



AGENDA
CITY OF GLENWOOD SPRINGS
Planning and Zoning Commission
Regular Meeting
APRIL 26, 2022
Council Chambers, First Floor
101 W. 8TH STREET
6:00 PM

1 Attendance Instructions

- A. This meeting will be held in person at City Hall Council Chambers as well as via ZOOM.

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/84442210420>

Or One tap mobile :

US: +16699006833,,84442210420# or +12532158782,,84442210420#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799 or +1 929 205 6099 or +1 301 715 8592 or +1 312 626 6799

Webinar ID: 844 4221 0420

International numbers available: <https://us02web.zoom.us/j/84442210420>

2 Roll Call

3 Receipt of the Minutes

- A. Draft Minutes March 22, 2022 Planning and Zoning Commission Meeting

4 Comments from citizens appearing for items not on the agenda

5 New Items

- A. Planning Item 66-21 Variance 727 Blake Avenue

- B. Planning Item 82-21 Design Variance 1120 Palmer

- C. Planning item 12-22, Code Amendments to Title 070.040 as it relates to Floodplain regulations

6 Commissioner Comments

7 Director Comments

8 Adjournment



AGENDA
CITY OF GLENWOOD SPRINGS
Planning and Zoning Commission
Regular Meeting
MARCH 22, 2022
Council Chambers, First Floor
101 W. 8TH STREET
6:00 PM

1 Roll Call

Present: Commissioners Wissing, Connerton, Shaver, Waller, White, and Cipperly.

Staff Present: Asst. City Manager Jenn Ooton, Asst. Director Hannah Klausman, Senior Long Range Planner Trent Hyatt, Asst City Attorney Richard Petersen Kremer. Parks Superintendent Dan Roper.

2 Receipt of the Minutes

- A. February 22, 2022 Planning and Zoning Commission Meeting Draft Minutes
Commissioner xxx motioned to approve the minutes. Commissioner xxx seconded. Unanimously approved.

3 Comments from citizens appearing for items not on the agenda

No public comments.

4 Continued Items

- A. Planning File 02-02, Part 2 Fire Impact Fee

Asst. City Manager Jenn Ooton presented the code amendments fixing the Fire impact fees in the municipal code.

Commissioner White asked if this had possibly been reduced as part of the Accessory Dwelling Unit code changes. Staff confirmed that it was not and the .25 number predated those changes.

Commissioner Connerton asked about the reasoning why the numbers possibly got written in error. Commissioner Waller asked about the process timeline and confirming that Planning and Zoning Commission was a recommending body and that City Council had final authority.

Commissioner Cipperly asked after the cost difference represented in the slide. Staff made a correction as the number had been cut off. The fire fee change to 0.65 EQRs would be \$893 and not the \$825 misrepresented in the slide.

Commissioner Waller asked how often the fee structure is looked at and adjusted. Staff explained that fees have an annual fee increase that water and wastewater has been receiving. Fire fees have also just been updated with the increase after a delay in the implementation.

Commissioner White motions to approve the Fire Impact Fee with a recommendation that the fire impact fee remain at 0.25 EQRs. Commissioner Cipperly seconded the motion.

Discussion:

Commissioner Waller asked if Planning and Zoning Commission should make a recommendation on what the number should be or perhaps the frequency with reviewing the fees.

Staff explained that either way would be fine and that staff would relay the recommendation or at minimum the discussion to City Council.

Commissioner Waller explained that she is more comfortable with the 0.65 number.

Motion passes unanimously with a vote of 6-0.

5 New Items

A. Planning File 53-20 City of Glenwood Springs Parks and Recreation Department World Headquarters Location and Extent Review

Long Range Senior Planner Trent Hyatt presented the Parks Department application materials and criteria for a Location and Extent application.

Commissioner Questions to Staff:

Commissioner Waller asked about the second condition regarding the language “to the best of the applicants financial ability” and if there were some aspects that staff would recommend for suggested changes over others. Staff explained that the Parks Department is open to suggestions and working with staff for enhanced design elements within reason such as:

- Color of the building
- Adding windows to improve the aesthetic

Noted that the applicant is improving on all of the aspects of the current conditions.

Staff reminded that Planning and Zoning could recommend changes while keeping in mind the associated costs towards a building that was utilized out of emergency need after the MOC building was no longer habitable.

Commissioner White asked that if the process was not a location and extent review and a normal planning application, would it need variances?

Staff explained that yes, since the application is a Location and Extent it would not follow the normal variance procedure for areas of code that are not met.

Commissioner Cipperly asked about the color of the building listed as light grey and if that meets the code standard. Staff explained that it was still perceived to be too light of a color.

Parks Superintendent Dan Roper explained that they would like the entire building to match in color and is open to suggestions on color. He further explained that Parks is happy to prioritize where funding is spent for design aspects, but it may mean phased implementation of some aspects such as paving parking. The department is working with Public Works to make sure there is stormwater compliance for improvements in nearby street infrastructure and that is a priority.

Chair Shaver commended the landscape showcase of drought resilience that is proposed. Further asked about the lack of sidewalk. Asked Mr. Roper about a possible flagstone path through the landscape area to connect a future sidewalk connection.

Commissioner Cipperly asked about not providing a sidewalk and if the current landscaping count would be reduced below code requirements when a sidewalk went in.

Mr. Roper explained that the landscaping counted in the application is only that on the lot itself and not the front to-be sidewalk area.

Chair Shaver opened the application for Public Comment.
No public comment.

Mr. Roper responded that it would definitely, be a possibility and something that Parks would support.

Commissioner Cipperly motioned to approve Planning item 53-20 Parks and Recreation Department Location and

Extent Review. Commissioner Wissing seconded the motion.

Motion passes unanimously with a vote of 6-0.

B. Planning File 07-22 Code Amendments to 070.040 Development Standards in regard to Landscaping

Asst. Director of Community Development Hannah Klausman presented the proposed code amendments to Title 070 as they relate to drought resiliency and water efficient landscaping. Ms. Klausman gave a comparison with 3 other municipalities as well as a model code from Northwest Colorado Council of Governments report. The code amendments include:

- Soil Amendment and Mulch Requirement.
- Hydro zoning for plants and corresponding irrigation zones.
- Turf Grass limitations and a prohibition of high water use turf grass unless exempted via a waiver for high-use recreation areas that meet the definition of "Functional Turf."
- Irrigation system requirements including the requirement for soil moisture sensing device, drip or sub-surface system used in all non-turf grass areas, and any area less than six feet in width that is also surrounded by impervious surfaces.

Commissioners comments included:

- Questions on applicability and when the regulations are applicable in regards to thresholds of remodels.
- Desire to have exceptions for growing food and medicinal plants and adopting language similar to Westminster Colorado that states : areas dedicated to edible plants, orchards, or vegetable garden are not included in landscape areas calculated towards water wise restrictions.
- Concern regarding the enforceability of including Single Family and Duplex homes in the applicable developments subject to the regulations.
- Concern over who is inspecting the soil amendment and mulching requirements and how that will be enforced.
- Questions on the waiver for recreation/athletic/high use areas and pet relief areas and what it can apply to.
- Suggestion of incentivizing water wise landscaping for single family and duplex properties as opposed to including them in the regulatory applicability.
- Suggestion of limiting cobble and rock size adjacent to sidewalks and pedestrian areas.
- Desire to include Firewise landscaping language similar to Aspen's code.
- Mention of golf courses and how we could improve those with these regulations.
- Concern over requiring a licensed landscape architect to develop all landscape plans as it might be cost prohibitive to smaller projects and certainly to the Single Family and Duplex developments.
- Curiosity on examples or data from other municipalities on effectiveness of water reduction and fire reduction.
- Idea of implementing a progressive water fee structure where the more water you use the higher your charge per gallon is.

Staff explained that the current landscaping code section has stipulations for applicability and remodeling thresholds that would govern the new proposed regulations as well. In addition, code amendments are written to incorporate flexibility to allow for such things as gardens with an allowance for 50% of landscape areas being allowed to be high water usage areas. Staff also explained that the irrigation standards stipulate low volume and drip service in any area not turf grass, which makes the high-water zone allowance more efficient.

Commissioner Cipperly motioned to recommend approval of Planning file 07-22 Code Amendments to 070.040 Development Standards in regard to Landscaping. Commissioner Connerton seconded the motion.

Discussion:

Commissioners discussed single family applicability, turf limitations, planting strip requirements, and progressive watering bills in determining additional amendments to the proposed code amendment.

Commissioner Cipperly motioned to amend the motion to include the direction given to staff which includes:

1. Single Family and Duplex landscaping site plans are not required to be stamped by a Licensed Landscape Architect.
2. Adding that (b) in the planting strip regulations for the downtown core include the verbiage "low water."
3. Landscape areas dedicated to edible plants, orchards, or vegetable gardens are not be included in high water percent limitations for landscape calculations.
4. Including Firewise landscape regulations.
5. Adding overwatering, "fugitive water" enforcement mechanism listed in the NorthWest Colorado Council of Governments model code for water waste.

Commissioner Connerton seconded the motion. Unanimously approved with a vote of 6-0.

6 Commissioner Comments

All commissioners praise staff on their excellent presentations.

7 Director Comments

Director Jenn Ooton mentions the comprehensive plan various meetings.

Assistant Director of Economic Development Hannah Klausman explains that the packets for the P&Z meetings are typically emailed. If they do not get a staff email with the packet for the meeting, Ms. Klausman asks commissioners to please check online, where the packet is available to everyone.

8 Adjournment

Meetings adjourns at 9:38 pm



Planning and Zoning Commission Report

Date: April 26, 2022
 To: Planning and Zoning Commission
 From: Emery Ellingson, Planner I
 Subject: Planning File #66-21– Variance 727 Blake Avenue

REQUEST	Consideration of a variance from <i>Section 070.070.030(c)(4)(d)</i> to allow an accessory structure within 5’ side yard setback on the north side of the property in the M2 Mixed Use Central Core Zoning District
APPLICANT	James Shannon
OWNER	James Shannon
LOCATION	727 Blake Avenue
ZONE	M2 – Mixed Use Central Core
SURROUNDING LAND USES	North: Residential South: Residential East: Residential West: Commercial/Mixed Use
LOT SIZE	Parcel (2185-094-04-005) 2,500 square feet

ACTION ITEM

Per Section 070.060.070 of the *Glenwood Springs Municipal Code* (Code), an application for a variance request is reviewed and decided by the Planning & Zoning Commission. Application items attached.

Action 1 – Variance Request – approve variance request from *Section 070.070.030(c)(4)(d)* to allow an accessory structure in the 5’ side setback on the north side of the property.

Staff recommendation: *Staff recommends **approval** of the variance request with findings and conditions on page 6 of the staff report.*

BACKGROUND

Project Summary

The application, submitted James Shannon, is to request a variance to allow a shed in the 5' side yard setback located at 727 Blake Avenue in the M2 Mixed Use Zoning District..

Location and Background

This structure was built in the summer of 2021 following preliminary approval by Community Development staff. This approval was issued with the understanding the walls of the shed would be fire rated construction and that the M2 Mixed Use Central Core Zoning District has 0' setbacks from all lot lines. Following this approval, the structure was built abutting the north side property line in summer 2021. The shed did not require a building permit because it is 120 square feet, with dimensions of 8' x 15'. The shed was built on a permanent foundation and not placed over any easements or utilities.

Further staff review showed that *Code Section 070.030.030(c)(4)(d) Accessory Uses and Structures* requires accessory structures to have a five-foot setback from side lot lines. This would still require an accessory structure to observe a setback from the side property line, which is what prompted this application.



SITE PLAN

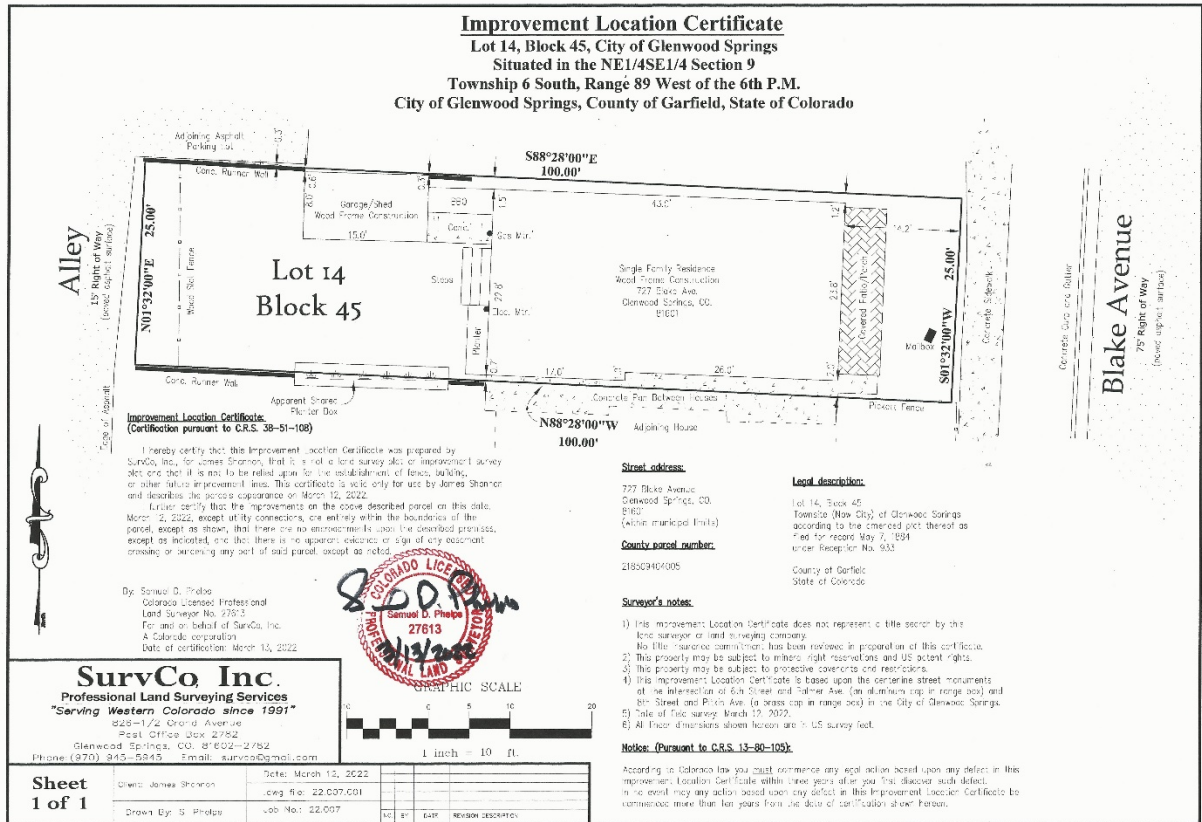


Image above shows the lot with structure on lot line included.



Finished shed, photo from alley



Photo of primary structure, from Blake Avenue

VARIANCE CRITERIA

This request is a variance from *Code Section 070.030.030(c)(4)(d) Accessory Uses and Structures* and must meet all of the following criteria. Staff analysis of criteria follows.

VARIANCE CRITERIA	
✓	The subject property has an exceptional shape, topography, building configuration, or other site condition that is not a general condition throughout the zone district
✓	The strict application of the Code standards for which a variance is sought would produce undue hardship
✓	The applicant did not create the hardship by his/her own actions.
✓	The variance requested does not harm the public and does not impair the intent or purposes of this Code; goals, and policies, including the specific regulation for which the variance is sought.
✓	The variance request demonstrates exceptional hardship not related to purposes of conveniences or financial burden
✓	The variance will not violate building or fire code requirements
✓	The variance is the minimum variance that will afford relief of the subject standards of the Code.

i. The subject property has an exceptional shape, topography, building configuration, or other site condition that is not a general condition throughout the zone district

Many properties in this this zoning district and neighborhood are mixed use buildings built to lot line. A single family dwelling not built to property lines is atypical to this zone district.

ii. The strict application of the Code standards for which a variance is sought would produce undue hardship

This structure was built following initial approval of staff and the strict application of Code standards would require tearing down of the structure which would produce an undue hardship to the applicant.

iii. The applicant did not create the hardship by his/her own actions.

Applicant did not create the hardship by their own actions. Structure was built with initial approval of staff and without that initial approval, the structure would not have been built.

iv. The variance requested does not harm the public and does not impair the intent or purposes of this Code; goals, and policies, including the specific regulation for which the variance is sought.

The variance requested does not harm the public nor impair intent or purposes of this Code including the specific regulation for which this variance is sought. This zoning district allows building up to lot lines of primary structures, only accessory structures are required to meet a 5' setback.

v. The variance request demonstrates exceptional hardship not related to purposes of conveniences or financial burden

Variance demonstrates hardship not related to convenience or financial burden. The variance demonstrates hardship because it was built with initial approval of Community Development staff. Without that initial approval, the structure would not have been built.

vi. The variance will not violate building or fire code requirements

Variance will not violate building or fire code requirements. Structure was built with fire rated materials and construction plans were reviewed by Building Department prior to construction.

vii. The variance is the minimum variance that will afford relief of the subject standards of the Code.

Variance is the minimum variance that will afford relief of subject standards of the Code as approving the variance provides minimum relief as the only alternative would be to tear down and rebuild outside of the 5' setback.

REVIEWING AGENCY COMMENTS

The application was referred to various City departments. No comments were received.

Engineering Department – No comments

Public Work, Electric, Water, Wastewater –No comments

Fire Department – No comments

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

The Planning and Zoning Commission may approve, approve with conditions, or deny the application. The Commission may also continue the hearing with a request for specific information necessary to determine compliance with the Municipal Code and city goals and policies.

Action 1 – Variance Request – approve variance request from *Section 070.070.030* for construction of an accessory structure in the side setback on the north side of the property.

Staff Recommendation/Suggested Motion

Staff recommends **approval** of the variance request with the following **findings and conditions**:

Suggested Findings:

1. The requested variance meets all variance criteria as described on pages 4 and 5 of staff report.

Suggested Conditions

1. The development shall comply with the requirements of the Code. Any future physical changes or improvements to the property or buildings are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code.
2. The owner shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by the Community Development Director
3. Following approval of the variance, the Director shall record the variance with the Garfield County Clerk and Recorder as soon as practicable.

ALTERNATIVE MOTION

***A member of City Council has requested that land use applications include suggested motions for both approval and denial. In most instances, staff has worked diligently with the applicant to address requirements outlined in the *Glenwood Springs Municipal Code* (Code) applicable to any given proposal. Therefore, we are usually in support of an application by the time it reaches the Planning and Zoning Commission and/or City Council. However, if the Planning and Zoning Commission does not believe the application meets the Code's minimum standards, your denial motion should be based on one or more of the same approval criteria applicable to the application. You should support your findings with information outlining the shortcomings of the request as shown in the example below:

MOTION TO DENY

Action 1:

Consideration of a variance request for the construction of an accessory structure within the 5' side yard setback. The variance does not meet the criteria because: **[insert reasoning];**

- i. The subject property [LACKS] an exceptional shape, topography, building configuration, or other site condition that is not a general condition throughout the zone district
- ii. The strict application of the Code standards for which a variance is sought would [NOT] produce undue hardship
- iii. The applicant [DID] create the hardship by his/her own actions.
- iv. The variance requested [DOES] harm the public and does not impair the intent or purposes of this Code; goals, and policies, including the specific regulation for which the variance is sought.
- v. The variance request [DOES NOT] demonstrate exceptional hardship not related to purposes of conveniences or financial burden
- vi. The variance [WILL] violate building or fire code requirements
- vii. The variance is [NOT] the minimum variance that will afford relief of the subject standards of the Code.



LAND USE APPLICATION

City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

<u>Ordinance Amendments</u>		<u>Development Permits</u>	
☐	Rezoning	☐	Site/Architectural Plan Review
☐	Rezoning to Planned Unit Development (PUD)	☐	Administrative
☐	Annexation	☐	Minor
☐	Condominiumization	☐	Major
☐	Annexation	☐	Master Plan
☐	Street Vacation	☐	Construction Plans
☐		☐	Location & Extent
<u>Subdivisions</u>		☐	Right of Way Encroachment License
☐	Minor Subdivision	☐	Floodplain Development Permit
☐	Preliminary Plat	☐	Special Use Permit
☐	Final Plat	<u>Flexibility and Relief Procedures</u>	
☐	Vacation of Right-of-Way	☒	Variance
☐		☐	Administrative Adjustment
<u>Other Land Use Applications</u>		☐	Appeal
☐	Outdoor Seating	☐	

<u>Applicant/Property Owner Information:</u>			
James Shannon			
Applicant		Owner	
Self			
Relationship to Owner		Owner	
727 Blake Ave Glenwood Springs, CO 81601			
Applicant Address		Owner Address	
303-960-6828	james@nostalgigroup.net		
Phone	Email Address	Phone	Email Address

<u>Property Information:</u>	
Address	Parcel Number
727 Blake Ave Glenwood Springs, CO 81601	218509404005
Subdivision	Lot and Block Number
Original Town Site	14 Block 45
Zone District M2	Existing Land Use Residential

<u>General Project Description:</u>
A Storage Shed.

<u>Signatures:</u>		
The owner or applicant must be present at the hearing. All public hearings must be properly noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the		1/19/22
	Applicant	Date
	Owner	Date

application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.		
	Owner	Date



Warranty Deed
(Pursuant to 38-30-113 C.R.S.)

State Documentary Fee
Date: August 31, 2016
\$ 34.00

THIS DEED, made on **August 31, 2016** by **TUTTLE INVESTMENTS, LLLP** Grantor(s), of the County of **GARFIELD** and State of **COLORADO** for the consideration of **(\$340,000.00) *** Three Hundred Forty Thousand and 00/100 ***** dollars in hand paid, hereby sells and conveys to **JAMES SHANNON** Grantee(s), whose street address is ~~727 BLAKE AVENUE GLENWOOD SPRINGS, CO 81601~~ County of **GARFIELD**, and State of **COLORADO**, the following real property in the County of **Garfield**, and State of **Colorado**, to wit:

**LOT 14
BLOCK 45
CITY OF GLENWOOD SPRINGS**

*4802 E. Kentucky Ave Unit A
Denver, CO 80246*

**COUNTY OF GARFIELD
STATE OF COLORADO**

also known by street and number as: **727 BLAKE AVENUE GLENWOOD SPRINGS CO 81601**

with all its appurtenances and warrants the title to the same, subject to *general taxes for the year 2016 and those specific Exceptions described by reference to recorded documents as reflected in the Title Documents accepted by Grantee(s) in accordance with Record Title Matters (Section 8.2) of the Contract to Buy and Sell Real Estate relating to the above described real property; distribution utility easements, (including cable TV); those specifically described rights of third parties not shown by the public records of which Grantee(s) has actual knowledge and which were accepted by Grantee(s) in accordance with Off-Record Title Matters (Section 8.3) and Current Survey Review (Section 9) of the Contract to Buy and Sell Real Estate relating to the above described real property; inclusions of the Property within any special tax district; and other NONE*

TUTTLE INVESTMENTS, LLLP

[Signature]
BY **JEFFREY A. TUTTLE, GENERAL PARTNER**
[Signature]
BY **CATHLEEN M. TUTTLE, GENERAL PARTNER**

State of **COLORADO**)
) ss.
County of **GARFIELD**)

The foregoing instrument was acknowledged before me on this day of **August 31, 2016**
by **JEFFREY A. TUTTLE AND CATHLEEN M. TUTTLE, GENERAL MANAGERS, TUTTLE INVESTMENTS, LLLP**

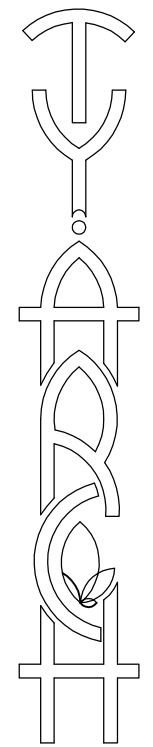
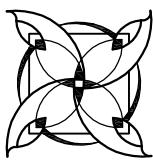
[Signature]
Notary Public
My commission expires 1-18-17

**REBECCA BLANCHARD
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19924017123
MY COMMISSION EXPIRES 01/18/2017**

When Recorded Return to: **JAMES SHANNON
727 BLAKE AVENUE GLENWOOD SPRINGS, CO 81601**



TODD YOUNG ARCHITECT
2920 HAGER LANE #1
GWS, COLORADO 81601



todd@toddyoungarchitect.com
www.toddyoungarchitect.com
970.618.0168

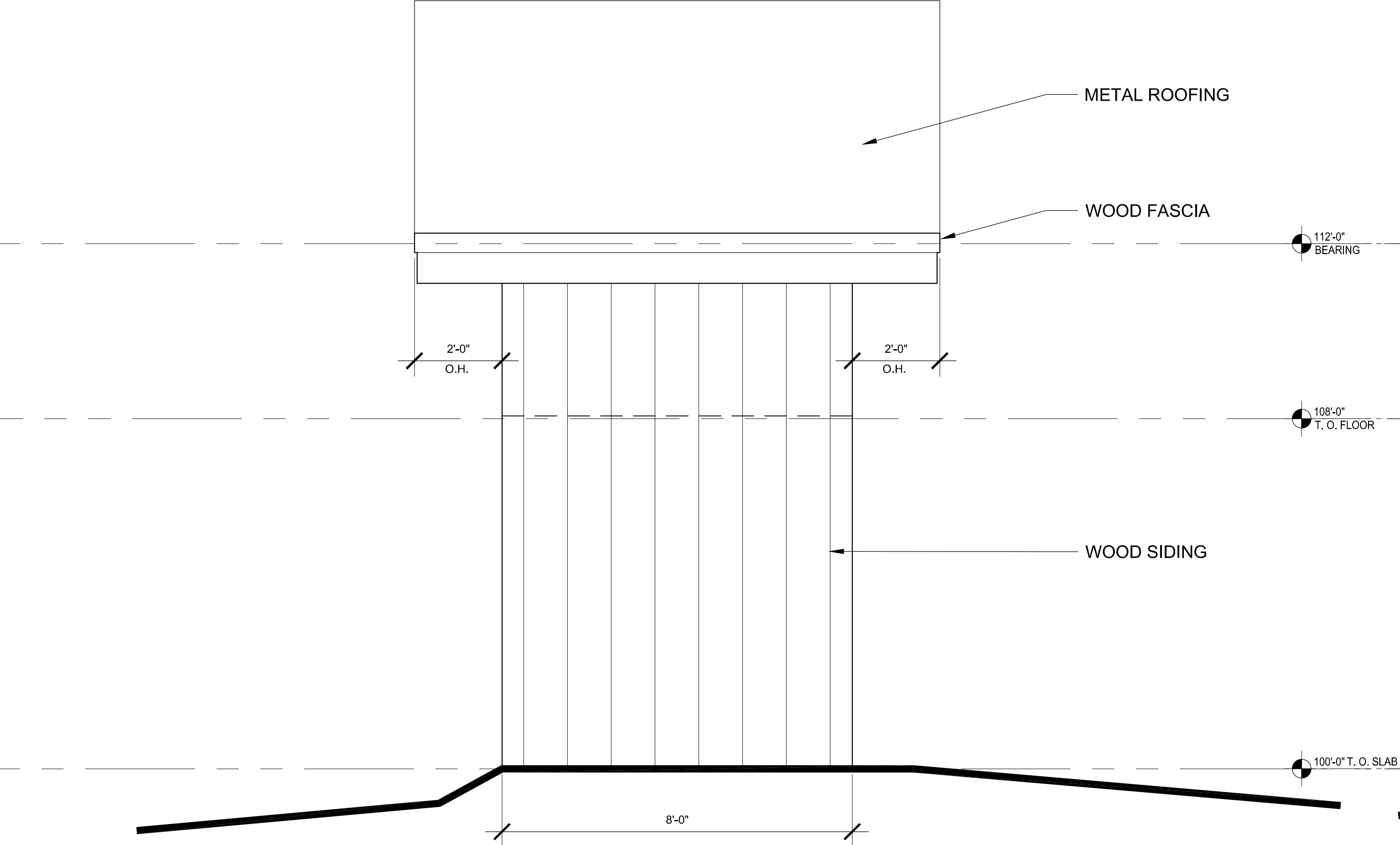
JIMMY'S SHED
727 BLAKE STREET
GLENWOOD, CO 81601

SHED ELEVATIONS

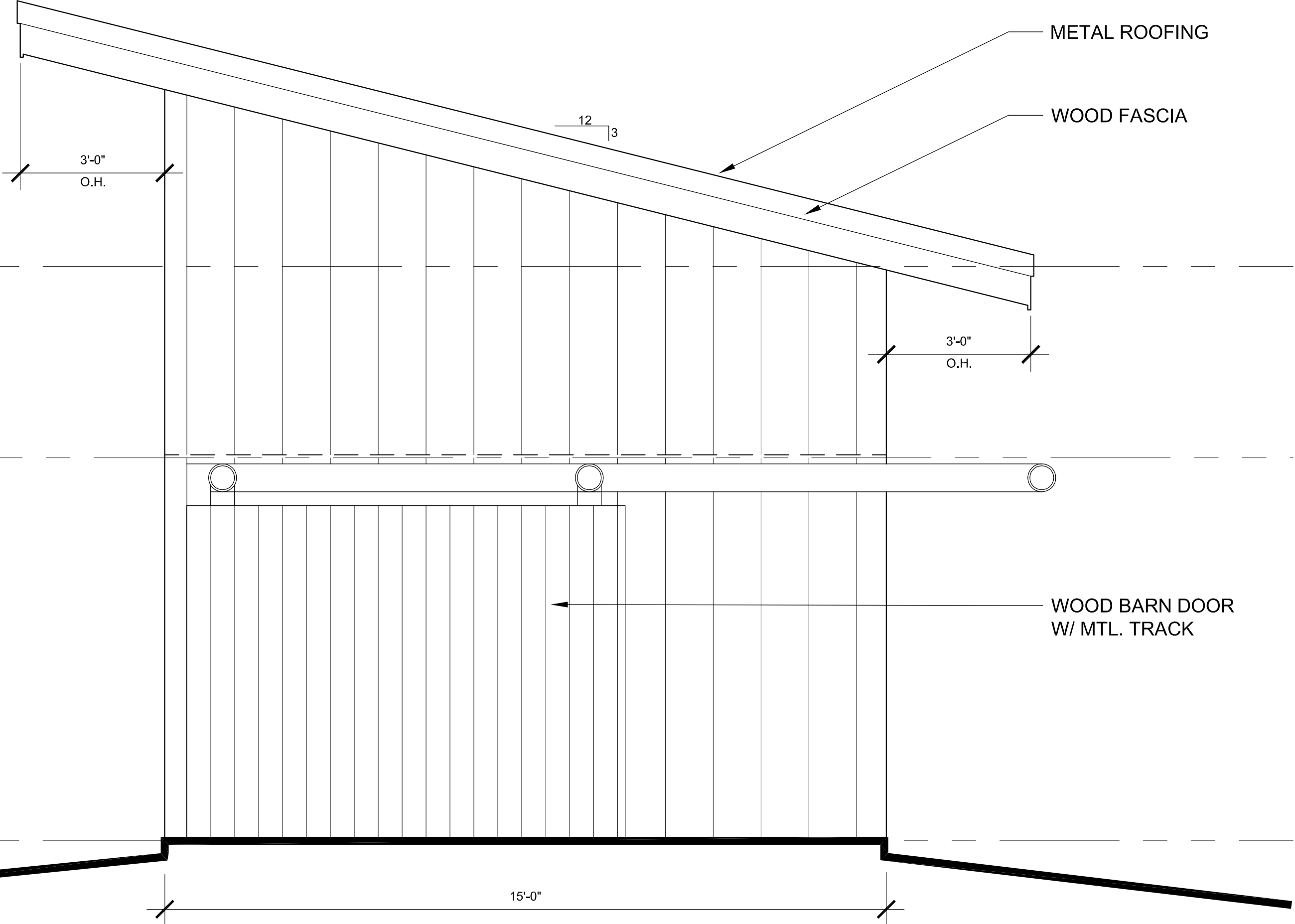
SKETCH SET: 04.09.21

DRAWN BY: TY
PROJECT # 2106

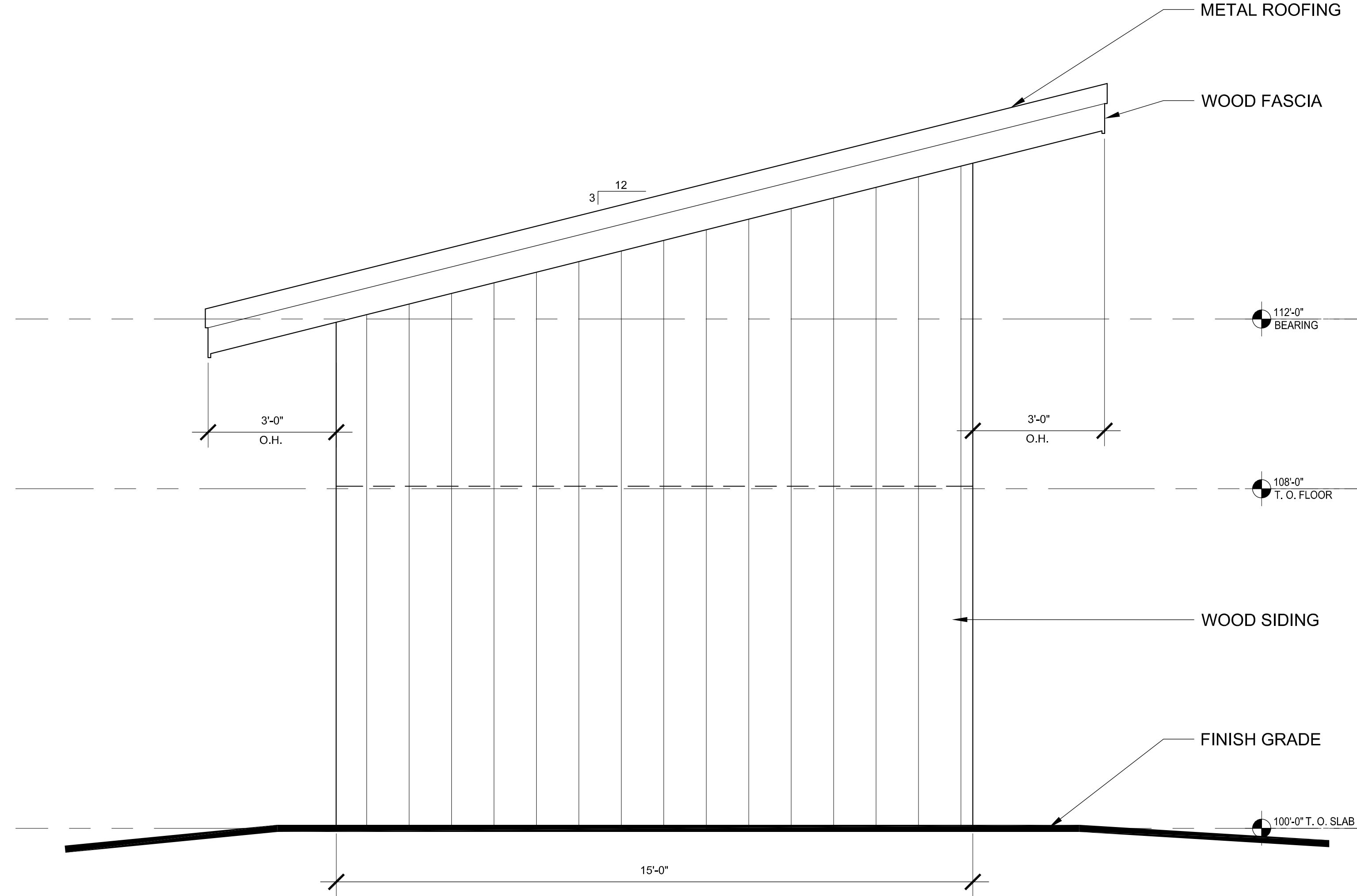
A3.0
sheet 1 of 1



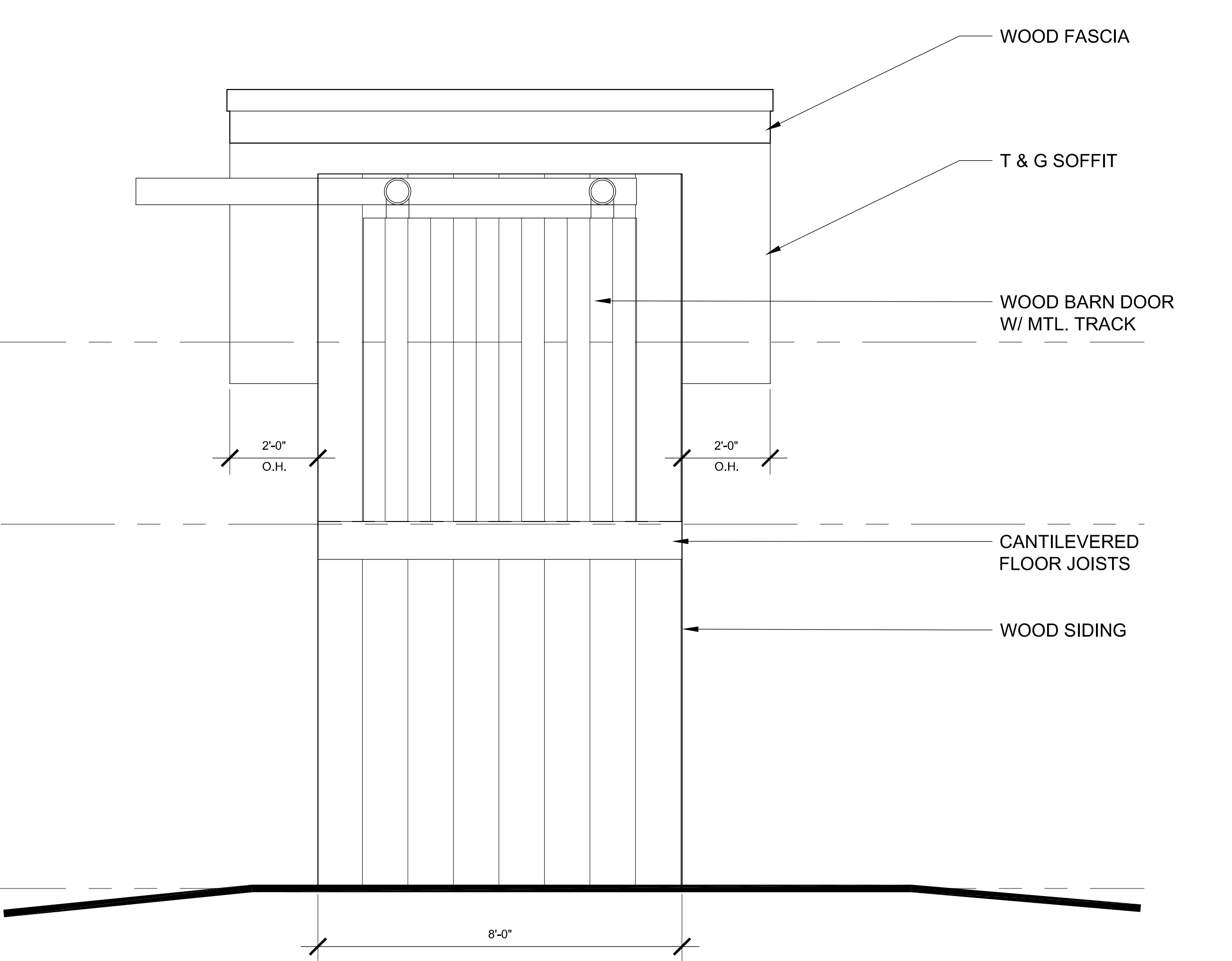
1 EAST ELEVATION
RE: 1/A2.0



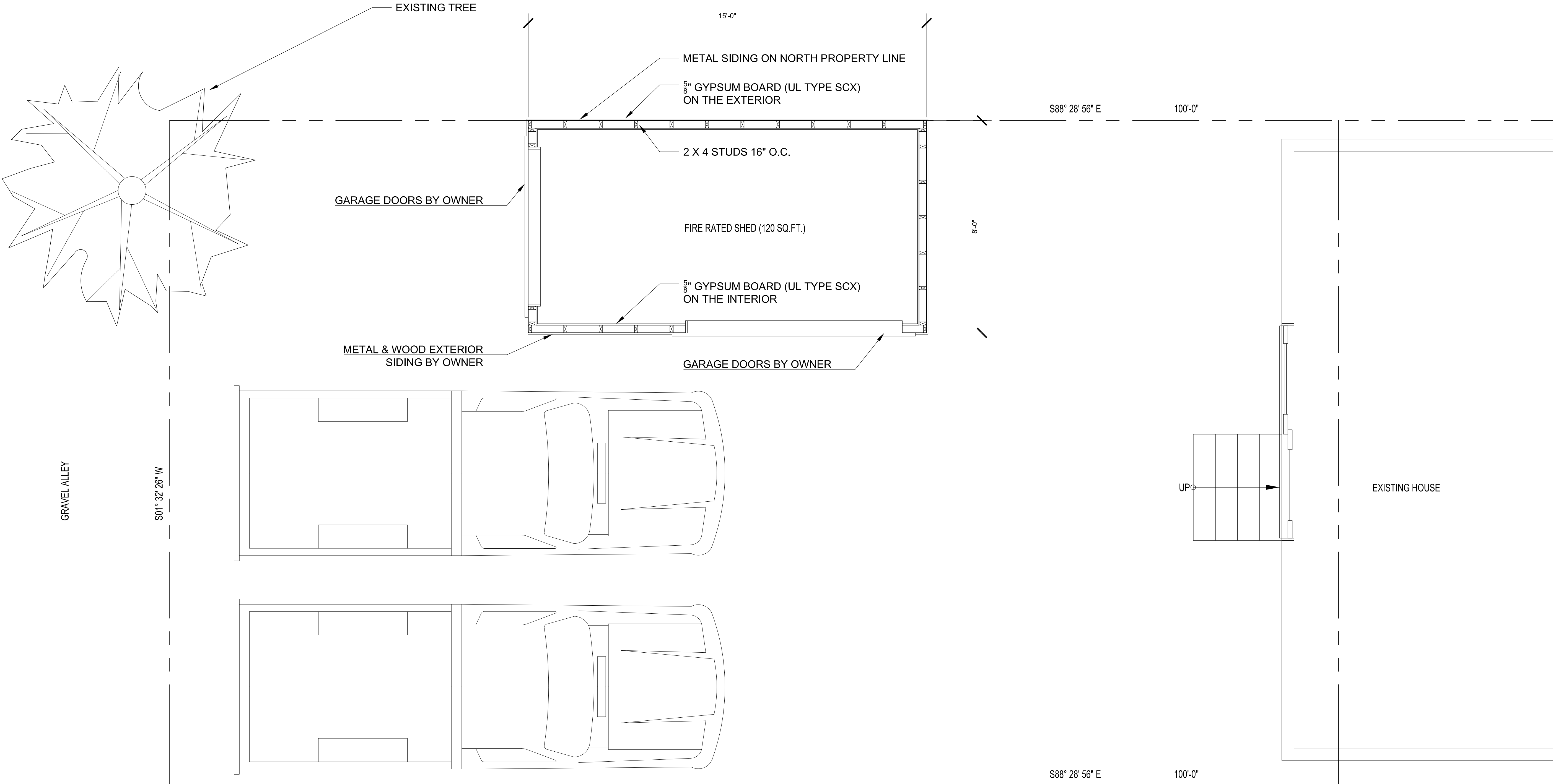
2 SOUTH YARD ELEVATION
RE: 1/A2.0



3 NORTH ELEVATION
RE: 1/A2.0

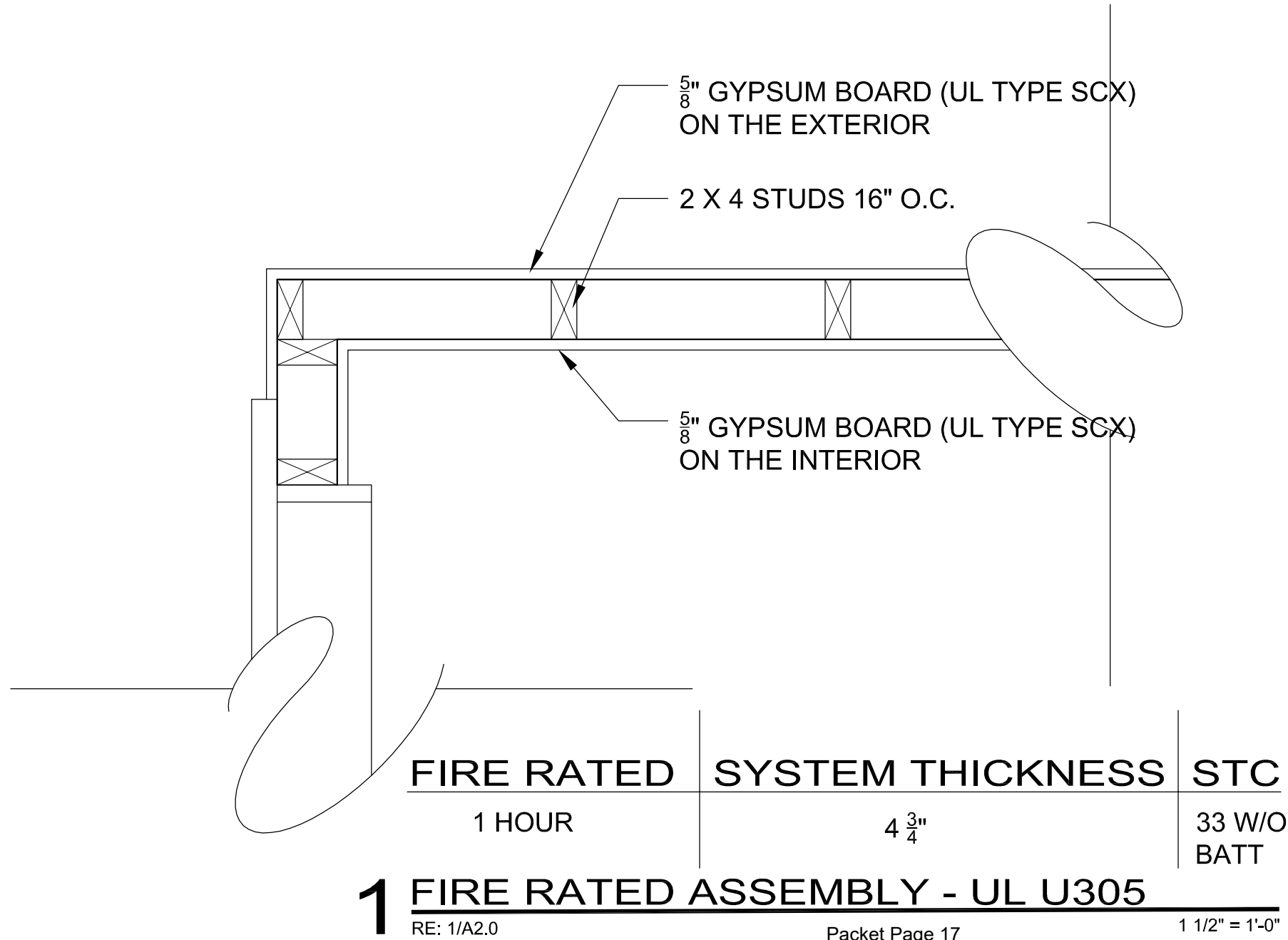


4 WEST ALLEY ELEVATION
RE: 1/A2.0



2 FLOOR PLAN
RE: 1/A3.0

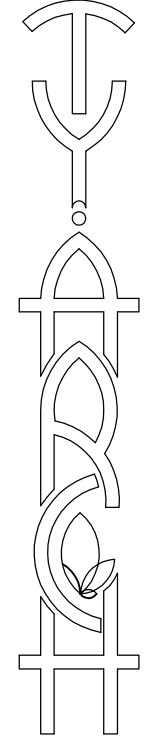
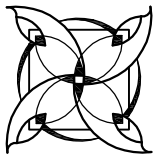
1/2" = 1'-0"



FIRE RATED	SYSTEM THICKNESS	STC
1 HOUR	4 3/4"	33 W/O BATT

1 FIRE RATED ASSEMBLY - UL U305
RE: 1/A2.0

TODD YOUNG ARCHITECT
2920 HAGER LANE #1
GWS, COLORADO 81601



todd@toddyoungarchitect.com
www.toddyoungarchitect.com
970.618.0168

JIMMY'S SHED
727 BLAKE STREET
GLENWOOD, CO 81601

FLOOR PLAN

SKETCH SET: 04.09.21
FIRE RATED: 05.26.21

DRAWN BY: TY
PROJECT # 2106

A2.0

James B. Shannon
727 Blake Ave.
Glenwood Springs, CO 81601

January 19, 2022

Emery Ellingson
Planner I
City of Glenwood Springs
101 W. Eighth Street
Glenwood Springs, CO 81601

Dear Emery,

This letter serves as a recap of what took place planning for my shed with Gretchen.

I believe that I originally spoke to Jessica who is a city engineer who I met with in the past on another project. She referred me to Gretchen, and I believe I started communication with her in March 2021. She explained that if the shed was under 120 Square feet it would not require a permit, so I then contact an architect to come up with a design to store my motorcycle and my whitewater equipment.

I contacted her again in April 2021 and set up a meeting with her at my house to show her what my plan was. She stated that the code was in conflict and one regulation said 3 feet from the property line and another said five, but she said in our district we are allowed to build up to the property line being that it was in the downtown area. I told her that I would like to build as close as I could to the property line to give me extra space in the backyard. Together, her and I located the property pins and I discussed and suggested that I would stay in my property line about 6 -12inches. At that time, she said she was going to check the statute and let me know. So, we spoke at the end of April and the beginning of May, and she found out that I could build on the property line if I met fire rating. I had the architect draw that plan up and sent it to her and that's when I found out that I was good to go with my plan.

Sincerely,

A handwritten signature in black ink, appearing to be 'JB Shannon', with a long horizontal flourish extending to the right.

James Shannon

James Shannon

From: Gretchen E Ricehill <gretchen.ricehill@cogs.us>
Sent: Thursday, May 6, 2021 8:53 AM
To: James Shannon
Subject: RE: shed setback information

Hello James

Sorry – as we had discussed, normally sheds can be constructed 3 feet from the property line. But, in the downtown area buildings can be constructed up to the property line. I confirmed with the building dept that if you construct your shed up to the property line, the walls of the shed would need to be fire rated construction. Just a reminder that sheds greater than 120 square feet need a building permit.

Let me know if I didn't entirely cover your questions.

Thanks
Gretchen

From: James Shannon <james@nostalgigroup.net>
Sent: Wednesday, May 5, 2021 5:56 PM
To: Gretchen E Ricehill <gretchen.ricehill@cogs.us>
Subject: RE: shed setback information

Hi Gretchen, I was just checking to see if there is any progress towards the possibility of building my shed?

Hope all is well, Jim.

Always,

James B. Shannon
Executive Director

Nostalgia Group, Inc.
1325 S. Colorado Blvd., Suite B304
Denver, CO 80222

P. 303-298-0027 F. 303-298-0037
Cell: 303-960-6828

From: Gretchen E Ricehill <gretchen.ricehill@cogs.us>
Sent: Wednesday, April 14, 2021 8:45 AM
To: James Shannon <james@nostalgigroup.net>
Subject: shed setback information

Hello James:

Following up on your shed construction: As long as the shed is 120 square feet or less, you do not need to apply for a building permit. The shed needs to be setback from your rear lot line by 10 feet and 5 feet from the side lot line.

Please let me know if you have additional questions.

Best,
Gretchen
Community Development Dept.
970-384-6428

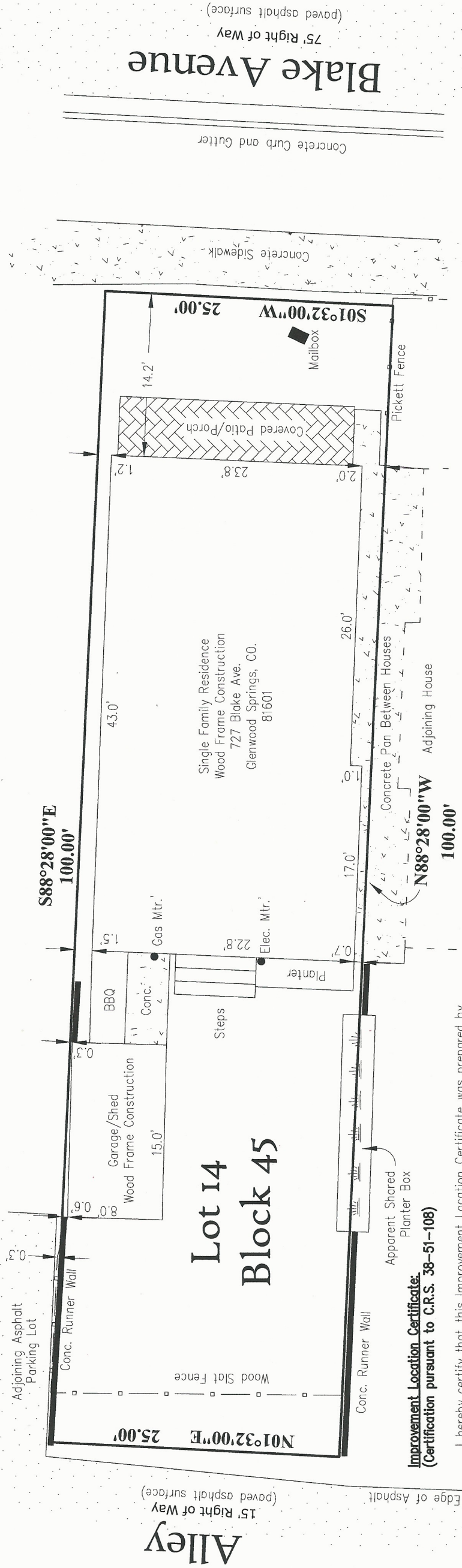
Improvement Location Certificate

Lot 14, Block 45, City of Glenwood Springs

Situated in the NE1/4SE1/4 Section 9

Township 6 South, Range 89 West of the 6th P.M.

City of Glenwood Springs, County of Garfield, State of Colorado

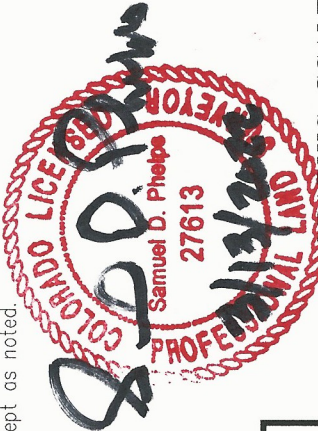


Improvement Location Certificate:
(Certification pursuant to C.R.S. 38-51-108)

I hereby certify that this Improvement Location Certificate was prepared by SurvCo, Inc., for James Shannon, that it is not a land survey plat or improvement survey plat and that it is not to be relied upon for the establishment of fence, building, or other future improvement lines. This certificate is valid only for use by James Shannon and describes the parcels appearance on March 12, 2022.

I further certify that the improvements on the above described parcel on this date, March 12, 2022, except utility connections, are entirely within the boundaries of the parcel, except as shown, that there are no encroachments upon the described premises, except as indicated, and that there is no apparent evidence or sign of any easement crossing or burdening any part of said parcel, except as noted.

By: Samuel D. Phelps
Colorado Licensed Professional
Land Surveyor No. 27613
For and on behalf of SurvCo, Inc.
A Colorado corporation
Date of certification: March 13, 2022



SurvCo, Inc.
Professional Land Surveying Services
"Serving Western Colorado since 1991"

826-1/2 Grand Avenue
Post Office Box 2782
Glenwood Springs, CO. 81602-2782
Phone: (970) 945-5945 Email: survco@gmail.com

Sheet 1 of 1	Client: James Shannon		Date: March 12, 2022		
	Drawn By: S. Phelps		.dwg file: 22.007.001		
			Job No.: 22.007		
		NO.	BY	DATE	REVISION DESCRIPTION

Street address:

727 Blake Avenue
Glenwood Springs, CO.
81601
(within municipal limits)

Legal description:

Lot 14, Block 45
Townsite (Now City) of Glenwood Springs
according to the amended plat thereof as
filed for record May 7, 1884
under Reception No. 933

County parcel number:

218509404005

County of Garfield
State of Colorado

Surveyor's notes:

- 1) This Improvement Location Certificate does not represent a title search by this land surveyor or land surveying company.
No title insurance commitment has been reviewed in preparation of this certificate.
- 2) This property may be subject to mineral right reservations and US patent rights.
- 3) This property may be subject to protective covenants and restrictions.
- 4) This Improvement Location Certificate is based upon the centerline street monuments at the intersection of 6th Street and Palmer Ave. (an aluminum cap in range box) and 8th Street and Pitkin Ave. (a brass cap in range box) in the City of Glenwood Springs.
- 5) Date of field survey: March 12, 2022.
- 6) All linear dimensions shown hereon are in US survey feet.

Notice: (Pursuant to C.R.S. 13-80-105):

According to Colorado law you must commence any legal action based upon any defect in this Improvement Location Certificate within three years after you first discover such defect. In no event may any action based upon any defect in this Improvement Location Certificate be commenced more than ten years from the date of certification shown hereon.



04/14/2022 14:12



Planning and Zoning Commission Report

Date: April 26, 2022
To: Planning and Zoning Commission
From: Emery Ellingson, Planner I
Subject: Planning File #82-21– Design Variance 1120 Palmer

REQUEST	1. Consideration of design variance from <i>Section 070.040.080(d)(3)(b)(3)</i> to allow a front loading garage in the Downtown Core 2. Consideration of design variance from <i>Section 070.040.080(e)(10)(c)(5)(i)</i> to allow a roof pitch with minimum less than 6:12 in the Downtown Core 3. Consideration of administrative adjustment for a building height in 15% excess of maximum building height of 27' in the Residential Medium Density Zoning District.
APPLICANT	Timothy J. Seydel Cashel
OWNER	Timothy J. Seydel Cashel
LOCATION	1120 Palmer Avenue
ZONE	RM1 – Residential Medium Density
SURROUNDING LAND USES	North: Residential South: Residential East: Residential/Undeveloped West: Residential
LOT SIZE	Parcel (2185-094-33-014) 5,000 square feet

ACTION ITEM

Per Section 070.060.070 of the *Glenwood Springs Municipal Code* (Code), an application for a design variance request is reviewed by the Planning & Zoning Commission. The Commission is the deciding body for this application. Action Items 1 and 2 are design variances.

When an application is concurrently is reviewed by Planning & Zoning Commission, the Commission shall review and decide on the administrative adjustment per criteria listed in *Section 070.060.070(b)(5)*. Action Item 3 is for an administrative adjustment.

Application items and related items are attached.

Action 1 – Design Variance Request – Consider a design variance from *Section 070.040.080(d)(3)(b)(3)* to allow a front loading garage in the Downtown Core.

Staff recommendation: *Staff recommends **approval** of the design variance request with findings and conditions on pages 14-17 of the staff report.*

Action 2 – Design Variance Request – Consider design variance request from *Section 070.040.080(e)(10)(c)(5)(i)* for a roof pitch of less than 6:12 in the Downtown Core.

Staff recommendation: *Staff recommends **approval** of the design variance request with findings and conditions on pages 14-17 of the staff report.*

Action 3 – Administrative Adjustment – Consider an administrative adjustment for building height in 15% excess of maximum building height of 27' for Residential Medium Density Zoning District

Staff recommendation: *Staff recommends **approval** of the design variance request with findings and conditions on pages 14-17 of the staff report.*

BACKGROUND

Project Summary

The application requests the Commission to consider two design variances and an administrative adjustment associated with the proposed construction of a single family dwelling with an attached accessory dwelling unit (ADU).

Location and Background

The property is located at 1120 Palmer Avenue in the RM1 Residential Medium Density Zoning District. This location is also located in the Downtown Core and is subject to additional Downtown Core design standards. The two design variances requested are related to Downtown Core specific design standards.

There is an existing trailer home and shed on the property that would both be demolished and removed as part of this proposed project.



Property in yellow

DESIGN REVIEW

Staff has reviewed the site plan and proposed design. Design review as follows:

CODE STANDARD		PROPOSED	REQ. MET
Lot Standards	5,000 square feet for lots created prior to March 1, 1965	5,000 square feet	YES
Lot Coverage	50% of total lot (2,500 sf) or 25% more than existing, (1,970 sf/39%) whichever less	21% (1,070 sf)	YES
Open Space	N/A	N/A	YES
Landscape	N/A	N/A	YES
Street Trees	1 per 75 linear feet (2 required)	2 street trees existing	YES
Planting Strip	Min. 5' from back of curb	Existing sidewalk to remain	YES
Sidewalk	5' minimum width	Existing 5' sidewalk	YES
Setback			
Front	20'	20' to main structure 10.5' to porch	YES ¹
Rear	15'	>15'	YES
Side	5'	At least 5' on north and south	YES
Height	27' to midpoint of highest gable from grade	North: 31' West: 30' South: 26.9' East: 25' 9"	NO ²
Roof Pitch	Minimum 6:12 for Downtown Core	3:12	NO ³
Vehicle Parking	1 for SFD, 1 for ADU, 2 total	2 total, including 1 garage space	YES
Architectural Elements	Four sided, 3 elements	At least 3 elements on each side	YES

1. Front porches and stoops may encroach 10' into required front yard provided porch or stoop is minimum 65% open

2. Action Item 3: Administrative Adjustment Request

3. Action Item 2: Roof Pitch Design Variance

Front Porch

This site plan includes a front porch which encroaches 10' into the front setback. *Section 070.020.190 Measurements & Exceptions* allows for front porches and stoops to encroach ten (10) feet into a required front yard provided the porch or stoop is a minimum of sixty-five percent open on front and sides and is no closer than ten (10) feet from the property line. Staff has determined the proposed porch meets these standards. The porch also minimizes the visual impact of the front loading garage.

Building Height

The maximum building height for the RM1 Zoning District is 27' which is measured from grade to the midpoint of the highest gable. The proposed design exceeds this height on the west and north elevations. The west elevation height facing Palmer is 30' and the north elevation height is 29.3'. Both heights exceed the maximum for the zoning district and are within the amount allowed per an approved Administrative Adjustment. An administrative adjustment allows variation in numeric standards of the Code. For building height, this adjustment would allow an additional 15% which would result in a maximum building height of 31'. As this administrative adjustment is concurrent with the variance application, Planning & Zoning Commission reviews this adjustment request.



West elevation as seen from Palmer Avenue

Transition to Existing Residential

Section 070.040.080 Residential Site & Building Design requires that a new development which exceeds that of an adjacent existing dwelling by one (1) story or more shall provide a transition using at least three of the following techniques:

1) Stepping down building height and mass along shared property line to existing home along a minimum fifty percent of the building's length.

Structure steps down on northwest corner of the house along property line for at least 50% of the building length.

2) Providing variations in the side building wall and/or roof form so that new structures have a comparable scale as neighboring homes along the shared property line.

As seen in elevations, variation in side roof form and building wall along north side of building in stepped back area with gable and hip roof lines and provides comparable scale to neighboring homes.

3) Utilizing a roof pitch and overhang similar to that of the neighboring structures;

As seen in photo below, similar roof pitch and overhang to neighboring structure to the north.

4) Utilizing dormers and sloping roofs to accommodate upper stories N/A

Staff finds that the proposed design utilizes three of these techniques to provide a transition to existing residential on the north elevation. (Techniques 1,2, and 3 above). Following photos provide additional neighborhood context.



North elevation as seen from property to north. Building height measured to grade along walkway.

SITE PLAN

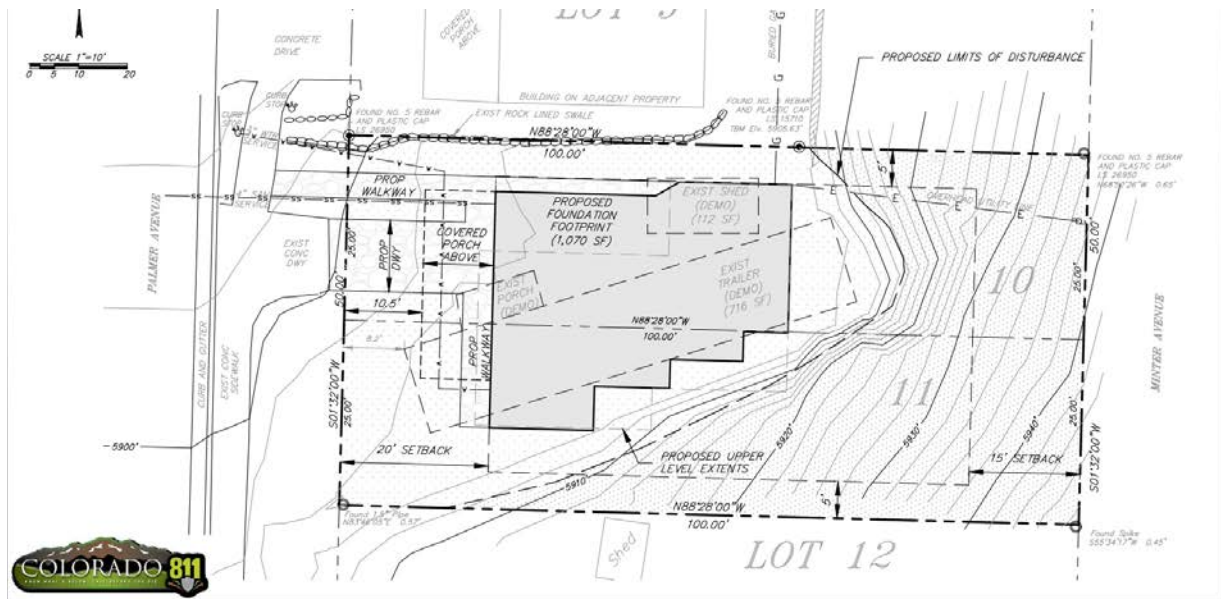


Image above shows the site plan.

NEIGHBORHOOD CONTEXT



1116 Palmer: Existing property and neighboring structure to the north. Building at 1116 Palmer has gable roof with similar roof pitch to proposed and a front loading garage.



1112 Palmer: *Neighboring structure of similar scale and height to proposed and similar roof pitch.*



1104 Palmer: *View of neighboring two unit structure with front loading garage of similar scale and height to proposed*

DESIGN VARIANCE CRITERIA

The requested design variances must meet all criteria in Section A and at least four of the criteria in Section B. Staff analysis of these criteria below.

Design Variance #1 from Section 070.040.080(d)(3)(b)(3) for front loading garage in the Downtown Core

Section A	
All design variance shall meet the following criteria	
✓	The variance requested does not harm the public health, safety, or welfare
✓	The variance requested is in general conformance with the Comprehensive Plan and with the stated purposed and intent of the Code including for which the variance is sought
✓	The variance requested will not violate building or fire code requirements
Section B	
All design variance shall meet at least four (4) of the following criteria	
	The variance requested advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard
✓	The subject property has an exceptional shape, topography, building configuration, or other exception site condition that is not a general condition throughout the zone district; or
✓	The variance requested results in benefits to the community that are equivalent or exceed benefits associated with subject standard; or
✓	The variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property; or
✓	The variance is the minimum variance that will afford relief of the subject standards of the Code; or
✓	The strict application of the Code standards for which a variance is sought would produce undue hardship

Section A – all three must be met.

i. The variance requested does not harm the public health, safety, or welfare

Requested variance does not harm the public health, safety, or welfare

ii. The variance requested is in general conformance with the Comprehensive Plan and with the stated purposed and intent of the Code including for which the variance is sought

Variance is in general conformance with the Comprehensive Plan. Redevelopment of this lot with an ADU meets the following Comprehensive Plan goals: Direct development to locations and building forms that are cost-effective to serve, provide housing opportunities for the entire community. The intent of Code which is to require alley access, which is not possible at this location.

iii. The variance requested will not violate building or fire code requirements

The variance requested does not violate building or fire code requirements.

Section B – at least four of the following criteria must be met

i. The variance requested advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard

N/A

ii. The subject property has an exceptional shape, topography, building configuration, or other exception site condition that is not a general condition throughout the zone district; or

The majority of properties in the RM1 Zoning district and in particular properties in the RM1 Zoning District which are located in the Downtown Core have alleys which allow for a garage access from alley. This property does not have an alley.

iii. The variance requested results in benefits to the community that are equivalent or exceed benefits associated with subject standard; or

The variance request results in benefits to the community that are equivalent to subject standard. The intent of this design requirement is to encourage rear access to properties and reduce the visual impact of a garage to building design in the Downtown Core. This design, if located outside the Downtown Core, would meet requirements for a front loading garage. The benefit of infill redevelopment of this lot combined with impracticality of rear access, results in benefits to the community that exceed the subject standard.

iv. The variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property; or

The design standard requires rear access. It is unreasonable to require rear access on this property.

v. The variance is the minimum variance that will afford relief of the subject standards of the Code; or

Allowing front loading garage is minimum variance that will afford relief. Design utilizes the existing curb cut so no new access is created.

vi. The strict application of the Code standards for which a variance is sought would produce undue hardship

Strict application requiring rear access would produce undue hardship as there is no alley and no reasonable alternative to create rear access.

Design Variance #2 from Section 070.040.080(d)(3)(b)(3) for roof pitch less than 6:12 in the Downtown Core

Section A	
All design variance shall meet the following criteria	
✓	The variance requested does not harm the public health, safety, or welfare
✓	The variance requested is in general conformance with the Comprehensive Plan and with the stated purposed and intent of the Code including for which the variance is sought
✓	The variance requested will not violate building or fire code requirements
Section B	
All design variance shall meet at least four (4) of the following criteria	
✓	The variance requested advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard
✓	The subject property has an exceptional shape, topography, building configuration, or other exception site condition that is not a general condition throughout the zone district; or
✓	The variance requested results in benefits to the community that are equivalent or exceed benefits associated with subject standard; or
	The variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property; or
✓	The variance is the minimum variance that will afford relief of the subject standards of the Code; or
	The strict application of the Code standards for which a variance is sought would produce undue hardship

Section A – all three must be met.

i. The variance requested does not harm the public health, safety, or welfare

Variance requested does not harm the public health, safety, or welfare

ii. The variance requested is in general conformance with the Comprehensive Plan and with the stated purposed and intent of the Code including for which the variance is sought

Variance is in general conformance with the Comprehensive Plan. Redevelopment of this lot with an ADU meets the following Comprehensive Plan goals: Direct development to locations and building forms that are cost-effective to serve, provide housing opportunities for the entire community. The intent of this standard is also met as the Code implicitly prohibits flat roofs and the intent of the Code also requires consideration of neighborhood context in application of Downtown Design Standards.

iii. The variance requested will not violate building or fire code requirements

Variance requested does not violate building or fire code requirements.

Section B – at least four of the following criteria must be met

i. The variance requested advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard

The variance achieves the intent of the subject standard to same or better degree. The intent of the subject standard is to appear similar to those seen traditionally in downtown neighborhoods and to match neighborhood contexts. The proposed roof style is a gabled roof which is a traditional roof design. Code

states that for purposes of evaluating the surrounding neighborhood, consideration shall be given to the predominant characteristics of existing structures along the same block face of the subject application. The neighboring structure at 1116 Palmer to the south of 1120 Palmer has a gable roof with a pitch less than 6:12.

ii. The subject property has an exceptional shape, topography, building configuration, or other exception site condition that is not a general condition throughout the zone district; or

The subject property has a topography which is not a general condition throughout the zoning district.

iii. The variance requested results in benefits to the community that are equivalent or exceed benefits associated with subject standard; or

The intent of the subject standard is to appear similar to those seen traditionally in downtown neighborhoods, with particular focus on similarities to existing conditions on the block face. The proposed roof style is a gabled roof which is a traditional roof design. The standard suggests that a minimum of 6:12 is an appropriate roof form and staff finds the 3:12 pitch proposed provides similar benefit equivalent to subject standard as it is similar to characteristics of existing structures along the same block face.

iv. The variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property; or

N/A

v. The variance is the minimum variance that will afford relief of the subject standards of the Code; or

Variance is minimum variance that will afford relief.

vi. The strict application of the Code standards for which a variance is sought would produce undue hardship

N/A

ADMINISTRATIVE ADJUSTMENT CRITERIA

The administrative adjustment procedure is intended to allow minor modifications or deviations from the dimensional or numeric standards of the Code. The adjustments are intended to provide greater flexibility when necessary, without requiring a formal zoning amendment or variance. Since the adjustment is concurrent with design variance applications, the review and decision on the adjustment is made by Planning and Zoning Commission instead of the Director.

The standard in question is maximum building height for the Residential Medium Density Zoning District which is 27'. An administrative adjustment would allow for 15% adjustment, which would allow for a maximum building height of 31'.

In reviewing a proposed administrative adjustment, the decision making body shall consider whether and to what extent the adjustment:

a. Will not result in compatible development

The proposed use is by right use in this zoning district and the building scale and height is similar in scale to those found on the block face.

b. Will not result in adverse impacts unless adequately mitigated; and

The additional height of the building will not result in adverse impact as the proposed project meets design requirements for transitions to existing residential and is similar in scale to other structures on the block face. Building height exceeds limit on only 2 of the 4 elevations (north and west)

c. Is of a technical nature and is required to:

1. Compensate for an unusual site condition

Additional height is a result of designing to site conditions, which include challenging topography.

2. Eliminate a minor inadvertent failure to comply with a Code standard; or N/A

3. Protect a sensitive resource, natural feature, or community asset. N/A

REVIEWING AGENCY COMMENTS

The application was referred to various City departments. Department comments included with application materials.

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

The Planning and Zoning Commission may approve, approve with conditions, or deny the application. The Commission may also continue the hearing with a request for specific information necessary to determine compliance with the Municipal Code and city goals and policies.

Action 1 – Design Variance Request – Consider a design variance from *Section 070.040.080(d)(3)(b)(3)* to allow a front loading garage in the Downtown Core.

Staff Recommendation/Suggested Motion

Staff recommends **approval** of the variance request with the following **findings and conditions**:

Suggested Findings:

1. The proposed design variance requests meet the required criteria for approval as described in Design Variance Criteria section on pages 9-10 of the staff report.

Suggested Conditions

1. The development shall comply with the requirements of the Code. Any future physical changes or improvements to the property or buildings are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code.

2. The owner shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by the Community Development Director

3. Following approval of a variance, the Director shall record the variance with the Garfield County Clerk and Recorder as soon as practicable.

4. Prior to submitting a building permit and/or grading permit the owner shall:

a. Comply with recommendations identified in technical reports submitted as part of the building permit application which includes and is not limited to Geotechnical and Drainage reports.

b. Request and approve any required variance from Engineering Department which may be required or identified as part of further design review for building and grading permit.

5. Prior to issuance of the building permit, the owner shall –

a. Pay all required system improvement fees including but not limited to water, sewer, parkland, school land, and Fire/EMS

6. Prior to issuance of Certificate of Occupancy, the owner shall

- a. Submit a set of as-built documents and Improvement Survey Plat per the Engineering Standards.

Action 2 – Design Variance Request – Consider design variance request from *Section 070.040.080(e)(10)(c)(5)(i)* for a roof pitch of less than 6:12 in the Downtown Core.

Staff Recommendation/Suggested Motion

Staff recommends **approval** of the variance request with the following **findings and conditions**:

Suggested Findings:

1. The requested design variance meets the necessary criteria for design variance approval as listed on pages 11 and 12 of the staff report.

Suggested Conditions

1. The development shall comply with the requirements of the Code. Any future physical changes or improvements to the property or buildings are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code.
2. The owner shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by the Community Development Director
3. Following approval of a variance, the Director shall record the variance with the Garfield County Clerk and Recorder as soon as practicable.
4. Prior to submitting a building permit and/or grading permit the owner shall:
 - a. Comply with recommendations identified in technical reports submitted as part of the building permit application which includes and is not limited to Geotechnical and Drainage reports.
 - b. Request and approve any required variance from Engineering Department which may be required or identified as part of further design review for building and grading permit.
5. Prior to issuance of the building permit, the owner shall –
 - a. Pay all required system improvement fees including but not limited to water, sewer, parkland, school land, and Fire/EMS

6. Prior to issuance of Certificate of Occupancy, the owner shall

- a. Submit a set of as-built documents and Improvement Survey Plat per the Engineering Standards.

Action 3 – Administrative Adjustment – Consider an administrative adjustment for building height in 15% excess of maximum building height of 27' for Residential Medium Density Zoning District

Staff Recommendation/Suggested Motion

Staff recommends **approval** of the variance request with the following **findings and conditions**:

Suggested Findings:

1. The requested administrative adjustment meet the required criteria for approval as described in Administrative Adjustment section on page 13 of the staff report.
2. The requested administrative adjustment does not result in an increase in overall project density, a change in permitted uses or mix of uses, a deviation from standards in Section 070.030.030, a deviation in Section 070.040.020, a deviation from building or fire codes, a deviation from City's Engineering Standards, requirements for public roadways, utilities, or other public infrastructure or facilities; or a change to a development standard where the same standard was already modified through a separate administrative adjustment or variance.

Suggested Conditions

1. The development shall comply with the requirements of the Code. Any future physical changes or improvements to the property or buildings are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code.
2. The owner shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by the Community Development Director
3. Following approval of a variance, the Director shall record the variance with the Garfield County Clerk and Recorder as soon as practicable.
4. Prior to submitting a building permit and/or grading permit the owner shall:
 - a. Comply with recommendations identified in technical reports submitted as part of the building permit application which includes and is not limited to Geotechnical and Drainage reports.

b. Request and approve any required variance from Engineering Department which may be required or identified as part of further design review for building and grading permit.

5. Prior to issuance of the building permit, the owner shall –

a. Pay all required system improvement fees including but not limited to water, sewer, parkland, school land, and Fire/EMS

6. Prior to issuance of Certificate of Occupancy, the owner shall

a. Submit a set of as-built documents and Improvement Survey Plat per the Engineering Standards.

ALTERNATIVE MOTION

***A member of City Council has requested that land use applications include suggested motions for both approval and denial. In most instances, staff has worked diligently with the applicant to address requirements outlined in the *Glenwood Springs Municipal Code* (Code) applicable to any given proposal. Therefore, we are usually in support of an application by the time it reaches the Planning and Zoning Commission and/or City Council. However, if the Planning and Zoning Commission does not believe the application meets the Code's minimum standards, your denial motion should be based on one or more of the same approval criteria applicable to the application. You should support your findings with information outlining the shortcomings of the request as shown in the example below:

MOTION TO DENY

Action 1:

Consideration of design variance request from *Section 070.040.080(d)(3)(b)(3)* to allow a front loading garage in the Downtown Core.: **[insert reasoning]**;

Section A

- i. The variance requested [DOES] harm the public health, safety, or welfare; and
- ii. The variance requested is [NOT] in general conformance with the Comprehensive Plan and with the stated purpose and intent of the Code including the specific regulation for which the variance is sought; and
- iii. The variance requested [WILL] violate building or fire code requirements

Section B

- i. The variance requested [DOES NOT] advance the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard; or
- ii. The subject property [DOES NOT] have an exceptional shape, topography, building configuration, or other exceptional site condition that is not a general condition throughout the zone district
- iii. The variance requested [DOES NOT] result in benefits to the community that are equivalent to or exceed benefits associated with the subject standard
- iv. The variance is [NOT] necessary and appropriate to make possible the reasonable use of the land or the structures on the property
- v. The variance is [NOT] the minimum variance that will afford relief of the subject standards of the Code
- vi. The strict application of the Code standards for which a variance is sought would [NOT] produce undue hardship.

Action 2:

Consider a design variance request from *Section 070.040.080(e)(10)(c)(5)(i)* for a roof pitch of less than 6:12 in the Downtown Core.: **[insert reasoning];**

Section A

- i. The variance requested [DOES] harm the public health, safety, or welfare; and
- ii. The variance requested is [NOT] in general conformance with the Comprehensive Plan and with the stated purpose and intent of the Code including the specific regulation for which the variance is sought; and
- iii. The variance requested [WILL] violate building or fire code requirements

Section B

- i. The variance requested [DOES NOT] advance the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard; or
- ii. The subject property [DOES NOT] have an exceptional shape, topography, building configuration, or other exceptional site condition that is not a general condition throughout the zone district
- iii. The variance requested [DOES NOT] result in benefits to the community that are equivalent to or exceed benefits associated with the subject standard
- iv. The variance is [NOT] necessary and appropriate to make possible the reasonable use of the land or the structures on the property
- v. The variance is [NOT] the minimum variance that will afford relief of the subject standards of the Code
- vi. The strict application of the Code standards for which a variance is sought would [NOT] produce undue hardship.

Action 3:

Consideration of an administrative adjustment for building height in 15% excess of maximum building height of 27' for Residential Medium Density Zoning District **[insert reasoning];**

- i. [WILL] result in compatible development
- ii. [WILL] result in adverse impacts unless adequately mitigated; and
- iii. Is [NOT] of a technical nature and is required to:
 - a. Compensate for an unusual site condition
 - b. Eliminate a minor inadvertent failure to comply with a Code standard; or
 - c. Protect a sensitive resource, natural feature, or community asset.



LAND USE APPLICATION

City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

Ordinance Amendments		Development Permits	
☐	Rezoning	☐	Site/Architectural Plan Review
☐	Rezoning to Planned Unit Development (PUD)	☐	Administrative
☐	Annexation	☐	Minor
☐	Condominiumization	☐	Major
☐	Annexation	☐	Master Plan
☐	Street Vacation	☐	Construction Plans
		☐	Location & Extent
Subdivisions		☐	Right of Way Encroachment License
☐	Minor Subdivision	☐	Floodplain Development Permit
☐	Preliminary Plat	☐	Special Use Permit
☐	Final Plat	Flexibility and Relief Procedures	
☐	Vacation of Right-of-Way	☒	Variance
		☐	Administrative Adjustment
Other Land Use Applications		☒	Appeal
☐	Outdoor Seating		

Applicant/Property Owner Information:

Applicant		Owner	
Timothy J. Seydel Cashel		Timothy J. Seydel Cashel	
Relationship to Owner		Owner	
Applicant Address		Owner Address	
1120 Palmer Ave.	Glenwood Springs, CO	1120 Palmer Ave.	Glenwood Springs, CO
Phone 970-379-3580	Email Address tjc@hawaii.edu	Phone 970-379-3580	Email Address tjc@hawaii.edu

Property Information:

Address		Parcel Number	
1120 Palmer Ave. Glenwood Springs, CO		218509433014	
Subdivision		Lot and Block Number	
Original I Townsite		11 & 12 Block 8	
Zone District RM1		Existing Land Use Single Family Dwelling	

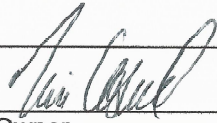
General Project Description:

Single Family Dwelling with garage and ADU.

Signatures:

The owner or applicant must be present at the hearing. All public hearings must be properly noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the		1/19/2022
	Applicant	Date
		1/19/2022
	Owner	Date

application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.



Owner
Timothy J. Seydel Cashel

Date
1/19/2022

- [Document Search](#)
- [Search Help](#)
- [About](#)
- [Garfield County Clerk & Recorder](#)
- [Garfield County Home](#)
- [Logout publicweb](#)

Warranty Deed - 895379

Reception Number
895379
Recording Date
07/28/2017 11:02:01 AM

# of Pgs	Rec. Fee
1	\$13.00

Doc. Date	Doc. Fee
07/27/2017	\$11.50

Surcharge	Total Fees
\$1.00	\$24.50

Return Address

TIMOTHY CASHEL

Address1
1120 PALMER AVE

Address2

City	State	Zip
GLENWOOD SPRINGS	CO	81601

Mailback Date
08/03/2017 09:49:09 AM

Related

Reception Number Book Page

<u>Owner Seller</u>	<u>Buyer Second Party</u>
SEYCASH LLC	SEYDEL CASHEL, TIMOTHY JOHN

Notes or Remarks

Notes

Remarks



SOURCE: GOOGLE EARTH 2022
VICINITY MAP
SCALE: N.T.S.



CASHEL PROPERTY

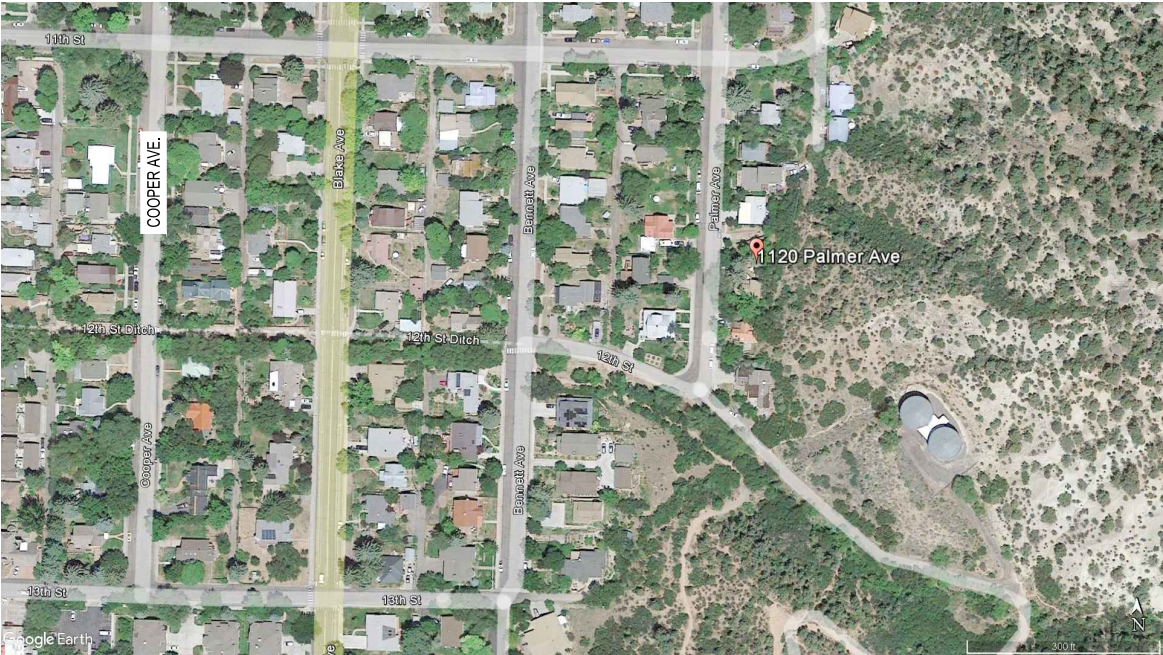
1120 PALMER AVENUE

GLENWOOD SPRINGS, COLORADO

PRELIMINARY DRAWINGS

- NOTES:
1. BEARINGS ARE RELATIVE TO A BEARING OF N88°28'00"W ON THE LINE BETWEEN SURVEY MONUMENTS AT THE INTERSECTIONS OF 8TH STREET AND PALMER AVENUE AND 8TH STREET AND PITKIN AVENUE.
 2. CONTRACTOR TO VERIFY UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT ALL UTILITIES DURING CONSTRUCTION.
 3. SITE IS LOCATED WITHIN FEMA FLOODPLAIN ZONE C, AREAS OF MINIMAL FLOODING, ON FIRM COMMUNITY PANEL NUMBER 080071 1432 C DATED OCTOBER 15, 1985.
 4. THIS PROPERTY IS SUBJECT TO GEOLOGIC HAZARDS PER THE ADOPTED MAPPING BY THE CITY OF GLENWOOD SPRINGS. HAZARDS TO NOTE ARE MODERATE DEBRIS FLOW. A FINAL GEOLOGIC HAZARD REPORT WILL BE SUBMITTED UPON APPLICATION OF A BUILDING PERMIT.

SHEET INDEX	
DRAWING NUMBER	DRAWING TITLE
1	COVER SHEET
2	SITE PLAN & PRELIMINARY UTILITY PLAN



SEWER
MANHOLE



SCALE 1"=10'
0 5 10 20

PALMER AVENUE

CURB AND GUTTER

EXIST CONC
SIDEWALK

EXISTING
STREET
TREE



CONCRETE
DRIVE

COVERED
PORCH
ABOVE

LOT 9

BUILDING ON ADJACENT PROPERTY

BURIED GAS LINE

ROCK WALL

PROPOSED LIMITS OF DISTURBANCE

CURB STOP
3" WTR
SERVICE

FOUND NO. 5 REBAR
AND PLASTIC CAP
LS 26950

EXIST ROCK LINED SWALE

FOUND NO. 5 REBAR
AND PLASTIC CAP
LS 15710
TBM Elev. 5905.63'

FOUND NO. 5 REBAR
AND PLASTIC CAP
LS 26950
N68°52'26"W 0.65'

OVERHEAD UTILITY LINE

MINTER AVENUE

S01°32'00"W

25.00'

25.00'

25.00'

Found 1.5" Pipe
N83°46'05"E 0.57'

20' SETBACK

COVERED
PORCH
ABOVE

PROPOSED
FOUNDATION
FOOTPRINT
(1,070 SF)

9' GARAGE DOOR

EXIST PORCH
(DEMO)

ENTRANCE
DOOR

PROP
STAIRS

EXIST SHED
(DEMO)
(112 SF)

EXIST TRAILER
(DEMO)
(716 SF)

N88°28'00"W
100.00'

PROPOSED UPPER
LEVEL EXTENTS

N88°28'00"W
100.00'

Shed

LOT 12

Found Spike
S55°34'17"W 0.45'

LEGEND:

- PROPERTY BOUNDARY
- SETBACK BOUNDARY
- EXIST IMPROVEMENTS

- MAJOR CONTOUR
- MINOR CONTOUR
- PROP BUILD FOOTPRINT
- PROP BUILD EXTENTS

- UNDISTURBED HILLSIDE
- LANDSCAPING
- PERVIOUS PAVEMENT
- LIMITS OF DISTURBANCE

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	FOR REVIEW	CSJ	04/18/22

PREPARED BY: CELESTE S. JAIN, P.E.
celeste.s.jain@gmail.com (734)635-6672

1120 PALMER AVENUE
SITE PLAN

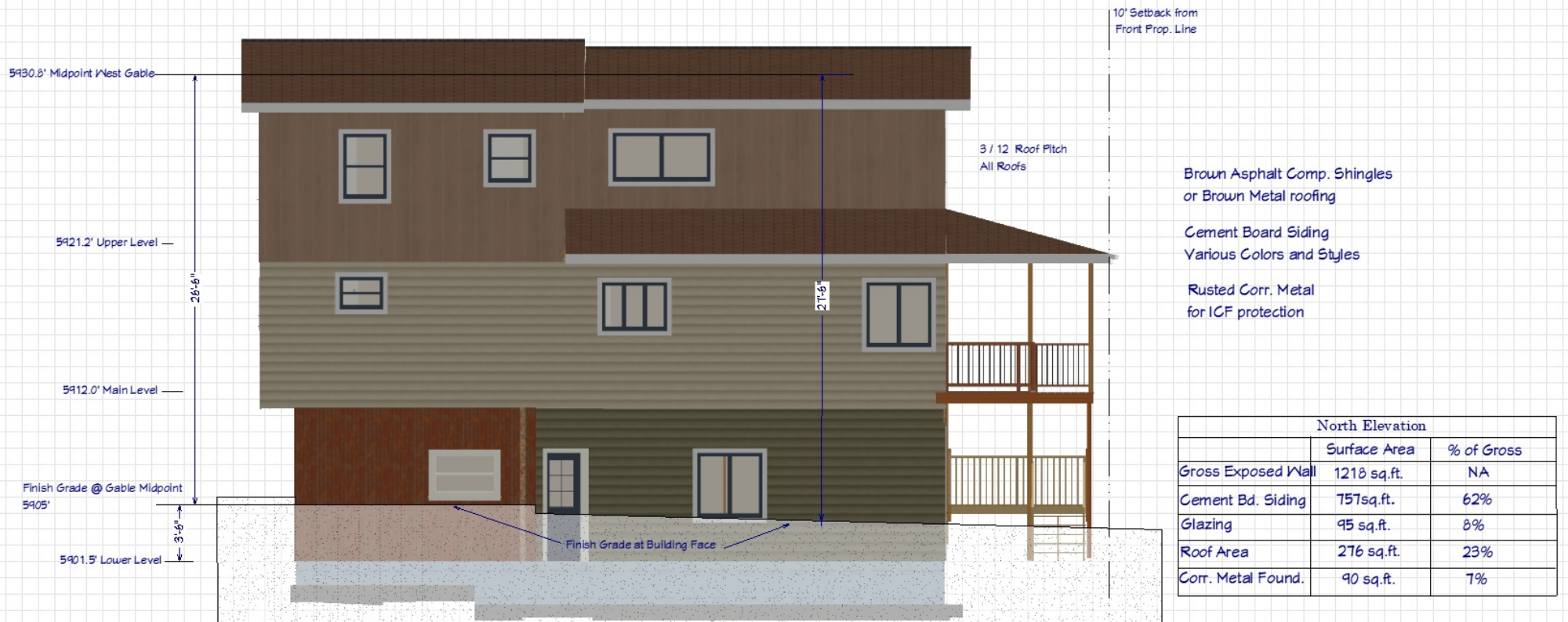
CITY/COUNTY : GLENWOOD SPRINGS/GARFIELD

OWNER: TIMOTHY & KARLEE CASHEL TJC@HAWAII.EDU
1120 PALMER AVE., GWS, CO 81601 (970) 379-3580

DRAWING

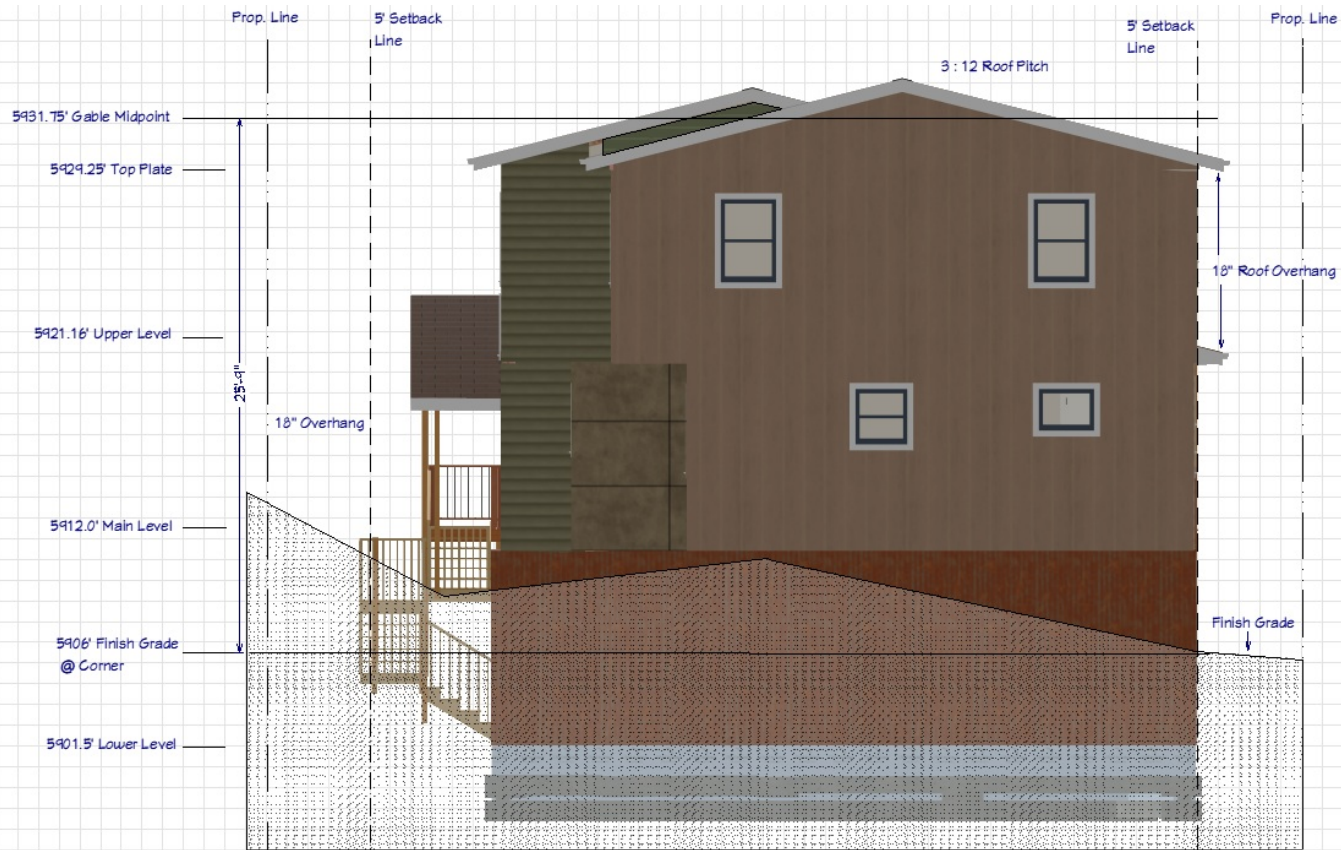
2





North Elevation
1120 Palmer Ave.

Note: These elevations are conceptual in nature. Individual building elevations may vary but will be evaluated for compliance with design standards contained within Title 070 of the Glenwood Springs Municipal Code at the time of Building Permit application.



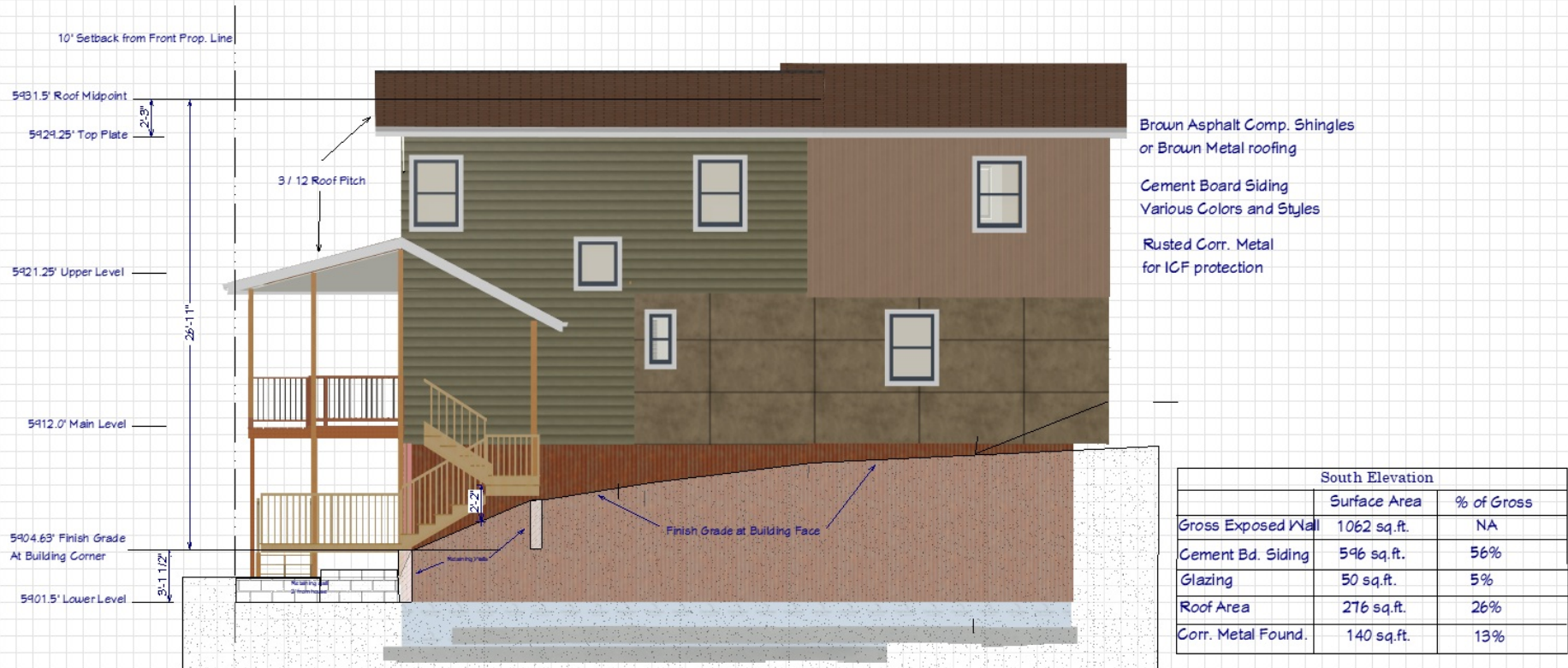
Cement Board Siding
Various Colors and Styles

Rusted Corrugated Siding
for ICF Protection

East Elevation		
	Surface Area	% of Gross
Gross Exposed Wall	785 sq.ft.	NA
Cement Bd. Siding	666 sq.ft.	85%
Glazing	32 sq.ft.	4%
Roof Area	24 sq.ft.	3%
Corr. Metal Found.	63 sq.ft.	8%

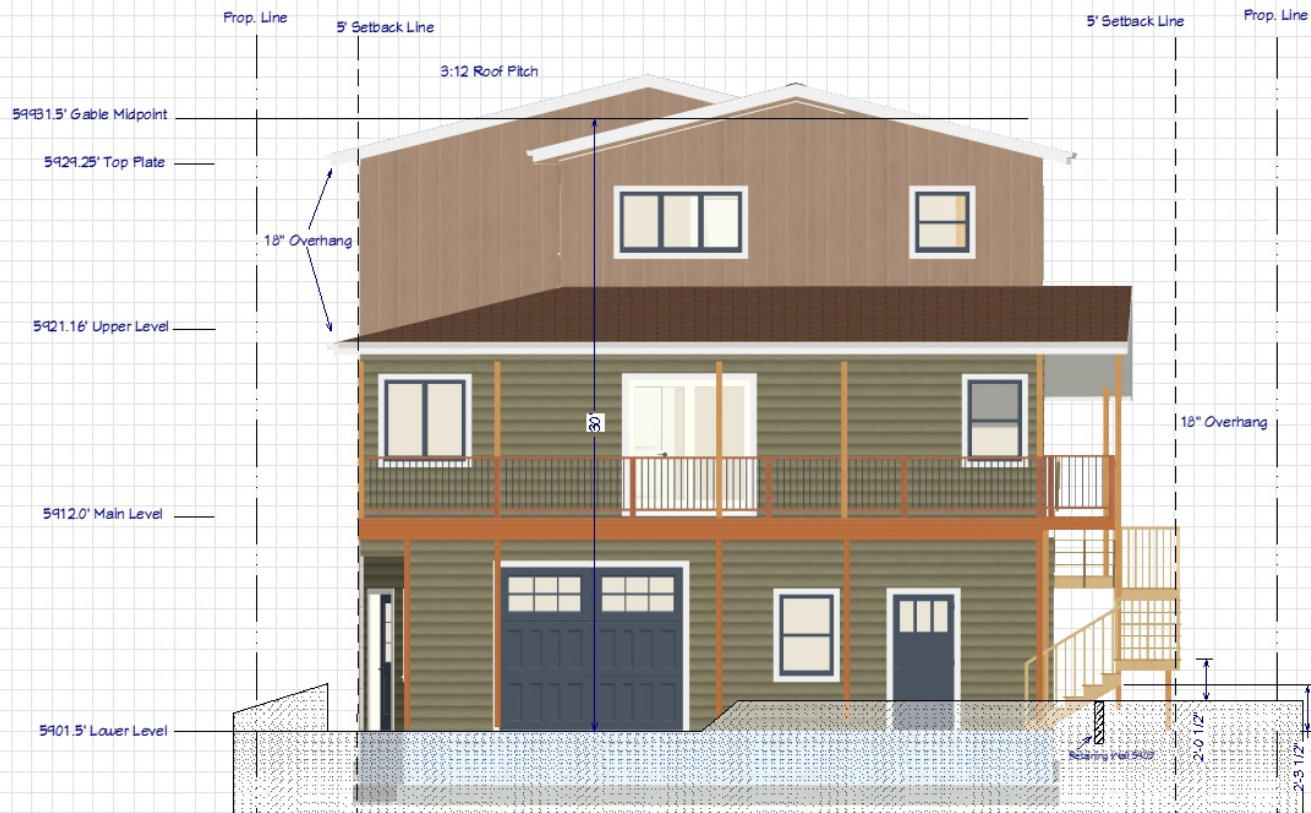
East Elevation
1120 Palmer Ave.

Note: These elevations are conceptual in nature. Individual building elevations may vary but will be evaluated for compliance with design standards contained within Title 070 of the Glenwood Springs Municipal Code at the time of Building Permit application.



South Elevation
1120 Palmer Ave.

Note: These elevations are conceptual in nature. Individual building elevations may vary but will be evaluated for compliance with design standards contained within Title 070 of the Glenwood Springs Municipal Code at the time of Building Permit application.



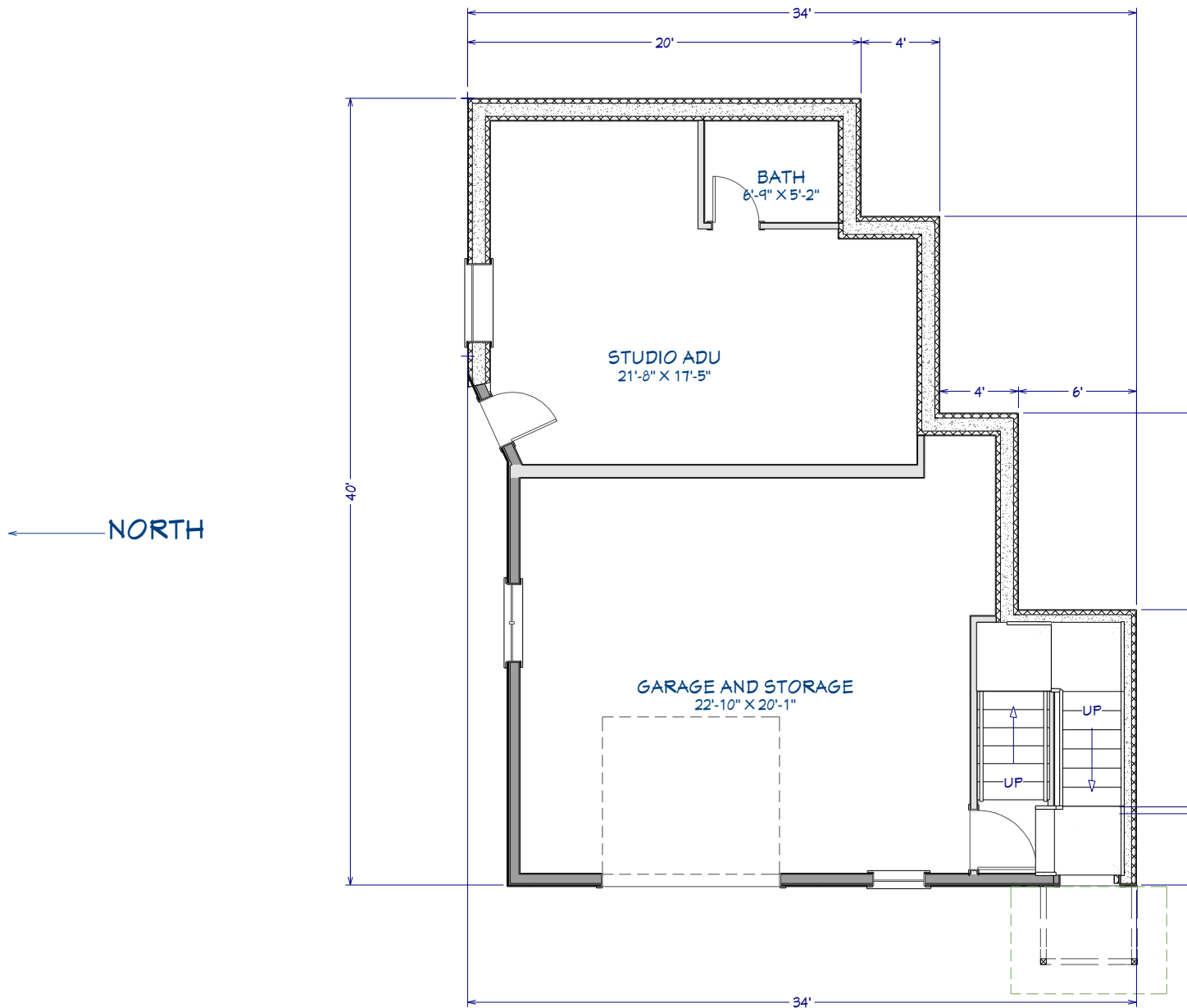
Brown Asphalt Composite Shingles
or Brown Metal Roofing

Cement Board Siding
Various Colors and Styles

West Elevation		
	Surface Area	% of Gross
Gross Wall	1050 sq.ft.	NA
Cement Bd. Siding	745 sq.ft.	71%
Glazing	104 sq.ft.	10%
Roof Area	112sq.ft.	11%

West Elevation
1120 Palmer Ave.

Note: These elevations are conceptual in nature. Individual building elevations may vary but will be evaluated for compliance with design standards contained within Title 070 of the Glenwood Springs Municipal Code at the time of Building Permit application.

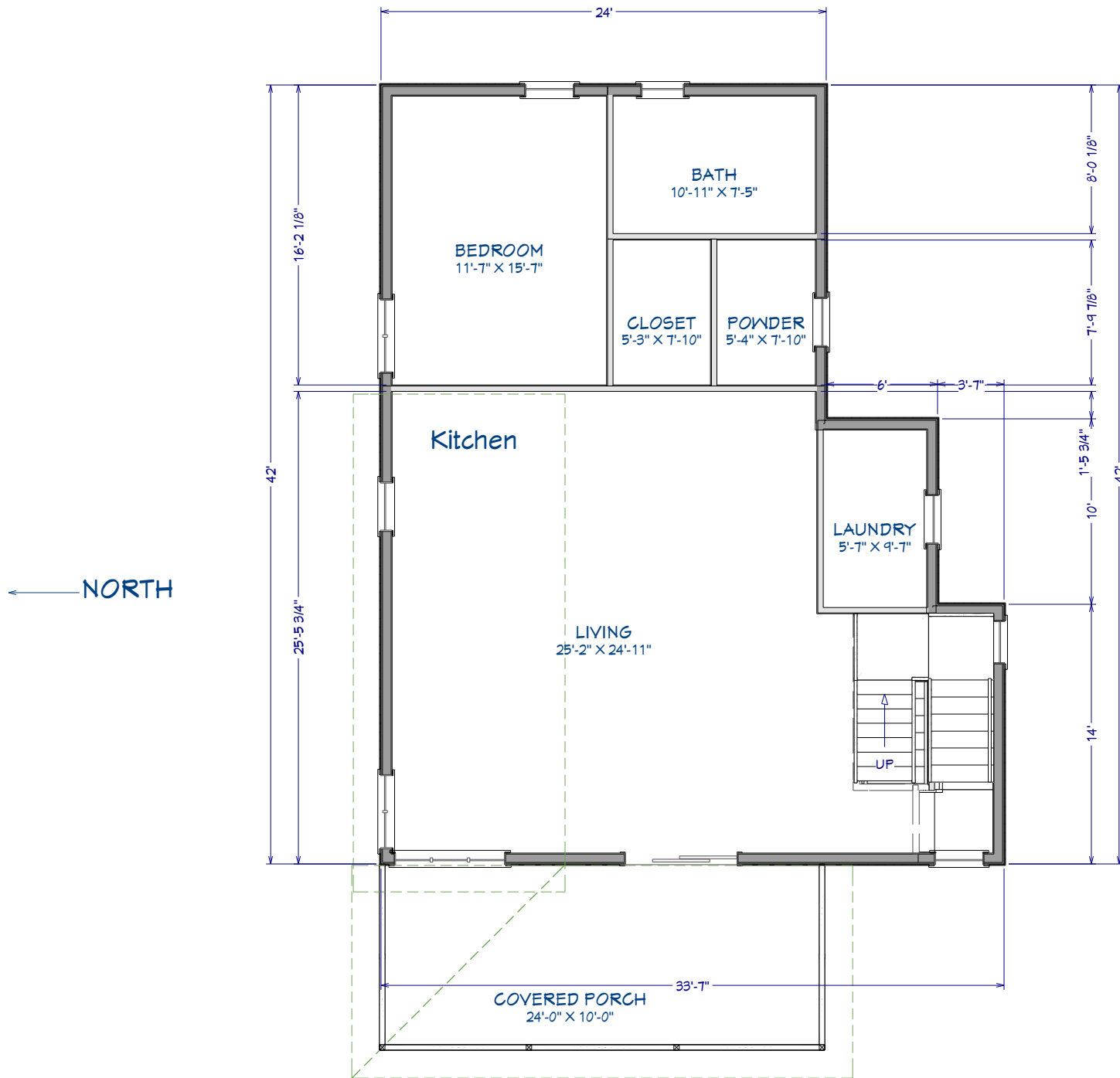


1120 Palmer Ave.
Cashel Property

Lower Level

$1/8" = 1'$

1056 sq.ft. Gross

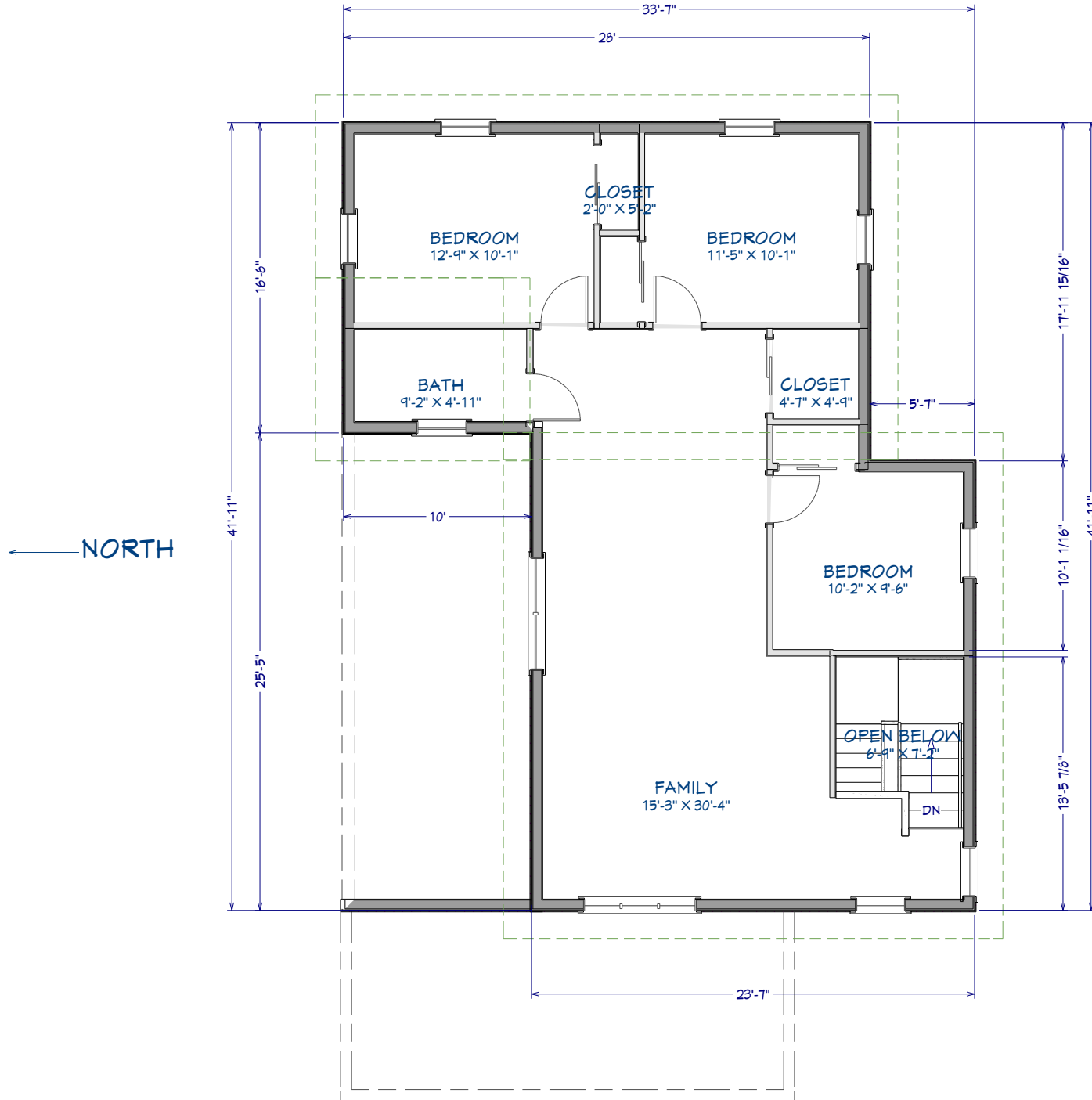


Cashel Property
1120 Palmer Ave.

Main Level

1/8" = 1'

1182 sq.ft. Gross



Cashel Property
1120 Palmer Ave.

Upper Level

1055 sq.ft. Gross



LAND USE APPLICATION

City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

Ordinance Amendments		Development Permits	
☐	Rezoning	☐	Site/Architectural Plan Review
☐	Rezoning to Planned Unit Development (PUD)	☐	Administrative
☐	Annexation	☐	Minor
☐	Condominiumization	☐	Major
☐	Annexation	☐	Master Plan
☐	Street Vacation	☐	Construction Plans
☐		☐	Location & Extent
Subdivisions		☐	Right of Way Encroachment License
☐	Minor Subdivision	☐	Floodplain Development Permit
☐	Preliminary Plat	☐	Special Use Permit
☐	Final Plat	Flexibility and Relief Procedures	
☐	Vacation of Right-of-Way	☐	Variance
☐		☒	Administrative Adjustment
Other Land Use Applications		☐	Appeal
☐	Outdoor Seating	☐	

Applicant/Property Owner Information:

Applicant		Owner	
Timothy Cashel		Timothy J. Seydel Cashel	
Relationship to Owner		Owner	
Owner			
Applicant Address		Owner Address	
1120 Palmer Ave.	Glenwood Springs, CO	1120 Palmer Ave.	Glenwood Springs, CO
Phone 9703793580	Email Address tjc@hawaii.edu	Phone 9703793580	Email Address tjc@hawaii.edu

Property Information:

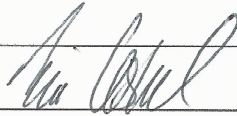
Address		Parcel Number	
1120 Palmer Ave. Glenwood Springs, CO		218509433014	
Subdivision		Lot and Block Number	
Original Townsite		11 & 12 Block 8	
Zone District	RM1	Existing Land Use	Single Family Dwelling

General Project Description:

Single Family Dwelling with garage and ADU

Signatures:

The owner or applicant must be present at the hearing. All public hearings must be properly noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the		3/24/22
	Applicant	Date
		3/24/22
	Owner	Date

application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.		3/24/22
	Owner Timothy John Seydel Cashel	Date 3/24/22

TO: City of Glenwood Springs
Director of Community Development

March 24, 2022

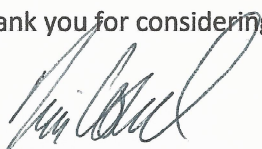
RE: Lots 10 & 11, Block 8
1120 Palmer Ave.
Glenwood Springs, CO

We are proposing to construct a new Single-Family Dwelling with a small Accessory Dwelling Unit to replace the existing mobile home. The proposed house is two stories over a partially exposed lower level with the garage and ADU. The lot is in RM1 Zone District and in the Downtown Core. Due to Downtown Core design standards, variances for front-loading garage and roof pitch less than 6:12 have been applied for.

We originally designed the house based on the measurement of the building height in Figure: 020-17 (Examples of Building Height Measurement). After preliminary review by the planning department, we were informed that the building height exceeded their interpretation of the maximum building height. We revised the roof design, and pitch, to allow Administrative Adjustment per: Table 060.3: Allowable Administrative Adjustments. Our proposed design is less than the 15% allowable Administrative Adjustment.

The site has a limited buildable area due to the challenging topography. The proposed design is compatible with the neighboring structures and will positively impact the surrounding neighborhood. Due to the unusual site conditions the design compelled to build up instead of out. The design strives to minimize the impact, and to blend in with the adjacent hillside.

Thank you for considering this project for Administrative Adjustment of maximum building height.



Timothy J. Seydel Cashel

Variance Criteria – Front Loading Garage

Variance type

Explain what Municipal Code requirements you are requesting a variance from and what it is that you are proposing that does not meet this requirement.

070.040.080 (d)(3) b.3. Residential Site and Building Design / Additional Standards in the Downtown Core.

- ***Front-loading garages are inconsistent with the historic character of downtown residential neighborhoods and are prohibited. New garages shall be set back from the primary structure and accessed from the alley.***

We are proposing a front-loading garage at an existing curb cut and driveway for our new single-family dwelling and ADU.

Variance Criteria Section A Design Variance must meet the following 3 criteria

1. Explain how the requested variance does not harm the public health, safety, or welfare.

The variance does not harm the public or impair the intent/purposes of the Code. In fact, the proposed structure is a public improvement that meets the intent and purposes of the residential design goals and policies of the Code. It provides two off-street parking spaces in the already limited parking in this neighborhood of the Downtown Core. The proposed ADU provides a needed housing unit in the current housing shortage. Replacing the existing mobile home with a house similar to houses on the block is a big neighborhood improvement. The proposed design makes use of the existing curb-cut/driveway thus avoiding another variance from the Downtown Core design standards.

2. The variance requested is in general conformance with the Comprehensive Plan and the stated purpose and intent of the Code including specific regulation for which the regulation is sought.

The variance requested is in general compliance with most of the Comprehensive Plan and the Residential Design Standards. The variance requested is due to the site being in the Downtown Core, which is more restrictive in that it prohibits front-loading garages. The Code states that garages should be set back from the structure, or accessed from an alley, but due to the topography of the site and no alley, this is impossible.

3. The variance requested will not violate the building or fire code requirements

The building will comply with the building code and fire code requirements. The exterior of the structure will use fire resistant materials.

Variance Criteria Section B- Design Variance must meet at least four (4) of the following criteria

- 1. The requested variance advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard.**
- 2. The subject property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district**

The building site has steep topographic features and does not have an alley at back. The steep terrain limits the buildable area of the site. The site is near the edge of the Downtown Core boundary and topographic conditions are unusual for the general Downtown Core.

- 3. The Requested variance results in benefits to the community that are equivalent to or exceed benefits associated with the subject standard.**

- 4. The requested variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property.**

The language of the Code requiring the variance makes the construction of a house with a garage impossible. The topography of the site limits the buildable area per the recommendation of the structural engineer.

- 5. The variance is the minimum variance that will afford relief of the subject standards of the Code.**

The variance requested is one of two that is needed to build a structure that is compliant with the Purpose and Intent of the Code per 070.010.030.

- 6. The strict application of the Code standards for which a variance is sought would produce undue hardship.**

The Downtown Core designation for this property was created with the last Development Code revision adopted in 2018. We want our house to be complimentary with the surrounding neighborhood and historical character of downtown. Prior to the Code revision this property would have been allowed to have a front-loading garage. There is an existing curb cut/driveway for a front-loading garage. The topography of the lot limits the buildable area. A garage provides one of the required parking spaces for a SFD with an ADU.

Variance Criteria – Roof Pitch

Variance type

Explain what Municipal Code requirements you are requesting a variance from and what it is that you are proposing that does not meet this requirement.

070.040.080 (e)(10) c.5.i Supplemental Architectural Design Standards: Downtown Core.

-Sloping roofs such as shed, gabled, and hipped roofs with a minimum pitch of 6:12 are appropriate roof forms.

After comments from the Planning Dept., we are proposing a 3:12 roof pitch to comply with the building height requirements.

Variance Criteria Section A Design Variance must meet the following 3 criteria

1. Explain how the requested variance does not harm the public health, safety, or welfare.

The variance does not harm the public or impair the intent/purposes of the Code. In fact, the proposed structure is a public improvement that meets the intent and purposes of the residential design goals and policies of the Code. The roof is sloped, not a flat roof that is prohibited by the Code.

2. The variance requested is in general conformance with the Comprehensive Plan and the stated purpose and intent of the Code including specific regulation for which the regulation is sought.

The variance requested is in general compliance with most of the Comprehensive Plan and the Residential Design Standards. The variance requested is due to the site being in the Downtown Core, which is more restrictive in that it states that a “6:12 roof pitch is appropriate”. After preliminary Planning Department review, the roof height had to be lowered to comply with maximum building height. The building site is near the Downtown Core boundary and the topography of the site limits the buildable area. It limits us to build up instead of building out, leading to building height constraints. Our intentions are to comply with Downtown Core standards code as much as possible.

3. The variance requested will not violate the building or fire code requirements

The building will comply with the building code and fire code requirements. The exterior of the structure will use fire resistant materials. The 3:12 roof pitch complies with the building code and fire code requirements.

Variance Criteria Section B- Design Variance must meet at least four (4) of the following criteria

- 1. The requested variance advances the goals and policies of the Code or achieves the intent of the subject standard to the same or better degree than the subject standard.**
- 2. The subject property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district**

The building site has steep topographic features and limits the buildable area of the site. The site is near the edge of the Downtown Core boundary and topographic conditions are unusual for the general Downtown Core. It limits us to build up instead of building out leading to building height constraints. The lowered roof pitch complies with the maximum building height requirements of the less restrictive Residential Design Standards.

- 3. The Requested variance results in benefits to the community that are equivalent to or exceed benefits associated with the subject standard.**

- 4. The requested variance is necessary and appropriate to make possible the reasonable use of the land or the structures on the property.**

The topography of the site limits the buildable area per the recommendation of the structural engineer. The 3:12 roof pitch provides compliance with the building height requirements. The 6:12 pitch being termed “appropriate” in the Downtown Core standards seems to be a suggestion versus a requirement.

- 5. The variance is the minimum variance that will afford relief of the subject standards of the Code.**

The variance requested is one of two that is needed to build a structure that is compliant with the Purpose and Intent of the Code per 070.010.030.

- 6. The strict application of the Code standards for which a variance is sought would produce undue hardship.**

The Downtown Core designation for this property was created with the last Development Code revision adopted in 2018. Prior to the Code revision this property would have been allowed a 3:12 roof pitch. The topography of the lot limits the buildable area.

**Engineering
Department
Jessica Bowser,
Asst. City Engineer**

Date: March 4, 2022

To: Community Development

Re: Planning Item 82-21: 1120 Palmer Avenue Variance

Please see the following engineering comments for the 1120 Palmer Avenue Variance. These comments are not inclusive of comments from other departments, including Public Works, Building, etc. It is up to the applicant to verify that the appropriate reviews have been completed by these departments. City of Glenwood Springs Engineering reserves the right to make additional comments throughout the application process, especially if significant modifications are made. It is in the applicant's best interest to address all comments holistically to reduce the number of reviews necessary for approvals.

Engineering will not review a revised submittal until the applicant provides a written response to these comments.

Plan Comments:

1. There is a rock lined swale that crosses this property and the property to the north. Is there a dedicated easement for this drainage facility?
2. The routing of the water service is odd. Why would this service be so far to the north and not be trenched with the sanitary service?
 - a. The curb stop should be placed approximately 1' inside the city ROW at the property line. (verify location with City of Glenwood Springs Water Department)
3. There is an existing gas line that crosses the property to the north and this property. Is this existing? Is this a main or a service? There should be a dedicated easement for this line.
4. Dimensioning should be provided. The driveway location and design should meet the requirements set forth in [Chapter 5 of the Engineering Standards](#). More specifically section 5.2.10.
5. Other existing facilities are not represented in the plan. There is an existing retaining wall encroaching on the City ROW. If this is to remain, a license to encroach should be requested and documented.
6. Removals and replacements of sidewalk, curb and gutter, and roadway, meeting the requirements of the Engineering Standards should be indicated.
 - a. The sidewalk should be reconstructed with the landscape buffer incorporated, or a variance request submitted. See Table 5-4 in [Chapter 5 of the Engineering Standards](#).

7. A **Drainage Report** should be completed by qualified State of Colorado licensed Professional Engineer. Requirements for drainage are outlined within Chapter 4 of the City of Glenwood Springs Engineering Standards available here: [Chapter 4 - Engineering Standards](#).
8. A **Geotechnical Report** should be completed by qualified State of Colorado licensed Professional Engineer. This report should address the following:
 - a. Hydrologic soil group.
 - b. Maximum allowable permanent slopes.
 - c. Recommendation for slopes away from foundations, paved and unpaved/landscaped.
 - d. Percolation rates for any on site detention or drywells (if applicable).
 - e. Foundation recommendations.
 - f. Pavement recommendations within the City of Glenwood Springs Right of Way (if applicable) that meet the minimum requirements set forth in the Engineering Standards.
9. This project site has been identified in a geologic hazards area per the City of Glenwood Springs Geologic Hazards Mapping Completed by Lincoln Devore in 1978. Mapping is available on the City Website at the following link for your review: [Geologic Hazards Mapping](#)
 - a. A **Geologic Hazards Report** should be completed by a qualified State of Colorado licensed Professional Engineer for this site. Mitigation should be completed per the City of Glenwood Springs Municipal Code Section 070.040.020 – Sensitive Area Protection Subsection (C).
10. Any retaining walls over four feet (4') in height from *bottom of footer to top of wall* or adjacent to any area subject to additional loading (tiered walls, traffic, parking, etc) shall be designed by a qualified State of Colorado licensed Professional Engineer, *if applicable*.
11. This project requires a [Grading Permit](#).
12. Any work taking place within an adjacent property required an easement (temporary or permanent).
13. Any work taking place within the City of Glenwood Springs Right of Way requires a [Right of Way Permit](#).
 - a. Provide S.U.E. plan per Colorado Law CRS 9-1.5-102 requirements or provide a stamped letter determining why this is not a Subsurface Utility Engineering-Required Project.

Development Application Comments:

14. The proposed site plan, grading and drainage should be supported by the findings in the Geotechnical Report. If they conflict with the provided report, the geotechnical engineer should provide documentation that they have reviewed the proposal and show that it is supported by any additional investigation and/or recommendations made by the geotechnical engineer.

Comments to be addressed prior to Grading Permit Approval:

15. A [Grading Permit](#) shall be submitted along with the following documentation:

- a. No work for this project will be allowed to commence until **all** work easements (temporary or permanent), on or off site, are in place for the development of property.
 - b. Final Stamped Reports (Geotechnical, Drainage, Traffic, Geologic Hazards, etc).
 - c. Final Stamped Construction Documents.
16. Any additional permitting necessary for the project should be submitted, including Building and/or Right of Way Permits.

Comments to be addressed prior to Certificate of Occupancy:

17. The city will require a **maintenance plan and agreement** with the development for the detention and debris system/s. If the system/s are not being maintained properly and having a negative effect on downstream facilities, the City will need access to perform the maintenance and back charge the facility owner. See Community Development for further information.
18. All drainage, retaining walls, and/or other site improvements require a **stamped/signed certification letter** from the engineer of record that verifies that all improvements were constructed per plan.
- a. If not constructed per plan, an explanation for the changes and any calculations/certifications should be submitted to verify that it meets the plan requirements.
19. **Record drawings (As-Built)/Improvement Survey Plat (ISP)** will be required to be submitted to the city along with electronic drawings (CAD) as described in the Engineering Standards.
- a. Critical improvements should be identified including, but not limited to:
 - i. Utility improvements, identify:
 - 1. Structures
 - 2. Pipes
 - 3. Inverts
 - 4. Service locations
 - 5. Ownership demarcation points
 - 6. As-built plan and profile for any utility mains (private or public)
 - ii. Stormwater improvements, include
 - 1. Verified detention capacity and/or verified infiltration rates
 - iii. Retaining walls, identify:
 - 1. Locations
 - 2. Height, i.e. top of wall (TOW) and bottom of wall (BOW)
 - b. Any approved **Licenses to Encroach** may require amending if the as-built conditions vary from the approved licensing locations.
 - c. **Utility Easements** shall be recorded for any City of Glenwood Springs main lines, hydrants, or transformers not in the City right of way.



Planning and Zoning Commission Report

Date: April 26, 2022
To: Planning and Zoning Commission
From: Terri Partch, City Engineer
Subject: Planning item 12-22, Code Amendments to Title 070.040 as it relates to Floodplain regulations

City of Glenwood Springs

ACTION ITEMS

Consideration of Code Text amendments to Title 070.040 amending the floodplain regulations.

BACKGROUND

The Colorado Water Conservation Board (CWCB), following a robust public and stakeholder engagement process as well as approval, implemented the new [Rules and Regulations for Regulatory Floodplains in Colorado](#) (2 CCR 408-1) effective January 14, 2022.

The revisions to the Rules 1) update the standards and processes for floodplain designation to make the Rules consistent with FEMA floodplain mapping procedures; 2) amend and clarify Rule 4 definitions; 3) update references to external documents; and 4) revise for clarification the following Rules: Rule 5, Rule 7.I.(2), Rule 8.D., Rule 10.D., Rule 12.D., Rule 12.J., the introductory paragraph to Rule 14, Rule 17, and Rule 20.

The City of Glenwood Springs presents these changes from the state as amendments to be adopted into the Municipal Code Standards for floodplain regulations.

PROJECT SUMMARY

The City of Glenwood Springs presents these changes from the state as amendments to be adopted into the Municipal Code Standards for floodplain regulations.

REVIEW CRITERIA AND STAFF ANALYSIS

A Code amendment is a legislative decision by the City Council. Prior to recommending approval or approving a proposed Code amendment, the Planning Commission and City Council shall consider whether and to what extent the proposed amendment:

- i. Is consistent with the Comprehensive Plan and other City policies;
 - ii. Does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;
 - iii. Is necessary to address a demonstrated community need;
 - iv. Is necessary to respond to substantial changes in conditions and/or policy; and
 - v. Is consistent with the general purpose and intent of this Code.
- Staff finds that the amendments are consistent with City plans and policies.

Staff has conducted an analysis to ensure there are no conflicts with other provisions of the Municipal Code.

Floodplain regulations are a vitally important piece for safe development within the City as well as emergency management.

The amendments are in response to changes being implemented at the State level.

Amendments are consistent with the general purpose of the Code and section 070.040.020 Sensitive

Area Protection which *"is intended to protect and enhance the natural features that contribute significantly to Glenwood Springs's quality and character, including but not limited to the varying topography and hillsides, floodplains, wetlands, viewsheds, and other significant features. This Section also is intended to ensure that land subject to natural hazards such as flooding, falling rock, landslides, mud flows, or snowslides is not approved for development without appropriate consideration by the City of potential conditions and safeguards to help protect life, health, and property."*

REVIEWING AGENCY COMMENTS

None at time of Staff report.

ACTION ITEMS & STAFF RECOMMENDATIONS

Staff recommends that Planning and Zoning Commission recommend approving Planning File 12-22, Code Amendments to Section 070.040 as it relates to Floodplain regulations.

Suggested Findings:

The proposed Code Amendment:

Is consistent with the Comprehensive Plan and other City policies;

Does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;

Is necessary to address a demonstrated community need;

Is necessary to respond to substantial changes in conditions and/or policy; and

Is consistent with the general purpose and intent of this Code.

DEPARTMENT OF NATURAL RESOURCES

Colorado Water Conservation Board

RULES AND REGULATIONS FOR REGULATORY FLOODPLAINS IN COLORADO

2 CCR 408-1

Rule 1. Title:

The formal title of the previous Rules and Regulations was "Rules and Regulations for the Designation and Approval of Floodplains and of Storm or Floodwater Runoff Channels in Colorado" as approved in 1988. The title for these Rules and Regulations was revised in 2005 to "Rules and Regulations for Regulatory Floodplains in Colorado," and amended here under the same title (referred to herein collectively as the "Rules" or individually as "Rule"). These Rules supersede the 2010, the 2005 and the 1988 Rules.

Rule 2. Authority:

These Rules are promulgated pursuant to the authority granted the Colorado Water Conservation Board (Board or CWCB) in sections, 24-65.1-101(1)(c), 24-65.1-202(2)(a), 24-65.1-302(2)(a), 24-65.1-403(3), 37-60-106(1), 37-60-106(1)(c)–(g), (j), (k), and 37-60-108, C.R.S..

Rule 3. Purpose and Scope:

- A. **Purpose.** The purpose of these Rules is to provide uniform standards for Regulatory Floodplains (or Floodplains) in Colorado, to provide standards for activities that may impact Regulatory Floodplains in Colorado, and to define the process by which floodplains will be Designated and Approved by the Board. Rules for Regulatory Floodplains are of statewide concern to the State of Colorado and the Board in order to prevent Flooding and the negative impacts of Floods, as well as to promote public health, safety, welfare and property by limiting Development in Floodplains. These Rules also assist the CWCB and Communities in Colorado to develop sound Floodplain Management practices and implement the NFIP. These Rules shall apply throughout the State of Colorado, without regard to whether a Community participates in the National Flood Insurance Program. These Rules shall also apply to Stream Alteration Activities conducted by state agencies and to federal Stream Alteration Activities that are fully or partially financed by state funds. These Rules also apply to projects or studies for which the Board has made a loan or grant pursuant to sections 37-60-120(2) and 37-60-121(1)(b)(VII), (IX)(C), C.R.S.
- B. **Scope.**
- (1) **Zoning.** These Rules apply to all Floodplain information developed for zoning and for Floodplain permitting purposes for waterways in the State of Colorado by, but not limited to, individuals, corporations, local government agencies, regional government agencies, state government agencies, Native American tribes, and federal government agencies.
 - (2) **Subdivisions.** These Rules generally apply to the local approval of subdivision drainage reports that provide 100-Year Floodplain information. Local governments should ensure that site-specific Floodplain delineations, intended for regulatory purposes when they are

prepared for Development activities, are consistent with Floodplain information Designated and Approved by the Board.

- (3) **Dam Failure Floodplain.** These Rules do not apply to the identification of the area potentially inundated by the catastrophic or sudden failure of any man-made structure such as a dam, canal, irrigation ditch, pipeline, or other artificial channel.

Rule 4. Definitions:

The following definitions are applicable to these Rules and Regulations for Regulatory Floodplain in Colorado:

<u>Term</u>	<u>Definition</u>
100-Year-Flood	A Flood having a recurrence interval that has a 1-percent-annual-chance of being equaled or exceeded during any given year (1-percent-annual-chance-Flood). For the purpose of these Rules, the terms "100-Year-Flood" "1-percent -annual-chance Flood," and "base Flood," are synonymous. The term does not imply that the Flood will necessarily happen once every one hundred years.
100-Year-Floodplain	The area of land susceptible to being inundated as a result of the occurrence of a 100-Year-Flood. 100-Year-Floodplains are considered to be areas of high Flood hazard. For the purposes of these Rules, the terms "100-Year-Floodplain," "Regulatory Floodplain," and "Special Flood Hazard Area" are synonymous.
500-Year-Flood	A Flood having a recurrence interval that has a 0.2-percent-annual-chance of being equaled or exceeded during any given year (0.2-percent- annual-chance-Flood). The terms "five-hundred-year Flood" and "0.2-percent -annual-chance Flood" are synonymous with the term "500-Year-Flood." The term does not imply that the Flood will necessarily happen once every five hundred years.
500-Year-Floodplain	The area of land susceptible to being inundated as a result of the occurrence of a 500-year-Flood. 500-Year-Floodplains are typically considered to be areas of moderate Flood hazard.
Accessory Structure	A structure which is on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure.
Addition	Any activity that expands the enclosed footprint or increases the horizontal square footage of an existing structure.
Agricultural Structure	For Floodplain Management Regulation purposes, Agricultural Structures are structures that are used exclusively for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock.

Structures used for human habitation and those that are places of employment or entertainment and structures with multiple or mixed purposes do not satisfy the “exclusive use” requirement and are not Agricultural Structures.

Alluvial Fans

A fan-shaped sediment deposit formed by a stream that flows from a steep mountain valley or gorge onto a plain or the junction of a tributary stream with the main stream. Alluvial Fans contain active stream Channels and boulder bars, and recently abandoned Channels. Alluvial Fans are predominantly formed by alluvial deposits and are modified by infrequent sheet Flood, Channel avulsions and other stream processes.

**Approximate
Floodplain Information**

Flood hazard information based on a reduced level of detail for topographic mapping or hydraulic calculations. Analysis results may be used to develop Flood hazard delineations and corresponding data (i.e., water surface elevations, associated depths and velocities). This may or may not have a comparison of water surface profiles with a topographic map of compatible accuracy. The level of detail for hydrology is consistent with that of detailed Floodplain information. Base Flood Elevations are often not portrayed on a mapped stream reach with Approximate Floodplain Information.

Base Flood

Is synonymous with 100-Year-Flood and is a Flood having a 1-percent-annual-chance of being equaled or exceeded in any given year.

**Base Flood Elevation
(BFE)**

The elevation shown on a FEMA FIRM for Zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30, and VE that indicates the water surface elevation resulting from a Flood that has a 1-percent-annual-chance of equaling or exceeding that level in any given year.

Basin

The total land surface area from which precipitation is conveyed or carried by a stream or system of streams under the force of gravity and discharged through one or more outlets.

Board

Refers to the Board of Directors of the Colorado Water Conservation Board.

Channel

The physical confine of stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.

Channelization

The artificial creation, enlargement or realignment of a stream Channel.

**Code of Federal
Regulations (CFR)**

The codification of the general and permanent Rules published in the Federal Register by the executive departments and agencies of the Federal Government. It is divided into 50 titles that represent broad

areas subject to Federal regulation.

**Colorado Floodplain
and Stormwater
Criteria Manual**

The Manual prepared by the CWCB to, if needed, aid local officials and engineers in the proper regulation and design of Flood protected facilities. The Manual is advisory, rather than regulatory, in purpose.

**Colorado Revised
Statutes (CRS)**

The codified general and permanent statutes of the Colorado General Assembly.

**Colorado Water
Conservation Board**

As used in these Rules, "CWCB" refers to the agency and its staff, and "Board" refers to the Board of Directors of the Colorado Water Conservation Board.

Community

Any political subdivision in the state of Colorado that has authority to adopt and enforce Floodplain Management Regulations through zoning, including, but not limited to, cities, towns, unincorporated areas in the counties, Native American tribes and drainage and Flood control districts.

**Conditional Letter of
Map Revision
(CLOMR)**

FEMA's comment on a proposed project, which evaluates potential project impacts on the hydrologic or hydraulic characteristics of a Flooding source. A CLOMR does not revise an effective Floodplain Map, but determines whether a proposed project, once constructed, would warrant revisions to the effective Flood Hazard Information.

**Critical Facility or
Critical Facilities**

Means a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the Community at any time before, during and after a Flood. See Rule 6.

Debris Flow

Movement of mud, water, and other materials downward over sloping terrain. The flow typically consists of a mixture of soil, rock, woody debris and water that flows down steep terrain.

**Designation and
Approval**

Certification by formal action of the Board that technical information developed through scientific study using accepted engineering methods is suitable for local governments making land use decisions under statutorily authorized zoning powers.

**Detailed Floodplain
Information**

Floodplain information prepared utilizing topographic base mapping, supplemental survey data, Hydrologic Analysis, and hydraulic calculations (at the time of the study) to arrive at precise Flood Hazard Information suitable for making land use decisions under statutorily authorized zoning powers.

Development

Any man-made changes to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining,

dredging, filling, grading, paving, excavation or drilling operations.

FEMA

Federal Emergency Management Agency.

**FEMA Risk Mapping
Assessment and
Planning (Risk MAP)
Technical References,
Guidelines and
Standards for Flood
Risk Analysis and
Mapping Activities**

FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping, and associated resources, define the implementation details for statutory and regulatory requirements for NFIP mapping.

Flood or Flooding

A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of water from Channels and reservoir spillways;
2. The unusual and rapid accumulation or runoff of surface waters from any source; or
3. Mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas (such as earth carried by a current of water and deposited along the path of the current.

**Flood Control
Structure**

A physical structure designed and built expressly or partially for the purpose of reducing, redirecting, or guiding Flood flows along a particular waterway.

**Flood Hazard
Information**

Floodplain Maps, profiles, and other related information for Flood hazard areas that have been Designated and Approved by the Board. See Rule 5.

**Flood Insurance Rate
Map (FIRM)**

A FIRM is the official FEMA Flood map for a Community for delineating both the 100-Year-Floodplain and 500-Year-Floodplain, the Floodway, and hazard zone designations applicable to the Community.

**Flood Insurance Study
(FIS)**

A FEMA FIS is a compilation and presentation of Flood hazard data (information and maps) for watercourses, lakes, and other sources of Flood hazard within a Community for the NFIP. The FIS report contains detailed Flood elevation data in Flood profiles and data

tables.

Floodplain	The area of land that could be inundated as a result of a Flood, including the area of land over which floodwater would flow from the spillway of a reservoir.
Floodplain Management	The operation of an overall program of corrective, preventive, and maintenance measures for reducing potential Flood risk and associated damage, including, but not limited to, zoning or land-use regulations, Flood mitigation measures, and emergency preparedness plans.
Floodplain Management Regulations	Zoning ordinances, subdivision regulations, building codes, health regulations, land-use permits, special purpose ordinances (Floodplain ordinance, grading ordinance, or erosion control ordinance) and other applications of regulatory powers. The term describes state/local regulations that provide standards for Floodplain preservation and potential Flood risk reduction to life, safety, health and property.
Floodplain Maps	Maps that show in a plan view the horizontal boundary of Floods of various magnitudes or frequencies. Such maps include, but are not limited to, Flood Hazard Boundary Maps (FHBM), and Flood Insurance Rate Maps (FIRMs) published by FEMA, Flood Prone Area Maps published by the U.S. Geological Survey (USGS), Flooded Area Maps published by the U. S. Army Corps of Engineers (USACE), Floodplain Information Reports published by the CWCB or others, Flood Hazard Area Delineation studies (FHADs) published by the Urban Drainage and Flood Control District (UDFCD) a/k/a the Mile High Flood District, and other locally adopted Floodplain Studies and master plans.
Floodplain Studies	A formal presentation of the study process, results, and technical support information developed for Floodplain Maps.
Floodway	The Channel of a river or other watercourse and the adjacent land areas that must be kept free of obstructions in order to discharge the Base Flood without cumulatively increasing the water surface elevation more than a designated height.
Freeboard	The vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to Flood heights greater than the height calculated for a selected size Flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the

watershed.

**Geographic
Information Systems
(GIS)**

Computer software that utilizes databases and terrain mapping to store and display spatial and tabular data, such as floodplains, as layers (e.g. political boundaries, roadways, structures, topographic information, land use) for natural resource management and other uses.

Hydraulic analysis

The determination of Flood elevations, depths, and velocities for various storm frequencies/events based on a scientific analysis of the movement and behavior of floodwaters in Channels and overbank areas through a Basin or watershed.

Hydrologic Analysis

The computation of the hydrograph, peak rate of flow, or discharge in cubic feet per second, for various storm frequencies/events for streams, Channels, or watersheds based on a scientific analysis of the physical process resulting in precipitation runoff amounts at specific locations.

**Letter of Map Revision
(LOMR)**

An official revision issued by FEMA to modify the currently effective FIRM and FIS. Based on supporting technical documentation, it is issued by FEMA for changes to Flood hazard potential, Flood zones, Flood hazard delineations, and corresponding Flood elevations.

**Letter of Map Revision
Based on Fill (LOMR-
F)**

FEMA's official determination document supporting a revision to the 100-Year-Floodplain, also known as the "Special Flood Hazard Area (SFHA)" or high risk Flood zone shown on the effective FIRM based on the placement of fill outside the effective regulatory Floodway. The determination is based on either the lowest adjacent grade or Lowest Floor relative to the effective BFE or 100-Year water surface elevation. This type of revision does not physically change the SFHA, but provides the property owner an official document verifying the property or building is above the regulatory Flood elevation at that location.

**Levee or Levee
System**

A man-made structure or land feature (or series of structures or land features) designed and operated, wholly or in part, for the purpose of containing, controlling, or diverting the flow of water to reduce Flood risk potential for areas on the landward side of the Levee or Levee System.

Lowest Floor

The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, useable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor. Provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of 44 C.F.R. § 60.3. See Rule 17.

**Low Impact
Development (LID)**

Development design/construction strategy that maintains the predevelopment hydrologic regime to the extent possible at the development site. The goal of LID is to mimic the natural runoff hydrograph as much as practicable in terms of magnitude, frequency, duration, timing, and rate of change of stream flows. LID focuses on small scale stormwater retention and detention, reduced impervious areas, and increased runoff periods.

**Material Safety Data
Sheet (MSDS)**

A form with data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.

Mitigation

The process of preventing disasters or reducing impacts of related hazards. Structural Mitigation, includes, but is not limited to, Flood proofing structures, diverting floodwaters, detention ponds, floodwalls or Levees. Nonstructural Mitigation includes, but is not limited to, education, planning, and design of Flood prevention measures, emergency preparedness plans, elevating or relocating structures, purchasing property for open space, and/or early Flood warning detection systems.

**Model-Backed
Approximate Flood
Elevation**

The 100-Year-Flood water surface elevation resulting from a hydraulic model used to determine an Approximate Floodplain.

**National Flood
Insurance Program
(NFIP)**

FEMA's program of Flood insurance coverage and national Floodplain Management administered in conjunction with the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The NFIP has applicable federal regulations promulgated in Title 44 of the Code of Federal Regulations. The U.S. Congress established the NFIP in 1968 with the passage of the National Flood Insurance Act of 1968.

**Notice of Non-
Compliance (NONC)**

Written notification notifying a Community or person that the CWCB has discovered potential violations of these Rules.

**Post-Wildfire
Hydrology**

Methodologies and calculations developed to account for the increased stormwater runoff following forest fires. Post-wildfire hydrology is typically evaluated every 3 to 5 years to assess the need for further revision based on watershed recovery, forest re-growth, and other factors.

**Provisionally
Accredited Levee
(PAL)**

A temporary FEMA Levee designation option for previously accredited Levees or Levee Systems recognized on a FIRM that allows mapping for an area while affording time for a Levee owner or Community to

provide data and documentation demonstrating the Levee still meets requirements set forth in 44 C.F.R § 65.10. A PAL notation on the FIRM indicates that the Levee owner has signed and submitted an agreement to FEMA to provide documentation of the structure's compliance under NFIP regulations within a specified period of time. As a result, FEMA has provisionally accredited the Levee (for a defined period of time), and that any designation of existing Zone X (shaded) areas due to Flood hazard reduction from a 1-percent-annual-chance-Flood on an effective FIRM (landward of the Levee) is also provisional.

Regulatory Floodplain

In Colorado the Regulatory Floodplain is the extents of the area subject to inundation by the 100-Year-Floodplain that have been Designated and Approved by the Board, unless a Community voluntarily elects to regulate to a 500-Year-Flood standard for certain circumstances.

Residual Risk

The Flood risk (probability of capacity exceedance or failure and the associated consequences) that remains after a Flood risk management or Mitigation measure has been implemented.

Special Flood Hazard Area (SFHA)

Special Flood Hazard Area means an area having special Flood, mudslide (i.e. mudflow), or Flood-related erosion hazards, and show on a Flood Hazard Boundary Map or FIRM as Zone A, AO, A1-30, AE, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, A99, AH.

Stream Alteration Activity

Any manmade activity within a stream or Floodplain that alters the natural Channel, geometry, or flow characteristics of the stream.

Substantial Damage / Substantially Damaged

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement / Substantially Improved

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have been Substantially Damaged, regardless of the actual repair work performed. The term does not, however, include either: 1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications, which have been identified by the Community and which are the minimum necessary to assure safe living conditions; or 2) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Threshold Planning Quantity (TPQ)	A quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.
Topography	Configuration (relief) of the land surface elevation; the graphic delineation or portrayal of that configuration in map form, as by lines of constant elevation called contour lines.
Use Change	Any change in the primary use of a facility or unimproved land.
Water Surface Profile	A graph that shows the relationship between the vertical elevation of the top of the floodwater and of the streambed with the horizontal distance along the stream alignment.

Rule 5. Regulatory Floodplain:

The Regulatory Floodplain in Colorado is the 100-Year-Floodplain, unless a Community voluntarily elects to regulate to a 500-Year-Flood standard for certain circumstances. The Board will also Designate and Approve 500-Year-Floodplain information when available. In addition, previously designated Floodplain areas that have been removed from FEMA's effective Regulatory Floodplain by a Letter of Map Revision based on Fill (LOMR-F) shall remain within the Regulatory Floodplain for all activities affected by Rule 11.C. All Designated and Approved Regulatory Floodplain information can be used by Communities for the purpose of local regulation. The General Assembly has deemed the designation of Floodplains a matter of statewide importance and interest and gave the CWCB the responsibility for the designation of Regulatory Floodplains and to promote protection of public health, safety, welfare and property by protecting development in the Regulatory Floodplains. § § 24-65.1-101, 24-65.1-202(2)(a)(I), 24-65.1-302(1)(b), (2)(a), 24-65.1-403(3), 24-65.1-404(3).

Rule 6. Critical Facilities:

- A. **Classification:** Critical Facilities are classified under the following categories: (1) Essential services facilities; (2) Hazardous materials facilities; (3) At risk populations facilities; and (4) Facilities vital to restoring normal services.
- (1) *Essential services facilities* include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities, and transportation lifelines.
- a. These facilities consist of:
- i. Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and emergency operation centers);
 - ii. Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctor offices, and non-urgent care medical structures that do not provide these functions);

- iii. Designated emergency shelters;
 - iv. Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables, and conduits);
 - v. Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines); and
 - vi. Air transportation lifelines [airports (municipal and larger), helicopter pads and structures serving emergency functions], and associated infrastructure (aviation control towers, air traffic control centers, and emergency equipment aircraft hangars).
- b. Specific exemptions to this category include wastewater treatment plants, non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.
- i. Owners of these facilities are encouraged to meet the spirit of Rule 6.D. when practicable in order to protect their own infrastructure and to avoid system failures during extreme Flood events. Emergency restoring plans following major Flood events should be considered as a prudent addition to operation and maintenance plans for those facilities.
 - ii. Public utility plant facilities may be exempted if it is demonstrated to the satisfaction of the Community that the facility is an element of a redundant system for which service will not be interrupted during a Flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the Regulatory Floodplain or are compliant with this Rule, and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a Flood. Evidence of ongoing redundancy shall be provided to the Community on an as-needed basis upon request by that Community.
- (2) *Hazardous materials facilities* include facilities that produce or store highly volatile, flammable, explosive, toxic, and/or water reactive materials.
- a. These facilities consist of:
 - i. Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);

- ii. Laboratories containing highly volatile, flammable, explosive, toxic and/or water reactive materials;
 - iii. Refineries;
 - iv. Hazardous waste storage and disposal sites; and
 - v. Above ground gasoline or propane storage or sales centers.
 - b. Facilities shall be determined to be Critical Facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a MSDS on file for any chemicals stored or used in the work place, AND the chemical(s) is stored in quantities equal to or greater than the TPQ for that chemical, then that facility shall be considered to be a Critical Facility. OSHA requirements for MSDS can be found in 29 C.F.R. § 1910. See Rule 17.
 - i. The TPQ for these chemicals is: either 500 pounds or the TPQ listed (whichever is lower) for the 356 chemicals listed under 40 C.F.R. § 302, also known as Extremely Hazardous Substances; or 10,000 pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Public Health and Environment (CDPHE). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," can be found at 40 C.F.R. § 302. See Rule 17.
 - c. Specific exemptions to this category include: Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use; Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the Community and certification by a qualified professional (as determined by the Community) that a release of the subject hazardous material does not pose a major threat to the public; and Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.
 - d. These exemptions shall not apply to buildings or other structures that also function as Critical Facilities under another category outlined in this Rule 6.A.
- (3) *At risk population facilities* include medical care, congregate care, and schools.
- a. These facilities consist of:
 - i. Elder care (nursing homes);
 - ii. Congregate care serving 12 or more individuals (day care and assisted living); and

- iii. Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving 12 or more children);
- (4) *Facilities vital to restoring normal services* including government operations.
 - a. These facilities consist of:
 - i. Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);and
 - ii. Essential structures for public colleges and universities (dormitories, offices, and classrooms only);
 - b. These facilities may be exempted if it is demonstrated to the satisfaction of the Community that the facility is an element of a redundant system for which service will not be interrupted during a Flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the Regulatory Floodplain or are compliant with this Rule, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a Flood. Evidence of ongoing redundancy shall be provided to the Community on an as-needed basis upon request by that Community.

B. Identification of Critical Facilities.

- (1) It is the responsibility of the Community to identify and confirm that specific structures in their Community meet the criteria outlined in Rule 6.A. and are deemed to be Critical Facilities. All structures that clearly meet the intent of Rule 6 shall be deemed Critical Facilities by that Community. For those structures for which it is unclear or otherwise ambiguous if the criteria are met, the Community shall have the sole discretion to determine if the structure is a Critical Facility. Communities may adopt ordinances that regulate to higher standards or that include additional facilities within the definition of Critical Facilities. Critical Facilities that are also designated as historic structures (determinations by the State Historic Preservation Office) are exempt from these requirements. Pursuant to section 24-65.1-202(2)(a)(I)(A), C.R.S., open space activities such as agriculture, horticulture, floriculture, recreation, and mineral extraction, including oil and gas activities, shall be encouraged in the Floodplain, and are exempt as Critical Facilities unless provisions within Rule 6.A.(2) apply. These activities may still require coordination with the Community and be subject to other local, state, and federal requirements or permits.
- (2) Required identification of Critical Facilities shall be limited to owner-occupied structures. Communities may, at their sole discretion, include leased facilities in their identification of Critical Facilities.

- C. **500-Year-Flood Events.** The CWCB acknowledges that Flooding does and has occurred above and beyond 100-Year-Flood events. Communities are encouraged to regulate Development of Critical Facilities within the 500-Year-Floodplain, when available.
- D. **Protection of Critical Facilities.**
- (1) All new, Substantially Damaged, and Substantially Improved Critical Facilities, and new Additions to Critical Facilities, shall be regulated to a higher standard than those structures not determined to be Critical Facilities. Communities are encouraged to consult with the owner of the Critical Facility in determining the value of the Critical Facility when a Substantial Damage and/or Substantial Improvement is being considered.
 - (2) This Rule 6 shall be applied to a Use Change if the new use meets the provisions within Rule 6.A. Further, although Rule 6 shall apply to new Additions made at Critical Facilities, it shall only apply to the new Additions, and not the Critical Facility to the extent the Critical Facility existed prior to the amendment of these Rules.
 - (3) The higher standard for Critical Facilities shall be as follows: For Critical Facilities located within the Regulatory Floodplain, the structure shall be protected according to Rule 11.B. herein, with the exception of a two-foot Freeboard requirement substituted for the standard one-foot Freeboard. The International Building Code and Flood Resistant Design and Construction (ASCE 24) can be used as reference tools for this standard, but are not incorporated by reference herein.
 - (4) For the purposes of this Rule 6.D., protection shall include one of the following:
 - a. Location outside the Regulatory Floodplain; or
 - b. Elevation or Flood proofing of the structure so that it is protected to the level indicated in this Rule 6.D.
 - (5) Unimproved lands associated with a Critical Facility that lie within a Regulatory Floodplain shall not be subject to this requirement, until future Development takes place on those lands. Likewise, if an undeveloped portion of a facility's property lies within a Regulatory Floodplain, but the developed portion of that facility lies outside of the Regulatory Floodplain, then that facility shall not be classified as a Critical Facility.
 - (6) All other rules and regulations governing structures not deemed Critical Facilities remain in effect and unchanged.
- E. **Ingress and Egress for New Critical Facilities.** New Critical Facilities shall, when practicable as determined by the Community, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a Regulatory Flood event. This criterion is also recommended, but not required, for changes to existing Critical Facilities and use changes involving existing structures or unimproved lands whose classification changes to Critical Facilities.

- F. **Variances.** For all Critical Facilities, the Variance procedure outlined in Rule 15 herein remains available and may be considered when deemed necessary and appropriate by the Community over the Critical Facility.

Rule 7. Standards for Delineation of Regulatory Floodplain Information:

- A. **Intent of this Rule.** This Rule contains standards for approximate and detailed Floodplains. All Floodplain information intended to be used by Communities for the purpose of regulating Flood hazard areas, with the exception of local stormwater drainage reports, CLOMR, LOMR, and LOMR-F submittals, and supporting documentation submitted to FEMA, shall be provided to the CWCB for Designation and Approval by the Board in order to enable Communities to regulate floodplains appropriately. The standards in this rule reference, and incorporate herein, the FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities, and associated resource documents.
- B. **Level of Detail.**
- (1) Approximate Floodplain Information will be based on detailed hydrology computed for 100-Year-Floods. Hydraulic information shall be produced using approximate, field, or limited techniques and best available topographic/survey data.
 - (2) Detailed Floodplain Information will be based on detailed hydrologic and hydraulic determinations for 100-Year-Floods, Flood profiles and Floodplain delineations for 100-Year-Flood and other frequencies, if any, shall be plotted, preferably using a digital method. The Board shall Designate and Approve 100-Year-Floodplain information, and 500-Year-Floodplain information when available.
- C. **Base Mapping.** Base mapping for Floodplain Studies shall meet the minimum standards as set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities.
- D. **Topography and Surveys.** Topographic and field survey information for Floodplain Studies shall meet the minimum standards as set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities.
- E. **Geographic Information Systems (GIS).** GIS information for Floodplain Studies in Colorado shall meet the minimum standards as set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities.
- F. **Hydrology.** Hydrologic Analyses for Floodplain Studies in Colorado shall be completed using the information set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities. The Colorado Floodplain and Criteria Stormwater Manual may be used as a reference document to aid in this analysis. In addition, hydrology studies must comply with the following:
- (1) All Floodplain Studies, regardless of the level of detail, (e.g., approximate or detailed) shall utilize detailed hydrologic information. The CWCB recognizes existing and future watershed conditions for the purposes of computing Flood hydrology. The CWCB may evaluate future watershed conditions, in addition to existing conditions.

- (2) Any new study to evaluate hydrologic information and/or design storm criteria shall be completed in such a way that it is scientifically defensible and technically reproducible.
 - (3) All jurisdictions and Communities affected by revised hydrologic data, due to their geographic proximity to the affected stream reach within a particular watershed, are encouraged to participate in the update process, and shall be given the opportunity by the study sponsor to review and comment on the revised information. Opponents to the revised information may present technically accurate and sound scientific data to the Board that clearly demonstrates that the information in question is inaccurate pursuant to Rule 12. The Board shall make the final determination regarding disputes.
 - (4) Within any given watershed, or hydrologic subregion, consistency in hydrologic data and runoff methodology shall be pursued to the extent possible through cooperation of all affected jurisdictions and entities.
- G. **Detailed Hydraulic Method.** Hydraulic Analyses for Floodplain Studies in Colorado shall be completed using protocols set forth FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities.
- H. **Floodplain Delineations.** Floodplain delineations shall be completed using protocols set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities , and shall, at a minimum, comply with the technical quality assurance standards as follows:
- (1) The Flood elevations and the Floodplain delineations on the maps must meet or exceed FEMA NFIP standards for tolerance and technical accuracy for correlation to the best available topographic information for the stream and adjacent corridor.
 - (2) The planimetric features on the Floodplain Maps (including, but not limited to: streets and highways, stream centerlines, bridges and other critical hydraulic features, corporate limits, section lines and corners, survey benchmarks) must be consistent with the best available geospatial data for the stream and the adjacent corridor, as determined through prevailing industry practices, and must meet an acceptable level of technical accuracy.
- I. **Special Floodplain Conditions.** There are a number of special Floodplain conditions, or natural Flood hazards, in Colorado that fall outside of the standard riverine environment. Studies for the Regulatory Flood involving special conditions shall be completed using protocols set forth in FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities. The special conditions are:
- (1) Alluvial Fan and Debris Flow Floodplains located within foothill and mountainous regions of Colorado shall be considered on a case-by-case basis.
 - (2) Post-Wildfire Hydrology may be evaluated on a case-by-case basis in forested areas immediately following moderate to intense wildfires resulting in approximately 15% or greater burn area of the affected watershed. Interim Flood advisory maps, based on burned watershed conditions, may be produced at the request of the Community or by Board initiative. The interim Floodplain Maps should show increased runoff from hydrophobic soils and lack of vegetation. The post-wildfire maps may be evaluated every

3 to 5 years to assess the need for further revision based on watershed recovery, forest re-growth, and other factors.

- (3) Ice jam Flooding shall be considered within stream reaches where this phenomenon is known to occur. Ice jam Flooding may be analyzed utilizing methodologies outlined in the FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities, *Guidance for Flood Risk Analysis and Mapping: Ice Jam Analyses and Mapping*.

J. **Written reports and maps.** The results of the Hydrologic Analyses, Hydraulic Analyses, and Flood hazard area delineations shall be summarized in a written report and submitted to the CWCB. All Approximate and Detailed Floodplain Information that is presented to the Board for Designation and Approval shall be properly titled, dated, organized, and compiled as a stand-alone digital document (in MS Word and PDF formats). All pertinent technical backup data to support the flood hazard study, regardless of data format be provided to the CWCB in acceptable digital formats. The CWCB shall make pertinent supporting documentation for flood hazard studies available for access to interested parties, to the extent possible, through a secure data sharing platform. In one-dimensional riverine situations, where discrepancies appear between Regulatory Floodplain maps and water surface profiles, any regulatory water surface profile designated and approved by the Board shall take precedence over any corresponding flooded area map for the same stream reach or site location, unless a profile error is identified and substantiated.

K. **Contractor Qualifications.**

- (1) Qualified engineers licensed in Colorado shall direct or supervise the Flood hazard studies and projects pertaining to the Regulatory Floodplain. All Floodplain maps, reports and project designs pertaining to the Regulatory Floodplain, except those prepared by federal agencies, shall be certified and sealed by the Colorado Registered Professional Engineer of record.
- (2) Federal agencies or other recognized and qualified government authorities may produce Floodplain mapping work as a study proponent or on behalf of a study proponent.

Rule 8. Standards for Regulatory Floodways:

A. **Establishment of Floodway Criteria.** The CWCB recognizes that Designated Floodways are administrative limits and tools used by Communities to regulate existing and future Floodplain Development within their jurisdictions. This Rule 8.A. does not require Communities to automatically map ½ foot floodways within their jurisdictions. However, at such time when Floodways are to be delineated based on revised Flood hazard studies or through physical map revisions involving local government participation, Communities shall delineate Floodways for the revised reaches based on ½-foot rise criteria. Letters of Map Revision to existing Floodway delineations may continue to use the Floodway criteria in place at the time of the existing Floodway delineation. Until such time that Floodways are revised and designated, Communities may continue to regulate their mapped one-foot Floodways. For reaches where a transition must be shown to connect new studies to existing studies with different Floodway criteria, the transition length shall not exceed 2,000 feet.

- B. **Designation of Floodways.** Designation and Approval of Floodplain information shall also include the Designation and Approval of corresponding Floodway Information. For waterways with Model-Backed Approximate Flood Elevations or BFEs for which Floodways are not computed, the Community shall apply a ½ foot Floodway regulation according to its own determination, as outlined in FEMA Regulation 44 C.F.R. § 60.3(c)(10), for the FEMA minimum requirement of a 1-foot floodway. See Rule 17.
- C. **Incorporation of FEMA's Floodway Regulations.** All Communities participating in the NFIP that have BFEs or Model-Backed Approximate Flood Elevation defined for one or more of the waterways within their jurisdictions shall adopt and enforce the "Criteria for Land Management and Use" Floodway regulations at 44 C.F.R. § 60.3(c)(10), (d). Failure to enforce Floodway regulations may impact the Community's standing in the NFIP and may eliminate or reduce eligibility for federal or state financial assistance for Flood Mitigation and disaster relief purposes.
- D. **Communities in Which This Rule Applies.** Communities with Regulatory Floodplains that have been Designated and Approved by the Board with BFEs or Model-Backed Approximate Flood Elevations defined for one or more of the waterways within their jurisdictions shall be required to establish technical (quantified) surcharge criteria for Floodway determination and regulation, which must meet or exceed the requirements set forth in this Rule. This Rule shall not apply to approximate stream reaches for which BFEs or Model-Backed Approximate Flood Elevation have not been defined (i.e. non-model-backed Flood hazard areas).

Rule 9. Criteria for Determining the Effects of Flood Control Structures on Regulatory Floodplains:

- A. For the purposes of this Rule, local and regional hydraulic structures providing local or regional Flood or stormwater detention, shall be considered to be Flood Control Structures. There are no separate criteria for these structures.
- B. **Flood Control Structures.**
 - (1) If a publicly operated and maintained structure, as further defined in subparagraph B.(3), is specifically designed and operated either in whole or in part for Flood control purposes, then its effects shall be taken into consideration when delineating the Floodplain below such structure. The effects of the structure shall be based upon the 100-Year-Flood with full credit given to the attenuation of peak Flood discharges, which would result from normal Flood Control Structure operating procedures.
 - (2) The Hydrologic Analysis pertaining to State Regulatory Floodplains shall consider the effects of on-site detention for rooftops, parking lots, highways, road fills, railroad embankments, diversion structures, refuse embankments (including, but not limited to, solid waste disposal facilities), mill tailings, impoundments, siltation ponds, livestock water tanks, erosion control structures, or other structures, only if they have been designed and constructed with the purpose of impounding water for Flood detention and/or infiltration and are publicly operated and maintained in accordance with subparagraph B.(3).
 - (3) For the purposes of this Rule, public operation and maintenance is required for credit of the flood control structure, which may include direct responsibility, ultimate Community responsibility, or Community enforcement. See 44 C.F.R. § 65.6 (a)(12). This does not

apply to state or federally operated and/or maintained facilities. Detention structures that are privately operated or maintained shall not be included in the Hydrologic Analysis unless it can be shown that they exacerbate downstream peak discharges.

- C. **Non-Flood Control Structures.** If a structure is not specifically designed and operated, either in whole or in part, for Flood control purposes, then its effects, even if it provides inadvertent Flood routing capabilities that reduce the 100-Year-Flood impacts downstream, shall not be taken into account, and the delineation of the Flood hazard areas below such structure shall be based upon the 100-Year-Flood that could occur absent the structure's influence. However, if adequate assurances have been obtained to preserve the Flood routing capabilities of such structure, then the delineation of the Flood hazard areas below the structure may, but need not, be based on the assumption that the reservoir formed by the structure will be filled to the elevation of the structure's emergency spillway and the 100-Year-Flood hydrology can be routed through the reservoir to account for any Flood attenuation effects.
- D. **Adequate Assurances.** For the purposes of this Rule 9 "adequate assurances" shall, at a minimum, include appropriate recognition in either a signed adequate assurance agreement, or the Community's adopted master plan of:
- (1) The Flood routing capability of the reservoir, as shown by comparison of the 100-Year-Flood hazard area in plan and profile (where applicable) with and without the structure in place, in order that the public may be made aware of the potential change in level of Flood protection in the event that the reservoir Flood routing capability is lost;
 - (2) The need to preserve that Flood routing capability by whatever means available in the event that the reservoir owners attempt to make changes that would decrease the Flood routing capability; and
 - (3) A complete operations and maintenance plan.
- E. **Irrigation Facilities.** The CWCB recommends that irrigation facilities (including, but not limited to, ditches and canals) not be used as stormwater or Flood conveyance facilities, unless specifically approved and designated by Community and approved by the irrigation facility owners. The Flood conveyance capacity of irrigation facilities shall be acknowledged only by agreement between the facility owners and Communities, with review and concurrence from the Colorado Division of Water Resources to ensure that water rights administration needs are properly considered. A maintenance easement or agreement shall be in place allowing the Community maintenance access to the irrigation facility if needed.

Unless specified otherwise by aforementioned written agreement, Flood hydrology for State Regulatory Floodplain mapping purposes shall consist of peak hydrologic flows that are identical immediately downstream and immediately upstream of a ditch or canal that is generally perpendicular to the stream or drainageway of interest. The irrigation facility shall be assumed as running full so that there are no computed Flood reduction benefits downstream of the irrigation facility. Backwater behind irrigation facilities shall be mapped. The Board will Designate and Approve 100-Year-Flood Flood Hazard Information for irrigation facilities if the above recommendations are met. This Rule is not intended in any way to interfere with Colorado water law.

Rule 10. Criteria for Determining Effects of Levees on Regulatory Floodplains:

- A. **General.** The use of Levees for property protection, Flood control, and Flood hazard Mitigation is not encouraged by the CWCB, unless other Mitigation alternatives are not viable. The areas landward of an accredited Levee and Provisionally Accredited Levee (PAL) system shall be mapped and annotated on the FIRM in accordance with FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities. In situations where Levees are the only viable alternative for protection of existing development, “setback” levees should be designed and constructed to maintain the natural Channel and reserve a portion of the natural Floodplain capacity. Levees should not be used for Flood protection along streams or watercourses where new Development is planned. However, Levees may be used to protect public utility plant facilities for wastewater treatment and pumping as well as electric power plants due to their close proximity to natural waterways. For existing Levees that protect existing development, proper maintenance should be performed by Levee owners/operators, or non-federal sponsors in the case of federal Levees, according to an operations and maintenance plan.
- (1) Levees should not be constructed for the primary purpose of removing undeveloped lands from mapped Floodplain areas for the purposes of developing those lands because of the potential impairment of the health, safety, welfare and property of the people. Design and construction of Levees identified for this purpose will not be eligible for CWCB grants or loans.
 - (2) When constructed, Levees for which protection will be considered for designation and approval must meet the requirements set forth in “Mapping of Areas Protected by Levee Systems,” 44 C.F.R. § 65.10. Artificial embankments that either function as a Levee or a Flood Control Structure must meet the provisions of this Rule or the “Office of the State Engineer Rules and Regulations for Dam Safety and Dam Construction,” 2 C.C.R. 402-1, respectively, in order to be considered as providing protection. See Rule 17.
- B. **Maintenance.** An operating and maintenance manual that ensures continuous proper function of the structure shall be prepared and updated. The Levee shall be structurally sound and adequately maintained. Sedimentation effects shall be considered for all Levee projects. Certification from a federal agency, state agency, or a Colorado Registered Professional Engineer that the Levee meets the minimum Freeboard criteria, as stated above in Rule 10.A.(2), shall be provided to CWCB. A visual inspection shall be required on a three-year basis to demonstrate that the Levee continues to be structurally sound and adequately maintained and results of the inspection shall be provided to the CWCB. Levees that have obvious structural defects or that are obviously lacking in proper maintenance shall not be considered in the Hydraulic Analysis without a funded project plan to bring the Levee deficiencies into compliance (to be considered on a case-by-case basis).
- C. **Ownership.** Privately-owned or non-Community-owned Levee systems shall only be considered in the Hydraulic Analysis if they are publicly operated and maintained. For the purposes of this Rule, public operation and maintenance is required for credit of the Levee system, which may include direct responsibility, ultimate Community responsibility, or Community enforcement. See 44 C.F.R. § 65.6 (a)(12). Levees for which the Community, state, or federal government has responsibility for operations and maintenance will be considered, provided that the criteria set forth in this Rule are met.

- D. **Levee Analysis and Standards Consistent with Federal Regulation.** To comply with these Rules, analysis of Levees and Levee standards for Freeboard, interior drainage, and human intervention and operation must comply with the standards in 44 CFR § 65.10 and the FEMA Risk MAP Technical References, Guidelines and Standards for Flood Risk Analysis & Mapping Activities, *Guidance for Flood Risk Analysis and Mapping: Levees*, Guidance Document 95.

Rule 11. Floodplain Management Regulations:

- A. **Compliance with Minimum Standards of the National Flood Insurance Program.** Each Community in the State of Colorado shall comply with the minimum Floodplain criteria set forth in the FEMA regulation “Criteria for Land Management and Use,” 44 C.F.R. § 60.3–60.5, see Rule 17, unless more restrictive standards have been adopted as set forth in these Rules or pursuant to regulations adopted by the Community. These Rules do not apply to local stormwater or local storm drainage studies where riverine Flooding sources are not considered.
- B. **Minimum Freeboard.** A minimum Freeboard of one foot above the 100-Year-Flood elevation (BFE or Model-Backed Approximate Flood Elevation) shall apply to structures in the Floodplain as follows:
- (1) **Residential Structures.** New, Substantially Damaged, and/or Substantially Improved residential structures, and Additions to existing residential structures shall be constructed with the Lowest Floor, including basements, placed with a minimum of one foot of Freeboard above the BFE or Model-Backed Approximate Flood Elevation. In AO Zones, new, Substantially Damaged, and/or Substantially Improved residential structures, and Additions to existing residential structures shall be constructed with the Lowest Floor, including basements, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Community’s FIRM (at least two feet if no depth number is specified) plus one foot of Freeboard.
 - (2) **Non-residential Structures.**
 - a. New, Substantially Damaged, and/or Substantially Improved non-residential structures, and Additions to existing non-residential structures shall be constructed with the Lowest Floor, including basements, placed with a minimum of one foot of Freeboard above the BFE or Model-Backed Approximate Flood Elevation, or together with attendant utility and sanitary facilities, be designed so that the structure is watertight to an elevation at least one foot above the BFE or Model-Backed Approximate Flood Elevation with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. In AO Zones, new, Substantially Damaged, and/or Substantially Improved non-residential structures and Additions to existing non-residential structures shall be constructed with the Lowest Floor, including basements, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Community’s FIRM (at least two feet if no depth number is specified) plus one foot of Freeboard, or together with attendant utility and sanitary facilities be completely floodproofed to that level with walls substantially impermeable to the past of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Agricultural

Structures and Accessory Structures shall be exempt from the Freeboard requirement but shall meet all other requirements set forth in FEMA Policy No. 104-008-03: Floodplain Management Requirements for Agricultural Structures and Accessory Structures.

- b. Critical Facilities shall be regulated according to Rule 6.D. This Rule does not affect the Freeboard requirement for Levees described in Rule 10.D.
- C. **Permit Restrictions for Properties Removed from the Floodplain by Fill.** No Community shall issue a permit for the construction of a new structure on a property removed from the Floodplain by the issuance of a FEMA LOMR-F unless the Lowest Floor elevation placed below the BFE or Model-Backed Approximate Flood Elevation with one foot of Freeboard that existed prior to the placement of fill. In AO Zones, new structures shall be constructed with the Lowest Floor, including basements, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Community's FIRM (at least two feet if no depth is specified) that existed prior to the placement of fill plus one-foot of Freeboard. Issuance of any such permit shall constitute a violation of these Rules. Critical Facilities are exempted from this restriction if the facility is protected according to Rule 6.D. herein.
- D. **Highest Adjacent Grade.** For the purposes of this Rule 11, highest adjacent grade means the highest natural elevation of the ground surface, prior to the start of construction, next to the proposed walls of a structure.

Rule 12. Effects of Flood Mitigation Measures and Stream Alteration Activities on Regulatory Floodplains:

In order to assist the CWCB in carrying out its mission to protect the health, safety, welfare and property of the public, through the prevention of Floods in Colorado, the CWCB requires the following:

- A. Flood control Channels shall include a low-flow Channel with a capacity to convey the average annual flow rate, or other appropriate flow rate as determined through a hydrogeomorphological analysis, without excessive erosion or Channel migration, with an adjacent overbank Floodplain to convey the remainder of the 100-Year-Flood flow. The Channel improvement shall not cause increased velocities or erosive forces upstream or downstream of the improvement.
- B. Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition, and Channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed geomorphological analysis should be considered, when appropriate, to assist in determining the most appropriate design.

Project proponents for a Mitigation activity must evaluate the residual 100-Year-Floodplain. Proponents are also encouraged to map the residual 500-Year-Floodplain.

- C. All dams must be maintained to ensure that they retain their structural and hydraulic integrity pursuant to FEMA Risk MAP Technical References, Guidelines, and Standards for Flood Risk Analysis and Mapping Activities, *Dams/Reservoirs and Non-Dam Features*. See Rule 17. All Levees must be maintained to ensure that they retain their structural and hydraulic integrity

pursuant to FEMA Risk MAP Technical References, Guidelines, and Standards for Flood Risk Analysis and Mapping Activities, *Levees*. See Rule 17.

- D. Any Stream Alteration Activity proposed by a project proponent in either i) a Floodway or ii) a Regulatory Floodplain with no established Floodway (except in shallow Flooding areas, defined as Flooding with an average depth limited to 3.0 feet or less where no defined Channel exists) must be evaluated for its impact on the Regulatory Floodplain. All Stream Alteration Activity shall be in compliance with all applicable federal, state and local Floodplain rules, regulations and ordinances.
- E. Any Stream Alteration Activity shall be designed and sealed by a Colorado Registered Professional Engineer.
- F. All activities within the Regulatory Floodplain performed by federal agencies using local or state funds, or by private, local or state entities shall meet all applicable federal, state and local Floodplain requirements.
- G. For compliance purposes, Stream Alteration Activities shall not be constructed in a Floodway unless the project proponent demonstrates through a Floodway analysis and report, sealed by a Colorado Registered Professional Engineer, that there is no rise resulting from the project unless a CLOMR has been obtained. No rise means a 0.00-foot rise or a decrease in the Flood elevation between the existing and proposed conditions. Stream Alteration Activities proposed in a Regulatory Floodplain with no established Floodway (except in shallow Flooding areas, defined as Flooding with an average depth limited to 3.0 feet or less where no defined Channel exists), shall demonstrate no more than $\frac{1}{2}$ -foot rise in Flood elevations (or a more stringent standard adopted by the Community) between the existing and proposed conditions unless a CLOMR is obtained. This requirement only applies on stream reaches with BFEs or Model-Backed Approximate Flood Elevations established.
- H. Rule 12.D. addresses when hydraulic modeling is required for Stream Alteration Activities. For map update purposes, regardless of whether modeling is required or not, whenever a Stream Alteration Activity is shown by hydraulic modeling to increase or decrease the established BFE in excess of 0.30 vertical feet between the pre-project and post-project conditions (or a more stringent standard adopted by the Community), a LOMR (or comparable revision process) showing such changes shall be obtained in order to accurately reflect the proposed changes on the Regulatory Floodplain map for the stream reach. This is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk assessment and Floodplain management requirements will be based upon current data, 44 CFR § 65.3. The Community is responsible for ensuring that this process is pursued. This section herein does not require a CLOMR to be applied for, unless mandated by the Community. This section reflects state policy and may not fully reflect federal and other requirements for map maintenance. This section is not intended to undermine or replace federal requirements, and Communities and project proponents are responsible for satisfying any other map maintenance requirements as a result of Stream Alteration Activities.

Rule 13. Process for Designation and Approval of Regulatory Floodplains:

- A. **Designation and Approval Requirements.** The Board will Designate and Approve Regulatory Floodplains by the adoption of written resolutions based only upon such Floodplain information as the CWCB determines meets the standards set forth in Rule 7, as applicable, with consideration of the effects of dams and Levees being subject to the criteria of Rules 9 and 10, respectively and any Mitigation activity in Rule 12.
- B. **Base Flood.** 100-Year-Floodplain information shall generally be the basis for all Designation and Approval actions by the Board for regulatory purposes in Colorado. However, the Board will Designate and Approve 500-Year-Floodplain information when available.
- C. **Provisional Designation.** The Board may Designate and Approve, on a provisional basis and for a maximum period of time not to exceed two years, Floodplain information that does not meet the minimum requirements as set forth in Rule 7.
- D. **Process for Taking Designation and Approval Actions.** The Board shall consider the Designation and Approval of Floodplain information either by request of a Community or by acting on its own initiative.
 - (1) **Consideration at a Community's Request.** The Board shall consider Designation and Approval of Floodplain information upon written request from the Community having jurisdiction in the area where the Floodplain information is applicable. The letter of request shall identify the report title, date, author or agency which prepared the report, stream name(s), upstream and downstream limits of the stream reach(es) to be designated, stream length(s) in miles, type of designation requested (detailed or approximate), and any other relevant information. The CWCB shall receive such a request at least 30 days prior to the Board meeting at which consideration of Designation and Approval is requested.
 - (2) **Consideration at the CWCB's initiative.** If Designation and Approval of a Floodplain would be in the best interest of the health, safety, welfare and property of the citizens of the State of Colorado, then the CWCB may take action at its own initiative to consider the Designation and Approval of Floodplain information. In such cases, the CWCB shall notify the affected Communities in writing at the time of study initiation or, in the case of a previously completed study, the CWCB will endeavor to receive concurrence in writing from the affected Community at least 45 days prior to the Board meeting at which it will consider the Designation and Approval of Floodplain information within their jurisdiction. Regardless of Community concurrence, CWCB may pursue Designation and Approval.
 - (3) **Notification of Adopted Resolutions.** The CWCB shall send signed copies of each adopted resolution of Designation and Approval to each Community in the study area and to FEMA within 30 days of adoption.

Rule 14. Designation and Approval of Changes to Regulatory Floodplains:

When changes are made to the characteristics of a Floodplain that result in a revision of a Community's FIRMs or Flood Hazard Boundary Maps (and a subsequent designation of the new map), the Board will Designate and Approve changes to the Regulatory Floodplain caused by Development, new or better technical information, or other sources. The Board will designate the revised Floodplains by adopting

written resolutions based upon such Floodplain information as the Board determines meets the standards set forth in Rules 6-12.

- A. In the event that a Community is aware of and has access to better available information on a previously designated flooding source, then the CWCB allows for that undesignated information to be used for regulatory purposes if it is to the same or greater level of detail as the previously designated Regulatory Floodplain information, has been approved through a detailed technical review by a qualified Colorado Professional Engineer, and meets one of the following conditions in (1) – (3). Communities may need to formally adopt this information through its local adoption process.
- (1) Regulatory Floodplain included on a FEMA FIRM – the revised Floodplain mapping is more restrictive, the Community has informed all impacted property owners of the change and provided due process as established in Community guidelines, and the revised Floodplain mapping is ultimately Designated and Approved by the Board; or
 - (2) Regulatory Floodplain not included on a FEMA FIRM – the Community has informed all impacted property owners of the change, and provided due process as established in Community guidelines. The Community must submit Floodplain mapping revisions for Designation and Approval by the Board in a timely manner (not to exceed two years from the date of completion); or
 - (3) Regulatory Floodplain – the revised Floodplain mapping has been approved by FEMA through a LOMR or Physical Map Revision process, and ultimately Designated and Approved by the Board.
- B. **Conditions.** All changes to Regulatory Floodplains shall meet or exceed the same conditions as those required for original Designation and Approval.
- C. **Process for Designation and Approval of Changes to a Regulatory Floodplain.** The Board may consider the Designation and Approval of changes to Regulatory Floodplain information either by request of a Community or by acting on its own initiative.
- (1) **Consideration at a Community's Request.** The Board shall consider Designation and Approval of changes to a Regulatory Floodplain upon written request from the governing body of any Community having jurisdiction in the area where the Floodplain information is applicable. The CWCB staff shall receive such requests at least 30 calendar days prior to the Board meeting at which consideration of Designation and Approval is requested.
 - (2) **Consideration at the CWCB's Initiative.** If Designation and Approval of changes to a Regulatory Floodplain would be in the best interest of the health, safety, welfare and property of the citizens of the State of Colorado, then the CWCB may take action at its own initiative to consider the Designation and Approval of Floodplain information. In such cases, the CWCB shall notify the affected Communities in writing at the time of the study initiation or, in the case of a previously completed study, the CWCB will endeavor to receive concurrence in writing from the affected Community at least 45 days prior to the Board meeting at which it will consider the Designation and Approval of Floodplain information within their jurisdiction. Regardless of Community concurrence, CWCB may pursue Designation and Approval.

- (3) **Notification of Adopted Resolution.** The CWCB shall send signed copies of each adopted resolution of Designation and Approval of changes to a Regulatory Floodplain to each Community within the limits of the changed Floodplain within 30 calendar days of Designation and Approval.
- D. **Identification of Designations of Changes to a Regulatory Floodplain.** The designation of the changes to the Regulatory Floodplain will be given a reference identification number that will differentiate the changed designation from the original. It is implied that designations to changes to a Regulatory Floodplain will only rescind the affected portions of the previously designated Floodplain information. All other unaffected reaches will remain as originally designated.
- E. **Map Revisions to Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps.** Floodplain Map revisions (e.g., FEMA LOMRs) may be designated twice annually by the Board during a regularly scheduled Board meeting and will not be subject to a full technical review by the CWCB staff.

Rule 15. Variances:

- A. **Consideration by Community.** Request for a variance to any of these Rules may be considered by the Community, provided the entity or individual requesting the variance has submitted a written request to the appropriate authority. A notice of the request must be provided to any adjacent Communities that would be affected by the variance.
- B. **Contents of a Request for Variance.** The request for a variance shall identify:
 - (1) The Rule from which the variance is requested;
 - (2) The Communities that would be affected by the variance;
 - (3) The reasons why the Rule cannot be complied with;
 - (4) The estimated difference in water surface elevations, Flood velocities and Flood boundaries that would result if the requested variance were granted than if the calculations were made through strict compliance with the Rule;
 - (5) The estimated number of people and structures that will be impacted by granting of the variance; and
 - (6) Any other evidence submitted by the Community, the CWCB staff, or other party of interest.
- C. **Factors to be considered.** Variances may be issued if it can be determined that:
 - (1) There is a good and sufficient cause; and
 - (2) The variance is the minimum necessary, considering the Flood hazard, to afford relief; and

- (3) Failure to grant the variance would result in exceptional hardship to the Community or the requestor and that the hardship is not the Community's or requestor's own making; and
- (4) The granting of a variance will not result in increased vulnerability to Flood losses, additional threats to public safety and welfare, extraordinary public expense, create nuisances, cause fraud or victimization of the public, hide information of significant interest to the public, or conflict with existing local laws or regulations.
- (5) In lieu of items C(1) through C(4) above, a Community may, at its sole discretion, use an established variance procedure.

D. Variance Process. Variance requests shall be processed as follows:

- (1) Communities shall render, confirm, modify, or reject all variance requests pertaining to these Rules.
- (2) The Board may review local variance decisions on a case-by-case basis to ensure that the overall intent and spirit of these Rules are properly considered at the local level.
- (3) Informal variance determination request may be presented to CWCB staff in order to guide Community officials or project applicants as to whether a formal variance would be needed on a case-by-case basis.

Rule 16. Enforcement of Floodplain Rules and Regulations:

A. Procedure to be followed regarding alleged violations

(1) Notice of Non-Compliance.

- a. A NONC may be prepared and transmitted by the CWCB or its Director. Information regarding potential violations may be discovered directly by CWCB staff or can be brought to the CWCB or its Director by a Complainant, such as FEMA, other state agencies, the Community within whose boundaries the alleged violation took place, or by any other person who may be directly and adversely affected or aggrieved as a result of the alleged violation.
- b. Oral complaints shall be confirmed in writing by the Complainant. Persons making a complaint are required to submit a formal letter of complaint to the CWCB Director.
- c. NONC process.
 - i. An NONC issued by the CWCB shall be delivered to an alleged violator by personal delivery or by certified mail (return receipt requested). A copy of the NONC shall be transmitted to FEMA Region VIII and the Community.
 - ii. The NONC does not constitute final agency action.

- iii. The NONC shall identify the statute, Rule, regulation, or policy subject to CWCB jurisdiction allegedly violated and the facts alleged to constitute the violation. The NONC may propose appropriate corrective action and suggested corrective action(s) if any, that the CWCB recommends.
- (2) FEMA Region VIII shall support, through its NFIP activities, these Rules. This support will include the existing ability for FEMA to place sanctions upon a Community for non-compliance.
- (3) Certain Board decisions to provide Flood and watershed related grant funding to Communities may be directly dependent upon a Community's compliance with these Rules.

Rule 17. Incorporation by Reference:

A. The following rules, regulations, standards, and guidelines are hereby incorporated by reference:

- (1) FEMA Risk Mapping, Assessment and Planning (Risk MAP) Technical References, Guidelines and Standards for Flood Risk Analysis and Mapping Activities, December 1, 2020, available at <https://www.fema.gov/flood-maps/guidance-reports/guidelines-standards>, including but not limited to the following specific guidance documents:
 - a. *Guidance for Flood Risk Analysis and Mapping: Ice Jam Analyses and Mapping;*
 - b. *Guidance for Flood Risk Analysis and Mapping: Levees; and*
 - c. *Guidance for Flood Risk Analysis and Mapping: Dams/Reservoirs and Non-Dam Features.*
- (2) FEMA National Flood Insurance Program, 44 C.F.R. §§ 59, 60, 65, 70, and 72, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/text-idx?SID=504ee2bfc731d90f6be69c8f09fd0b3c&mc=true&tpl=/ecfrbrowse/Title44/44CIsu-bchapB.tpl>.
- (3) The United States Environmental Protection Agency Superfund, Emergency Planning, and Community Right-to-Know Programs, Designation, Reportable Quantities, and Notification Regulations, 40 C.F.R. § 302, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.30.302&rgn=div5>.
- (4) The Occupational Safety and Health Administration Occupational Safety and Health Standards Regulations, 29 C.F.R. § 1910, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=13981877314c1c75ef4ee8c5652c8449&ty=HTML&h=L&mc=true&n=pt29.5.1910&r=PART>.
- (5) The Colorado Office of the State Engineer Rules and Regulations for Dam Safety and Dam Construction Materials, 2 CCR 402-1, January 1, 2020, available at <https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8426&fileName=%20CCR%20402-1>.

- (6) FEMA Policy No. 104-008-03: Floodplain Management Requirements for Agricultural Structures and Accessory Structures, February 2020, available at https://www.fema.gov/sites/default/files/2020-08/fema_floodplain-management_agriculture-accessory-structures_2020.pdf.
- B. These rules, regulations, standards, and guidelines in subparagraphs (1)-(6) of Rule 17.A. are hereby incorporated by reference by the Board and made a part of these Rules. Materials in these Rules, which are incorporated by reference are limited to those materials in existence as of the effective date of these revised Rules and do not include later amendments to or editions of such rules, regulations, standards, and guidelines. The material incorporated by reference is available for public inspection during regular business hours at the office of the Colorado Water Conservation Board, 1313 Sherman Street, Room 718, Denver, CO 80203 or may be examined at any state or federal publications depository library, or on the FEMA or CWCB website.

Rule 18. Severability:

If any portion of these Rules is found to be invalid, the remaining portion of the Rules shall remain in force and in effect.

Rule 19. Recommended Activities for Regulatory Floodplains:

The following list contains Floodplain Management activities and actions suggested by the CWCB to increase a Community's overall level of Flood protection. Communities and other authorized government entities may:

- A. Adopt local standards above and beyond the FEMA and CWCB minimum requirements.
- B. Develop a Flood response plan that identifies responsibilities/actions before, during, and after a Flood event.
- C. Enroll in FEMA's NFIP and possibly FEMA's Community Rating System Program.
- D. Develop an early warning Flood detection system (Flood warning system) using available technologies such as automated precipitation and stream flow gages linked to an appropriate notification system.
- E. Coordinate with lenders, insurance agents, real estate agents, and developers to prepare and discuss educational tools based on state and federal requirements.
- F. Promote wise Floodplain Development and support effective structural and non-structural Flood Mitigation projects.
- G. Conduct Floodplain Studies in areas of foreseeable development that do not currently have detailed Floodplain Studies.
- H. Maintain an electronic or paper library of local flood related data.
- I. Develop a Flood risk outreach program and notify Flood prone residents annually of Flood hazards and the need for Flood insurance.

- J. Encourage elevation of Flood-prone structures and Flood-proofing of structures in the Floodplains.
- K. Utilize available state/federal Mitigation and preparedness funds.
- L. Require certified Floodplain managers to review proposed land developments.
- M. Advise the public at large that Flooding does occur above and beyond the 100-Year-Flood and 500-Year-Floods. Floods greater than 500-Year-Floods (0.2-percent-annual-chance Floods) do occur, and loss of life and property is possible in areas mapped outside of both the 100-Year-Floodplain and 500-Year-Floodplain.
- N. Utilize the concept of "No Adverse Impact" Floodplain Management where the action of one property owner does not adversely impact the rights of other property owners, as measured by increased Flood peaks, Flood stage, Flood velocity, and erosion and sedimentation. "No Adverse Impact" could be extended to entire watersheds as a means to promote the use of retention/detention or other techniques to mitigate increased runoff from urban areas.
- O. Prohibit the construction of new Levees that are intended to remove land from a Regulatory Floodplain for the purpose of allowing new Development activity to take place in areas that are otherwise Flood prone.
- P. Require an appropriate level of Freeboard at bridges between the 100-Year-Flood water surface elevation and the lowest elevation of the lowest structural member to allow for passage of waterborne debris.
- Q. Identify areas prone to Flooding outside of the 500-Year-Floodplain where loss of life or Substantial Damage may occur. Flooding greater than 500-Year-Flood events can and do occur as well, and loss of life and property is possible in areas mapped outside of both the 100-Year-Floodplain and 500-Year-Floodplain. Communities are encouraged to map and regulate 500-Year-Floodplains for Critical Facilities at their sole discretion.
- R. Maintain a Flood hazard page on the Community website with links to the CWCB, FEMA Flood Map Service Center, NFIP, National Weather Service, local building codes, and local permitting information.
- S. The CWCB discourages compensatory Flood storage because existing Flood storage volume should be preserved. However, when necessary, structures and fill that displace Floodplain storage volume shall be compensated for by excavation of equivalent volumes at equivalent elevations within a nearby vicinity of the displaced volume. The compensatory storage area shall be hydraulically connected to the source of Flooding.
- T. Adopt buffer ordinances that limit Development in and near natural protective features such as riparian stream corridors and wetlands. Natural protective features may extend beyond 100-Year-Flood elevations. Extra protections for these areas are beneficial because these areas attenuate runoff periods, improve water quality, stabilize streambanks, recharge groundwater aquifers, allow for lateral stream migration, and protect aquatic and terrestrial habitat. Riparian and wetland areas also enhance the general aesthetic value of a community.

- U. Buffer ordinances are often seen as part of land use or zoning code. They may also stand alone in other portions of the municipal code. Options for widths include fixed width, variable width, or multi-zoned buffers.
- V. **Establish Residual Risk Mapping.** Residual Risk is the threat to the areas behind Levees that may still be at risk for Flooding. FEMA has identified thousands of miles of Levees nationwide, affecting millions of people. It is important for Levee owners, Communities, and homeowners to understand the risks associated with living in Levee-impacted areas and the steps that can be taken to provide full protection from Flooding. Even the best Flood protection system or structure cannot completely eliminate the risk of every Flood event, and when Levee systems fail, the results may be catastrophic and the damage may be more significant than if the Levee system had not been built.
- W. A Community may regulate any Designated and Approved 100-Year shallow Flooding areas, defined as Flooding with an average depth limited to 3.0 feet or less where no defined Channel exists.
- X. Detention/Flood control storage and LID should be considered, when practicable, as part of a basinwide program for the watershed.

Rule 20. Effective Date:

These revised Rules shall apply to the Designation and Approval of all Flood Hazard Information made by the CWCB and all other Floodplain activities on or after January 14, 2022 and are, therefore, not retroactive to any Floodplain information Designated and Approved by the Board or other Floodplain activities prior to the effective date.

070.040.020 Sensitive Area Protection.

(a) General Provisions.

- (1) *Purpose.* This Section 070.040.020 is intended to protect and enhance the natural features that contribute significantly to Glenwood Springs's quality and character, including but not limited to the varying topography and hillsides, floodplains, wetlands, viewsheds, and other significant features. This Section also is intended to ensure that land subject to natural hazards such as flooding, falling rock, landslides, mud flows, or snowslides is not approved for development without appropriate consideration by the City of potential conditions and safeguards to help protect life, health, and property.
- (2) *Applicability.* This Section shall apply to any proposed development that requires one (1) or more of the following:
 - a. Any development permit required by Section 070.060.050, Development Permits, including:
 1. Site/Architectural Plan Review (Subsection 070.060.050(a));
 2. Master Plan (Subsection 070.060.050(b));
 3. Final Plans (Subsection 070.060.050(c));
 4. Location and Extent Review (Subsection 070.060.050(d));
 5. Special Use Permit (Subsection 070.060.050(e)); and/or
 6. Right-of-Way Encroachment License (Subsection 070.060.050(f)).
 - b. A variance required by Subsection 070.060.070(a), Variance;
 - c. A permit for excavation and/or grading, as required by the Engineering Standards;
 - d. A building permit for construction of a new building or structure; or
 - e. A building permit for addition, alteration, or repair of an existing building or structure, the value of which exceeds fifty (50) percent of the assessed value of the building or structure.
- (3) *Additional Submittal Requirements.*
 - a. In order to evaluate and ensure compliance with the standards in this Section, the Director may require existing conditions reports and other technical reports and plans, as set forth in the Administrative Manual, that identify slopes, soil conditions, floodplains, geologic hazards, and other sensitive features present on the site, and that recommend steps to mitigate any hazards in order to comply with this Code.
 - b. Such reports shall be prepared to standards adopted by the City Engineer. Best practices to mitigate such hazards recommended in such reports shall be required. Geotechnical and geologic reports shall be prepared by a licensed professional engineer.
- (4) *Limits of Disturbance.*
 - a. *Establishment of Limits of Disturbance.* Except for properties in the Downtown Core, for every development subject to this Section the applicant shall establish "limits of disturbance" that indicate the specific area(s) of a site within which construction and development activity shall be contained. The limits of disturbance shall be shown on the site/architectural plan.
 - b. *Criteria for Establishing Limits of Disturbance.* In establishing limits of disturbance, the following criteria and standards shall be considered and applied, as well as applicable requirements from the City's Engineering Standards:

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1. Minimize visual impacts from the development, including but not limited to screening from adjacent and downhill properties, ridgeline area protection, and protection of scenic views;
 2. Erosion prevention and control, including but not limited to protection of steep slopes and natural drainage channels;
 3. Fire prevention and safety, including but not limited to location of trees and vegetation near structures;
 4. Preservation of significant trees or vegetation;
 5. Conservation of water including but not limited to preservation of existing native vegetation, reduction in amounts of irrigated areas, and similar considerations;
 6. Wildlife habitat protection, including but not limited to preservation of critical wildlife habitat and identified migration corridors and routes;
 7. Stream corridor and wetland protection and buffering; and
 8. Preservation of the maximum amount of the site's natural topography, tree cover, and vegetation.
- c. *Maximum Limits of Disturbance.*
1. *Single-Family Detached Residential Uses.* For single-family detached residential uses subject to the requirements of Subsection 070.040.020(b), Hillside Development, the limits of disturbance for an individual single-family detached residential use and any accessory structure shall not exceed fifty (50) percent of the total gross area of the underlying lot or lots, or twenty thousand (20,000) square feet, whichever is less. For most single-family residential development, limits of disturbance will cover the area(s) needed to provide the building sites for the principal structure and any major accessory structure(s), plus the area(s) necessary to provide an access driveway and necessary septic systems, utilities, services, and drainage facilities.
 2. *All Other Developments.* For all other types of development, including planned unit developments, the limits of disturbance, including parking areas and accessory buildings and structures, shall be determined on a case-by-case basis, as determined by setback, common open space, landscaping, and other requirements of this Code.
 3. *On-Site Wastewater Treatment Systems.* For all types of development, leach fields constructed in connection with an on-site sewer system shall not be counted toward the maximum limits of disturbance provided the leach field is revegetated with native vegetation in accord with state onsite wastewater treatment regulations.
- d. *Location of Limits of Disturbance.*
1. *Zero Lot Lines.* Where appropriate to preserve or to protect steep slopes or other natural features, a structure may be located on a lot in such a manner that one (1) or both of the side facades of a structure rest directly on a lot line. This provision shall not be interpreted to exempt a structure from any applicable building and fire code provisions or requirements.
 2. *Contiguity.* Limits of disturbance necessary to accommodate proposed development may be non-contiguous in order to best meet the criteria and standards set forth in this Section.
 3. *Clustering.* Clustering of building pads and parking areas within a building site is strongly encouraged and may be required to minimize the size of the limits of disturbance and to maintain the maximum amount of open space in the development.

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- e. *Modification of Limits of Disturbance.* The Director has discretion to administratively increase the limits of disturbance by a maximum of twenty (20) percent where applicable, provided one (1) of the following criteria is met:
1. The modification is designed to yield:
 - i. More effective preservation of existing mature trees, vegetation, riparian areas, rock outcrops, or other significant natural features of the site;
 - ii. Less visual impact on the property or on the surrounding area; or
 - iii. Better protection of wildlife habitat; or,
 2. Strict application of the standard(s) would render a site undevelopable.
- (5) *Clustering.* Clustering of development in sensitive areas is strongly encouraged and may be required to meet the requirements of this Section. (Figure 040-1)
- a. *When Allowed.* Minimum lot size may be reduced through clustering of development if the applicable decision-making body finds that:
1. The clustering proposal, compared with a more traditional site development plan, better attains the policies and objectives of this Article, such as providing more open space, preserving existing trees and vegetation coverage, and preserving sensitive environmental areas such as stream corridors, slide areas, wetlands, and steep slopes;
 2. The clustering proposal will have no significant adverse impact on adjacent properties or development, or the applicant has agreed to adopt appropriate mitigation measures such as landscaping, screening, illumination standards, and other design features as recommended by the Director to buffer and protect adjacent properties from the proposed clustered development;
 3. The architecture, height, building materials, building colors, and other design features of the development are compatible with adjacent properties or development and blend with the surrounding natural landscape; and
 4. The clustering proposal meets all other applicable requirements set forth in this Article or in other applicable ordinances or regulations.

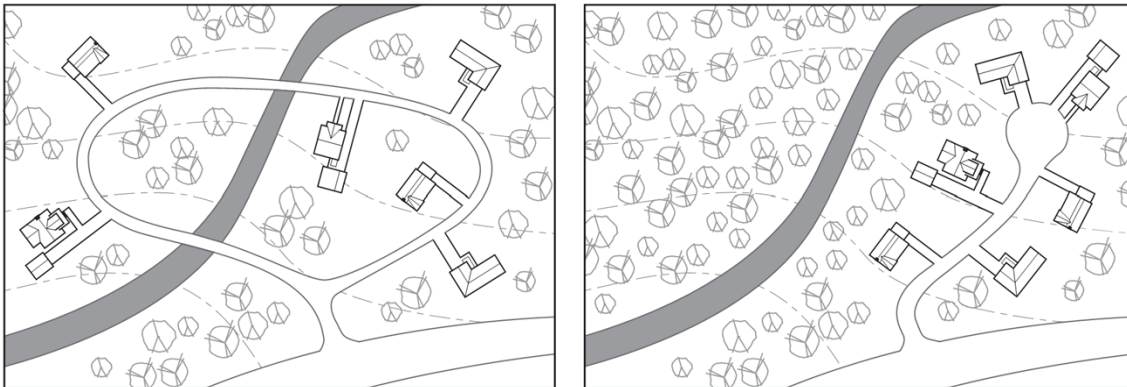


Figure 040-1: Clustering

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- b. *Minimum Lot Size Reduction.* Minimum lot sizes required for the underlying zoning district in Article 070.020: Zoning Districts, may be reduced by up to twenty-five (25) percent for lots within cluster developments that satisfy the above standards.
 - c. *Pre-Application Conference Required.* Any applicant proposing to reduce minimum lot sizes through clustering shall be required to attend a pre-application conference pursuant to Subsection 070.060.030(b), Pre-Application Conference, prior to submitting a development application.
- (6) *Interpretation.* The provisions of this Section 070.040.020 shall be deemed to be minimum requirements. Nothing in this Section shall impair the obligations of or interfere with private agreements in excess of the minimum requirements. Where this Section imposes a restriction different from that imposed by other applicable provisions of law, contract, or deed, the more restrictive provision shall control.
 - (7) *Disclaimer of Liability.* This Section 070.040.020 is intended to provide some degree of protection to life, safety, and property. It is based on scientific and engineering considerations that are continually being developed and proven. Compliance with this Section cannot ensure freedom from risk to life, safety, or property. This Section shall not create liability on the part of the City or any officer or employee of the City for any damage that may result from reliance on this Section or any administrative decision lawfully made pursuant to this Code.
- (b) *Hillside Development.*
- (1) *Purpose.* The purpose of this Subsection is to:
 - a. Minimize the negative environmental and visual effects of mass cut-and-fill of large pads and excessive terracing through retention of the natural topography of the hillsides;
 - b. Prevent soil erosion and landslides;
 - c. Provide safe circulation of vehicular and pedestrian traffic to and within hillside areas and to provide access for emergency vehicles necessary to serve the hillside areas;
 - d. Preserve visually significant slope banks, ridge lines, rock outcroppings, native plant materials, natural hydrology, and other areas of visual significance;
 - e. Encourage innovative architectural, landscaping, circulation, and site design that serve to preserve the significant natural resources and visual character of the City;
 - f. Protect the public from natural hazards caused by unstable slopes and soils, debris flow, erosion and other geologic hazards of hillside development; and
 - g. Minimize the threat and subsequent damage of wildfire through safe building practices.
 - (2) *Applicability.* This Subsection shall apply to any of the application types listed in Subsection 070.040.020(a)(2), Applicability (Sensitive Area Protection), that meet any of the following criteria:
 - a. *Hillside Preservation District.* Any proposed development in the Hillside Preservation district; see Section 070.020.170.
 - b. *Slopes.* Any proposed development on a lot with average slopes in excess of twenty (20) percent within the limits of disturbance area.
 - c. *Areas of Geologic Hazard.* Any proposed development in Areas of Geologic Hazard, which consists of the Hazard Avoidance Districts and Hazard Mitigation Districts as defined in Subsection 070.040.020(c)(2)b., Establishment of Geological Hazards Districts.
 - (3) *Lot and Density/Intensity Requirements.*

- a. *Minimum Lot Size.* All development subject to this Subsection shall comply with the minimum lot size and lot width standards required in the underlying zone district and with other development standards in this Article 070.040: Development Standards.
- b. *Allowed Density/Intensity.*
 1. *Residential Development.* The maximum number of residential units permitted within areas subject to the Hillside Development standards shall be pursuant to Table 040.1 below. In addition, a detached accessory dwelling unit may be allowed so long as the limits of disturbance does not exceed fifty (50) percent of the total gross area of the underlying lot or lots, or twenty thousand (20,000) square feet, whichever is less.

Table 040.1: Allowed Residential Development	
Average Slope of Overall Site (within LOD)	Residential: Allowable Units
In excess of 20% and up to 25%	1 dwelling unit per 10,000 square feet
In excess of 25% and up to 30%	1 dwelling unit per 20,000 square feet

2. *Nonresidential Development.* The maximum amount of nonresidential gross square footage permitted within areas subject to the Hillside Development standards shall be the square footage allowed by the zoning district. Nonresidential buildings are prohibited on slopes greater than twenty (20) percent; however, open decks and support structures for existing buildings may be constructed.
3. *Calculating Density/Intensity.* For the purposes of calculating density/intensity, only the average slope within the proposed area within the limits of disturbance of a specific lot or parcel shall be considered.
- c. *Prohibition of Development on Steep Slopes.* No development, including clearing, excavation, and grading, shall be allowed where the average slope within the limits of disturbance is greater than thirty (30) percent. Structures shall be set back from ascending or descending slopes greater than thirty (30) percent in accordance with the requirements of the current adopted building code.
- d. *Consolidation of Substandard Lots.*
 1. *General Rule: Consolidation Required.* Two (2) or more lots or parcels subject to these Hillside Development standards shall be considered to be a single, undivided lot or parcel for the purposes of this Code, if all the following factors apply:
 - i. The lots or parcels are contiguous;
 - ii. The lots or parcels are in single and common ownership and are of record on the effective date of this Code;
 - iii. No structures are located on the lots or parcels;
 - iv. All or part of the lots or parcels do not meet the minimum lot area or lot width requirements set forth in the base zoning district; and
 - v. Such lots have not been improved with individual and separate connections to municipal water or sewer systems.

No portion of such lots or parcels subject to this consolidation provision shall be used or sold in a manner that renders compliance with the lot width and lot area requirements set forth in this Subsection less feasible.

2. *Exception.* Notwithstanding the general rule for consolidation set forth in c. above, if a lot or parcel that would otherwise be subject to the general consolidation rule meets the minimum lot area or lot width requirements set forth in the underlying zone district, then consolidation shall not be required.

e. *Slope Calculations.*

1. Slope shall be calculated as the vertical rise in feet measured over a horizontal distance, expressed as a percentage. Slope calculations shall not include areas outside the limits of disturbance.
2. The applicant shall indicate on a site/architectural plan the limits of proposed development and disturbance and shall include the calculation of the average slope of that area.

(4) *Site Development Standards.*

- a. *Building Envelope and Site Design Generally.* Building envelopes and setbacks shall be determined on the basis of natural landforms, vegetation, and underlying geology. The designation of the limits of disturbance, which shall include all structures and access areas, shall be designed to avoid and minimize disturbance to sensitive areas and geologic and natural vegetative features. Natural vegetation, rock outcroppings, and significant landforms shall be retained to the maximum extent practicable. Flexibility and creativity are encouraged in designing development around existing features.
- b. *Protection from Potential Hazards.* All proposed development shall be designed to protect the public from the potential hazards of drainage, debris flow, rock fall, fire, and erosion. Projects shall be designed with existing features in order to minimize disturbance to, and therefore mitigation of, surficial hillside geology.
- c. *Access Roads.* New roads shall comply with the street standards in Section 070.040.070, Access and Circulation. Such access shall be approved by the Fire Department and the City Engineer.
- d. *Fire Hazard Mitigation.*
 1. Brush and vegetated areas shall be cleared and maintained according to the Fire Department.
 2. New vegetation shall be fire- and drought-resistant species.
 3. Roofs, overhangs, and exposed balconies shall be fire-rated according to the adopted Fire Code.
 4. Water supply, fire breaks, and access shall be approved by the Fire Department.
 5. Buildings shall be sited so that fire hazard clearing zones will not affect mature vegetation.
- e. *Viewshed Protection.* Proposed development shall retain the essential visual qualities of the site so that views from public open space areas, rights-of-way, and other public places will not be negatively impacted. In designing a proposed development, applicants shall adhere to the following principles:
 1. Following construction, off-site views of retaining walls, structures, parking areas, and landscaping on the development site shall be minimized.
 2. The disturbance areas shall be reclaimed as soon as possible after construction ends.

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- f. *Geology, Soils, and Grading.* Development shall be designed to reduce the potential for soil erosion and slope degradation during and after construction. In addition to meeting the standards of Subsection 070.040.020(a)(5), Clustering, the following standards shall apply:
1. A grading permit shall be required for disturbance in excess of one thousand (1,000) square feet. Grading plans shall be submitted and reviewed according to the City's Engineering Standards.
 2. Structures shall be designed to step down with the existing topography. To the maximum extent feasible, building designs that require extensive cut and fills shall not be allowed.
 3. Except for driveways, cut-and-fill slopes shall be entirely contained within a lot (i.e., natural grade at the lot lines shall be maintained).
 4. Sharp angles shall be rounded off, in a natural manner, at the top and ends of cut and fill slopes (within approximately five (5) feet of the sharp angle) unless steep angles are a natural character of the site. Where this would damage tree root systems, the amount of rounding off may be reduced and shrubs used instead to hide the transition.
 5. The subdivider and/or property owner shall maintain in perpetuity and repair (or supply a program for preventative maintenance) of manufactured slope areas, erosion control devices, retaining walls, drainage structures and fire prevention measures as specified in an approved development.
 6. Trees and vegetation shall be maintained to provide slope stability and prevent visual scarring wherever possible. When this requirement conflicts with fire hazard mitigation such as defensible space, appropriate mitigation shall be provided as determined by the Fire Department and the Director. A revegetation landscape plan is required for disturbed site areas.
 7. Final contours and slopes shall reflect existing landforms to the maximum extent practicable.
 8. The grade of a lot shall not be raised or lowered more than four (4) feet at any point for construction of any structure or improvement, except:
 - i. The site's original grade may be raised or lowered a maximum of six (6) feet if retaining walls are used to reduce the steepness of man-made slopes, provided that the retaining walls comply with the requirements set forth in this Subsection.
 - ii. Grade changes or retaining walls up to six (6) feet may be allowed if necessary to construct a driveway from the street to a garage or parking area,
 - iii. For the purposes of this Subsection, basements and buildings set into a slope are not considered to lower the natural grade within their footprint.
- g. *Retaining Walls and Fencing.*
1. Generally, a retaining wall shall be no higher than six (6) feet, except that a wall varied in height to accommodate a variable slope shall have an average height no greater than four (4) feet and a maximum height no greater than eight (8) feet in any sixty-foot length. A higher wall is permitted:
 - i. Where used internally at the split between one- and two-story portions of a building; and

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- ii. Where substantially hidden from public view at the rear of a building, where it may not exceed the eave height of the building.
 - 2. Visible retaining walls and fencing shall be designed to maintain human scale and reduce the visual impact of cut lines on the hillside through the use of indigenous materials, terracing and aligning construction with the natural topography.
 - 3. Indigenous materials and/or earth-toned concrete shall be used, and terraced to match existing terrain.
 - 4. Terraced walls and retaining structures should incorporate landscaping, if approved by the City Engineer.
 - 5. Retaining walls and fencing shall comply with all standards in Subsection 070.040.050(f)(3), Retaining Wall Standards.
 - h. *Water Supply.* Water supply and pressure shall be adequate to serve both residential and emergency services pursuant to the adopted Fire Code.
 - i. *Drainage.*
 - 1. Natural drainage courses shall not be disturbed by construction activity, and natural runoff shall be maintained unless approved by the City Engineer.
 - 2. A drainage plan prepared by a licensed professional engineer shall be submitted in accordance with the City's Engineering Standards.
- (5) *Building Design Standards.*
- a. *Structure Design Generally.* Building massing and roof lines shall be designed to blend with the natural terrain. When possible, the massing of the structure shall be broken up using the slope and terrain to vary the exterior dimensions.
 - b. *Ground Plane.*
 - 1. Buildings that firmly meet the ground convey an appearance of greater permanence and are strongly encouraged.
 - 2. To the maximum extent feasible, placing buildings on piers such that exterior walls do not continue down to the ground shall be prohibited because of aesthetic and energy efficiency concerns. This requirement shall not apply in areas of waterways and areas of special flood hazard.
 - c. *Building Mass and Scale.*
 - 1. To the maximum extent feasible, building design shall incorporate changes in the planes of walls and changes in the slope and height of roof lines to add variety, create visual interest, and minimize scale.
 - 2. Building mass and wall lines shall be broken up to conform to existing slope and avoid unbroken expanses of building mass and walls that can intrude into the natural setting and dominate a site.
 - d. *Building Colors.*
 - 1. Colors that enhance the natural colors of the building materials shall be used in developing an overall color scheme. Predominant tones on exterior walls shall tend toward neutral colors such as warm earthy hues, dark green of forests, greys and grey-brown of the mountains, the tan of grasses, and similar colors. Bright, harshly contrasting color combinations shall be avoided.

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2. Exterior building, roofing, and exposed rooftop mechanical equipment shall be warm or dark earth-toned colors with low reflectivity.
 3. Color and intensity of color proposed for all exterior building and roofing materials, including exposed rooftop mechanical systems such as HVAC equipment, roof vents, air handling/exchange units, shall be subject to approval by the Planning and Zoning Commission and/or City Council, as applicable.
 4. Exterior building and roofing colors shall not include white, off-white, high-intensity primary colors, and/or fluorescent colors.
- e. *Building Materials.*
1. Primary building materials shall be selected for their ability to withstand Glenwood Springs' variable mountain climate. Materials with demonstrated durability include, but are not limited to:
 - i. Brick;
 - ii. Stone;
 - iii. Cementitious siding products;
 - iv. Log construction;
 - v. Cast concrete; or
 - vi. Other comparable materials as approved by the Director.
 2. Exterior Insulation and Finish Systems (EIFS) shall not be utilized in high-traffic areas, such as at primary building entrances, where it may be easily damaged.
- f. *Parking Areas.*
1. Parking lots and detached garages accessory to residential uses shall be located so that they can be screened to blend into the natural environment and will not require backing onto an arterial or collector street.
 2. To the maximum extent feasible, parking lots and detached garages accessory to residential uses shall be located where they can be screened so they do not dominate the streetscape. Parking facilities shall be designed to follow the existing topography and to provide adequate snow storage areas.
- (c) *Development in Areas of Geologic Hazard.*
- (1) *Purpose.* The purpose of this Subsection 070.040.020(c) is to promote the public health, safety, and general welfare and to minimize public and private losses due to geologic conditions in specific areas by regulations designed to:
 - a. Protect human life, safety and property;
 - b. Minimize damage to public facilities and utilities;
 - c. Minimize the need for relief and clean-up operations due to geologic events with their accompanying public and private costs;
 - d. Minimize the need for expensive mitigation measures to protect public and private property; and
 - e. Alert property owners and potential buyers of geologic hazards existing in certain areas so that they may protect their own property and avoid endangering the property of others.
 - (2) *General Provisions.*

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- a. *Types of Geologic Hazards.* As used in this Subsection, the term "geologic hazard" shall include the following hazards, as defined in Colorado Geological Survey Open File Report 78-10 ("C.G.S. 78-10"):
1. "Corrosive soils" are potentially corrosive to concrete and steel.
 2. "Debris flow hazard" means severe and moderate debris flow hazard.
 - i. "Severe debris flow hazard" poses possible serious damage to structures and risk to life, and mitigation is necessary.
 - ii. "Moderate debris flow hazard" poses possible minor damage to structures and risk to life. Mitigation is recommended and may be required and major cleanup is probable.
 3. "Landslide hazard" is shown in areas of identified landslide features. Slides are mostly older features but have potential for reactivation.
 4. "Rockfall hazard criteria" includes an identifiable source area for rocks and the presence of fallen rocks with intermediate diameters of two (2) feet or more.
 5. "Slope instability" denotes areas of past and current mass wasting processes.
- b. *Establishment of Geological Hazards Districts.* There are hereby created within the City the following Geologic Hazards Districts:
1. *Hazard Avoidance District.* This district includes undeveloped parcels with the potential or presence of severe debris flow, and/or rockfall. The district also includes developed parcels with the potential or presence of severe geologic hazards where additional development will significantly increase the risk of damage from the hazard or significantly increase the cost to the community of mitigating the hazard.
 2. *Hazard Mitigation District.* This district includes parcels with severe geologic hazards where significant development already exists and where additional development will not significantly increase the risk of damage from the hazard nor significantly increase the cost to the community of mitigating the hazard. It also includes areas with the potential or presence of moderate debris flow, and/or rockfall hazards.
- c. *Geologic Hazards District Map.* The locations and boundaries of the Geologic Hazards Districts established by this Subsection shall be those established by the official report entitled "Geologic Hazards of the Glenwood Springs Metropolitan Area" as released by the C.G.S. 78-10. The geologic hazards maps that accompany C.G.S. 78-10 are hereby adopted as the "official geologic hazards maps" and shall be maintained along with accompanying sensitive area reports by the Office of the City Engineer. These maps shall serve as official reference in case of dispute regarding the location of hazards, and the City Engineer's interpretation of these maps shall be final. The maps shall be interpreted by the City Engineer as follows:
1. *Hazard Avoidance Districts.*
 - i. Undeveloped parcels lying entirely or partly in any area identified as a severe hazard zone on the Map of Debris Flow Fan Deposits and Hazards and/or the General Geologic Hazards Map.
 - ii. Developed parcels identified as lying entirely or partly in any area identified as a severe hazard zone on the aforesaid maps where the City Engineer has determined that additional development will increase the risk of damage from the hazards and/or significantly increase the cost to the community of mitigating the hazards.

2. *Hazard Mitigation Districts.*

- i. Parcels lying entirely or partly in any area identified as a moderate hazard zone on the Map of Debris Flow Fan Deposits and Hazards and/or the General Geologic Hazards Map.
 - ii. Developed parcels identified as lying entirely or partly in any area identified as a severe hazard zone on the aforementioned maps where the City Engineer has determined that additional development will not increase the risk of damage from the hazard and/or will not significantly increase the cost to the community of mitigating the hazard.
- d. *Annexation of Land Within an Area of Geologic Hazard.* Upon annexation of any land within an area of geologic hazard, as determined on the official geologic hazards maps, such land shall be added to the appropriate geologic hazards district, and all provisions of this Subsection shall apply.

(3) *Geologic Hazards District Standards.*

- a. *Hazard Avoidance Districts.* No improvement, building, structure, excavation, dumping, or backfill shall be placed, built, undertaken or approved in a Hazard Avoidance District except for fences, geologic stabilization structures, or paths for nonmotorized use unless, before application for a development permit or, if no development permit is required, for a grading or building permit, the applicant demonstrates to the City Engineer and the Director by clear and convincing evidence that one (1) of the following conditions is met:
 - 1. The land to be affected does not lie within an area of severe debris flow, rockfall hazard, or a drainage basin contributing to any such hazard, as shown on the official geologic hazards maps, and the proposal is in conformance with the purposes of this Subsection.
 - 2. The severe hazard does not exist on the subject site in the proposal and is in conformance with the purposes of this Subsection. Such a determination shall require detailed analysis of the area by a qualified geologist and an engineering geology report, which report may be submitted by the City to the Colorado Geologic Survey for review. For purposes of this provision, the area" means the site of the proposed development as well as adjacent land and upslope drainage basins as necessary to compare the area analysis with the official geologic hazards maps. Upon submittal of this report by the applicant, application may be made for a development, grading, or building permit, but such a permit shall not be issued until the City Engineer and the Director have determined that the conditions of this Paragraph are met.
 - 3. The proposed development meets all of the following conditions:
 - i. It will include no human habitation;
 - ii. It will not require City water, wastewater, streets or other public service;
 - iii. It will not increase the hazard to other public or private property; and
 - iv. It is consistent with the intent and purposes of this Article.
 - 4. The subject site lies within an area with rockfall hazard but not debris flow and not within a drainage basin contributing to any such hazard as shown on the official geologic hazards maps. In the case of such a determination by the City Engineer, a mitigation plan shall be required before issuance of a development, grading or building permit. The mitigation plan shall be produced and certified by a qualified engineer and shall demonstrate to the City

Engineer and the Director by clear and convincing evidence that rockfall damage will be prevented by a catchment wall or other means.

b. *Hazard Mitigation Districts.*

1. *Applicability.* All new structures and additions or improvements subject to this Subsection and proposed in a hazard mitigation district shall be subject to the requirements of Subsection 070.040.020(c)(3)b.2., Standards, unless before application for a development permit, or, if no development permit is required, for excavation or building permit, the applicant demonstrates to the City Engineer and the Director by clear and convincing evidence that one (1) of the following conditions is met:
 - i. The land to be affected does not lie within an area of severe or moderate debris flow, rockfall hazard, or a damage basin contributing to any such hazard as shown on the official geologic hazards maps.
 - ii. The severe or moderate hazards as specified in C.G.S. 78-10 do not exist on the subject site and the proposal is in conformance with the purposes of this Subsection. Such a determination shall require detailed analysis of the area by a qualified geologist in an engineering geology report, which report may be submitted by the City to the Colorado Geological Survey for review. For purposes of this provision, "the area" means the site of the proposed development, as well as the adjacent land and upslope drainage basin as necessary to compare the area analysis with the official geologic hazard maps. Upon submittal of this report by the applicant, application may be made for a development, excavation, or building permit, but such permit shall not be issued until the City Engineer and the Director have determined that the conditions of this Subparagraph are met.

2. *Standards.*

- i. In areas with moderate or severe debris flow hazard as shown on the official geologic hazards maps, before issuance of a development permit or, if no development permit is required, an excavation or building permit, the applicant shall demonstrate to the City Engineer and the Director by clear and convincing evidence that any structure or grading change that may divert debris flow or floodwaters from the subject property will not increase hazards to other public or private properties. Such a determination shall require an engineering geology report produced and certified by a qualified engineer.
- ii. Before issuance of a building permit, the applicant shall demonstrate to the City Engineer and the Building Official by clear and convincing evidence that all applicable requirements in the City's Engineering Standards are met.

(4) *Public Improvements in Areas of Geologic Hazard.* Public improvements, including but not limited to streets, water, wastewater, and electrical services, will not be extended into the Hazard Avoidance District, except where:

- a. An area or a proposed development meets one (1) of the conditions of Subsection 070.040.020(c)(3)a., Hazard Avoidance Districts; or
- b. The public good is better served by the extension which shall be in compliance with the City goals and policies. Such determination shall be made by the City Council upon a recommendation from the Planning Commission.

(d) *Development in Waterways and Areas of Special Flood Hazard.*

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- (1) *Findings of Fact.*
- a. The flood hazard areas of the City are subject to periodic inundation which can result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, of which adversely affect the public health, safety and general welfare of the public.
 - b. These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood-proofed, or otherwise protected from flood damage.
- (2) *Statement of Purpose.* It is the purpose of this Subsection 070.040.020(d) to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions to specific areas by provisions designed to:
- a. Protect human life and health;
 - b. Minimize expenditure of public money for costly flood control projects;
 - c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - d. Minimize prolonged business interruptions;
 - e. Minimize damage to critical facilities, infrastructure and other public facilities such as water, sewer and gas mains, electric and communication stations, and streets and bridges located in floodplains;
 - f. Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner so as to minimize future flood blight areas; and
 - g. Ensure that potential buyers are notified that property is located in a flood hazard area.
- (3) *Methods of Reducing Flood Losses.* In order to accomplish its purposes, this Subsection uses the following methods:
- a. Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
 - b. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 - c. Control the alteration of natural floodplains, stream channels and natural protective barriers, which are involved in the accommodation of flood waters;
 - d. Control filling, grading, dredging and other development which may increase flood damage; and
 - e. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.
- (4) *Lands to Which this Subsection Applies.* This Subsection shall apply to all areas of Special Flood Hazard Areas and areas removed from the floodplain by the issuance of a FEMA Letter of Map Revision Based on Fill (LOMR-F) within the jurisdiction of the City.
- (5) *Basis for Establishing Areas of Special Flood Hazard.* The special flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for the City of Glenwood Springs," dated October 15, 1985, with an accompanying Flood Insurance Rate Map (FIRM) and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this Title. The Special

Flood Hazard Areas identified by the FIS and attendant mapping are the minimum area of applicability of this Subsection and may be supplemented by studies designated and approved by the City. The Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), DFIRMs, FIRMs and/or FBFMs on file and are available for public inspection.

- (6) *Establishment of Floodplain Development Permit.* A floodplain development permit shall be required to ensure conformance with the provisions of this Subsection.
- (7) *Compliance.* No structure or land shall hereafter be located, altered or have its use changed within the Special Flood Hazard Area without full compliance with the terms of this Subsection and other applicable regulations. Nothing herein shall prevent the City from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the National Flood Insurance Program.
- (8) *Abrogation and Greater Restrictions.* This Subsection is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Subsection and another provision of this Code, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- (9) *Interpretation.* In the interpretation and application of this Subsection, all provisions shall be:
 - a. Considered as minimum requirements;
 - b. Liberally construed in favor of the governing body; and
 - c. Deemed neither to limit nor repeal any other powers granted under state statutes.
- (10) *Warning and Disclaimer of Liability.* The degree of flood protection required by this Subsection is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions, greater floods can and will occur and flood heights may be increased by manmade or natural causes. This Subsection does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Subsection shall not create liability on the part of the City, any official or employee thereof, for any flood damages that result from reliance on this Subsection or any administrative decision lawfully made thereunder.
- (11) *Designation of the Floodplain Administrator.* The City Engineer is hereby appointed as Floodplain Administrator to administer, implement and enforce the provisions of this Subsection and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) pertaining to floodplain management.
- (12) *Duties and Responsibilities of Floodplain Administrator.* Duties of the Floodplain Administrator shall include, but not be limited to the following:
 - a. Maintain and hold open for public inspection all records pertaining to the provisions of this Subsection, including the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures and any floodproofing certificate required by Subsection 070.040.020(d)(13).
 - b. Review, approve, or deny all applications for floodplain development permits required by adoption of this Subsection.
 - c. Review floodplain development permit applications to determine whether a proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.
 - d. Review permits for proposed development to ensure that all necessary permits have been obtained from those federal, state or local governmental agencies (including Section 404 of the

Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required.

- e. Inspect all development at appropriate times during the period of construction to ensure compliance with all provisions of this Subsection, including proper elevation of the structure.
- f. Where interpretation is needed as to the exact location of the boundaries of the Special Flood Hazard Area (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.
- g. When Base Flood Elevation data has not been provided in accordance with Section 070.090.060, the Floodplain Administrator shall obtain, review and reasonably utilize any Base Flood Elevation data and Floodway data available from a federal, state or other source, in order to administer the provisions of this Subsection.
- h. For waterways with Base Flood Elevations for which a regulatory Floodway has not been designated, no new construction, substantial improvements or other development (including fill) shall be permitted within Zones A1—30 and AE on the City's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (½) foot at any point within the City.
- i. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, the City may approve certain development in Zones A1—30, AE, AH, on the City's FIRM which increases the water surface elevation of the base flood by more than one-half (½) foot, provided that the City first applies for a conditional FIRM revision through FEMA (Conditional Letter of Map Revision), fulfills the requirements for such revisions as established under the provisions of Section 65.12, and receives FEMA approval.
- j. Notify, in riverline situations, adjacent communities and the State Coordinating Agency which is the Colorado Water Conservation Board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.
- k. Ensure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(13) *Permit Procedures.*

- a. *Application.* Application for a Floodplain Development Permit shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions and elevations of proposed landscape alterations; existing or proposed structures, including the placement of manufactured homes and the location of the foregoing in relation to Special Flood Hazard Area. Additionally, the following information is required:
 - 1. Elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures;
 - 2. Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;
 - 3. A certificate from a registered Colorado Professional Engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria in Subsection 070.040.020(d)(16)b.;
 - 4. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development; and

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5. Maintain a record of all such information in accordance with Subsection 070.040.020(d)(12).
- b. *Approval Criteria.* Approval or denial of a floodplain development permit by the Floodplain Administrator shall be based on all of the provisions of this Subsection and the following relevant factors:
1. The danger to life and property due to flooding or erosion damage;
 2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 3. The danger that materials may be swept onto other lands to the injury of others;
 4. The compatibility of the proposed use with existing and anticipated development;
 5. The safety of access to the property in times of flood for ordinary and emergency vehicles;
 6. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
 7. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 8. The necessity to the facility of a waterfront location, where applicable;
 9. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use; and
 10. The relationship of the proposed use to the comprehensive plan for that area.

(14) *Variance Procedure.*

- a. The Planning and Zoning Commission ("Commission") shall hear and render judgment on requests for variances from the requirements of this Subsection.
- b. The Commission shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this Subsection. Such appeals shall be subject to the procedures set forth in Subsection 070.060.070(c).
- c. Any person or persons aggrieved by the decision of the Commission may appeal such decision in the courts of competent jurisdiction upon completing the administrative procedures set forth in Subsection 070.060.070(c).
- d. The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.
- e. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this Subsection.
- f. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided that the requirements of Subsection 070.040.020(d)(13) have been fully considered. As the lot size increases beyond the one-half (½) acre, the technical justifications required for issuing the variance increases.

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- g. Upon consideration of the factors noted above and the intent of this Subsection, the Commission may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this Subsection as stated in Subsection 070.040.020(d)(2), Statement of Purpose.
 - h. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 - i. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
 - j. Prerequisites for granting variances:
 - 1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - 2. Variances shall only be issued upon:
 - i. A showing of good and sufficient cause;
 - ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 - iii. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with this Code or the City goals, policies and plans.
 - k. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the Base Flood Elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
 - l. Variances may be issued for new constructions and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:
 - 1. The criteria outlined in Subsections 070.040.020(d)(14)a.—i. are met; and
 - 2. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.
- (15) *General Standards.* In all areas of special flood hazards, the following standards are required:
- a. All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrostatic and hydrodynamic loads, including the effects of buoyancy;
 - b. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
 - c. All new construction or substantial improvements shall be constructed with materials resistant to flood damage;
 - d. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

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- e. All manufactured homes shall be installed using methods and practices which minimize flood damage. For purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
 - f. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
 - g. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and
 - h. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- (16) *Specific Standards.* In all Special Flood Hazard areas where Base Flood Elevation data has been provided as set forth in Subsection 070.040.020(d)(5), Subsection 070.040.020(d)(12)g., and/or Subsection 070.040.020(d)(21), the following provisions are required:
- a. *Residential Construction.* New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork), elevated to one (1) foot above the Base Flood Elevation. Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado Professional Engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.
 - b. *Nonresidential Construction.*
 - 1. With the exception of Critical Facilities outlined in 070.040.020(d)(22), new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated to one (1) foot above the Base Flood Elevation; or, together with attendant utility and sanitary facilities, shall: be designed so that at one (1) foot above the Base Flood Elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
 - 2. A registered Colorado Professional Engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this Subsection. Such certifications shall be maintained by the Floodplain Administrator, as set forth in Subsection 070.040.020(d)(13).
 - c. *Enclosures.*
 - 1. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
 - 2. Designs for meeting this requirement must either be certified by a registered Colorado Professional Engineer or architect or meet or exceed the following minimum criteria:

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- i. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - ii. The bottom of all openings shall be no higher than one (1) foot above grade.
 - iii. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - d. *Manufactured Homes.*
 - 1. All manufactured homes that are placed or substantially improved within Zones A1—30, AH and AE on the City's FIRM on sites: (1) outside of a manufactured home park or subdivision; (2) in a new manufactured home park or subdivision; (3) in an expansion to an existing manufactured home park or subdivision; or (4) in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home, electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities (including ductwork) are elevated to one (1) foot above the Base Flood Elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
 - 2. All manufactured homes placed or substantially improved on sites in existing manufactured home parks or subdivision within Zones A1—30, AH and AE on the City's FIRM that are not subject to the provisions of the previous paragraph shall be elevated so that either: (1) the lowest floor of the manufactured home, electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), are one (1) foot above the Base Flood Elevation; or (2) the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
 - e. *Recreational Vehicles.*
 - 1. All recreational vehicles placed on sites within Zones A1—30, AH, and AE on the City's FIRM sites either: (1) be on the site for fewer than one hundred eighty (180) consecutive days; (2) be fully licensed and ready for highway use; or (3) meet the permit requirements of Subsection 070.040.020(d)(13), and the elevation and anchoring requirements for "manufactured homes" in Paragraph d. above.
 - 2. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.
 - f. *Prior Approved Activities.* Any activity for which a floodplain development permit was issued by the City or a CLOMR was issued by FEMA prior to the effective date of this Subsection may be completed according to the standards in place at the time of the permit or CLOMR issuance and will not be considered in violation of this Subsection if it meets such standards.
 - (17) *Standards for Areas of Shallow Flooding (AO/AH Zones).* Located within the Special Flood Hazard Area established in Subsection 070.040.020(d)(5), are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

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- a. *Residential Construction.* All new construction and substantial improvements of residential structures must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three (3) feet if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado Professional Engineer, architect, or land surveyor. Such certification shall be submitted to the Floodplain Administrator.
 - b. *Nonresidential Construction.*
 - 1. With the exception of Critical Facilities, outlined in Subsection 070.040.020(d)(22), all new construction and Substantial Improvements of non-residential structures, must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the City's FIRM (at least three (3) feet if no depth number is specified), or together with attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one (1) foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy. A registered Colorado Professional Engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Subsection, as proposed in Subsection 070.040.020(d)(13), are satisfied.
 - 2. Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from proposed structures.
- (18) *Floodways.* Floodways are administrative limits and tools used to regulate existing and future floodplain development. The State of Colorado has adopted Floodway standards that are more stringent than the FEMA minimum standard (see definition of Floodway in Subsection 070.040.020(d)(25)). Located within Special Flood Hazard Areas established in Subsection 070.040.020(d)(5) are areas designated as Floodways. Since the Floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions apply:
- a. Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory Floodway unless it has been demonstrated through hydrologic and hydraulic analysis performed by a licensed Colorado Professional Engineer and in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a No-Rise Certification) in flood levels within the City during the occurrence of the base flood discharge.
 - b. If Paragraph a. above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Subsections 070.040.020(d)(15) through 070.040.020(d)(22).
 - c. Under the provisions of 44 CFR Chapter 1, Section 65.12 of the National Flood Insurance Regulations, the City may permit encroachments within the adopted regulatory floodway that would result in an increase in Base Flood Elevations, provided that the City first applies for a CLOMR and floodway revision through FEMA.
- (19) *Alteration of a Watercourse.* For all proposed developments that alter a watercourse within a Special Flood Hazard Area, the following standards apply:

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- a. Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition, and channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.
 - b. Channelization and flow diversion projects shall evaluate the residual one-hundred-year floodplain.
 - c. Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable federal, state and local floodplain rules, regulations and ordinances.
 - d. Any stream alteration activity shall be designed and sealed by a registered Colorado Professional Engineer or Certified Professional Hydrologist.
 - e. All activities within the regulatory floodplain shall meet all applicable federal, state and City floodplain requirements and regulations.
 - f. Within the Regulatory Floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a Floodway analysis and report, sealed by a registered Colorado Professional Engineer, that there is not more than a 0.00 foot rise in the proposed conditions compared to existing conditions Floodway resulting from the project, otherwise known as a No-Rise Certification, unless the City first applies for a CLOMR and Floodway revision in accordance with Subsections 070.040.020(d)(15) through 070.040.020(d)(22).
 - g. Maintenance shall be required for any altered or relocated portions of watercourses so that the flood-carrying capacity is not diminished.
- (20) *Properties Removed from the Floodplain by Fill.* A floodplain development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA Letter of Map Revision Based on Fill (LOMR-F), unless such new structure or addition complies with the following:
- a. *Residential Construction.* The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one (1) foot above the Base Flood Elevation that existed prior to the placement of fill.
 - b. *Nonresidential Construction.* The lowest floor (including basement), electrical, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one (1) foot above the Base Flood Elevation that existed prior to the placement of fill, or together with attendant utility and sanitary facilities be designed so that the structure or addition is watertight to at least one (1) foot above the base flood level that existed prior to the placement of fill with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.
- (21) *Standards for Subdivision Proposals.*
- a. All subdivision proposals including the placement of manufactured home parks and subdivisions shall be reasonably safe from flooding. If a subdivision or other development proposal is in a flood-prone area, the proposal shall minimize flood damage.
 - b. All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet floodplain development permit requirements of

Subsection 070.040.020(d)(6), Subsection 070.040.020(d)(13), and the provisions of Subsections 070.040.020(d)(15) through 070.040.020(d)(22).

- c. Base Flood Elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to Subsection 070.040.020(d)(5) or Subsection 070.040.020(d)(12).
 - d. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
 - e. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
- (22) *Standards for Critical Facilities.* A Critical Facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the City at any time before, during and after a flood.
- a. *Classification of Critical Facilities.*
 - 1. It is the responsibility of the City to identify and confirm that specific structures meet the following criteria: Critical Facilities are classified under the following categories: (a) essential services (b) hazardous materials (c) at-risk populations, and (d) vital to restoring normal Services.
 - 2. Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities, and transportation lifelines. These facilities consist of:
 - i. Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and emergency operation centers);
 - ii. Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctor's offices, and non-urgent care medical structures that do not provide these functions;
 - iii. Designated emergency shelters;
 - iv. Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables and conduits);
 - v. Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines); and
 - vi. Air transportation lifelines (airports [municipal and larger], helicopter pads and structures serving emergency functions, and associated infrastructure [aviation control towers, air traffic control centers, and emergency equipment aircraft hangars]).

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- vii. Specific exemptions to this category include wastewater treatment plants (WWTP), non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenance.
 - viii. Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the City that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the one-hundred-year floodplain or are compliant with the provisions of this Subsection, and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the City on an as-needed basis upon request.
3. Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxins and/or water-reactive materials. These facilities may include:
- i. Chemical and pharmaceutical plants (chemical plants, pharmaceutical manufacturing);
 - ii. Laboratories containing highly volatile, flammable, explosive, toxins and/or water-reactive materials;
 - iii. Refineries;
 - iv. Hazardous waste storage and disposal sites; and
 - v. Above ground gasoline or propane storage or sales centers.
 - vi. Facilities shall be determined to be Critical Facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a Material Safety Data Sheet (MSDS) on file for any chemicals stored or used in the workplace, AND the chemical(s) is stored in quantities equal to or greater than the Threshold Planning Quantity (TPQ) for that chemical, then that facility shall be considered to be a Critical Facility. The TPQ for these chemicals is: either five hundred (500) pounds or the TPQ listed (whichever is lower) for the three hundred fifty-six (356) chemicals listed under 40 C.F.R. § 302 (2010), also known as Extremely Hazardous Substances (EHS); or ten thousand (10,000) pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Health and Environment. OSHA requirements for MSDS can be found in 29 C.F.R. § 1910 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification" 40 C.F.R. § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards", 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of this Subsection, but exclude later amendments to or editions of the regulations. Specific exemptions to this category include:
 - a. Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.

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- b. Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.
 - c. Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.
 - d. These exemptions shall not apply to building or other structures that also function as Critical Facilities under another category outlined in this Subsection.
 - vii. At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:
 - a. Elder care (nursing homes);
 - b. Congregate care serving twelve (12) or more individuals (day care and assisted living);
 - c. Public and private school (pre-schools, K—12 schools), before-school and after-school care serving twelve (12) or more children.
 - viii. Facilities vital to restoring normal services including government operations. These facilities consist of:
 - a. Essential government operations (public records, courts, jails, building permitting and inspection services, City administration and management, maintenance and equipment centers);
 - b. Essential structures for public colleges and universities (dormitories, offices, and classrooms only).
 - c. These facilities may be exempted if it is demonstrated to the City that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the one-hundred-year floodplain or are compliant with this Subsection, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the City on an as-needed basis upon request.
 - b. *Protection for Critical Facilities.* All new and substantially improved Critical Facilities and new additions to Critical Facilities located within the Special Flood Hazard Area shall be regulated to a higher standard than structures not determined to be Critical Facilities. For the purposes of this Subsection, protection shall include one (1) of the following:
 - 1. Location outside the Special Flood Hazard Area; or
 - 2. Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two (2) feet above the Base Flood Elevation.

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- c. *Ingress and Egress for New Critical Facilities.* New Critical Facilities shall, when practicable as determined by the City, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a one-hundred-year flood event.
- (23) *Amendments.* Any amendments of this Subsection or the maps or studies incorporated herein shall be subject to and governed by the provisions of Subsection 070.040.020(d)(5).
- (24) *Conservation of Waterways.* It is the purpose of this subsection to conserve and promote the health of the City's riparian ecosystems, water quality, and protect human drinking water by maintaining a functional natural buffer adjacent to waterways.
- a. *Applicability.* All new improvements, buildings, additions, structures, excavations, grading, dumping, clearing of native vegetation, or backfill shall be subject to the requirements of Section 070.040.020(d)(24). A permit, engineering or other study would not be required to be in compliance with Section 070.040.020(d)(24)b, if any of the following conditions are met. This would not exempt the following activities from permits or engineering studies required by other parts of the Municipal Code:
1. The removal of native vegetation existing on or before September 17, 2020, not to exceed twenty (20) percent of the setback area defined below, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within said area.
 2. The construction of bridges, public utilities, public paths for non-motorized use, public open space areas and boat ramps, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices that do not result in a material increase in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.
 3. Removal of vegetation listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm in compliance with applicable regulations or removal of dead vegetation. The type, kind and amount of replacement vegetation shall be at the discretion of the property owner provided it includes native riparian plant species and is sufficient to limit and prevent erosion at the riverbank.
 4. The property owner demonstrates one (1) or more of the following:
 - i. The area on or before September 17, 2020 did not contain significant riparian plant species or functions;
 - ii. The area on or before September 17, 2020 was impacted by previous earth disturbing activities; and/or
 - iii. Any improvement (including but not limited to the pruning of vegetation, construction of access path or steps, hot springs pools) does not result in a material increase in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.
- b. *Standards.*
1. No improvement, building, structure, excavation, grading, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within thirty-five (35) feet of the ordinary high-water mark (as defined by the U.S. Army Corp of Engineers), measured horizontally, of any river or live perennial stream.
 2. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within said thirty-five-foot setback area.

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- (25) *Definitions Related to Floodplain Regulations.* Unless specifically defined below, words or phrases used in this Subsection shall be interpreted so as to give them the meaning they have in common usage and to give this Subsection the most reasonable application.
- a. *One-Hundred-Year Flood.* A flood having a recurrence interval that has a one (1) percent chance of being equaled or exceeded during any given year (one (1) percent annual chance of flood). The term "one (1) percent chance flood" is synonymous with the term "one-hundred-year flood." The term does not imply that the flood will necessarily happen once every one hundred (100) years.
 - b. *One-hundred-Year Floodplain.* The area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.
 - c. *Five-Hundred-Year Flood.* A flood having a recurrence interval that has a 0.2 percent chance of being equaled or exceeded during any given year (0.2 percent chance annual of flood). The term does not imply that the flood will necessarily happen once every five hundred (500) years.
 - d. *Five-Hundred-Year Floodplain.* The area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.
 - e. *Addition.* Any activity that expands the enclosed footprint or increases the square footage of an existing structure.
 - f. *Alluvial Fan Flooding.* A fan-shaped sediment deposit formed by a stream that flows from a steep mountain valley or gorge onto a plain or the junction of a tributary stream with the main stream. Alluvial fans contain active stream channels and boulder bars, and recently abandoned channels. Alluvial fans are predominantly formed by alluvial deposits and are modified by infrequent sheet flood, channel avulsions and other stream processes.
 - g. *Area of Shallow Flooding.* A designated Zone AO or AH on a Community's Flood Insurance Rate Map (FIRM) with a one (1) percent chance or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist; where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.
 - h. *Base Flood Elevation (BFE).* The elevation shown on a FEMA Flood Insurance Rate Map for Zones AE, AH, A1—A30, AR AR/A, AR/AE, AR/A1—A30, AR/AH, AR/AO, V1—V30, and VE that indicates the water surface elevation resulting from a flood that has a one (1) percent chance of equaling or exceeding that level in any given year.
 - i. *Basement.* Any area of a building having its floor sub-grade (below ground level) on all sides.
 - j. *Channel.* The physical confine of stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.
 - k. *Channelization.* The artificial creation, enlargement, or realignment of a stream channel.
 - l. *Code of Federal Regulations (CFR).* The codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. It is divided into fifty (50) titles that represent broad areas subject to Federal regulation.
 - m. *Community.* Any political subdivision in the state of Colorado that has authority to adopt and enforce floodplain management regulations through zoning, including but not limited to, cities, towns, unincorporated areas in the counties, Indian tribes, and drainage and flood control districts.
 - n. *Conditional Letter of Map Revision (CLOMR).* FEMA's comment on a proposed project, which does not revise an effective floodplain map that would, upon construction, affect the hydrologic or

hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodplain.

- o. *Critical Facility.* A structure or related infrastructure but not the land on which it is situated, as specified in Section 070.090.210, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the City at any time before, during and after a flood.
- p. *Development.* Any manmade change in improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations or storage of equipment or materials.
- q. *DFIRM Database (usually spreadsheets containing data and analyses that accompany DFIRMs).* The FEMA Mapping Specifications and Guidelines outline requirements for the development and maintenance of DFIRM databases.
- r. *Digital Flood Insurance Rate Map (DFIRM).* The FEMA digital floodplain map. These digital maps serve as "regulatory floodplain maps" for insurance and floodplain management purposes.
- s. *Elevated Building.* A non-basement building (i) built, in the case of a building in Zones A1—30, AE, A, A99, AO, AH, B, C, X and D, to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers) or shear walls parallel to the flow of the water, and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1—30, AE, A, A99, AO, AH, B, C, X, and D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.
- t. *Existing Manufactured Home Park or Subdivision.* A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed before the effective date of the Floodplain Management Regulations adopted by the City.
- u. *Expansion to Existing Manufactured Home Park or Subdivision.* The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).
- v. *Federal Register.* The official daily publication for Rules, proposed Rules, and notices of Federal agencies and organizations, as well as executive orders and other presidential documents.
- w. *FEMA.* The Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program.
- x. *Flood or Flooding.* A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - 1. The overflow of water from channels and reservoir spillways;
 - 2. The unusual and rapid accumulation or runoff of surface waters from any source; or
 - 3. Mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas (such as earth carried by a current of water and deposited along the path of the current).

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- y. *Flood Insurance Rate Map (FIRM)*. An official map of a Community, on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas and the risk premium zones applicable to the Community.
 - z. *Flood Insurance Study (FIS)*. The official report provided by the Federal Emergency Management Agency. The report contains the Flood Insurance Rate Map as well as flood profiles for studied flooding sources that can be used to determine Base Flood Elevations for some areas.
 - aa. *Floodplain or Flood-Prone Area*. Any land area susceptible to being inundated as the result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.
 - bb. *Floodplain Administrator*. The City Engineer, who is the City official designated to administer and enforce the floodplain management regulations.
 - cc. *Floodplain Development Permit*. A permit required before construction or development begins within any Special Flood Hazard Area (SFHA). If FEMA has not defined the SFHA within the City, the City shall require permits for all proposed construction or other development in the City including the placement of manufactured homes so that it may determine whether such construction or other development is proposed within flood-prone areas. Permits are required to ensure that proposed development projects meet the requirements of the NFIP and this Subsection.
 - dd. *Floodplain Management*. The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.
 - ee. *Floodplain Management Regulations*. Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.
 - ff. *Flood Control Structure*. A physical structure designed and built expressly or partially for the purpose of reducing, redirecting or guiding flood flows along a particular waterway. These specialized flood modifying works are those constructed in conformance with sound engineering standards.
 - gg. *Floodproofing*. Any combination of structural and/or non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
 - hh. *Floodway (Regulatory Floodway)*. The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. The Colorado statewide standard for the designated height to be used for all newly studied reaches shall be one-half (½) foot (six (6) inches). Letters of Map Revision to existing floodway delineations may continue to use the floodway criteria in place at the time of the existing floodway delineation.
 - ii. *Freeboard*. The vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the watershed.
 - jj. *Functionally Dependent Use*. A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities

that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

- kk. *Highest Adjacent Grade*. The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- ll. *Historic Structure*. Any structure that is:
1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;
 3. Individually listed on the state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
 4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - i. By an approved state program as determined by the Secretary of the Interior; or
 - ii. Directly by the Secretary of the Interior in states without approved programs.
- mm. *Letter of Map Revision (LOMR)*. FEMA's official revision of an effective Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs) or the Special Flood Hazard Area (SFHA).
- nn. *Letter of Map Revision Based on Fill (LOMR-F)*. FEMA's modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM) based on the placement of fill outside the existing regulatory floodway.
- oo. *Levee*. A manmade embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 CFR 65.10.
- pp. *Levee System*. A flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.
- qq. *Lowest Floor*. The lowest floor of the lowest enclosed area (including basement). Any floor used for living purposes which includes working, storage, sleeping, cooking and eating, or recreation or any combination thereof. This includes any floor that could be converted to such a use such as a basement or crawl space. The lowest floor is a determinate for the flood insurance premium for a building, home or business. An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 60.3 of the National Flood Insurance Program regulations.

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- rr. *Manufactured Home*. A structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured home does not include a recreational vehicle.
 - ss. *Manufactured Home Park or Subdivision*. A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.
 - tt. *Mean Sea Level*. For purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum, to which Base Flood Elevations shown on a Community's Flood Insurance Rate Map are referenced.
 - uu. *Material Safety Data Sheets (MSDS)*. A form with data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.
 - vv. *National Flood Insurance Program (NFIP)*. FEMA's program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and Emergency Assistance Act. The NFIP has applicable Federal regulations promulgated in Title 44 of the Code of Federal Regulations. The U.S. Congress established the NFIP in 1968 with the passage of the National Flood Insurance Act of 1968.
 - ww. *New Manufactured Home Park or Subdivision*. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of Flood Plain Management Regulations adopted by the City.
 - xx. *No-Rise Certification*. A record of the results of an engineering analysis conducted to determine whether a project will increase flood heights in a floodway. A No-Rise Certification must be supported by technical data and signed by a registered Colorado Professional Engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the one-hundred-year floodway show on the Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM).
 - yy. *Physical Map Revision (PMR)*. FEMA's action whereby one (1) or more map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations, and/or planimetric features.
 - zz. *Recreational Vehicle*. A vehicle which is: (a) built on a single chassis; (b) four hundred (400) square feet or less when measured at the largest horizontal projections; (c) designed to be self-propelled or permanently towable by a light duty truck; and (d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.
 - aaa. *Special Flood Hazard Area*. The land in the floodplain within a Community subject to a one (1) percent or greater chance of flooding in any given year, i.e., the one-hundred-year floodplain.
 - bbb. *Start of Construction*. The date the building permit was issued, including substantial improvements, provided that the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, installation of piles, construction of

columns or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

- ccc. *Structure*. A walled and roofed building including a gas or liquid storage tank, which is principally above ground as well as a manufactured home.
- ddd. *Substantial Damage*. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent of the market value of the structure just prior to when the damage occurred.
- eee. *Substantial Improvement*. Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before the start of construction of the improvement. The value of the structure shall be determined by the local jurisdiction having land use authority in the area of interest. This includes structures which have incurred substantial damage regardless of the actual repair work performed. The term does not however, include either:
 - 1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary conditions; or
 - 2. Any alteration of an historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.
- fff. *Threshold Planning Quantity (TPQ)*. A quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.
- ggg. *Variance*. A grant of relief from the requirements of this Subsection when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner that would otherwise be prohibited by this Subsection. (For full requirements see Section 60.6 of the National Flood Insurance Program regulations.)
- hhh. *Violation*. The failure of a structure or other development to be fully compliant with the City's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance with Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) of the National Flood Insurance Program regulations is presumed to be in violation until such time as that documentation is provided.
- iii. *Water Surface Elevation*. The height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. 19-2018 , § 2(Exh. A), 8-2-2018; Ord. No. 15-2020 , § 2(Exh. A), 7-2-2020; Ord. No. 21-2020 , § 3, 9-17-2020; Ord. No. 3-2021 , § 2(Exh. A), 5-20-2021)