



# MEDINA, WASHINGTON

## PLANNING COMMISSION MEETING

Virtual/Online

Tuesday, February 22, 2022 – 4:00 PM

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### AGENDA

**COMMISSION CHAIR** | Laurel Preston

**COMMISSION VICE-CHAIR** | Shawn Schubring

**COMMISSIONERS** | Laura Bustamante, David Langworthy, Mark Nelson, Mike Raskin

**PLANNING MANAGER** | Stephanie Keyser

#### Virtual Meeting Participation

With the passage of the City's Proclamation of Local Emergency, City Hall is closed to the public. Planning Commission participation in this meeting will be by teleconference/online only. Members of the public may also participate by phone/online. Individuals wishing to speak live during the Virtual Planning Commission meeting will need to register their request with the Development Services Coordinator at 425.233.6414 or email [rbennett@medina-wa.gov](mailto:rbennett@medina-wa.gov) and leave a message before 12PM on the day of the February 22 Planning Commission meeting. Please reference Public Comments for February 22 Planning Commission Meeting on your correspondence. The Development Services Coordinator will call on you by name or telephone number when it is your turn to speak. You will be allotted 3 minutes for your comment and will be asked to stop when you reach the 3-minute limit.

Join Zoom Meeting

<https://us06web.zoom.us/j/86813165335?pwd=aUFENEZYdEwvR3NVOXBTVElscjk1Zz09>

Meeting ID: 868 1316 5335

Passcode: 875874

One tap mobile

+12532158782,,86813165335#,,,,\*875874# US (Tacoma)

1. **CALL TO ORDER / ROLL CALL**

2. **APPROVAL OF MEETING AGENDA**

3. **APPROVAL OF MINUTES**

**3.1** Planning Commission Minutes of January 25, 2022

**Recommendation:** Approve Minutes

**Staff Contact:** Rebecca Bennett, Development Services Coordinator

4. **ANNOUNCEMENTS**

4.1 Staff/Commissioners

5. **AUDIENCE PARTICIPATION**

Individuals wishing to speak live during the Virtual Planning Commission meeting will need to register their request with the Development Services Coordinator, Rebecca Bennett, via email ([rbennett@medina-wa.gov](mailto:rbennett@medina-wa.gov)) or by leaving a message at 425.233.6414 before 12pm the day of the Planning Commission meeting. Please reference Public Comments for the February 22 Planning Commission meeting on your correspondence. The Development Services Coordinator will call on you by name or telephone number when it is your turn to speak. You will be allotted 3 minutes for your comment and will be asked to stop when you reach the 3-minute limit.

6. **DISCUSSION**

6.1 Added Agenda Item – Supportive and Transitional Housing Update

**Recommendation:** Discussion

**Staff Contact(s):** Stephanie Keyser, Planning Manager

**Time Estimate:** 10 minutes

6.2 Alternatives to Original Grade

**Recommendation:** Discussion

**Staff Contact(s):** Stephanie Keyser, Planning Manager

**Time Estimate:** 60 minutes

7. **ADJOURNMENT**

**ADDITIONAL INFORMATION**

Planning Commission meetings are held on the 4th Tuesday of the month at 4 PM, unless otherwise specified.

In compliance with the Americans with Disabilities Act, if you need a disability-related modification or accommodation, including auxiliary aids or services, to participate in this meeting, please contact the City Clerk’s Office at (425) 233-6410 at least 48 hours prior to the meeting.

**UPCOMING MEETINGS**

Tuesday, March 22, 2022 – Special Meeting at 4:00 PM

***Tuesday, April 26, 2022 - Joint PC/CC Meeting at 4:00 PM***

Tuesday, May 24, 2022 - Special Meeting at 4:00 PM

Tuesday, June 28, 2022 - Special Meeting at 4:00 PM

Tuesday, July 26, 2022 - Special Meeting at 4:00 PM

***Tuesday, August 23, 2022 – No PC Meeting***

Tuesday, September 27, 2022 - Special Meeting at 4:00 PM

Tuesday, October 25, 2022 - Special Meeting at 4:00 PM

***Tuesday, November 22, 2022 - Regular Meeting Cancelled***

November 2022 - ***Meeting Date TBD***

**Tuesday, December 27, 2022 - Regular Meeting Cancelled**  
December 2022 - **Meeting Date TBD**



# MEDINA, WASHINGTON

## PLANNING COMMISSION MEETING

Virtual/Online

Tuesday, January 25, 2022 – 4:00 PM

### MINUTES

**COMMISSION CHAIR |**

**COMMISSION VICE-CHAIR |**

**COMMISSIONERS |** Laura Bustamante, David Langworthy, Mark Nelson, Laurel Preston, Mike Raskin, Shawn Schubring

**PLANNING MANAGER |** Stephanie Keyser

**1. CALL TO ORDER / ROLL CALL**

Development Services Coordinator Rebecca Bennett called the meeting to order at 4:00pm

**PRESENT**

- Commissioner Laurel Preston
- Commissioner Shawn Schubring
- Commissioner Laura Bustamante
- Commissioner David Langworthy arrived at 4:11pm
- Commissioner Mark Nelson

**ABSENT**

- Commissioner Mike Raskin

**STAFF**

- Bennett, Burns, Kellerman, Keyser, Miner, Wilcox

**2. ELECTIONS**

**2.1 Election of the 2022 Chair and Vice Chair**

Bennett asked for nominations for Chair. Nelson nominated Preston. Bennett asked for additional nominations. None were heard. Bennett closed nomination period.

Action: Voting for Preston as Chair (Approved 4-0)

Voting Yea: Commissioner Preston, Commissioner Schubring, Commissioner Bustamante, Commissioner Nelson

Chair Preston asked for nominations for Vice Chair. Nelson nominated Schubring. Preston asked for additional nominations. None were heard. Preston closed nomination period.

Action: Voting for Schubring as Vice Chair (Approved 4-0)

Voting Yea: Chair Preston, Commissioner Schubring, Commissioner Bustamante, Commissioner Nelson

### **3. APPROVAL OF MEETING AGENDA**

Action: By consensus, Planning Commission approved the meeting agenda as presented.

### **4. APPROVAL OF MINUTES**

#### 4.1 Planning Commission Minutes of December 14, 2021

**Recommendation:** Approve Minutes

**Staff Contact:** Rebecca Bennett, Development Services Coordinator

Action: Motion to approve minutes. (Approved 4-0)

Motion made by Commissioner Nelson, Seconded by Vice Chair Schubring.  
Voting Yea: Chair Preston, Vice Chair Schubring, Commissioner Bustamante, Commissioner Nelson

### **5. ANNOUNCEMENTS**

None.

### **6. AUDIENCE PARTICIPATION**

No public was in attendance to speak during the audience participation.

### **7. DISCUSSION**

#### 7.1 2022 Planning Commission Update

**Recommendation:** Discussion

**Staff Contact(s):** Stephanie Keyser, Planning Manager

**Time Estimate:** 30 minutes

Keyser presented 2022 Planning Commission Update.

Commissioners discussed and asked questions.

Staff responded.

### **8. ADJOURNMENT**

Meeting adjourned at 4:47 PM.

Motion made by Commissioner Bustamante, Seconded by Vice Chair Schubring.  
Voting Yea: Chair Preston, Vice Chair Schubring, Commissioner Bustamante, Commissioner Langworthy, Commissioner Nelson



# MEDINA, WASHINGTON

## AGENDA BILL

Tuesday, February 22, 2022

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**Subject:** Alternatives to Original Grade

**Category:** Discussion

**Staff Contact(s):** Stephanie Keyser, Planning Manager

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### **Summary**

Original grade has been used as the starting point for measuring structure height in Medina for decades. Defined as the natural ground elevation that existed prior to any lot development or manmade modifications in the first instance (MMC 16.12.080), determining original grade is not as simple as looking at a site with your naked eye or reviewing a topographic map. As prescribed in the code, the determination requires a soils investigation by a geotechnical engineer along the parameters of the proposed exterior walls/sides (MMC 16.23.080(B)). Test pits are dug and based on those samples, the geotechnical engineer determines original grade underneath the entire structure. A written report is submitted with the building permit and is reviewed for completeness against the requirements in MMC 16.23.080(D). The process is an imperfect science where different experts can reach different determinations for the same lot. Over the years, moving away from the original grade process has been discussed. Most recently, Planning Commission included a recommendation to investigate alternatives to original grade among the bulk recommendations that were presented to Council at their February 8, 2021 meeting. On October 11, 2021, Council adopted Planning Commission's 2021-2023 work plan. Item 5 on the work plan is alternatives to original grade.

**Attachment(s)** Alternatives to Original Grade Memo

**Budget/Fiscal Impact:** N/A

**Recommendation:** Discussion

**Proposed Commission Motion:** N/A

**Time Estimate:** 60 minutes



# CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144  
TELEPHONE 425-233-6400 | www.medina-wa.gov

## MEMORANDUM

DATE: February 22, 2022

TO: Medina Planning Commission

FROM: Stephanie Keyser, AICP, Planning Manager

RE: Alternatives to Original Grade

Original grade has been used as the starting point for measuring structure height in Medina for decades. Defined as the natural ground elevation that existed prior to any lot development or manmade modifications in the first instance (MMC 16.12.080), determining original grade is not as simple as looking at a site with your naked eye or reviewing a topographic map. As prescribed in the code, the determination requires a soils investigation by a geotechnical engineer along the parameters of the proposed exterior walls/sides (MMC 16.23.080(B)). Test pits are dug and based on those samples, the geotechnical engineer determines original grade underneath the entire structure. A written report is submitted with the building permit and is reviewed for completeness against the requirements in MMC 16.23.080(D).

The process of determining original grade is an imperfect science. Different firms can and have reached contrasting conclusions for the same site. There are sites where original grade is actually in the air, at a point above the existing ground because the site was graded at some point in its history. There are sites that have been amended with soil to create a lawn on a slope and the original grade is now 4-6 feet beneath the visual ground. Original grade is not an infallible process and there is a simpler alternative available.

Most cities use average grade (average building elevation) as a means of determining the starting point to measure structure height. This is calculated by averaging the length of the proposed building's walls with the existing elevation at the center of all exterior walls. Moving to an average grade method will not only make the City consistent with other jurisdictions, and as a result there will be faster cognition from applicants/residents/realtors when they ask how tall of a structure they can build on a site, but it will simplify the development code. Code simplification continues to be on Council's work plan and moving to average grade would align with that directive.

Nothing Planning Commission looks at ends up being an insulated *quick fix*. It should therefore not be surprising to any of the Commissioners that moving to average grade will be no exception. As the code is today, how height is measured depends on the zoning district the lot is in. When measuring in the R-16 zoning district or when utilizing the bonus height for R-20 and R-30, one must look at both the high and low points of original and finished grade, and whichever point has the *lower upper elevation* is what is used. In all other zoning districts and the Medina Heights overlay, height is measured from only the low point of either original or finished grade and whichever point has the lower upper elevation is what is used. The diagrams in the code that demonstrate this process are listed below:

Figure 16.23.060(B): R-16 Height Measurements

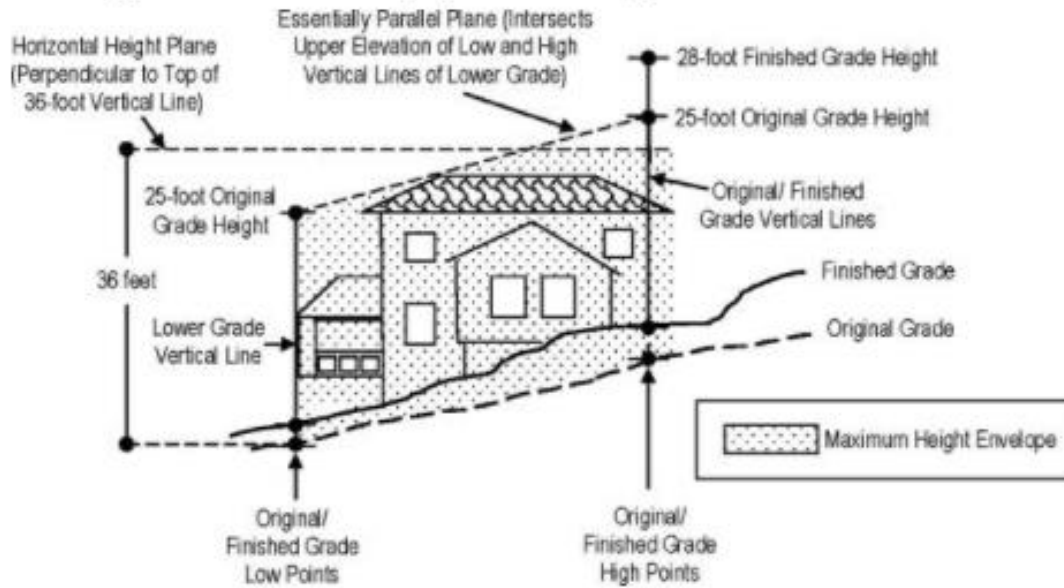
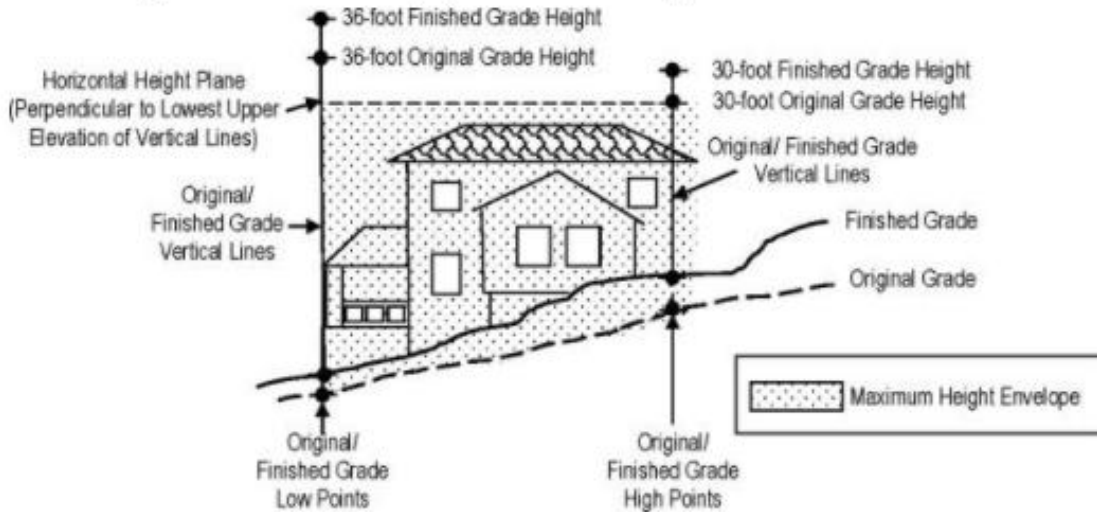


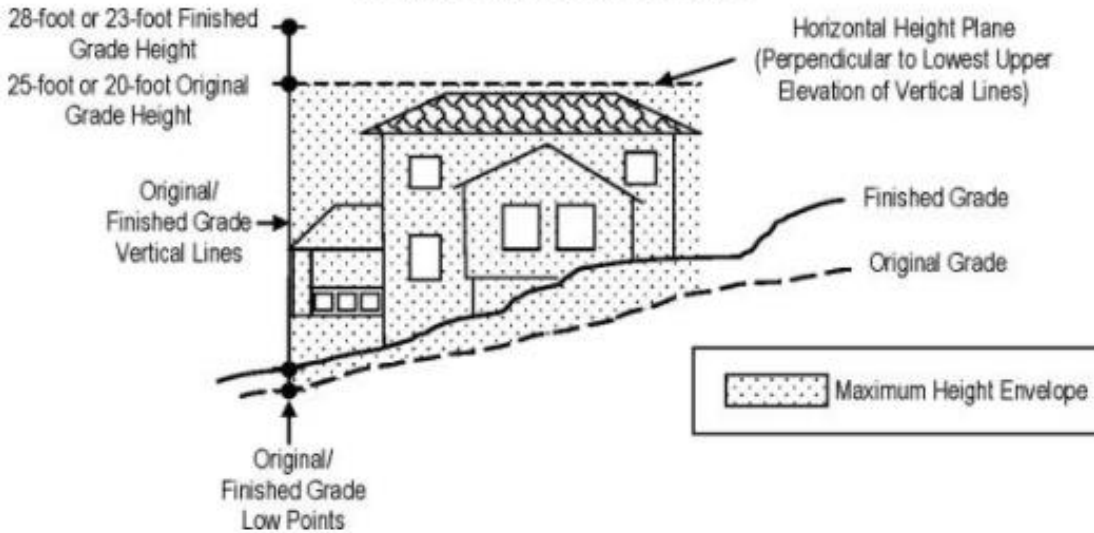
Figure 16.23.060(D): Bonus Height Measurements



In the R-16 zoning district and when using the height bonus for R-20 and R-30, moving to an average grade will result in buildings having a slightly shorter maximum building elevation. The maximum height of 25-feet (or 30-feet in the instance of the height bonus) will remain the same, but because where measuring starts is now an average, that number will never be equal to the high point of original or finished grade. Please refer to Example 1 for a study of a lot in the R-16 zoning district.



Figure 16.23.060(C): R-20, R-30, SR-30, and Medina Heights, Height Measurements



In the other zoning districts and the Medina Heights overlay, moving to an average grade will result in a slightly higher building elevation (again, the maximum height remains the same). This is because the starting point of measuring will be from the average elevation and not the low point of original or finished grade (Example 2).

Please note that Staff used the smallest rectangle around the structure option to determine average grade in the example (See Seattle, below) and the same structure is being used for both examples. Example 3 is the study that Commissioner Nelson shared during the bulk development code discussion.

The definitions used in Kirkland and Mercer Island are provided below to help the discussion as well as two methods to determine average grade from Seattle.

**Kirkland**

**Average Bulding Elevation**

The weighted average elevation of the topography, prior to any development activity, either (1) under the footprint of a building as measured by delineating the smallest rectangle which can enclose the building footprint and then average the elevations taken at the midpoint of each side of the rectangle, or (2) at the center of all exterior walls of a building or structure.

**Mercer Island**

Average building elevation: The reference point on the surface topography of a lot from which building height is measured. The elevation in the R-8.4, R-9.6, R-12, and R-15 zoning designations is established by averaging the elevation at existing grade or finished grade, whichever is lower (MICC 19.02.020(E)(4)). The elevation in the PI zoning designation is established by averaging the elevation at existing grade. The elevation points to be averaged shall be located at the center of all exterior walls of the completed building; provided:

- 1. Roof overhangs and eaves, chimneys and fireplaces, unenclosed projecting wall elements (columns and fin walls), unenclosed and unroofed stairs, and porches, decks and terraces may project outside exterior walls and are not to be considered as walls.

2.If the building is circular in shape, four points, 90 degrees apart, at the exterior walls, shall be used to calculate the average building elevation.

Formula:	Average Building Elevation = (Weighted Sum of the Mid-point Elevations) ÷ (Total Length of Wall Segments)
Where:	Weighted Sum of the Mid-point Elevations = The sum of: ((Mid-point Elevation of Each Individual Wall Segment) × (Length of Each Individual Wall Segment))

For example, for a house with ten wall segments:

$(A \times a) + (B \times b) + (C \times c) + (D \times d) + (E \times e) + (F \times f) + (G \times g) + (H \times h) + (I \times i) + (J \times j)$
$a + b + c + d + e + f + g + h + i + j$

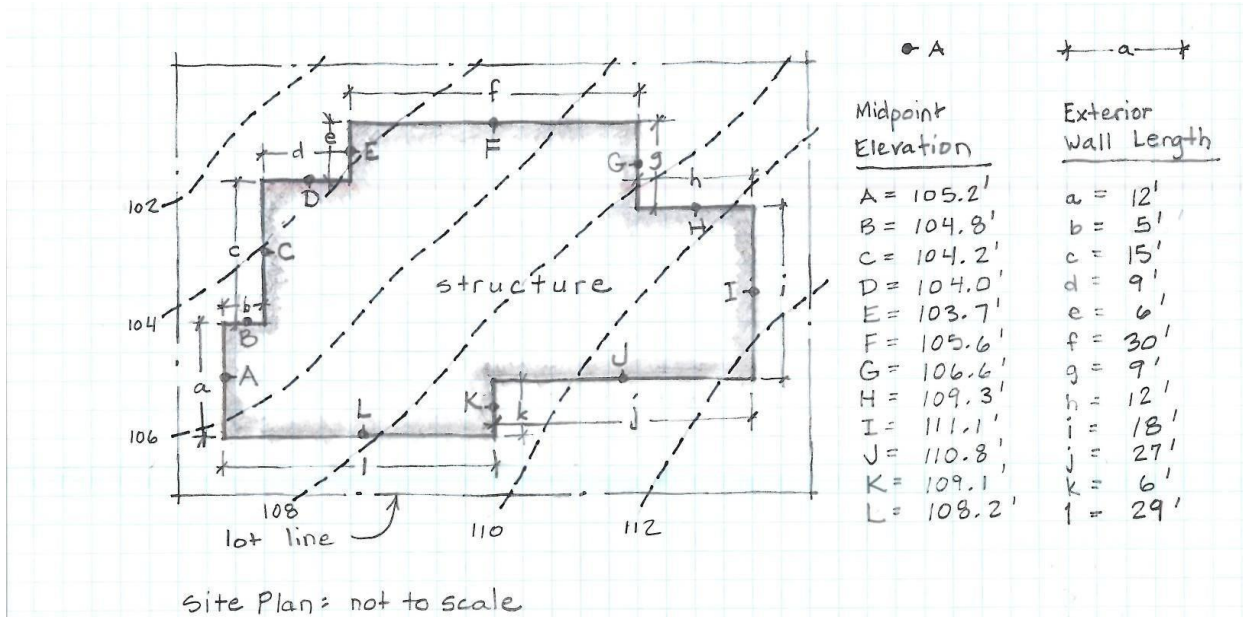
Where:	A, B, C, D... = The existing or finished ground elevation, whichever is lower, at midpoint of wall segment.
And:	a, b, c, d... = The length of wall segment measured on outside of wall.

**Seattle**

**Example applying Formula 1 to calculate average grade level**

A, B, C, D...Existing ground elevation at midpoint of exterior wall a, b,  
c, d.....Horizontal length of exterior wall\*

\*include the perimeter of a deck, unless the deck has no walls at or below the deck level and no covering above the deck



Formula: 
$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d) + (E \times e) + (F \times f) + (G \times g) + (H \times h) + (J \times j) + (K \times k) + (L \times l) + \dots}{a + b + c + d + e + f + g + h + i + j + k + l + \dots}$$

Example:

$$\frac{(105.2 \times 12) + (104.8 \times 5) + (104.2 \times 15) + (104.0 \times 9) + (103.7 \times 6) + (105.6 \times 30) + (106.6 \times 9) + (109.3 \times 12) + (111.1 \times 18) + (110.8 \times 27) + (109.1 \times 6) + (108.2 \times 29)}{12 + 5 + 15 + 9 + 6 + 30 + 9 + 12 + 18 + 27 + 6 + 29} =$$

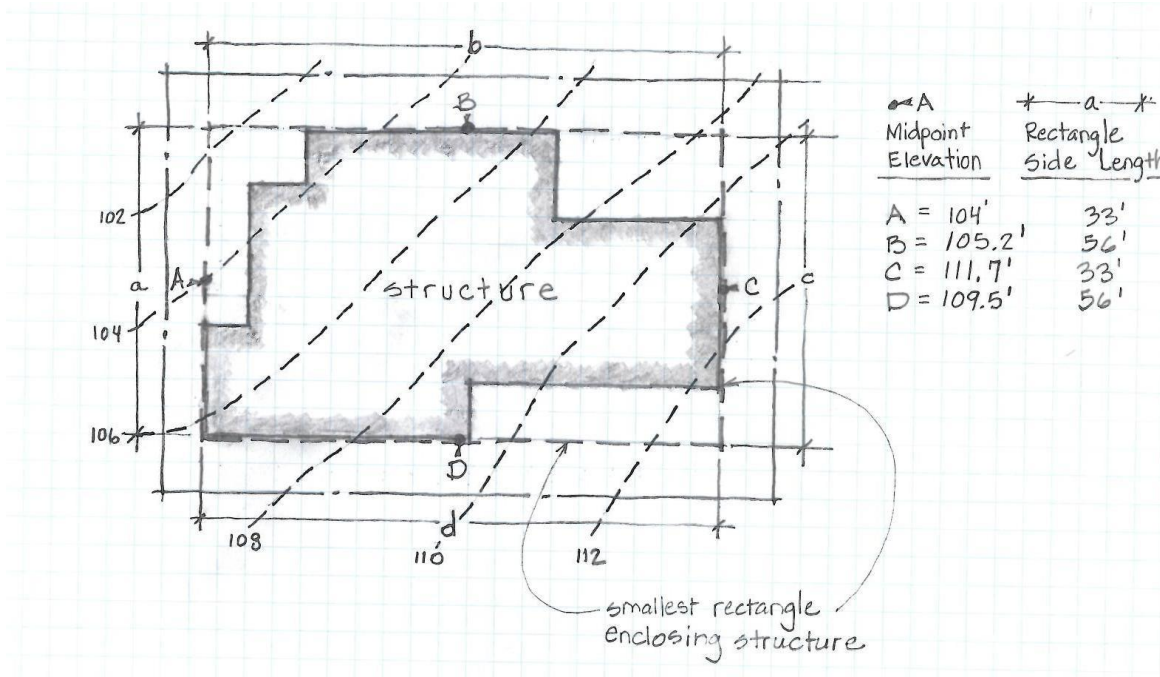
$$\frac{19,130.4}{178} = 107.47' \text{ average grade level}$$

The height of the structure is then measured from this average grade level of 107.47 feet.

**Formula 2: Enclosing Rectangle.** Under this formula, the average grade level is calculated by first drawing the smallest rectangle that encloses the entire structure, including all occupied floor area. The average grade level is calculated as the average of the elevation of existing lot grades at the midpoints, measured horizontally, of each side of this rectangle. For irregular lots, if the rectangle enclosing the proposed structure would extend beyond the lot property lines, the Director will determine how to treat the irregularity to most closely approximate the smallest enclosing rectangle.

**Formula 2: (midpoint grade elevations) x (rectangle side lengths)**  
**(total length of rectangle sides)**

**Example applying Formula 2 to calculate average grade level**



Formula: 
$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d)}{a + b + c + d}$$

Example: 
$$\frac{(104 \times 33) + (105.2 \times 56) + (111.7 \times 33) + (109.5 \times 56)}{33 + 56 + 33 + 56} =$$

$$\frac{3,432 + 5891.2 + 3,686.1 + 6,132}{178} = \frac{19,141.3}{178} = 107.53 \text{ average grade level}$$

The height of the structure is then measured from this average grade level of 107.53 feet.

### Example 1

#### Current Code

R-16 Height – Constraints are high and low points

Highest point of Original Grade – 115.85'

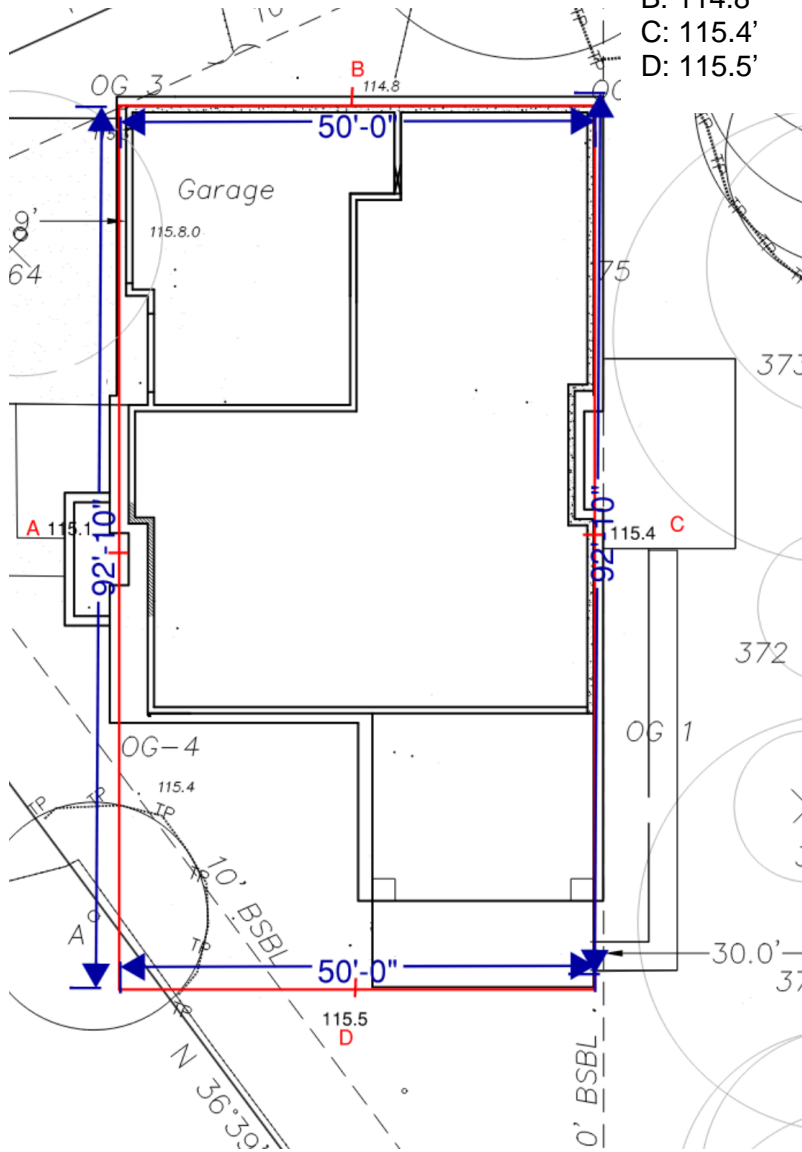
Lowest point of Original Grade – 113.62'

**Maximum elevations: 140.85' from the high point and 138.62' from the low point**



**Average Grade Example**

Midpoint Elevation	Rectangle Side Length
A: 115.1'	92'-10"
B: 114.8'	50'
C: 115.4'	92'-10"
D: 115.5'	50'



Formula: 
$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d)}{a + b + c + d}$$

Example: 
$$\frac{(115.1 \times 92.1) + (114.8 \times 50) + (115.4 \times 92.1) + (115.5 \times 50)}{92.1 + 50 + 92.1 + 50} =$$

$$\frac{10,600.71 + 5,740 + 10,628.34 + 5,775}{284.2} = \frac{32,744.05}{284.2} = 115.21 \text{ average grade level}$$

Maximum elevation: 140.21'

## Example 2

### Current Code

R-20/R-30/SR-30 Height – Constraints are low points

Lowest point of Original Grade – 113.62'

**Maximum elevation: 138.62' from the low point**



The same method for determining average grade as shown in Example 1 would be used, so the average grade would still be 115.21', for a maximum elevation of 140.21'

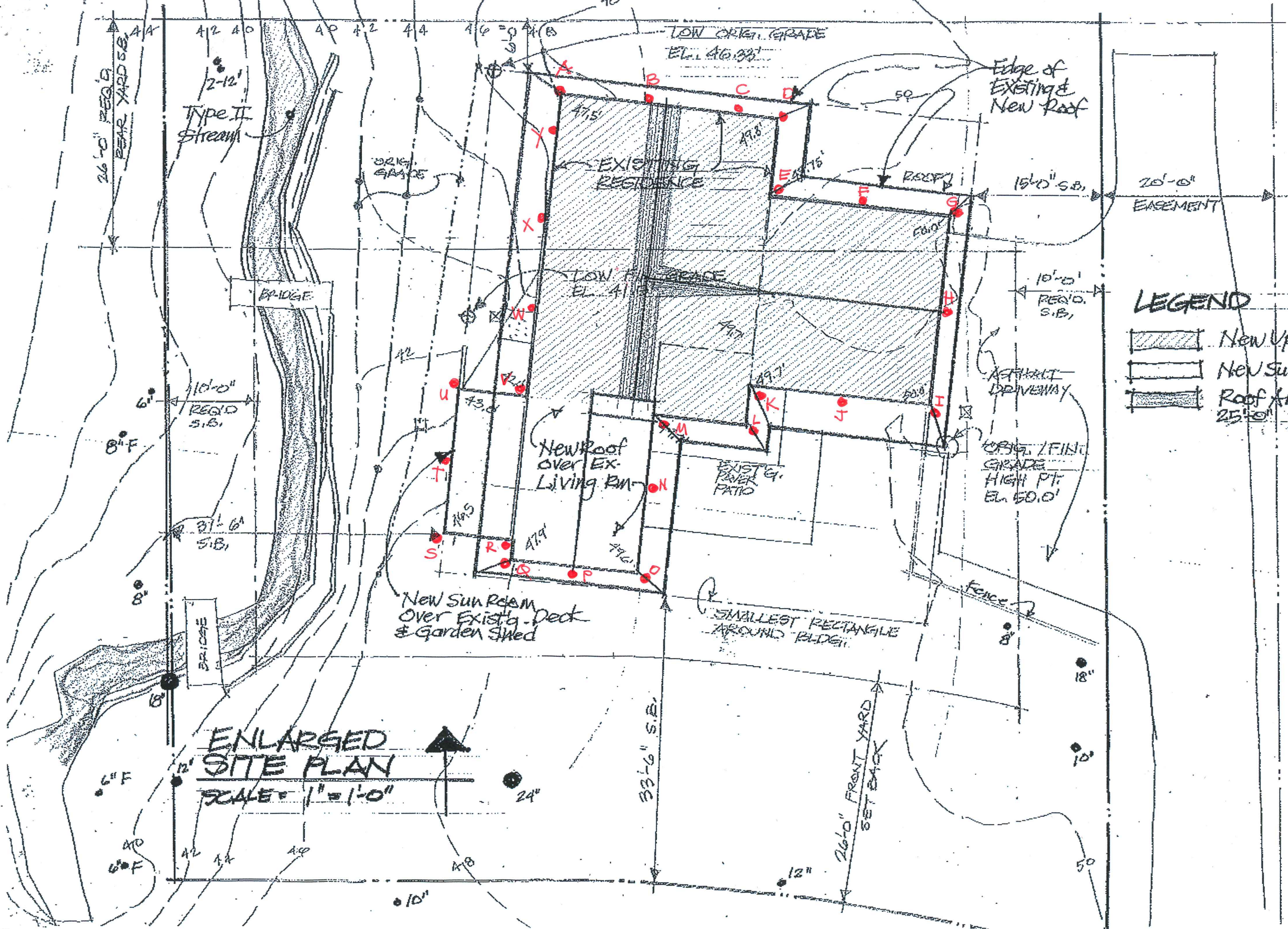


Mark L. Nelson AIA  
Principal

1233 Evergreen Point Road  
Medina, Washington 98039  
Telephone (425) 454-7704  
Facsimile (425) 454-7803

### LEGEND

- New Upper Floor
- New Sun Room
- Roof Area Over 25'-0" High



**ENLARGED SITE PLAN**  
 SCALE = 1" = 1'-0"  
 10"



AVERAGE  
SPIG. GRADE

AVERAGE  
EX. GRADE

A	47.5'
B	48.2'
C	49.0'
D	49.3'
E	49.75'
F	50.5'
G	50.0'
H	50.0'
I	50.8'
J	49.9'
K	49.7'
L	49.7'
M	49.5'
N	49.5'
O	49.6'
P	48.5'
Q	47.9'
R	47.9' = 887.25
S	47.0'
T	46.9'
U	46.8'
V	47.8'
W	47.9'
X	47.9'
Y	48.0'

47.5'
48.2'
49.0'
49.3'
49.75'
50.5'
50.0'
50.0'
50.8'
49.9'
49.7'
49.7'
49.5'
49.5'
49.6'
48.5'
47.9'
47.9' 887.25
46.5'
45.0'
43.0'
41.25'
41.25'
46.00'
47.00'

$1219.55' \div 25 = 48.78$

$1197.25' \div 25 = 47.89$



Mark L. Nelson AIA  
Principal

1233 Evergreen Point Road  
Medina, Washington 98039  
Telephone (425) 454-7704  
Facsimile (425) 454-7808

NO ORIG. GR. HEIGHT PLANE

ESSENTIALLY  
PARALLEL PLANE  
(R-16)

28' ABOVE HIGH  
FIN. GRADE

25' ABOVE HIGH  
ORIG. GRADE

AVG. EX.  
GRADE  
72.89'

29' ABOVE  
LOW ORIG.  
GR. EL. 71'

28'-0" ABOVE  
LOW FIN.  
GRADE

LOWER  
GRADE  
VERT. LINE

28'-0" ABOVE L.P.G.

25'-0" ABOVE L.O.S.

LOW ORIG.  
GRADE  
EL. 46.89'

AVG. EX.  
GRADE  
47.89'

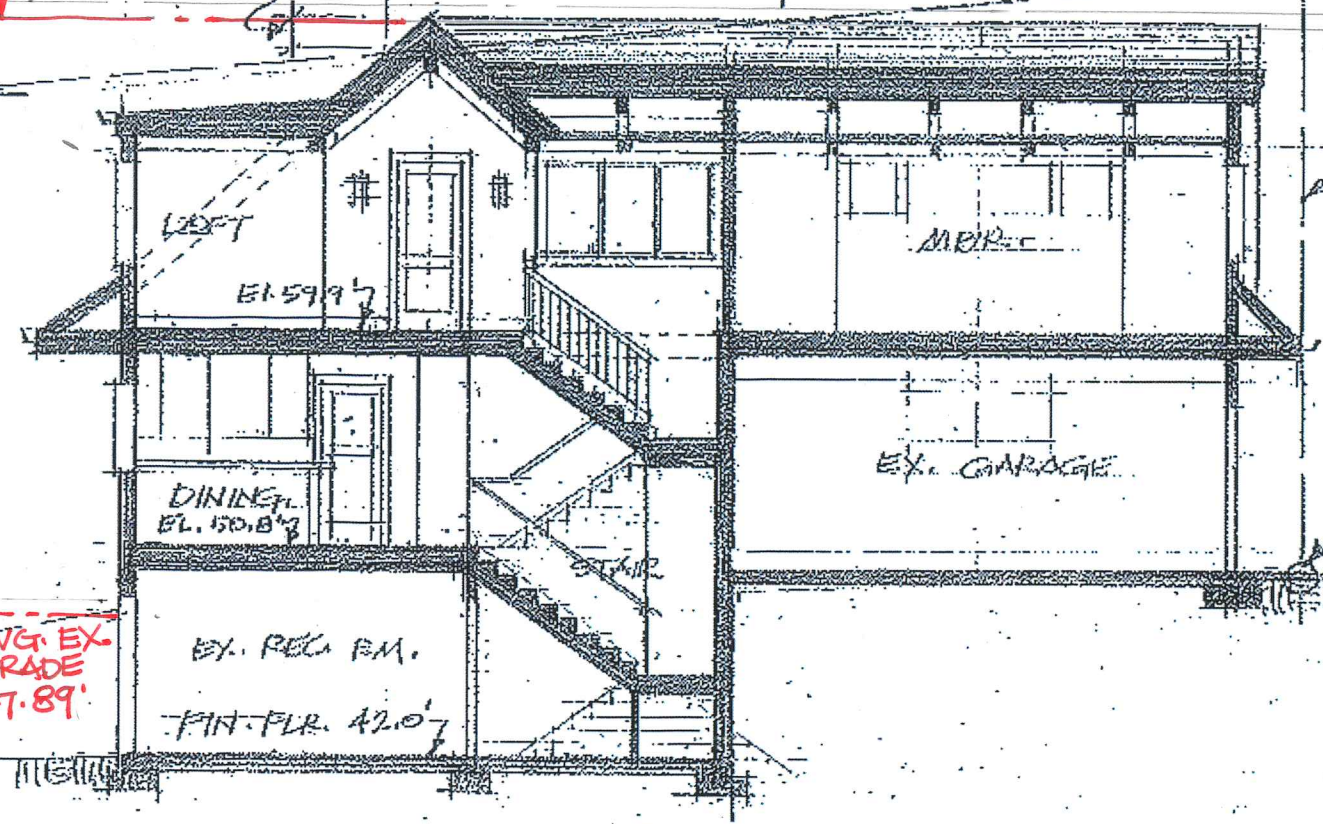
LOW FIN. GR.  
EL. 41.5'

ORIG. / FIN. GRADE  
VERTICAL LINE

HIGH ORIG. & FIN. GRADE  
EL. 50.0'

50  
48  
46  
44  
42  
40

STREAM



"A" E-W SECTION

6.11.15