (Eq. 7.7-1, Ref. 2-1)

Height of balanced snow load (Snow drift height): $h_b := \frac{p_s}{\gamma_{snow}} = 1.291\ ft$ (7.7.1, Ref. 2-1)

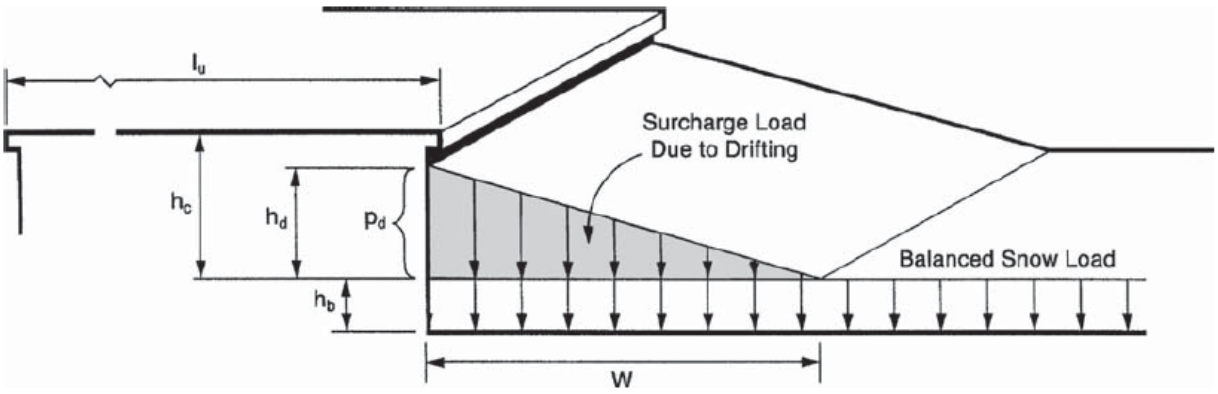


Figure 6 - Configuration of snow drift (Fig. 7-8, Ref. 2-1)

Calculate Snow Drifts near parapet:

Parapet Height per architecture: $h_{pr} := 42\ in$

Clear height : $h_c := h_{pr} - h_b = 2.209\ ft$

$$Calculate\_drift := \begin{cases} \text{if } \frac{h_c}{h_b} < 0.2 \\ \quad \text{“No Drift”} \\ \text{else} \\ \quad \text{“Yes”} \end{cases} \qquad Calculate\_drift = \text{“Yes”}$$ (7.7.1, Ref. 2-1)

Length of the roof upwind of the drift : $l_u := 40\ ft$

If less than 25ft use lu=25 ft $l_u := \max(l_u, 25\ ft) = 40\ ft$

Ground Snow load: $p_g = 30\ psf$

Height of snow drift : $h_d := \frac{3}{4}\left(0.43 \cdot \sqrt[3]{\frac{l_u}{ft}} \cdot \sqrt[4]{\frac{p_g}{psf} + 10} - 1.5\right) ft = 1.649\ ft$ (Fig. 7-9, Ref. 2-1)

$$w := min\left(\begin{cases} \text{if } h_d \le h_c \\ \quad 4 \cdot h_d \\ \text{else} \\ \quad 4 \cdot \frac{h_d^{\,2}}{h_c} \end{cases}, 8\ h_c\right) = 6.595\ ft$$

$$p_d := \begin{cases} \text{if } h_d \le h_c \\ \quad h_d \\ \text{else} \\ \quad h_c \end{cases} = 1.649\ ft$$

A & A Structures LLC - Structural Calculation Sheets

PROJECT: 4459 MacArthur Blvd NW, Washington, DC 20007

By : YA , Date: 03/28/2021

SUBJECT: Roof Joist check

IBC section 1608 requires roofs with a slope less than 1/2" per 12" to be designed for a rain-on-snow surcharge load as determined in accordance with ASCE 7, section 7.10. Section 7.10 does not require a rain-on-snow surcharge for locations where the ground snow load exceeds 20 psf; therefore, rain-on-snow surcharge is not required.

Summary:

Snow Load in flat parts: $SL_{unif} := \max(p_g, p_f) = 30\ psf$

Snow drift: $SD := p_d \cdot \gamma_{snow} = 29.512\ psf$ Max Drift lendth : $w = 6.595\ ft$

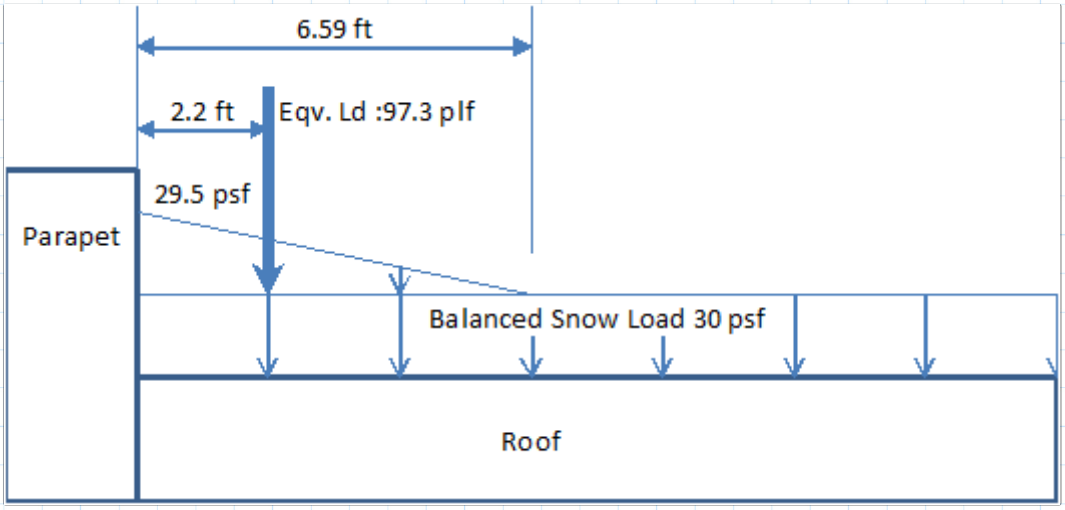


Figure 7 - Snow drift equivalent load

Equivalent Snow Drift : $SD_{eqv} = 97.316\ plf$

Distance of equivalent load to parapet : $SD_{dist} = 2.198\ ft$

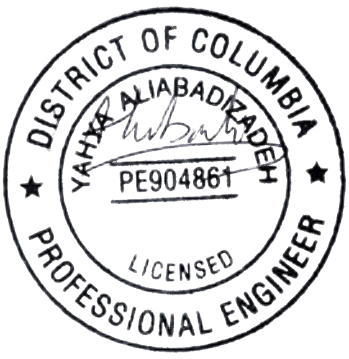
A & A Structures LLC

Tel : 240-678-5399
Email : aastructure@gmail.com

Project Title:
Engineer:
Project ID:
Project Descr:

Building Code Information

Governing Code : IBC 2018, ASCE 7-16, CBC 2019, AISC 360-16, NDS 2018, ACI 318-14, TMS
City Jurisdiction :
Contact Name :
Alternate Contact :
Building Official :
Address : , ,
Phone : Fax : eMail :
Notes :



A & A Structures LLC

Tel : 240-678-5399
Email : aastructure@gmail.com

Project Title: Roof structure of existing building
Engineer: Y. Aliabadi
Project ID:
Project Descr:

Project Information

Project Title : Roof structure of existing building
Description :

I.D. :
Address : 4459 MacArthur Blvd NW, Washington, DC 20007

Project Leader : Y. Aliabadi
Phone : 240-678-5399 Fax : eMail : aastructure@gmail.com

Project Notes

A & A Structures LLC

Tel : 240-678-5399
Email : aastructure@gmail.com

Project Title: Roof structure of existing building
Engineer: Y. Aliabadi
Project ID:
Project Descr:

Wood Beam

File: Roof Check.ec6

DESCRIPTION: Roof Joists check for Bending

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : IBC 2018

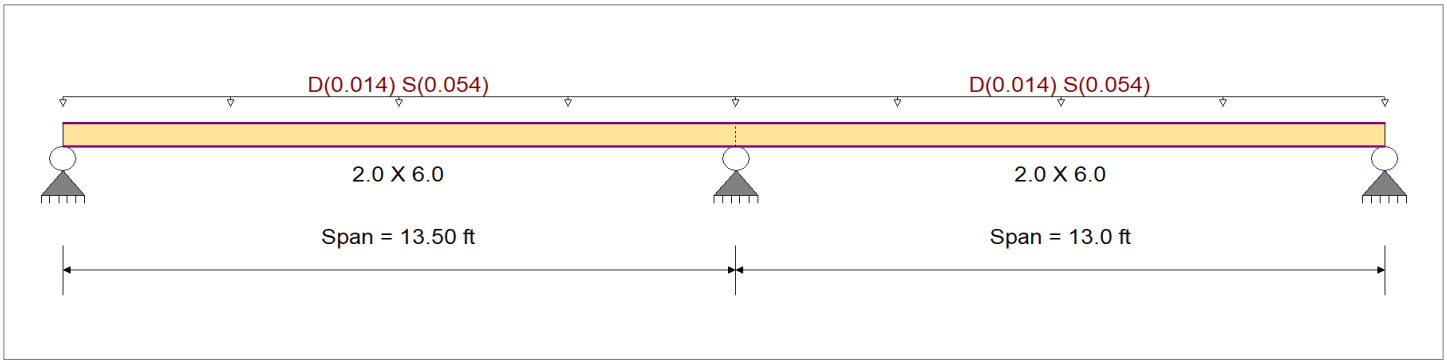
Wood Species : Hem-Fir (North)
Wood Grade : Select Structural

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	1300 psi
Fb -	1300 psi
Fc - Prll	1700 psi
Fc - Perp	405 psi
Fv	145 psi
Ft	775 psi

E : Modulus of Elasticity

Ebend- xx	1700 ksi
Eminbend - xx	620 ksi
Density	28.72 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Load for Span Number 1
Uniform Load : D = 0.0070, S = 0.0270 ksf, Tributary Width = 2.0 ft, (Snow Load)
Load for Span Number 2
Uniform Load : D = 0.0070, S = 0.0270 ksf, Tributary Width = 2.0 ft, (Snow Load)

No additional capacity for snow drift

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.999 : 1	Maximum Shear Stress Ratio	=	0.404 : 1
Section used for this span		2.0 X 6.0	Section used for this span		2.0 X 6.0
	=	1,493.87 psi		=	67.36 psi
	=	1,495.00 psi		=	166.75 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	13.500 ft	Location of maximum on span	=	13.047 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.290 in	Ratio =	557 >=240
Max Upward Transient Deflection	0.000 in	Ratio =	0 <240
Max Downward Total Deflection	0.366 in	Ratio =	442 >=180
Max Upward Total Deflection	-0.001 in	Ratio =	177873 >=180

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	C_d	$C_{F/V}$	C_i	C_r	C_m	C_t	C_L	Moment Values M	Moment Values fb	Moment Values F'b	Shear Values V	Shear Values fv	Shear Values F'v
D Only					1.000	1.00	1.00	1.00	1.00	1.00			0.00	0.00	0.00	0.00
Length = 13.50 ft	1	0.263	0.106	0.90	1.000	1.00	1.00	1.00	1.00	1.00	0.31	307.56	1170.00	0.11	13.87	130.50
Length = 13.0 ft	2	0.263	0.106	0.90	1.000	1.00	1.00	1.00	1.00	1.00	0.31	307.56	1170.00	0.11	13.87	130.50
+D+S					1.000	1.00	1.00	1.00	1.00	1.00			0.00	0.00	0.00	0.00
Length = 13.50 ft	1	0.999	0.404	1.15	1.000	1.00	1.00	1.00	1.00	1.00	1.49	1,493.87	1495.00	0.54	67.36	166.75
Length = 13.0 ft	2	0.999	0.404	1.15	1.000	1.00	1.00	1.00	1.00	1.00	1.49	1,493.87	1495.00	0.53	67.36	166.75
+D+0.750S					1.000	1.00	1.00	1.00	1.00	1.00			0.00	0.00	0.00	0.00
Length = 13.50 ft	1	0.801	0.324	1.15	1.000	1.00	1.00	1.00	1.00	1.00	1.20	1,197.30	1495.00	0.43	53.99	166.75
Length = 13.0 ft	2	0.801	0.324	1.15	1.000	1.00	1.00	1.00	1.00	1.00	1.20	1,197.30	1495.00	0.42	53.99	166.75
+0.60D					1.000	1.00	1.00	1.00	1.00	1.00			0.00	0.00	0.00	0.00
Length = 13.50 ft	1	0.089	0.036	1.60	1.000	1.00	1.00	1.00	1.00	1.00	0.18	184.54	2080.00	0.07	8.32	232.00

A & A Structures LLC

Tel : 240-678-5399
Email : aastructure@gmail.com

Project Title: Roof structure of existing building
Engineer: Y. Aliabadi
Project ID:
Project Descr:

Wood Beam

File: Roof Check.ec6

DESCRIPTION: Roof Joists check for Bending

Load Combination		Max Stress Ratios									Moment Values			Shear Values		
Segment Length	Span #	M	V	C_d	$C_{F/V}$	C_i	C_r	C_m	C_t	C_L	M	fb	F'b	V	fv	F'v
Length = 13.0 ft	2	0.089	0.036	1.60	1.000	1.00	1.00	1.00	1.00	1.00	0.18	184.54	2080.00	0.07	8.32	232.00

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+S	1	0.3657	5.807		0.0000	0.000
+D+S	2	0.2810	7.626	+D+S	-0.0009	0.218

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	0.348	1.127	0.327
Overall MINimum	0.277	0.895	0.260
D Only	0.072	0.232	0.067
+D+S	0.348	1.127	0.327
+D+0.750S	0.279	0.903	0.262
+0.60D	0.043	0.139	0.040
S Only	0.277	0.895	0.260